ARI Research Note 91-35

Task Analysis and Workload Prediction for the MH-47E Mission and a Comparison with CH-47D Workload Predictions

Volume II: Appendixes A through N

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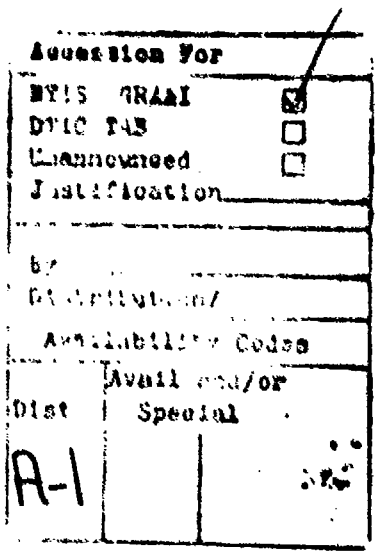

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19. ABSTRACT (Continue on reverse if necessary and identify by block number)

For this research, a mission scenario was used to conduct a comprehensive task analysis for MH-47E operations. The analysis used a top-down approach to identify the phases, functions, and tasks for the mission and identified 5 phases, 15 segments, 73 functions, and 239 tasks. The crew member performing each task was identified, and estimates of the sensory, cognitive, and psychomotor workload associated with the tasks were derived. Estimates of the task durations also were derived.

The mission/task/workload analysis data were used to develop a computer model of workload for MH-47E crew members. The model used a bottom-up approach to build mission functions from tasks and mission segments from functions. Decision rules were written to specify the procedure for combining the tasks into functions and the functions into segments. The model permitted an analysis of total workload experienced by the pilot and copilot in the performance of both sequential and concurrent tasks. The predicted workload for the MH-47E pilot and copilot was compared to the CH-47D baseline workload prediction to determine the impact

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19. ABSTRACT (Continued)

of the advanced technology on the MH-47E. The comparison indicated little difference in the predicted workload for the pilot and indicated a lower predicted workload for the copilot in the MH-47E.

Volume I of the report describes the methodology and summarizes the results of the research. This volume contains the appendixes, which present the workload predictions of the CH-47D model; the MH-47E mission/task/workload analysis, decision rules, and workload predictions; and a comparison of the predictions from both models.

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ACKNOWLEDGMENTS

The authors wish to express their appreciation to the following individuals for their contributions to this research effort.

Chief Warrant Officer (CWO) John M. LeDuc, 160th Special Operations Aviation Group (SOAG), Fort Campbell, Kentucky, served as subject matter expert for the review of the MH-47E task analysis. The task analysis required in-depth knowledge of the MH-47E cockpit configuration and the tasks performed at the pilot and copilot stations. CWO LeDuc's knowledge of the specific tasks performed by the pilot and copilot in the conduct of their mission contributed greatly to the success of the task analysis.

Ms. Laura Fulford and Ms. Cassandra Hocutt, Anacapa Sciences, Inc., developed the Task Analysis/Workload (TAWL) Operator Simulation System (TOSS) to provide for the management of the MH-47E and CH-47D mission/task/workload data base and the workload prediction models.

The authors especially thank Ms. Nadine McCollim, Anacapa Sciences, Inc., for the speedy and accurate typing of the numerous revisions of the task analysis. Her work significantly enhanced the quality of the final product.

TASK ANALYSIS AND WORKLOAD PREDICTION FOR THE MH-47E MISSION AND A COMPARISON WITH CH-47D WORKLOAD PREDICTIONS

Volume II: Appendixes A through N

CONTENTS

TASK ANALYSIS AND WORKLOAD PREDICTION FOR THE MH-47E MISSION AND A COMPARISON WITH CH-47D WORKLOAD PREDICTIONS VOLUME II: APPENDIXES A THROUGH N

INTRODUCTION

This two-volume report describes the methodology used to conduct a comprehensive task analysis of the MH-47E mission and the results of the analysis. Information provided by the MH-47E mission/task/workload analysis was used to establish a data base and to develop a computer model that predicts workload for the MH-47E pilot and copilot. Assessments of workload produced by the model are compared with the CH-47D baseline model to assess the impact on workload of the high technology modifications made in the MH-60K aircraft. The complete explanation of the Task Analysis/Workload (TAWL) methodology for performing the mission/task/workload analysis is contained in Volume I of this report.

Appendixes A through G present the results of exercising the CH-47D workload prediction model and the task analysis of the MH-47E mission scenario. The task/workload analysis and model construction phases of the CH-47D are described in a report by Bierbaum and Aldrich (1989). The graphs in Appendixes A and B present the workload predictions for the pilot and copilot for each of the 38 UH-60A mission segments. The graphs present the total workload for each of the six components for all tasks the crew member is performing during each half-second of the mission segment. The diamond symbol at the end of each graph indicates the average workload of the component for the segment.

Appendixes C through G present the results of the task analysis of the MH-47E mission scenario:

- Appendix C summarizes the segments within each MH-47E mission phase,
- Appendix D presents a list of the unique MH-47E mission functions,
- Appendix E summarizes the MH-47E functions within each mission segment,
- Appendix F presents a list of the unique MH-47E tasks, and
- Appendix G presents the MH-47E Function Analysis Worksheets that summarize the workload data derived for each unique function.

The task analysis results were used in the construction of the MH-47E workload prediction model. The workload rating scales used in Appendix G are presented in Volume I, pages 21 and 22.

Appendixes H through N present the decision rules for construction of the MH-47E workload prediction model and the results from exercising the model. The information presented in Appendixes H through K is as follows:

- Appendix H presents the MH-47E Function Summary Worksheets,
- Appendix I presents the MH-47E Function Decision Rules Worksheets,
- Appendix J presents the MH-47E Segment Summary Worksheets, and
- Appendix K presents the MH-47E Segment Decision Rules Worksheets.

The graphs in Appendixes L and M present the workload predictions for the pilot and copilot for each of the 15 MH-47E mission segments. The graphs present the total workload for each of the six components for all tasks the crew member is performing during each half-second of the mission segment.

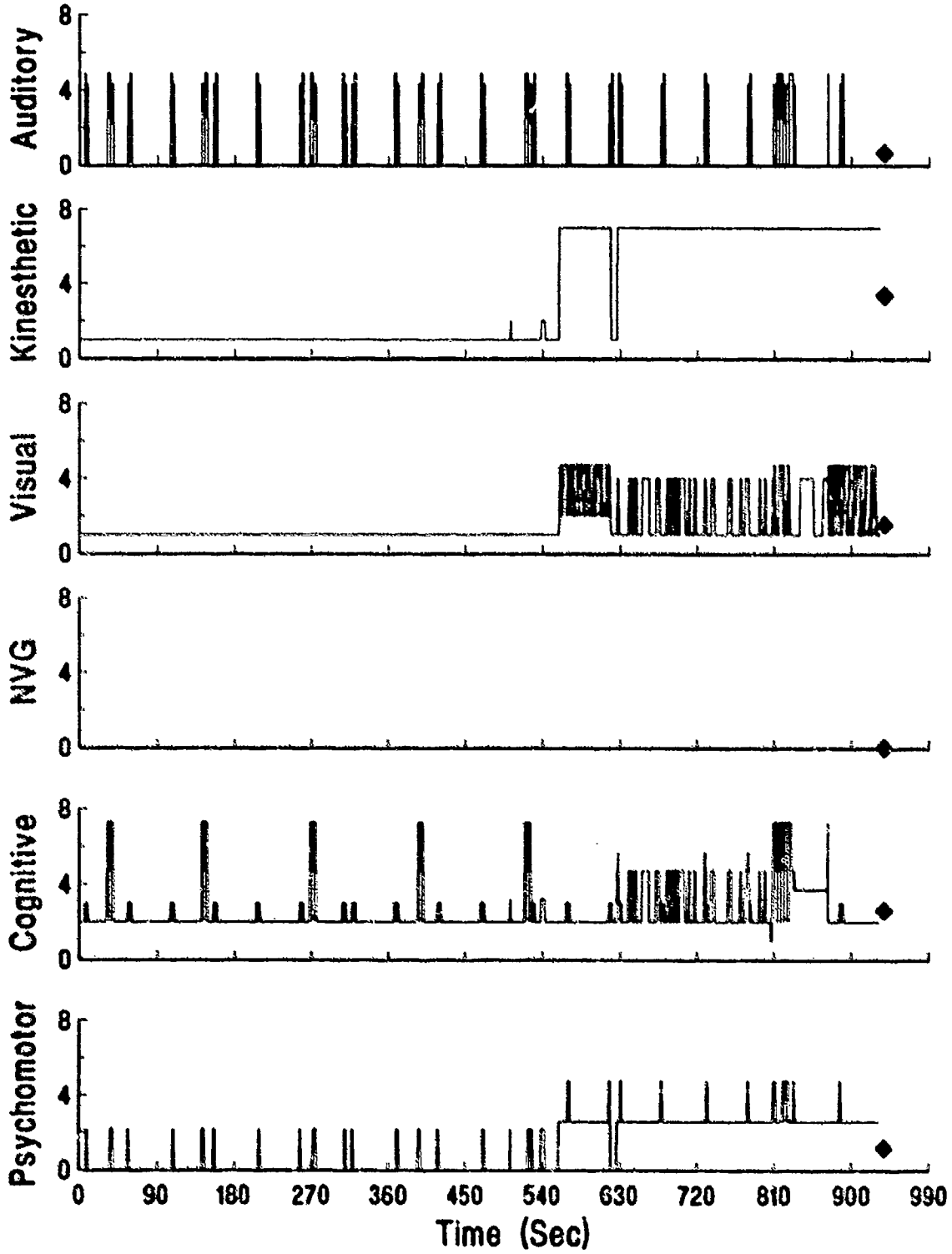
The MH-47E and CH-47D segments and functions used for the workload comparison are listed in Appendix N. The results of the comparisons are presented in Volume I of this report.

A P P E N D I X A

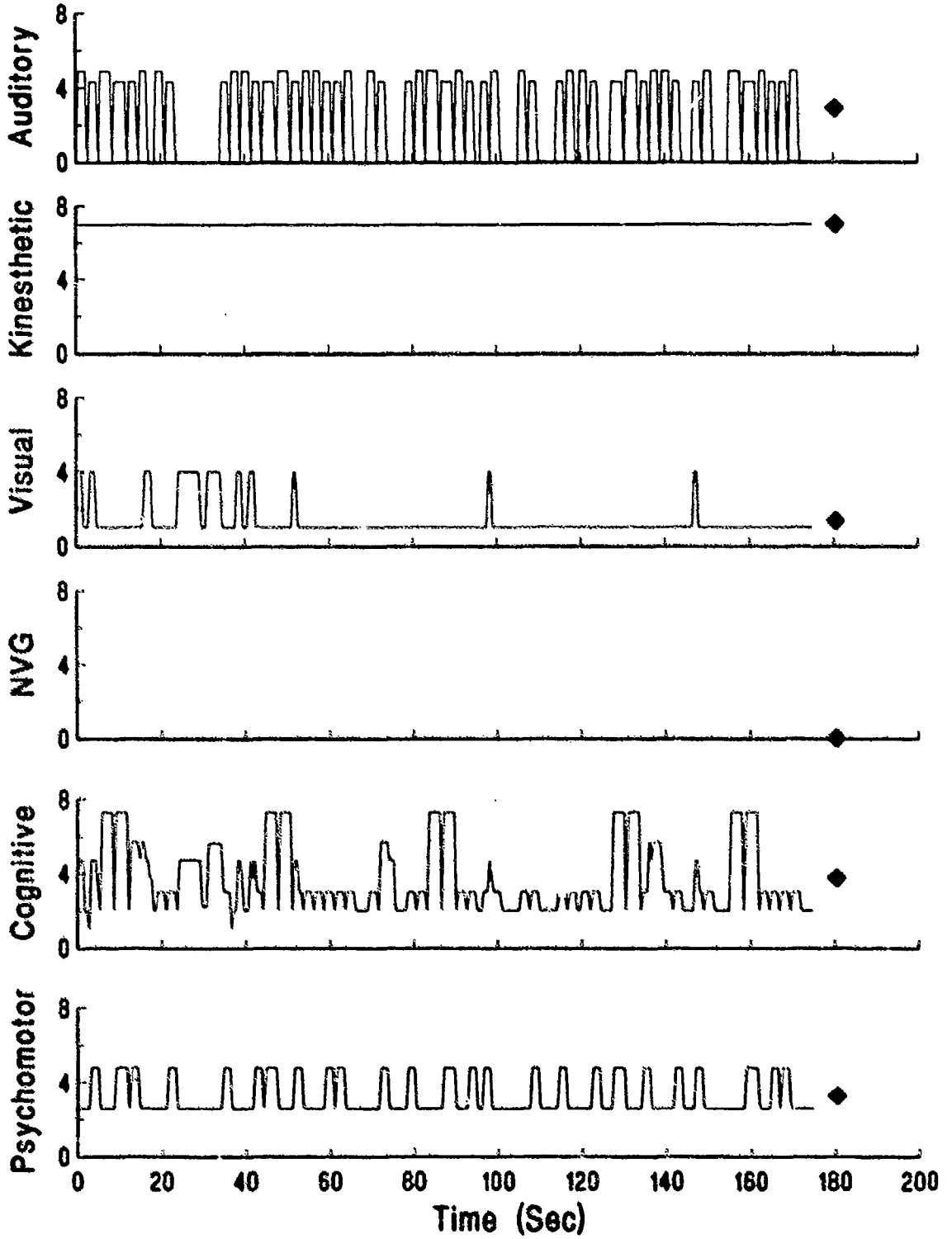
CH-47D PILOT WORKLOAD PREDICTION GRAPHS

This appendix contains the workload prediction graphs for the pilot for each of the 38 CH-47D segments. Each page displays the predicted pilot workload for one segment using six graphs, one for each workload component. The diamond at the end of each graph indicates the average component workload for the segment.

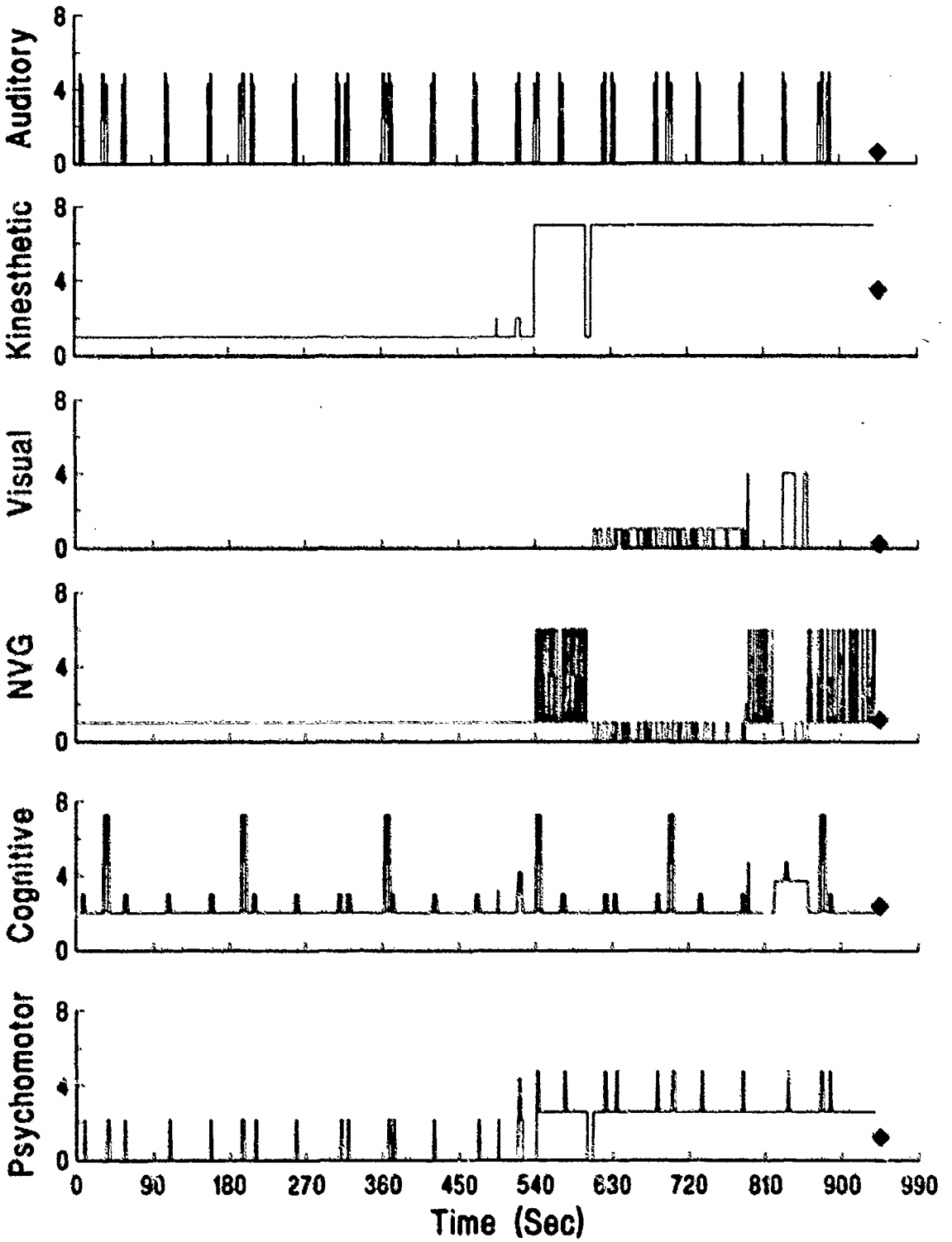
Segment 01: Before Takeoff (Assembly Area)
Pilot - CH-47D



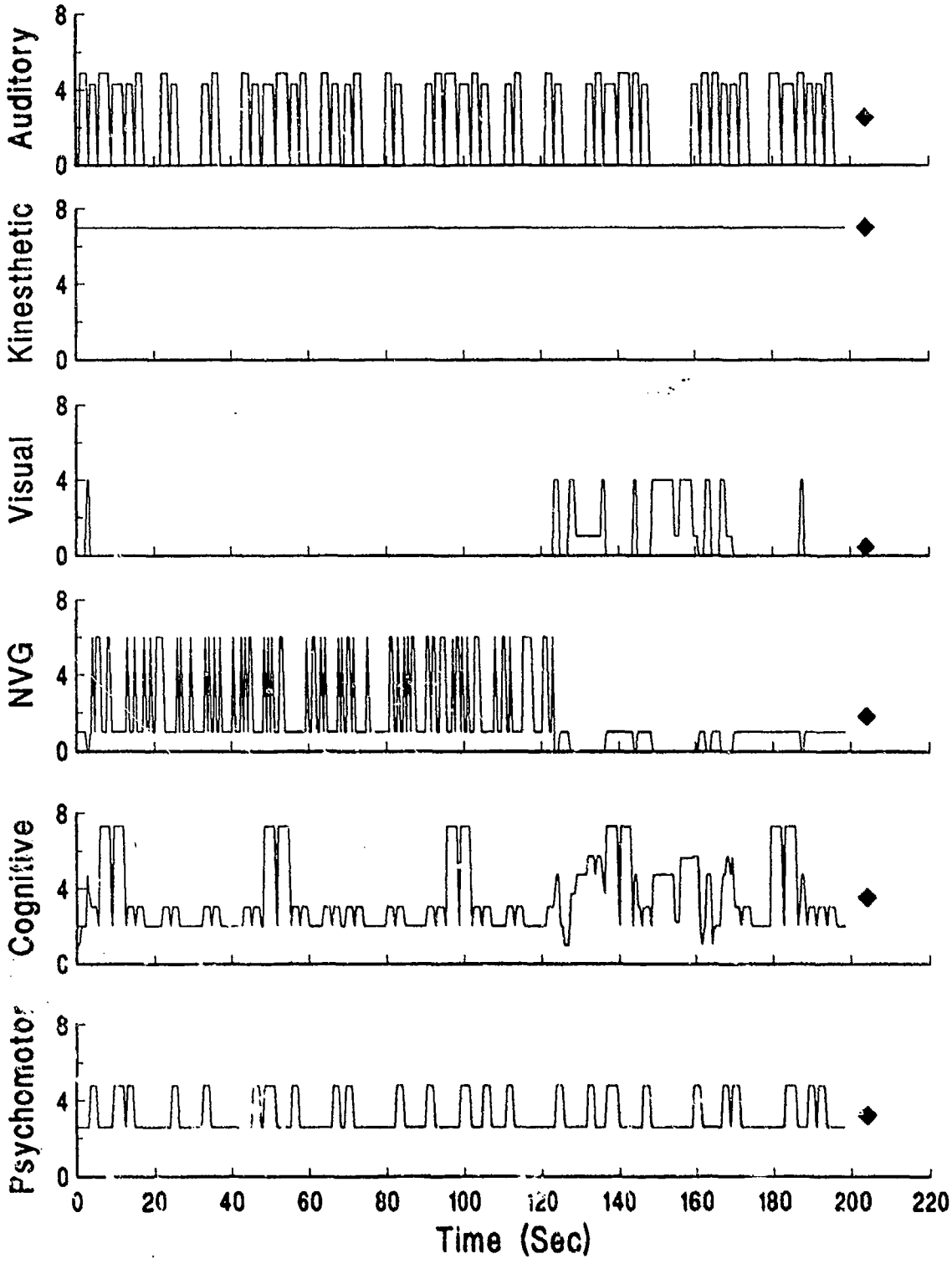
Segment 02: Takeoff (Assembly Area)
Pilot - CH-47D



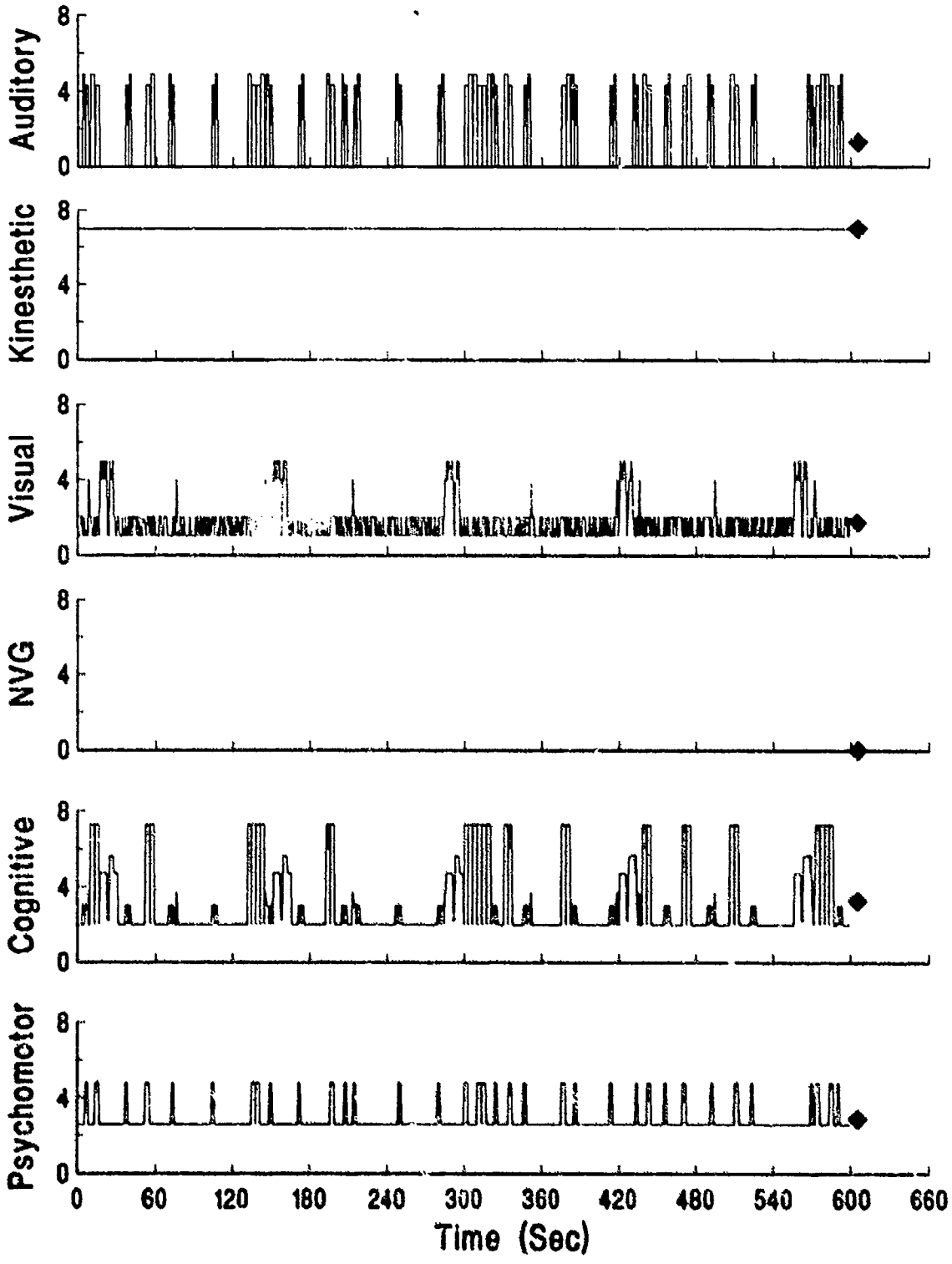
Segment 03: Before Takeoff (Assembly Area) [NVG]
Pilot - CH-47D



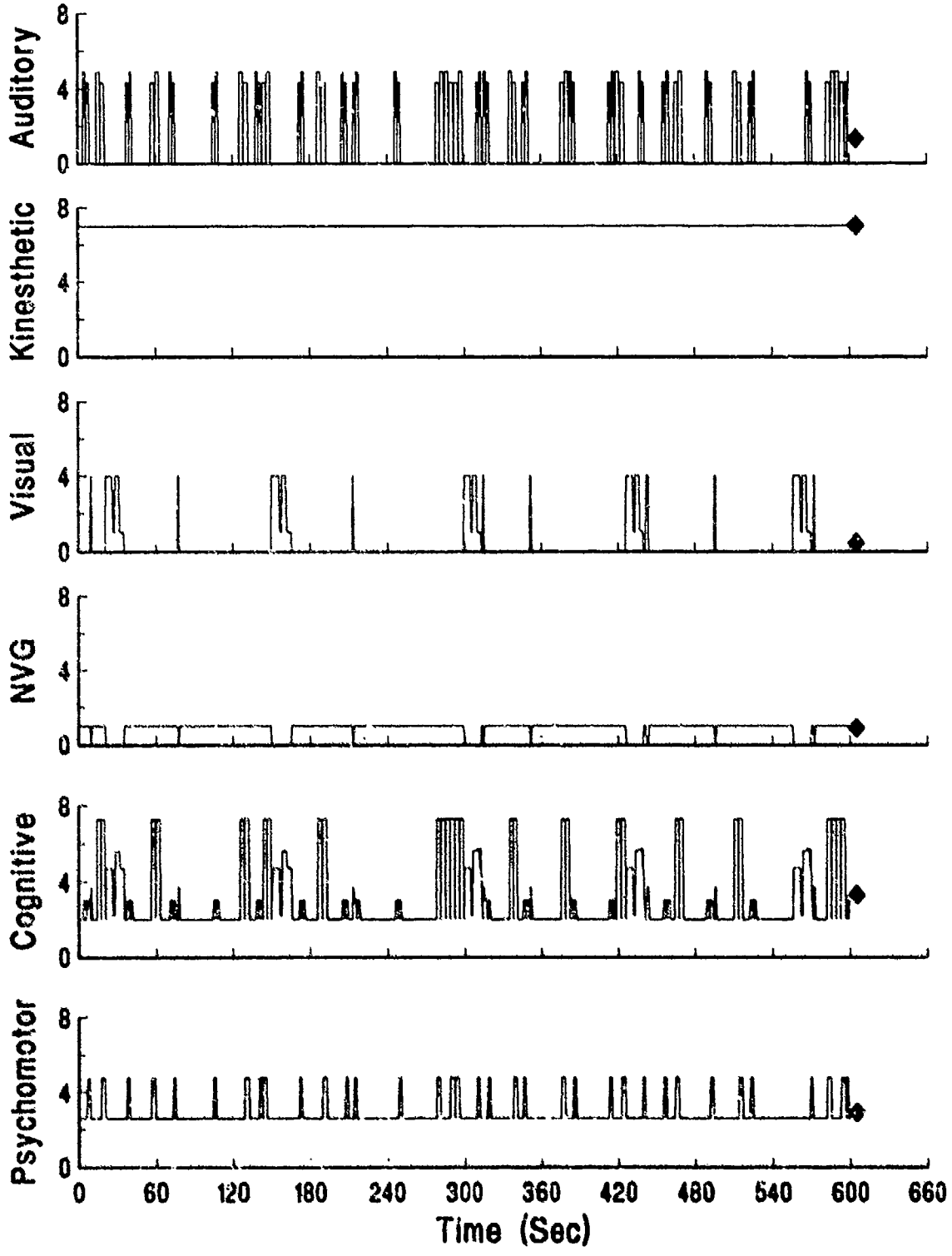
Segment 04: Takeoff (Assembly Area) [NVG]
Pilot - CH-47D



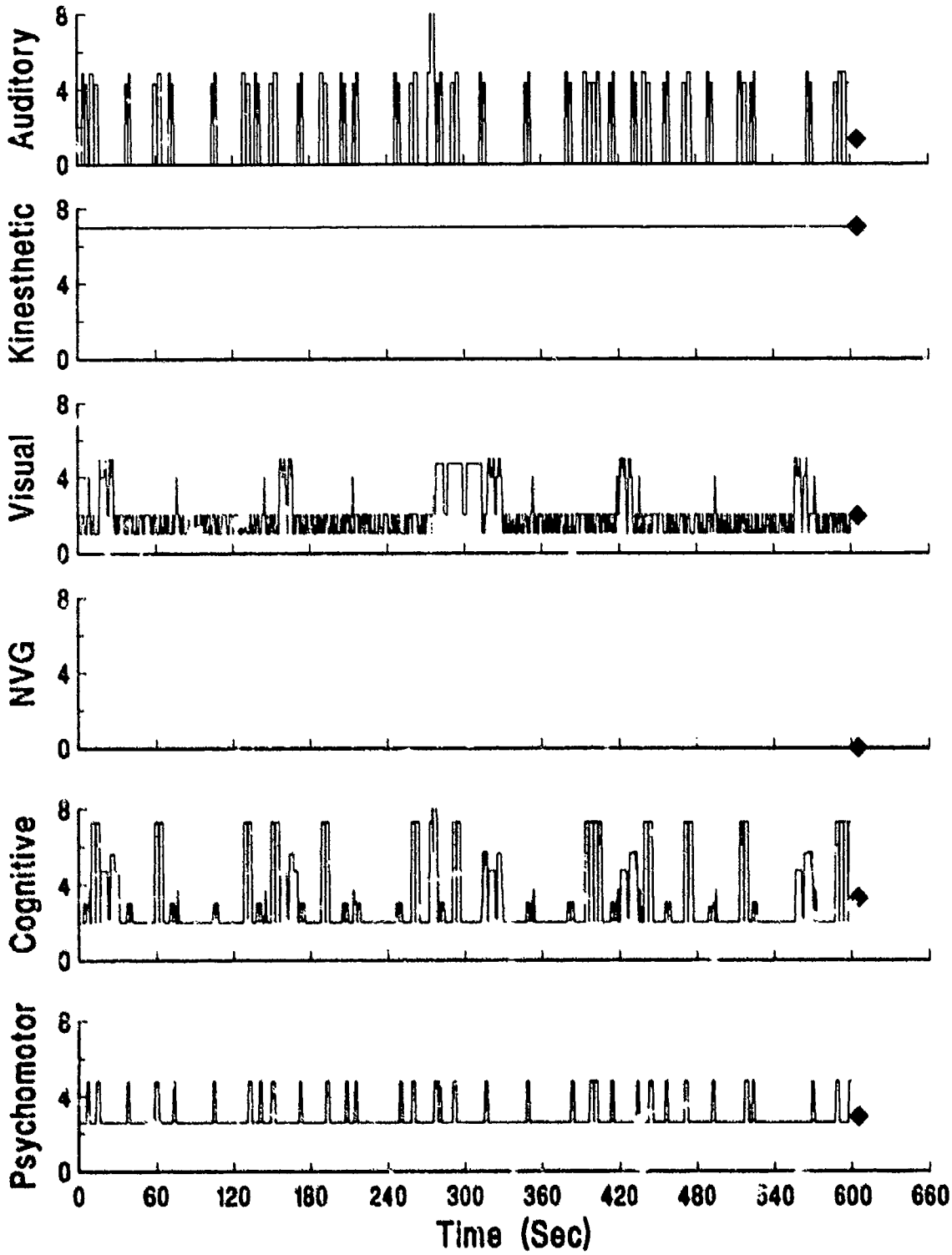
Segment 05: Contour Flight
Pilot - CH-47D



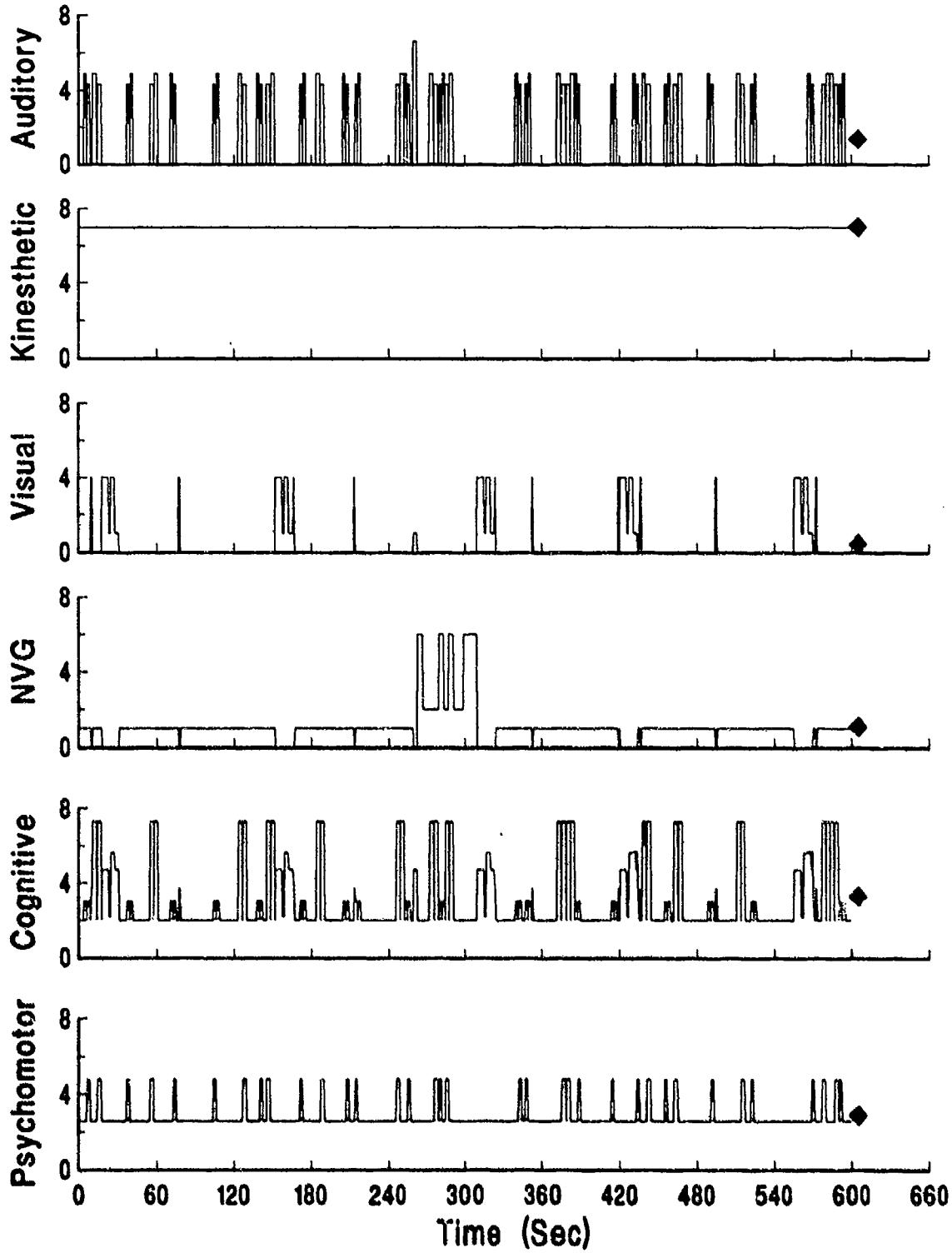
Segment 06: Contour Flight [NVG]
Pilot - CH-47D



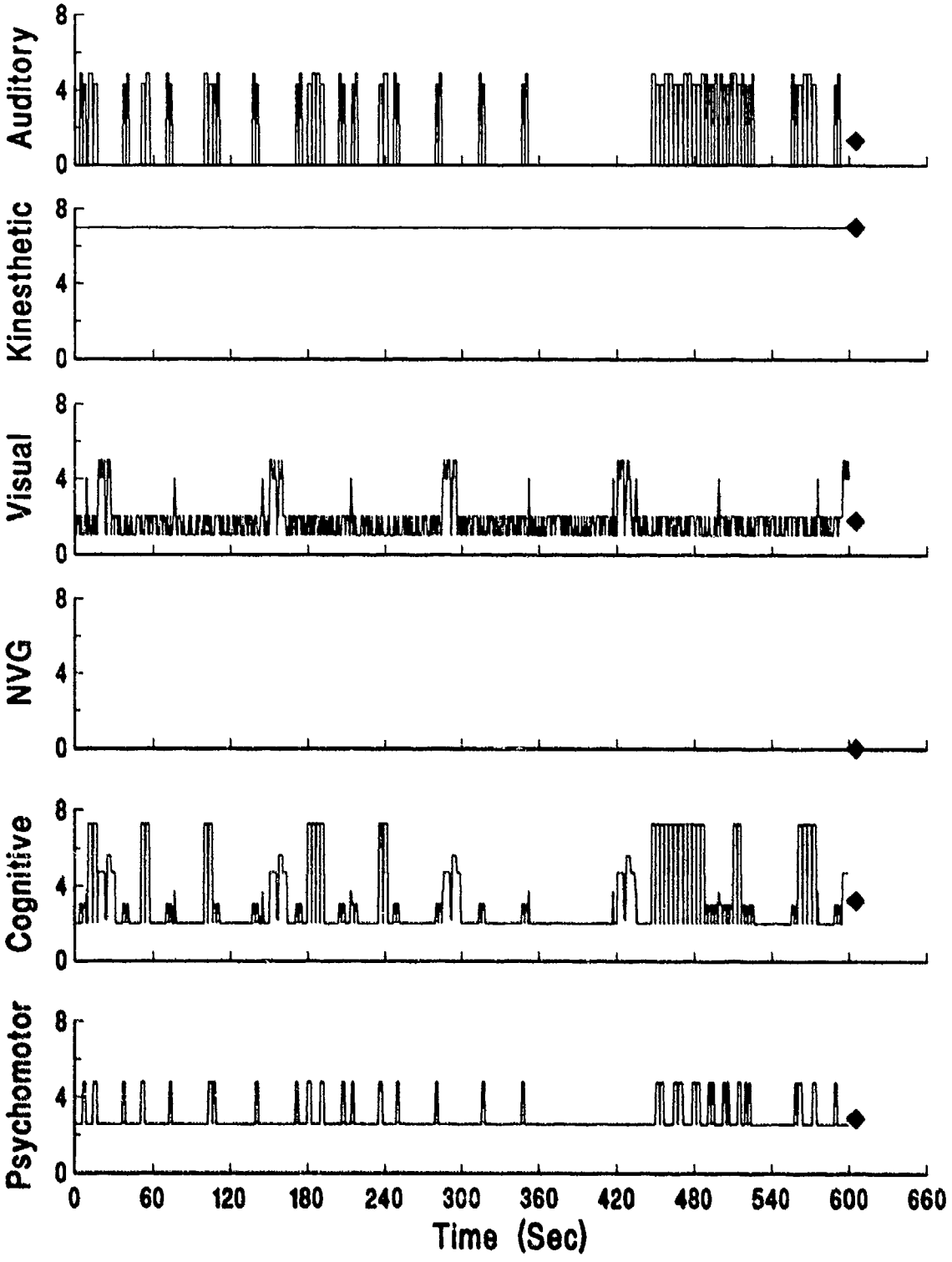
Segment 07: Contour Flight (Threat)
Pilot - CH-47D



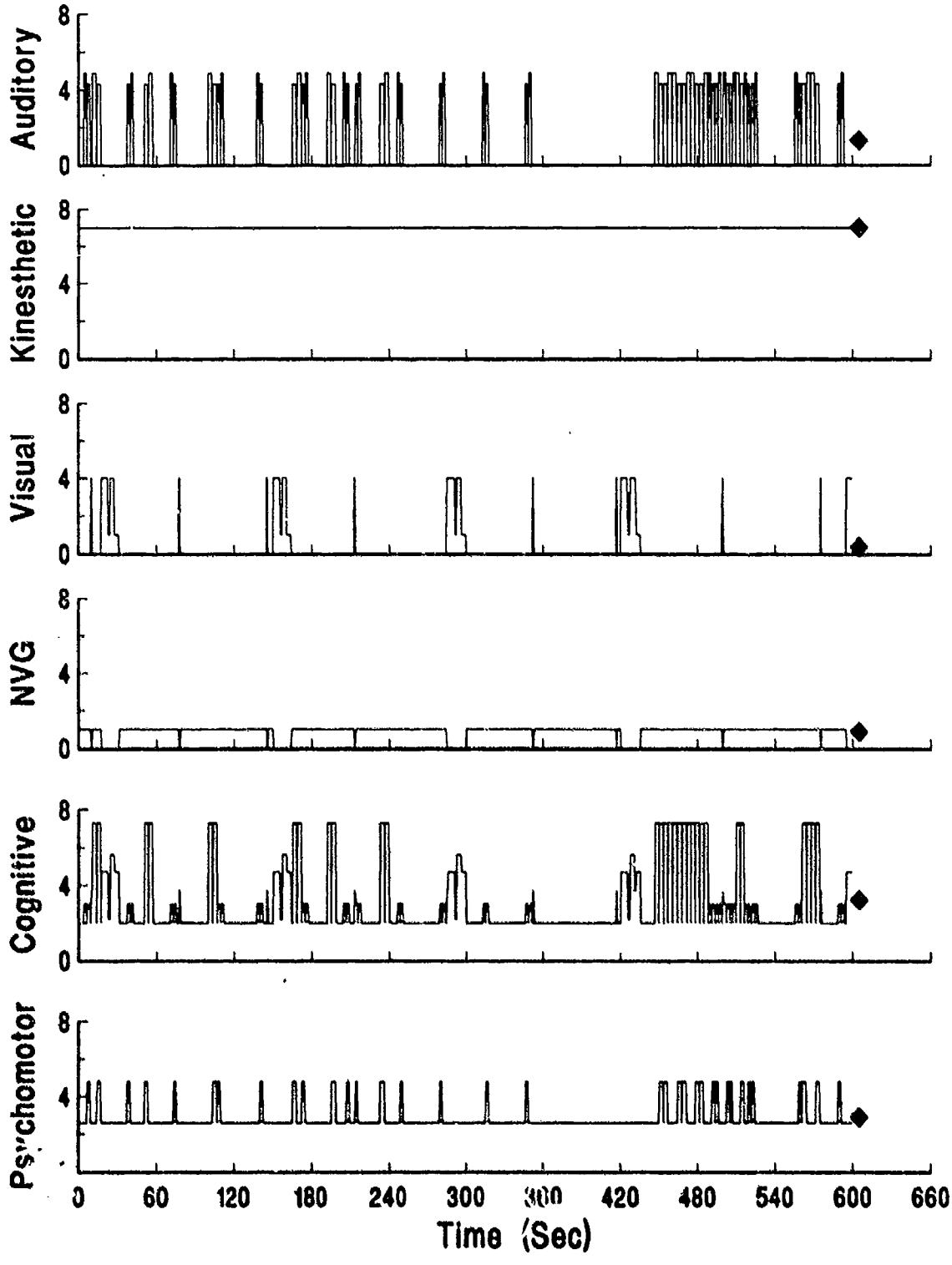
Segment 08: Contour Flight (Threat) [NVG]
Pilot - CH-47D



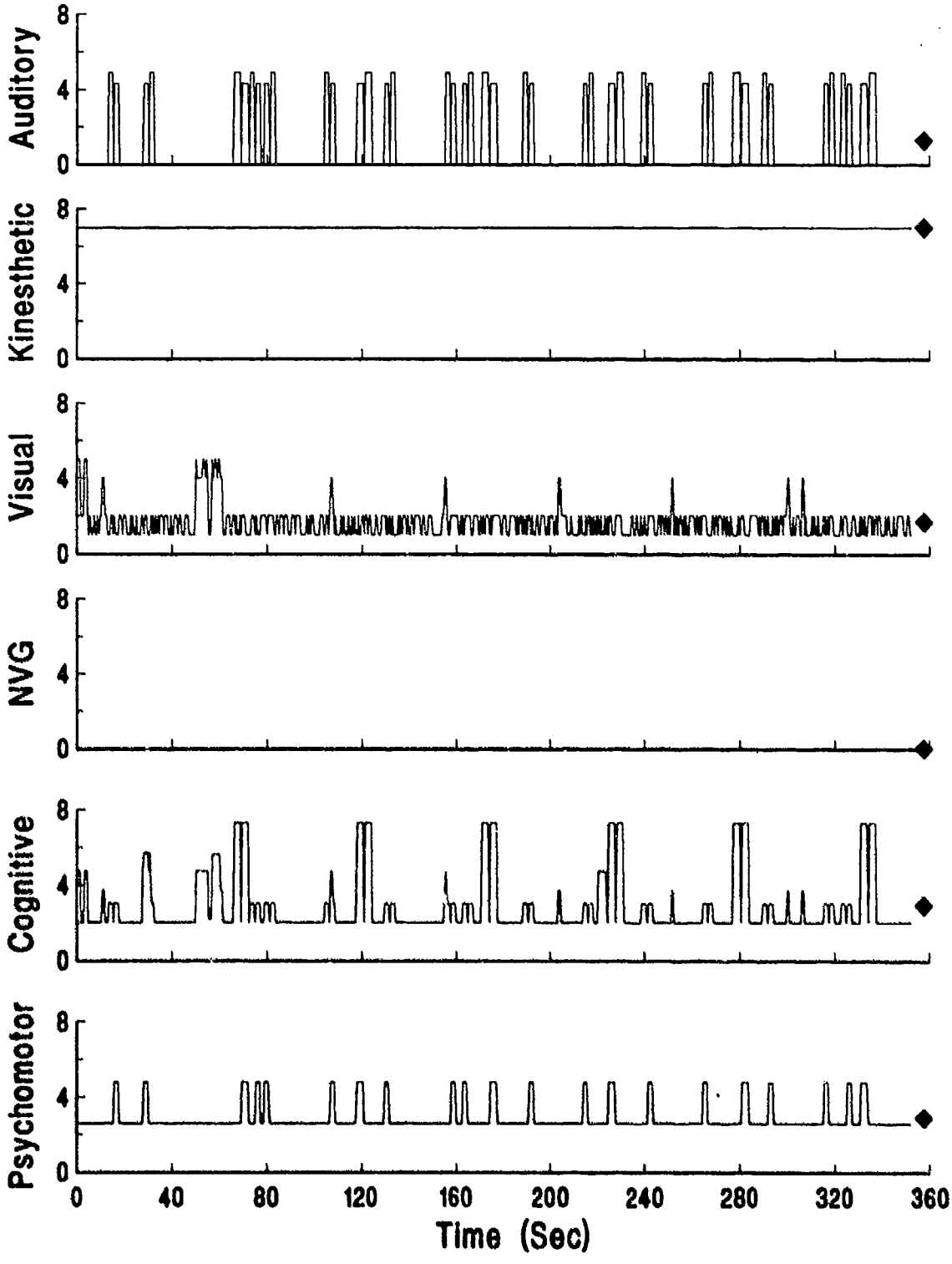
Segment 09: Contour Flight (Mission Change)
Pilot - CH-47D



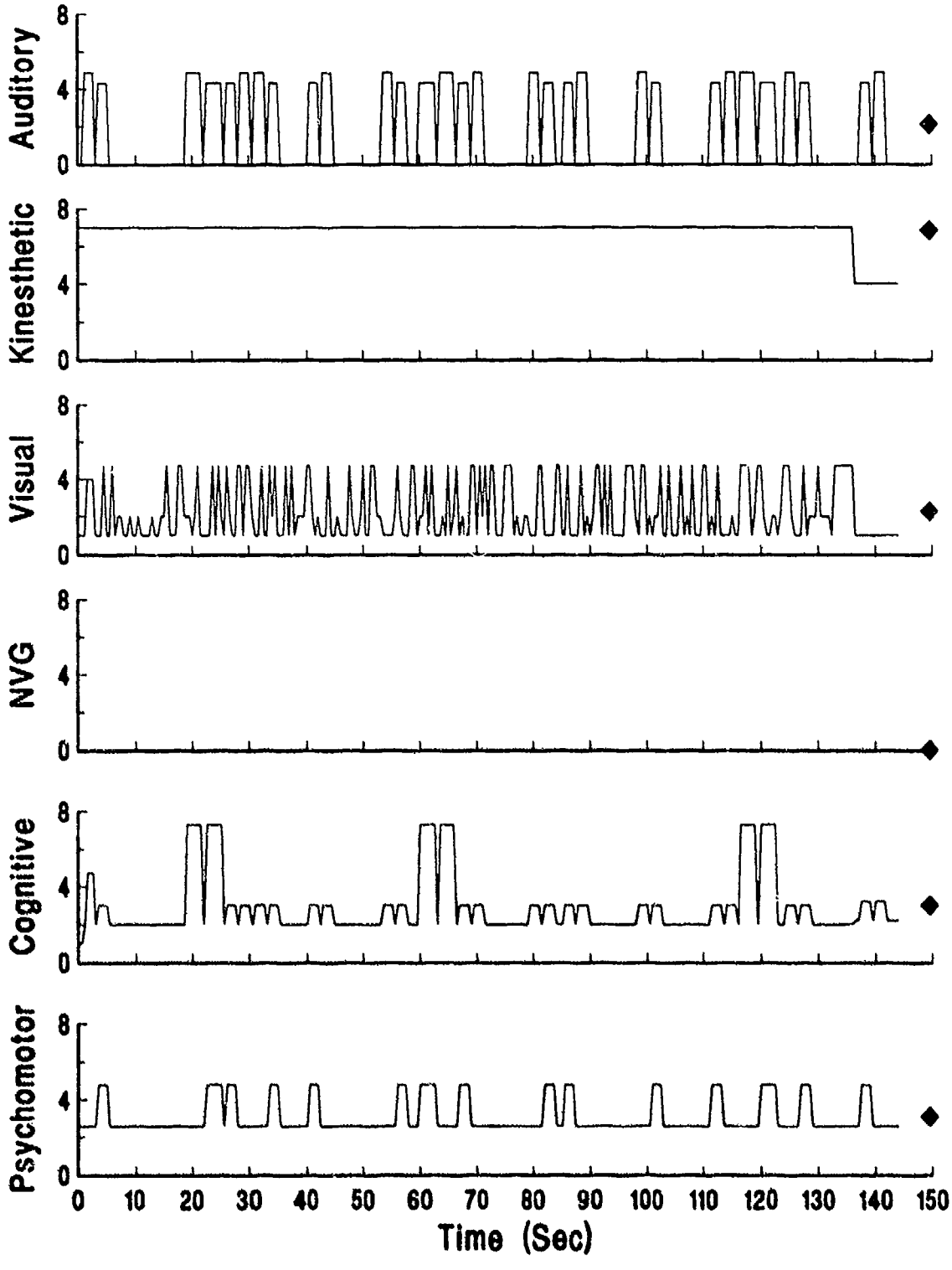
Segment 10: Contour Flight (Mission Change) [NVG]
Pilot - CH-47D



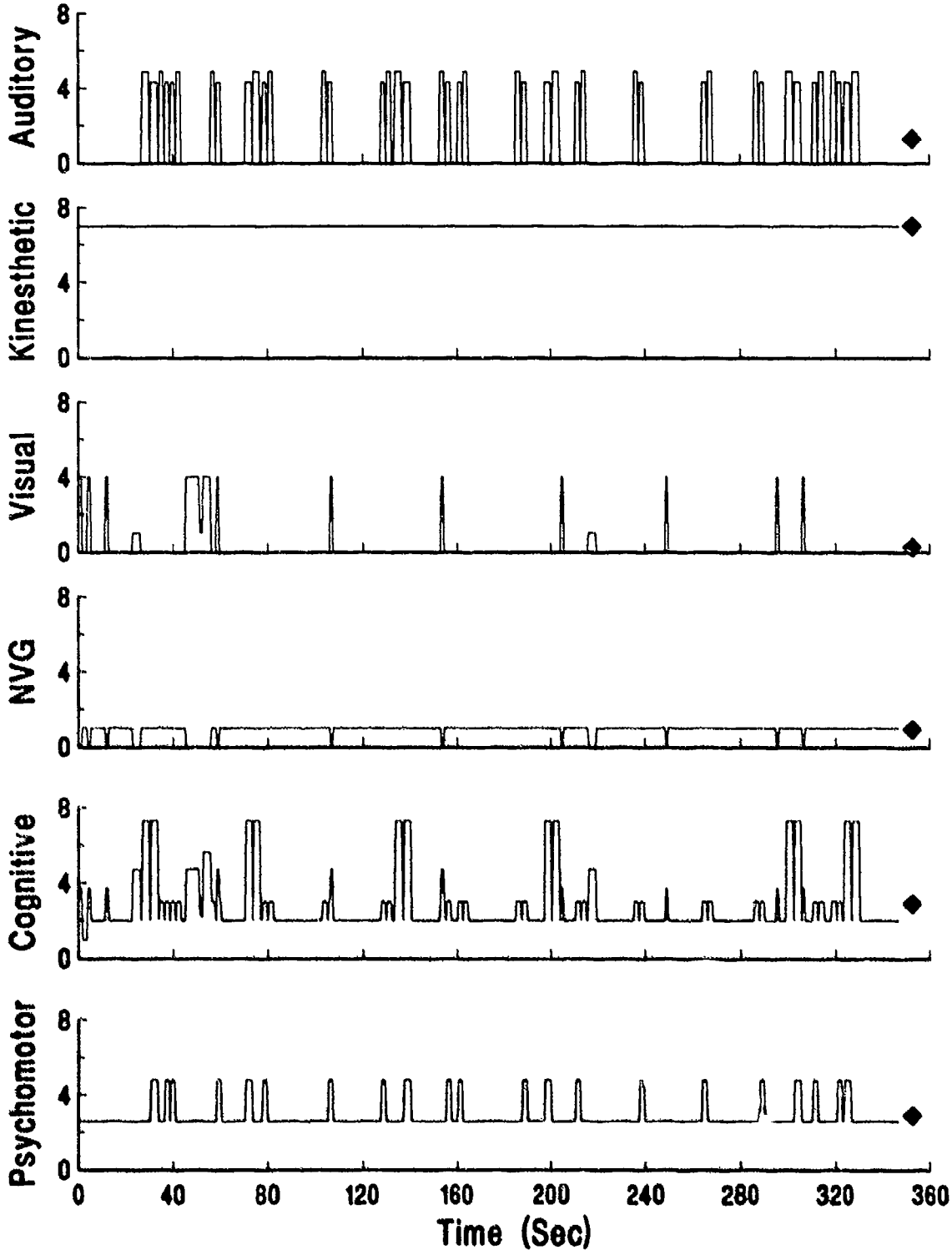
Segment 11: Approach
Pilot - CH-47D



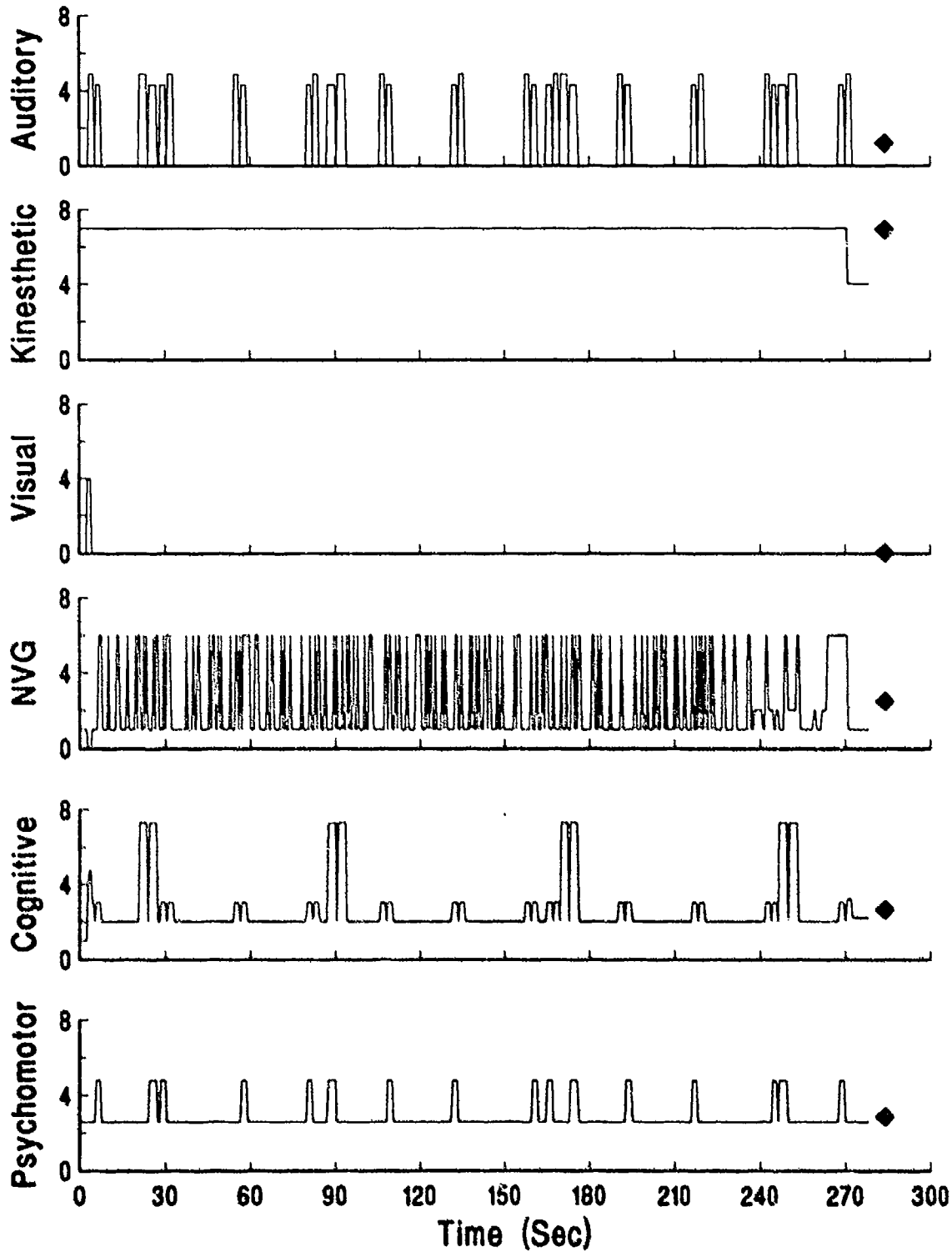
Segment 12: Landing
Pilot - CH-47D



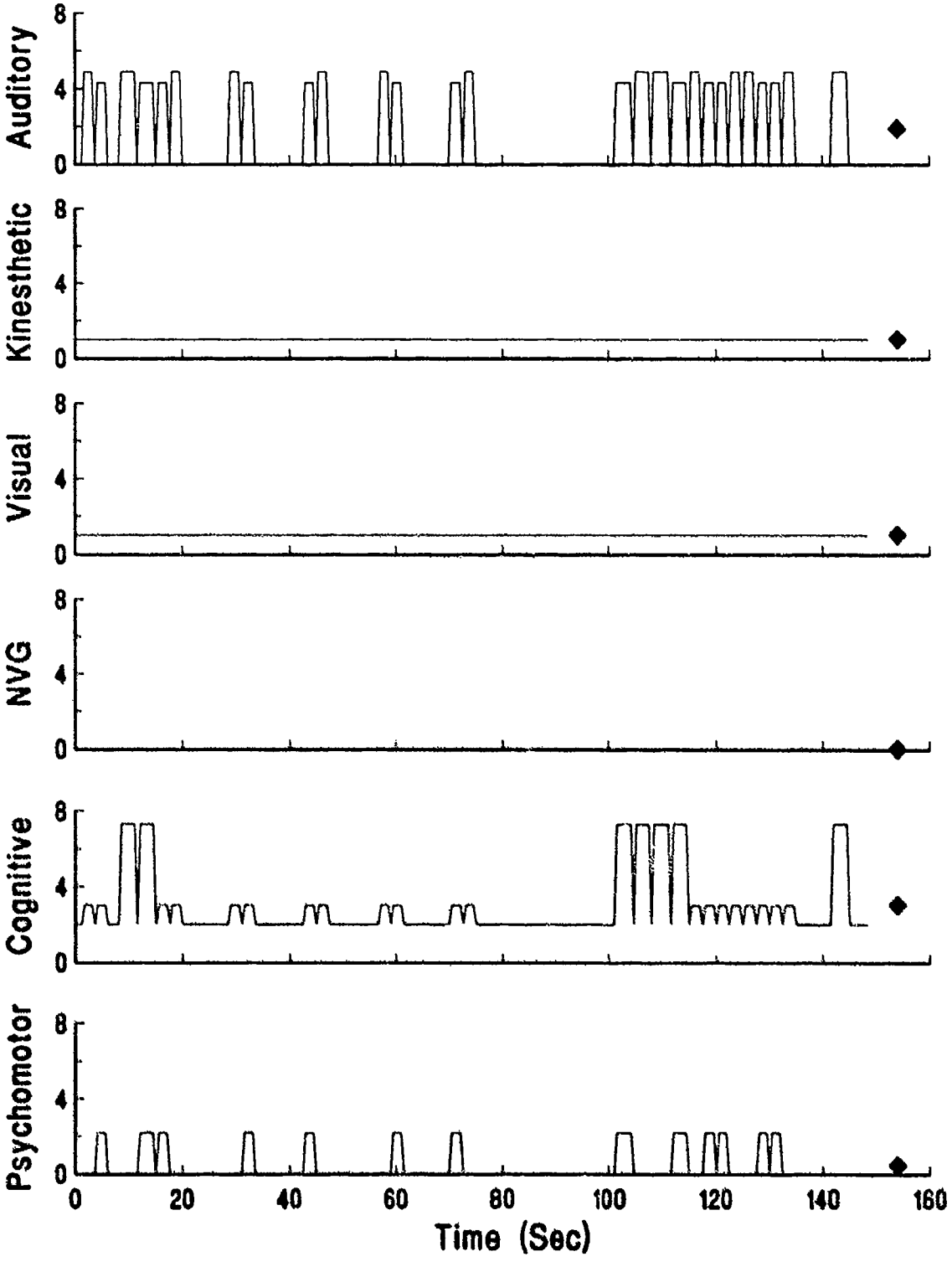
Segment 13: Approach [NVG]
Pilot - CH-47D



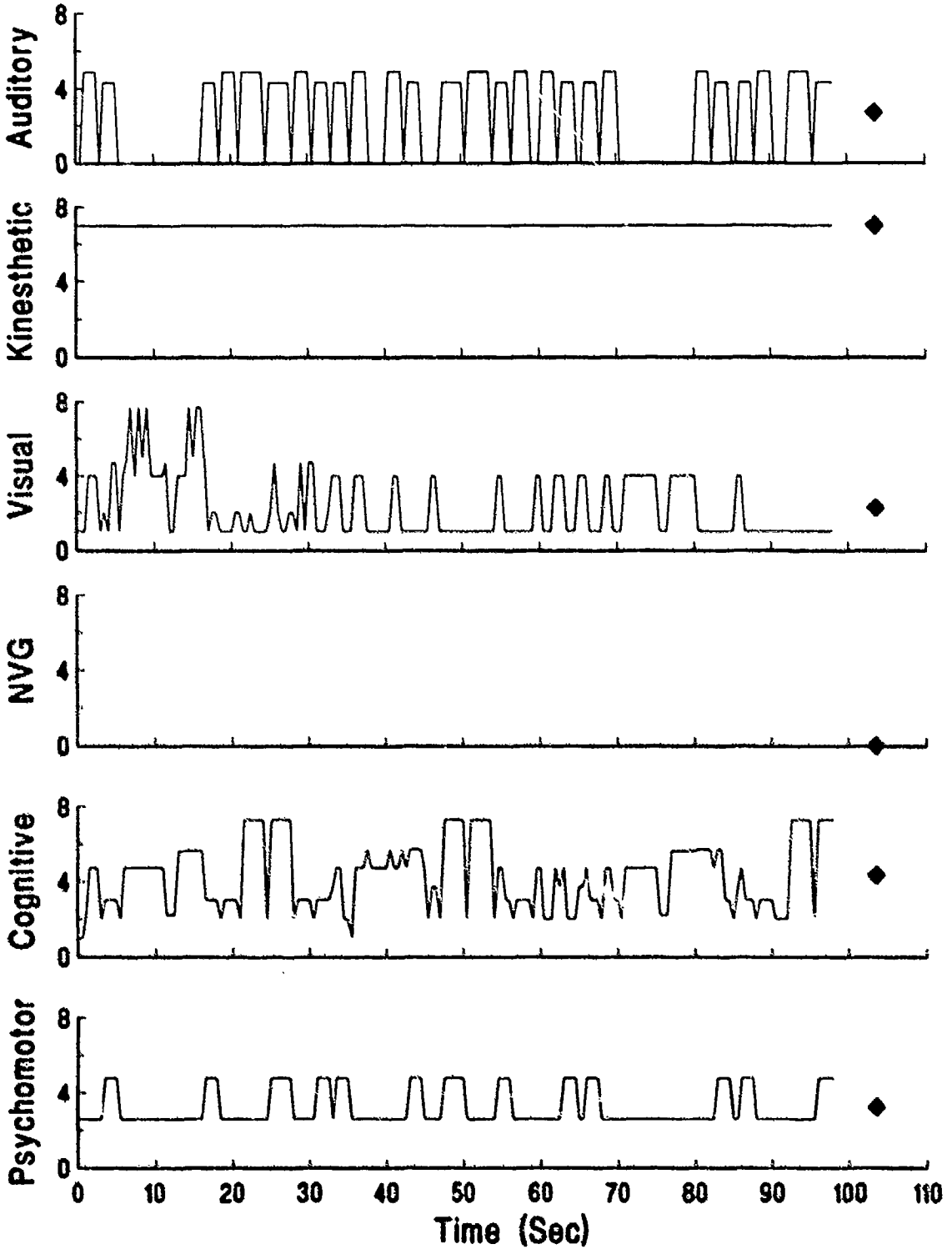
Segment 14: Landing [NVG]
Pilot - CH-47D



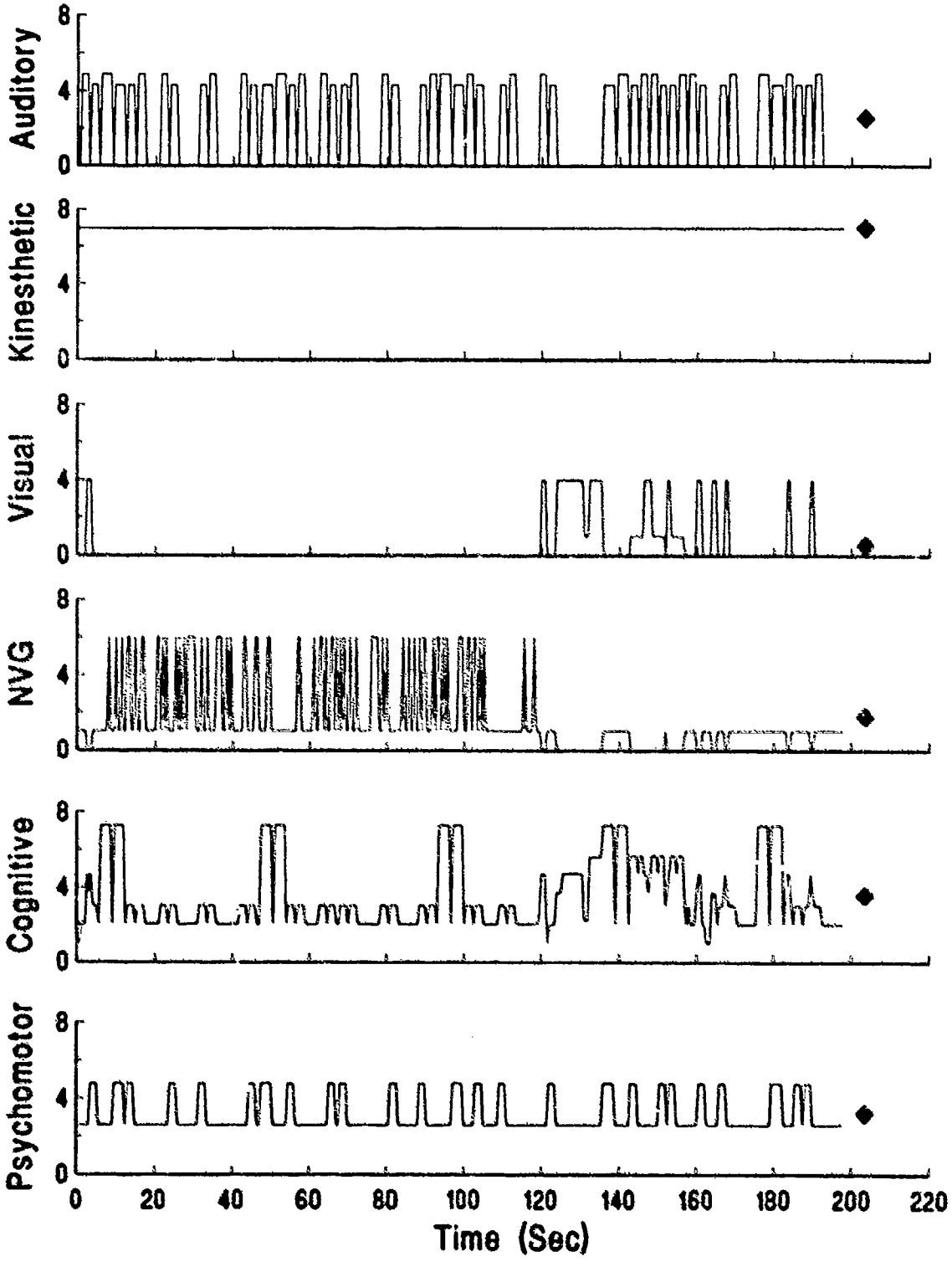
Segment 15: Before Takeoff (Internal Load)
Pilot - CH-47D



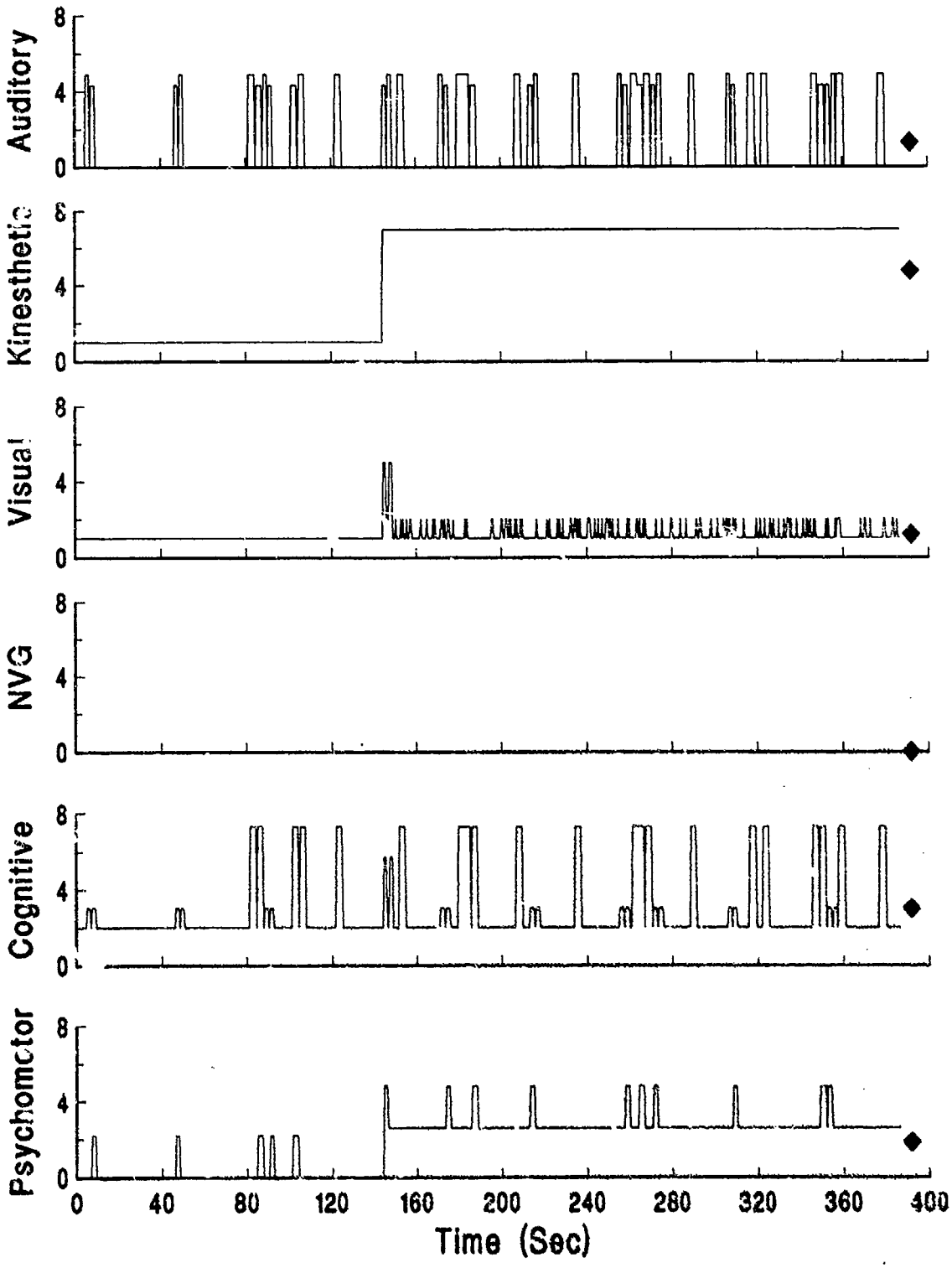
Segment 16: Takeoff
Pilot - CH-47D



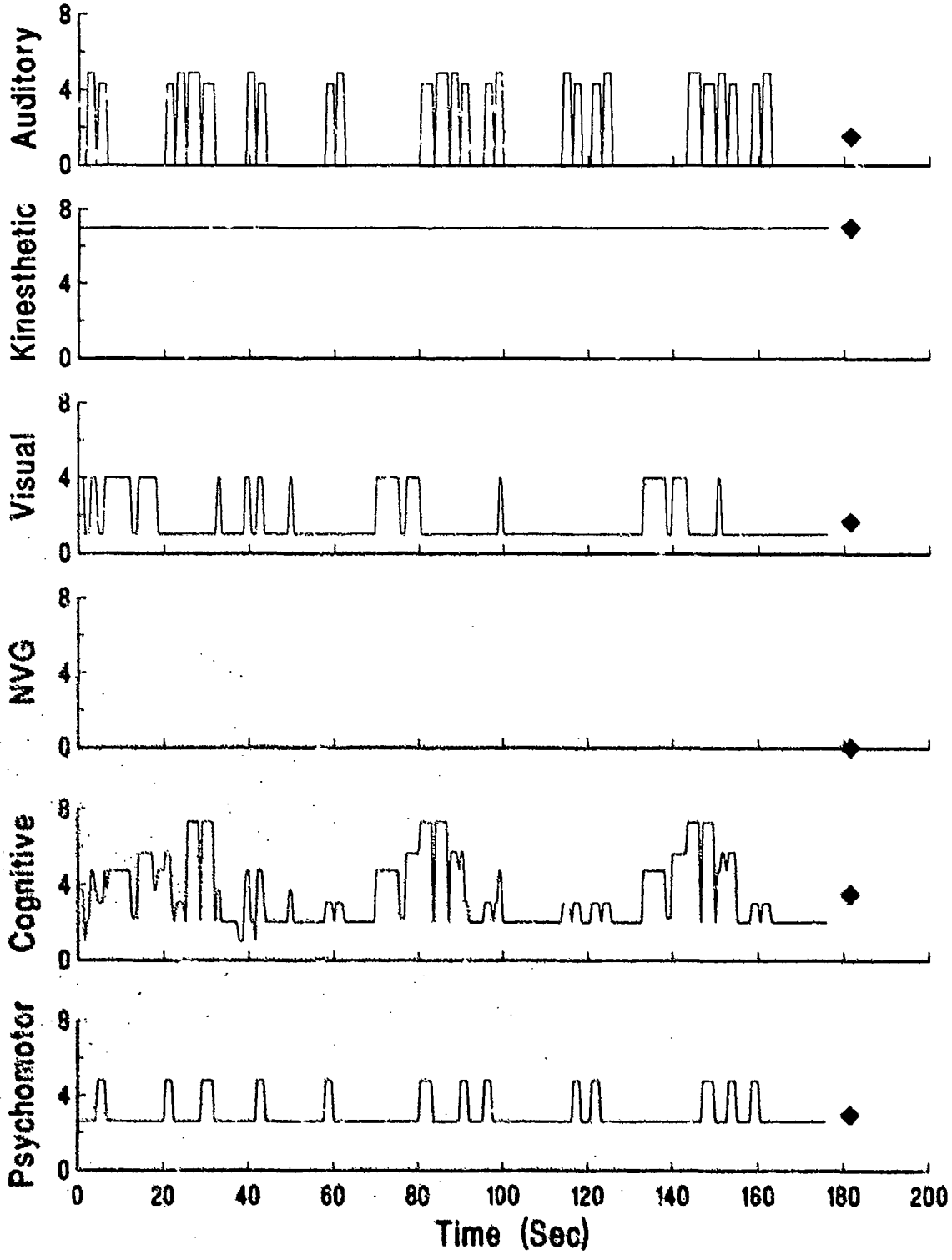
Segment 17: Takeoff [NVG]
Pilot - CH-47D



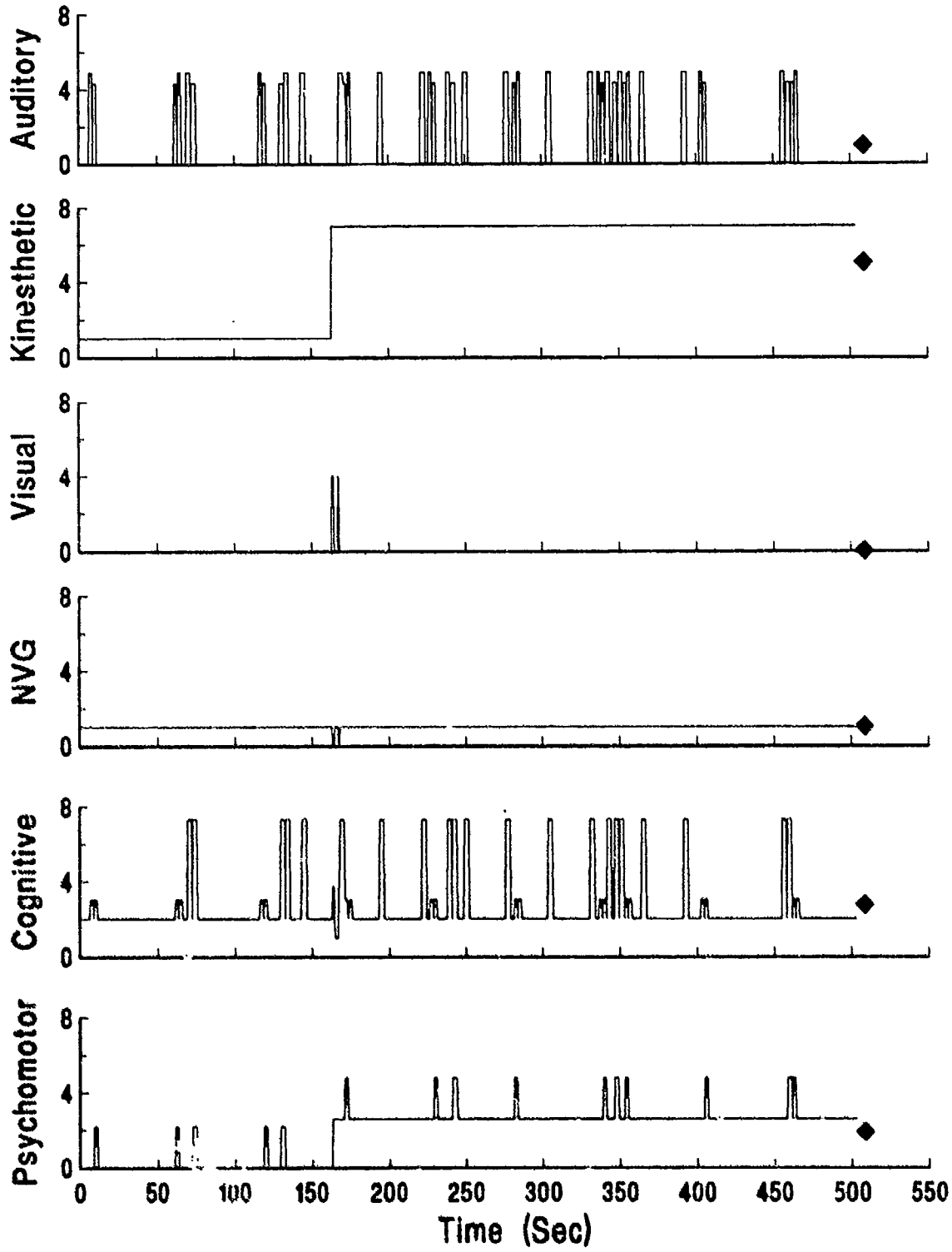
Segment 18: Before Takeoff (External Load)
Pilot - CH-47D



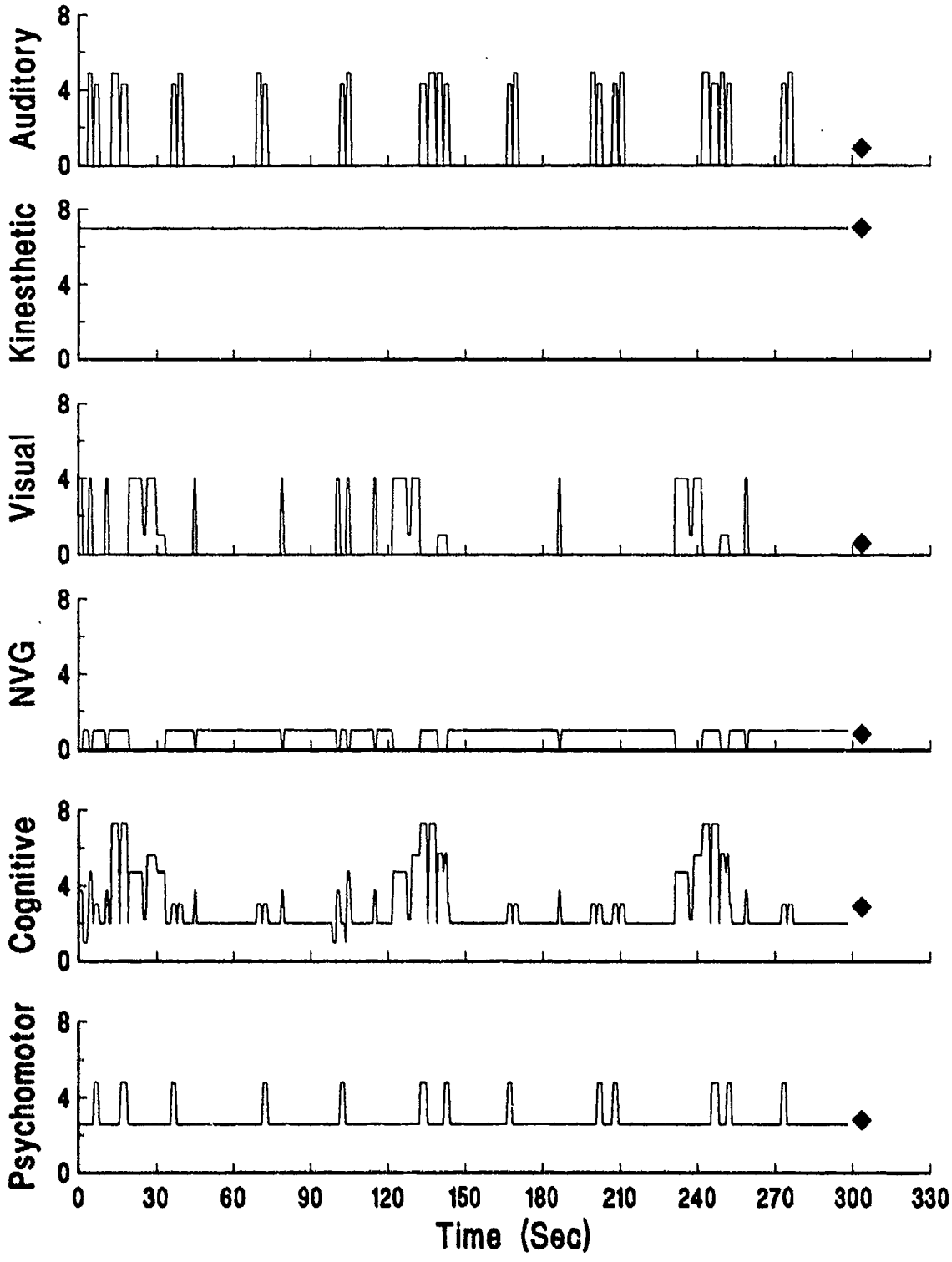
Segment 19: Takeoff (External)
Pilot - CH-47D



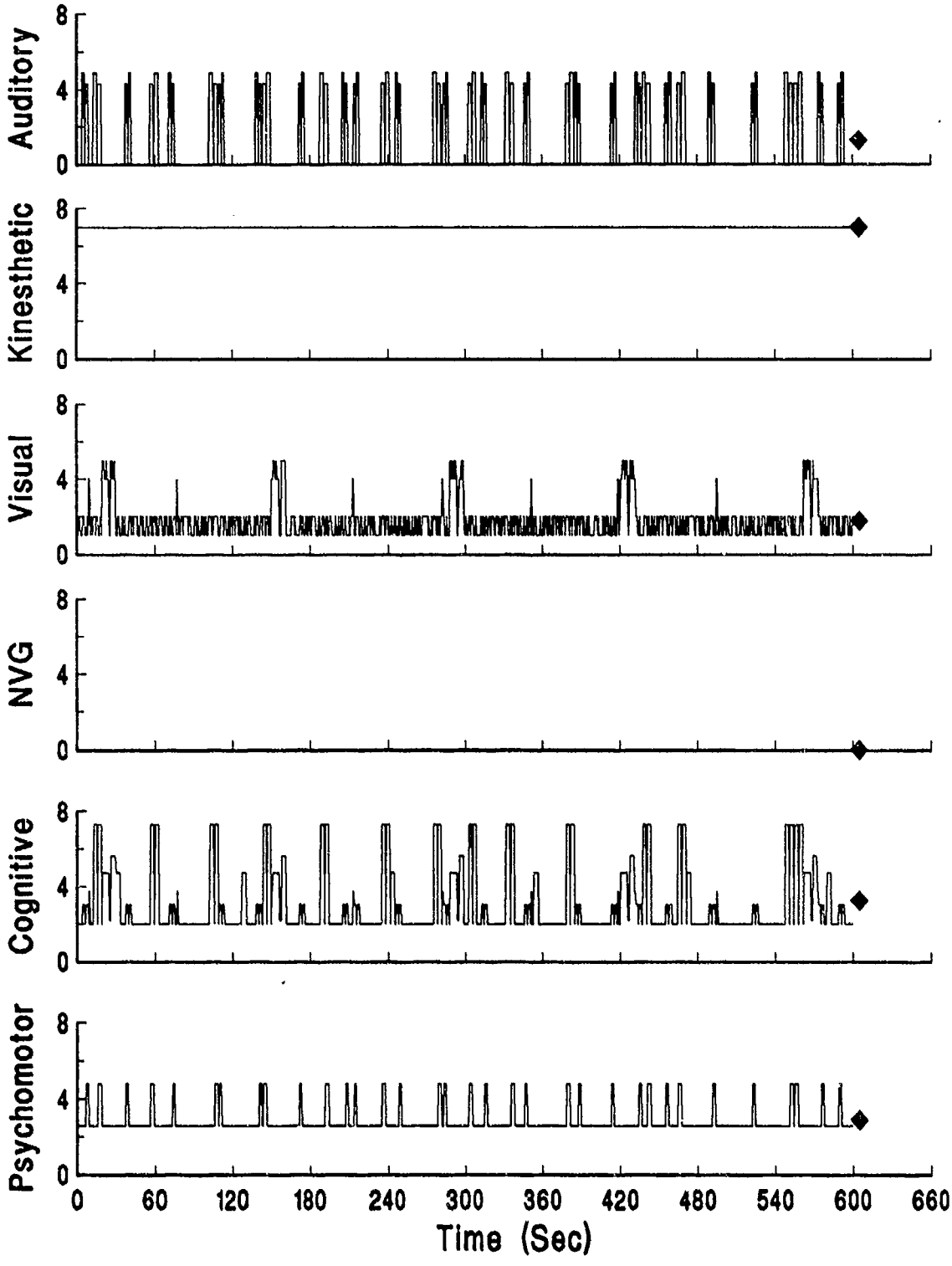
Segment 20: Before Takeoff (External Load) [NVG]
Pilot - CH-47D



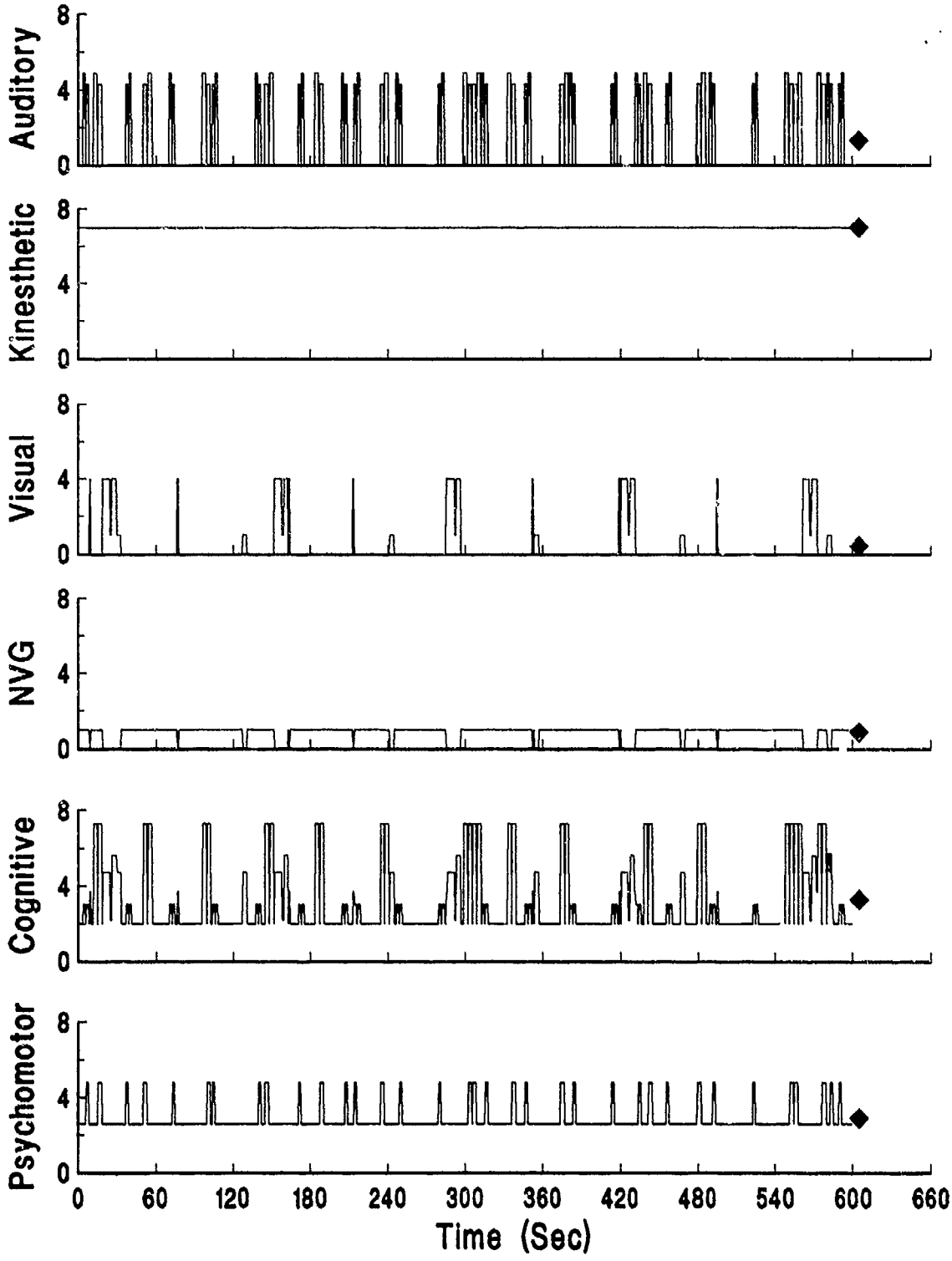
Segment 21: Takeoff (External) [NVG]
Pilot - CH-47D



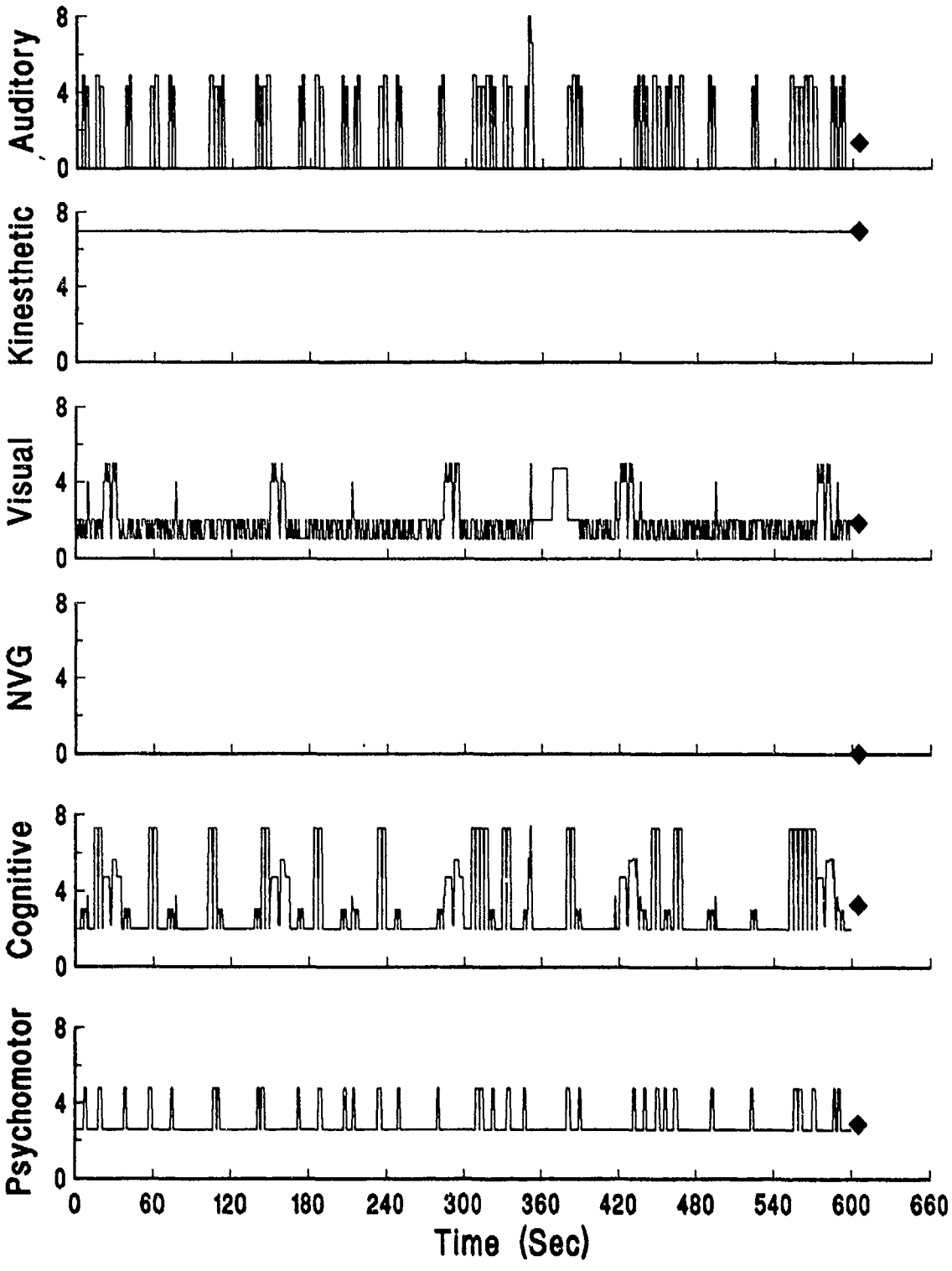
Segment 22: NOE Flight
Pilot - CH-47D



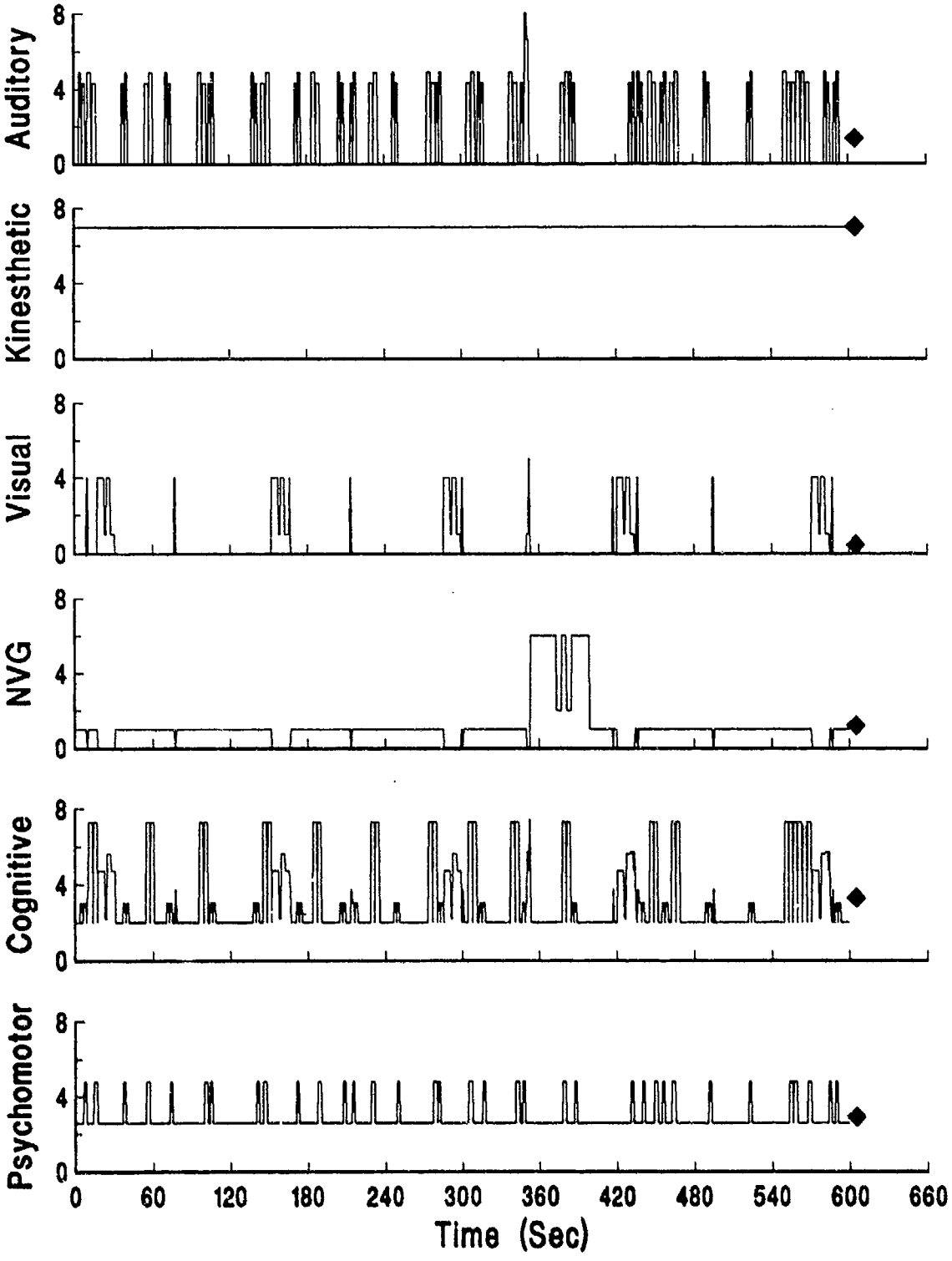
Segment 23: NOE Flight [NVG]
Pilot - CH-47D



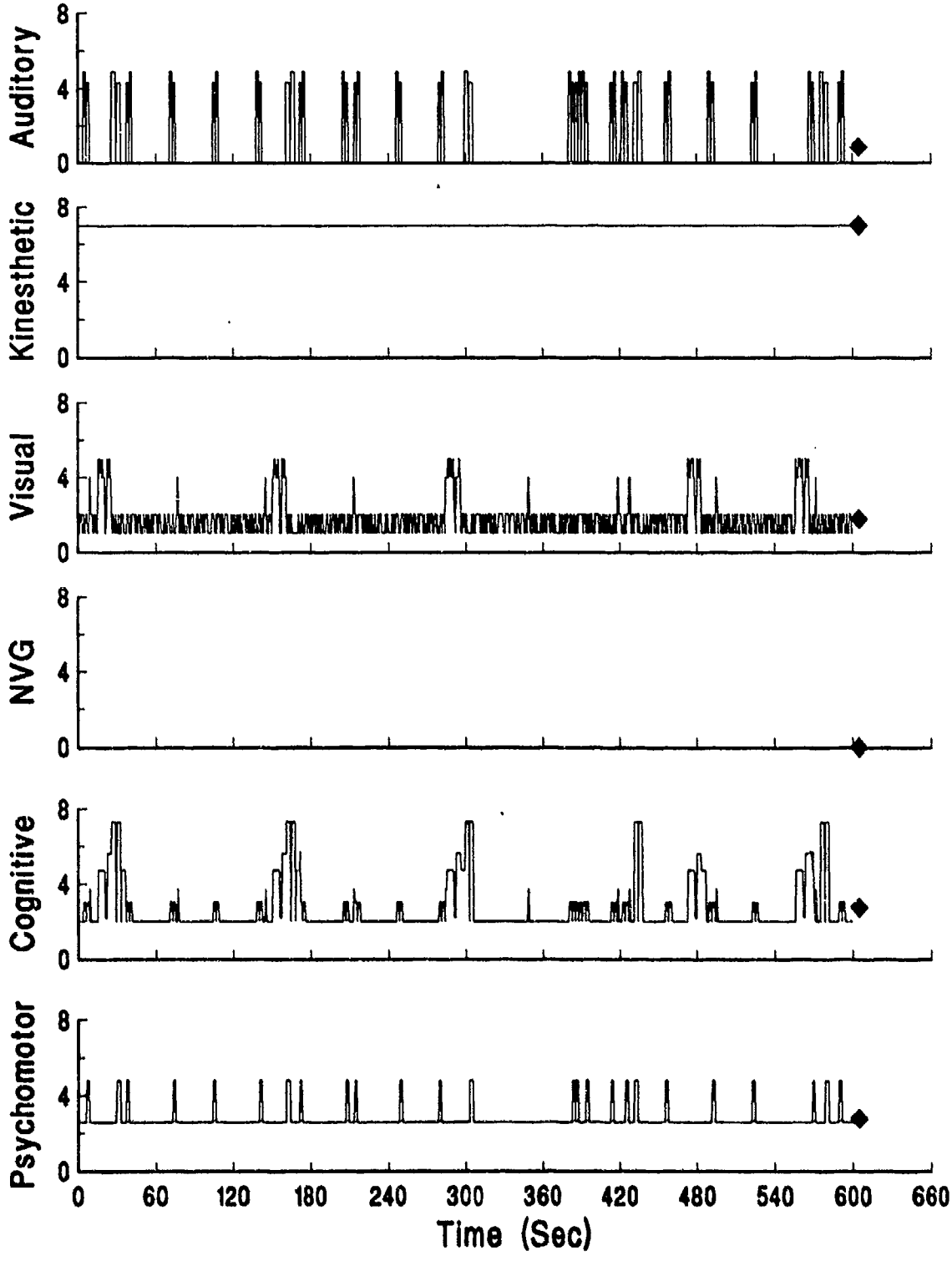
Segment 24: NOE Flight (Threat)
Pilot - CH-47D



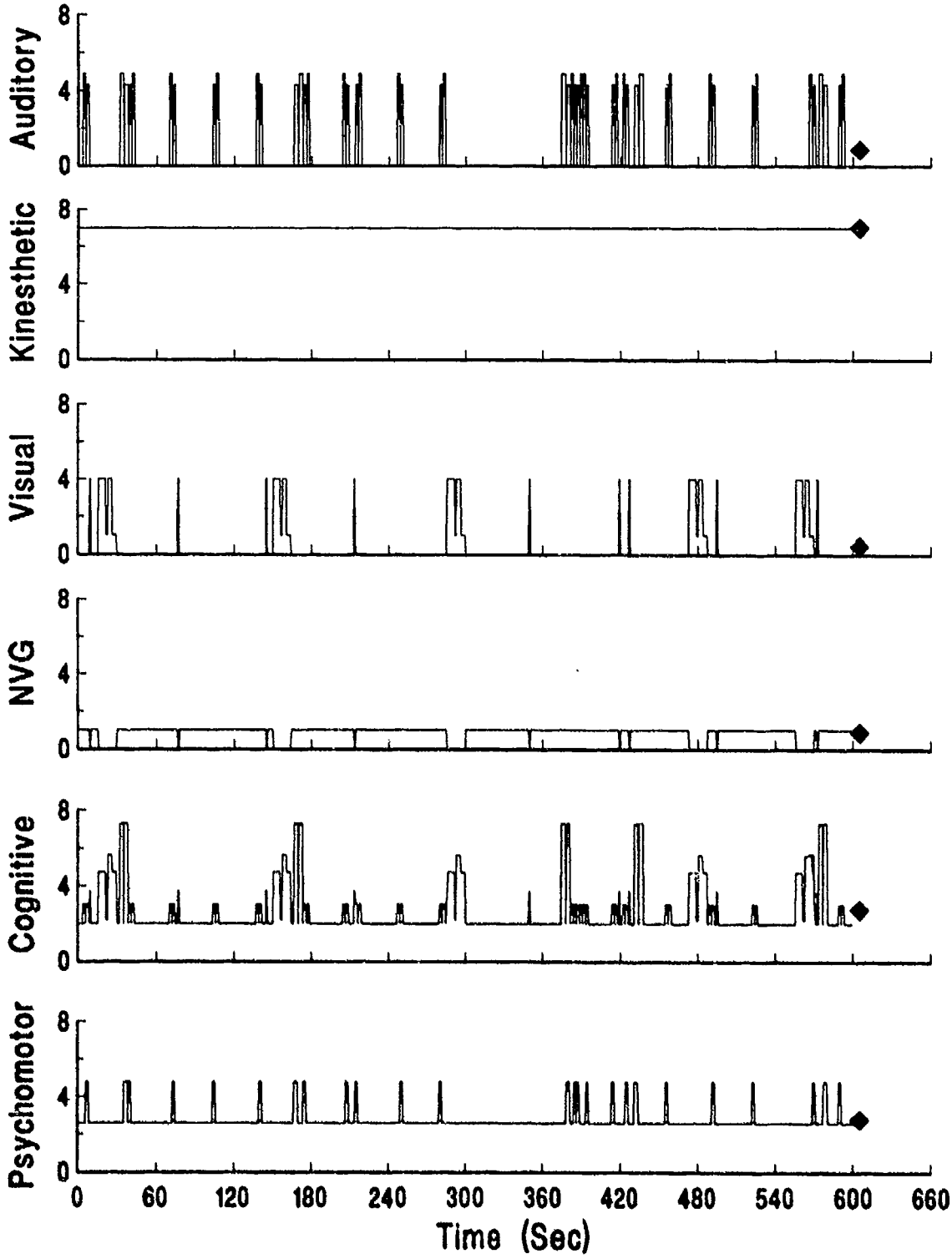
Segment 25: NOE Flight (Threat) [NVG]
Pilot - CH-47D



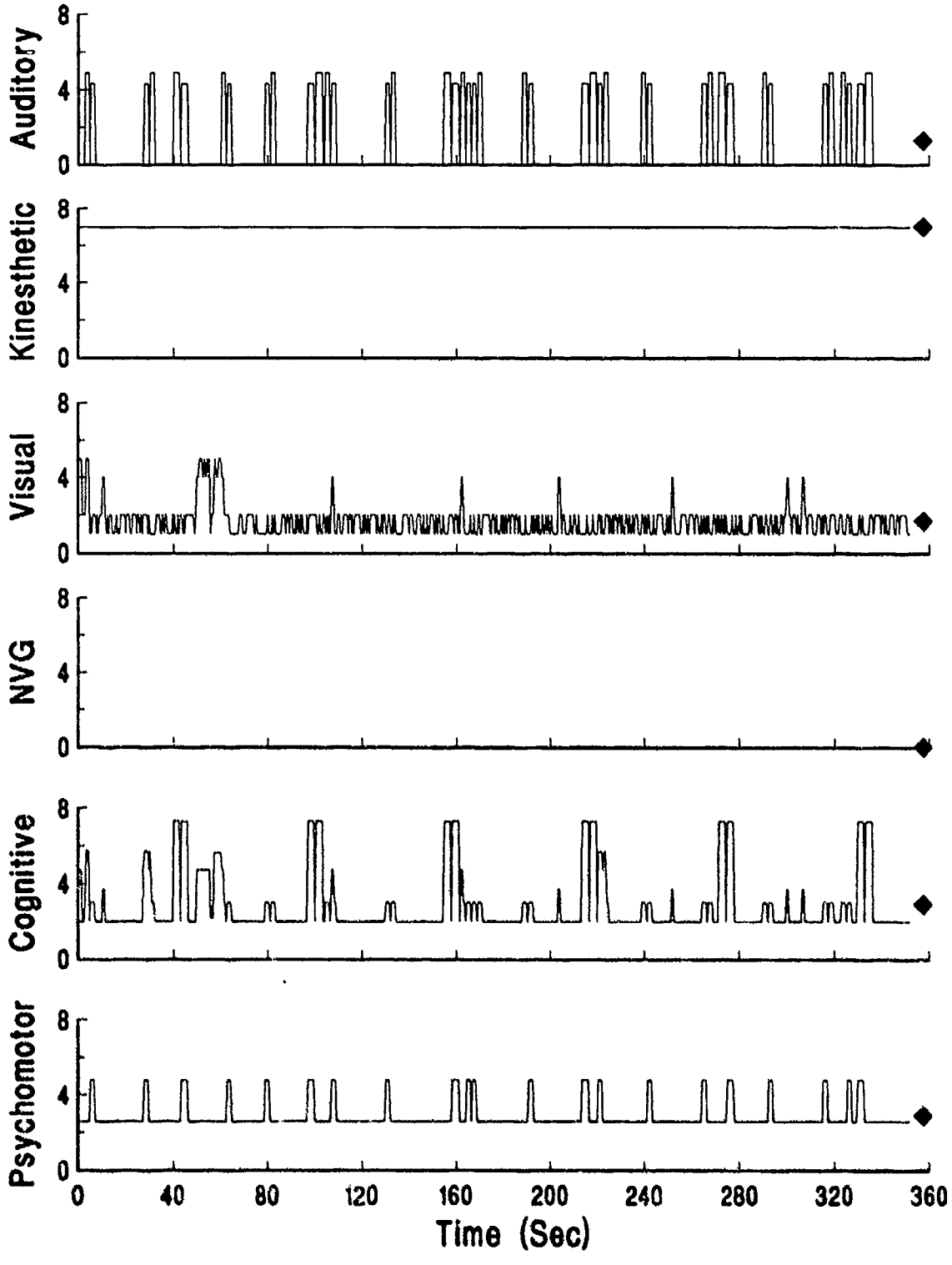
Segment 26: NOE Flight (Mission Change)
Pilot - CH-47D



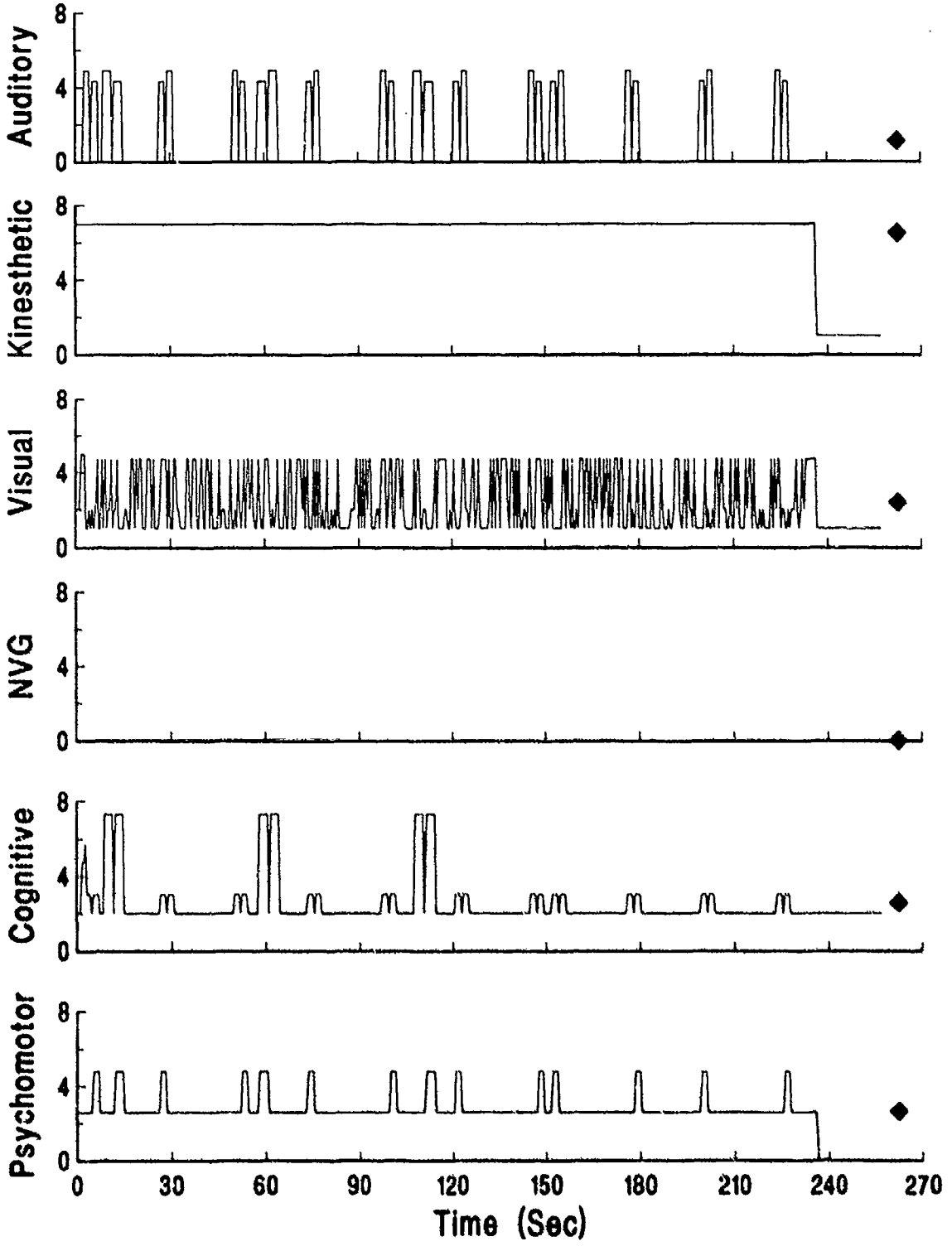
Segment 27: NOE Flight (Mission Change) [NVG]
Pilot - CH-47D



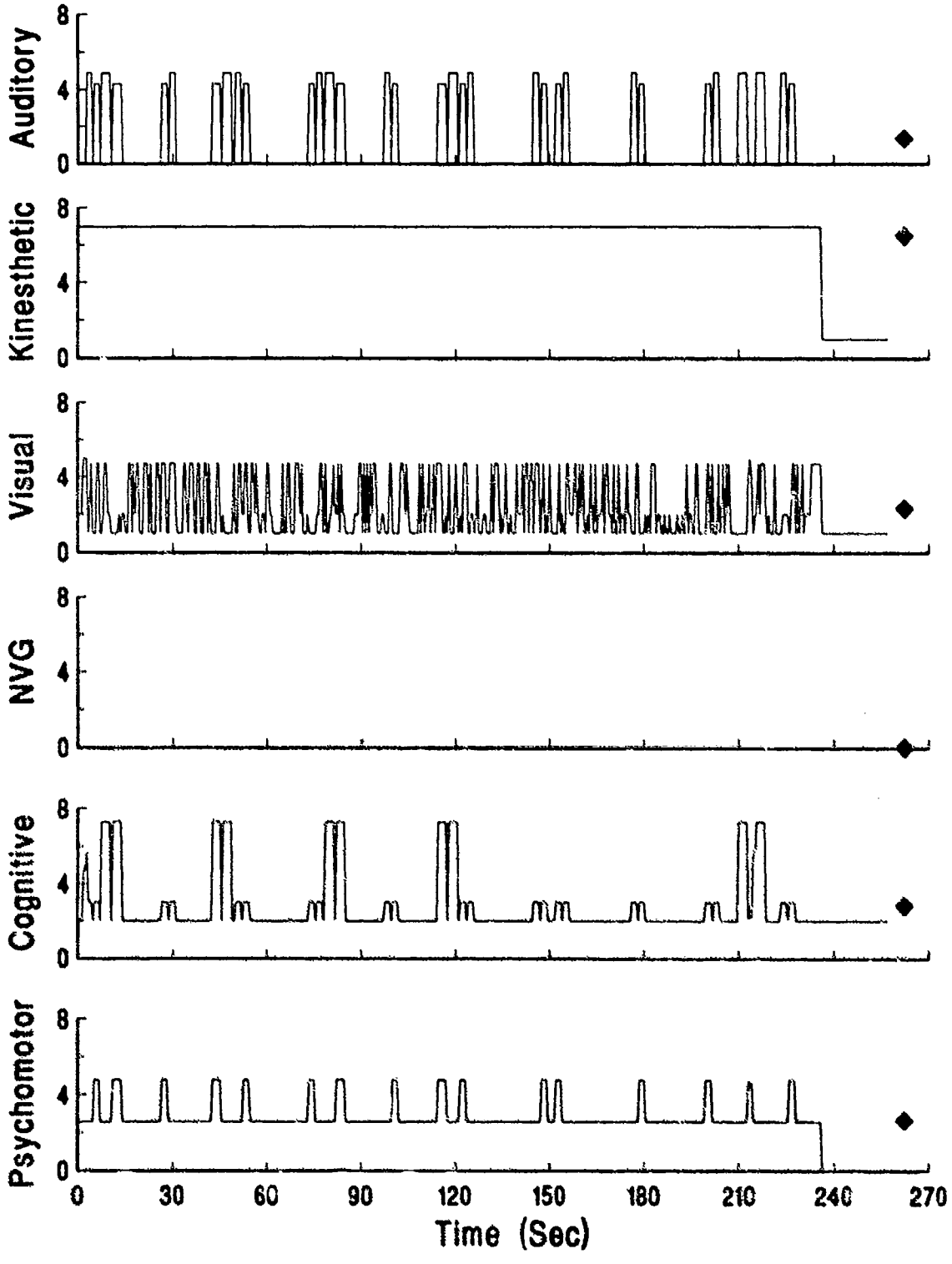
Segment 28: Approach (LZ)
Pilot - CH-47D



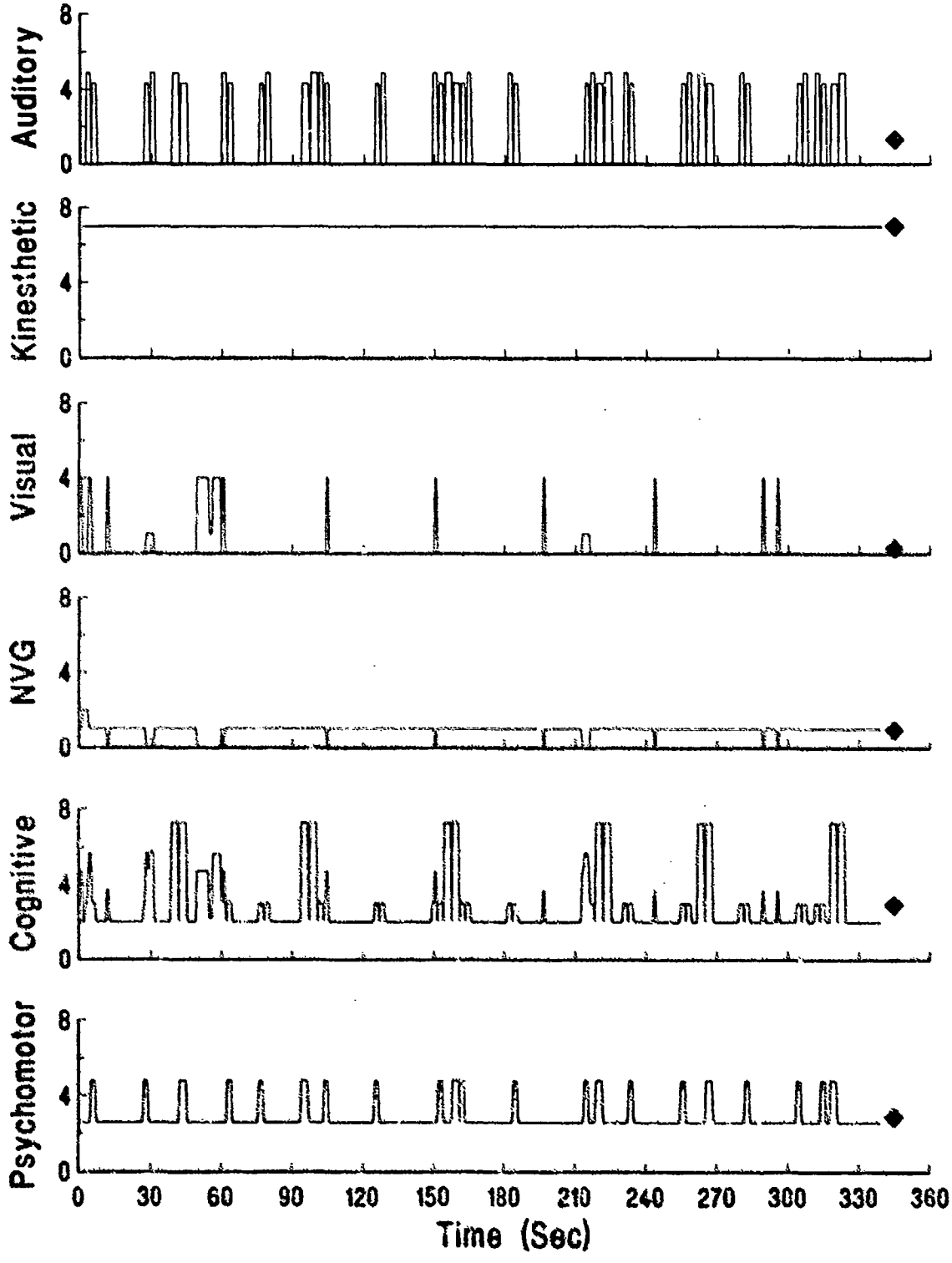
Segment 29: Landing (LZ, Internal Load)
Pilot - CH-47D



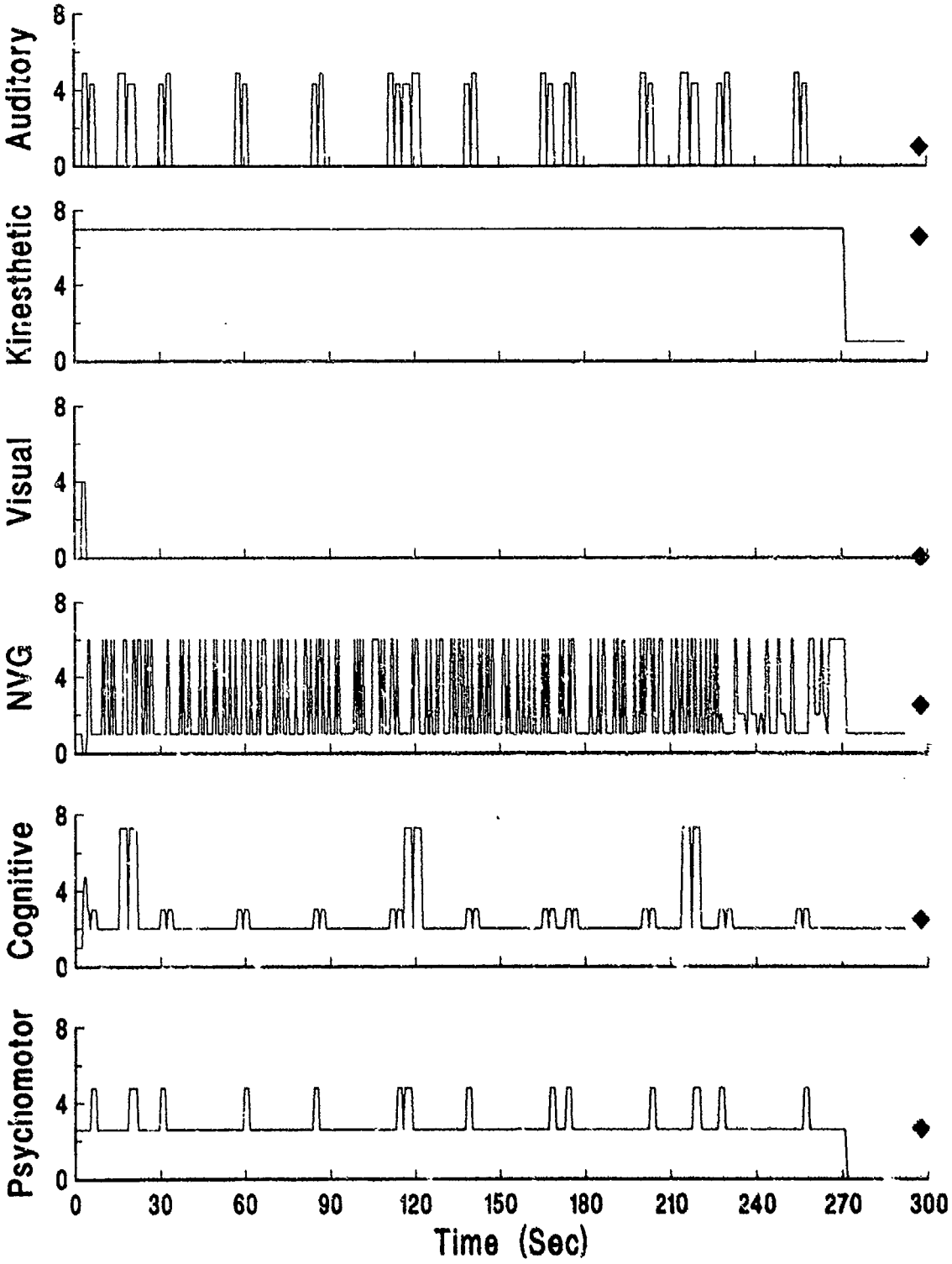
Segment 30: Landing (LZ, External Load)
Pilot - CH-47D



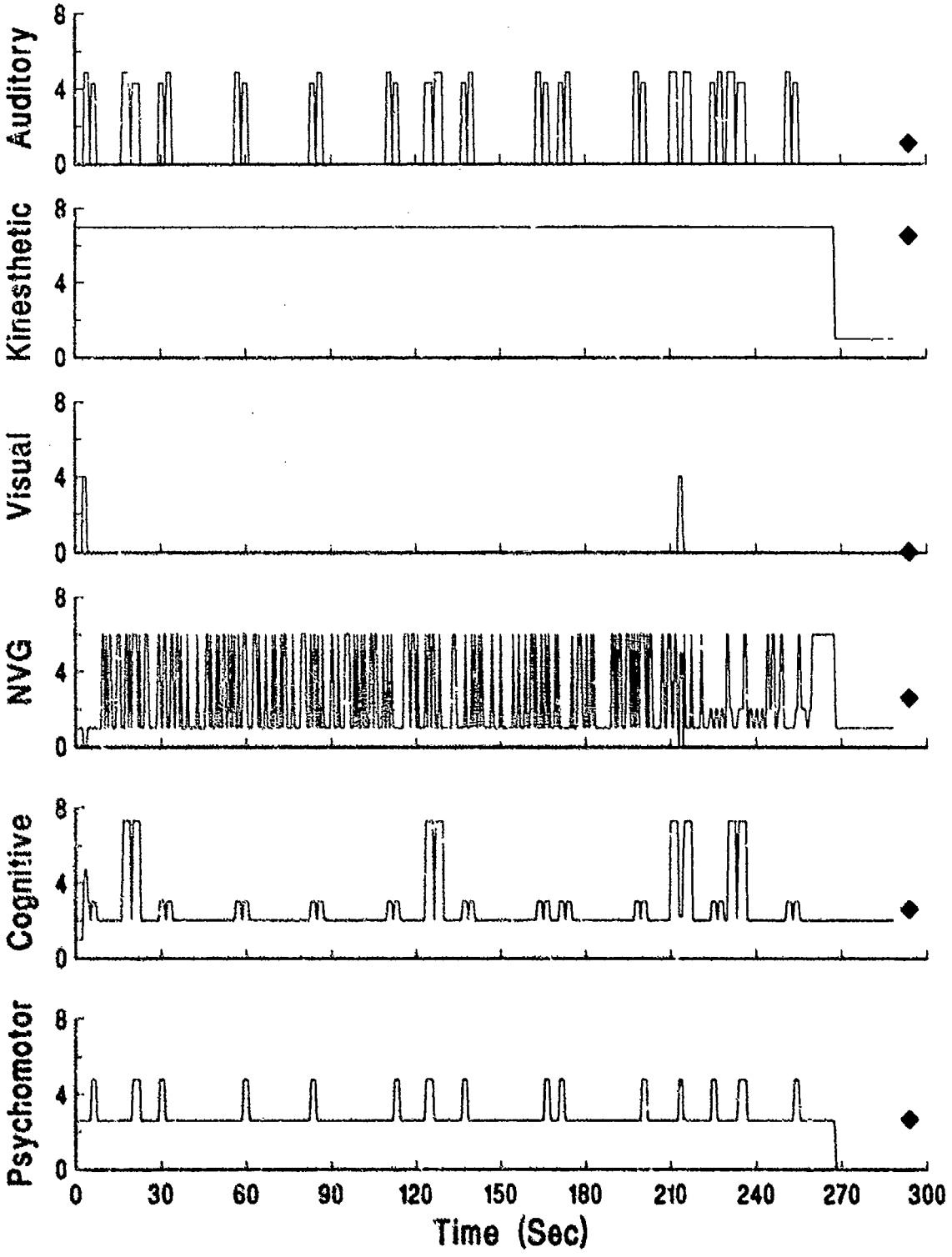
Segment 31: Approach (LZ) [NVG]
Pilot - CH-47D



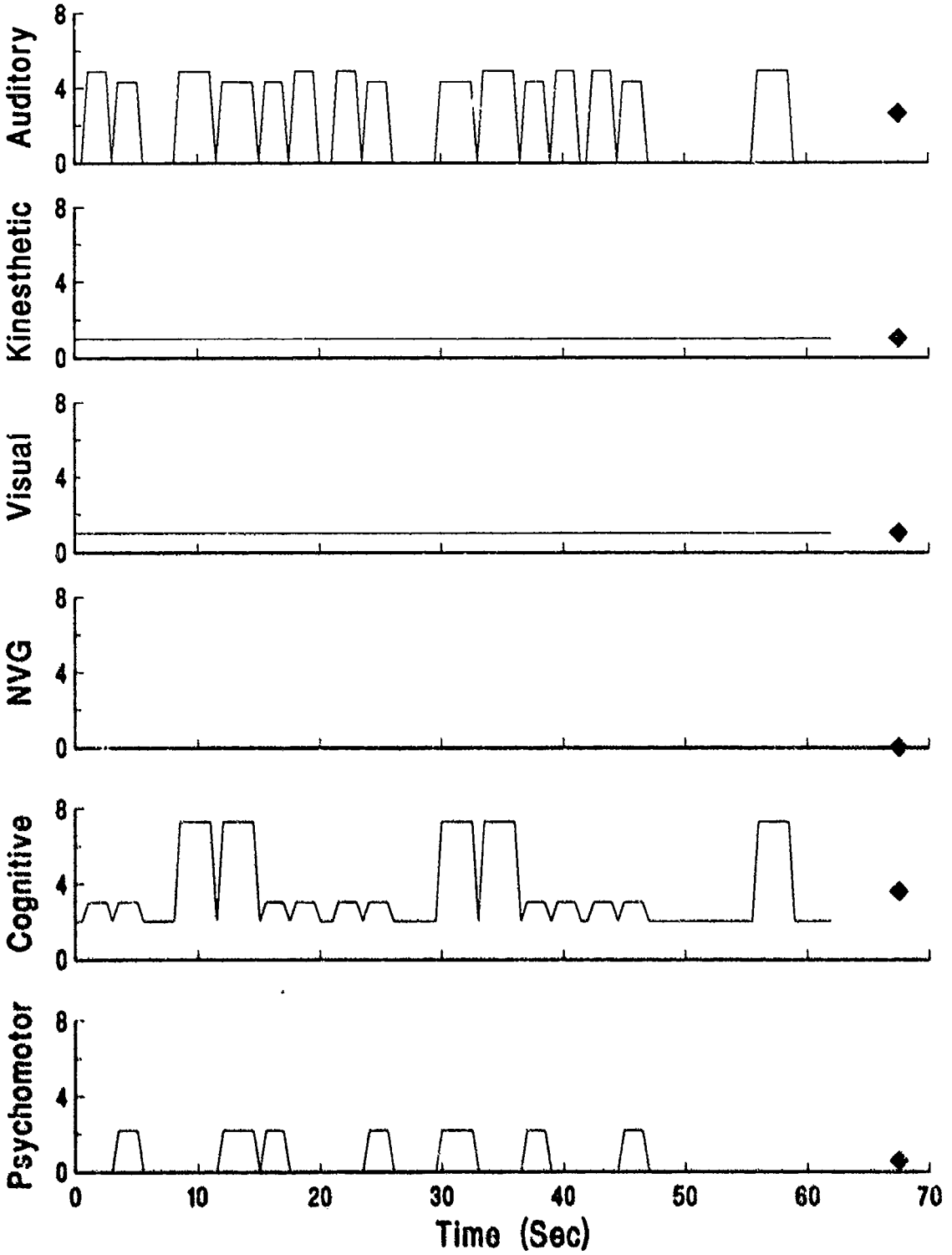
Segment 32: Landing (LZ, Internal Load) [NVG]
Pilot - CH-47D



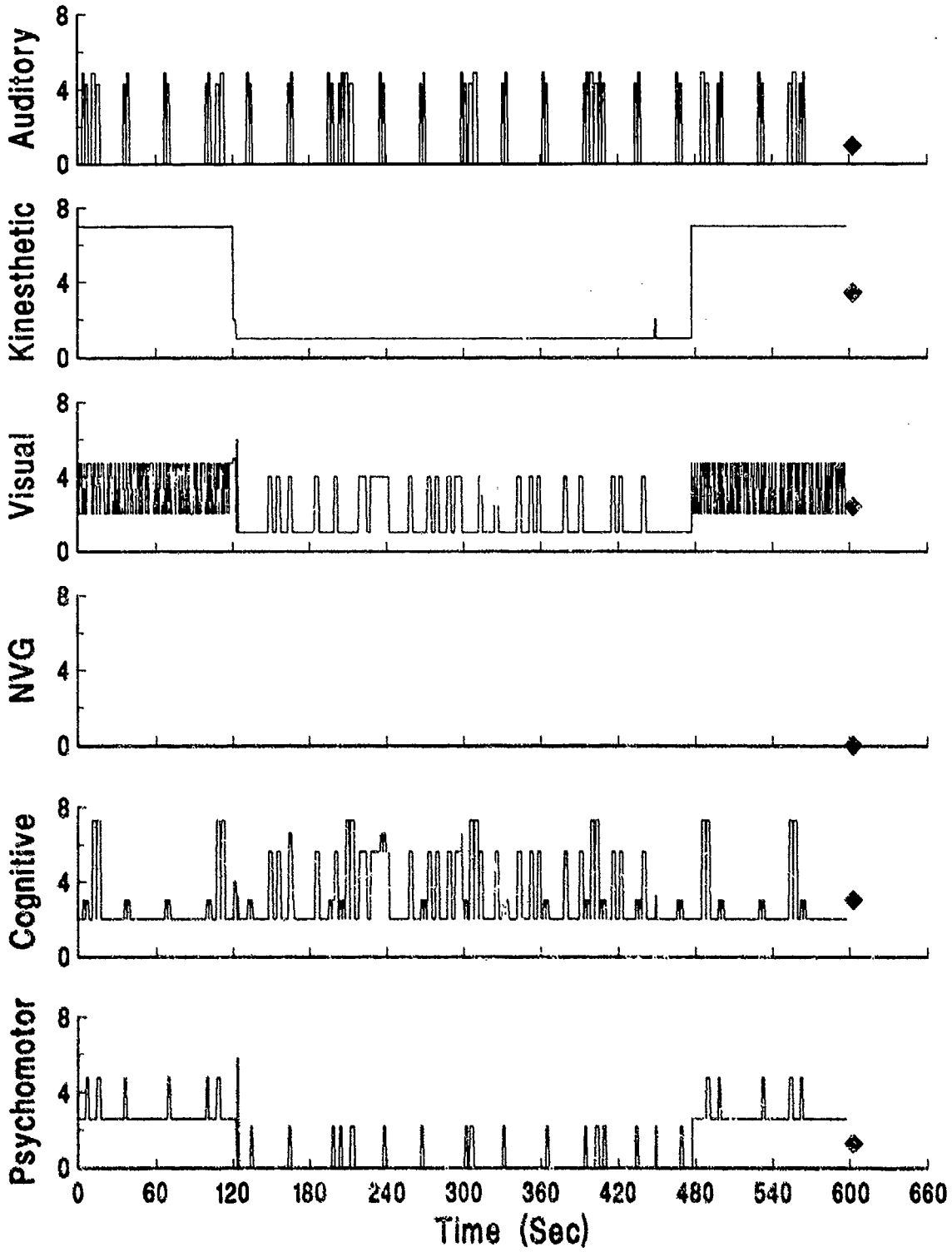
Segment 33: Landing (LZ, External Load) [NVG]
Pilot - CH-47D



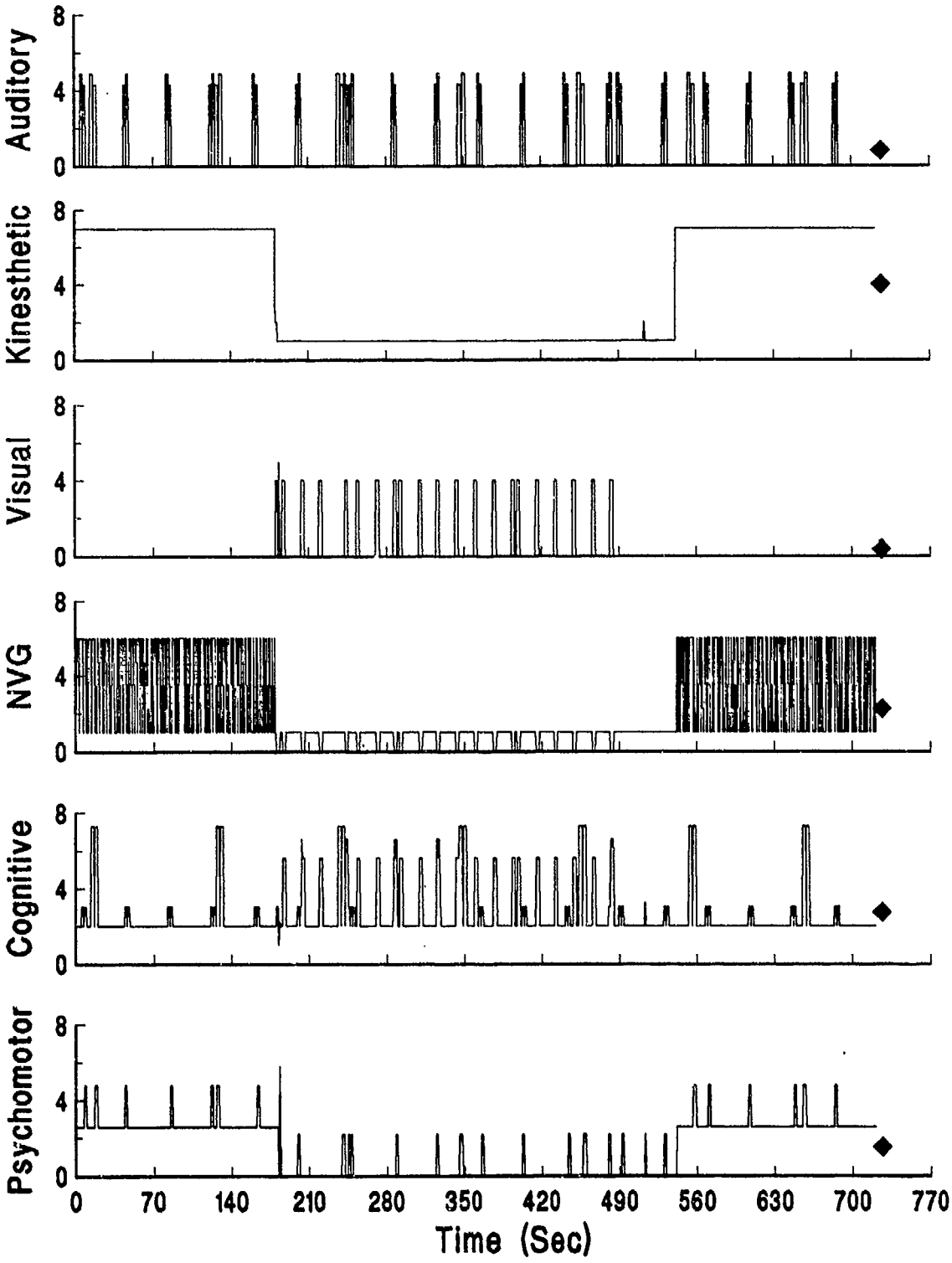
Segment 34: Before Takeoff (LZ)
Pilot - CH-47D



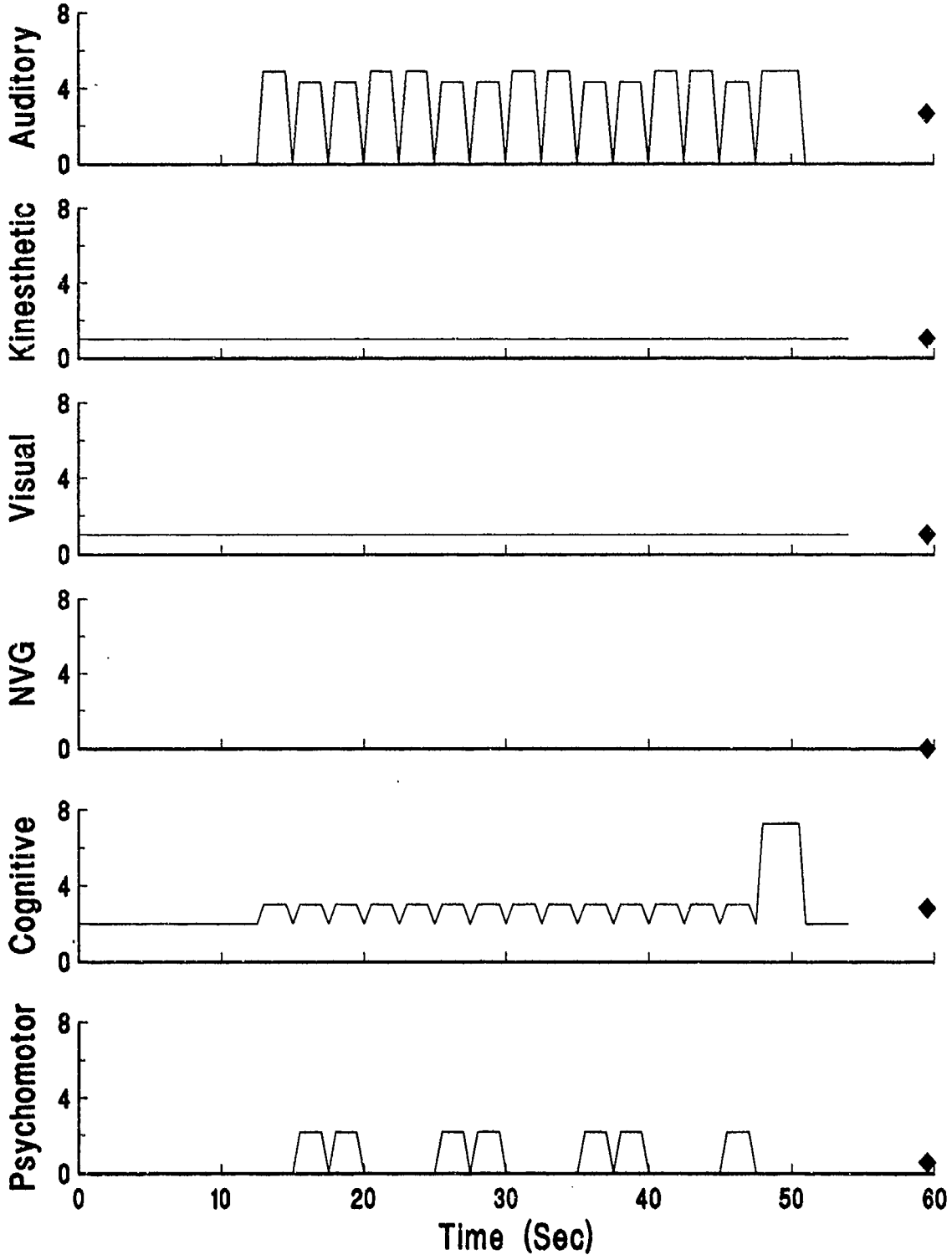
Segment 35: FARP Procedures
Pilot - CH-47D



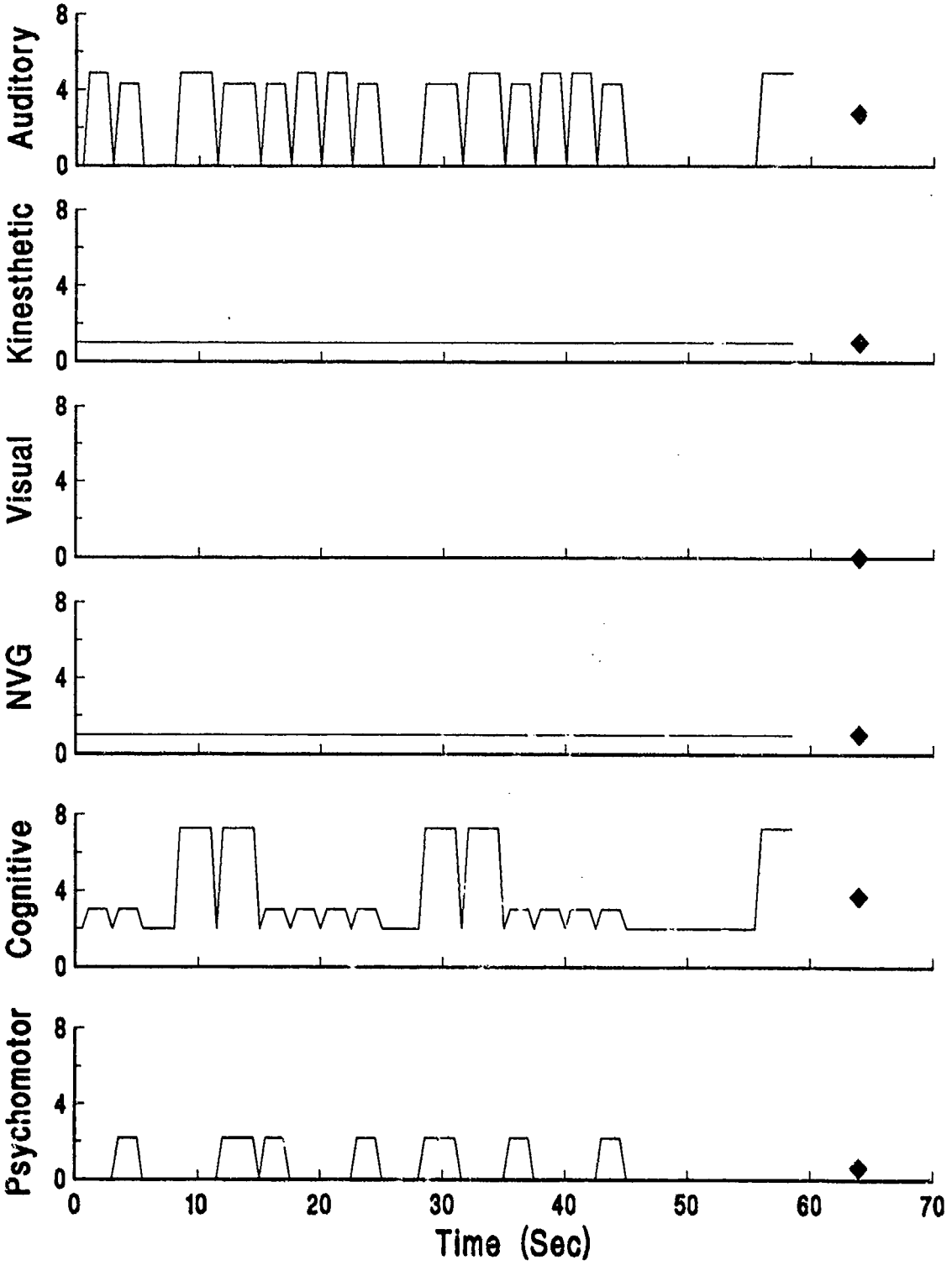
Segment 36: FARP Procedures [NVG]
Pilot - CH-47D



Segment 37: Before Takeoff (FARP)
Pilot - CH-47D



Segment 38: Before Takeoff (LZ)(NVG)
Pilot - CH-47D

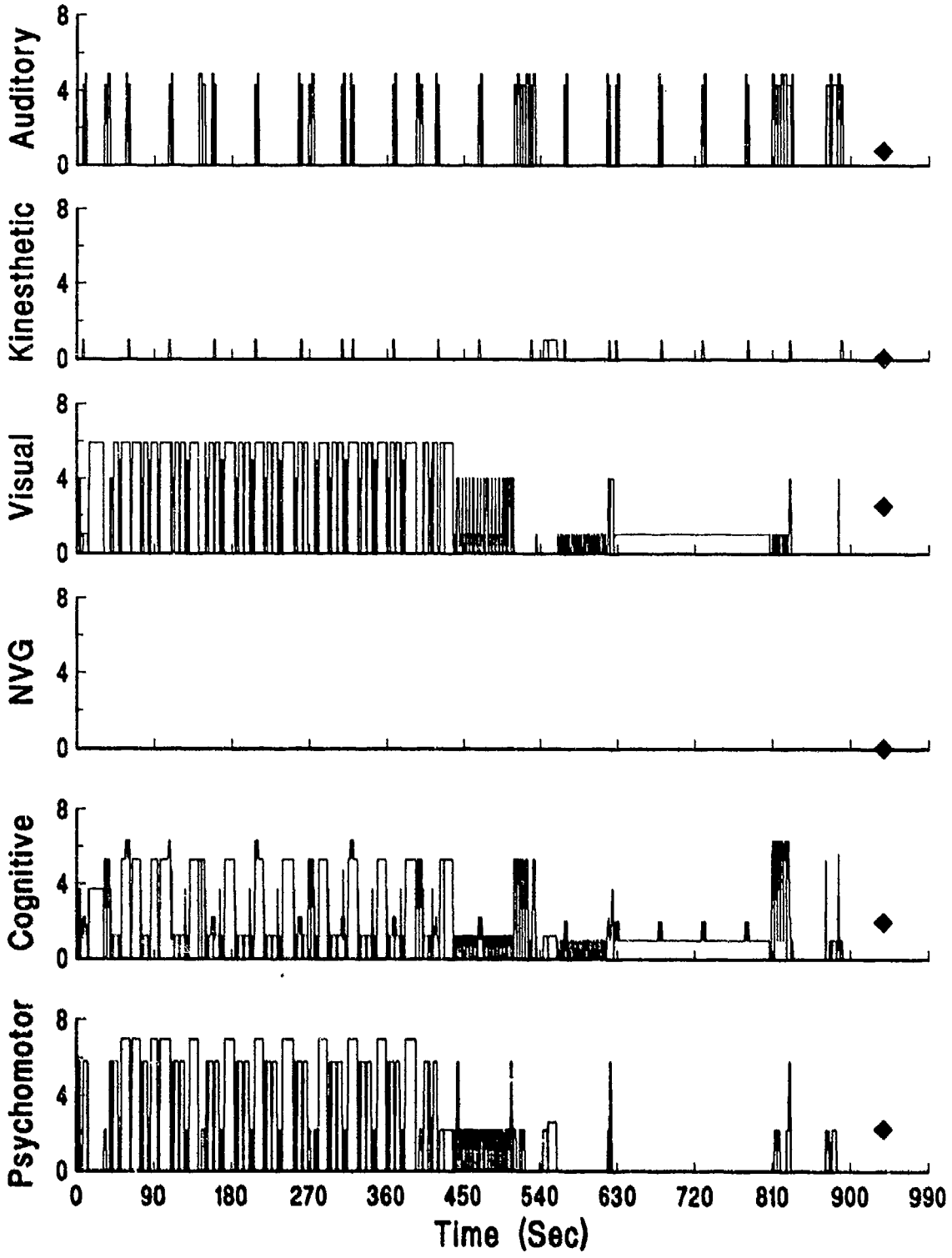


A P P E N D I X B

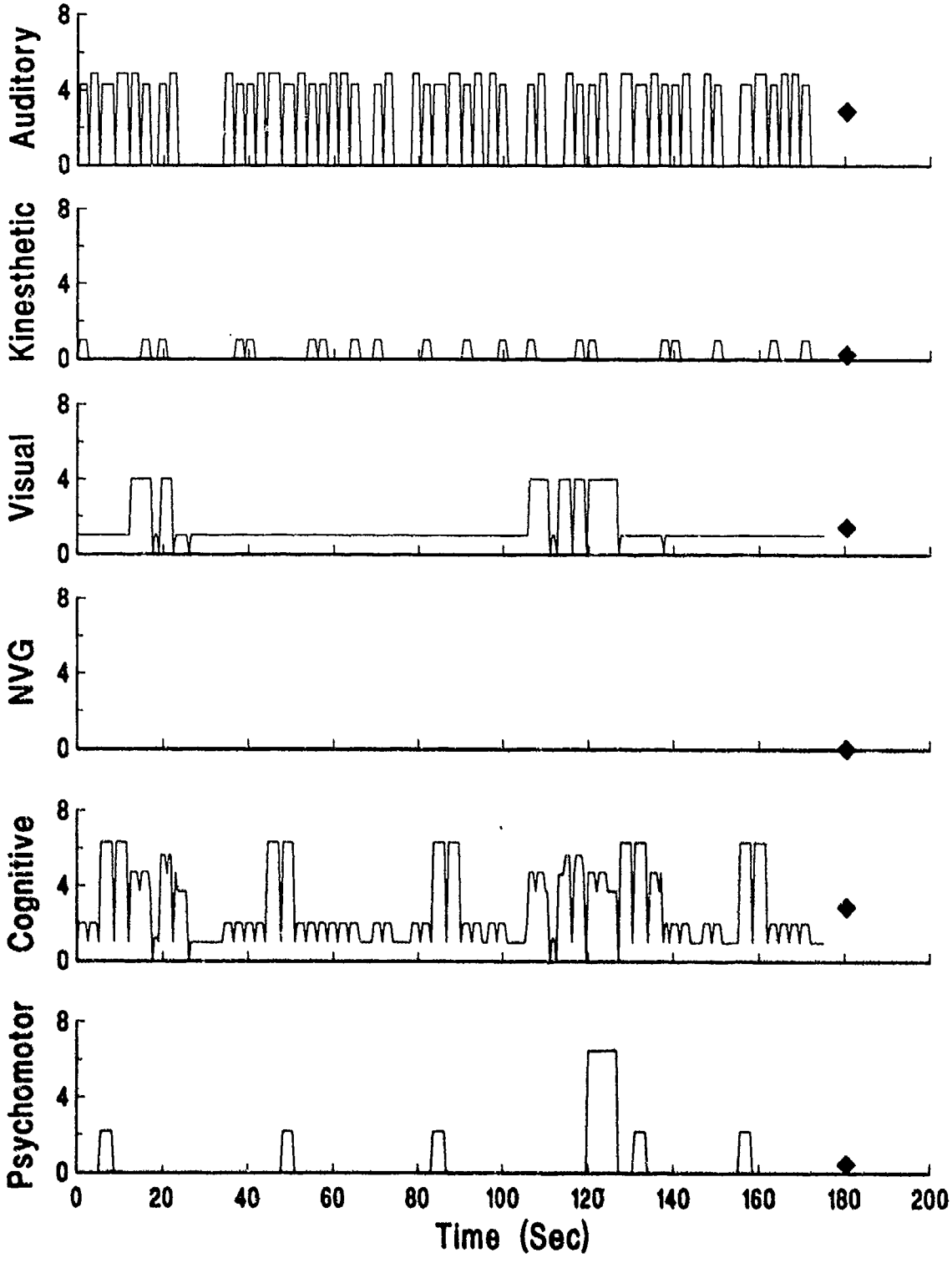
CH-47D COPILOT WORKLOAD PREDICTION GRAPHS

This appendix contains the workload prediction graphs for the copilot for each of the 38 CH-47D segments. Each page displays the predicted copilot workload for one segment using six graphs, one for each workload component. The diamond at the end of each graph indicates the average component workload for the segment.

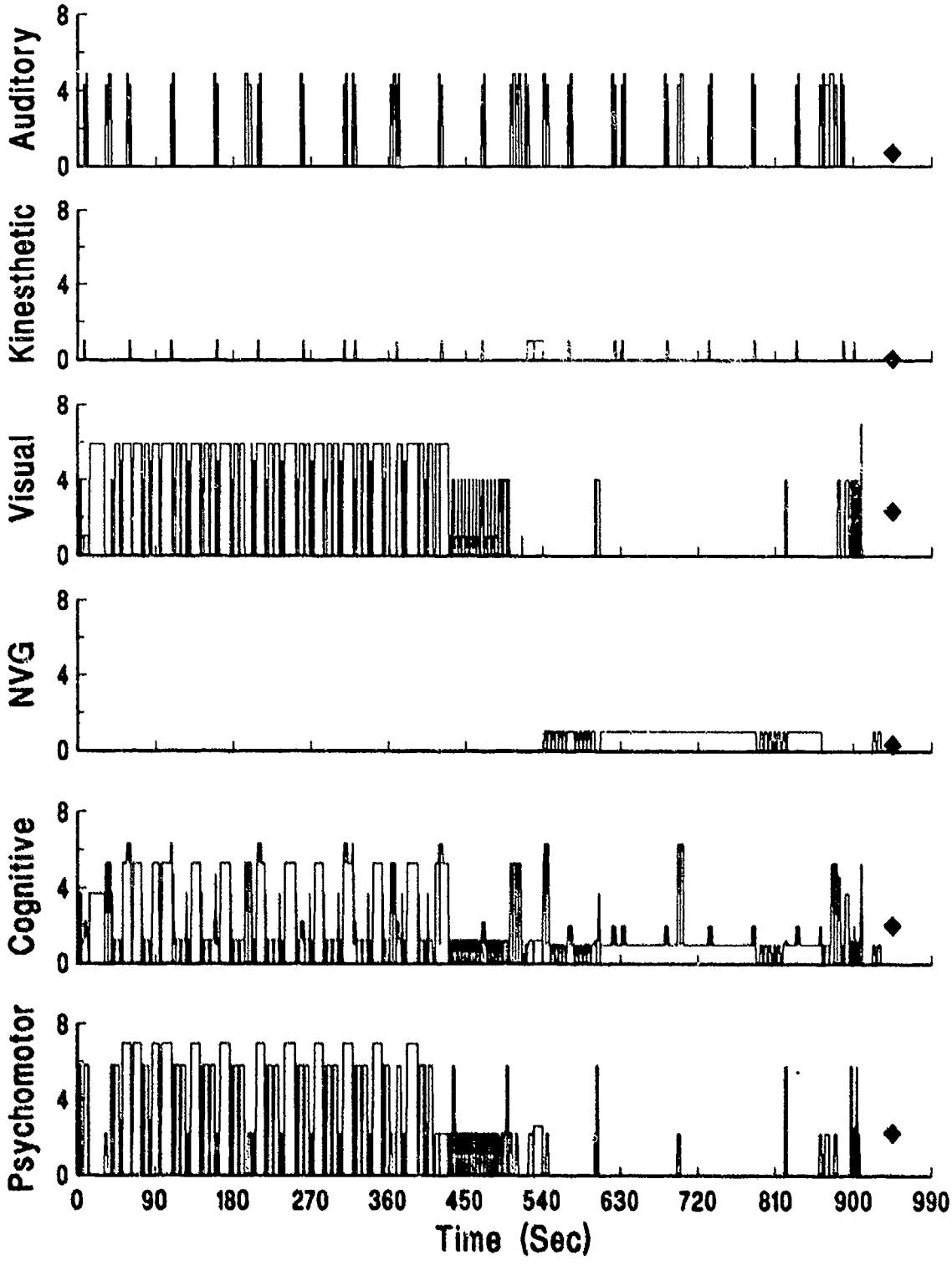
Segment 01: Before Takeoff (Assembly Area)
Copilot - CH-47D



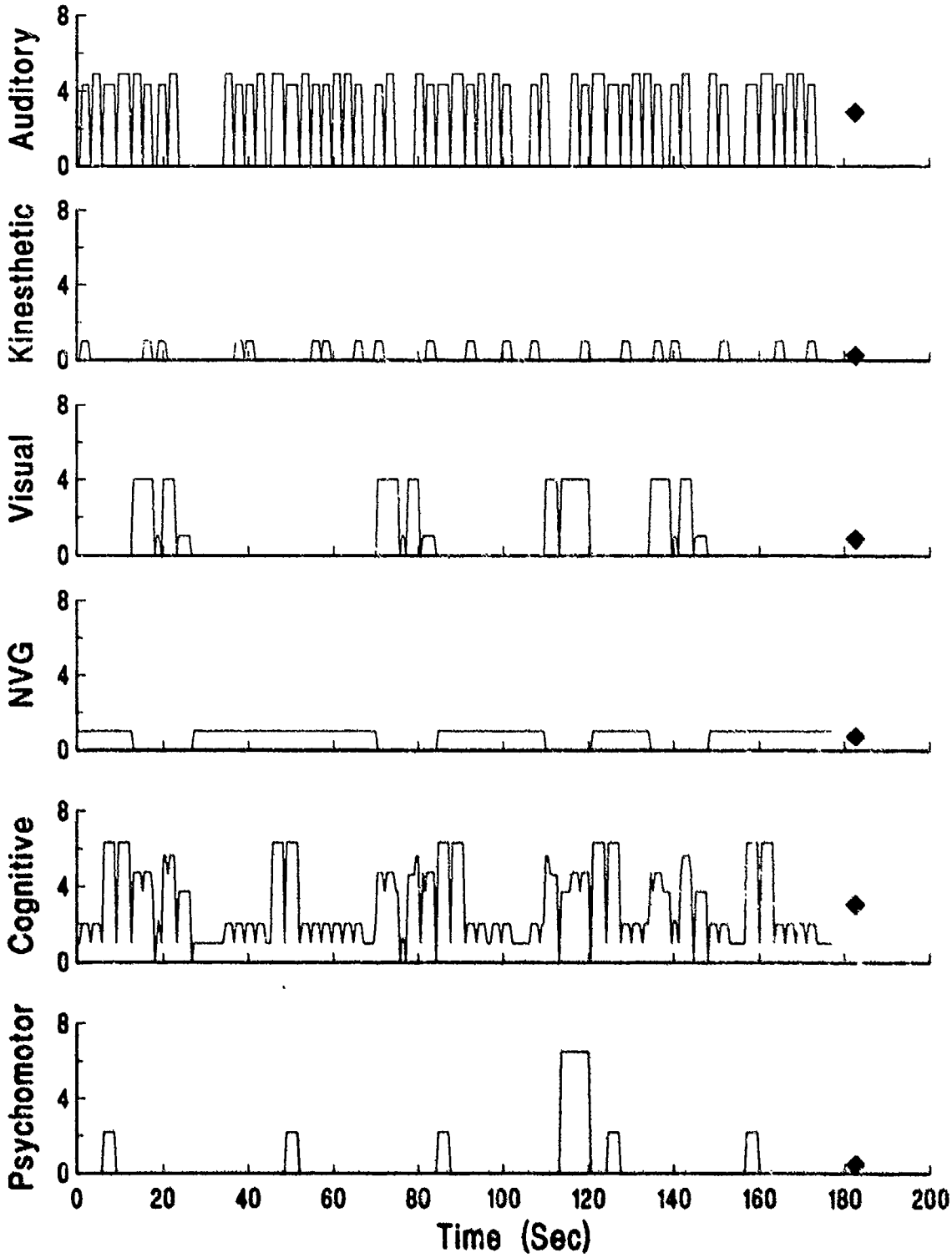
Segment 02: Takeoff (Assembly Area)
Copilot - CH-47D



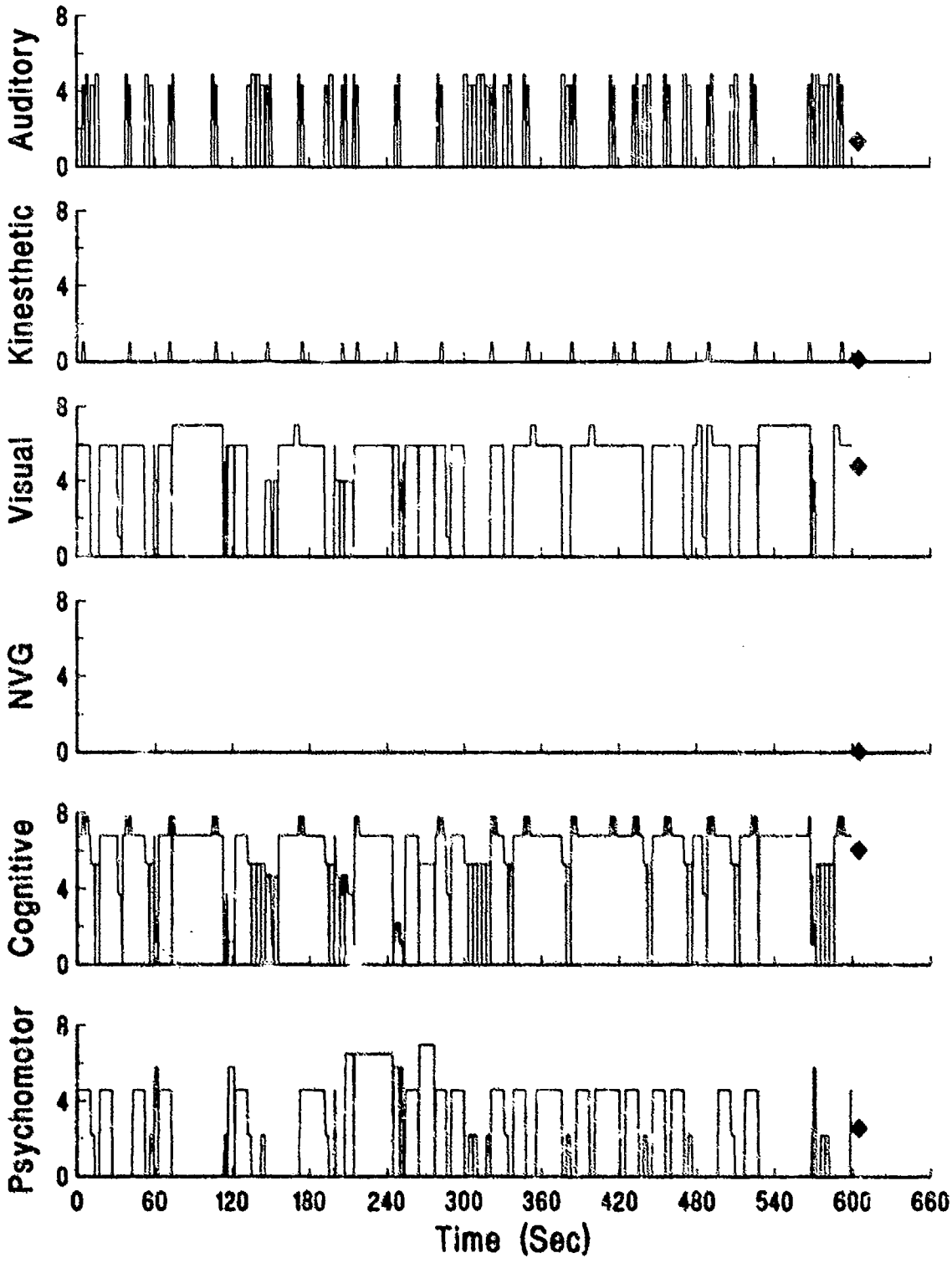
Segment 03: Before Takeoff (Assembly Area) [NVG]
Copilot - CH-47D



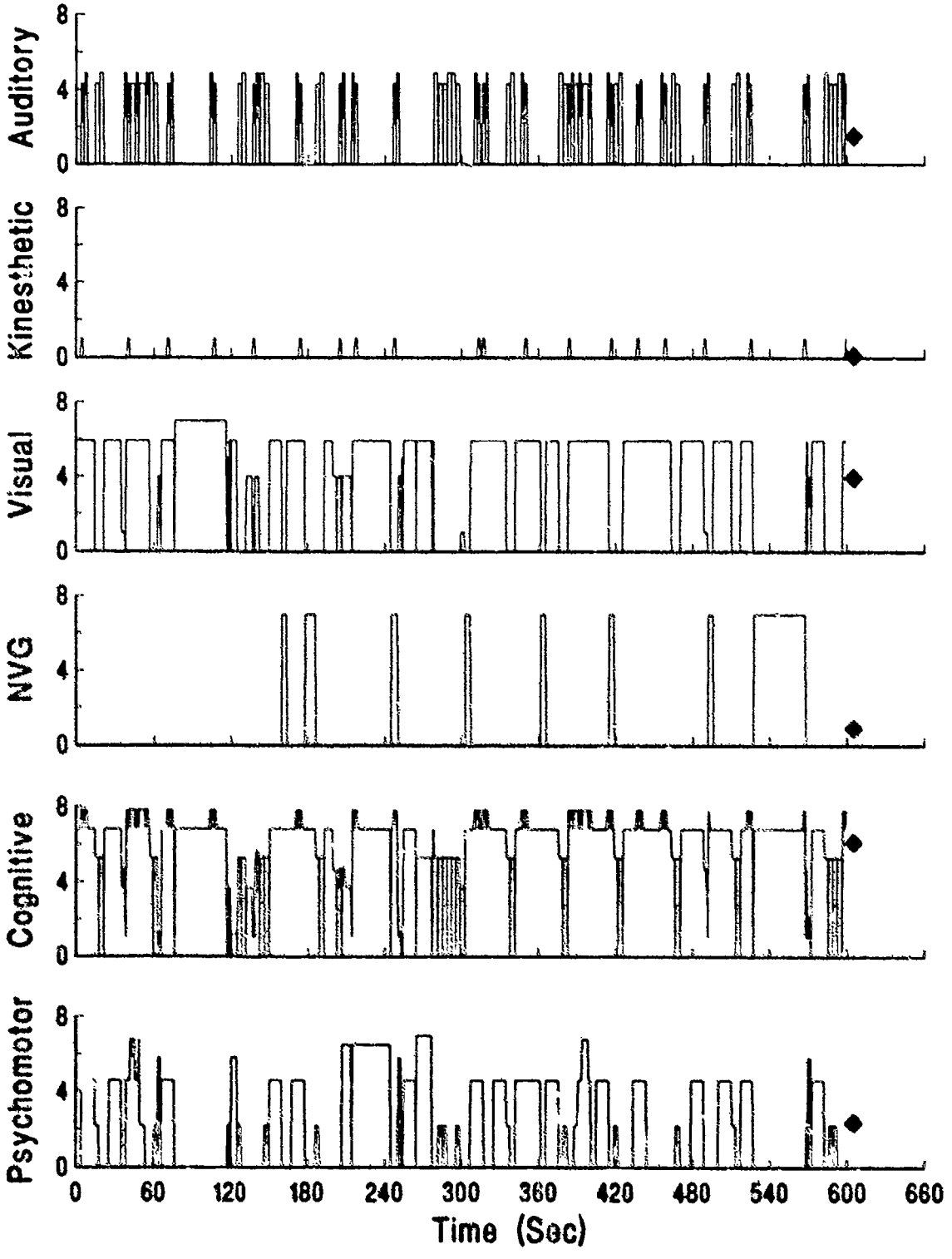
Segment 04: Takeoff (Assembly Area) [NVG]
Copilot - CH-47D



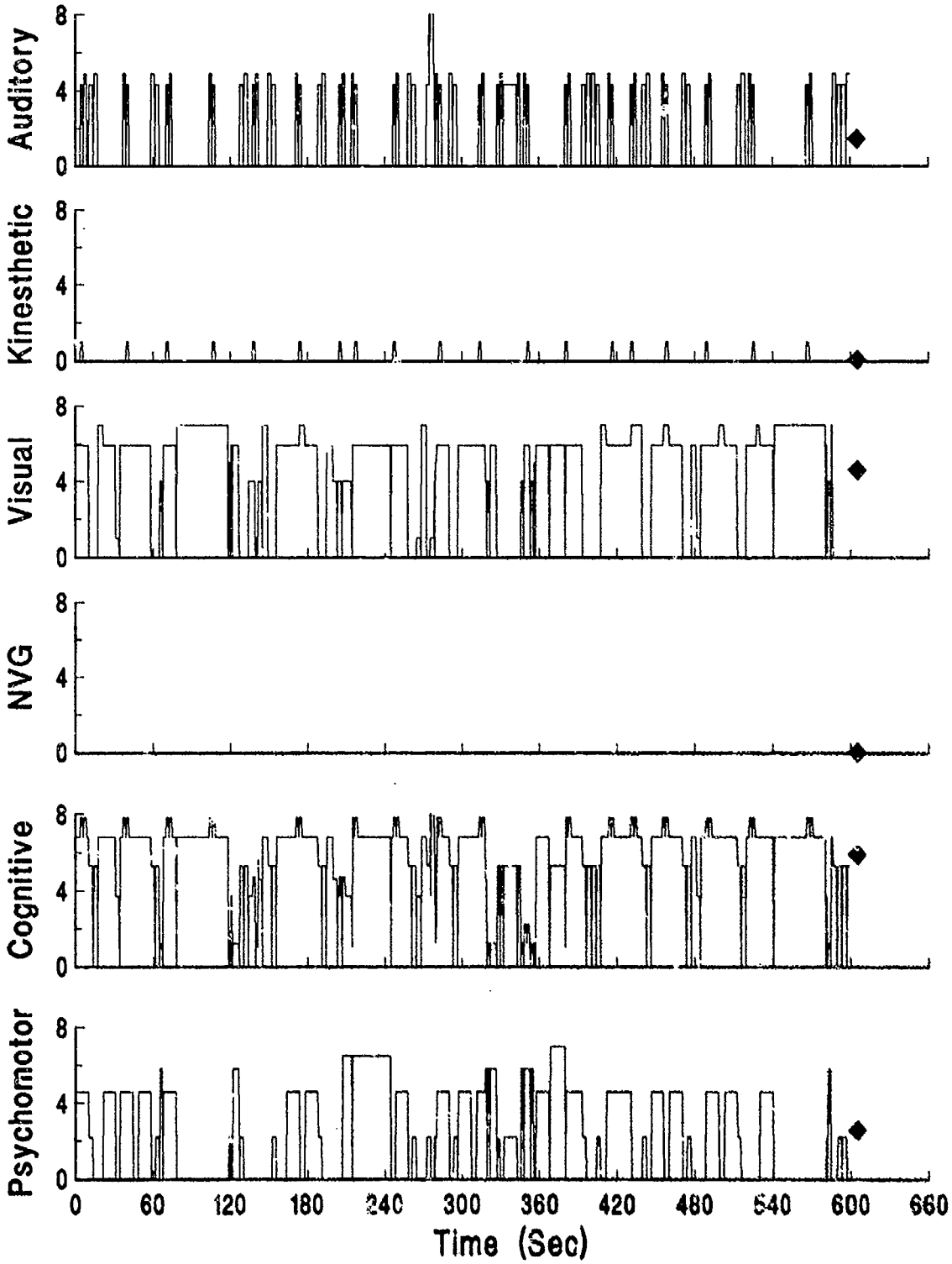
Segment 05: Contour Flight
Copilot - CH-47D



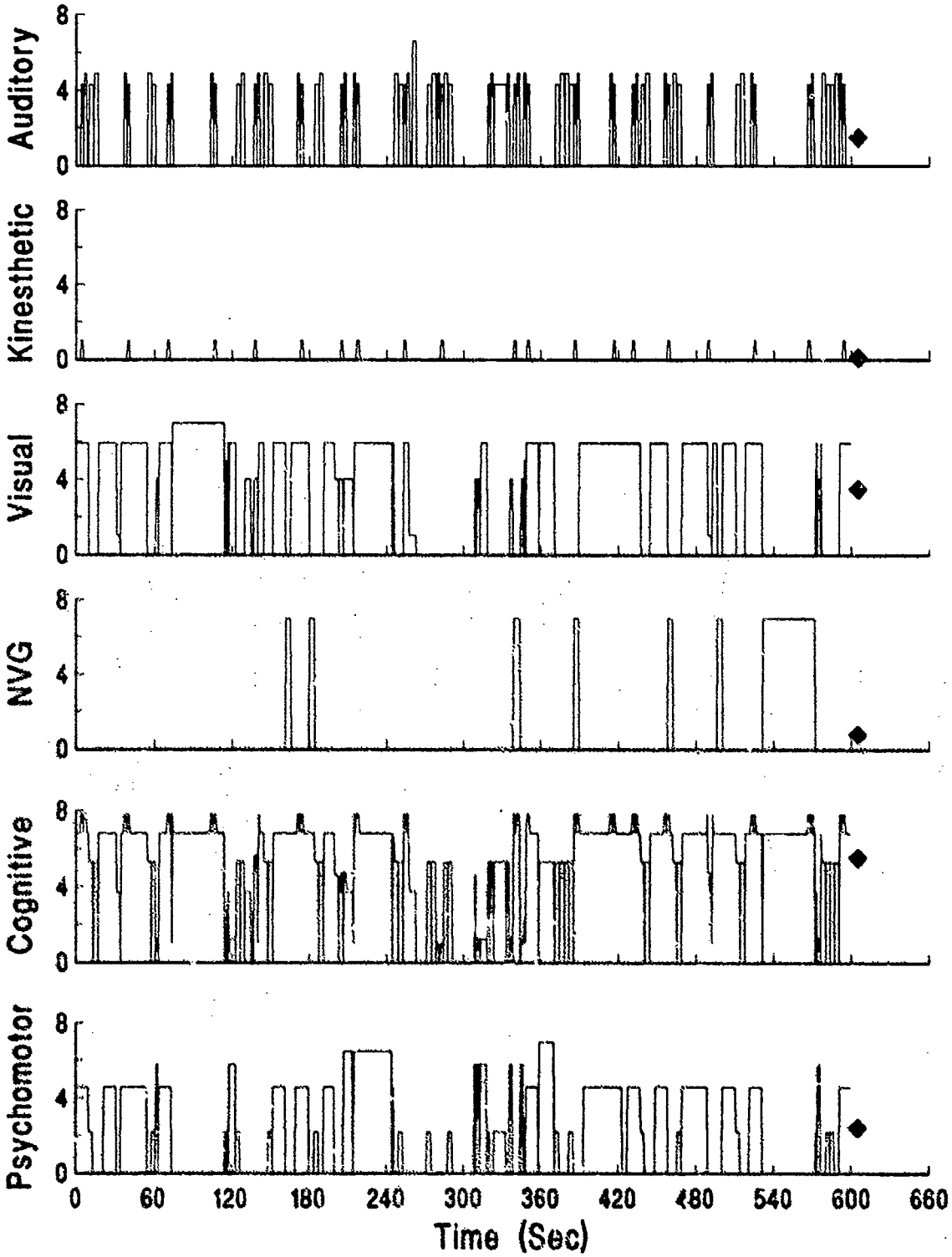
Segment 06: Contour Flight [NVG]
Copilot - CH-47D



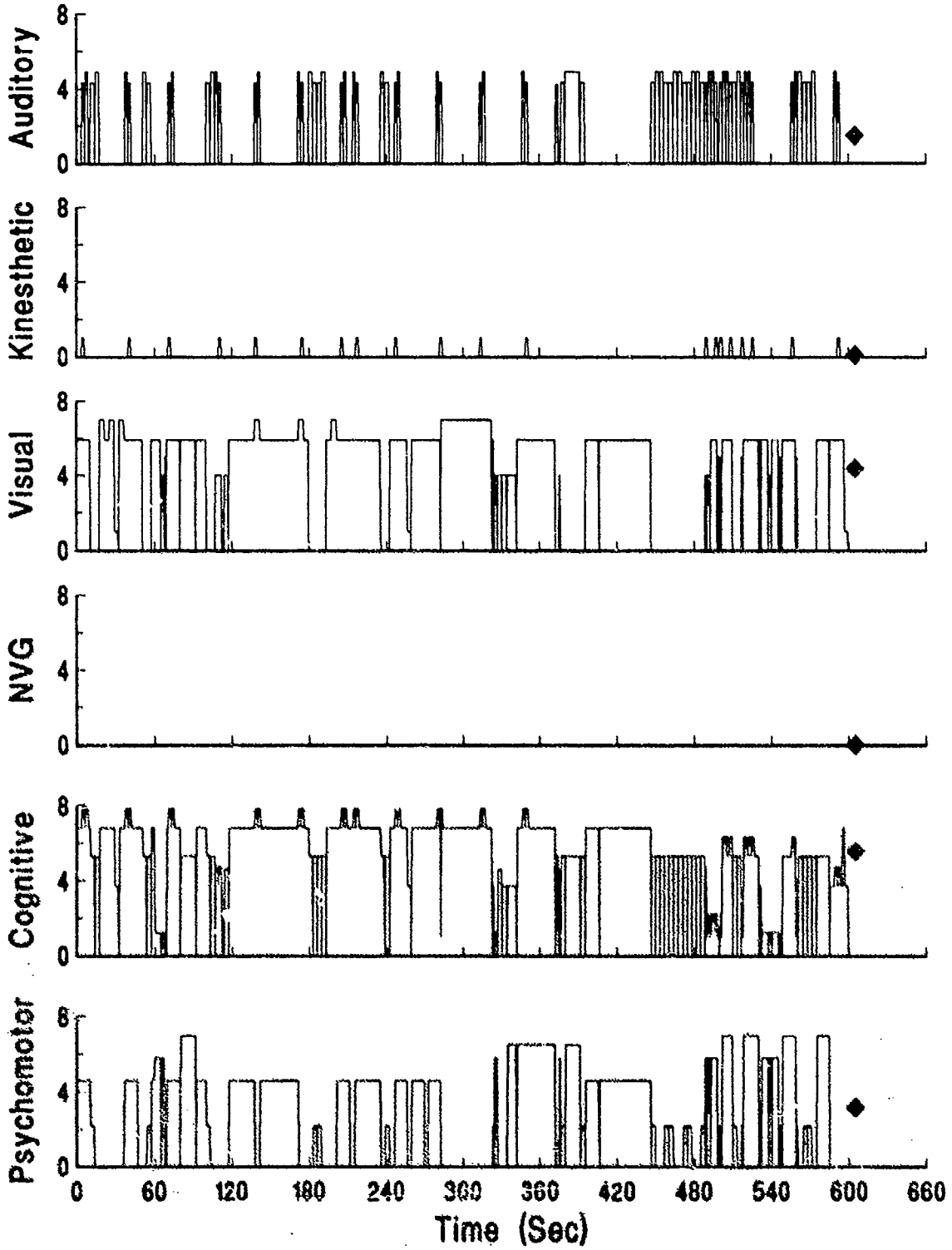
Segment 07: Contour Flight (Threat)
Copilot - CH-47D



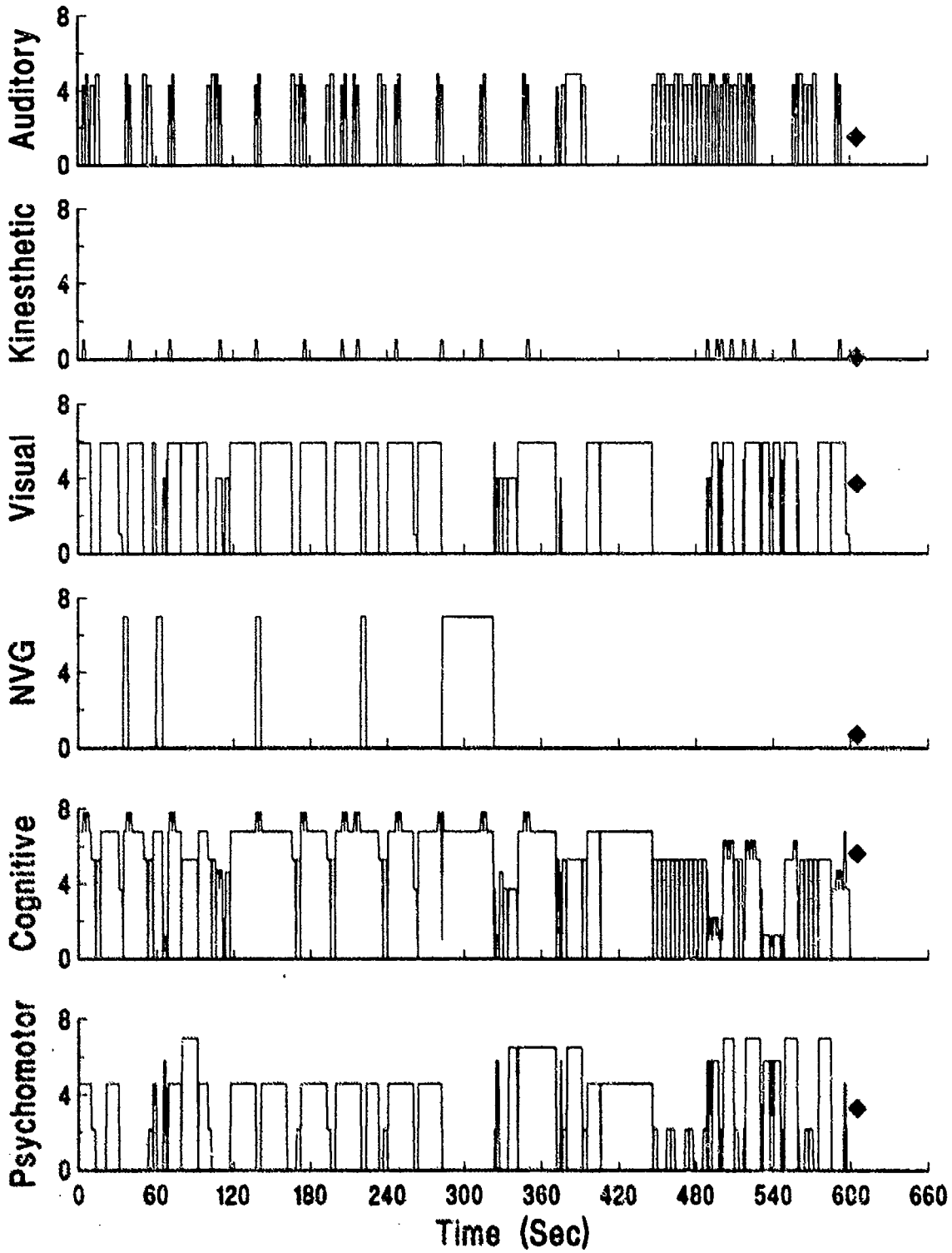
Segment 08: Contour Flight (Threat) [NVG]
Copilot - CH-47D



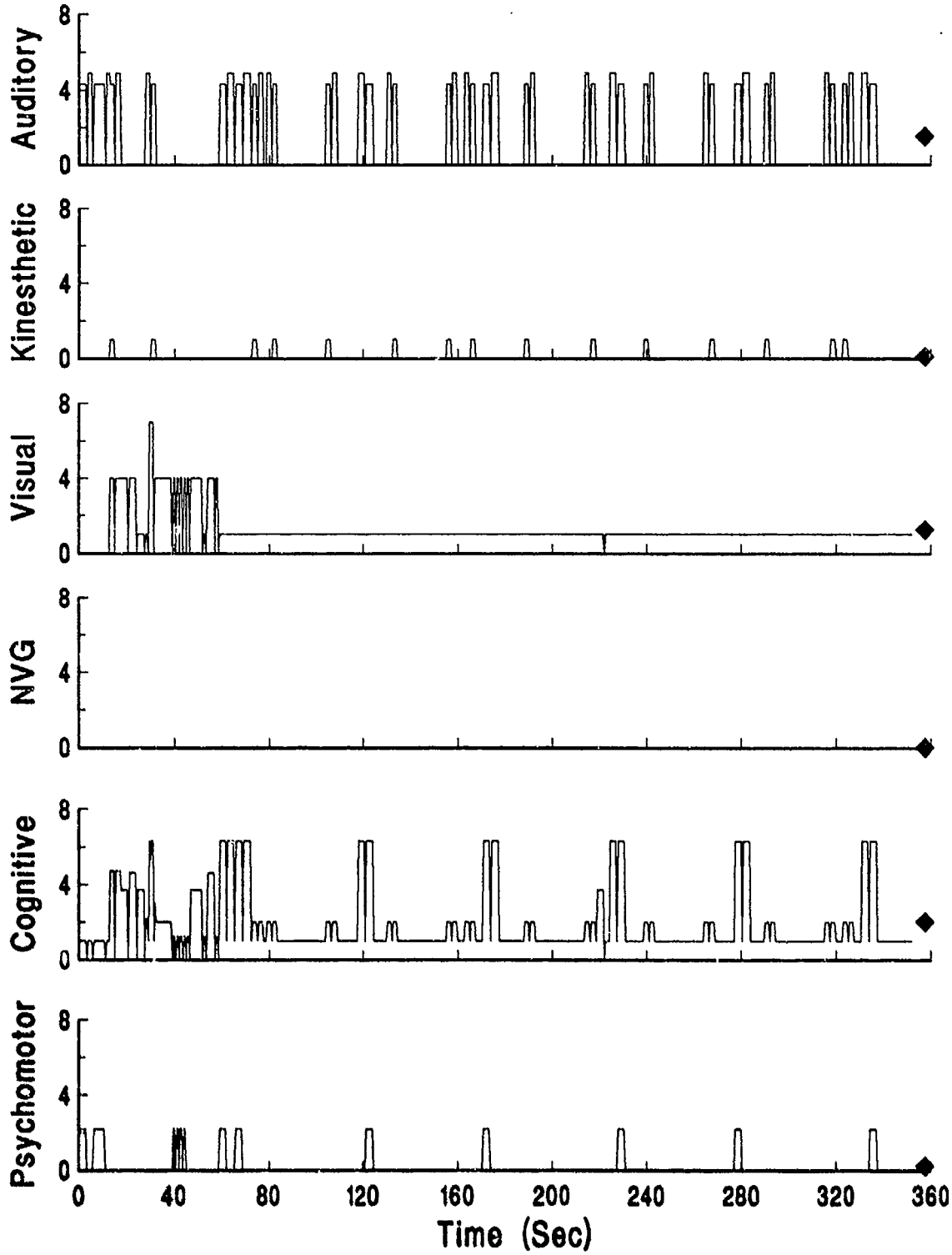
Segment 09: Contour Flight (Mission Change)
Copilot - CH-47D



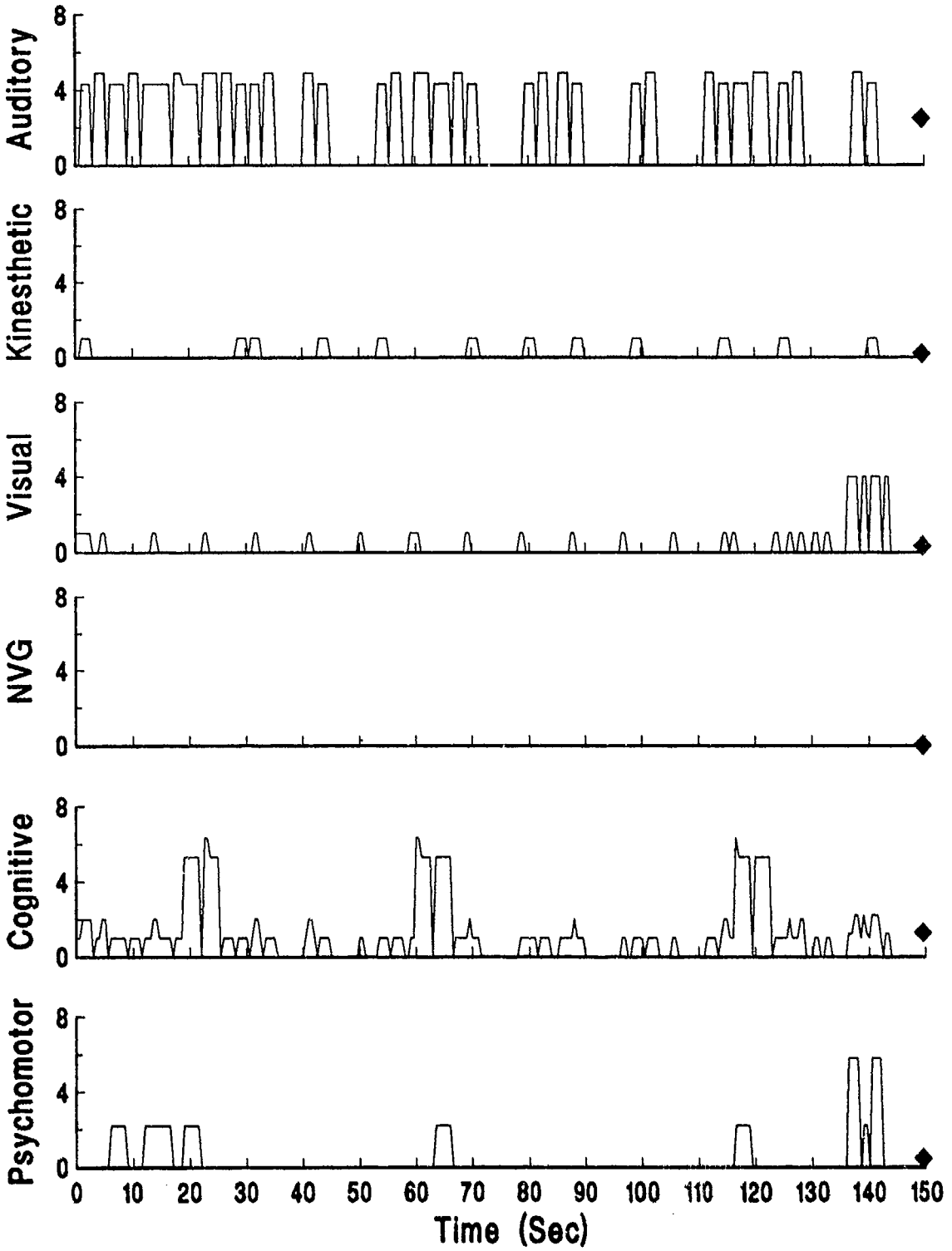
Segment 10: Contour Flight (Mission Change) [NVG]
Copilot - CH-47D



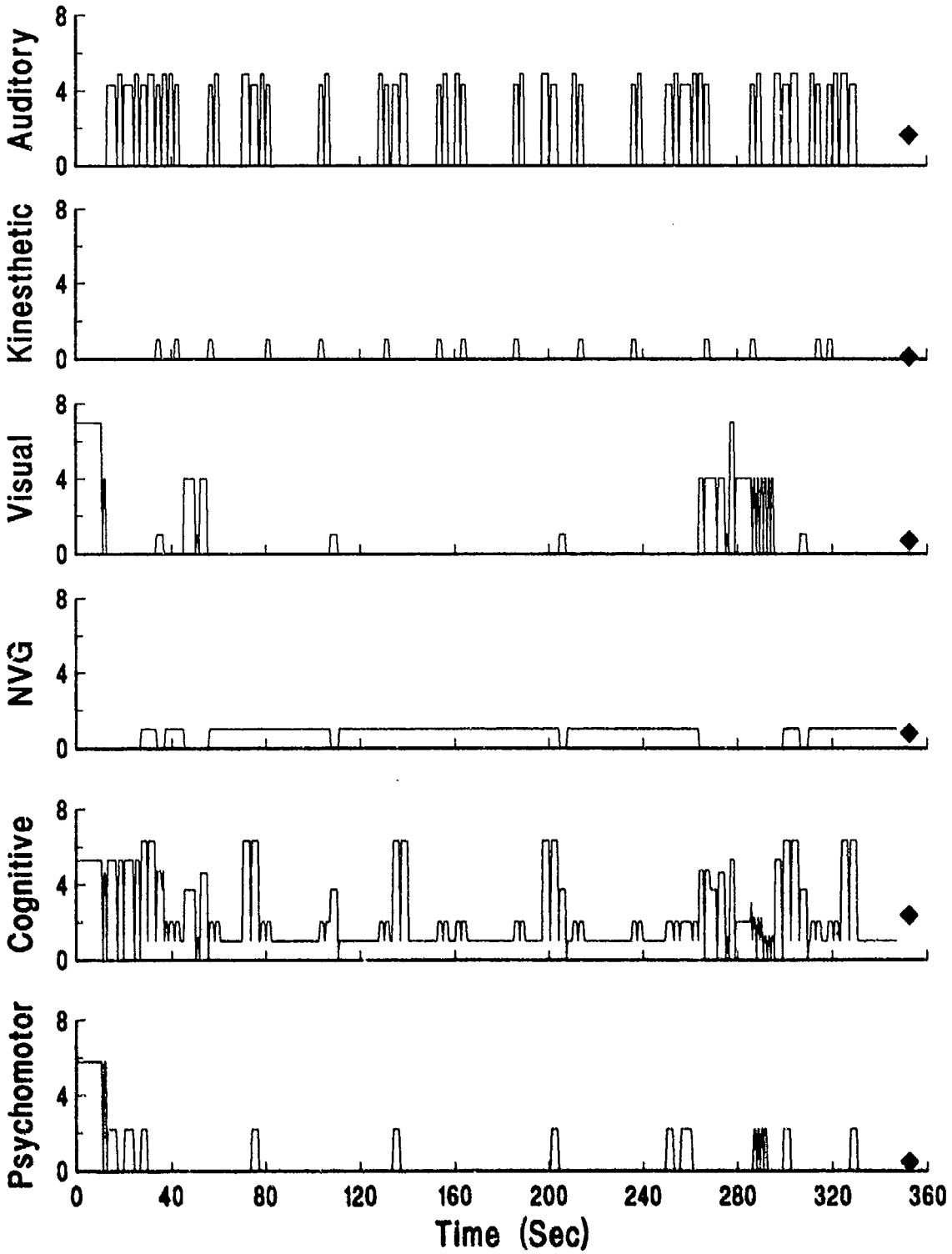
Segment 11: Approach
Copilot - CH-47D



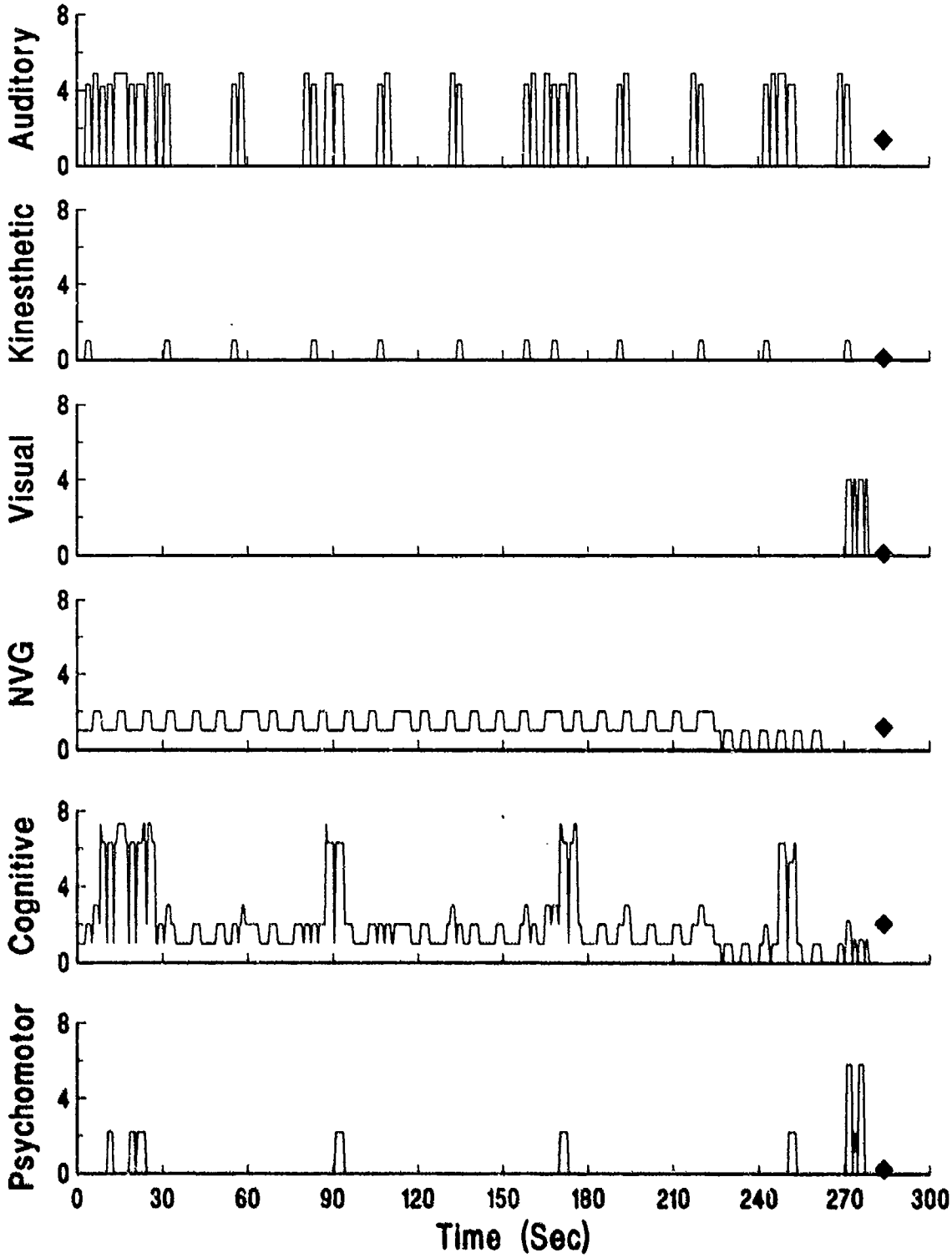
Segment 12: Landing
Copilot - CH-47D



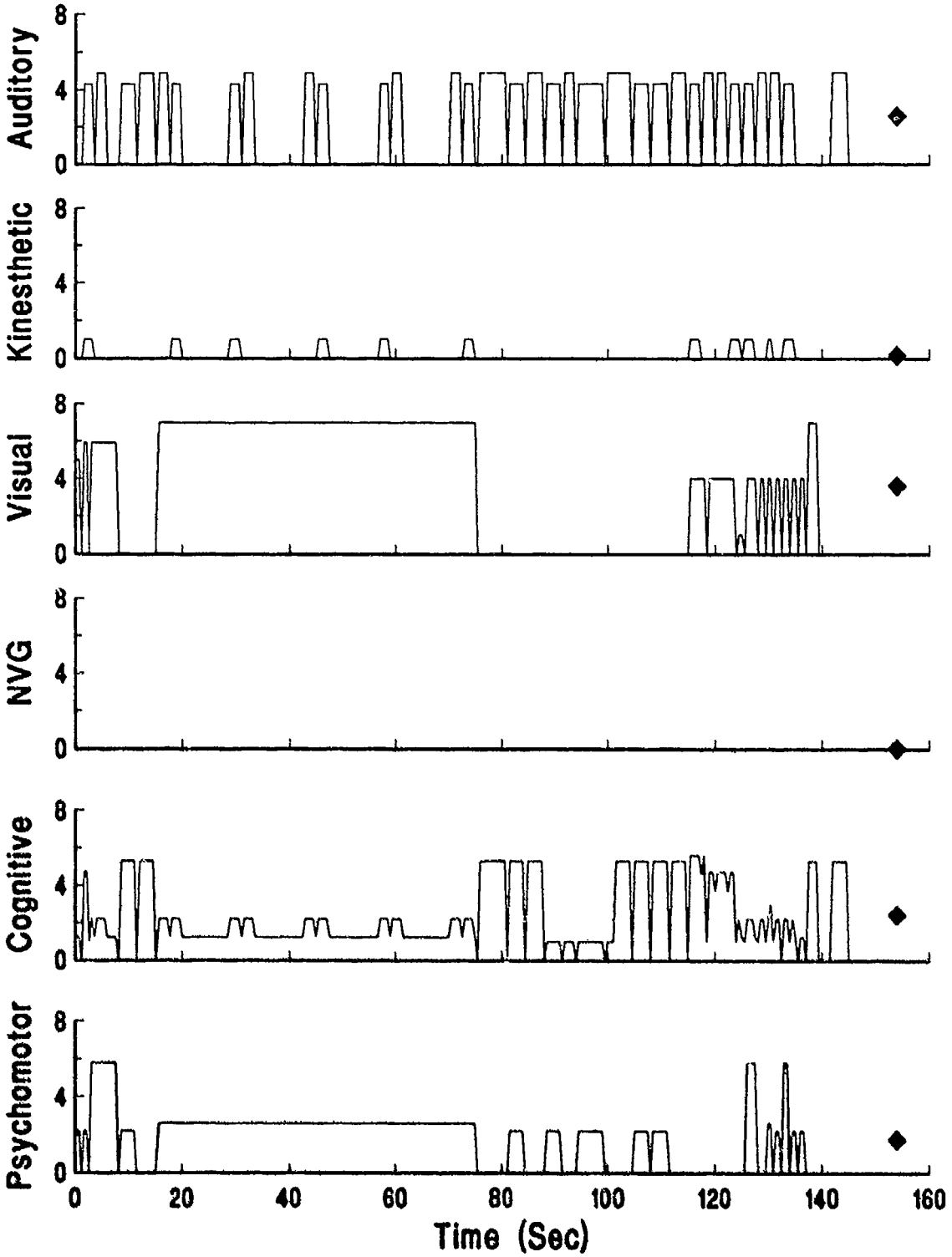
Segment 13: Approach [NVG]
Copilot - CH-47D



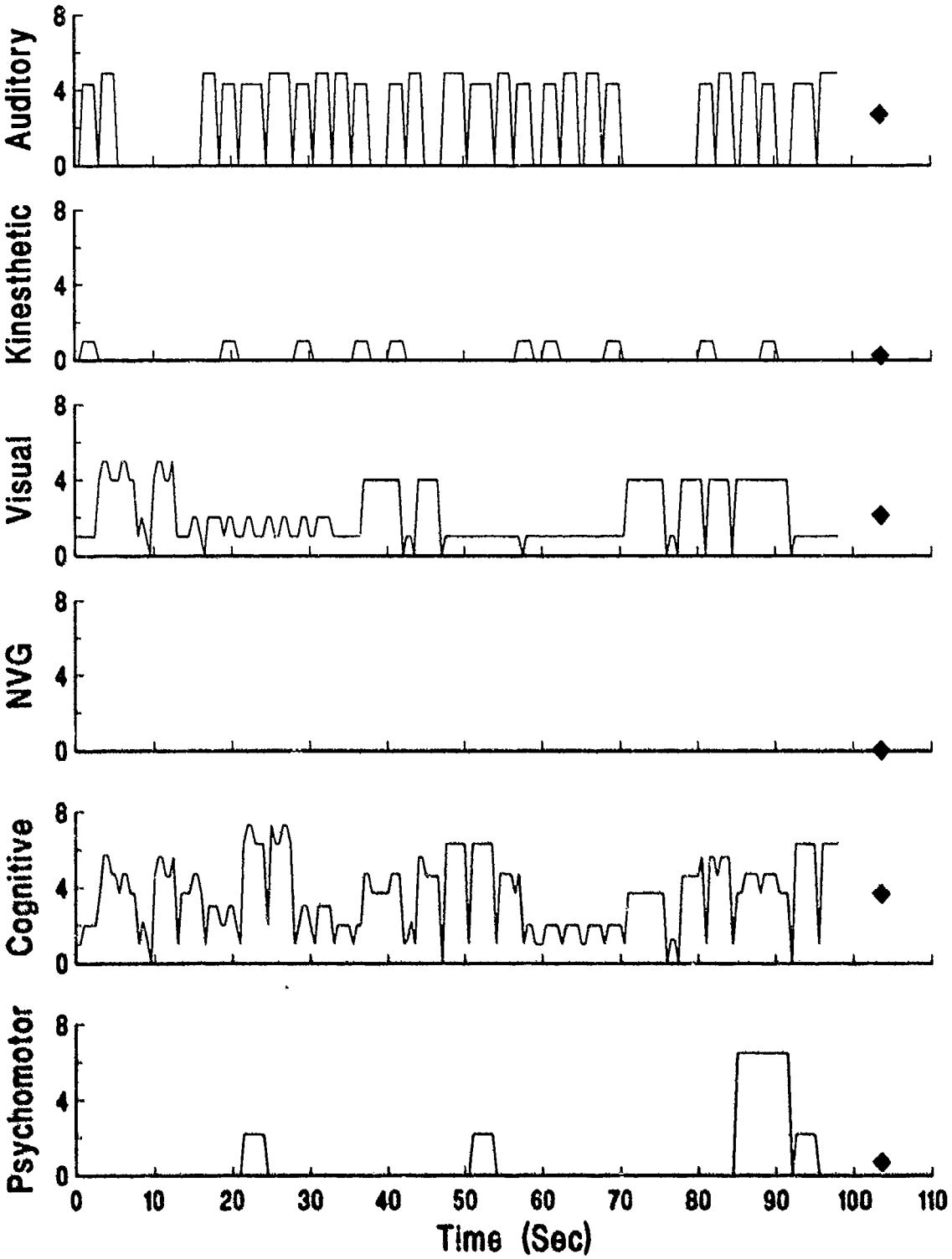
Segment 14: Landing [NVG]
Copilot - CH-47D



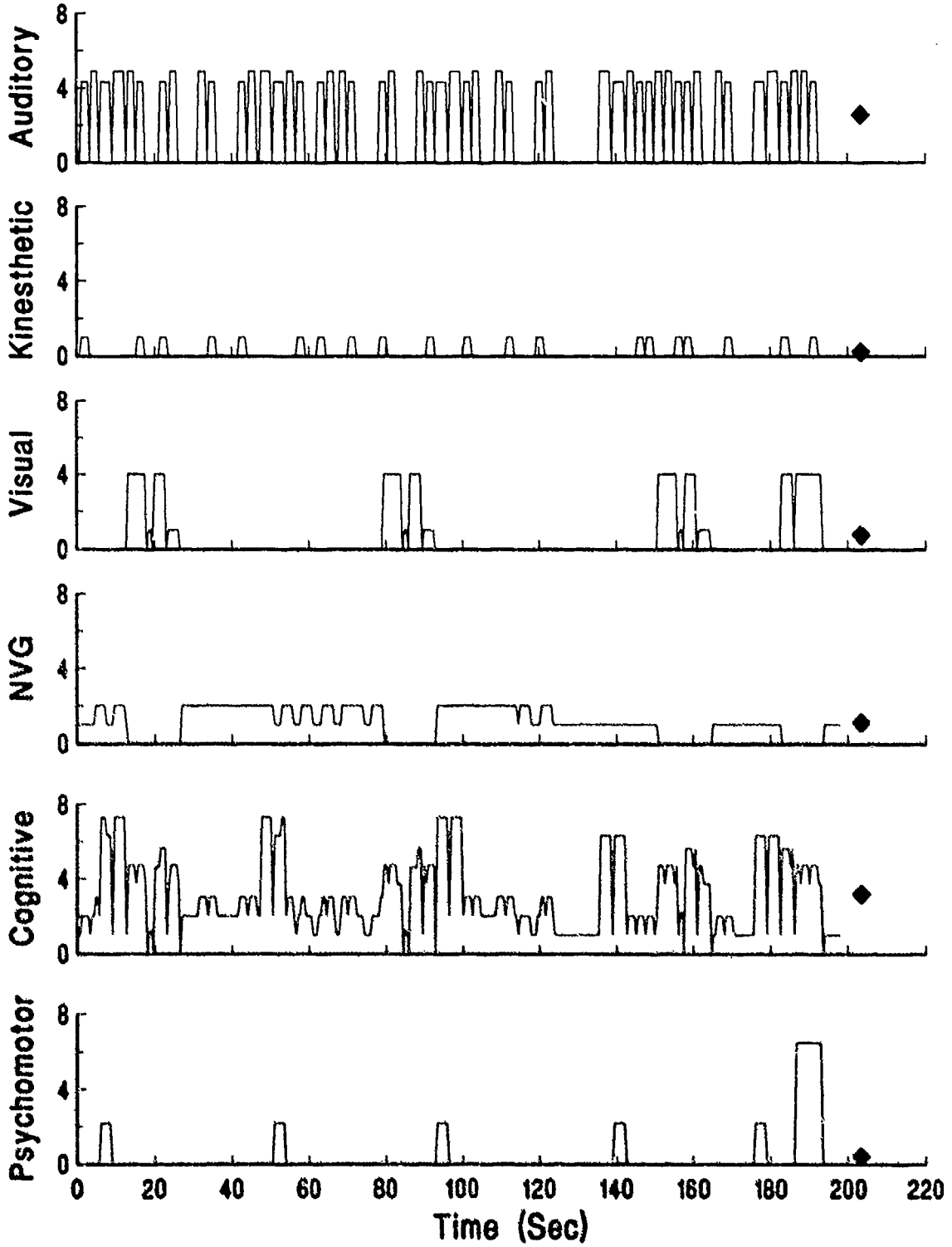
Segment 15: Before Takeoff (Internal Load)
Copilot - CH-47D



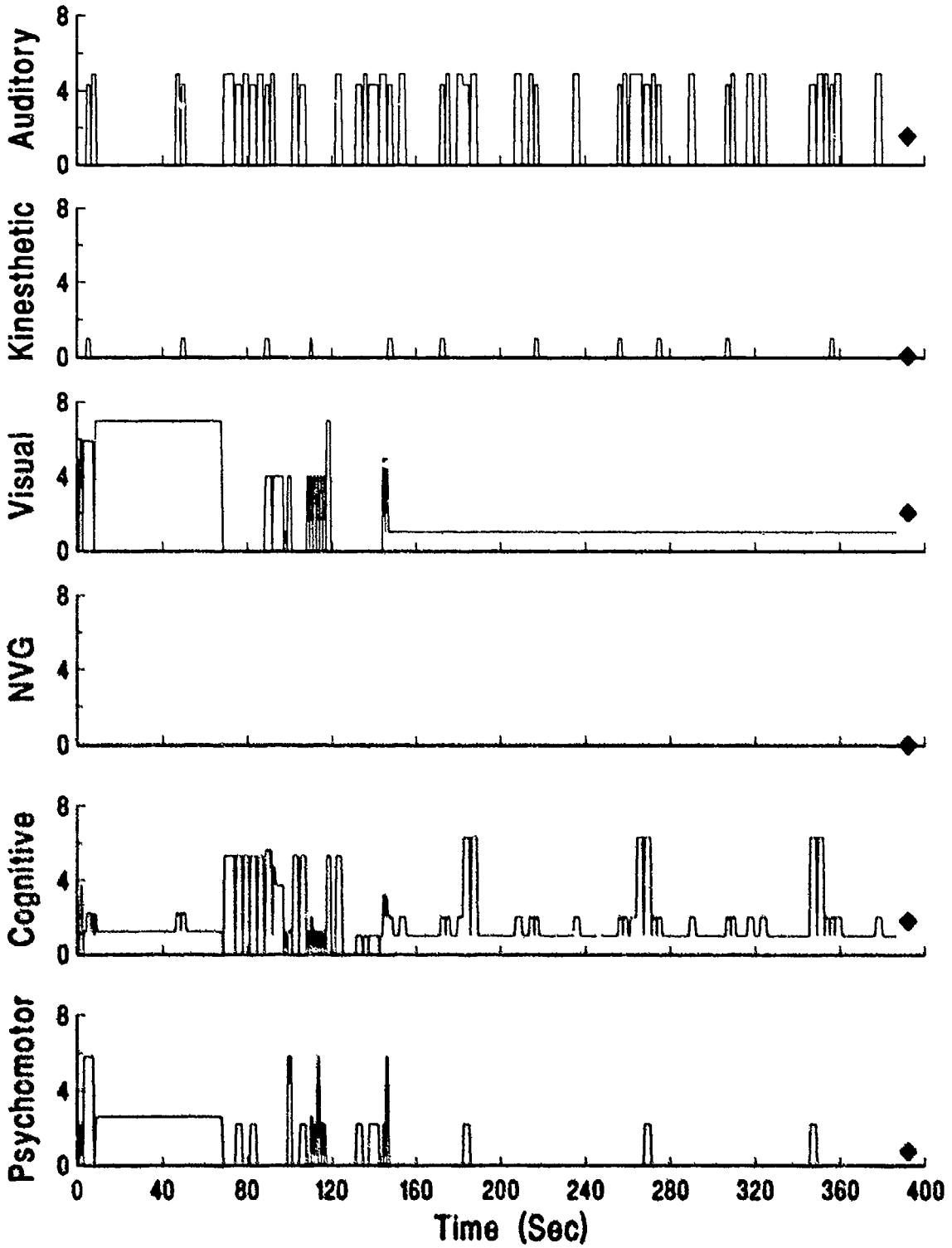
Segment 16: Takeoff
Copilot - CH-47D



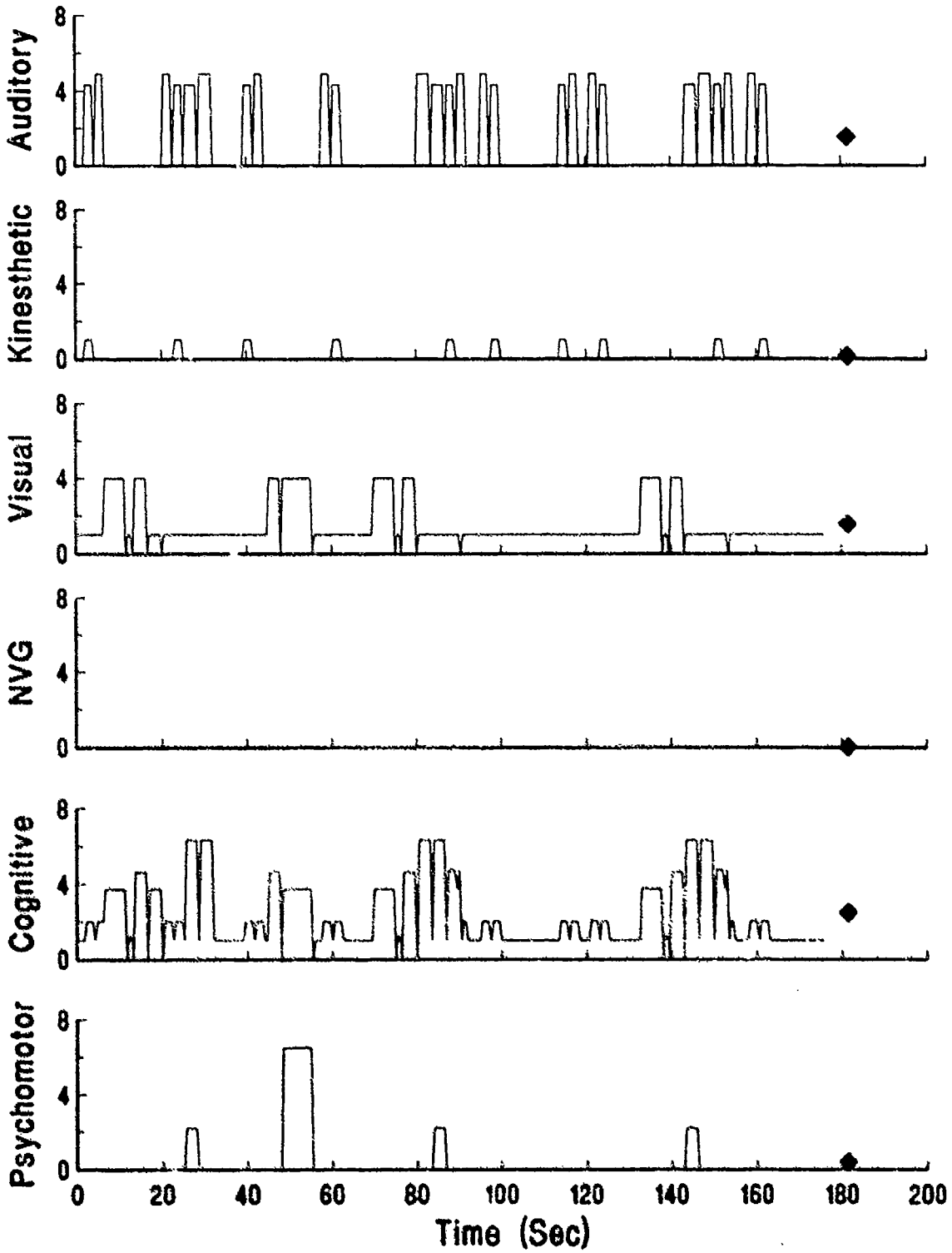
Segment 17: Takeoff [NVG]
Copilot - CH-47D



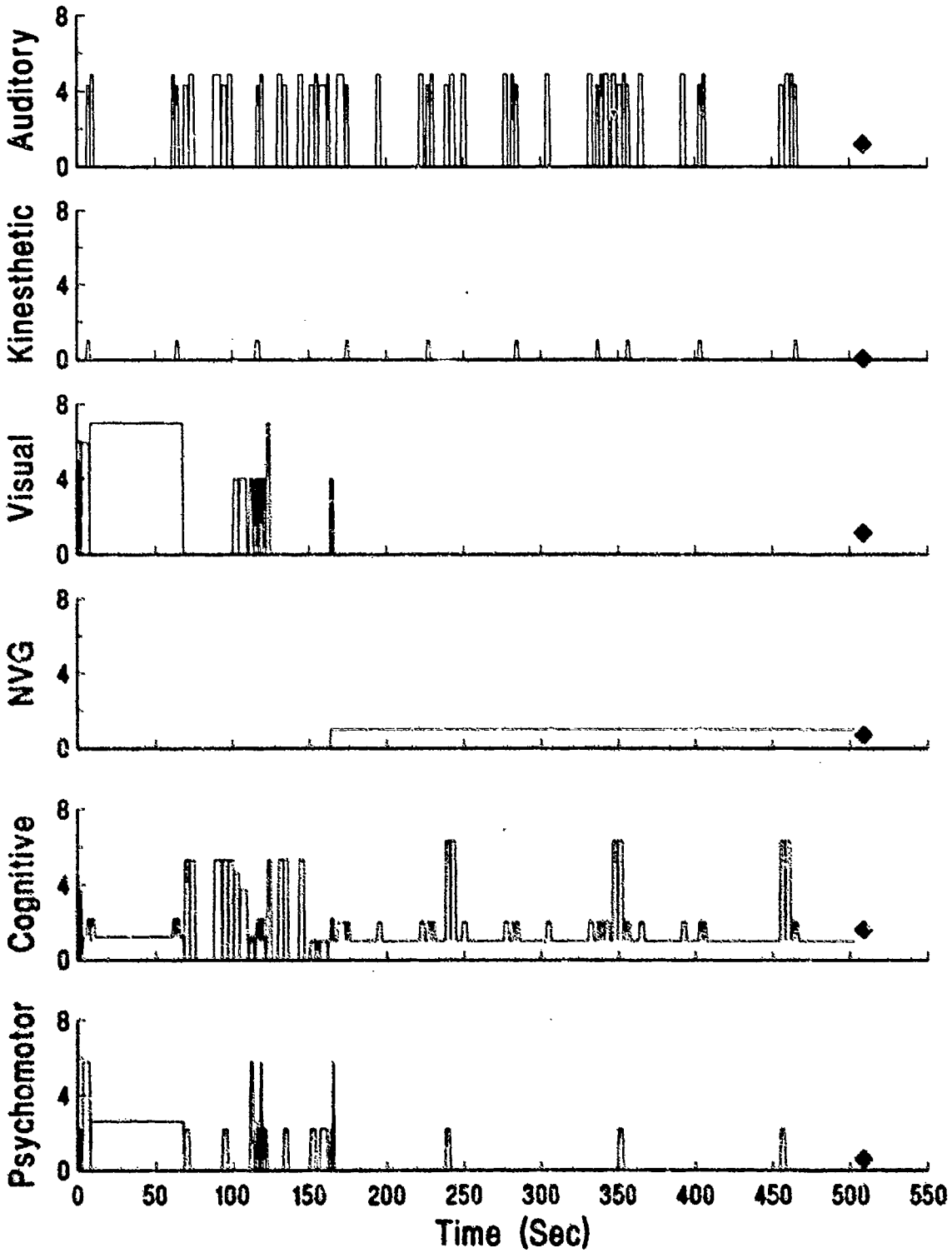
Segment 18: Before Takeoff (External Load)
Copilot - CH-47D



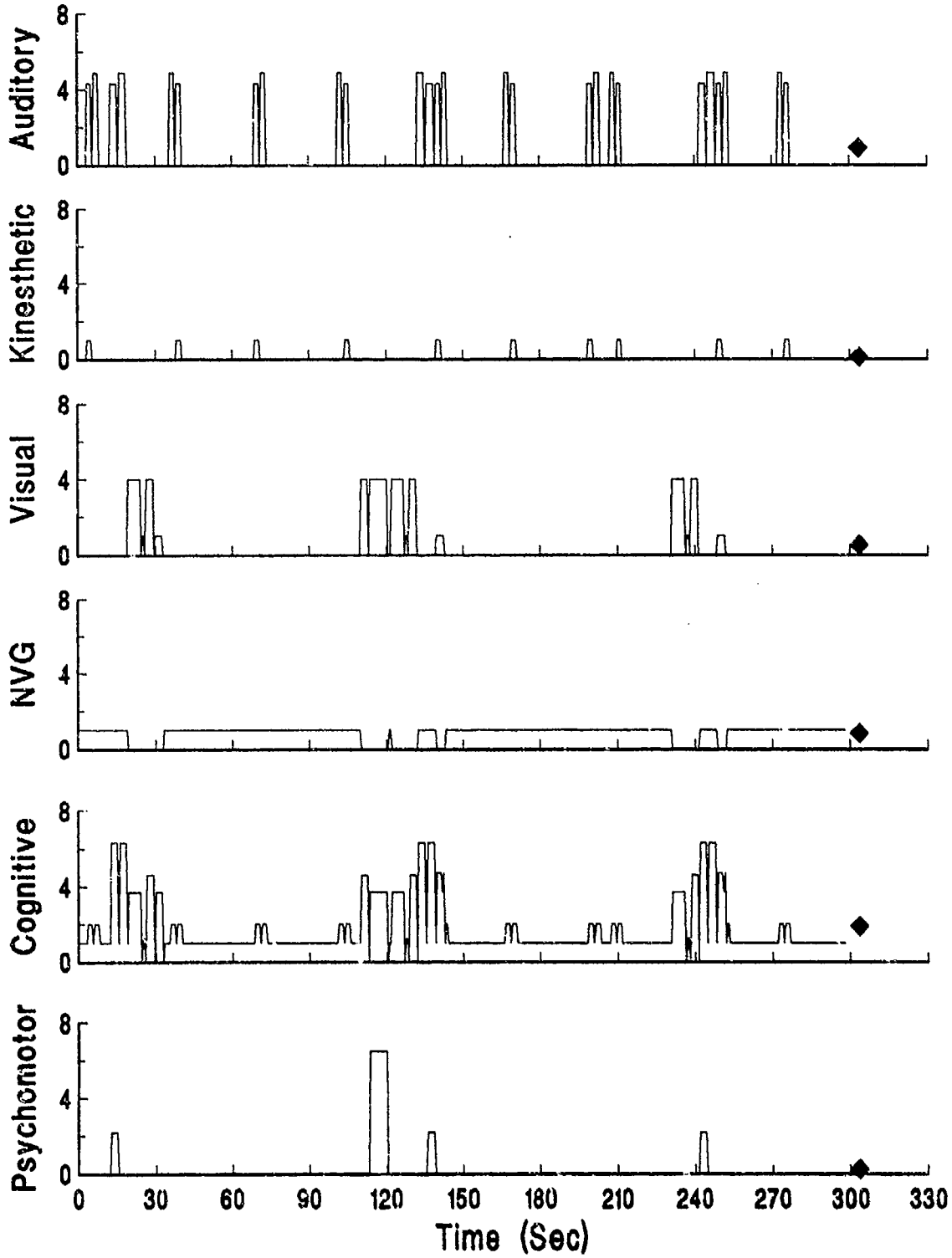
Segment 19: Takeoff (External)
Copilot - CH-47D



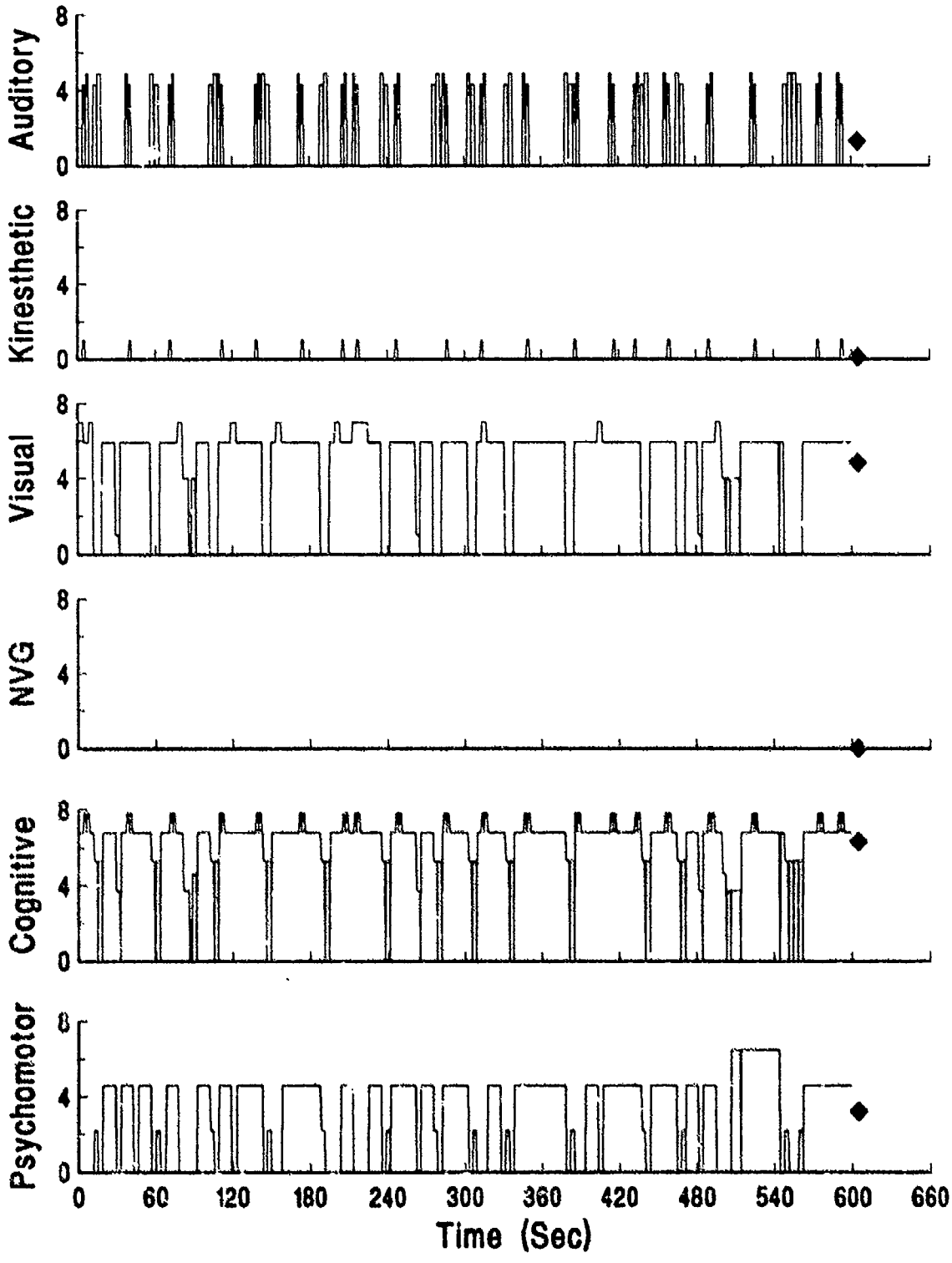
Segment 20: Before Takeoff (External Load) [NVG]
Copilot - CH-47D



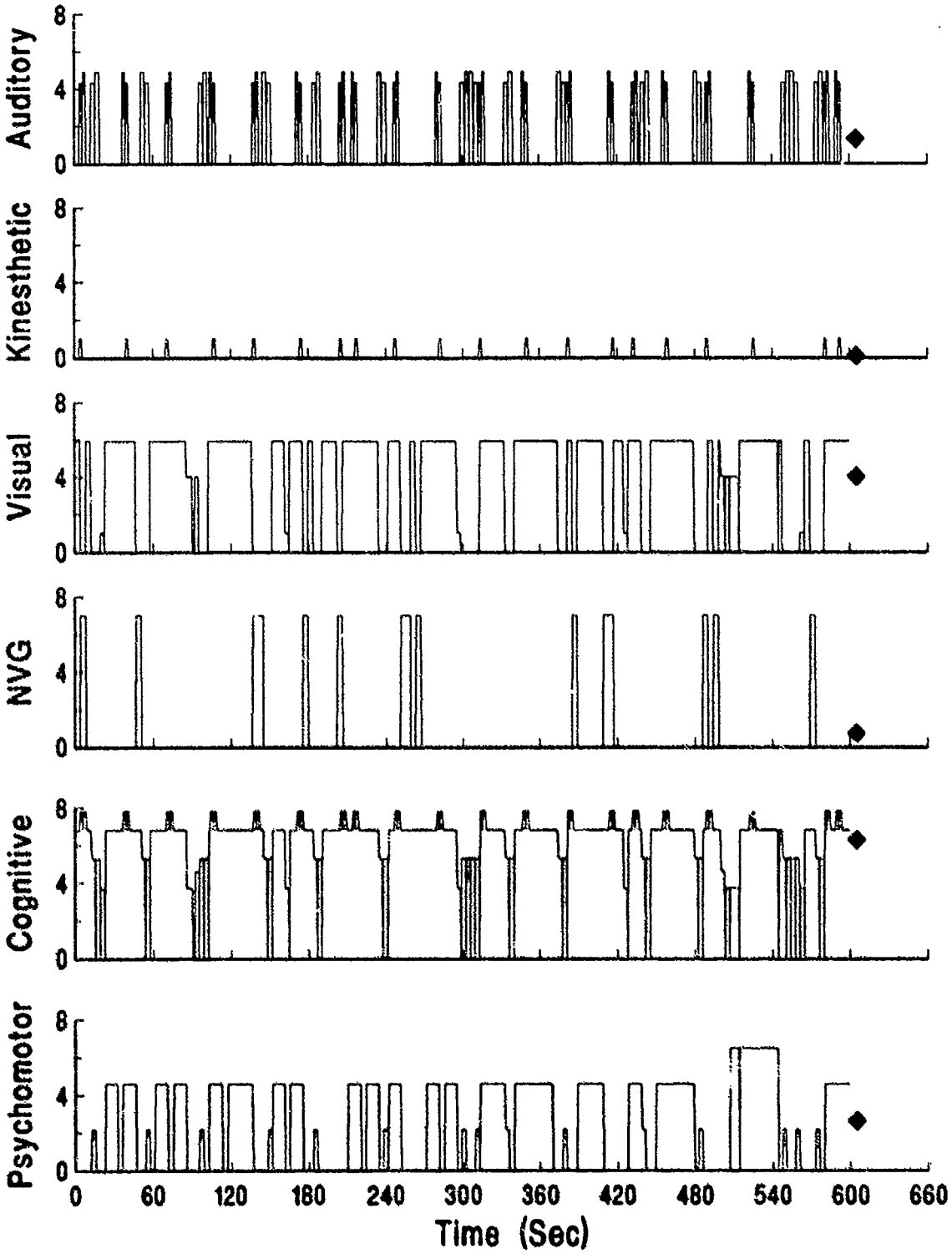
Segment 21: Takeoff (External) [NVG]
Copilot - CH-47D



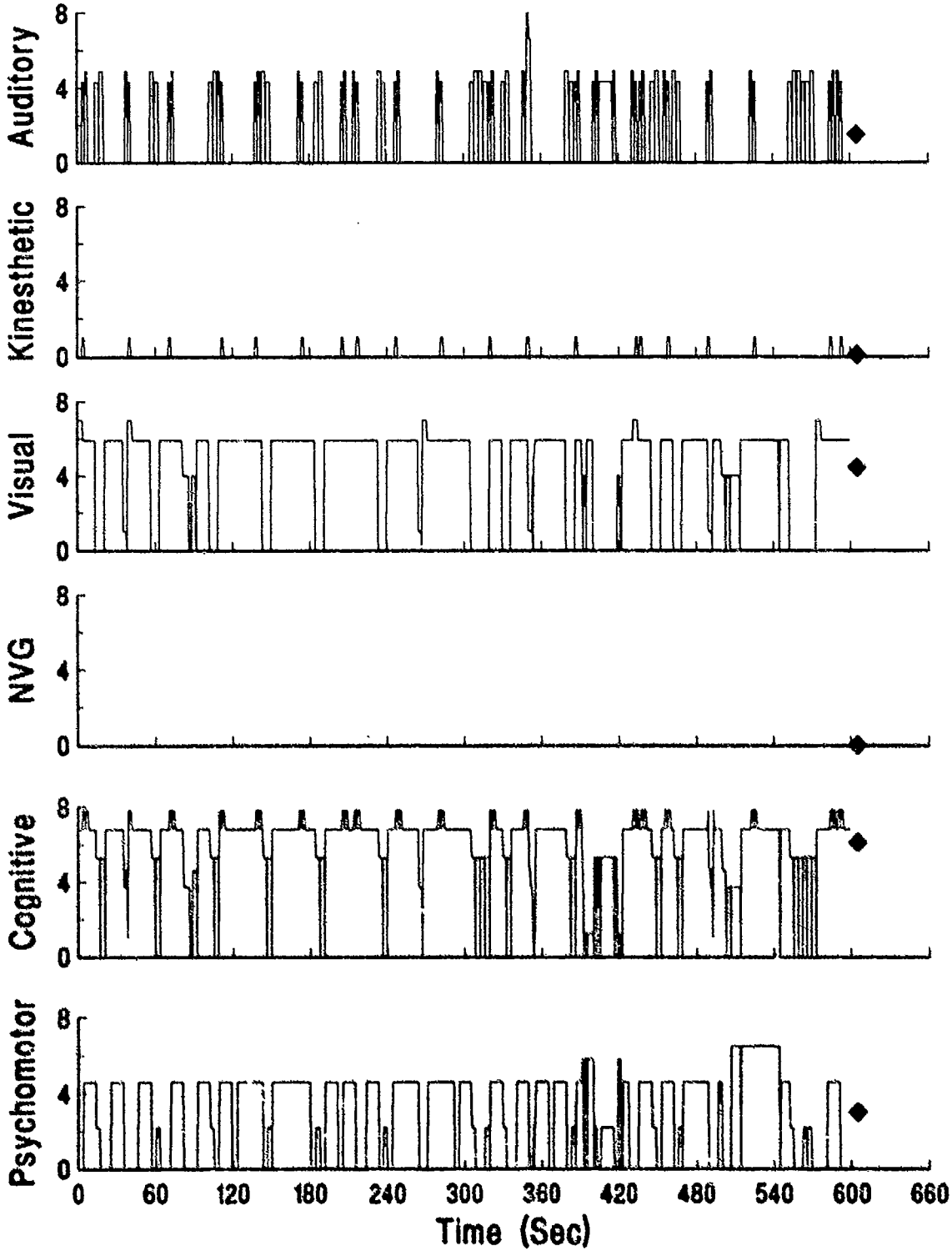
Segment 22: NOE Flight
Copilot - CH-47D



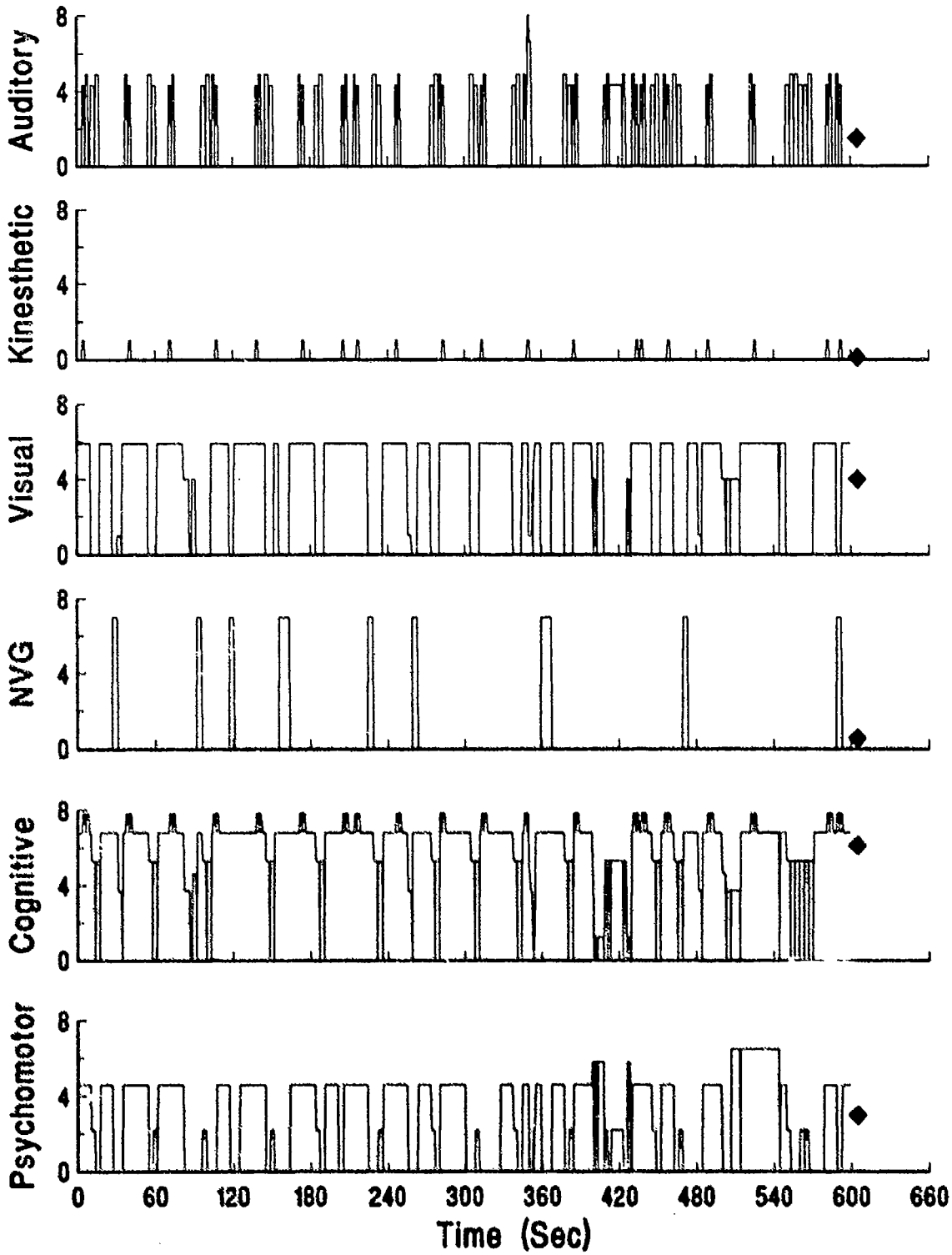
Segment 23: NOE Flight [NVG]
Copilot - CH-47D



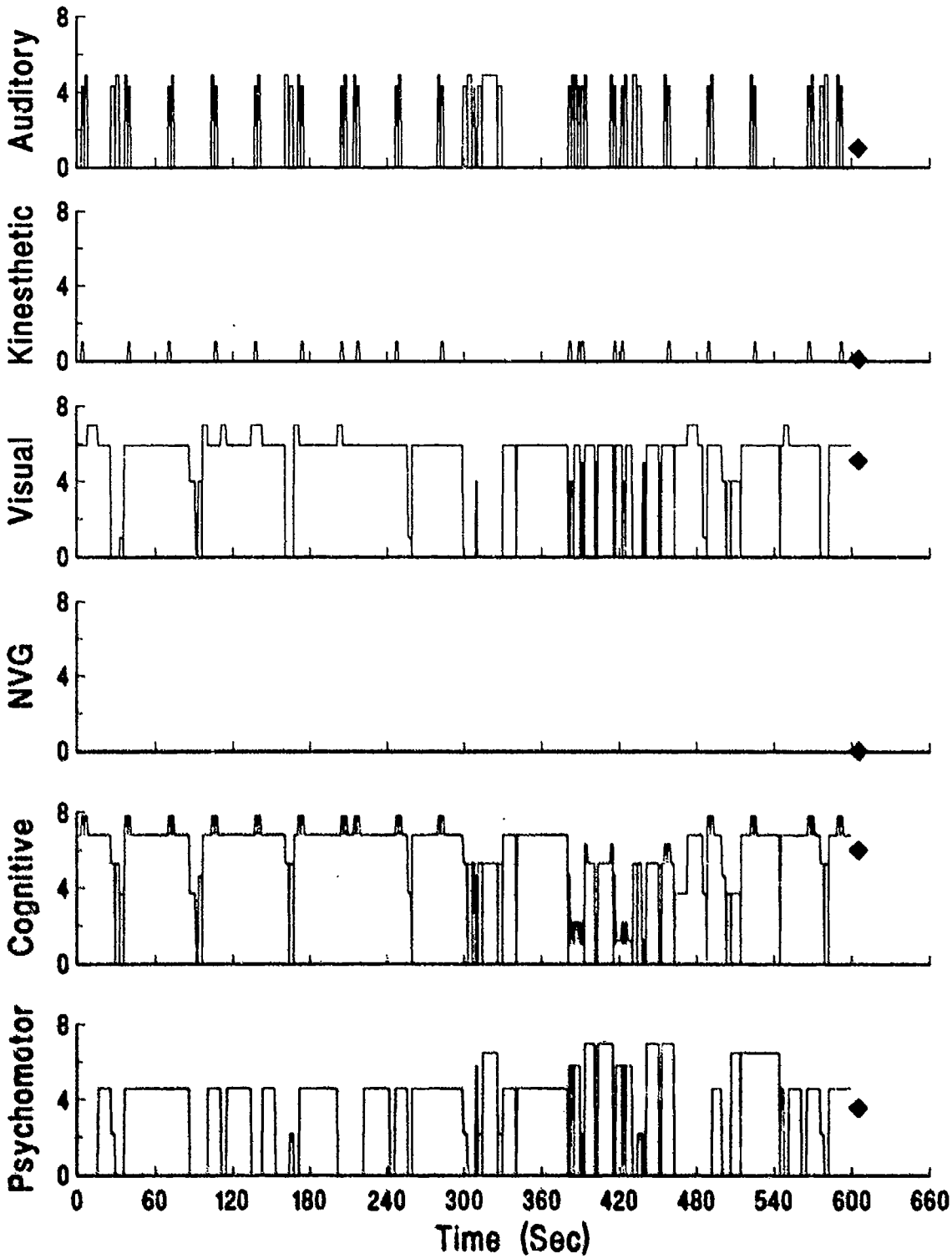
Segment 24: NOE Flight (Threat)
Copilot - CH-47D



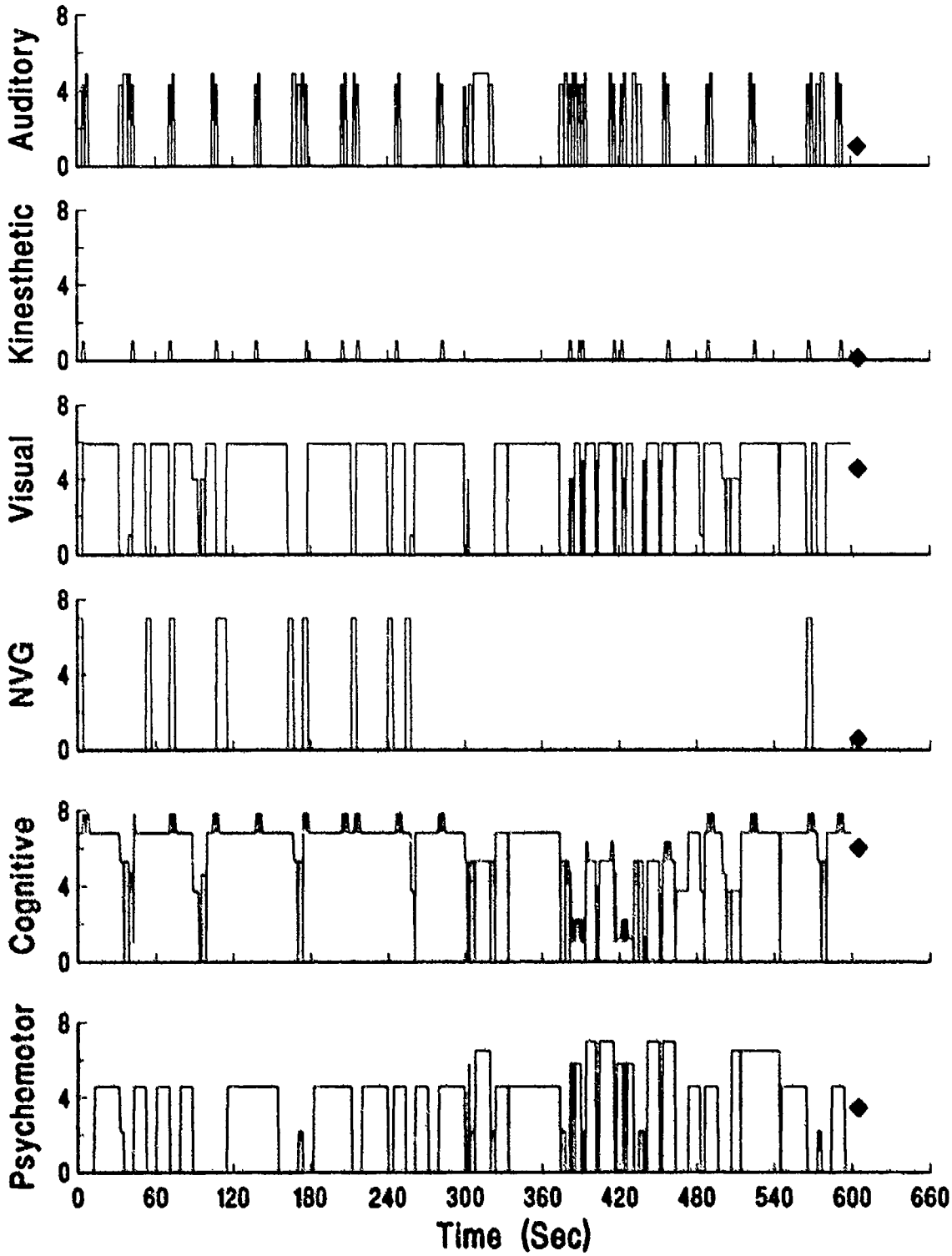
Segment 25: NOE Flight (Threat) [NVG]
Copilot - CH-47D



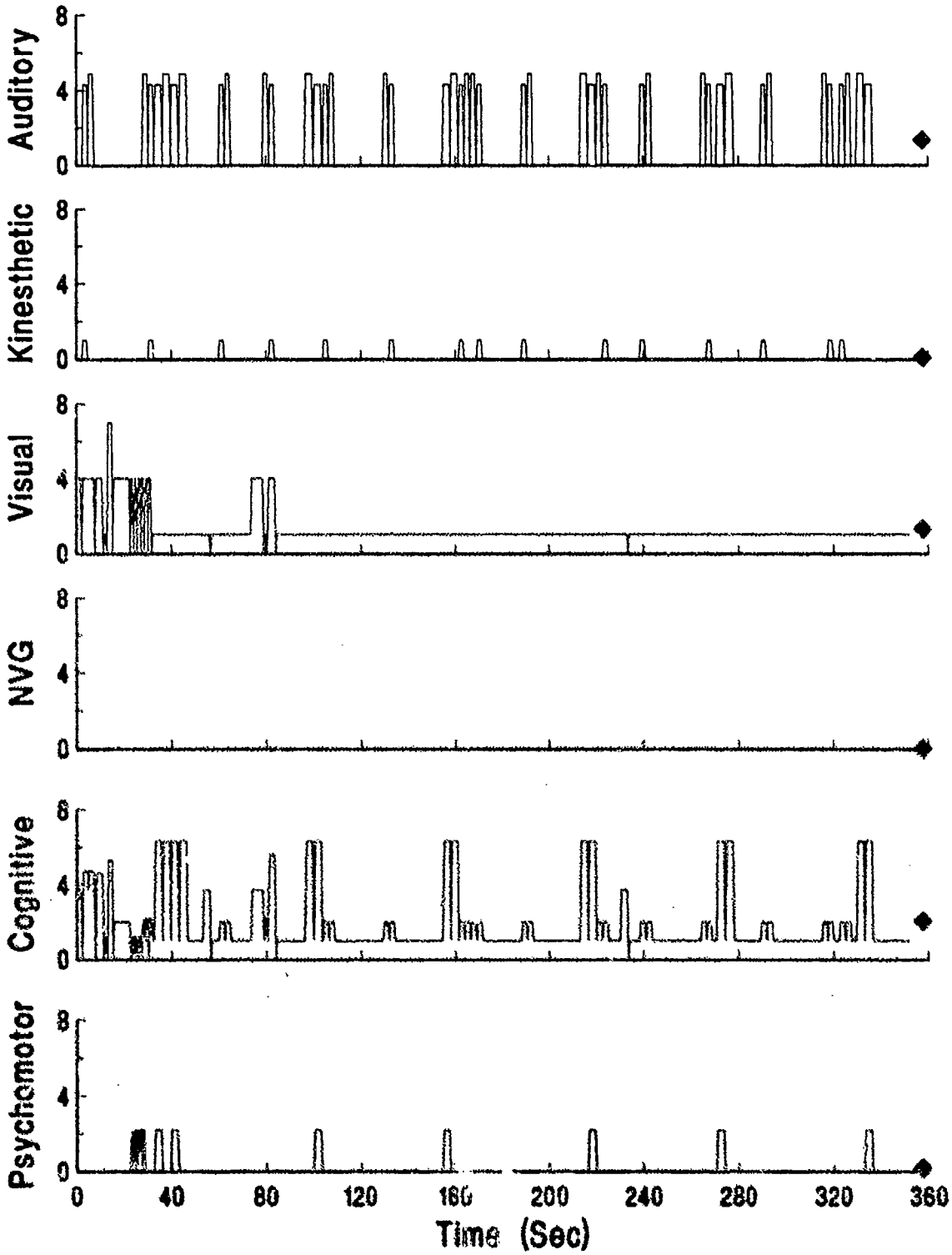
Segment 26: NOE Flight (Mission Change)
Copilot - CH-47D



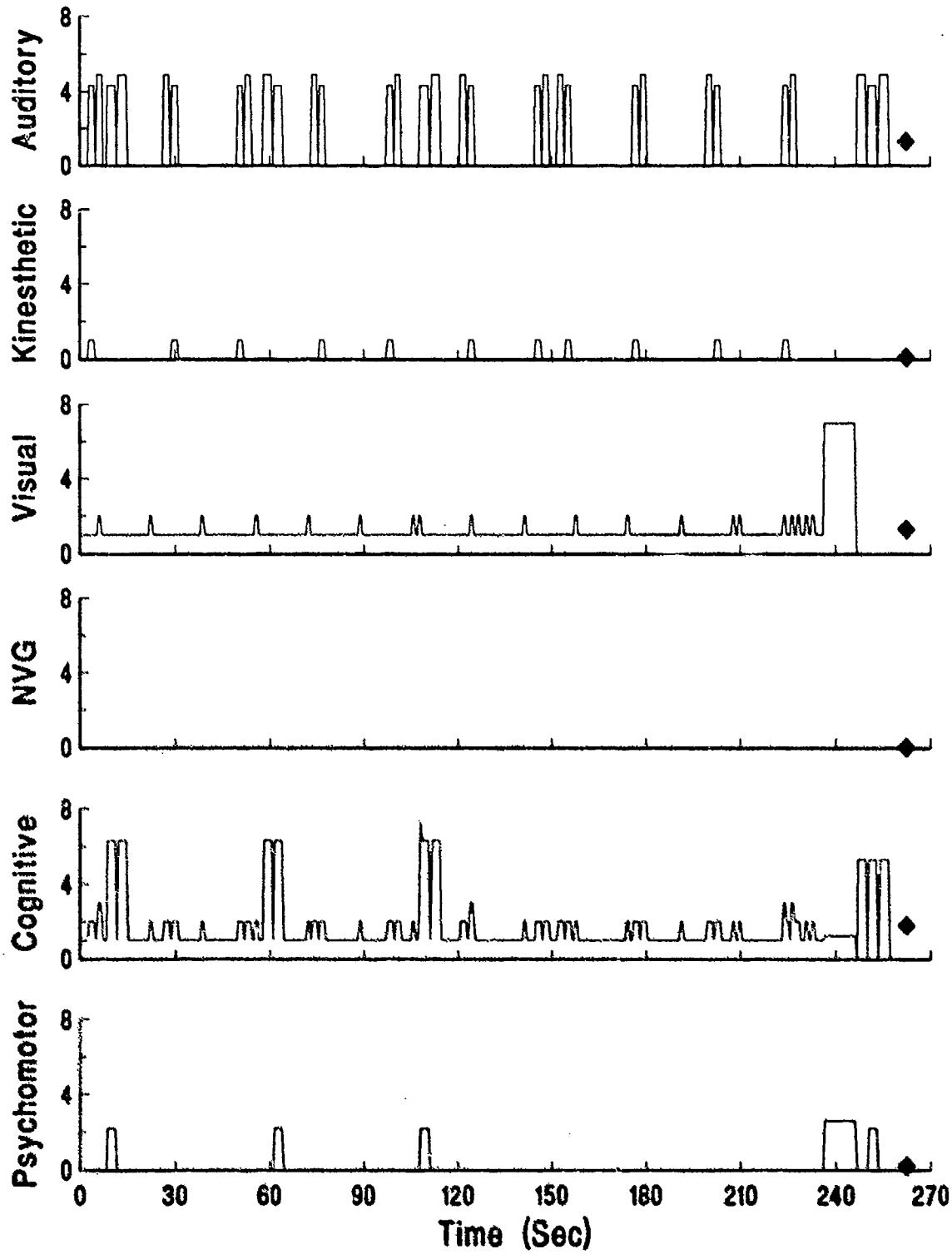
Segment 27: NOE Flight (Mission Change) [NVG]
Copilot - CH-47D



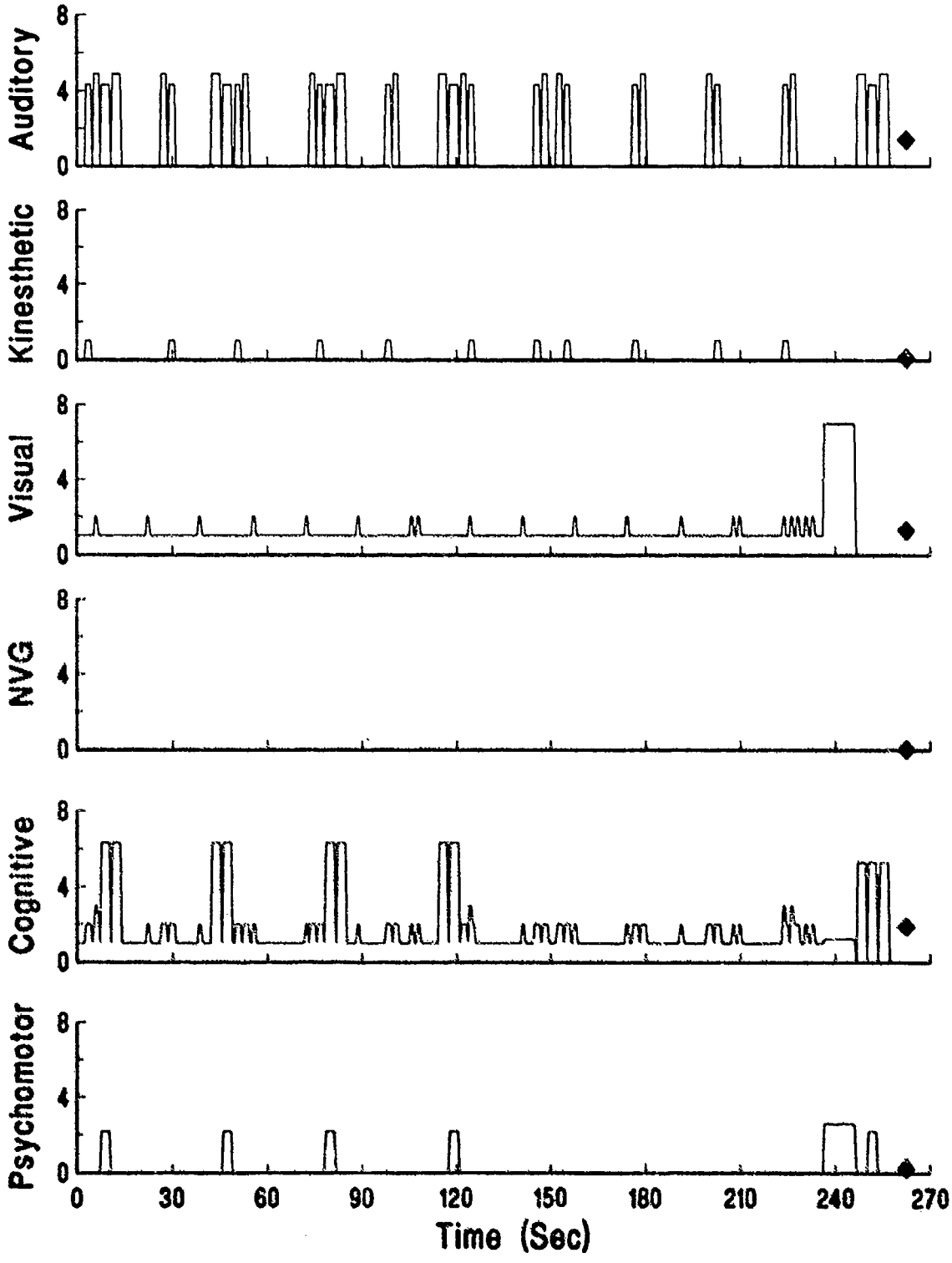
Segment 28: Approach (LZ)
Copilot - CH-47D



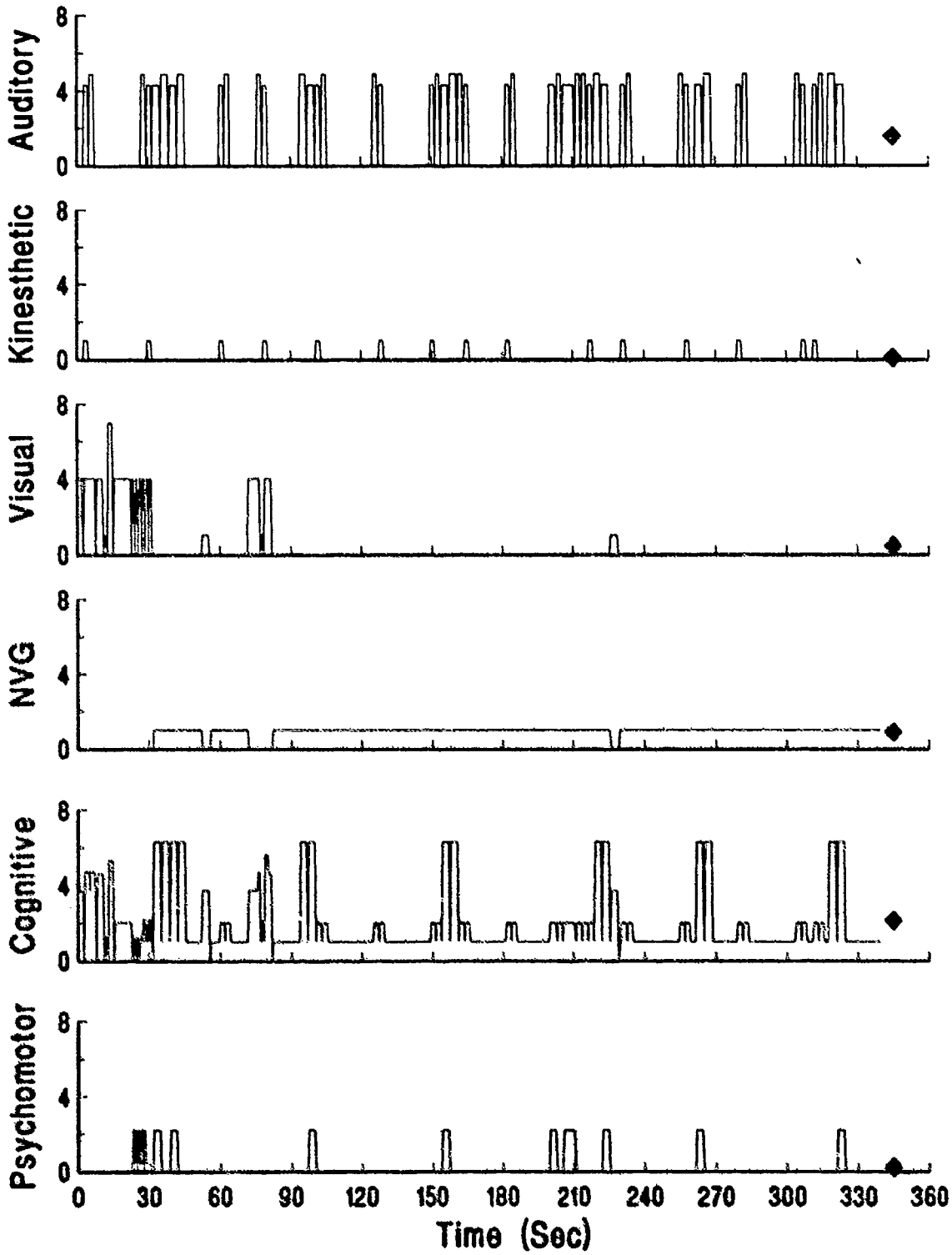
Segment 29: Landing (LZ, Internal Load)
Copilot - CH-47D



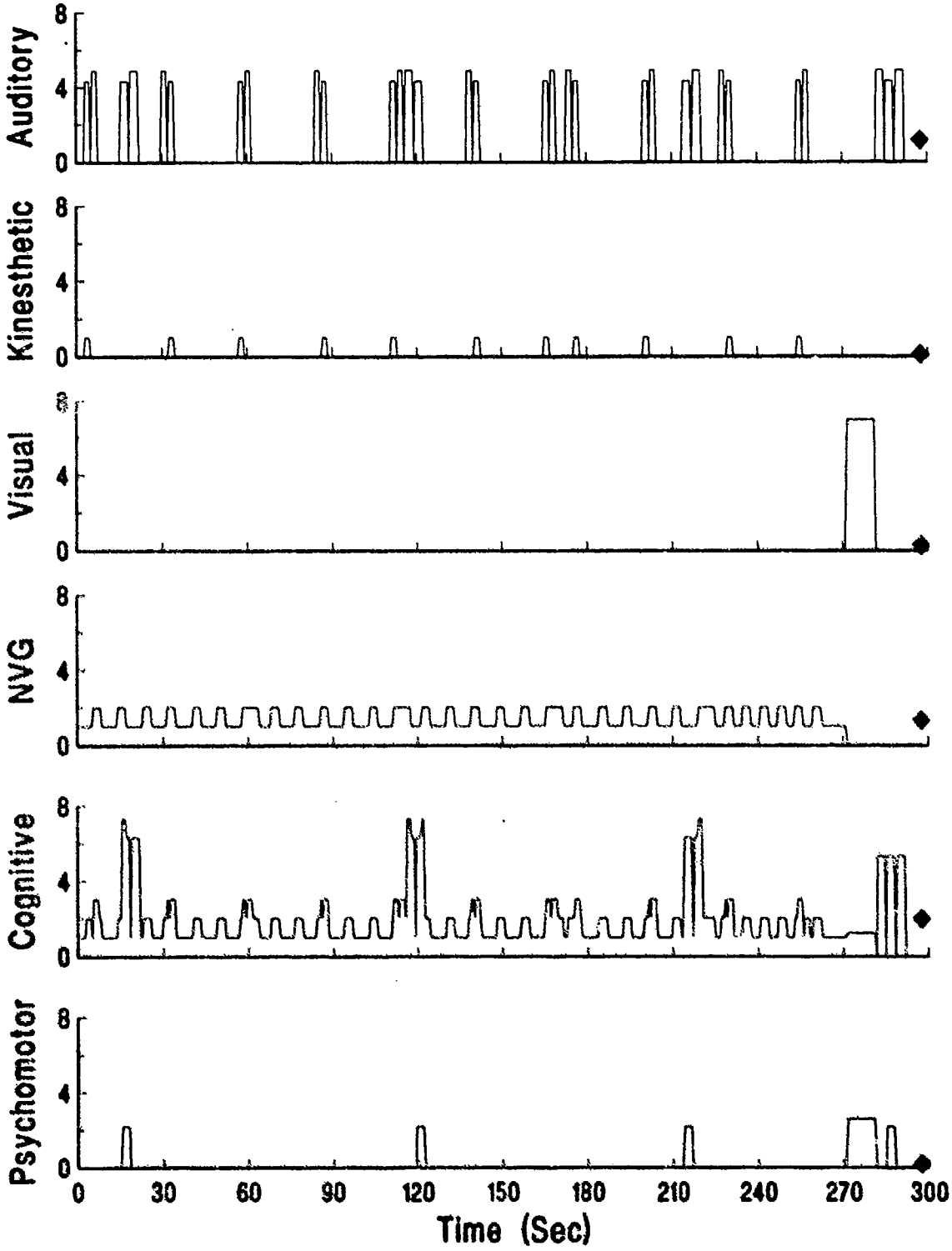
Segment 30: Landing (LZ, External Load)
Copilot - CH-47D



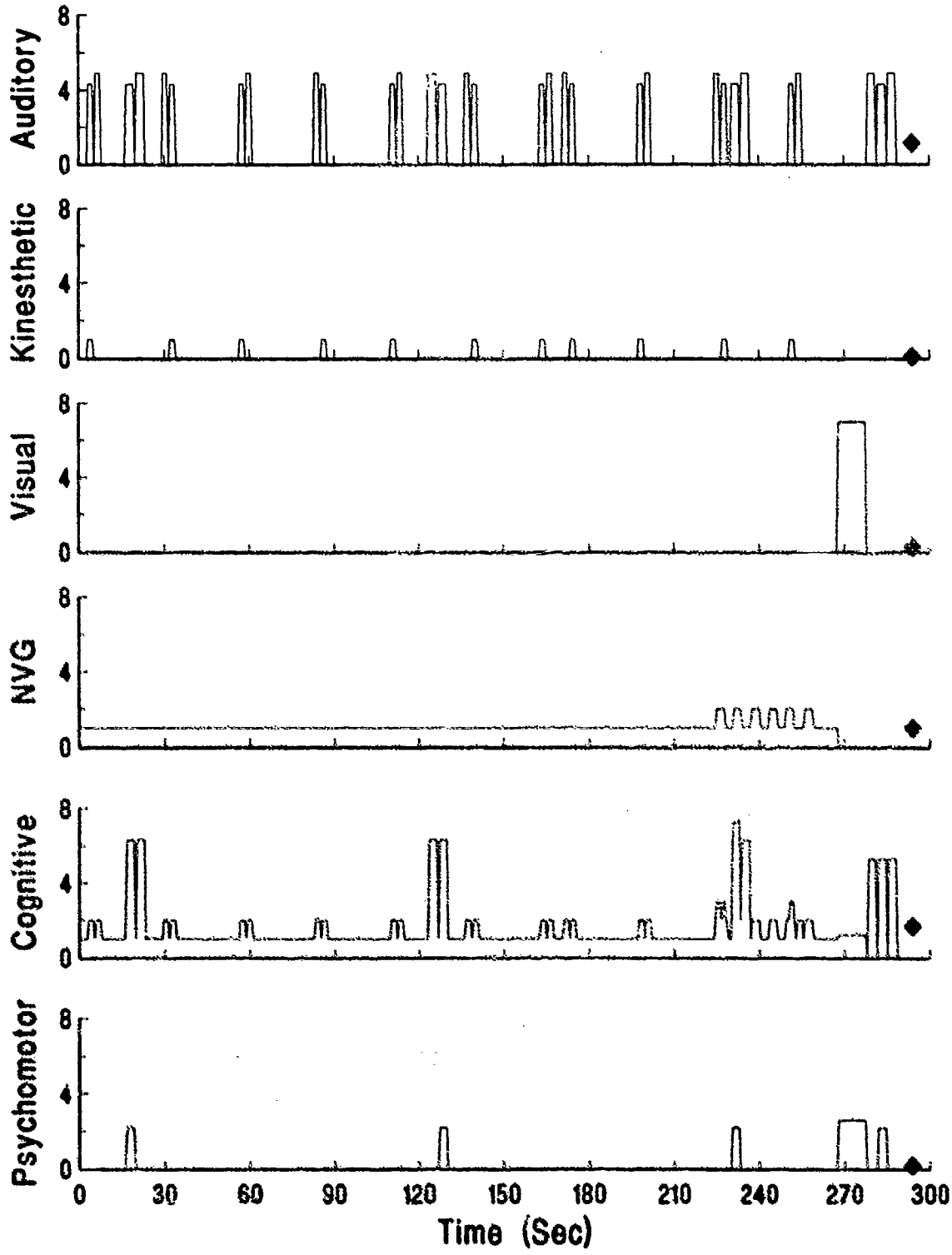
Segment 31: Approach (LZ) [NVG]
Copilot - CH-47D



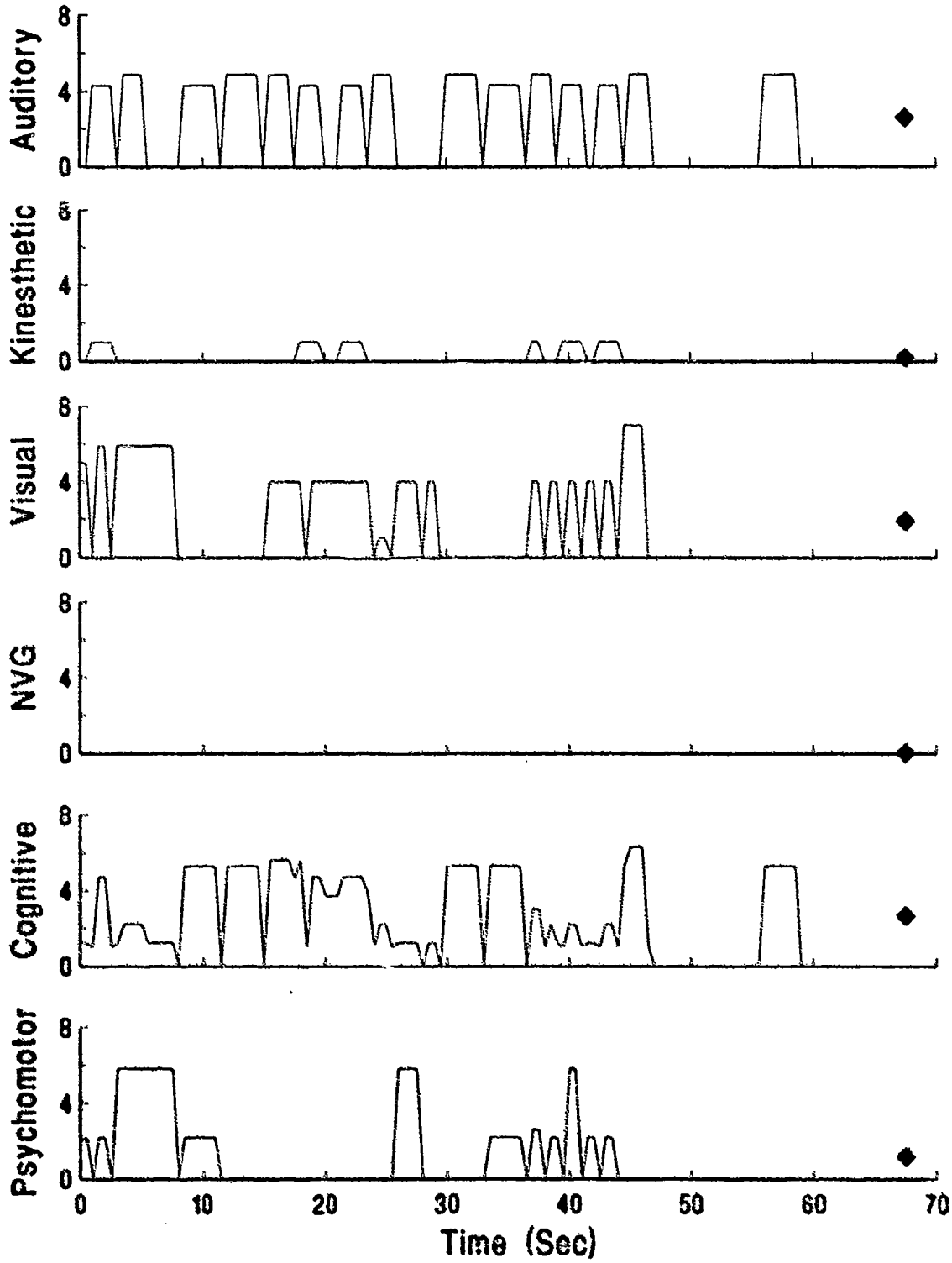
Segment 32: Landing (LZ, Internal Load) [NVG]
Copilot - CH-47D



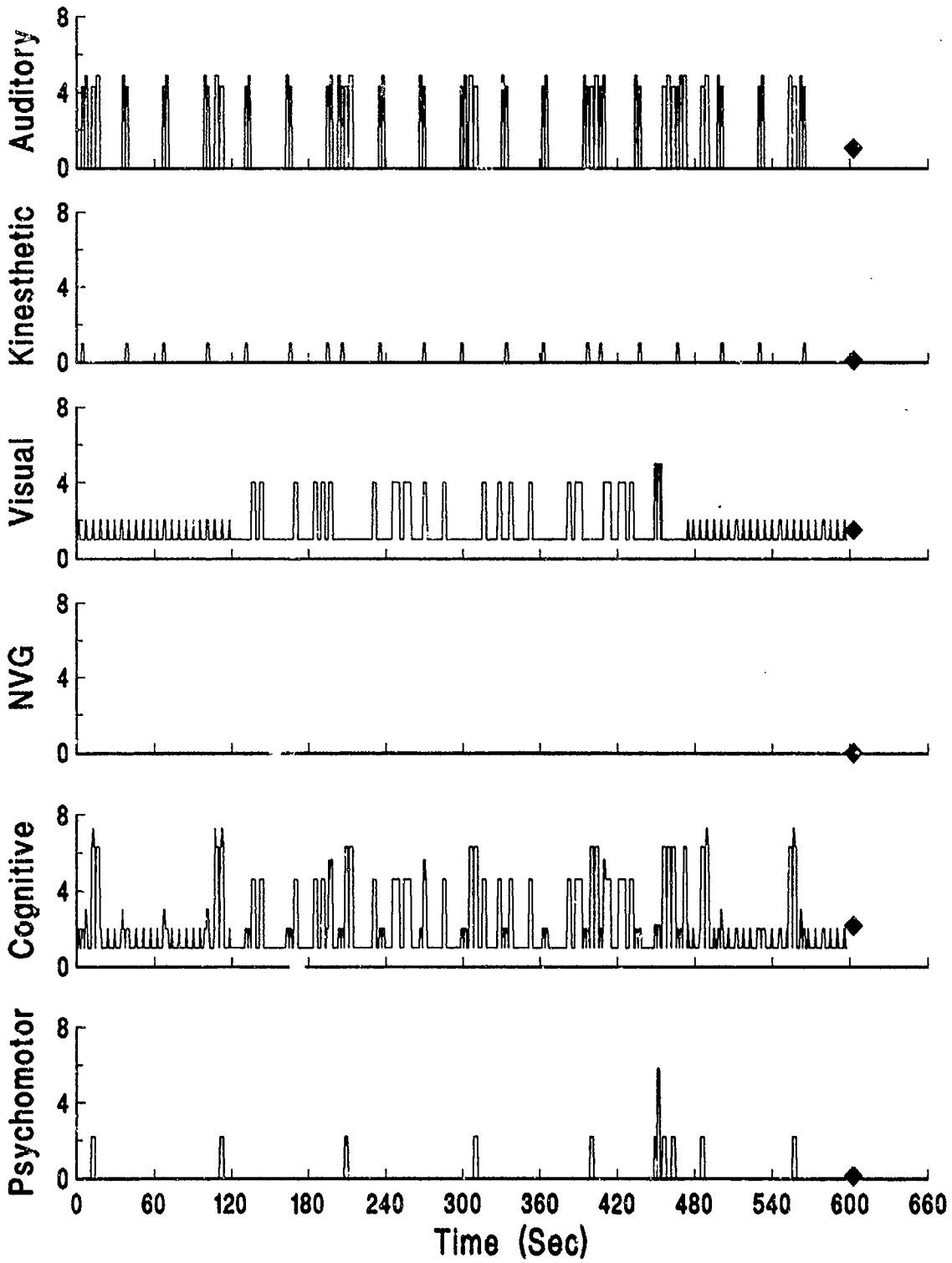
Segment 33: Landing (LZ, External Load) [NVG]
Copilot - CH-47D



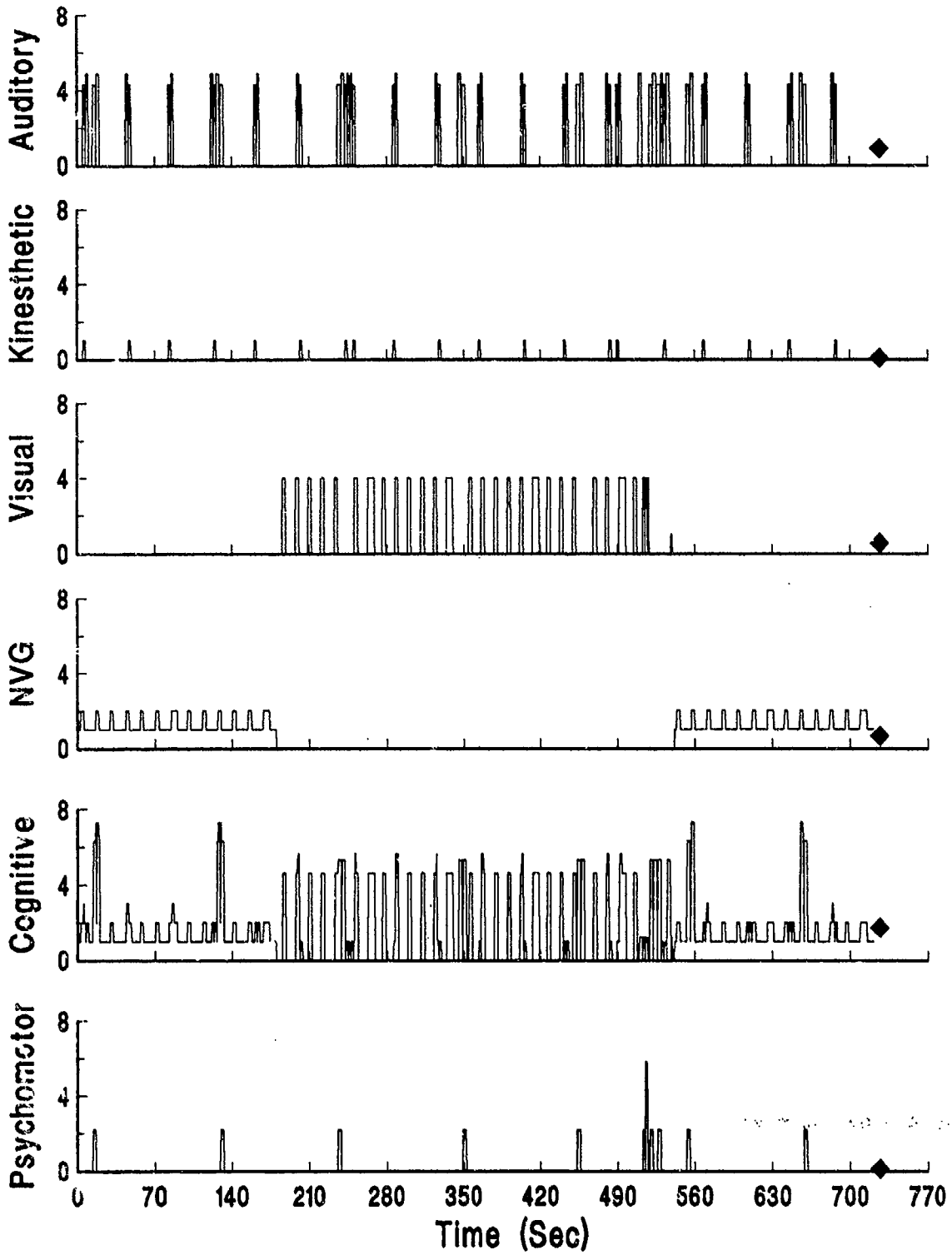
Segment 34: Before Takeoff (LZ)
Copilot - CH-47D



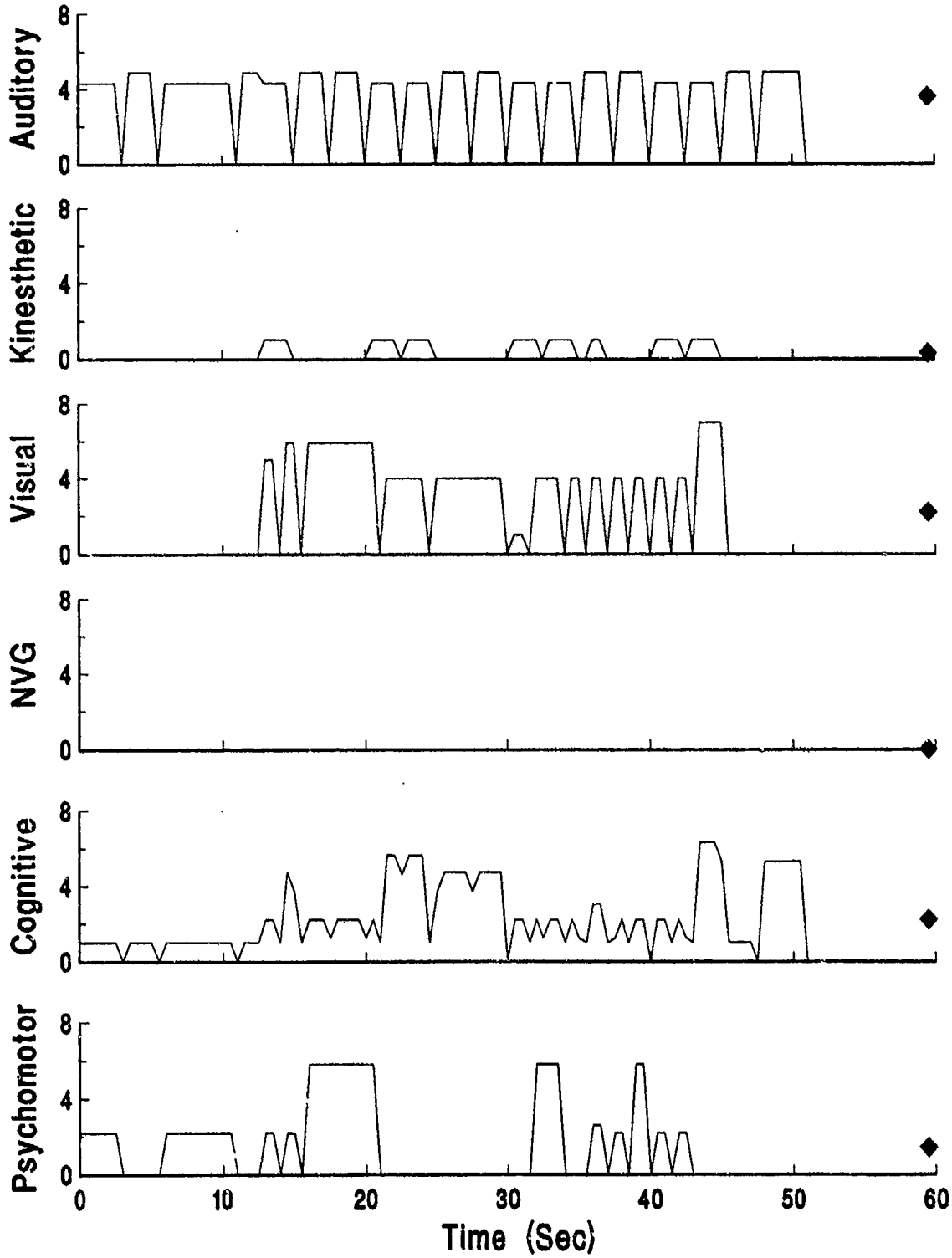
Segment 35: FARP Procedures
Copilot - CH-47D



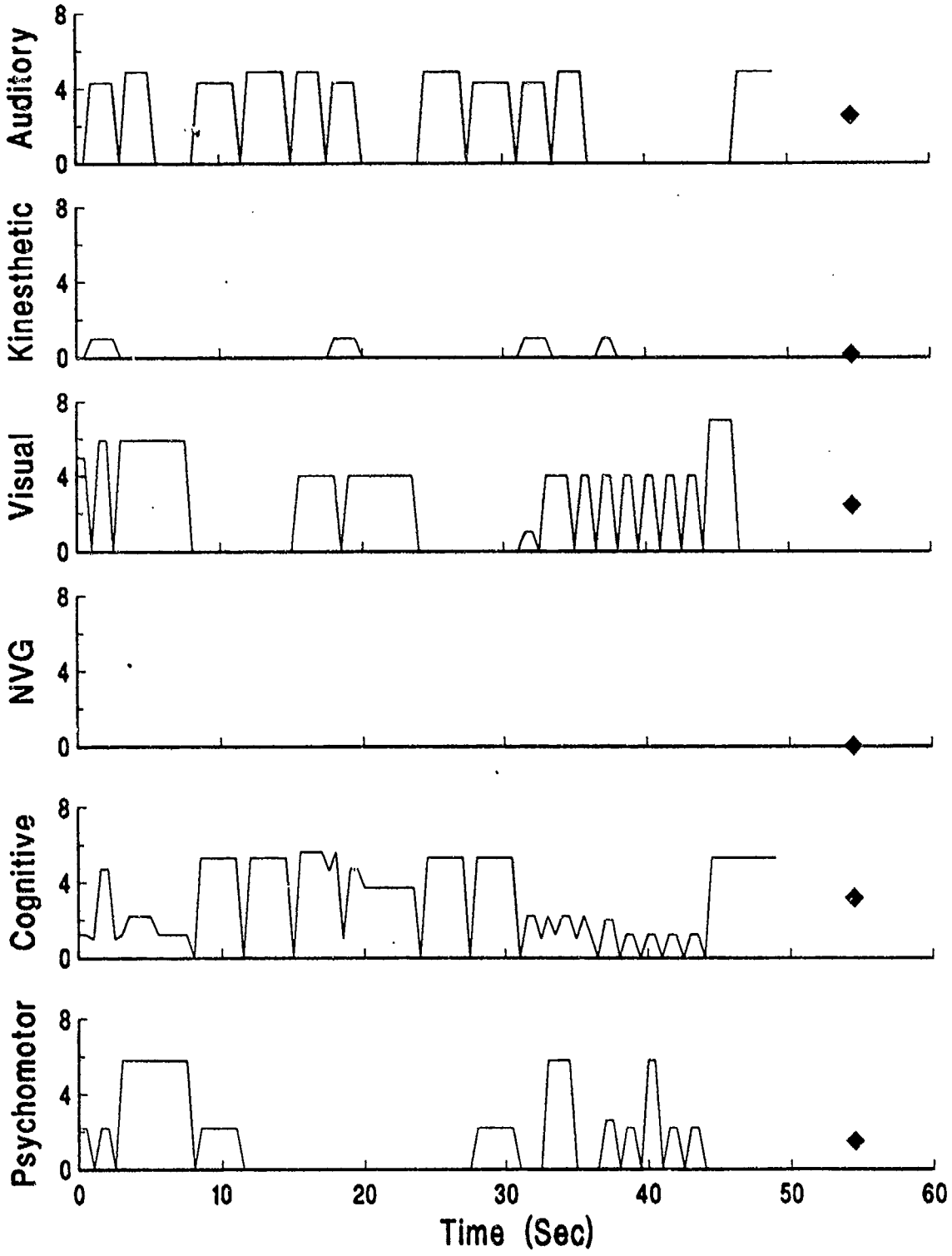
Segment 36: FARP Procedures [NVG]
Copilot - CH-47D



Segment 37: Before Takeoff (FARP)
Copilot - CH-47D



Segment 38: Before Takeoff (LZ)(NVG)
Copilot - CH-47D



A P P E N D I X C

SUMMARY OF MH-47E MISSION PHASES AND SEGMENTS

The MH-47E mission scenario was divided into 5 unique mission phases. Subsequently, the 5 mission phases were divided into segments. This appendix lists the 5 phases and the 15 unique mission segments that were derived during the MH-47E mission analysis.

Phase 1: Departure (Base)

Segment 01: Configure Systems for Mission

02: Before Takeoff (Base/Internal Load)

03: Takeoff [ANVIS]

Phase 2: Enroute (Base-Rendezvous)

Segment 04: Enroute Flight

05: Contour Flight (No Update) [ANVIS]

06: Contour Flight (Update) [ANVIS]

07: Rendezvous [ANVIS]

Phase 3: Enroute (Rendezvous-LZ)

Segment 08: NOE Flight [ANVIS]

09: NOE Flight [ANVIS/ASE]

10: Approach (LZ) [ANVIS]

11: Landing (LZ/Internal Load) [ANVIS]

Phase 4: Enroute (LZ-Rendezvous)

Segment 12: Before Takeoff (LZ)

03: Takeoff [ANVIS]

13: NOE Flight (Route Change) [ANVIS]

07: Rendezvous [ANVIS]

Phase 5: Enroute (Rendezvous-Base)

Segment 06: Contour Flight (Update) [ANVIS]

14: Approach [ANVIS]

15: Landing [ANVIS]

A P P E N D I X D

LIST OF MH-47E MISSION FUNCTIONS

Each mission segment listed in Appendix C was divided into functions during the MH-47E mission analysis. Seventy-three unique functions were identified. Subsequently, the 73 unique functions were listed and a number (01 - 73) was assigned corresponding to the ordinal position within the list. This appendix is a list of the functions and the numerical identifiers for the functions.

NUMBER	FUNCTION
01	Adjust Approach Parameters [NVG]
02	Adjust Climb Parameters [NVG]
03	Adjust Flight Parameters [NVG]
04	Adjust Level of Flight Parameters [NVG]
05	Adjust Map Display (Copilot)
06	Adjust Map Display (Pilot)
07	Align Navigation Systems
08	Boresight FLIR
09	Check Approach Parameters
10	Check Avionics System
11	Check Climb Parameters
12	Check Flight Instruments (Auto)
13	Check Flight Parameters
14	Check Level of Flight Parameters
15	Check Map Display System (Copilot)
16	Check Map Display System (Pilot)
17	Configure Flight Director
18	Configure Navigation Radios
19	Depart Rendezvous [NVG]
20	Engage Level Flight (Auto)
21	Establish Approach [NVG]
22	Establish Climb [NVG]
23	Establish Hover [NVG]
24	Establish Level of Flight [NVG]
25	Land Aircraft [NVG]
26	Load Aircraft (Internal)
27	Load Mission Plan
28	Mission Change
29	Monitor Audio

NUMBER	FUNCTION
30	Monitor External Visual Field [NVG] (Copilot)
31	Monitor External Visual Field [NVG] (Pilot)
32	Monitor Flight Controls
33	Monitor FLIR Image (Copilot)
34	Monitor FLIR Image (Pilot)
35	Monitor Radar Image (Copilot)
36	Monitor Radar Image (Pilot)
37	Monitor Threat (Copilot)
38	Monitor Threat (Pilot)
39	Perform Aerial Refueling [NVG]
40	Perform After Landing Check
41	Perform Before Hover Check
42	Perform Before Landing Check
43	Perform Before Landing Check (LZ)
44	Perform Before Takeoff Check
45	Perform Before Takeoff Check (LZ)
46	Perform Before Taxi Check
47	Perform Cockpit Communication (Copilot) (Coordination)
48	Perform Cockpit Communication (Copilot) (Normal)
49	Perform Cockpit Communication (Pilot) (Coordination)
50	Perform Cockpit Communication (Pilot) (Normal)
51	Perform External Communication (ATHS)
52	Perform External Communication (Frequency Change)
53	Perform External Communication (Receive Coordination)
54	Perform External Communication (Transmit Code)
55	Perform Hover Check [NVG]
56	Perform Hover [NVG]

NUMBER	FUNCTION
57	Perform IFF Procedures
58	Perform Navigation [NVG]
59	Perform Navigation (Radar)
60	Perform Rendezvous Check
61	Perform Rendezvous [NVG]
62	Perform Taxi [NVG]
63	Perform Taxiing Check
64	Program Transponder
65	Respond to Threat [NVG]
66	Set Up Communication Radios
67	Unload Aircraft (Internal)
68	Update Navigation (FLIR)
69	Update Navigation (LZ)
70	Update Navigation (Mission Change)
71	Update Navigation (NRP)
72	Check FLIR Operation
73	Check Radar Operation

A P P E N D I X E

OUTLINE OF MH-47E MISSION SEGMENTS AND FUNCTIONS

A mission scenario was developed as the first step in the MH-47E mission/task/workload analysis. Subsequently, the MH-47E mission scenario was divided into five unique mission phases. The five mission phases subsequently were divided into segments and functions. This appendix is a list of all the segments and functions as they occur in each of the five mission phases throughout the entire mission scenario.

DEPARTURE (BASE)

- Configure Systems for Mission
  - Configure Flight Director
  - Check Map Display System (Pilot)
  - Check Map Display System (Copilot)
  - Load Mission Plan
  - Check Avionics System
  - Align Navigation System
  - Configure Navigation Radios
  - Set Up Communication Radio
  - Program Transponder
  - Boresight FLIR
  - Check FLIR Operations
  - Check RADAR Operations
  - Perform Cockpit Communication (Copilot) (Coordination)
  - Perform Cockpit Communication (Pilot) (Coordination)
  - Perform Cockpit Communication (Copilot) (Normal)
  - Perform Cockpit Communication (Pilot) (Normal)
  - Monitor Flight Controls
  - Monitor External Visual Field [NVG] (Pilot)
- Before Takeoff (Base/Internal Load)
  - Perform Before Taxi Check
  - Perform Cockpit Communication (Copilot) (Coordination)
  - Perform Cockpit Communication (Pilot) (Coordination)
  - Perform Cockpit Communication (Copilot) (Normal)
  - Perform Cockpit Communication (Pilot) (Normal)
  - Perform Taxi [NVG]
  - Perform Taxiing Check
  - Perform Before Hover Check
  - Perform Hover Check [NVG]
  - Land Aircraft [NVG]
  - Load Aircraft (Internal)
  - Perform Before Takeoff Check
  - Perform External Communication (Receive Coordination)
  - Monitor Flight Controls
  - Monitor External Visual Field [NVG] (Pilot)
  - Monitor External Visual Field [NVG] (Copilot)
- Takeoff [ANVIS]
  - Establish Hover [NVG]
  - Perform Hover [NVG]
  - Establish Climb [NVG]
  - Adjust Climb Parameters [NVG]
  - Check Climb Parameters
  - Establish Level of Flight [NVG]
  - Adjust Level of Flight Parameters [NVG]
  - Check Level of Flight Parameters
  - Perform Cockpit Communication (Copilot) (Coordination)
  - Perform Cockpit Communication (Pilot) (Coordination)

Takeoff [ANVIS] [Continued]
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Monitor External Visual Field [NVG] (Pilot)
- Monitor External Visual Field [NVG] (Copilot)

ENROUTE (BASE-RENDEZVOUS)

Enroute Flight [ANVIS]
- Engage Level Flight (Auto)
- Monitor Flight Controls
- Monitor External Visual Field [NVG] (Pilot)
- Adjust Map Display (Pilot)
- Adjust Map Display (Copilot)
- Check Flight Instruments (Auto)
- Perform Navigation
- Perform Navigation (Radar)
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)
- Perform External Communication (Transmit Code)
- Monitor FLIR Image (Pilot)
- Monitor FLIR Image (Copilot)

Contour Flight (No Update) [ANVIS]
- Adjust Flight Parameters [NVG]
- Check Flight Parameters
- Adjust Map Display (Pilot)
- Adjust Map Display (Copilot)
- Perform Navigation [NVG]
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Monitor External Visual Field [NVG] (Pilot)
- Monitor FLIR Image (Pilot)
- Monitor FLIR Image (Copilot)
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)
- Perform External Communication (Transmit Code)
- Perform Navigation (Radar)

Contour Flight (Update) [ANVIS]
- Adjust Flight Parameters [NVG]
- Check Flight Parameters
- Adjust Map Display (Copilot)
- Perform Navigation [NVG]

Contour Flight (Update) [ANVIS] [Continued]
Monitor Threat (Pilot)
Monitor Threat (Copilot)
Monitor External Visual Field [NVG] (Pilot)
Monitor Radar Image (Pilot
Monitor FLIR Image (Pilot)
Update Navigation (FLIR)
Update Navigation (NRP)
Perform Cockpit Communication (Copilot) (Coordination)
Perform Cockpit Communication (Pilot) (Coordination)
Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)
Perform External Communication (Transmit Code)

Rendezvous [ANVIS]
Monitor External Visual Field [NVG] (Pilot)
Monitor Threat (Pilot)
Monitor Threat (Copilot)
Adjust Level of Flight Parameters [NVG]
Check Flight Parameters
Perform External Communication (Frequency Change)
Perform Rendezvous Check
Perform IFF Procedures
Perform Rendezvous [NVG]
Perform Aerial Refueling [NVG]
Depart Rendezvous [NVG]
Perform Cockpit Communication (Copilot) (Coordination)
Perform Cockpit Communication (Pilot) (Coordination)
Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)

ENROUTE (RENDEZVOUS-LZ)

NOE Flight [ANVIS]
Adjust Flight Parameters [NVG]
Check Flight Parameters
Adjust Map Display (Copilot)
Perform Navigation [NVG]
Monitor Threat (Pilot)
Monitor Threat (Copilot)
Monitor External Visual Field [NVG] (Pilot)
Perform Cockpit Communication (Copilot) (Coordination)
Perform Cockpit Communication (Pilot) (Coordination)
Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)

NOE Flight [ANVIS/ASE]
Adjust Flight Parameters [NVG]
Check Flight Parameters
Adjust Map Display (Copilot)
Perform Navigation [NVG]

NOE Flight [ANVIS/ASE] [Continued]
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Monitor External Visual Field [NVG] (Pilot)
- Monitor Radar Image (Copilot)
- Respond to Threat [NVG]
- Update Navigation (FLIR)
- Perform External Communication (ATHS)
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)

Approach (LZ) [ANVIS]
- Perform Before Landing Check (LZ)
- Establish Approach [NVG]
- Adjust Approach Parameters [NVG]
- Check Approach Parameters
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Monitor External Visual Field [NVG] (Pilot)
- Monitor External Visual Field [NVG] (Copilot)
- Perform External Communication (Transmit Code)

Landing (LZ Internal Load) [ANVIS]
- Establish Hover [NVG]
- Perform Hover [NVG]
- Land Aircraft [NVG]
- Unload Aircraft (Internal)
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)
- Monitor Flight Controls
- Monitor External Visual Field [NVG] (Pilot)
- Monitor External Visual Field [NVG] (Copilot)

ENROUTE (LZ-RENDEZVOUS)

Before Takeoff (LZ) [ANVIS]
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)
- Perform Before Takeoff Check (LZ)
- Update Navigation (LZ)
- Monitor Flight Controls
- Monitor External Visual Field [NVG] (Pilot)

Takeoff [ANVIS]
- Establish Hover [NVG]
- Perform Hover [NVG]
- Establish Climb [NVG]
- Adjust Climb Parameters [NVG]
- Check Climb Parameters
- Establish Level of Flight [NVG]
- Adjust Level of Flight Parameters [NVG]
- Check Level of Flight Parameters
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Monitor External Visual Field [NVG] (Pilot)
- Monitor External Visual Field [NVG] (Copilot)

NOE Flight (Route Change) [ANVIS]
- Adjust Flight Parameters [NVG]
- Check Flight Parameters
- Adjust Map Display (Copilot)
- Perform Navigation [NVG]
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Monitor External Visual Field [NVG] (Pilot)
- Mission Change
- Update Navigation (Mission Change)
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)

Rendezvous [ANVIS]
- Monitor External Visual Field [NVG] (Pilot)
- Monitor Threat (Pilot)
- Monitor Threat (Copilot)
- Adjust Flight Parameters [NVG]
- Check Flight Parameters
- Perform External Communication (Frequency Change)
- Perform Rendezvous Check
- Perform IFF Procedures
- Perform Rendezvous [NVG]
- Perform Aerial Refueling [NVG]
- Depart Rendezvous [NVG]
- Perform Cockpit Communication (Copilot) (Coordination)
- Perform Cockpit Communication (Pilot) (Coordination)
- Perform Cockpit Communication (Copilot) (Normal)
- Perform Cockpit Communication (Pilot) (Normal)

ENROUTE (RENDEZVOUS-BASE)

- Contour Flight (Update) [ANVIS]
  - Adjust Flight Parameters [NVG]
  - Check Flight Parameters
  - Adjust Map Display (Copilot)
  - Perform Navigation [NVG]
  - Monitor Threat (Pilot)
  - Monitor Threat (Copilot)
  - Monitor External Visual Field [NVG] (Pilot)
  - Monitor Radar Image (Pilot)
  - Monitor FLIR Image (Pilot)
  - Update Navigation (FLIR)
  - Update Navigation (NRP)
  - Perform Cockpit Communication (Copilot) (Coordination)
  - Perform Cockpit Communication (Pilot) (Coordination)
  - Perform Cockpit Communication (Copilot) (Normal)
  - Perform Cockpit Communication (Pilot) (Normal)
  - Perform External Communication (Transmit Code)
- Approach [ANVIS]
  - Perform External Communication (Frequency Change)
  - Perform Before Landing Check
  - Establish Approach [NVG]
  - Adjust Approach Parameters [NVG]
  - Check Approach Parameters
  - Perform Cockpit Communication (Copilot) (Coordination)
  - Perform Cockpit Communication (Pilot) (Coordination)
  - Perform Cockpit Communication (Copilot) (Normal)
  - Perform Cockpit Communication (Pilot) (Normal)
  - Monitor Threat (Pilot)
  - Monitor Threat (Copilot)
  - Monitor External Visual Field [NVG] (Pilot)
  - Monitor External Visual Field [NVG] (Copilot)
  - Monitor FLIR Image (Copilot)
  - Perform External Communication (Transmit Code)
- Landing [ANVIS]
  - Establish Hover [NVG]
  - Perform Hover [NVG]
  - Land Aircraft [NVG]
  - Perform After Landing Check
  - Perform External Communication (Receive Coordination)
  - Perform Cockpit Communication (Copilot) (Coordination)
  - Perform Cockpit Communication (Pilot) (Coordination)
  - Perform Cockpit Communication (Copilot) (Normal)
  - Perform Cockpit Communication (Pilot) (Normal)
  - Monitor External Visual Field [NVG] (Pilot)
  - Monitor External Visual Field [NVG] (Copilot)

A P P E N D I X F

LIST OF MH-47E TASKS

During the MH-47E mission/task/workload analysis, each of the 73 functions was divided into tasks. A task defines an observable crew activity that is essential to the successful performance of the selected function. For the 73 functions, a total of 239 unique tasks were identified. This appendix is a list of the 239 tasks with assigned task numbers.

Task #	Verb	Object
001	Press	ACC Key
002	Receive	Acknowledgment
003	Transmit	Acknowledgment
004	Press	ADF Key
005	Press	ADS SYM Key
006	Perform	AFCS Check (Hover) [NVG]
007	Set	AFCS SEL Switch
008	Press	AHRS NAV Key
009	Press	AHRS NORM Key
010	Check	Airspeed
011	Enter	Airspeed
012	Check	Airspeed (Inflight)
013	Control	Airspeed [NVG]
014	Change	Airspeed Quickly [NVG]
015	Check	Altitude
016	Check	Altitude (Inflight)
017	Adjust	Altitude [NVG]
018	Control	Altitude [NVG]
019	Change	Altitude Sharply [NVG]
020	Press	A/S SEL Key
021	Press	ASE Key
022	Press	ATHS MENU Key
023	Check	Attitude
024	Adjust	Attitude [NVG]
025	Control	Attitude [NVG]
026	Monitor	Audio
027	Press	BALT SEL Key
028	Enter	BARO Altitude
029	Press	BCN OPER Key
030	Press	BCN STBY Key
031	Check	Bit Light
032	Press	BORE Key
033	Check	Brakes (Copilot)
034	Check	Brakes (Pilot)
035	Press	CALC Key
036	Press	CALT Key
037	Check	CAUTION/WARNING/Advisory Display
038	Enter	CDU Data
039	Press	CENTER Key
040	Press	CHAN Key
041	Press	CHECK LISTS Key
042	Press	COMM Key
043	Receive	Communication (Copilot)
044	Transmit	Communication (Copilot)

Task #	Verb	Object
045	Receive	Communication (Copilot) (Normal)
046	Transmit	Communication (Copilot) (Normal)
047	Receive	Communication (Crewchief)
048	Transmit	Communication (Crewchief)
049	Receive	Communication (Pilot)
050	Transmit	Communication (Pilot)
051	Receive	Communication (Pilot) (Normal)
052	Transmit	Communication (Pilot) (Normal)
053	Check	Course Display
054	Check	Crew
055	Press	CRS Key
056	Press	CTR Key
057	Check	Cyclic Trim Indicator
058	Check	Cyclic Trim Switch
059	Press	DCLT Key
060	Press	DECENTER Key
061	Check	Direction Display
062	Press	DISP MSGS Key
063	Press	DISPLAY LEG Key
064	Control	Drift [NVG]
065	Insert	DTM Cartridge
066	Check	Engine Display
067	Check	Engine Indications (Hover)
068	Press	ENTER Key
069	Check	EQP STAT Key
070	Press	EQP STAT Key
071	Check	External Scene [NVG]
072	Press	F/D Key
073	Monitor	Flight Controls
074	Neutralize	Flight Controls
075	Check	Flight Controls (Hover) [NVG]
076	Verify	Flight Path (FLIR)
077	Verify	Flight Path (Radar)
078	Verify	Flight Path [NVG]
079	Check	Flight Symbology (Hover)
080	Press	FLIR CTRL Key
081	Check	FLIR Image
082	Press	FLIR Key
083	Press	FLIR ON Key
084	Press	FLY OVER STR Key
085	Press	FLY OVER UPD Key
086	Control	Forward Motion (Taxi) [NVG]
087	Press	FOV Key
088	Press	FOV NAR Key

Task #	Verb	Object
089	Set	FOV Scale Switch
090	Press	FPLN Key
091	Press	FPLN LOAD Key
092	Press	FPLN ON Key
093	Press	FPV Key
094	Check	Fuel Indicator
095	Press	FUEL/POWER Key
096	Check	Fuel Summary
097	Press	GET LIST Key
098	Press	GM/TF Key
099	Press	GPS DOP Key
100	Press	GPS INIT Key
101	Perform	Hard Turns [NVG]
102	Press	HDG SEL Key
103	Check	Heading
104	Enter	Heading
105	Check	Heading (Inflight)
106	Adjust	Heading [NVG]
107	Control	Heading [NVG]
108	Control	Heading (Taxi) [NVG]
109	Press	HF COMM Key
110	Press	HF LIST Key
111	Perform	HIT Check
112	Press	HSD Key
113	Press	HVR SYM Key
114	Check	IFF Code
115	Press	IFF Key
116	Press	IFF MODE Key
117	Press	IFF NORM/STBY Key
118	Press	IFF STBY Key
119	Press	INIT Key
120	Press	INS NAV Key
121	Press	INST Key
122	Identify	Landmark (FLIR)
123	Identify	Landmark (Map)
124	Press	LEG ADD Key
125	Enter	Leg Data
126	Press	LEG MOD Key
127	Press	LEGS Key
128	Set	Lights
129	Check	Load Secure
130	Verify	Load Secure
131	Monitor	Loading
132	Press	LOOK AHD Key

Task #	Verb	Object
133	Scan	Map Display
134	Check	Map Display Scale
135	Interpret	Map Features
136	Press	MAP Key
137	Check	MASTER Key
138	Press	MASTER Key
139	Enter	Message
140	Read	Message
141	Receive	Message
142	Transmit	Message
143	Note	Message Alert
144	Receive	Message Alert
145	Transmit	Message (Brief)
146	Verify	Mission Loaded
147	Press	MISSN LOAD Key
148	Press	MODE 1 Key
149	Press	MODE 2 Key
150	Press	MODE 3A Key
151	Press	MODE C Key
152	Pull	Mode Trigger
153	Release	Mode Trigger
154	Press	NAV AIDS Key
155	Press	NAV INIT Key
156	Press	NAV Key
157	Enter	New NRP Number
158	Press	NEXT Key
159	Press	NORM Key
160	Verify	NRP
161	Enter	NRP Data
162	Enter	NRP Number
163	Check	Obstacle Clearance [NVG]
164	Maintain	Obstacle Clearance [NVG]
165	Press	OP RDY Key
166	Check	Park Brake
167	Release	Park Brake
168	Check	Park Brake Light
169	Press	POL Key
170	Perform	Power Check (Hover)
171	Adjust	Power [NVG]
172	Check	Power Steering
173	Verify	Probe Hookup
174	Verify	Probe Unhooked
175	Press	PT Key
176	Check	Radar Image

Task #	Verb	Object
177	Press	RADAR Key
178	Check	Radios
179	Check	Rate of Climb Indicator (Inflight)
180	Control	Rate of Climb [NVG]
181	Control	Rate of Descent [NVG]
182	Press	RDR Key
183	Set	Refuel Panel
184	Verify	Refueling Ceased
185	Press	RNG DOWN Key
186	Press	RNG Key
187	Press	RNG UP Key
188	Check	Rotor RPM
189	Press	RTN Key
190	Press	SEC Key
191	Press	SEQ CHAN Key
192	Press	SEQ Key
193	Press	SEQ MSG Key
194	Press	SLEW Key
195	Press	SNSR UPD Key
196	Press	SQL Key
197		Standby
198	Press	STR Key
199	Press	STR NRP Key
200	Check	Swivel Switch
201	Set	Swivel Switch
202	Press	SYST Key
203	Press	TA Key
204	Check	TACAN Channel
205	Locate	Tanker [NVG]
206	Press	TCN A/AR Key
207	Press	TCN BRG Key
208	Press	TF Key
209	Detect	Threat
210	Enter	Threat Information
211	Perform	Touchdown [NVG]
212	Check	Trim Ball (Inflight)
213	Adjust	Trim [NVG]
214	Press	TUNE HF Key
215	Press	TUNE UHF 1 Key
216	Press	TUNE VHF 1 Key
217	Press	TUNE VHF 2 Key
218	Press	UHF COMM Key
219	Press	UHF LIST Key
220	Monitor	Unloading

Task #	Verb	Object
221	Verify	Unloading Complete
222	Press	UPD Key
223	Slew	Update Cursor
224	Check	Vertical Situation Display
225	Press	VHF 1 Key
226	Press	VHF 2 Key
227	Press	VHF LIST Key
228	Press	VOR TAC Key
229	Press	VSD Key
230	Press	WCA Key
231	Check	WCA Light
232	Press	WYPT Key
233	Press	XMIT MSG Key
234	Check	% TRQ Indication (Inflight)
235	Pull	Slew Trigger
236	Manipulate	Thumb Tracker
237	Check	FPLN
238	Enter	CARGO WGT
239	Enter	OAT

A P P E N D I X G

MH-47E FUNCTION ANALYSIS WORKSHEETS

During the MH-47E mission/task/workload analysis, descriptive information was compiled for each of the 239 unique tasks. The descriptive information for each task was compiled on a Function Analysis Worksheet using a standardized format. This appendix contains the Function Analysis Worksheet for each of the 73 functions. The Function Analysis Worksheets provide the following information:

- function name,
- function number,
- total time of function,
- task identifiers with verb and object,
- crewmember(s) performing each task,
- task numbers,
- subsystems associated with each task,
- verbal descriptors of sensory components and workload ratings,
- verbal descriptors of cognitive components and workload ratings,
- verbal descriptors of psychomotor components and workload ratings,
- descriptions of switches if used to perform the tasks, and
- task durations.

FUNCTION 01 Adjust Approach Parameters [NVG] **TOTAL TIME (Approximate) 340 Seconds***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Control	Attitude [NVG]	P025	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Rate of Descent [NVG]	P181	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Airspeed [NVG]	P013	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Heading [NVG]	P107	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Drift [NVG]	P064	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 02 Adjust Climb Parameters [NVG] **TOTAL TIME (Approximate) 90 Seconds***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Control	Attitude [NVG]	P025	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Rate of Climb [NVG]	P180	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Airspeed [NVG]	P013	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Heading [NVG]	P107	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 03 Adjust Flight Parameters [NVG] **TOTAL TIME (Approximate) Continuous***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Control	Attitude [NVG]	P025	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Adjust	Attitude [NVG]	P017	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Airspeed [NVG]	P013	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Adjust	Heading [NVG]	P106	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Adjust	Trim [NVG]	P213	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	

*The total time for the function will vary depending on the length of the segment.

FUNCTION 04 Adjust Level of Flight Parameters [NVG] **TOTAL TIME (Approximate) 190 Seconds***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Control	Attitude [NVG]	P025	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Attitude [NVG]	P018	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Airspeed [NVG]	P013	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Heading [NVG]	P107	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 05 Adjust Map Display (Copilot) **TOTAL TIME (Approximate) 1 Second***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Map Display Scale	C134	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Sensor Image V-3.7	Verify Correct Image Scale C-1.2			.5	
Press	RNG UP Key	C187	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RNG DOWN Key	C185	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	DECENTER Key	C060	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CENTER Key	C039	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

*Since the function is performed randomly and only one task is performed each time the function is selected, the total time is less than the sum of the individual tasks.

FUNCTION 06 Adjust Map Display (Pilot) **TOTAL TIME (Approximate) 1 Second***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Map Display Scale	P134	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Sensor Image V-3.7	Verify Correct Image Scale C-1.2			.5	
Press	RNG UP Key	P187	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RNG DOWN Key	P185	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	DECENTER Key	P060	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CENTER Key	P039	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

*Since the function is performed randomly and only one task is performed each time the function is selected, the total time is less than the sum of the individual tasks.

FUNCTION 07 Align Navigation Systems **TOTAL TIME (Approximate) 33.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (2)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	NAV Key (2)	C156	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	NAV INIT Key (2)	C155	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Enter	CDU Data	C038	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry (LAT/LONG C-5.3	Press Softkey P-2.2	Softkey	20	
Press	NORM Key (2)	C159	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	INIT Key (2)	C119	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	INS NAV Key (2)	C120	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GPS INIT Key (2)	C100	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 07 [illegible]avigation Systems [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	AHRS NORM Key (2)	C009	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	AHRS NAV Key (2)	C008	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	INIT Key (2)	C119	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	NAV Key (2)	C156	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GPS DOP Key (2)	C099	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HSD Key (2)	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 08 Boresight FLIR

TOTAL TIME (Approximate) 9 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	FLIR CTRL Key (2)	C080	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FLIR ON Key (2)	C083	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	NEXT Key (2)	C158	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	BORE Key (2)	C032	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CALC Key (2)	C035	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FOV NAR Key (2)	C088	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (NAR) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	NEXT Key (2)	C158	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	ADS SYM Key (2)	C005	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 09 Check Approach Parameters

TOTAL TIME (Approximate) 1 Second*

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Rate of Climb Indicator (Inflight)	P179	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Airspeed (Inflight)	P012	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Heading (Inflight)	P105	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	

*Since the function is performed randomly and only one task is performed each time the function is selected, the total time is less than the sum of the individual tasks.

FUNCTION 10 Check Avionics System **TOTAL TIME (Approximate) 208 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	WCA Key (2)	C230	Advisory/Multifuction Display (UAD/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Press	EQP STAT Key (2)	C070	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Press	OP RDY Key (2)	C165	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
	Standby	B197						200	
Check	EQP STAT Key (2)	C069	Multifunction Display (MFD)	Visually Check Stat Matrix V-4	Verify Correct Status C-1.2			3	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	

FUNCTION 11 Check Climb Parameters **TOTAL TIME (Approximate) 1 Second***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Rate of Climb Indicator (Inflight)	P179	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Airspeed (Inflight)	P012	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Heading (Inflight)	P105	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	

*Since the function is performed randomly and only one task is performed each time the function is selected, the total time is less than the sum of the individual tasks.

FUNCTION 12 Check Flight Instruments (Auto) **TOTAL TIME (Approximate) 1 Second***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Attitude	P015	ANVIS Symbology (ANV)	Visually Check Symbolic Indications V-4	Interpret Readout and Verify Correct Status C-3.7			.5	
Check	Airspeed	P010	ANVIS Symbology (ANV)	Visually Check Symbolic Indications V-4	Interpret Readout and Verify Correct Status C-3.7			.5	
Check	Heading	P103	ANVIS Symbology (ANV)	Read Heading Indicator V-5.9	Verify Correct Heading C-1.2			.5	
Check	Attitude	P023	ANVIS Symbology (ANV)	Visually Check Symbolic Indications V-4	Interpret Readout and Verify Correct Status C-3.7			.5	

*Since the function is performed randomly and only one task is performed each time the function is selected, the total time is less than the sum of the individual tasks.

FUNCTION 14 Check Level of Flight Parameters **TOTAL TIME (Approximate) 1 Second***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Altitude (Inflight)	P016	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Airspeed (Inflight)	P012	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Heading (Inflight)	P105	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	

*Since the function is performed randomly and only one task is performed each time the function is selected, the total time is less than the sum of the individual tasks.

FUNCTION 14 Check Level of Flight Parameters

TOTAL TIME (Approximate) 1 Second*

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Altitude (Inflight)	P016	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Airspeed (Inflight)	P012	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Check	Heading (Inflight)	P105	ANVIS Symbology/ Flight Control (ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	

*Since the function is performed randomly and only one task is performed each time the function is selected, the total time is less than the sum of the individual tasks.

FUNCTION 15 Check Map Display System (Copilot) **TOTAL TIME (Approximate) 5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Map Display Scale	C134	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Sensor Image V-3.7	Verify Correct Image Scale C-1.2			.5	
Press	RNG UP Key	C187	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RNG DOWN Key	C185	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	DECENTER Key	C060	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CENTER Key	C039	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 16 Check Map Display System (Pilot) **TOTAL TIME (Approximate) 5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Map Display Scale	P134	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Sensor Image V-3.7	Verify Correct Image Scale C-1.2			.5	
Press	RNG UP Key	P187	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RNG DOWN Key	P185	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	DECENTER Key	P060	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CENTER Key	P039	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 17 Configure Flight Director **TOTAL TIME (Approximate) 5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (4)	P202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Press	FPLN Key (4)	P090	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Press	FPLN LOAD Key (4)	P091	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Press	FPLN ON Key (4)	P092	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Press	VSD Key (4)	P229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	

FUNCTION 18 Configure Navigation Radios **TOTAL TIME (Approximate) 8 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	F/D Key (2)	C072	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	NEXT Key (2)	C158	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	ADF Key (2)	C004	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	VOR TAC Key (2)	C228	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HSD Key (2)	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	NAV AIDS Key (2)	C154	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TCN BRG Key (2)	C207	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 19 Depart Rendezvous [NVG] **TOTAL TIME (Approximate) 30 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Set	Refuel Panel	C183	Fuel (EF)	Visually Check Switch Positions and Placement of Switches V-4	Decide Desired Position C-1.2	Move Switches P-2.2		10	
Transmit	Message (Brief)	C145	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message (Refueling Complete) C-5.3	Press Switch and Speak P-2.2		3	
Receive	Acknowledgment	C002	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	
Press	VSD Key (1)	C229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FLIR CTRL Key (1)	C080	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FLIR ON Key (1)	C083	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (1)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	IFF Key (1)	C115	Malfunction Display/Transponder (MFD/TP)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	BCN STBY Key (1)	C030	Transponder (TP)	Visually Locate Key V-3.7	Verify Correct Status (STBY) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 19 Depart Rendezvous [NVG] [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	IFF STBY Key (1)	C118	Malfunction Display/Transponder (MFD/TP)	Visually Locate Key V-3.7	Verify Correct Status (STBY) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FUEL/POWER Key (1)	C095	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Fuel Summary (1)	C096	Fuel/Multifunction Display (EF/MFD)	Visually Inspect Symbolic Indication V-4	Interpret Symbolic Readout (Quantity) and Make Judgment (Enough Fuel) C-6.8			3	
Press	VSD Key (1)	C229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 20 Engage Level Flight (Auto) **TOTAL TIME (Approximate) 18.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	F/D Key (1)	C072	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (F/D Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	
Enter	Airspeed	C011	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	4	
Enter	BARO Altitude	C028	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	4	
Enter	Heading	C104	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	4	
Press	A/S SEL Key (1)	C020	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (F/D Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	BALT SEL Key (1)	C027	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (F/D Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HDG SEL Key (1)	C102	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (F/D Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (1)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (F/D Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 21 Establish Approach [NVG] **TOTAL TIME (Approximate) 11 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Adjust	Power [NVG]	P171	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		2	
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Press	F/D Key (4)	P072	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Control	Attitude [NVG]	P025	Flight Control (FC)	Feel Control Movement K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		3	
Press	HVR SYM Key (4)	P113	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (4)	P189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 22 Establish Climb [NVG] **TOTAL TIME (Approximate) 4 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Adjust	Power [NVG]	P171	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		2	
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	

FUNCTION 23 Establish Hover [NVG]

TOTAL TIME (Approximate) 3 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Adjust	Power [NVG]	P171	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		2	
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	

FUNCTION 24 Establish Level of Flight [NVG]

TOTAL TIME (Approximate) 4.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Adjust	Attitude [NVG]	P024	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Check	% TRQ Indication (Inflight)	P234	Engine/ANVIS Symbology/Flight Control (EN/ANV/FC)	Feel Control Movements/ Visually Check Symbolic Indications K-7/V-4	Interpret Readout and Verify Correct Status (Readout Within Limits) C-3.7	Control Pressure P-2.6		.5	
Adjust	Power [NVG]	P171	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		2	

FUNCTION 25 Land Aircraft [NVG]

TOTAL TIME (Approximate) 43 Seconds*

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Maintain	Obstacle Clearance [NVG]	P164	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Orient Aircraft K-7/G-5	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Adjust	Power [NVG]	P171	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement and Monitor Instrument Indications K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Attitude [NVG]	P025	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement and Monitor Instrument Indications K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Heading [NVG]	P107	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement and Monitor Instrument Indications K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Drift [NVG]	P064	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Perform	Touchdown [NVG]	P211	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Orient Aircraft K-7/G-5	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		5	
Check	Obstacle Clearance [NVG]	C163	Night Vision Goggles (VG)	Visually Register Obstacles G-1	Make Conditioned Association (Aircraft Clear) C-1			3	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 26 Load Aircraft (Internal)

TOTAL TIME (Approximate) 116 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Monitor	Loading	C131	Cargo (UCA)	Visually Scan Cargo Compartment V-7	Verify Correct Procedure C-1.2	Move Head P-2.6		60	
Verify	Load Secure	C130	Cargo (UCA)	Visually Inspect Cargo Compartment V-4	Verify Correct Status C-1.2	Move Head P-2.6		30	
Press	INST Key	C121	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Enter	Cargo Wgt	C238	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2		10	
Enter	CAT	C239	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2		5	
Press	HSD Key	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Transmit	Communication (Crewchief)	C048	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message (Check Load) C-5.3	Press Switch and Speak P-2.2		3	
Receive	Communication (Crewchief)	C047	Communication (UC)	Receive Auditory Message A-4.9	Decode Message (Load Secure) C-5.3			3	

FUNCTION 27 Load Mission Plan **TOTAL TIME (Approximate) 21 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Insert	DTM Cartridge	C065	Data Transfer Unit (DTU)	Visually Coordinate Hand Movement V-5	Verify Correct Status (Cartridge In) C-1.2	Insert Cartridge P-2.6		4	
Check	Bit Light	C031	Data Transfer Unit (DTU)	Visually Check and Register Light V-1	Verify Correct Status (Light Not Illuminated) C-1	Move Switches P-2.2		.5	
Press	SYST Key (2)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MISSN LOAD Key (2)	C147	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (First Depression) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MISSN LOAD Key (2)	C147	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Second Depression) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	LEGS Key (2)	C127	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Second Depression) C-1.2	Press Softkey P-2.2	Softkey	.5	
Verify	Mission Loaded	C146	Multifunction Display (MFD)	Visually Check Symbolic Indications V-4	Interpret Readout and Verify Correct Status (Mission Loaded) C-3.7			10	
Press	HSD Key (2)	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 28 Mission Change

TOTAL TIME (Approximate) 18 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Note	Message Alert	C143	Communication (UC)	Register Sound/Visually Register Advisory A-1/V-1	Interpret Symbolic Readout C-3.7			1	
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	ATHS MENU Key (1)	C022	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	DISP MSGS Key (1)	C062	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Read	Message	C140	Communication (UC)	Read Symbolic Display V-5.8	Interpret Symbolic Readout C-3.7			12	
Press	RTN Key (1)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 29 Monitor Audio

TOTAL TIME (Approximate) Continuous*

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Monitor	Audio	B026	Communication/ Survivability (UC/US)	Register Sound A-1	Recognize Auditory Signal C-1				(c)

*The total time for this function varies with the segment in which the function occurs.

FUNCTION 30 Monitor External Visual Field [NVG] (Copilot) **TOTAL TIME (Approximate) Continuous***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	External Scene [NVG]	P071	Night Vision Goggles (VG)	Visually Register Obstacles G-1	Make Conditioned Association (Flight Path Clear) C-1				

*The total time for the function will vary depending on the length of the segment.

FUNCTION 31 Monitor External Visual Field [NVG] (Pilot) **TOTAL TIME (Approximate) Continuous***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	External Scene [NVG]	P073	Night Vision Goggles (VG)	Visually Register Obstacles S-1	Make Conditioned Association (Flight Path Clear) C-1				(c)

*The total time for this function will vary depending on the length of the segment.

FUNCTION 22 Monitor Flight Controls

TOTAL TIME (Approximate) Continuous*

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Monitor	Flight Controls	P073	Flight Control (FC)	Make Conditioned Association K-1	Make Conditioned Association C-1	Control Pressure P-2.6			(c)

*The total time for the function will vary depending on the length of the segment.

FUNCTION 33 Monitor FLIR Image (Copilot) **TOTAL TIME (Approximate) Continuous**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	FLIR Image	C061	Forward-Looking Infrared (FLIR) (FLR)	Visually Check Sensor Image V-4	Evaluate Sensory Feedback C-4.6				(c)

FUNCTION 3 4 Monitor FLIR Image (Pilot) **TOTAL TIME (Approximate)** **Continuous**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	FLIR Image	P081	Forward-Looking Infrared (FLIR) (FLR)	Visually Check Sensor Image V-4	Evaluate Sensory Feedback C-4.6				(c)

FUNCTION 35 **Monitor Radar Image (Copilot)**

TOTAL TIME (Approximate) **Continuous**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Radar Image	C176	RADAR (NRA)	Visually Check Sensor Image V-4	Evaluate Sensory Feedback C-4.6				(c)

FUNCTION 36 Monitor Radar Image (Pilot) **TOTAL TIME (Approximate) Continuous**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Radar Image	P176	RADAR (NRA)	Visually Check Sensor Image V-4	Evaluate Sensory Feedback C-4.6				(c)

FUNCTION 37 Monitor Threat (Copilot) **TOTAL TIME (Approximate) 3.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Direction Display	C061	Survivability (US)	Detect Visual Image V-1	Recognize Visual Signal (Threat Present) C-3.7			3	

FUNCTION 38 Monitor Threat (Pilot) **TOTAL TIME (Approximate) 3.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Direction Display	P061	Survivability (US)	Detect Visual Image V-1	Recognize Visual Signal (Threat Present) C-3.7			3	

FUNCTION 39 Perform Aerial Refueling [NVG] **TOTAL TIME (Approximate) 240 Seconds***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Transmit	Message (Brief)	C145	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message (Present Status) C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	3	
Receive	Message	C141	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			5	
Transmit	Acknowledgment	C003	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	2	
Verify	Probe Hookup	B173	Night Vision Goggles (VG)	Visually Discriminate Alignment Differences G-5	Evaluate Sensory Feedback and Make Judgment (Connected) C-4.6			4	
Transmit	Message (Brief)	C145	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message (Begin Refueling) C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	3	
Receive	Acknowledgment	C002	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	
Press	INST Key (1)	C121	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Power Train Display) C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Fuel Indicator	C094	Fuel/Multifunction Display (EF/MFD)	Read Symbolic Indication V-5.9	Interpret Symbolic Readout and Make Judgment (Enough Fuel) C-4.6			3	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 39 Perform Aerial Refueling [NVG] [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Transmit	Message (Brief)	C 145	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message (Refueling Complete) C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	3	
Receive	Acknowledgment	C002	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	
Verify	Refueling Ceased	C184	Fuel/Multifunction Display (EF/MFD)	Read Symbolic Indication V-5.9	Interpret Symbolic Readout and Make Judgment (No Increase) C-4.6			4	
Verify	Probe Unhooked	B174	Night Vision Goggles (VG)	Visually Discriminate Alignment Differences G-5	Evaluate Sensory Feedback and Make Judgment (Disconnected) C-4.6			2	

FUNCTION 40 Perform After Landing Check

TOTAL TIME (Approximate) 12.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Neutralize	Flight Controls	P074	Flight Control (FC)	Feel Control Movements K-4	Make Conditioned Association (Controls Neutralized) C-1.2	Control Pressure P-2.6		5*	
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHECK LISTS Key (1)	C041	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ Key (1)	C192	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GET LIST Key (1)	C097	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Set	AFCS SEL Switch	C007	Flight Control (FC)	Visually Check Switch Position and Placement of Switch V-4	Decide Correct Position and Verify Correct Status C-1.2	Turn Switch P-5.8	Rotary - 5 Positions (R-5)	2	
Set	Swivel Switch	C201	Gear (FG)	Visually Check Switch Position and Placement of Switch V-4	Decide Correct Position (Unlock) C-1.2	Move Switch P-2.2	Toggle - 3 Positions (T-3)	1	
Check	Radios	C178	Communication/ Multifunction Display (UC/MFD)	Visually Check Symbolic Indications V-4	Interpret Symbolic Readouts and Verify Correct C-5.3			4	

*Time not included in total. The pilot will perform the task while the copilot performs other tasks.

FUNCTION 40 Perform After Landing Check [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Cyclic Trim Indicator	C057	Flight Control (FC)	Visually Inspect Symbolic Indications V-4	Interpret Symbolic Readout and Verify Correct Status (GND) C-1.2			1*	
Monitor	Flight Controls	P073	Flight Control (FC)	Make Conditioned Association K-1	Make Conditioned Association C-1	Control Pressure P-2.6			(c)

*Time not included in total. The pilot will perform the task while the copilot performs other tasks.

FUNCTION 41 Perform Before Hover Check **TOTAL TIME (Approximate)184.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Set	Swivel Switch	C201	Gear (FG)	Visually Check Switch Position and Placement of Switch V-4	Decide Desired Position C-1.2	Move Switch P-2.2	Toggle - 3 Positions (T-3)	2*	
Set	AFCS SEL Switch	C007	Flight Control (FC)	Visually Check Switch Position and Placement of Switch V-4	Decide Correct Position and Verify Correct Status C-1.2	Turn Switch P-5.8	Rotary - 5 Positions (R-5)	2*	
Check	Rotor RPM	P188	ANVIS Symbology (ANV)	Visually Inspect Symbolic Indications V-4	Interpret Sensory and Symbolic Readouts and Verify Correct Status (100%) C-3.7			.5	
Press	F/D Key (4)	P072	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HVR SYM Key (4)	P113	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (4)	P189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Perform	HIT Check	P111	Flight Control/ Multifunction Display (FC/MFD)	Feel Control Movements/ Visually Monitor Symbolic Indications K-7/V-4	Interpret Sensory and Symbolic Readouts and Make Comparison (Indication Same as Performance Charts) C-3.7	Control Pressure P-2.6		180	

*Time not included in total. The pilot will perform the task while the copilot performs other tasks.

FUNCTION 4.2 Perform Before Landing Check

TOTAL TIME (Approximate) 27.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHECK LISTS Key (1)	C041	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ Key (1)	C192	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GET LIST Key (1)	C097	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Rotor RPM	C188	ANVIS Symbology (ANV)	Visually Inspect Symbolic Indications V-4	Interpret Sensory and Symbolic Readouts and Verify Correct Status (100%) C-3.7			.5	
Check	WCA Light	C231	Multifunction Display (MFD)	Visually Register Light V-1	Verify Correct Status (Light Extinguished) C-1.2			1	
Check	Radios	C178	Communication/ Multifunction Display (UC/MFD)	Visually Check Symbolic Indications V-4	Interpret Symbolic Readouts and Verify Correct C-5.3			1	
Check	Park Brake	C166	Brakes (FB)	Visually Inspect Handle Position V-4	Verify Current Position Correct (Unlocked) C-2			1	

FUNCTION 42 Perform Before Landing Check [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	F/D Key (2)	C072	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (F/D Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	A/S SEL Key (2)	C020	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Off) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	BALT SEL Key (2)	C027	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Off) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HDG SEL Key (2)	C102	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Off) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Check	Cyclic Trim Switch	C058	Flight Control (FC)	Visually Inspect Switch Position V-4	Verify Correct Status (AUTO) C-1.2			1	
Check	Swivel Switch	C200	Gear (FG)	Visually Inspect Switch Position V-4	Verify Correct Status (LOCK) C-1.2			1	
Press	ASE Key	C021	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	

FUNCTION 4 2 Perform Before Landing Check (Continued)

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	MASTER Key	C138	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status (Off) C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Crew	C054	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	3	
Receive	Communication (Crewchief)	C047	Communication (UC)	Receive Auditory Message A-4.9	Decode Message (Crew Secure) C-5.3			3	
Press	VSD Key (1)	C229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (VSD Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 43 Perform Before Landing Check (LZ) **TOTAL TIME (Approximate) 26.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHECK LISTS Key (1)	C041	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ Key (1)	C192	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GET LIST Key (1)	C097	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Rotor RPM	C188	ANVIS Symbology (ANV)	Visually Inspect Symbolic Indications V-4	Interpret Sensory and Symbolic Readouts and Verify Correct Status (100%) C-3.7			.5	
Check	WCA Light	C231	Multifunction Display (MFD)	Visually Register Light V-1	Verify Correct Status (Light Extinguished) C-1.2			1	
Check	Radios	C176	Communication/ Multifunction Display (UC/MFD)	Visually Check Symbolic Indications V-4	Interpret Symbolic Readouts and Verify Correct C-5.3			1	
Check	Park Brake	C166	Brakes (FB)	Visually Inspect Handle Position V-4	Verify Current Position Correct (Unlocked) C-2			1	

FUNCTION 43 Perform Before Landing Check (LZ) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	F/D Key (2)	C072	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (F/D Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	BALT SEL Key (2)	C027	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Off) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HDG SEL Key (2)	C102	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Off) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Check	Cyclic Trim Switch	C058	Flight Control (FC)	Visually Inspect Switch Position V-4	Verify Correct Status (AUTO) C-1.2			1	
Check	Swivel Switch	C200	Gear (FG)	Visually Inspect Switch Position V-4	Verify Correct Status (LOCK) C-1.2			1	
Press	ASE Key	C021	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Press	MASTER Key	C138	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status (Off) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 43 Perform Before Landing Check (LZ) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Load Secure	C129	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	3	
Receive	Communication (Crewchief)	C047	Communication (UC)	Receive Auditory Message A-4.9	Decode Message (Crew Secure) C-5.3			3	
Press	VSD Key (1)	C229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (VSD Control Layer) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 4 4 Perform Before Takeoff Check

TOTAL TIME (Approximate) 28.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SEQ Key (1)	C192	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GET LIST Key (1)	C097	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	WCA Key (2)	C230	Advisory/ Multifunction Display (UAD/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	CAUTION/WARNING/ Advisory Display (2)	C037	Advisory/ Multifunction Display (UAD/MFD)	Visually Check Symbolic Display V-4	Verify Correct Status (No Entries) C-1.2			1	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Park Brake	C166	Brakes (FB)	Visually Inspect Handle Position V-4	Verify Current Position Correct (Unlocked) C-2		Push-Pull Handle (PPH)	1	
Set	AFCS SEL Switch	C007	Flight Control (FC)	Visually Check Switch Positions and Placement of Switch V-4	Decide Correct Position and Verify Correct Status (Both) C-1.2	Turn Switch P-5.8	Rotary - 5 Positions (R-5)	1	
Check	Cyclic Trim Switch	C058	Flight Control (FC)	Visually Inspect Switch Position V-4	Verify Correct Status (AUTO) C-1.2			1	

FUNCTION 44 Perform Before Takeoff Check [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Swivel Switch	C200	Gear (FG)	Visually Inspect Switch Position V-4	Verify Correct Status (LOCK) C-1.2			1	
Check	Radios	C178	Communication/ Multifunction Display (UC/MFD)	Visually Check Symbolic Indications V-4	Interpret Symbolic Readouts and Verify Correct C-5.3			4	
Press	ASE Key	C021	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MASTER Key	C138	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status (On) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	VSD Key (1)	C229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RDR Key (1)	C182	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TF Key (1)	C208	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GM/TF Key (1)	C098	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 4 4 Perform Before Takeoff Check [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	DCLT Key (1)	C059	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CALT Key (1)	C035	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Radar Clearance Altitude) C-1.2	Press Softkey P-2.2	Softkey	.5	
Receive	Communication (Crewchief)	C047	Communication (UC)	Receive Auditory Message A-4.9	Decode Message (Crew Secure) C-5.3			3	
Press	IFF NORM/STBY Key	C117	Transponder/ Multifunction Display (TP/MFD)	Visually Locate Key V-3.7	Verify Correct Status (NORM) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 45 Perform Before Takeoff Check (LZ) **TOTAL TIME (Approximate) 35.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHECK LISTS Key (1)	C041	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ Key (1)	C192	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GET LIST Key (1)	C097	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	INST Key (2)	C121	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Fuel Summary (2)	C096	Fuel/Multifunction Display (EF/MFD)	Visually Inspect Symbolic Indication V-4	Interpret Symbolic Readout (Quantity) and Make Judgment (Enough Fuel) C-6.8			3	
Check	Engine Display (2)	C066	Engine/Multifunction Display (EN/MFD)	Visually Scan Symbolic Indications V-7	Interpret Sensory and Symbolic Readouts and Verify Correct Status (Readouts Within Limits) C-3.7			5	
Press	WCA Key (2)	C230	Advisory/ Multifunction Display (UAD/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 4 5 Perform Before Takeoff Check (LZ) (Continued)

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	CAUTION/WARNING/ Advisory Display (2)	C037	Advisory/ Multifunction Display (UAD/MFD)	Visually Check Symbolic Display V-4	Verify Correct Status (No Entries) C-1.2			1	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Park Brake	C156	Brakes (FB)	Visually Inspect Handle Position V-4	Verify Current Position Correct (Unlocked) C-2		Push-Pull Handle (PPH)	1	
Set	AFCS SEL Switch	C007	Flight Control (FC)	Visually Check Switch Positions and Placement of Switch V-4	Decide Correct Position and Verify Correct Status (Both) C-1.2	Turn Switch P-5.8	Rotary - 5 Positions (R-5)	1	
Check	Cyclic Trim Switch	C058	Flight Control (FC)	Visually Inspect Switch Position V-4	Verify Correct Status (AUTO) C-1.2			1	
Check	Swivel Switch	C200	Gear (FG)	Visually Inspect Switch Position V-4	Verify Correct Status (LOCK) C-1.2			1	
Check	ins	C178	Communication/ Multifunction Display (UC/MFD)	Visually Check Symbolic Indications V-4	Interpret Symbolic Readouts and Verify Correct C-5.3			4	
Press	ASE Key	C021	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 4.5 Perform Before Takeoff Check (LZ) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	MASTER Key	C138	Survivability/ Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status (On) C-1.2	Press Softkey P-2.2	Softkey	.5	
Receive	Communication (Crewchief)	C047	Communication (UC)	Receive Auditory Message A-4.9	Decode Message (Crew Secure) C-5.3			3	
Press	HSD Key (2)	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	VSD Key (1)	C229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 46 Perform Before Taxi Check

TOTAL TIME (Approximate) 61.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHECK LISTS Key (1)	C041	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ Key (1)	C192	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GET LIST Key (1)	C097	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	INST Key (4)	P121	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Fuel Summary (4)	P096	Fuel/Multifunction Display (EF/MFD)	Visually Inspect Symbolic Indication V-4	Interpret Symbolic Readout (Quantity) and Make Judgment (Enough Fuel) C-6.8			3	
Check	Engine Display (4)	P066	Engine/Multifunction Display (EN/MFD)	Visually Scan Symbolic Indications V-7	Interpret Sensory and Symbolic Readouts and Verify Correct Status (Readouts Within Limits) C-3.7			5	
Press	VSD Key (3)	P229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 46 Perform Before Taxi Check [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Vertical Situation Display (3)	P224	Multifunction Display (MFD)	Visually Scan Symbolic Indications V-7	Interpret Sensory and Symbolic Readouts and Verify Correct Status C-3.7			5	
Press	DCLT Key (3)	P059	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FPLN Key (1)	C090	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	FPLN	C237	Multifunction Display (MFD)	Visually Read Display V-5.9	Verify Flight Plan Correct C-6.8			10	
Press	FPLN ON Key (2)	C092	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HSD Key (2)	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	F/D Key (2)	C072	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	WYPT Key (2)	C232	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 46 Perform Before Taxi Check [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	CRS Key (2)	C055	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HSD Key (4)	P112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RDR Key (4)	P182	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TA Key (4)	P203	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	DCLT Key (4)	P059	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MAP Key (2)	C136	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CTR Key (2)	C056	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 46 Perform Before Taxi Check [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	DCLT Key (2)	C059	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Set	Swivel Switch	C201	Gear (FG)	Visually Check Switch Positions and Placement of Switch V-4	Decide Desired Position C-1.2	Move Switch P-2.2	Toggle - 3 Positions (T-3)	2	
Set	AFCS SEL Switch	C007	Flight Control (FC)	Visually Check Switch Positions and Placement of Switch V-4	Decide Correct Position and Verify Correct Status (Both) C-1.2	Turn Switch P-5.8	Rotary - 5 Positions (R-5)	1	
Check	Cyclic Trim Indicator	C057	Flight Control (FC)	Visually Check Indicator's Position V-4	Verify Correct Position (GND) C-1.2			1	
Check	Crew	P054	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message (Crew Secure) C-5.3	Press Switch and Speak P-2.2	Springloaded Toggle - 3 Positions (SPT-3)	3	
Receive	Communication (Crewchief)	P047	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			3	
Release	Park Brake	P167	Brakes (FB)	Feel Brake Position K-1	Decide and Verify Correct Position (Unlocked) C-1.2	Push Toe Brakes P-2.2		1	
Check	Park Brake Light	C163	Advisory (UAD)	Visually Register Light V-1	Verify Correct Status (Extinguished) C-1.2			1	

FUNCTION 47 Perform Cockpit Communication (Copilot) (Coordination) **TOTAL TIME (Approximate) 7 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Transmit	Communication (Copilot)	C044	Communication (UC)	Receive Speech Feedback/ Feel Floor Switch A-4.3/K-1	Encode Message C-5.3		Springloaded Press - 2 Positions (SP-2)	3	
Receive	Communication (Pilot)	P049	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			3	
Transmit	Communication (Pilot)	P050	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Pull Trigger and Speak P-2.2	Springloaded Trigger (SPTR)	3	
Receive	Communication (Copilot)	C043	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			3	

FUNCTION 48 Perform Cockpit Communication (Copilot) (Normal) **TOTAL TIME (Approximate) 5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Transmit	Communication (Copilot) (Normal)	C046	Communication (UC)	Receive Speech Feedback/ Feel Floor Switch A-4.3/K-1	Make Conditioned Association C-1		Springloaded Press - 2 Positions (SP-2)	2	
Receive	Communication (Pilot) (Normal)	P051	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	
Transmit	Communication (Pilot) (Normal)	P052	Communication (UC)	Receive Speech Feedback A-4.3	Make Conditioned Association C-1	Pull Trigger and Speak P-2.2	Springloaded Trigger (SPTR)	2	
Receive	Communication (Copilot) (Normal)	C045	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	

FUNCTION 49 Perform Cockpit Communication (Pilot) (Coordination) **TOTAL TIME (Approximate) 7 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Transmit	Communication (Pilot)	P050	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Pull Trigger and Speak P-2.2	Springloaded Trigger (SPTR)	3	
Receive	Communication (Copilot)	C043	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			3	
Transmit	Communication (Copilot)	C044	Communication (UC)	Receive Speech Feedback/ Feel Floor Switch A-4.3/K-1	Encode Message C-5.3		Springloaded Press - 2 Positions (SP-2)	3	
Receive	Communication (Pilot)	P049	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			3	

FUNCTION 50 Perform Cockpit Communication (Pilot) (Normal) **TOTAL TIME (Approximate) 5 Second**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Transmit	Communication (Pilot) (Normal)	P052	Communication (UC)	Receive Speech Feedback A-4.3	Make Conditioned Association C-1	Pull Trigger and Speak P-2.2	Springloaded Trigger (SPTR)	2	
Receive	Communication (Copilot) (Normal)	C045	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	
Transmit	Communication (Copilot) (Normal)	C046	Communication (UC)	Receive Speech Feedback/ Feel Floor Switch A-4.3/K-1	Make Conditioned Association C-1		Springloaded Press - 2 Positions (SP-2)	2	
Receive	Communication (Pilot) (Normal)	P051	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	

FUNCTION 51 Perform External Communication (ATHS) **TOTAL TIME (Approximate) 20.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	ATHS MENU Key (1)	C022	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ MSG Key (1)	C193	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Enter	Message	C139	Communication/ Control Display Unit (CDU/MFD)	Visually Locate Keys V-3.7	Encode Message C-5.3	Type Entry P-2.2	Softkey	15	
Press	ENTER Key	C068	Control Display Unit (CDU)	Visually Locate Key V-3.7	Verify Key Selected C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	XMIT MSG Key (1)	C233	Communication/ Control Display Unit (UC/CDU)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 5 2 Perform External Communication (Frequency Change) **TOTAL TIME (Approximate) 21.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	COMM Key (1)	C042	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	VHF LIST Key (1)	C227	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ CHAN Key (1)	C191	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	2	
Press	TUNE VHF 1 Key (1)	C216	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (1)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Transmit	Message (Brief)	C145	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	4	
Receive	Acknowledgment	C002	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-1			2	
Transmit	Message (Brief)	C145	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	4	
Receive	Acknowledgment	C002	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	

FUNCTION 5.3 Perform External Communication (Receive Coordination) **TOTAL TIME (Approximate) 13 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Receive	Message Alert	C144	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			2	
Transmit	Acknowledgment	C003	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	2	
Receive	Message	C141	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			5	
Transmit	Acknowledgment	C003	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	2	

FUNCTION 5 4 Perform External Communication (Transmit Code) **TOTAL TIME (Approximate) 14 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Transmit	Message	C142	Communication (UC)	Receive Speech Feedback A-4.3	Make Conditioned Association C-1	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	3	
Receive	Acknowledgment	C002	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	
Transmit	Message	C142	Communication (UC)	Receive Speech Feedback A-4.3	Make Conditioned Association C-1	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	5	
Receive	Acknowledgment	C002	Communication (UC)	Receive Auditory Message A-4.9	Make Conditioned Association C-1			2	

FUNCTION 5 5 Perform Hover Check (NVG) **TOTAL TIME (Approximate) 45.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	MST Key (4)	P121	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Control	Attitude (NVG)	P025	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		.5	
Check	Flight Controls (Hover) (NVG)	P075	Flight Control/Night Vision Goggles (FC/NG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Verify Correct Status (Correct Control Response) C-3.7	Control Pressure P-2.6		10	
Check	Engine Indications (Hover)	P067	Flight Control/ Engine/Multifunction Display (FC/EN/MFD)	Feel Control Movements/ Visually Scan Indications K-7/V-7	Inspect Sensory and Symbolic Readouts and Verify Correct Status (Readouts Within Limits) C-3.7	Control Pressure P-2.6		5	
Check	Flight Symbology (Hover)	P079	Flight Control/ ANVIS Symbology/ Multifunction Display (FC/ANV/MFD)	Feel Control Movements/ Visually Scan Symbology K-7/V-7	Inspect Sensory and Symbolic Readouts and Verify Correct Status (Correct Response) C-3.7	Control Pressure P-2.6		10	
Set	AFCS SEL Switch	C007	Flight Control (FC)	Visually Check Switch Positions and Placement of Switch V-4	Decide Correct Position and Verify Correct Status C-1.2	Turn Switch P-5.8	Rotary - 5 Positions (R-5)	2*	
Perform	AFCS Check (Hover) (NVG)	P006	Flight Control/Night Vision Goggles (FC/NG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Verify Correct Status (No Abrupt Engagement Errors) C-3.7	Control Pressure P-2.6		10	
Perform	Power Check (Hover)	P170	Flight Control/ Engine (FC/EN)	Feel Control Movements/ Visually Check Instrument Indications K-7/V-4	Interpret Sensory and Symbolic Readouts (Note Torque and N1) C-3.7	Control Pressure P-2.6		5	

*Time not included in total. The copilot will perform the task while the pilot performs other tasks.

FUNCTION 5 5 Perform Hover Check [NVG] (Continued)

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	HSD Key (4)	P112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Control	Attitude [NVG]	PC25	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		.5	

FUNCTION 5 6 Perform Hover [NVG]

TOTAL TIME (Approximate) 220 Seconds*

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Control	Altitude [NVG]	P018	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Attitude [NVG]	P025	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Heading [NVG]	P107	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Control	Drift [NVG]	P064	Flight Control (FC)	Feel Control Movements K-7	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Maintain	Obstacle Clearance [NVG]	P164	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Orient Aircraft K-7/C-5	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		1	
Check	Obstacle Clearance [NVG]	C163	Night Vision Goggles (VG)	Visually Register Obstacles G-1	Make Conditioned Association (Aircraft Clear) C-1			3	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 57 Perform IFF Procedures

TOTAL TIME (Approximate) 10.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR		
Press	IFF Key (1)	C115	Multifunction Display/Transponder (MFD/TP)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5
Press	IFF MODE Key (1)	C116	Multifunction Display/Transponder (MFD/TP)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5
Check	IFF Code	C114	Control Display Unit/ Transponder (CDU/TP)	Visually Inspect Readout V-4	Interpret Sensory and Symbolic Readout and Verify Correct Status (Correct Code) C-3.7			5
Press	IFF NORM/STBY Key (1)	C117	Multifunction Display/Transponder (MFD/TP)	Visually Locate Key V-3.7	Verify Correct Status (NORM) C-1.2	Press Softkey P-2.2	Softkey	.5
Press	BCN OPER Key (1)	C029	Multifunction Display/Transponder (MFD/TP)	Visually Locate Key V-3.7	Verify Correct Status (OPER) C-1.2	Press Softkey P-2.2	Softkey	.5
Press	RTN Key (1)	C169	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5

FUNCTION 5 8 Perform Navigation [NVG] **TOTAL TIME (Approximate) Continuous***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Interpret	Map Features	C135	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Terrain V-3.7	Interpret Sensory Feedback and Make Judgment C-6.8			8	
Verify	Flight Path [NVG]	C078	Night Vision Goggles (VG)	Visually Search External Field of View G-7	Interpret Sensory Feedback and Make Judgment (Adjustment Needed) C-6.8			10	
Check	Heading	C103	ANVIS Symbology (ANV)	Read Heading Indicator V-5.9	Verify Correct Heading C-1.2			.5	
Check	Course Display	C052	Multifunction Display (MFD)	Visually Discriminate Symbolic Display V-3.7	Verify Correct Status (On Course) C-1.2			5	
Verify	Flight Path (FLIR) (1)	C076	Forward-Looking Infrared (FLIR) (FLR)	Visually Search FLIR Image V-7	Interpret Sensory Feedback and Make Judgment (Adjustment Needed) C-6.8			10	

*The total time for the function will vary depending on the length of the segment.

FUNCTION 59 Perform Navigation (RADAR)

TOTAL TIME (Approximate) 17.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	RADAR Key (1)	C177	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Verify	Flight Path (Radar)	C077	RADAR (NRA)	Visually Scan Sensor Image V-7	Interpret Sensory Feedback and Make Judgment (Adjustment Needed) C-6.8			15	
Press	FLIR Key (1)	C082	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	

FUNCTION 60 Perform Rendezvous Check

TOTAL TIME (Approximate) 7.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	NAV AIDS Key (1)	C154	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TCN BRG Key (1)	C207	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TCN A/AR Key (1)	C206	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (A/AR) C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	TACAN Channel	C204	Control Display Unit (CDU)	Visually Check Symbolic Indications V-4	Interpret Sensory and Symbolic Readout and Verify Correct Status (Channel Correct) C-3.7			3	
Press	RTN Key (1)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 61 Perform Rendezvous [NVG]

TOTAL TIME (Approximate) 65.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	SYST Key (1)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHECK LISTS Key (1)	C041	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEQ Key (1)	C192	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GET LIST Key (1)	C097	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Set	Lights	C128	Lighting (UL)	Visually Check Switch Positions and Placement of Switches V-4	Decide Desired Position C-1.2	Move Switches P-2.2		6	
Set	Refuel Panel	C183	Fuel (EF)	Visually Check Switch Positions and Placement of Switches V-4	Decide Desired Position C-1.2	Move Switches P-2.2		10	
Press	VSD Key (1)	C229	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FLIR CTRL Key (2)	C080	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FLIR ON Key (2)	C083	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (OFF) C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 61 Perform Rendezvous [NVG] [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Locate	Tanker [NVG]	B205	Night Vision Goggles (VG)	Visually Detect Image G-1	Evaluate Sensory Information and Make Judgment (Tanker) C-4.6			40	

FUNCTION 62 Perform Taxi [NVG]

TOTAL TIME (Approximate)80.5 Seconds*

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Control	Forward Motion (Taxi) [NVG]	P086	Brakes/Night Vision Goggles (FB/VG)	Feel Pedal Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Press Toe Brakes P-2.6		.5	
Control	Heading (Taxi) [NVG]	P108	Gear/Night Vision Goggles (FG/VG)	Feel Swivel Knob Movements/Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		.5	
Maintain	Obstacle Clearance [NVG]	P164	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Orient Aircraft K-7/G-5	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		.5	
Check	Obstacle Clearance [NVG]	C163	Night Vision Goggles (VG)	Visually Register Obstacles G-1	Make Conditioned Association (Aircraft Clear) C-1			3	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 63 Perform Taxiing Check

TOTAL TIME (Approximate) 21.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Check	Brakes (Pilot)	P034	Brakes (FB)	Feel Brake Position K-1	Verify Correct Status C-1.2	Press Toe Brakes P-2.2		5	
Check	Brakes (Copilot)	C033	Brakes (FB)	Feel Brake Position K-1	Verify Correct Status C-1.2	Press Toe Brakes P-2.2		5	
Check	Power Steering	C172	Gear (FG)	Feel Knob Movement K-1	Verify Correct Status C-1.2	Control Pressure P-2.6	Springloaded Rotary (SPR)	10	

FUNCTION 6 4 Program Transponder

TOTAL TIME (Approximate) 7 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	IFF NORM/STBY Key (2)	C117	Transponder/ Multifunction Display (TP/MFD)	Visually Locate Key V-3.7	Verify Correct Status (STBY) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	IFF Key (2)	C115	Transponder/ Multifunction Display (TP/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MODE 1 Key (2)	C148	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MODE 3A Key (2)	C150	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MODE C Key (2)	C151	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MODE 2 Key (2)	C149	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (ON) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 65 Respond to Threat [NVG] **TOTAL TIME (Approximate) 60 Seconds***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Detect	Threat	B209	Survivability (US)	Detect Audio Difference/ Detect Visual Image A-6.6/V-1	Recognize Visual Signal (Threat Direction)/Decode Sound C-5.3			3	
Press	ASE Key	C021	Survivability/Control Display Unit (US/CDU)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	MASTER Key	C137	Survivability/Control Display Unit (US/CDU)	Visually Check Status V-3.7	Verify Correct Status (On) C-1.2			1	
Press	STR Key (1)	C198	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FLY OVER STR Key (1)	C084	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Enter	Threat Information	C210	Control Display Unit (CDU)	Visually Locate Keys on Keypad V-3.7	Encode Data C-5.3	Type Entry P-7	Springloaded Press (SP)	30	
Press	RTN Key (1)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Perform	Hard Turns [NVG]	P101	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Orient Aircraft K-7/G-5	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		4	

*Since some of the tasks are performed randomly, the total time for the function is greater than the sum of the length of the individual tasks.

FUNCTION 6 5 Respond to Threat [NVG] (Continued)

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Change	Altitude Sharply [NVG]	P019	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		4	
Change	Airspeed Quickly [NVG]	P014	Flight Control/Night Vision Goggles (FC/VG)	Feel Control Movements/ Visually Detect Aircraft Movement K-7/G-1	Make Conditioned Association (Adjustment Needed) C-1	Control Pressure P-2.6		4	

FUNCTION 66 Set Up Communication Radios **TOTAL TIME (Approximate) 19 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	COMM Key (2)	C042	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	VHF 2 Key (2)	C226	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Sec) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SQL Key (2)	C196	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (On) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	VHF 1 Key (2)	C225	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Sec) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SQL Key (2)	C196	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (On) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	VHF LIST Key (2)	C227	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHAN Key (2)	C040	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TUNE VHF 1 Key (2)	C216	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 66 Set Up Communication Radios [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	CHAN Key (2)	C040	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TUNE VHF 2 Key (2)	C217	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HF COMM Key (2)	C109	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	HF LIST Key (2)	C110	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	CHAN Key (2)	C040	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TUNE HF Key (2)	C214	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	UHF COMM Key (2)	C218	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	UHF LIST Key (2)	C219	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 6 6 Set Up Communication Radios [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	CHAN Key (2)	C040	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	TUNE UHF 1 Key (2)	C215	Communication/ Multifunction Display (UC/MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SEC Key (2)	C190	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status (Sec) C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 67 Unload Aircraft (Internal) **TOTAL TIME (Approximate) 39 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Monitor	Unloading	C220	Cargo (UCA)	Visually Scan Cargo Compartment V-7	Verify Correct Procedure C-1.2	Move Head P-2.6		10	
Press	INST Key	C121	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Enter	Cargo WGT	C238	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2		10	
Enter	OAT	C239	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2		5	
Press	HSD Key	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Verify	Unloading Complete	C221	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			3	
Transmit	Communication (Crewchief)	C048	Communication (UC)	Receive Speech Feedback A-4.3	Encode Message (Ramp/ Door Check) C-5.3	Press Switch and Speak P-2.2	Springloaded Press - 2 Positions (SP-2)	3	
Receive	Communication (Crewchief)	C047	Communication (UC)	Receive Auditory Message A-4.9	Decode Message C-5.3			3	

FUNCTION 6 8 Update Navigation (FLIR) **TOTAL TIME (Approximate) 21.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	FLIR Key (2)	C082	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Touch Softkey P-2.2	Softkey	.5	
Press	PT Key (2)	C175	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Touch Softkey P-2.2	Softkey	.5	
Press	UPD Key (2)	C222	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Touch Softkey P-2.2	Softkey	.5	
Press	SLEW Key (2)	C194	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Touch Softkey P-2.2	Softkey	.5	
Set	FOV Scale Switch (2)	C089	Multifunction Display/Forward-Looking Infrared (MFD/FLR)	Feel Switch Movement/ Visually Detect Sensor Images K-1/V-1	Decide Correct Position and Verify Correct Image C-1.2	Move Switch P-2.2	Slide - 2 Positions	1	
Identify	Landmark (FLIR)	C122	Maps/Multifunction Display (NMM/MFD)	Visually Discriminate Terrain V-3.7	Interpret Sensory Feedback and Make Judgment C-6.8			5	
Slew	Update Cursor	C223	Multimode Controller/ Multifunction Display (MC/MFD)	Feel Switch Movement/ Visually Align Symbol K-6.7/V-5	Verify Symbol Position Correct C-1.2	Manipulate Thumbwheel P-4	Springloaded Center Thumbwheel - 5 Positions	4	
Pull	Mode Trigger	C152	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position (Second Detent) C-1.2	Pull Trigger P-2.2		.5	

FUNCTION 6 8 Update Navigation (FLIR) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Release	Mode Trigger	C153	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position C-1.2	Release Trigger P-2.2		.5	
Press	SNSR UPD Key (2)	C195	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	ACC Key (2)	C001	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	MAP Key (2)	C136	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 69 Update Navigation (LZ)

TOTAL TIME (Approximate) 9.5 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	UPD Key (2)	C222	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Touch Softkey P-2.2	Softkey	.5	
Enter	NRP Number	C162	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry (NRP) C-5.3	Type Entry P-2.2	Softkey	5	
Press	FLY OVER UPD Key (2)	C085	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	ACC Key (2)	C001	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (2)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 70 Update Navigation (Mission Change) **TOTAL TIME (Approximate) 32.5 Seconds***

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	STR Key (2)	C198	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	LOOK AHD Key (2)	C132	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RNG Key (2)	C186	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Scan	Map Display (2)	C133	Maps/Multifunction Display (NM/MFD)	Visually Scan Imagery V-7	Interpret Sensory Feedback and Make Judgment C-6.8			10	
Identify	Landmark (Map)	C123	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Terrain V-3.7	Interpret Sensory Feedback and Make Judgment C-6.8			5	
Press	SLEW Key (2)	C194	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Slew	Update Cursor	C2..	Multimode Controller/ Multifunction Display (MC/MFD)	Feel Switch Movement/ Visually Align Symbol K-6.7/V-5	Verify Symbol Position Correct C-1.2	Manipulate Thumbwheel P-4	Springloaded Center Thumbwheel - 5 Positions	4	
Pull	Mode Trigger	C152	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position (Second Detent) C-1.2	Pull Trigger P-2.2		.5	

*Time required to establish three NRPs.

FUNCTION 70 Update Navigation (Mission Change) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Release	Mode Trigger	C153	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position C-1.2	Release Trigger P-2.2		.5	
Enter	New NRP Number	C157	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	4	
Enter	NRP Data	C161	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	7	
Press	STR NRP Key (2)	C199	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Scan	Map Display (2)	C133	Maps/Multifunction Display (NM/MFD)	Visually Scan Imagery V-7	Interpret Sensory Feedback and Make Judgment C-6.8			10	
Identify	Landmark (Map)	C123	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Terrain V-3.7	Interpret Sensory Feedback and Make Judgment (New NRP) C-6.8			5	
Slew	Update Cursor	C223	Multimode Controller/ Multifunction Display (MC/MFD)	Feel Switch Movement/ Visually Align Symbol K-6.7/V-5	Verify Symbol Position Correct C-1.2	Manipulate Thumbwheel P-4	Springloaded Center Thumbwheel - 5 Positions	4	
Pull	Mode Trigger	C152	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position C-1.2	Pull Trigger P-2.2		.5	

FUNCTION 7 0 Update Navigation (Mission Change) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Release	Mode Trigger	C153	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position C-1.2	Release Trigger P-2.2		.5	
Enter	New NRP Number	C157	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	4	
Enter	NRP Data	C161	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	7	
Press	STR NRP Key (2)	C199	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Scan	Map Display (?)	C133	Maps/Multifunction Display (NM/MFD)	Visually Scan Imagery V-7	Interpret Sensory Feedback and Make Judgment C-6.8			10	
Identify	Landmark (Map)	C123	Maps/Multifunction Display (NM/MFD)	Visually Discriminate Terrain V-3.7	Interpret Sensory Feedback and Make Judgment (New NRP) C-6.8			5	
Slew	Update Cursor	C223	Multimode Controller/ Multifunction Display (MC/MFD)	Feel Switch Movement/ Visually Align Symbol K-6.7/V-5	Verify Symbol Position Correct C-1.2	Manipulate Thumbwheel P-4	Springloaded Center Thumbwheel - 5 Positions	4	
Pull	Mode Trigger	C152	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position (Second Detent) C-1.2	Pull Trigger P-2.2		.5	

FUNCTION 70 Update Navigation (Mission Change) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Release	Mode Trigger	C153	Multimode Controller (MC)	Feel Trigger Movement K-1	Verify Correct Position C-1.2	Release Trigger P-2.2		.5	
Enter	New NRP Number	C157	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	4	
Enter	NRP Data	C161	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2	Softkey	7	
Press	STR NRP Key (2)	C199	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SYST Key (2)	C202	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FPLN Key (2)	C090	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	LEG ADD Key (2)	C124	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	LEGS Key (2)	C127	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 70 Update Navigation (Mission Change) [Continued]

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	DISPLAY LEG Key	C063	Control Display Unit (CDU)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Enter	Leg Data	C125	Control Display Unit (CDU)	Visually Locate Keys and Read Symbolic Display V-5.9	Encode and Verify Correct Entry C-5.3	Type Entry P-2.2		7	
Press	LEG MOD Key (2)	C126	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FUEL/POWER Key (2)	C095	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Check	Fuel Summary	C096	Fuel/Multifunction Display (EF/MFD)	Visually Inspect Symbolic Indication V-4	Interpret Symbolic Readout (Quantity) and Make Judgment (Enough Fuel) C-6.6			6	
Press	HSD Key (2)	C112	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 7 1 Update Navigation (NRP) **TOTAL TIME (Approximate) 12.5 Seconds**

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	TA Key (1)	C203	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	UPD Key (1)	C222	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	SLEW Key (1)	C194	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Verify	NRP	C160	Multifunction Display/Navigation (MFD/NA)	Visually Discriminate Symbology V-3.7	Interpret Sensory Feedback and Make Judgment (Delta) C-6.8			5	
Press	SNSR UPD Key (1)	C195	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	ACC Key (1)	C001	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	RTN Key (1)	C189	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	GM/TF Key (1)	C098	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 7 2 Check FLIR Operation

TOTAL TIME (Approximate) 8 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Pull	SLEW Trigger	P235	Forward-Looking Infrared (FLR)	Feel Trigger Movement K-1	Verify Correct Position (First Detent) C-1.2	Pull Trigger P-2.2		.5	
Manipulate	THUMB TRACKER	P236	Forward-Looking Infrared (FLR)	Feel Switch Movement/ Visually Detect Sensor Movement K-1/V-1	Verify Sensory Movement C-1.2	Manipulate Thumbwheel P-4	Springloaded Center Thumbwheel - 5 Positions	4	
Press	FPV Key (3)	P093	Multifunction Display/ Forward-Looking Infrared (MDF/FLR)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	FOV Key (3)	P087	Multifunction Display/ Forward-Looking Infrared (MDF/FLR)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	
Press	POL Key (3)	P169	Multifunction Display/ Forward-Looking Infrared (MDF/FLR)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2	Softkey	.5	

FUNCTION 73 Check Radar Operation

TOTAL TIME (Approximate) 11 Seconds

TASKS		TASK #	SUBSYSTEM(S)	WORKLOAD COMPONENTS			SWITCH DESCRIPTION	DURATION (SECONDS) DISCRETE/ CONTINUOUS	
VERB	OBJECT			SENSORY	COGNITIVE	PSYCHOMOTOR			
Press	RADAR Key	P177	Multifunction Display (MFD)	Visually Locate Key V-3.7	Verify Correct Status C-1.2	Press Softkey P-2.2		.5	
Check	Radar Image	P175	Radar (NRA)	Visually Check Sensor Image V-4	Evaluate Sensory Feedback (Correct Return) C-4.6			10	

A P P E N D I X H

MH-47E FUNCTION SUMMARY WORKSHEETS

This appendix contains the Function Summary Worksheets for each of the 73 functions. The summary worksheets identify and list the tasks to be performed by the pilot and copilot. For each crewmember, separate columns are used to identify discrete fixed, discrete random, continuous fixed, and continuous random tasks. The spatial arrangement of the tasks on the worksheet corresponds roughly to the temporal arrangement of the tasks within the functions.

FUNCTION 01 Adjust Approach Parameters [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Control Altitude [NVG] (025) Control Rate of Descent [NVG] (181) Control Airspeed [NVG] (013) Control Heading [NVG] (107) Control Drift [NVG] (064)				

FUNCTION 02 Adjust Climb Parameters [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Control Attitude [NVG] (025) Control Rate of Climb [NVG] (150) Control Airspeed [NVG] (013) Control Heading [NVG] (197)				

FUNCTION 03 Adjust Flight Parameters [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Control Attitude [NVG] (025) Adjust Altitude [NVG] (017) Control Airspeed [NVG] (013) Adjust Heading [NVG] (106) Adjust Trim [NVG] (213)				

FUNCTION 04 Adjust Level of Flight Parameters [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Control Attitude [NVG] (025) Control Altitude [NVG] (016) Control Airspeed [NVG] (013) Control Heading [NVG] (107)				

FUNCTION 05 Adjust Map Display (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
							Check Map Display Scale (134) Press RNG UP Key (187) Press RNG DOWN Key (185) Press DECENTER Key (060) Press CENTER Key (039)

FUNCTION 06 Adjust Map Display (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Check Map Display Scale (134) Press RNG UP Key (167) Press RNG DOWN Key (165) Press DECENTER Key (060) Press CENTER Key (039)				

FUNCTION 07 Align Navigation Systems

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press SYST Key (2) (202) Press NAV Key (2) (156) Press NAV INIT Key (2) (155) Enter CDU Data (038) Press NORM Key (2) (159) Press INIT Key (2) (119) Press INS NAV Key (2) (120) Press GPS INIT Key (2) (100) Press AHRS NORM Key (2) (009) Press AHRS NAV Key (2) (008) Press INIT Key (2) (119) Press NAV Key (2) (156) Press GPS DOP Key (2) (099) Press HSD Key (2) (112)			

FUNCTION 06 Boresight FLIR

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press FLIR CTRL Key (2) (080) Check FLIR ON Key (2) (083) Press NEXT Key (2) (158) Press BORE Key (2) (032) Press CALC Key (2) (035) Press FOV NAR Key (2) (088) Press NEXT Key (2) (158) Press ADS SYM Key (2) (005) Press RTN Key (2) (189)			

FUNCTION 09 Check Approach Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Check Rate of Climb Indicator (Inflight) (179) Check Airspeed (Inflight) (012) Check Heading (Inflight) (105)				

FUNCTION 10 Check Avionics System

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press WCA Key (2) (230) Press EQP STAT Key (2) (070) Press OP RDY Key (2) (165) Standby (197) Check EQP STAT Key (2) (069) Press RTN Key (2) (189)			

FUNCTION 11 Check Climb Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Check Rate of Climb Indicator (Inflight) (179) Check Airspeed (Inflight) (012) Check Heading (Inflight) (105)				

FUNCTION 12 Check Flight Instruments (Auto)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Check Altitude (015) Check Airspeed (010) Check Heading (100) Check Attitude (023)				

FUNCTION 13 Check Flight Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Check Altitude (Inflight) (016) Check Airspeed (Inflight) (012) Check % TRQ Indication (Inflight) (234) Check Heading (Inflight) (105) Check Trim Ball (Inflight) (212)				

FUNCTION 14 Check Level of Flight Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Check % TRQ Indication (Inflight) (234) Check Altitude (Inflight) (016) Check Airspeed (Inflight) (012) Check Heading (Inflight) , 105)				

FUNCTION 15 Check Map Display System (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Check Map Display Scale (134) Press RNG UP Key (187) Press RNG DOWN Key (185) Press DECENTER Key (060) Press CENTER Key (039)			

FUNCTION 16 Check Map Display System (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Check Map Display Scale (134) Press RNG UP Key (187) Press RNG DOWN Key (185) Press DECENTER Key (060) Press CENTER Key (039)							

FUNCTION 17 Configure Flight Director

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Press SYST Key (4) (202) Press FPLN Key (4) (090) Press FPLN LOAD Key (4) (091) Press FPLN ON Key (4) (092) Press VSD Key (4) (229)							

FUNCTION 18 Configure Navigation Radios

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press F/D Key (2) (072) Press NEXT Key (2) (158) Press ADF Key (2) (004) Press VOR TAC Key (2) (226) Press HSD Key (2) (112) Press NAV AIDS Key (2) (154) Press TCN BRG Key (2) (207) Press RTN Key (2) (189)			

FUNCTION 19 Depart Rendezvous (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Set Refuel Panel (163) Transmit Message (Brief) (145) Receive Acknowledgment (002) Press VSD Key (1) (229) Press IFF Key (1) (115) Press BCN STBY Key (1) (030) Press IFF STBY Key (1) (118) Press SYST Key (1) (202) Press FUEL/POWER Key (1) (095) Check Fuel Summary (096) Press VSD Key (1) (229) PRESS FLIR CTRL Key (1) (080) Press FLIR ON Key (1) (083) Press RTN Key (1) (189)			

FUNCTION 20 Engage Level Flight (Auto)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press F/D Key (1) (072) Enter Airspeed (011) Enter BARO Altitude (028) Enter Heading (104) Press A/S SEL Key (1) (020) Press BALT SEL Key (1) (027) Press HDG SEL Key (1) (102) Press RTN Key (1) (189)			

FUNCTION 21 Establish Approach [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Check % TRQ Indication (Inflight) (234) Adjust Power [NVG] (171) Check % TRQ Indication (Inflight) (234) Press F/D Key (4) (072) Press HVR SYM Key (4) (113) Press RTN Key (4) (189) Control Attitude [NVG] (025)							

FUNCTION 22 Establish Climb [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Check % TRQ Indication (Inflight) (234) Adjust Power [NVG] (171) Check % TRQ Indication (Inflight) (234)							

FUNCTION 23 Establish Hover [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Adjust Power [NVG] (171) Check % TRQ Indication (Inflight) (234)							

FUNCTION 24 Establish Level of Flight [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Adjust Attitude [NVG] (024) Check % TRQ Indication (Inflight) (234) Adjust Power [NVG] (171)							

FUNCTION 25 Land Aircraft [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Perform Touchdown [NVG] (211)			Maintain Obstacle Clearance [NVG] (164) Adjust Power [NVG] (171) Control Attitude [NVG] (025) Control Heading [NVG] (107) Control Drift [NVG] (064)		Check Obstacle Clearance [NVG] (163)		

FUNCTION 28 Load Aircraft (Internal)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Monitor Loading (131) Verify Load Secure (130) Transmit Communication (Crewchief) (048) Receive Communication (Crewchief) (047) Press INST Key (121) Enter CARGO WGT (238) Enter C/T (239) Press HSD Key (112)			

FUNCTION 27 Load Mission Plan

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Insert DTM Cartridge (065) Check Bit Light (031) Press SYST Key (2) (202) Press MISSN LOAD Key (2) (147) Press MISSN LOAD Key (2) (147) Press LEGS Key (2) (127) Verify Mission Loaded (146) Press HSD Key (2) (112)			

FUNCTION 28 Mission Change

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Note Message Alert (143) Press SYST Key (1) (202) Press ATHS MENU Key (1) (022) Press DISP MSGS Key (1) (062) Read Message (140) Press RTN Key (1) (189)			

FUNCTION 23 Monitor Audio

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Monitor Audio (025)				Monitor Audio (026)	

FUNCTION 30 Monitor External Visual Field [NVG] (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
						Check External Scene [NVG] (071)	

FUNCTION 31 Monitor External Visual Field (NVG) (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Check External Scene (NVG) (071)					

FUNCTION 32 Monitor Flight Controls

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Monitor Flight Controls (073)					

FUNCTION 33 Monitor FLIR Image (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
						Check FLIR Image (081)	

FUNCTION 34 Monitor FLIR Image (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Check FLIR Image (081)					

FUNCTION 35 Monitor RADAR Image (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
						Check RADAR Image (176)	

FUNCTION 36 Monitor RADAR Image (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Check RADAR Image (176)					

FUNCTION 37 Monitor Threat (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Check Direction Display (061)			

FUNCTION 38 Monitor Threat (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Check Direction Display (061)							

FUNCTION 39 Perform Aerial Refueling [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Verify Probe Hookup (173)				Transmit Message (Brief) (145)	Check External Scene [NVG] (071)		
				Receive Message (141)			
				Transmit Acknowledgment (003)			
				Verify Probe Hookup (173)			
				Transmit Message (Brief) (145)			
				Receive Acknowledgment (002)			
				Press INST Key (1) (121)			
					Check Fuel Indicator (094)		
				Transmit Message (Brief) (145)			
				Receive Acknowledgment (002)			
				Verify Refueling Ceased (114)			
Verify Probe Unhooked (174)				Verify Probe Unhooked (174)			

FUNCTION 40 Perform After Landing Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Neutralize Flight Controls (074)		Monitor Flight Controls (073)		Press SYST Key (1) (202) Press CHECK LISTS Key (1) (041) Press SEQ Key (1) (192) Press GET LIST Key (1) (097) Set AFCS SEL Switch (087) Set SWIVEL Switch (201) Check Radios (178) Check Cyclic Indicator (057)			

FUNCTION 41 Perform Before Hover Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Check Rotor RPM (188) Press F/D Key (4) (072) Press HVR SYM Key (4) (113) Press RTN Key (4) (189) Perform HIT Check (111)				Set SWIVEL Switch (201) Set AFCS SEL Switch (007)			

FUNCTION 42 Perform Before Landing Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press SYST Key (1) (202) Press CHECK LISTS Key (1) (041) Press SEQ Key (1) (192) Press GET LIST Key (1) (097) Check Rotor RPM (188) Check WCA Light (231) Check Radios (178) Check Park Brake (166) Press F/D Key (2) (072) Press A/S SEL Key (2) (020) Press BALT SEL Key (2) (027) Press HDS SEL Key (2) (102) Press RTN Key (2) (189) Check Cyclic Trim Switch (058) Check SWIVEL Switch (200) Press ASE Key (021) Continued...			

FUNCTION 42 Perform Before Landing Check (Continued)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press MASTER Key (138) Check Crew (054) Receive Communication (Crewchief) (047) Press VSD Key (1) (229)			

FUNCTION 43 Perform Before Landing Check (LZ)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press SYST Key (1) (202) Press CHECK LISTS Key (1) (041) Press SEQ Key (1) (192) Press GET LIST Key (1) (097) Check Rotor RPM (188) Check WCA Light (231) Check Radios (178) Check Park Brake (166) Press F/D Key (2) (072) Press BALT SEL Key (2) (027) Press HDS SEL Key (2) (102) Press RTN Key (2) (189) Check Cyclic Trim Switch (058) Check SWIVEL Switch (200) Press ASE Key (021) Press MASTER Key (138) Continued...			

FUNCTION 43 Perform Before Landing Check (LZ) (Continued)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Check Load Secure (129) Receive Communication (Crewchief) (047) Press VSD Key (1) (223)			

FUNCTION 44 Perform Before Takeoff Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Press FLIR Key (3) (082) Press FPV Key (3) (093) Press FOV Key (3) (087) Press POL Key (3) (169)				Press SEQ Key (1) (192) Press GET LIST Key (1) (097) Press WCA Key (2) (230) Check CAUTION/ WARNING/Advisory Display (2) (037) Press RTN Key (2) (189) Check Park Brake (166) Set AFCS SEL Switch (007) Check Cyclic Trim Switch (058) Check SWIVEL Switch (200) Check Radios (178) Press ASE Key (021) Press MASTER Key (138) Press VSD Key (1) (229) Press RDR Key (1) (182) Press TF Key (1) (208) Press GM/TF Key (1) (098) Continued...			

FUNCTION 44 Perform Before Takeoff Check [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press DCLT Key (1) (059) Press CALT Key (1) (036) Receive Communication (Crewchief) (047) Press IFF NORM/STBY Key (117)			

FUNCTION 45 Perform Before Takeoff Check (LZ)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press SYST Key (1) (202) Press CHECK LISTS Key (1) (041) Press SEQ Key (1) (192) Press GET LIST Key (1) (097) Press INST Key (2) (121) Check Fuel Summary (2) (096) Check Engine Display (2) (066) Press WCA Key (2) (230) Check CAUTION/ WARNING/Advisory Display (2) (037) Press RTN Key (2) (189) Check Park Brake (166) Set AFCS SEL Switch (007) Check Cyclic Trim Switch (058) Check SWIVEL Switch (200) Check Radios (178) Continued...			

FUNCTION 45 Perform Before Takeoff Check (LZ) [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Receive Communication (Crewchief) (047)				Press ASE Key (021) Press MASTER Key (138) Receive Communication (Crewchief) (047) Press HSD Key (2) (112) Press VSD Key (1) (229)			

FUNCTION 46 Perform Before Taxi Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Press INST Key (4) (121)				Press SYST Key (1) (202)			
Check Fuel Summary (4) (096)				Press CHECK LISTS Key (1) (041)			
Check Engine Display (4) (066)				Press SEQ Key (1) (192)			
Press VSD Key (3) (229)				Press GET LIST Key (1) (097)			
Check Vertical Situation Display (3) (224)				Press FPLN Key (2) (090)			
Press DCLT Key (3) (059)				Check FPLN (2) (237)			
Press HSD Key (4) (112)				Press FPLN ON Key (2) (092)			
Press RDR Key (4) (182)				Press HSD Key (2) (112)			
Press TA Key (4) (203)				Press F/D Key (2) (072)			
Press DCLT Key (4) (059)				Press WYPT Key (2) (232)			
Check Crew (054)				Press CRS Key (2) (055)			
Receive Communication (Crewchief) (047)				Press RTN Key (2) (189)			
Release Park Brake (167)				Press MAP Key (2) (136)			
Check Park Brake Light (168)				Press CTR Key (2) (056)			
				Press DCLT Key (2) (059)			

FUNCTION 47 Perform Cockpit Communication (Copilot) (Coordination)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Receive Communication (Pilot) (049) Transmit Communication (Pilot) (050)				Transmit Communication (Copilot) (044) Receive Communication (Copilot) (043)			

FUNCTION 48 Perform Cockpit Communication (Copilot) (Normal)

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Receive Communication (Pilot) (Normal) (051) Transmit Communication (Pilot) (Normal) (052)				Transmit Communication (Copilot) (Normal) (046) Receive Communication (Copilot) (Normal) (045)			

FUNCTION 49 Perform Cockpit Communication (Pilot) (Coordination)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Transmit Communication (Pilot) (050) Receive Communication (Pilot) (049)				Receive Communication (Copilot) (043) Transmit Communication (Copilot) (044)			

FUNCTION 50 Perform Cockpit Communication (Pilot) (Normal)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Transmit Communication (Pilot) (Normal) (052) Receive Communication (Pilot) (Normal) (051)				Receive Communication (Copilot) (Normal) (045) Transmit Communication (Copilot) (Normal) (046)			

FUNCTION 51 Perform External Communication (ATHS)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press SYST Key (1) (202) Press ATHS MENU Key (1) (022) Press SEQ MSG Key (1) (193) Enter Message (139) Press Enter Key (068) Press XMIT MSG Key (1) (233)			

FUNCTION 52 Perform External Communication (Frequency Change)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press COMM Key (1) (042) Press VHF LIST Key (1) (227) Press SEQ CHAN Key (1) (191) Press Tune VHF 1 Key (1) (216) Press RTN Key (1) (189) Transmit Message (Brief) (145) Receive Acknowledgment (002) Transmit Message (Brief) (145) Receive Acknowledgment (002)			

FUNCTION 53 Perform External Communication (Receive Coordination)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Receive Message Alert (144) Transmit Acknowledgment (003) Receive Message (141) Transmit Acknowledgment (003)			

FUNCTION 54 Perform External Communication (Transmit Code)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Transmit Message (142) Receive Acknowledgment (002) Transmit Message (142) Receive Acknowledgment (002)			

FUNCTION 55 Perform Hover Check [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Press INST Key (4) (121) Check Flight Controls (Hover) [NVG] (075) Check Engine Indications (Hover) (067) Check Flight Symbology Symbology (Hover) (079) Perform AFCS Check (Hover) [NVG] (006) Perform Power Check (Hover) (170) Press HSD Key (4) (112) Control Altitude [NVG] (025)				Set AFCS SEL Switch (007)			

FUNCTION 56 Perform Hover [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Control Altitude [NVG] (018) Control Altitude [NVG] (025) Control Heading [NVG] (107) Control Drift [NVG] (064) Maintain Obstacle Clearance) [NVG] (164)		Check Obstacle Clearance [NVG] (163)		

FUNCTION 57 Perform IFF Procedures

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press IFF Key (1) (115) Press IFF MODE Key (1) (116) Check IFF Code (114) Press IFF NORM/STBY Key (1) (117) Press BCN OPER Key (1) (029) Press RTN Key (1) (169)			

FUNCTION 58 Perform Navigation [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
							Interpret Map Features (135) Verify Flight Path [NVG] (078) Check Heading (103) Check Course Display (053) Verify Flight Path (FLIR) (076)

FUNCTION 59 Perform Navigation (RADAR)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press RADAR Key (1) (177) Verify Flight Path (RADAR) (077) Press FLIR Key (1) (082)			

FUNCTION 60 Perform Rendezvous Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press NAV AIDS Key (1) (154) Press TCN BRG Key (1) (207) Press TCN A/AR Key (1) (206) Check TACAN Channel (204) Press RTN Key (1) (189)			

FUNCTION 61 Perform Rendezvous (HVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Locate Tanker (205)				Press SYST Key (1) (202) Press CHECK LISTS Key (1) (041) Press SEQ Key (1) (192) Press GET LIST Key (1) (097) Set Lights (128) Set Refuel Panel (183) Press VSD Key (1) (229) Press FLIR CTRL Key (1) (060) Press FLIR ON Key (1) (083) Press RTN Key (1) (189) Locate Tanker (205)			

FUNCTION 62 Perform Taxi [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Control Forward Motion (Taxi) [NVG] (086) Control Heading (Taxi) [NVG] (108) Maintain Obstacle Clearance [NVG] (164)		Check Obstacle Clearance [NVG] (163)		

FUNCTION 63 Perform Taxiing Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Check Brakes (Pilot) (034)				Check Brakes (Copilot) (033) Check Power Steering (172)			

FUNCTION 64 Program Transponder

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press IFF NORM/STBY Key (2) (117) Press IFF Key (2) (115) Press MODE 1 Key (2) (148) Press MODE 3A Key (2) (150) Press MODE C Key (2) (151) Press MODE 2 Key (2) (149) Press PTN Key (2) (169)			

FUNCTION 65 Respond to Threat [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Detect Threat (209)			Perform Hard Turns [NVG] (101) Change Altitude Sharply [NVG] (019) Change Airspeed Quickly [NVG] (014)	Detect Threat (209) Press ASE Key (021) Check MASTER Key (137) Press STR Key (1) (198) Press FLY OVER STR Key (1) (084) Enter Threat Information (210) Press RTN Key (1) (189)			

FUNCTION 56 Set up Communication Radios

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press COMM Key (2) (042) Press VHF 2 Key (2) (226) Press SQL Key (2) (196) Press VHF 1 Key (2) (225) Press SQL Key (2) (196) Press VHF LIST Key (2) (227) Press CHAN Key (2) (040) Press TUNE VHF 1 Key (2) (216) Press CHAN Key (2) (040) Press TUNE VHF 2 Key (2) (217) Press HF COMM Key (2) (109) Press HF LIST Key (2) (110) Press CHAN Key (2) (040) Press TUNE HF Key (2) (214) Continued...			

FUNCTION 66 Set up Communication Radios [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press UHF COMM Key (2) (218) Press UHF LIST Key (2) (219) Press CHAN Key (2) (040) Press TUNE UHF 1 Key (2) (215) Press SEC Key (2) (190) Press RTN Key (2) (189)			

FUNCTION 67 Unload Aircraft (Internal)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Monitor Unloading (220) Verify Unloading Complete (221) Press INST Key (2) (121) Enter CARGO WGT (2) (238) Enter OAT (2) (239) Press HSD Key (2) (112) Transmit Communication (Crewchief) (048) Receive Communication (Crewchief) (047)			

FUNCTION 68 Update Navigation (FLIR)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press FLIR Key (2) (082) Press PT (2) Key (175) Press UPD Key (2) (222) Press SLEW Key (2) (194) Set FOV Scale Switch (2) (089) Identify Landmark (FLIR) (122) Slew Update Cursor (223) Pull Mode Trigger (152) Release Mode Trigger (153) Press SNSR UPD Key (2) (195) Press ACC Key (2) (001) Press RTN Key (2) (189) Press MAP Key (2) (136)			

FUNCTION 69 ***Update Navigation (LZ)***

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
				Press UPD Key (2) (222) Press FLY OVER UPD Key (2) (085) Press ACC Key (001) Press RTN Key (2) (189)			

FUNCTION 70 Update Navigation (Mission Change)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press STR Key (2) (198) Press LOOK AHD Key (2) (132) Press RNG Key (2) (186) Scan Map Display (2) (133) Identify Landmark (Map) (123) Press SLEW Key (2) (194) Slew Update Cursor (223) Pull Mode Trigger (152) Release Mode Trigger (153) Enter New NRP Number (157) Enter NRP Data (161) Press STR NRP Key (199) Scan Map Display (2) (133) Identify Landmark (Map) (123) Slew Update Cursor (223) Continued...			

FUNCTION 70 Update Navigation (Mission Change) [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Pull Mode Trigger (152) Release Mode Trigger (153) Enter New NRP Number (157) Enter NRP Data (161) Press STR NRP Key (2) (199) Scan Map Display (2) (133) Identify Landmark (Map) (123) Slew Update Cursor (223) Pull Mode Trigger (152) Release Mode Trigger (153) Enter New NRP Number (157) Enter NRP Data (161) Press STR NRP Key (2) (199) Press SYST Key (2) (202) Press FPLN Key (2) (090) Continued...			

FUNCTION 70 Update Navigation (Mission Change) [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press LEG ADD Key (2) (124) Press LEGS Key (2) (127) Press DISPLAY LEG Key (2) (063) Enter Leg Data (125) Press LEG MOD Key (2) (126) Press FUEL/POWER Key (2) (095) Check Fuel Summary (096) Press HSD Key (2) (112)			

FUNCTION 71 Update Navigation (NRP)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Press TA Key (1) (203) Press UPD Key (1) (222) Press SLEW Key (1) (194) Verify NRP (160) Press SNSR UPD Key (1) (195) Press ACC Key (1) (001) Press RTN Key (1) (189) Press GM/TF Key (1) (096)			

FUNCTION 72 Check FLIR Operation

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Pull Slew Trigger (235) Manipulate Thumb Tracker (236) Press FPV Key (003) Press FOV Key (067) Press POL Key (169)							

FUNCTION 73 Check RADAR Operation

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Press RADAR Key (177) Check RADAR Image (176)							

A P P E N D I X I

MH-47E FUNCTION DECISION RULES WORKSHEETS

Once the Function Summary Worksheets (see Appendix H) were completed for each function, decision rules were written to describe the exact manner in which the tasks are combined to form the function. Decision rules for discrete fixed tasks and continuous fixed tasks simply state the start time and duration of the task on the function timeline. In addition to duration, the decision rules for discrete random and continuous random tasks state the probability and/or frequency of the random task's occurrence within the function. This appendix contains the 73 function decision rules.

FUNCTION 01 Adjust Approach Parameters (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select Tasks 013, 025, 064, 107, or 181 at 1-second intervals for the duration of the function. Standby .5 second				

FUNCTION 02 Adjust Climb Parameters [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select Tasks 013, 025, 107, or 180 at 1-second intervals for the duration of the function. Standby .5 second				

FUNCTION 03 Adjust Flight Parameters (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select Tasks 013, 017, 025, 106, or 213 at 1-second intervals for the duration required for the segment. Standby .5 second				

FUNCTION 04 Adjust Level of Flight Parameters (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
			Randomly select Tasks 013, 018, 025, or107 at 1-second intervals for the duration of the function. Standby .5 second				

FUNCTION 05 Adjust Map Display (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
							Randomly select one of the following tasks: Task 039 for .5 second Task 060 for .5 second Task 134 for .5 second Task 185 for .5 second Task 187 for .5 second Standby .5 second

FUNCTION 06 Adjust Map Display (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
			Randomly select one of the following tasks: Task 039 for .5 second Task 060 for .5 second Task 134 for .5 second Task 185 for .5 second Task 187 for .5 second Standby .5 second				

FUNCTION 07 Align Navigation Systems

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 156 for .5 second Task 155 for .5 second Task 038 for 20 seconds Task 159 for .5 second Task 119 for .5 second Task 120 for .5 second Task 100 for .5 second Task 009 for .5 second Task 008 for .5 second Task 119 for .5 second Task 156 for .5 second Task 099 for .5 second Task 112 for .5 second Standby .5 second			

FUNCTION 08 Boresight FLIR

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 060 for .5 second Task 063 for .5 second Task 158 for .5 second Task 032 for .5 second Task 035 for .5 second Task 068 for .5 second Task 158 for .5 second Task 005 for .5 second Task 189 for .5 second Standby .5 second			

FUNCTION 09 Check Approach Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select one of the following tasks: Task 012 for .5 second Task 105 for .5 second Task 179 for .5 second Standby .5 second				

FUNCTION 10 Check Avionics System

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 230 for .5 second Task 070 for .5 second Task 165 for .5 second Task 197 for 120 seconds Task 069 for 3 seconds Task 189 for .5 second Standby .5 second			

FUNCTION 11 Check Climb Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select one of the following tasks: Task 012 for .5 second Task 105 for .5 second Task 179 for .5 second Standby .5 second				

FUNCTION 12 Check Flight Instruments (Auto)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select one of the following tasks: Task 015 for .5 second Task 010 for .5 second Task 103 for .5 second Task 023 for .5 second Standby .5 second				

FUNCTION 13 Check Flight Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select one of the following tasks: Task 016 for .5 second Task 012 for .5 second Task 234 for .5 second Task 105 for .5 second Task 212 for .5 second Standby .5 second				

FUNCTION 14 Check Level of Flight Parameters

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select one of the following tasks: Task 234 for .5 second Task 016 for .5 second Task 012 for .5 second Task 105 for .5 second Standby .5 second				

FUNCTION 15 Check Map Display System (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (includs a .5-second delay between tasks): Task 134 for .5 second Task 187 for .5 second Task 185 for .5 second Task 060 for .5 second Task 039 for .5 second Standby .5 second			

FUNCTION 13 Check Map Display System (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 134 for .5 second Task 187 for .5 second Task 185 for .5 second Task 060 for .5 second Task 039 for .5 second Standby .5 second							

FUNCTION 17 Configure Flight Director

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 090 for .5 second Task 091 for .5 second Task 092 for .5 second Task 229 for .5 second Standby .5 second							

FUNCTION 18 Configure Navigation Radios

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 072 for .5 second Task 158 for .5 second Task 004 for .5 second Task 228 for .5 second Task 112 for .5 second Task 154 for .5 second Task 207 for .5 second Task 189 for .5 second Standby .5 second			

FUNCTION 19 Depart Rendezvous (HVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 183 for 10 seconds Task 145 for 3 seconds Task 002 for 2 seconds Task 229 for .5 second Task 060 for .5 second Task 063 for .5 second Task 189 for .5 second Task 115 for .5 second Task 030 for .5 second Task 118 for .5 second Task 202 for .5 second Task 095 for .5 second Task 096 for 3 seconds Task 229 for .5 second Standby .5 second			

FUNCTION 20 Engage Level Flight (Auto)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 072 for .5 second Task 011 for 4 seconds Task 028 for 4 seconds Task 104 for 4 seconds Task 020 for .5 second Task 027 for .5 second Task 102 for .5 second Task 189 for .5 second Standby .5 second			

FUNCTION 21 Establish Approach (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program in sequence, the following tasks: Task 234 for 1 second Task 171 for 2.5 seconds Task 234 for 1 second Task 072 for 1 second Task 113 for 1 second Task 189 for 1 second Task 025 for 3 seconds							

FUNCTION 22 Establish Climb [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program in sequence, the following tasks: Task 234 for 1 second Task 171 for 2.5 seconds Task 234 for 1 second							

FUNCTION 23 Establish Hover [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program in sequence, the following tasks: Task 171 for 2.5 seconds Task 234 for 1 second							

FUNCTION 24 Establish Level of Flight (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program in sequence, the following tasks: Task 024 for 1.5 seconds Task 234 for 1 second Task 171 for 2 seconds							

FUNCTION 25 Land Aircraft (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
After 38 seconds, program Task 211 for 5 seconds.			Randomly alternate (.20 probability) Tasks 025, 054, 107, 154, and 171 at 1-second intervals. Continue for 38 seconds.		7 times during the first 38 seconds, randomly select Task 163. Task 163 lasts 3 seconds.		

FUNCTION 26 Load Aircraft (Internal)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 131 for 60 seconds Task 130 for 30 seconds Task 121 for .5 second Task 238 for 10 seconds Task 239 for 5 seconds Task 112 for .5 second Task 040 for 3 seconds Task 047 for 3 seconds Standby .5 second			

FUNCTION 27 Lead Mission Plan

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 065 for 4 seconds Task 031 for 30 seconds Task 202 for .5 second Task 147 for .5 second Task 147 for .5 second Task 127 for .5 second Task 146 for 10 seconds Task 112 for .5 second Standby .5 second			

FUNCTION 28 Mission Change

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program in sequence, the following tasks (include a .5-second delay between tasks): Task 143 for 2 seconds Task 202 for .5 second Task 022 for .5 second Task 062 for .5 second Task 140 for 12 seconds Task 189 for .5 second Standby .5 second			

FUNCTION 29 Monitor Audio

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Program Task 026 for the duration of the segment in which Function 29 occurs.				Program Task 026 for the duration of the segment in which Function 29 occurs.	

FUNCTION 30 Monitor External Visual Field [NVG] (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
						Program Task 071 for the length of Function 30.	

FUNCTION 31 Monitor External Visual Field (NVG) (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Program Task 071 for the length of Function 31.					

FUNCTION 32 Monitor Flight Controls

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Program Task 073 for the length of Function 32.					

FUNCTION 33 Monitor FLIR Image (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
						Program Task 081 for the length of Function 33.	

FUNCTION 34 Monitor FLIR Image (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Program Task 061 for the length of Function 34.					

FUNCTION 35 Monitor RADAR Image (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
						Program Task 176 for the length of Function 35.	

FUNCTION 36 Monitor RADAR Image (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
		Program Task 176 for the length of Function 36.					

FUNCTION 37 Monitor Threat (Copilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program Task 061 for 3 seconds. Standby .5 second			

FUNCTION 38 Monitor Threat (Pilot)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program Task 061 for 3.5 seconds.							

FUNCTION 39 Perform Aerial Refueling [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Program Task 173 and Task 174 to occur with copilot Task 173 and Task 174. Task 173 lasts 4 seconds. Task 174 lasts 2 seconds.				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 145 for 3 seconds Task 141 for 5 seconds Task 003 for 2 seconds Task 173 for 4 seconds Task 145 for 3 seconds Task 002 for 2 seconds Task 121 for .5 second Start Task 145 229 seconds after Function 39 begins. Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 145 for 3 seconds Task 002 for 2 seconds Task 184 for 4 seconds Task 174 for 2 seconds Standby .5 second			Between 23 and 26 seconds, randomly select Task 071 or 094 for 3 seconds.

FUNCTION 40 Perform After Landing Check

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 074 for 5 seconds		Program Task 073 for the length of the function.		Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 041 for .5 second Task 192 for .5 second Task 097 for .5 second Task 007 for 2 seconds Task 201 for 1 second Task 178 for 4 seconds Task 057 for 1 second Standby .5 second			

FUNCTION 41 Perform Before Hover Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks: Task 186 for 1 second Task 072 for 2 seconds Task 113 for 1 second Task 189 for .5 second Task 111 for 180 seconds Standby .5 second				Program, in sequence, the following tasks: Task 201 for 2 seconds Task 007 for 2 seconds			

FUNCTION 42 Perform Before Landing Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 041 for .5 second Task 192 for .5 second Task 097 for .5 second Task 188 for .5 second Task 231 for 1 second Task 176 for 1 second Task 166 for 1 second Task 072 for .5 second Task 020 for .5 second Task 027 for .5 second Task 102 for .5 second Task 189 for .5 second Task 058 for 1 second Task 200 for 1 second Task 021 for .5 second Task 138 for .5 second Task 054 for 3 seconds Task 047 for 3 seconds Continued...			

FUNCTION 42 Perform Before Landing Check (Continued)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Task 229 for .5 second Standby .5 second			

FUNCTION 43 Perform Before Landing Check (LZ)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 041 for .5 second Task 192 for .5 second Task 097 for .5 second Task 188 for .5 second Task 231 for 1 second Task 178 for 1 second Task 166 for 1 second Task 072 for .5 second Task 027 for .5 second Task 102 for .5 second Task 189 for .5 second Task 058 for 1 second Task 200 for 1 second Task 021 for .5 second Task 138 for .5 second Task 129 for 3 seconds Task 047 for 3 seconds Continued...			

FUNCTION 43 Perform Before Landing Check (LZ) [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Task 229 for .5 second Standby .5 second			

FUNCTION 44 Perform Before Takeoff Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks: Task 062 for 1 second Task 093 for 1 second Task 067 for 1 second Task 169 for 1 second				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 192 for .5 second Task 097 for .5 second Task 230 for .5 second Task 037 for 1 second Task 189 for .5 second Task 166 for 1 second Task 007 for 1 second Task 058 for 1 second Task 200 for 1 second Task 178 for 4 seconds Task 021 for .5 second Task 138 for .5 second Task 229 for .5 second Task 182 for .5 second Task 208 for .5 second Task 098 for .5 second Task 059 for .5 second Task 036 for .5 second Continued...			

FUNCTION 44 Perform Before Takeoff Check (Continued)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program Task 047 when Task 036 ends. Task 047 lasts 3 seconds.				Task 047 for 3 seconds Task 117 for .5 second Standby .5 second			

FUNCTION 45 Perform Before Takeoff Check (LZ)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program Task 047 for 3 seconds when Task 047 occurs for the copilot.				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 041 for .5 second Task 192 for .5 second Task 097 for .5 second Task 121 for .5 second Task 096 for 3 seconds Task 066 for 5 seconds Task 230 for .5 second Task 037 for 1 second Task 189 for .5 second Task 166 for 1 second Task 007 for 1 second Task 058 for 1 second Task 200 for 1 second Task 178 for 4 seconds Task 021 for .5 second Task 138 for .5 second Task 047 for 3 seconds Task 112 for .5 second *Continued...*			

FUNCTION 45 Perform Before Takeoff Check (LZ) [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Task 229 for .5 second Standby .5 second			

FUNCTION 46 Perform Before Taxi Check

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 121 for 1 second Task 096 for 3.5 seconds Task 066 for 5.5 seconds Task 229 for 1 second Task 224 for 5.5 seconds Task 059 for 1 second Task 112 for 1 second Task 182 for 1 second Task 203 for 1 second Task 059 for 1 second Task 054 for 3 seconds Task 047 for 3 seconds Task 167 for 1 second Task 168 for 1 second				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 041 for .5 second Task 192 for .5 second Task 097 for .5 second Task 090 for .5 second Task 092 for .5 second Task 112 for .5 second Task 072 for .5 second Task 232 for .5 second Task 055 for .5 second Task 189 for .5 second Task 136 for .5 second Task 056 for .5 second Task 059 for .5 second Task 201 for 2 seconds Task 007 for 1 second Task 057 for 1 second Task 237 for 10 seconds Standby .5 second			

FUNCTION 47 Perform Cockpit Communication (Copilot) (Coordination)

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Program, in sequence, the following tasks *(include a .5-second* delay between tasks): Task 049 for 3 seconds Task 050 for 3 seconds Standby .5 second				Program, in sequence, the following tasks *(include a .5-second* delay between tasks): Task 044 for 3 seconds Task 043 for 3 seconds Standby .5 second			

FUNCTION 48 Perform Cockpit Communication (Copilot) (Normal)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 051 for 2 seconds Task 052 for 2 seconds Standby .5 second				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 046 for 2 seconds Task 045 for 2 seconds Standby .5 second			

FUNCTION 49 Perform Cockpit Communication (Pilot) (Coordination)

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 050 for 3 seconds Task 049 for 3 seconds Standby .5 second				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 043 for 3 seconds Task 044 for 3 seconds Standby .5 second			

FUNCTION 50 Perform Cockpit Communication (Pilot) (Normal)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 052 for 2 seconds Task 051 for 2 seconds Standby .5 second				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 045 for 2 seconds Task 046 for 2 seconds Standby .5 second			

FUNCTION 51 Perform External Communications [ATHS]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 022 for .5 second Task 193 for .5 second Task 139 for 15 seconds Task 068 for .5 second Task 233 for .5 second Standby .5 second			

FUNCTION 52 Perform External Communication (Frequency Change)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 042 for .5 second Task 227 for .5 second Task 191 for 2 seconds Task 216 for .5 second Task 189 for .5 second Task 145 for 3 seconds Task 002 for 2 seconds Task 145 for 5 seconds Task 002 for 2 seconds Standby .5 second			

FUNCTION 53 Perform External Communication (Receive Coordination)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 144 for 2 seconds Task 003 for 2 seconds Task 141 for 5 seconds Task 003 for 2 seconds Standby .5 second			

FUNCTION 54 Perform External Communication (Transmit Code)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 142 for 3 seconds Task 002 for 2 seconds Task 142 for 5 seconds Task 002 for 2 seconds Standby .5 second			

FUNCTION 55 Perform Hover Check (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program Task 025 for 10 seconds at the beginning of the function and again when Task 112 occurs. Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 121 for 1 second Task 075 for 10.5 seconds Task 067 for 5.5 seconds Task 079 for 10.5 seconds Task 006 for 12 seconds Task 170 for 5.5 seconds Task 112 for .5 second Standby .5 second				Program Task 007 for 1 second.			

FUNCTION 56 Perform Hover [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select (.20 probability) Tasks 018, 025, 064, 107, or 164 at 1-second intervals. Continue for the duration of the segment in which Function 56 occurs.		29 times during Function 56, randomly select Task 163. Task 163 lasts 3 seconds.		

FUNCTION 57 Perform IFF Procedures

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 115 for .5 second Task 116 for .5 second Task 114 for 5 seconds Task 117 for .5 second Task 029 for .5 second Task 189 for .5 second Standby .5 second			

FUNCTION 58 Perform Navigation [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
							Randomly select (.25 probability) Tasks 053, 076, 078, 103, or 135 for the duration of the segment in which Function 58 occurs. *Select:* Task 053 for 5 seconds Task 076 for 10 seconds Task 078 for 10 seconds Task 103 for .5 second Task 135 for 8 seconds Interrupt any ongoing task when the function ends. Standby .5 second

FUNCTION 59 Perform Navigation (RADAR)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 177 for .5 second Task 077 for 15 seconds Task 082 for .5 second Standby .5 second			

FUNCTION 60 Perform Rendezvous Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 154 for .5 second Task 207 for .5 second Task 206 for .5 second Task 204 for 3 seconds Task 189 for .5 second Standby .5 second			

FUNCTION 61 Perform Rendezvous [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Program Task 205 to occur when Task 205 occurs for the copilot.				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 202 for .5 second Task 041 for .5 second Task 192 for .5 second Task 097 for .5 second Task 128 for 6 seconds Task 183 for 10 seconds Task 229 for .5 second Task 080 for .5 second Task 083 for .5 second Task 189 for .5 second Task 205 for 40 seconds Standby .5 second			

FUNCTION 62 Perform Taxi (NVG)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
			Randomly select (.33 probability) Tasks 086, 108, or 164 at .5-second intervals. Continue for 180 seconds.		15 times during Function 62, randomly select Task 163. Task 163 lasts 3 seconds.		

FUNCTION 63 Perform Taxiing Check

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program Task 034 for 5 seconds				Program, in sequence, the following tasks when Task 034 ends (include a .5-second delay between tasks): Task 033 for 5 seconds Task 172 for 1 second Standby .5 second			

FUNCTION 64 Program Transponder

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 117 for .5 second Task 115 for .5 second Task 148 for .5 second Task 150 for .5 second Task 151 for .5 second Task 149 for .5 second Task 189 for .5 second Standby .5 second			

FUNCTION 65 Respond to Threat [NVG]

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
Program Task 209 for 3 seconds.			.5 second after Task 209 ends, randomly select (.33 probability) Tasks 014, 019, or 101 at 4-second intervals. Continue for 60 seconds.	Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 209 for 3 seconds Task 021 for .5 second Task 137 for 1 second Task 196 for .5 second Task 084 for .5 second Task 210 for 30 seconds Task 189 for .5 second			

FUNCTION 66 Set up Communication Radios

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 042 for .5 second Task 226 for .5 second Task 196 for .5 second Task 225 for .5 second Task 196 for .5 second Task 227 for .5 second Task 040 for .5 second Task 216 for .5 second Task 040 for .5 second Task 217 for .5 second Task 109 for .5 second Task 110 for .5 second Task 040 for .5 second Task 214 for .5 second Task 218 for .5 second Task 219 for .5 second Task 040 for .5 second Task 215 for .5 second Task 190 for .5 second Continued...			

FUNCTION 66 Set up Communication Radios (Continued)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Task 189 for .5 second Standby .5 second			

FUNCTION 67 Unload Aircraft (Internal)

PILOT				COPILOT			
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**CONTINUOUS (RANDOM)**
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 220 for 10 seconds Task 221 for 3 seconds Task 121 for .5 second Task 238 for 10 seconds Task 239 for 5 seconds Task 112 for .5 second Task 048 for 3 seconds Task 047 for 3 seconds Standby .5 second			

FUNCTION 68 Update Navigation (FLIR)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 082 for .5 second Task 175 for .5 second Task 222 for .5 second Task 194 for .5 second Task 089 for 1 second Task 122 for 5 seconds Task 223 for 4 seconds Task 152 for .5 second Task 153 for .5 second Task 195 for .5 second Task 001 for .5 second Task 189 for .5 second Task 136 for .5 second Standby .5 second			

FUNCTION 69 Update Navigation (LZ)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 222 for .5 second Task 085 for .5 second Task 001 for .5 second Task 189 for .5 second Standby .5 second			

FUNCTION 70 Update Navigation (Mission Change)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 198 for .5 second Task 132 for .5 second Task 186 for .5 second Task 133 for 10 seconds Task 123 for 5 seconds Task 194 for .5 second Task 223 for 4 seconds Task 152 for .5 second Task 153 for .5 second Task 157 for 4 seconds. Task 161 for 7 seconds Task 199 for .5 second Task 133 for 10 seconds Task 123 for 5 seconds Task 223 for 4 seconds Task 152 for .5 second Task 153 for .5 second Task 157 for 4 seconds Continued...			

FUNCTION 70 Update Navigation (Mission Change) [Continued]

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Task 161 for 7 seconds			
				Task 199 for .5 second			
				Task 133 for 10 seconds			
				Task 123 for 5 seconds			
				Task 223 for 4 seconds			
				Task 152 for .5 second			
				Task 153 for .5 second			
				Task 157 for 4 seconds			
				Task 161 for 7 seconds			
				Task 199 for .5 second			
				Task 202 for .5 second			
				Task 090 for .5 second			
				Task 124 for .5 second			
				Task 127 for .5 second			
				Task 063 for .5 second			
				Task 125 for 7 seconds			
				Task 126 for .5 second			
				Task 095 for .5 second			
				Task 096 for 6 seconds			
				Task 112 for .5 second			
				Standby .5 second			

FUNCTION 71 Update Navigation (NRP)

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
				Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 203 for .5 second Task 222 for .5 second Task 194 for .5 second Task 160 for 5 seconds Task 195 for .5 second Task 001 for .5 second Task 189 for .5 second Task 098 for .5 second Standby .5 second			

FUNCTION 72 Check FLIR Operation

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 235 for .5 second Task 236 for 4 seconds Task 093 for .5 second Task 087 for .5 second Task 169 for .5 second Standby .5 second							

FUNCTION 73 Check RADAR Operation

PILOT				COPILOT			
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	CONTINUOUS (RANDOM)
Program, in sequence, the following tasks (include a .5-second delay between tasks): Task 177 for .5 second Task 176 for 10 seconds Standby .5 second							

A P P E N D I X J

MH-47E SEGMENT SUMMARY WORKSHEETS

This appendix contains the Segment Summary Worksheets for each of the 15 segments. The summary worksheets identify and list all of the functions performed by the pilot and copilot during each mission segment. The summary worksheets also identify the type of functions (i.e., discrete fixed, discrete random, or continuous fixed) performed by the crewmember and the approximate temporal arrangement of the functions within the segments.

PHASE 1 Departure (Base) **SEGMENT 01 Configure Systems for Mission**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Configure Flight Director (17) Check Map Display System (Pilot) (16) Check FLIR Operation (72) Check RADAR Operation (73)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor Flight Controls (32) Monitor External Visual Field [NVG] (Pilot) (31)	Load Mission Plan (27) Check Avionics System (10) Align Navigation Systems (07) Check Map Display System (Copilot) (15) Configure Navigation Radios (18) Set Up Communication Radio (66) Program Transponder (64) Boresight FLIR (08)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	

PHASE 1 Departure (Base) **SEGMENT 02 Before Takeoff (Base/Internal Load)**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Perform Before Taxi Check (46)	Perform Cockpit Communication (Pilot) (Coordination) (49)	Monitor Flight Controls (32)	Perform Before Taxi Check (46)	Perform Cockpit Communication (Pilot) (Coordination) (49)	Monitor External Visual Field [NVG] (Copilot) (30)
Perform Taxiing Check (63)	Perform Cockpit Communication (Copilot) (Coordination) (47)	Monitor External Visual Field [NVG] (Pilot) (31)	Perform Taxi [NVG] (62)	Perform Cockpit Communication (Copilot) (Coordination) (47)	
Perform Taxi [NVG] (62)	Perform Cockpit Communication (Pilot) (Normal) (50)		Perform Taxiing Check (63)	Perform Cockpit Communication (Pilot) (Normal) (50)	
Perform Before Hover Check (41)	Perform Cockpit Communication (Copilot) (Normal) (48)		Perform Hover Check [NVG] (55)	Perform Cockpit Communication (Copilot) (Normal) (48)	
Perform Hover Check [NVG] (55)			Land Aircraft [NVG] (25)		
Land Aircraft [NVG] (25)			Load Aircraft (Internal) (26)		
Perform Before Takeoff Check (44)			Perform External Communication (Receive Coordination) (53)		
			Perform Before Takeoff Check (44)		

PHASE 1 Departure (Base) ***SEGMENT 03 Takeoff [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Establish Hover [NVG] (23) Adjust Hover [NVG] (55) Establish Climb [NVG] (22) Adjust Climb Parameters [NVG] (02) Establish Level of Flight [NVG] (24) Adjust Level of Flight Parameters [NVG] (04)	Perform Cockpit Communication (Pilot) (Coordination) (49) Check Climb Parameters (11) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Level of Flight Parameters (14) Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Pilot) (31)	Perform Hover [NVG] (56)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Copilot) (30)

*Denotes segment that occurs in more than one mission phase.

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 04 Enroute Flight**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	Check Flight Instruments (Auto) (12) Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48) Adjust Map Display (Pilot) (06) Monitor FLIR Image (Pilot) (34)	Monitor Flight Controls (32) Monitor External Visual Field [NVG] (Pilot) (31)	Engage Level Flight (Auto) (20)	Adjust Map Display (Copilot) (05) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform External Communication (Transmit Code) (54) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48) Monitor FLIR Image (Copilot) (33) Continued...	Perform Navigation [NVG] (58)

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 04 Enroute Flight [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
				Perform Navigation (RADAR) (59)	

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 05 Contour Flight (No Update) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Flight Parameters (13) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48) Adjust Map Display (Pilot) (06) Monitor FLIR Image (Pilot) (34)	Adjust Flight Parameters [NVG] (03) Monitor External Visual Field [NVG] (Pilot) (31)		Adjust Map Display (Copilot) (05) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform External Communication (Transmit Code) (54) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48) Monitor FLIR Image (Copilot) (33) Continued...	Perform Navigation [NVG] (58)

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 05 Contour Flight (No Update) [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
				Perform Navigation (RADAR) (59)	

PHASE 2 Enroute (Base - Rendezvous) ***SEGMENT 06 Contour Flight (Update) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Flight Parameters (13) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48) Monitor RADAR Image (Pilot) (36) Monitor FLIR Image (Pilot) (34)	Adjust Flight Parameters [NVG] (03) Monitor External Visual Field [NVG] (Pilot) (31)	Update Navigation (FLIR) (68) Update Navigation (NRP (71)	Adjust Map Display (Copilot) (05) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform External Communication (Transmit Code) (54) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Perform Navigation [NVG] (58)

*Denotes segment that occurs in more than one mission phase.

PHASE 2 Enroute (Base - Rendezvous) ***SEGMENT 07 Rendezvous [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Perform Rendezvous [NVG] (61) Perform Aerial Refueling [NVG] (39)	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Flight Parameters (13) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Adjust Level of Flight Parameters [NVG] (04) Monitor External Visual Field [NVG] (Pilot) (31)	Perform External Communication (Frequency Change) (52) Perform Rendezvous Check (60) Perform IFF Procedures (57) Perform Rendezvous [NVG] (61) Perform Aerial Refueling [NVG] (39) Depart Rendezvous [NVG] (19)	Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	

*Denotes segment that occurs in more than one mission phase.

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 08 NOE Flight [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Flight Parameters (13) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Adjust Flight Parameters [NVG] (03) Monitor External Visual Field [NVG] (Pilot) (31)		Adjust Map Display (Copilot) (05) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Perform Navigation [NVG] (58)

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 09 NOE Flight [ANVIS/ASE]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Respond to Threat [NVG] (65)	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Flight Parameters (13) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Adjust Flight Parameters [NVG] (03) Monitor External Visual Field [NVG] (Pilot) (31)	Respond to Threat [NVG] (65) Perform External Communication (ATHS) (51) Update Navigation (FLIR) (68)	Adjust Map Display (Copilot) (05) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48) Monitor RADAR Image (Copilot) (35)	Perform Navigation [NVG] (58)

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 10 Approach (LZ) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Establish Approach [NVG] (21)	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Approach Parameters (09) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Adjust Approach Parameters [NVG] (01) Monitor External Visual Field [NVG] (Pilot) (31)	Perform Before Landing Check (LZ) (43) Perform External Communication (Transmit Code) (54)	Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Copilot) (30)

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 11 Landing (LZ/Internal Load) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Establish Hover [NVG] (23) Perform Hover [NVG] (56) Land Aircraft [NVG] (25)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Pilot) (31) Monitor Flight Controls (32)	Perform Hover [NVG] (56) Land Aircraft [NVG] (25) Unload Aircraft (Internal) (67)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Copilot) (30)

PHASE 4 Enroute (LZ - Rendezvous) **SEGMENT 12 Before Takeoff (LZ)**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor Flight Controls (32) Monitor External Visual Field [NVG] (Pilot) (31)	Perform Before Takeoff Check (LZ) (45) Update Navigation (LZ) (69)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	

PHASE 4 Enroute (LZ - Rendezvous) ***SEGMENT 03 Takeoff [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Establish Hover [NVG] (23) Perform Hover [NVG] (56) Establish Climb [NVG] (22) Adjust Climb Parameters [NVG] (02) Establish Level of Flight [NVG] (24) Adjust Level of Flight Parameters [NVG] (04)	Perform Cockpit Communication (Pilot) (Coordination) (49) Check Climb Parameters (11) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Level of Flight Parameters (14) Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Pilot) (31)	Perform Hover [NVG] (56)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Copilot) (30)

*Denotes segment that occurs in more than one mission phase.

PHASE 4 Enroute (LZ - Rendezvous) **SEGMENT 13 NOE Flight (Route Change) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Flight Parameters [NVG] (13) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Adjust Flight Parameters [NVG] (03) Monitor External Visual Field [NVG] (Pilot) (31)	Mission Change (28) Update Navigation (Mission Change) (70)	Adjust Map Display (Copilot) (05) Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Perform Navigation [NVG] (58)

PHASE 4 Enroute (LZ - Rendezvous) ***SEGMENT 07 Rendezvous [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Perform Rendezvous [NVG] (61) Perform Aerial Refueling [NVG] (39)	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Flight Parameters (13) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Adjust Level of Flight Parameters [NVG] (03) Monitor External Visual Field [NVG] (Pilot) (31)	Perform External Communication (Frequency Change) (52) Perform Rendezvous Check (60) Perform IFF Procedures (57) Perform Rendezvous [NVG] (61) Perform Aerial Refueling [NVG] (39) Depart Rendezvous [NVG] (19)	Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	

*Denotes segment that occurs in more than one mission phase.

PHASE 5 Enroute (Rendezvous - Base) ***SEGMENT 06 Contour Flight (Update) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	Monitor Threat (Pilot) (33)	Adjust Flight Parameters [NVG] (03)	Update Navigation (FLIR) (68)	Adjust Map Display (Copilot) (05)	Perform Navigation [NVG] (58)
	Perform Cockpit Communication (Pilot) (Coordination) (49)	Monitor External Visual Field [NVG] (Pilot) (31)	Update Navigation (NRP (71)	Monitor Threat (Copilot) (37)	
	Perform Cockpit Communication (Copilot) (Coordination) (47)			Perform Cockpit Communication (Pilot) (Coordination) (49)	
	Check Flight Parameters (13)			Perform Cockpit Communication (Copilot) (Coordination) (47)	
	Perform Cockpit Communication (Pilot) (Normal) (50)			Perform External Communication (Transmit Code) (54)	
	Perform Cockpit Communication (Copilot) (Normal) (48)			Perform Cockpit Communication (Pilot) (Normal) (50)	
	Monitor RADAR Image (Pilot) (36)			Perform Cockpit Communication (Copilot) (Normal) (48)	
	Monitor FLIR Image (Pilot) (34)				

*Denotes segment that occurs in more than one mission phase.

PHASE 5 Enroute (Rendezvous - Base) **SEGMENT 14 Approach [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Establish Approach [NVG] (21)	Monitor Threat (Pilot) (38) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Check Approach Parameters (09) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Adjust Approach Parameters [NVG] (01) Monitor External Visual Field [NVG] (Pilot) (31)	Perform External Communication (Frequency Change) (52) Perform Before Landing Check (42) Perform External Communication (Transmit Code) (54)	Monitor Threat (Copilot) (37) Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48) Monitor FLIR Image (Copilot) (33)	Monitor External Visual Field [NVG] (Copilot) (30)

PHASE 5 Enroute (Rendezvous - Base) **SEGMENT 15 Landing [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Establish Hover [NVG] (23) erform Hover [NVG] (56) Land Aircraft [NVG] (25) Perform After Landing Check (40)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Pilot) (31)	Perform Hover [NVG] (56) Land Aircraft [NVG] (25) Perform External Communication (Receive Coordination) (53) Perform After Landing Check (40)	Perform Cockpit Communication (Pilot) (Coordination) (49) Perform Cockpit Communication (Copilot) (Coordination) (47) Perform Cockpit Communication (Pilot) (Normal) (50) Perform Cockpit Communication (Copilot) (Normal) (48)	Monitor External Visual Field [NVG] (Copilot) (30)

A P P E N D I X K

MH-47E SEGMENT DECISION RULES WORKSHEETS

Once the Segment Summary Worksheets (see Appendix J) were completed for each segment, decision rules were written to describe the exact manner in which the functions are combined to form the segment. The Segment Decision Rules Worksheets in this appendix contain the decision rules defining the sequence of the functions performed by each crewmember and the times on the mission segment timelines at which the functions begin and end. This appendix contains the 15 Segment Decision Rules Worksheets.

PHASE 1 Departure (Base) **SEGMENT 01 Configure Systems for Mission**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 72 when Function 10 ends. Function 72 lasts 8 seconds. Start Function 73 when Function 72 ends. Function 73 lasts 11 seconds. Start Function 17 when Function 07 ends. Function 17 lasts 5 seconds. Continued...	8 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each. 20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47 or 49.	Start Function 32 at the beginning of the segment. Function 32 lasts until the end of the segment. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 16 or 17 occurs.	Start Segment 01 with Function 27. Function 27 lasts 21 seconds. Interrupt Function 27 when Function 47 or 49 occurs. Start Function 10 when Function 27 ends. Function 10 lasts 127.5 seconds. Start Function 07 when Function 10 ends. Function 07 lasts 33.5 seconds. Interrupt Function 07 when Function 47 or 49 occurs. Start Function 15 when Function 07 ends. Function 15 lasts 5 seconds. Continued...	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

PHASE 1 Departure (Base) **SEGMENT 01 Configure Systems for Mission [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 16 when Function 17 ends. Function 16 lasts 5 seconds.			Start Function 18 when Function 15 ends. Function 18 lasts 8 seconds. Start Function 66 when Function 18 ends. Function 66 lasts 19 seconds. Start Function 64 when Function 66 ends. Function 64 lasts 7 seconds. Start Function 08 when Function 64 ends. Function 08 lasts 9 seconds.		

PHASE 1 Departure (Base) **SEGMENT 02 Before Takeoff (Base/Internal Load)**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 46 at the beginning of the segment. Function 46 lasts 20.5 seconds. Interrupt Function 46 when Function 47, 48, 49, or 50 occurs. Start Function 63 46 seconds after Segment 02 begins. Function 63 lasts 21.5 seconds. Start Function 62 when Function 63 ends. Function 62 lasts 60 seconds. Start Function 41 when Function 62 ends. Function 41 lasts 3.5 seconds. Start Function 141 when Function 41 ends. Function 141 lasts 180 seconds. Continued...	8 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 41, 53, 55, 63, or 141. 20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 53.	Start Function 32 at the beginning of the segment. Function 32 lasts until the end of the segment. Interrupt Function 32 when Function 25, 55, 62, or 141 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 41, 44, 55, or 141 occurs.	Start Function 46 at the beginning of the segment. Function 46 lasts 20.5 seconds. Start Function 63 46 seconds after Segment 02 begins. Function 63 lasts 21.5 seconds. Start Function 62 when Function 63 ends. Function 62 lasts 60 seconds. Start Function 55 when Function 141 ends. Function 55 lasts 45.5 seconds. Start Function 25 when Function 55 ends. Function 25 lasts 43 seconds. Continued...	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	Start Function 30 at the beginning of the segment. Function 30 lasts until the end of the segment. Interrupt Function 30 when Function 26, 41, 46, 64, 144, or 155 occurs.

PHASE 1 Departure (Base) **SEGMENT 02 Before Takeoff (Base/Internal Load) [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 55 when Function 141 ends. Function 55 lasts 45.5 seconds. Start Function 25 when Function 55 ends. Function 25 lasts 43 seconds. Start Function 44 when Function 26 ends. Function 44 lasts 25 seconds. Interrupt Function 44 when Function 47, 48, 49, or 50 occurs.			Start Function 26 when Function 25 ends. Function 26 lasts 98 seconds. Interrupt Function 26 when Function 47, 48, 49, or 50 occurs. Start Function 144 when Function 26 ends. Function 144 lasts 40.5 seconds. Interrupt Function 144 when Function 47, 48, 49, or 50 occurs. Start Function 53 when Function 144 ends. Function 53 lasts 13 seconds.		

PHASE 1 Departure (Base) ***SEGMENT 03 Takeoff [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Segment 03 with Function 23. Function 23 lasts 3.5 seconds. Start Function 56 when Function 23 ends. Function 56 lasts 120 seconds. Start Function 22 when Function 56 ends. Function 22 lasts 4.5 seconds. Start Function 02 when Function 22 ends. Function 02 lasts 30 seconds. Interrupt Function 02 when Function 11 occurs. Start Function 24 when Function 02 ends. Function 24 lasts 4.5 seconds. Continued...	5 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 22, 23, or 24. 3 times after Function 22 ends, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 11, 14, 24, 47, or 49. 3 times during Function 02, randomly select Function 11. Function 11 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued...	Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 11, 14, 22, 24, or 38 occurs.	3.5 seconds after Segment 03 begins, start Function 56. Function 56 lasts 120 seconds.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 3 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47 or 49. Continued...	Start Function 30 at the beginning of the segment. Function 30 lasts until the end of the segment. Interrupt Function 30 when Function 37 occurs.

*Denotes a segment that occurs in more than one mission phase.

PHASE 1 Departure (Base) ***SEGMENT 03 Takeoff [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 04 when Function 24 ends. Function 04 lasts 30 seconds. Interrupt Function 04 when Function 14 occurs.	2 times during Function 04, randomly select Function 14. Function 14 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. 20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47 or 49.			Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

*Denotes a segment that occurs in more than one mission phase.

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 04 Enroute Flight [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	15 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each. 3 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds & Δ cannot occur concurrently with Function 12, 47, or 49. 15 times during the segment, randomly select Function 12. Function 12 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued...	Start Segment 04 with Function 32. Function 32 lasts 600 seconds. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 06, 12, 34, or 38 occurs.	Start Segment 04 with Function 20. Function 20 lasts 18.5 seconds. Interrupt Function 20 when Function 47 or 49 occurs.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 6 times during the segment, randomly select Function 05. Function 05 lasts 1 second. 4 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, 54, or 58. Continued...	Start Function 58 at the beginning of the Segment 04. Function 58 lasts until the end of the segment. Interrupt Function 58 when Function 05, 20, 33, 37, 47, 49, 54, or 59 occurs.

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 04 Enroute Flight [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	20 times during the segment, randomly select (.50) Function 48 or 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 54. 6 times during the segment, randomly select Function 06. Function 06 lasts 1 second and cannot occur concurrently with Function 12, 34, 38, 47, or 49. 6 times during the segment, randomly select Function 34. Function 34 lasts 10 seconds and cannot occur concurrently with Function 06, 12, 38, 47, or 49.			2 times during the segment, randomly select Function 54. Function 54 lasts 14 seconds and cannot occur concurrently with Function 37, 47, 49, or 58. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50. 5 times during the segment, randomly select Function 59. Function 59 lasts 17.5 seconds and cannot occur concurrently with Function 05, 20, 33, 37, 47, or 49. Continued...	

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 04 Enroute Flight [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
				6 times during the segment, randomly select Function 33. Function 33 lasts 10 seconds and cannot occur concurrently with Function 05, 20, 37, 47, 49, or 59.	

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 05 Contour Flight (No Update) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	15 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13, 38, or 54. 5 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 13, 47, or 49. 10 times during the segment, randomly select Function 13. Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued	Start Segment 05 with Function 03. Function 03 lasts 600 seconds. Interrupt Function 03 when Function 13 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 06, 13, 34, or 38 occurs.		Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 5 times during the segment, randomly select Function 05. Function 05 lasts 1 second. 3 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, or 54. Continued...	Start Segment 05 with Function 58. Function 58 lasts until the end of the segment. Interrupt Function 58 when Function 05, 33, 37, 47, 49, 54, or 59 occurs.

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 05 Contour Flight (No Update) [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 54. 6 times during the segment, randomly select Function 06. Function 06 lasts 1 second and cannot occur concurrently with Function 13, 34, 38, 47, or 49. 6 times during the segment, randomly select Function 34. Function 34 lasts 10 seconds and cannot occur concurrently with Function 06, 13, 38, 47, or 49.			2 times during the segment, randomly select Function 54. Function 54 lasts 14 seconds and cannot occur concurrently with Function 37, 47, or 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50. 5 times during the segment, randomly select Function 59. Function 59 lasts 17.5 seconds and cannot occur concurrently with Function 05, 33, 37, 47, or 49. Continued...	

PHASE 2 Enroute (Base - Rendezvous) **SEGMENT 03 Contour Flight (No Update) [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)
				6 times during the segment, randomly select Function 33. Function 33 lasts 10 seconds and cannot occur concurrently with Function 05, 37, 47, 49, or 59.	

PHASE 2 Enroute (Base - Rendezvous) ***SEGMENT 06 Contour Flight (Update) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	15 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13, 38, or 57. 5 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 13, 47, or 49. 10 times during the segment, randomly select Function 13. Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued...	Start Segment 06 with Function 03. Function 03 lasts 600 seconds. Interrupt Function 03 when Function 13 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 13, 34, 36, or 38 occurs.	Start Function 68 120 seconds after Segment 06 begins. Function 68 lasts 21.5 seconds. Interrupt Function 68 when Function 37, 47, 49, or 54 occurs. Start Function 71 580 seconds after Segment 06 begins. Function 71 lasts 12.5 seconds. Interrupt Function 71 when Function 37, 47, 49, or 54 occurs.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 5 times during the segment, randomly select Function 05. Function 05 lasts 1 second. 3 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, or 54. Continued...	Start Segment 06 with Function 58. Function 58 lasts until the end of the segment. Interrupt Function 58 when Function 05, 37, 47, 49, 54, 68, or 71 occurs.

*Denotes a segment that occurs in more than one mission phase.

PHASE 2 Enroute (Base - Rendezvous) ***SEGMENT 06 Contour Flight (Update) [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 54. 6 times during the segment, randomly select Function 34. Function 34 lasts 10 seconds and cannot occur concurrently with Function 13, 36, 38, 47, or 49. 6 times during the segment, randomly select Function 36. Function 36 lasts 10 seconds and cannot occur concurrently with Function 13, 34, 38, 47, or 49.			2 times during the segment, randomly select Function 54. Function 54 lasts 14 seconds and cannot occur concurrently with Function 37, 47, or 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

*Denotes a segment that occurs in more than one mission phase.

PHASE 2 Enroute (Base - Rendezvous) ***SEGMENT 07 Rendezvous [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 61 when Function 57 ends. Function 61 lasts 62.5 seconds. Interrupt Function 61 when Function 33, 34, 37, 38, 47, or 49 occurs. Continued...	7 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13, 38, 52, or 60. 2 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 13, 47, 49 or 61. Continued...	Start Segment 07 with Function 04. Function 04 lasts until the end of the segment. Interrupt Function 04 when Function 13 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 13, 34, or 38 occurs.	Start Segment 07 with Function 52. Function 52 lasts 21.5 seconds. Start Function 60 when Function 52 ends. Function 60 lasts 7.5 seconds. Start Function 57 when Function 60 ends. Function 57 lasts 10.5 seconds. Interrupt Function 57 when Function 33, 37, 47, or 49 occurs. Start Function 61 when Function 57 ends. Function 61 lasts 62.5 seconds. Interrupt Function 61 when Function 33, 34, 37, 38, 47, or 49 occurs. Continued...	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 2 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, or 52. Continued...	

*Denotes a segment that occurs in more than one mission phase.

PHASE 2 Enroute (Base - Rendezvous) ***SEGMENT 07 Rendezvous [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 39 when Function 61 ends. Function 39 lasts 240 seconds. Interrupt Function 39 when Function 33, 34, 37, 38, 47, 48, 49, or 50 occurs.	10 times during the segment, randomly select Function 13. Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, 49 or 61. 20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 52.		Start Function 39 when Function 61 ends. Function 39 lasts 240 seconds. Interrupt Function 39 when Function 33, 34, 37, 38, 47, 48, 49, or 50 occurs. Start Function 19 when Function 39 ends. Function 19 lasts 27 seconds. Interrupt Function 19 when Function 33, 37, 47, or 49 occurs.	Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

*Denotes a segment that occurs in more than one mission phase.

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 08 NOE Flight [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	15 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13 or 38. 6 times during the segment, randomly select Function 38 Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 13, 47, or 49. 10 times during the segment, randomly select Function 13 Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued...	Start Segment 08 with Function 03. Function 03 lasts 600 seconds. Interrupt Function 03 when Function 13 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 13 or 38 occurs.		Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 5 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47 or 49. 8 times during the segment, randomly select Function 05. Function 05 lasts 1 second. Continued...	Start Segment 08 with Function 58. Function 58 lasts until the end of the segment. Interrupt Function 58 when Function 05, 37, 47, 49, or 59 occurs.

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 08 NOE Flight [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47 or 49.			Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 09 NOE Flight [ANVIS/ASE]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
350 seconds after Segment 09 begins, start Function 165. Function 165 lasts 3 seconds. Start Function 65 when Function 165 ends. Function 65 lasts 60 seconds. Interrupt Function 65 when Function 37, 47, or 49 occurs.	15 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13, 38, or 51, 65, or 68. 5 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 37, 39, or 65. 10 times during the segment, randomly select Function 13. Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, 49, or 65. Continued...	Start Segment 09 with Function 03. Function 03 lasts 600 seconds. Interrupt Function 03 when Function 13 or 65 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 13, 38, or 165 occurs.	Start Function 165 when Function 165 occurs for the pilot. Interrupt Function 58 when Function 165 occurs. Function 165 lasts 3 seconds. Start Function 65 when Function 165 ends. Function 65 lasts 60 seconds. Interrupt Function 65 when Function 37, 47, or 49 occurs. Continued...	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 8 times during the segment, randomly select Function 05. Function 05 lasts 1 second and cannot occur concurrently with Function 68. 3 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, or 51. Continued...	Start Segment 09 with Function 58. Function 58 lasts until the end of the segment. Interrupt Function 58 when Function 05, 35, 37, 47, 49, 51, 65, 68, or 165 occurs.

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 09 NOE Flight [ANVIS/ASE] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 51.		Start Function 51 when Function 65 ends. Function 51 lasts 20.5 seconds. Start Function 68 at 495.5 seconds. Function 68 lasts 21.5 seconds.	5 times during the segment, randomly select Function 35. Function 35 lasts 10 seconds and cannot occur concurrently with Function 05, 37, 47, 49, 51, 65, or 68. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 10 Approach (LZ) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Segment 10 with Function 21. Function 21 lasts 7.5 seconds.	6 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 09, 21, or 38. 2 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 09, 21, 47, or 49. 8 times during the segment, randomly select Function 09. Function 09 lasts 1 second and cannot occur concurrently with Function 21, 38, 47, or 49. Continued...	Start Function 01 at the beginning of the segment. Function 01 lasts 340 seconds. Interrupt Function 01 when Function 09 or 21 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 09, 21, or 38 occurs.	Start Segment 10 with Function 43. Function 43 lasts 27.5 seconds. Interrupt Function 43 when Function 37, 47, 48, 49, or 50 occurs. Start Function 54 at 200 seconds. Function 54 lasts 14 seconds.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 4 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 48, 49, 50, or 54. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	Start Function 30 at the beginning of the segment. Function 30 lasts until the end of the segment. Interrupt Function 30 when Function 37 or 43 occurs.

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 10 Approach (LZ) [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)
	15 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 37, 47, 49, or 54.				

PHASE 3 Enroute (Rendezvous - LZ) **SEGMENT 11 Landing (LZ/Internal Load) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Segment 11 with Function 23. Function 23 lasts 3.5 seconds. Start Function 56 when Function 23 ends. Function 56 lasts 220 seconds. Start Function 25 when Function 56 ends. Function 25 lasts 43 seconds.	3 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each. 11 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 67.	Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 23 occurs. Start Function 32 when Function 25 ends. Function 32 lasts until the end of the segment.	Start Function 56 when Function 23 ends. Function 56 lasts 220 seconds. Start Function 25 when Function 56 ends. Function 25 lasts 43 seconds. Start Function 67 when Function 25 ends. Function 67 lasts 21 seconds. Interrupt Function 67 when Function 47, 48, 49, or 50 occurs.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	Start Function 30 at the beginning of the segment. Function 30 lasts until the end of the segment. Interrupt Function 30 when Function 67 occurs.

PHASE 4 Enroute (LZ - Rendezvous) **SEGMENT 12 Before Takeoff (LZ) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 145 when Function 45 ends. Function 145 lasts 3 seconds.	2 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each. 5 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47 or 49.	Start Function 32 at the beginning of the segment. Function 32 lasts until the end of the segment. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment.	Start Segment 12 with Function 69. Function 69 lasts 4 seconds. Interrupt Function 69 when Function 47 or 49 occurs. Start Function 45 when Function 69 ends. Function 45 lasts 32.5 seconds. Interrupt Function 45 when Function 47 or 49 occurs. Start Function 145 when Function 45 ends. Function 145 lasts 3 seconds.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

PHASE 4 Enroute (LZ - Rendezvous) ***SEGMENT 03 Takeoff [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Segment 03 with Function 23. Function 23 lasts 3.5 seconds. Start Function 56 when Function 23 ends. Function 56 lasts 120 seconds. Start Function 22 when Function 56 ends. Function 22 lasts 4.5 seconds. Start Function 02 when Function 22 ends. Function 02 lasts 30 seconds. Interrupt Function 02 when Function 11 occurs. Start Function 24 when Function 02 ends. Function 24 lasts 4.5 seconds. Continued...	5 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 22, 23, or 24. 3 times after Function 22 ends, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 11, 14, 24, 47, or 49. 3 times during Function 02, randomly select Function 11. Function 11 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued...	Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 11, 14, 22, 24, or 38 occurs.	3.5 seconds after Segment 03 begins, start Function 56. Function 56 lasts 120 seconds.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 3 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47 or 49. Continued...	Start Function 30 at the beginning of the segment. Function 30 lasts until the end of the segment. Interrupt Function 30 when Function 37 occurs.

*Denotes a segment that occurs in more than one mission phase.

PHASE 4 Enroute (LZ - Rendezvous) ***SEGMENT 03 Takeoff [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 04 when Function 24 ends. Function 04 lasts 30 seconds. Interrupt Function 04 when Function 14 occurs.	2 times during Function 04, randomly select Function 14. Function 14 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. 20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47 or 49.			Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

*Denotes a segment that occurs in more than one mission phase.

PHASE 4 Enroute (LZ - Rendezvous) **SEGMENT 13 NOE Flight (Route Change) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	5 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13, 28, 38, or 70. 5 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 13, 47, or 49. 10 times during the segment, randomly select Function 13. Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued...	Start Segment 13 with Function 03. Function 03 lasts 600 seconds. Interrupt Function 03 when Function 13 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 13 or 38 occurs.	450 seconds after Segment 13 begins, start Function 28. Function 28 lasts 18 seconds. Start Function 70 when Function 28 ends. Function 70 lasts 132.5 seconds. Interrupt Function 70 when Function 05, 47, or 49 occurs.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 8 times during the segment, randomly select Function 05. Function 05 lasts 1 second. 3 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Functions 28, 47, 49, 58, or 70. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	Start Segment 13 with Function 58. Function 58 lasts until the end of the segment. Interrupt Function 58 when Function 05, 28, 37, 47, 49, or 70 occurs.

PHASE 4 Enroute (LZ - Rendezvous) **SEGMENT 13 NOE Flight (Route Change) [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)	DISCRETE (FIXED)	DISCRETE (RANDOM)	CONTINUOUS (FIXED)
	20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47 or 49.				

PHASE 4 Enroute (LZ - Rendezvous) ***SEGMENT 07 Rendezvous [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 61 when Function 57 ends. Function 61 lasts 62.5 seconds. Interrupt Function 61 when Function 33, 34, 37, 38, 47, or 49 occurs. Continued...	7 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13, 38, 52, or 60. 2 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 13, 47, 49 or 61. Continued...	Start Segment 07 with Function 04. Function 04 lasts until the end of the segment. Interrupt Function 04 when Function 13 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 13, 34, or 38 occurs.	Start Segment 07 with Function 52. Function 52 lasts 21.5 seconds. Start Function 60 when Function 52 ends. Function 60 lasts 7.5 seconds. Start Function 57 when Function 60 ends. Function 57 lasts 10.5 seconds. Interrupt Function 57 when Function 33, 37, 47, or 49 occurs. Start Function 61 when Function 57 ends. Function 61 lasts 62.5 seconds. Interrupt Function 61 when Function 33, 34, 37, 38, 47, or 49 occurs. Continued...	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 2 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, or 52. Continued...	

*Denotes a segment that occurs in more than one mission phase.

PHASE 4 Enroute (LZ - Rendezvous) ***SEGMENT 07 Rendezvous [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Function 39 when Function 61 ends. Function 39 lasts 240 seconds. Interrupt Function 39 when Function 33, 34, 37, 38, 47, 48, 49, or 50 occurs.	10 times during the segment, randomly select Function 13. Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, 49 or 61. 20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 52.		Start Function 39 when Function 61 ends. Function 39 lasts 240 seconds. Interrupt Function 39 when Function 33, 34, 37, 38, 47, 48, 49, or 50 occurs. Start Function 19 when Function 39 ends. Function 19 lasts 27 seconds. Interrupt Function 19 when Function 33, 37, 47, or 49 occurs.	Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

*Denotes a segment that occurs in more than one mission phase.

PHASE 5 Enroute (Rendezvous - Base) ***SEGMENT 06 Contour Flight (Update) [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	15 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 13, 38, or 57. 5 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 13, 47, or 49. 10 times during the segment, randomly select Function 13. Function 13 lasts 1 second and cannot occur concurrently with Function 38, 47, or 49. Continued...	Start Segment 06 with Function 03. Function 03 lasts 600 seconds. Interrupt Function 03 when Function 13 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 13, 34, 36, or 38 occurs.	Start Function 68 120 seconds after Segment 06 begins. Function 68 lasts 21.5 seconds. Interrupt Function 68 when Function 37, 47, 49, or 54 occurs. Start Function 71 580 seconds after Segment 06 begins. Function 71 lasts 12.5 seconds. Interrupt Function 71 when Function 37, 47, 49, or 54 occurs.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 5 times during the segment, randomly select Function 05. Function 05 lasts 1 second. 3 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, or 54. Continued...	Start Segment 06 with Function 58. Function 58 lasts until the end of the segment. Interrupt Function 58 when Function 05, 37, 47, 49, 54, 68, or 71 occurs.

*Denotes a segment that occurs in more than one mission phase.

PHASE 5 Enroute (Rendezvous - Base) ***SEGMENT 06 Contour Flight (Update) [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	20 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 54. 6 times during the segment, randomly select Function 34. Function 34 lasts 10 seconds and cannot occur concurrently with Function 13, 36, 38, 47, or 49. 6 times during the segment, randomly select Function 36. Function 36 lasts 10 seconds and cannot occur concurrently with Function 13, 34, 38, 47, or 49.			2 times during the segment, randomly select Function 54. Function 54 lasts 14 seconds and cannot occur concurrently with Function 37, 47, or 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	

*Denotes a segment that occurs in more than one mission phase.

PHASE 5 Enroute (Rendezvous - Base) **SEGMENT 14 Approach [ANVIS]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Segment 14 with Function 21. Function 21 lasts 7.5 seconds.	6 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 09, 38, or 52. 2 times during the segment, randomly select Function 38. Function 38 lasts 3.5 seconds and cannot occur concurrently with Function 21, 47, or 49. 8 times during the segment, randomly select Function 09. Function 09 lasts 1 second and cannot occur concurrently with Function 21, 38, 47, or 49. Continued...	Start Function 01 when Function 21 ends. Function 01 lasts 340 seconds. Interrupt Function 01 when Function 09 occurs. Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 09, 21, or 38 occurs.	Start Segment 14 with Function 52. Function 52 lasts 21.5 seconds. Start Function 42 when Function 52 ends. Function 42 lasts 27.5 seconds. Interrupt Function 42 when Function 33, 37, 47, 48, 49, or 50 occurs. 200 seconds after the segment begins, start Function 54. Function 54 lasts 14 seconds.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. 4 times during the segment, randomly select Function 37. Function 37 lasts 3.5 seconds and cannot occur concurrently with Function 47, 49, or 52. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50. Continued...	Start Function 30 when Function 52 ends. Function 30 lasts until the end of the segment. Interrupt Function 30 when Function 33, 37, 42, or 54 occurs.

PHASE 5 Enroute (Rendezvous - Base) **SEGMENT 14 Approach [ANVIS] [Continued]**

PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
	15 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, 52, or 54.			5 times during the segment, randomly select Function 33. Function 33 lasts 10 seconds and cannot occur concurrently with Function 37, 52, or 54.	

PHASE 5 Enroute (Rendezvous - Base) **SEGMENT 15 Landing [ANVIS]**

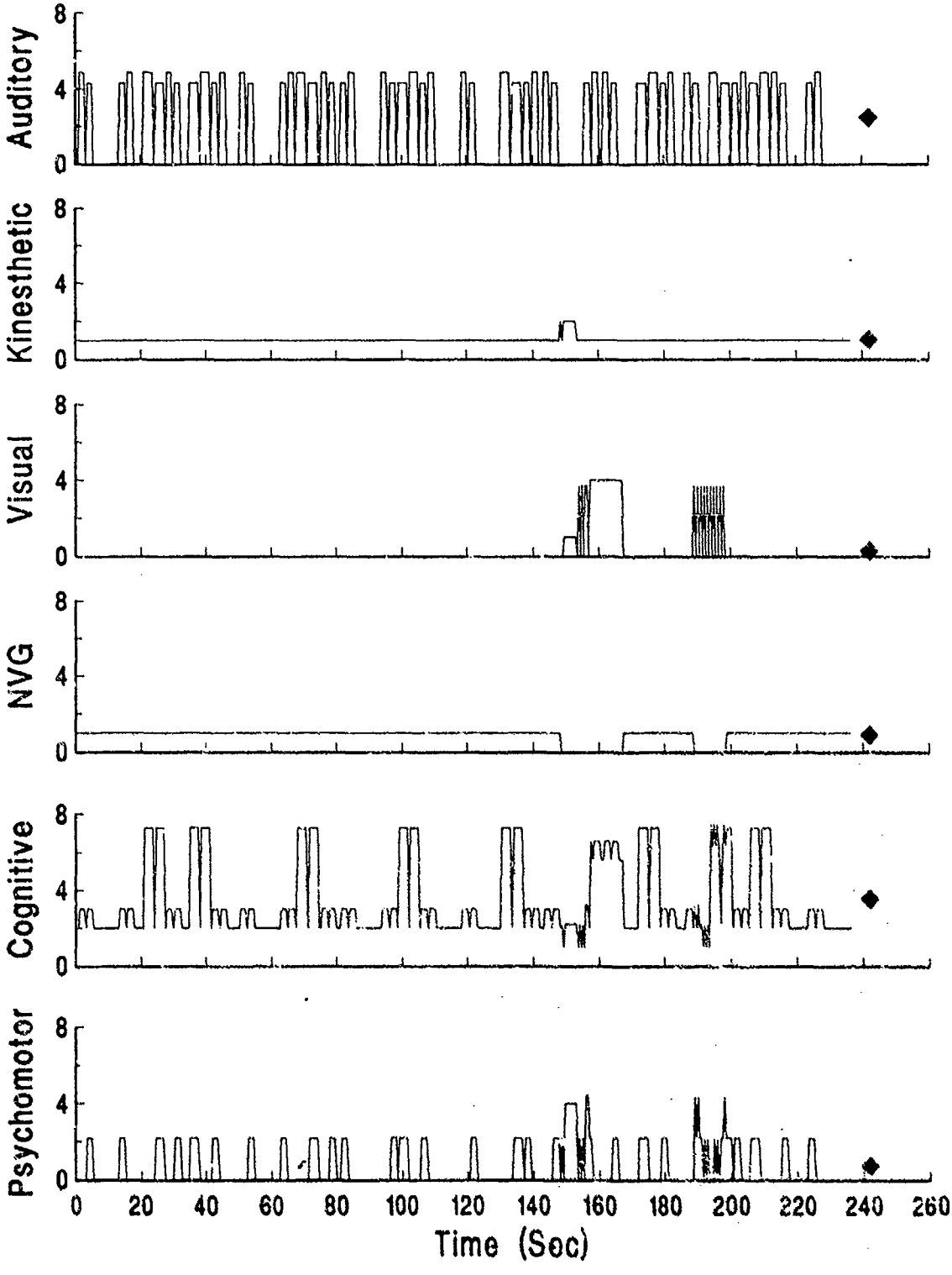
PILOT			COPILOT		
DISCRETE (FIXED)	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**	**DISCRETE (FIXED)**	**DISCRETE (RANDOM)**	**CONTINUOUS (FIXED)**
Start Segment 15 with Function 23. Function 23 lasts 3.5 seconds. Start Function 56 when Function 23 ends. Function 56 lasts 220 seconds. Start Function 25 when Function 56 ends. Function 25 lasts 43 seconds. Start Function 40 when Function 25 ends. Function 40 lasts 12.5 seconds.	4 times during the segment, randomly select (.50) Function 47 or Function 49. Functions 47 and 49 last 7 seconds each and cannot occur concurrently with Function 23 or 53. 12 times during the segment, randomly select (.50) Function 48 or Function 50. Functions 48 and 50 last 5 seconds each and cannot occur concurrently with Function 47, 49, or 53.	Start Function 31 at the beginning of the segment. Function 31 lasts until the end of the segment. Interrupt Function 31 when Function 23 occurs.	Start Function 56 when Function 23 ends. Function 56 lasts 220 seconds. Start Function 53 when Function 23 ends. Function 53 lasts 13 seconds. Start Function 25 when Function 56 ends. Function 25 lasts 43 seconds. Start Function 40 when Function 25 ends. Function 40 lasts 12.5 seconds.	Insert Function 47 each time the pilot performs Function 47 and Function 49 each time the pilot performs Function 49. Insert Function 48 each time the pilot performs Function 48 and Function 50 each time the pilot performs Function 50.	Start Function 30 at the beginning of the segment. Function 30 lasts until the end of the segment. Interrupt Function 30 when Function 40 occurs.

A P P E N D I X L

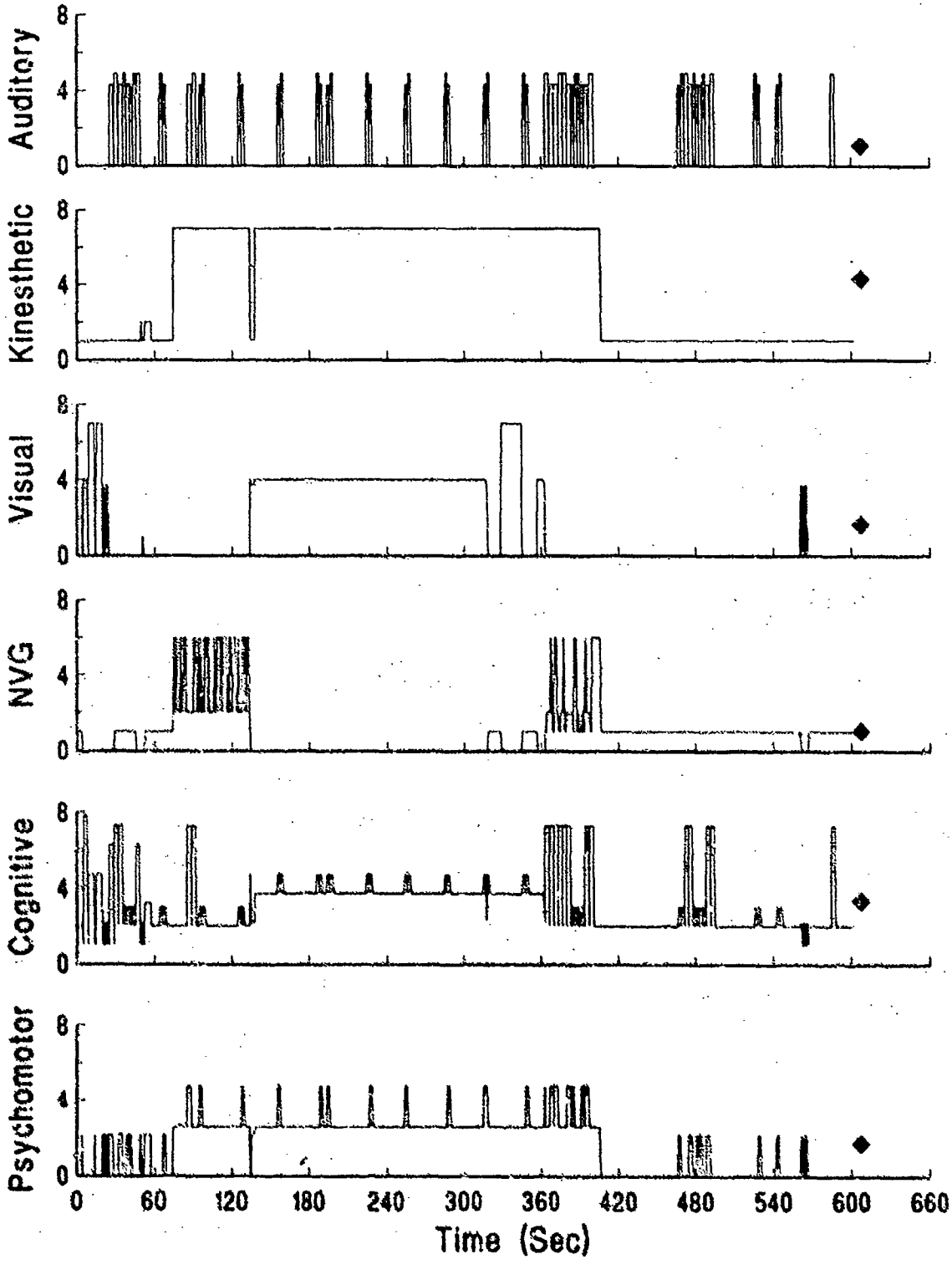
MH-47E PILOT WORKLOAD PREDICTION GRAPHS

This appendix contains the workload prediction graphs for the pilot for each of the 15 MH-47E segments. Each page displays the predicted pilot workload for one segment using six graphs, one for each workload component. The diamond at the end of each graph indicates the average component workload for the segment.

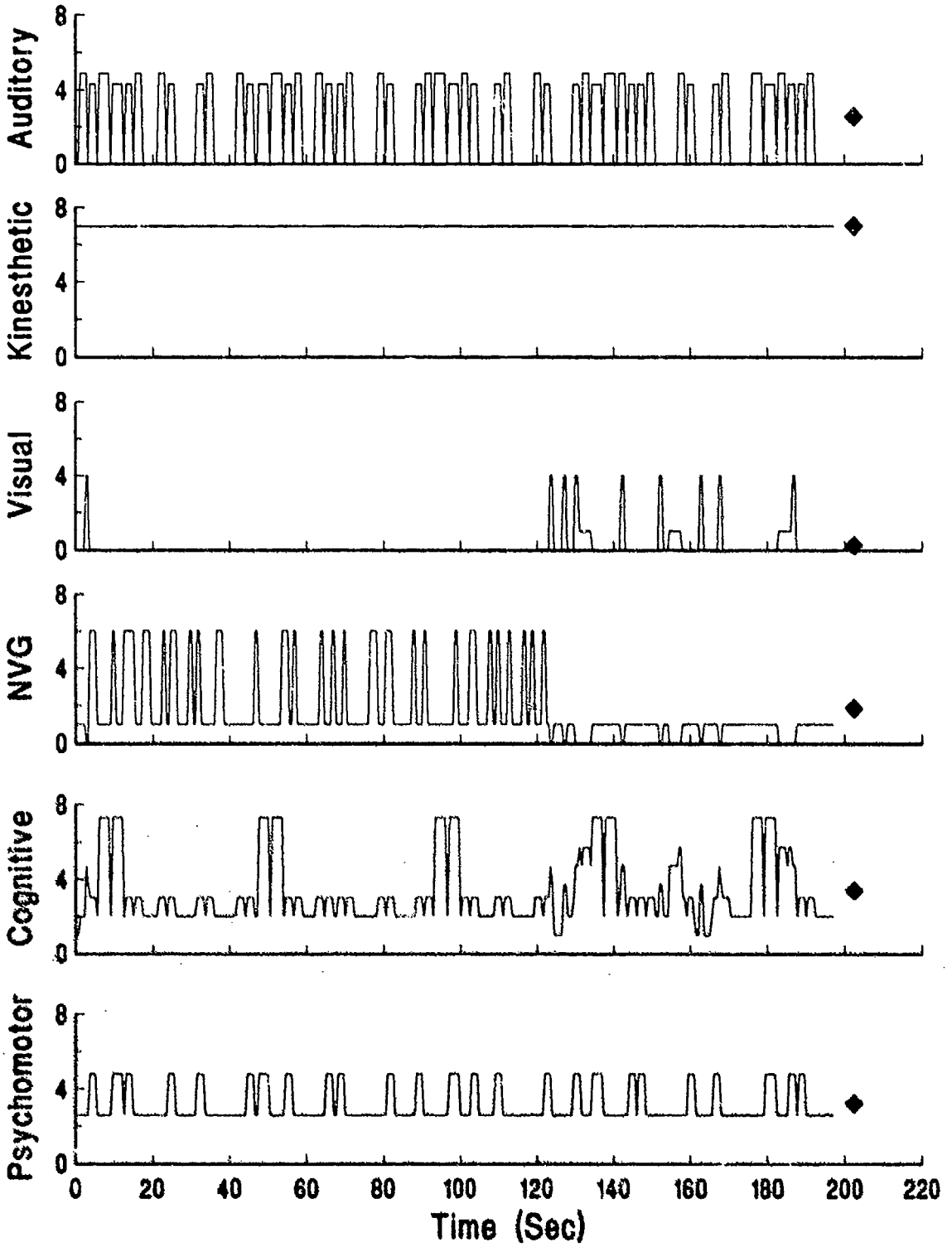
Segment 01: Configure Systems for Mission
Pilot - MH-47E



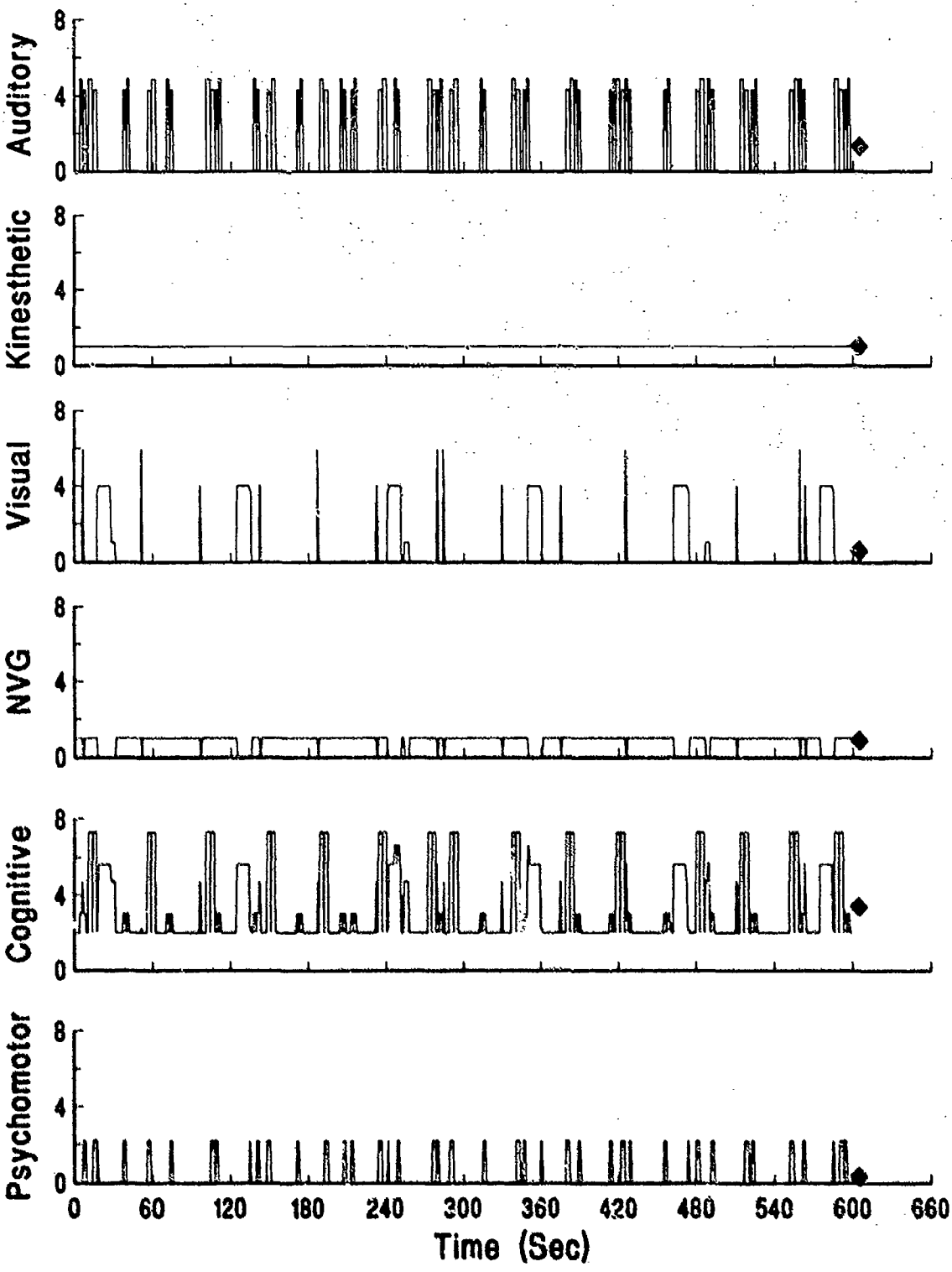
Segment 02: Before Takeoff (Base/Internal Load)
Pilot - MH-47E



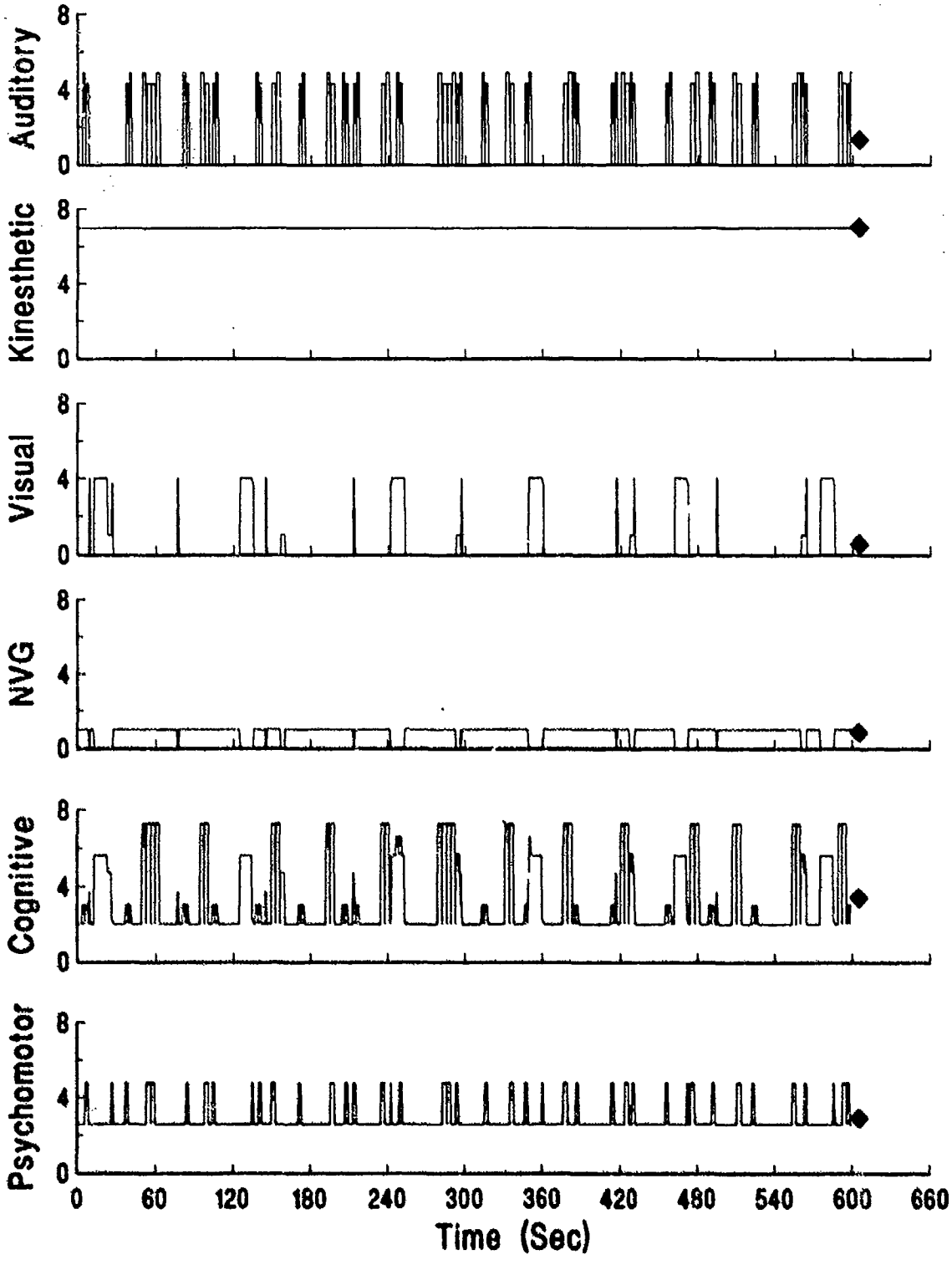
Segment 03: Takeoff [ANVIS]
Pilot - MH-47E



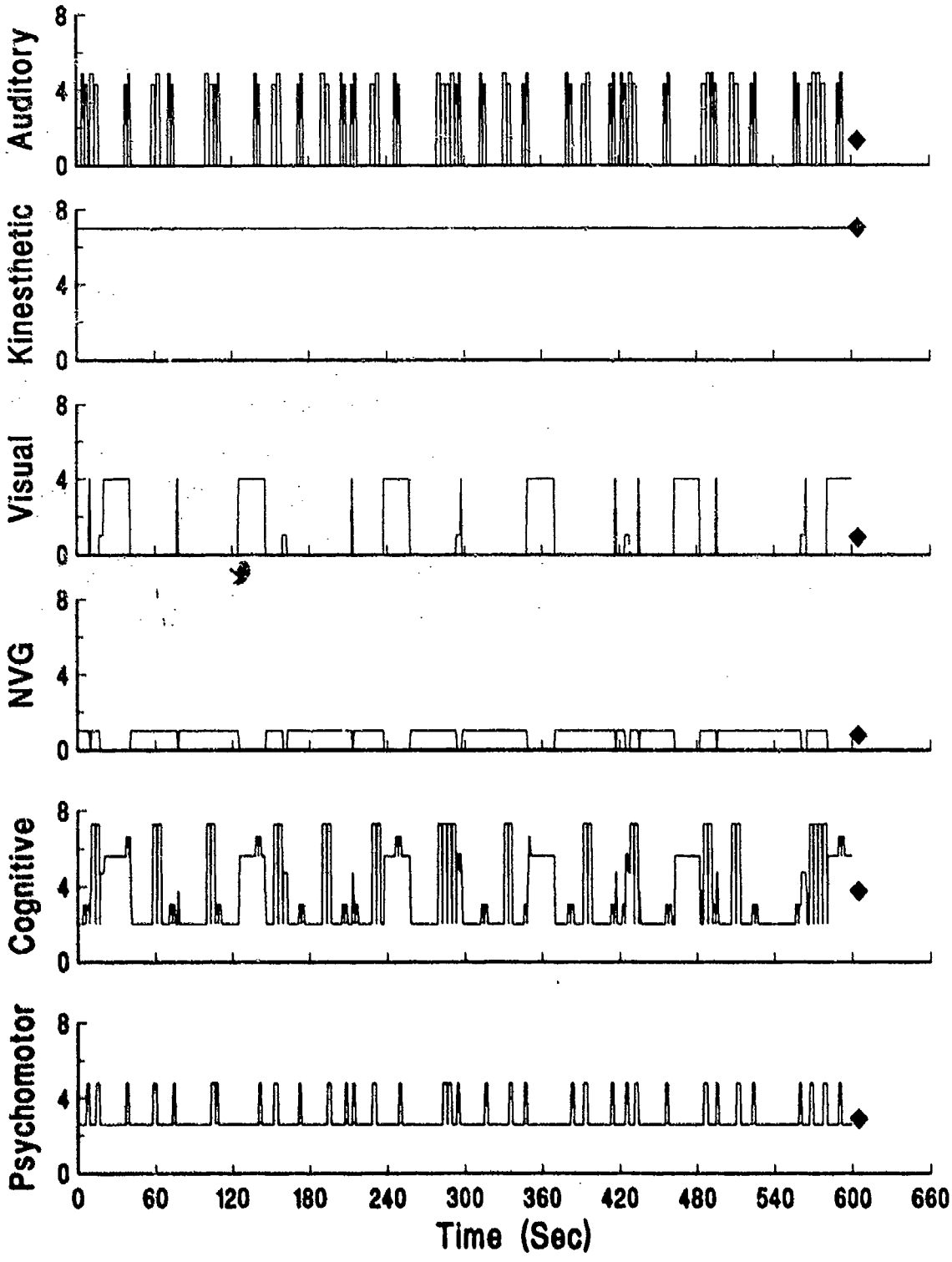
Segment 04: Enroute Flight (ANVIS)
Pilot - MH-47E



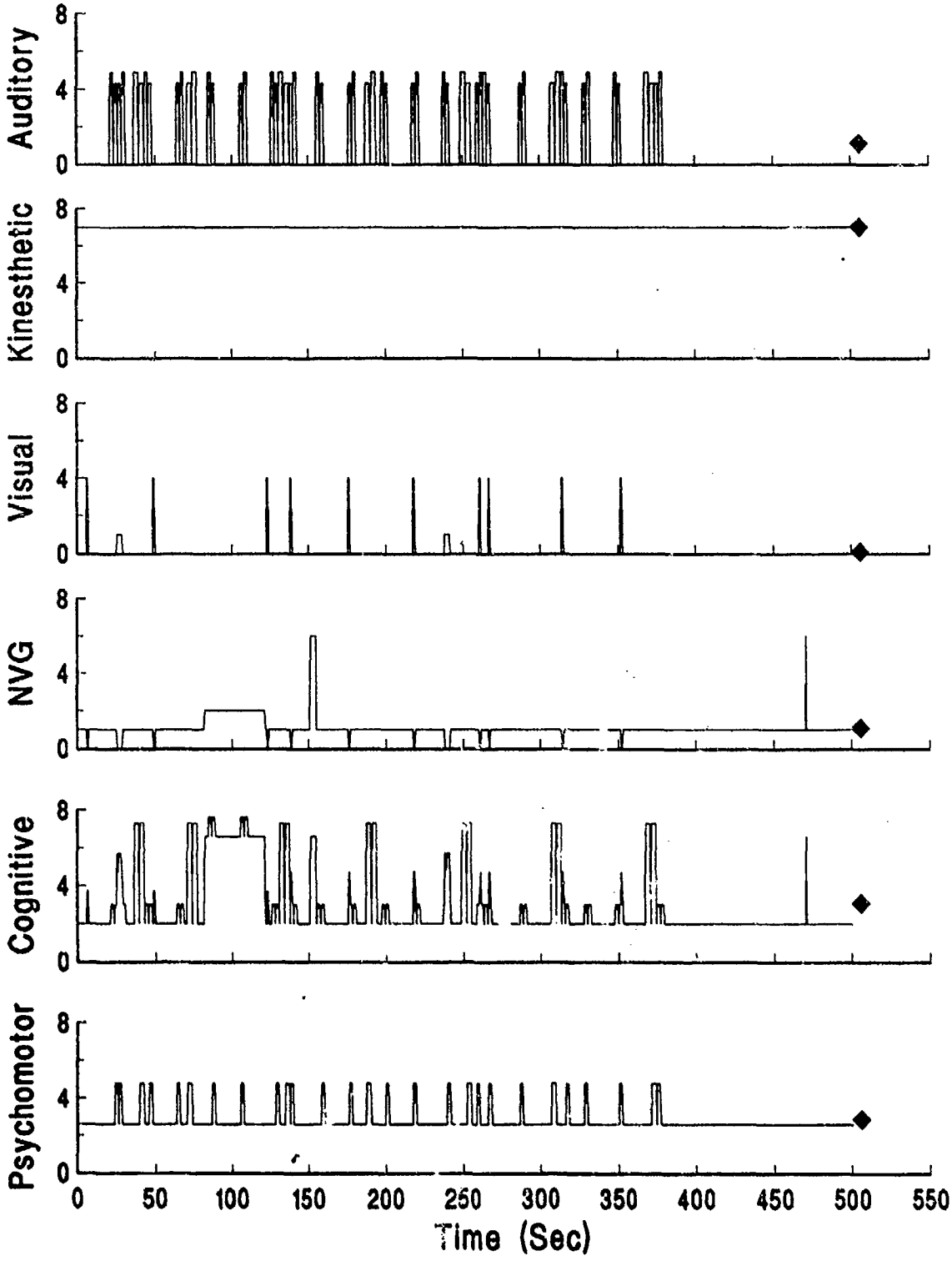
Segment 05: Contour Flight (No Update) [ANVIS]
Pilot - MH-47E



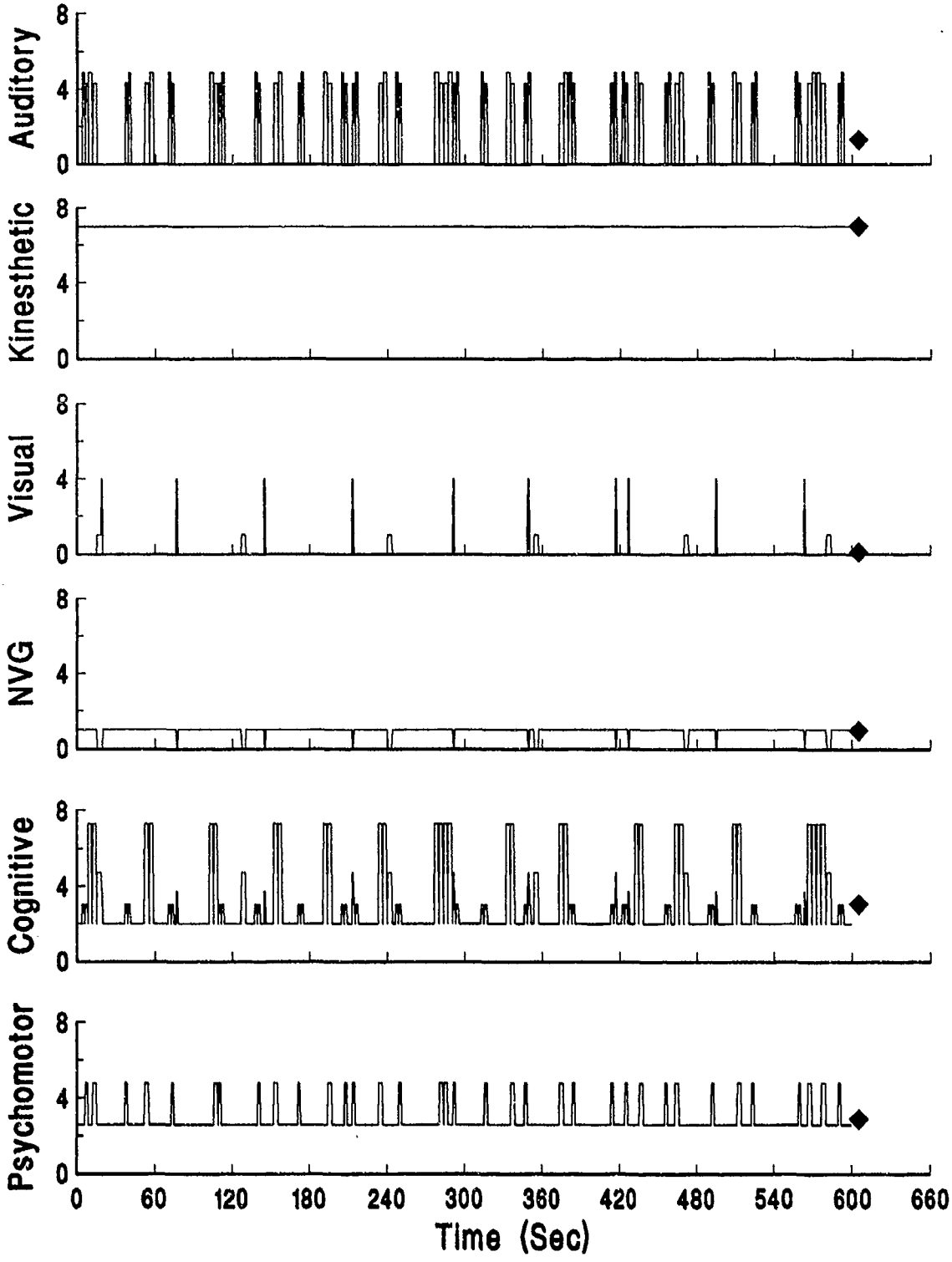
Segment 06: Contour Flight (Update) [ANVIS]
Pilot - MH-47E



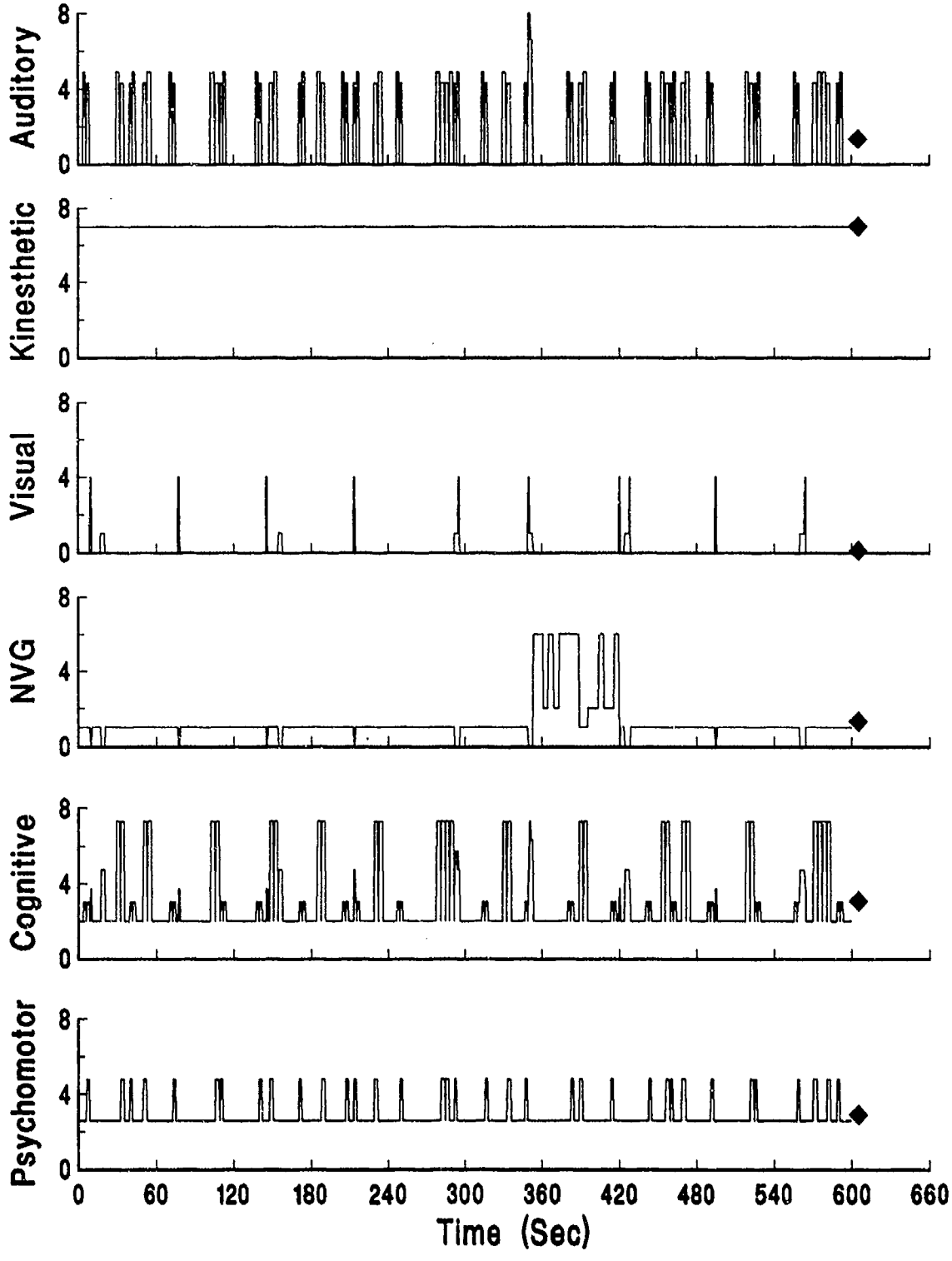
Segment 07: Rendezvous [ANVIS]
Pilot - MH-47E



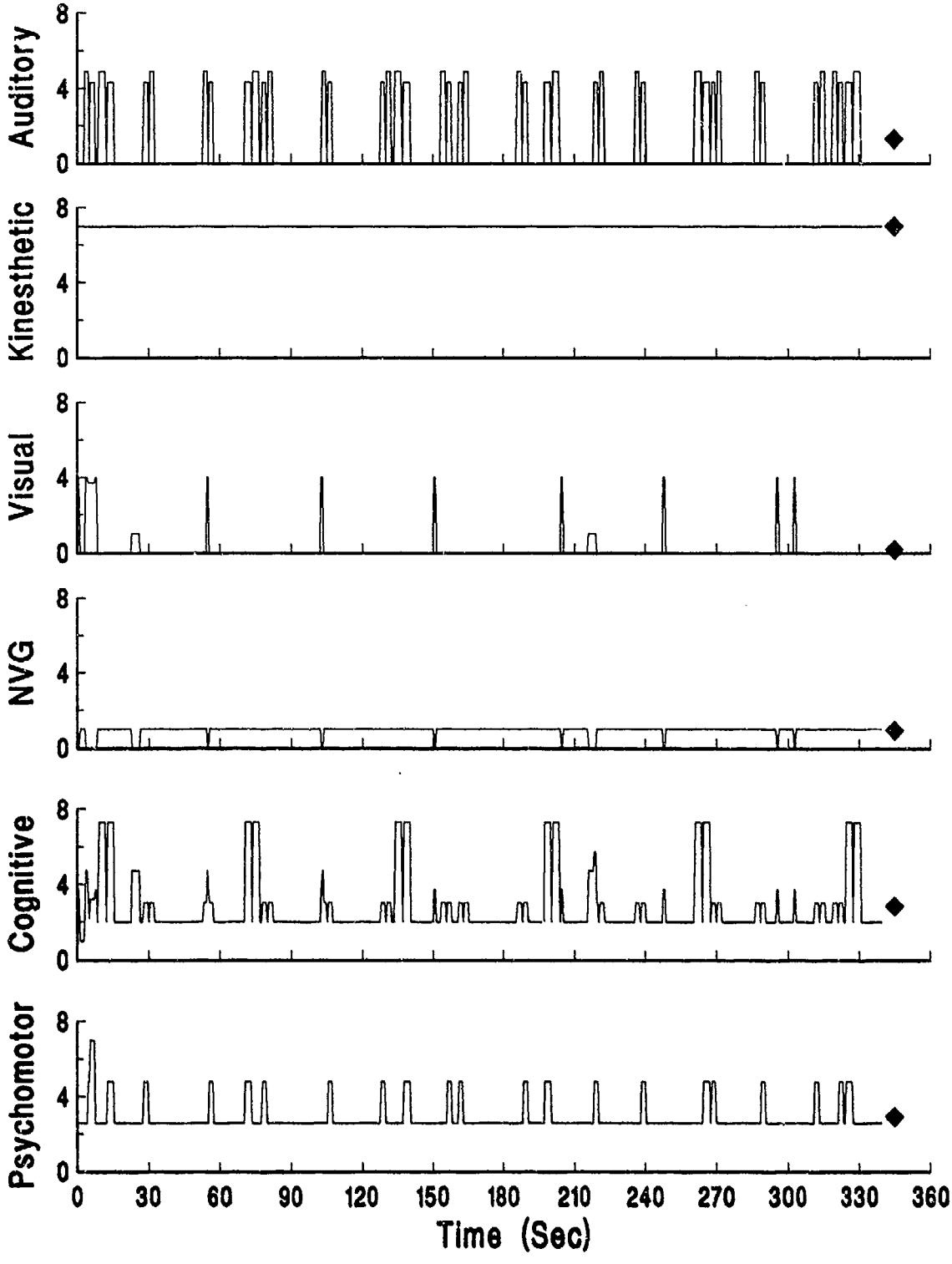
Segment 08: NOE Flight [ANVIS]
Pilot - MH-47E



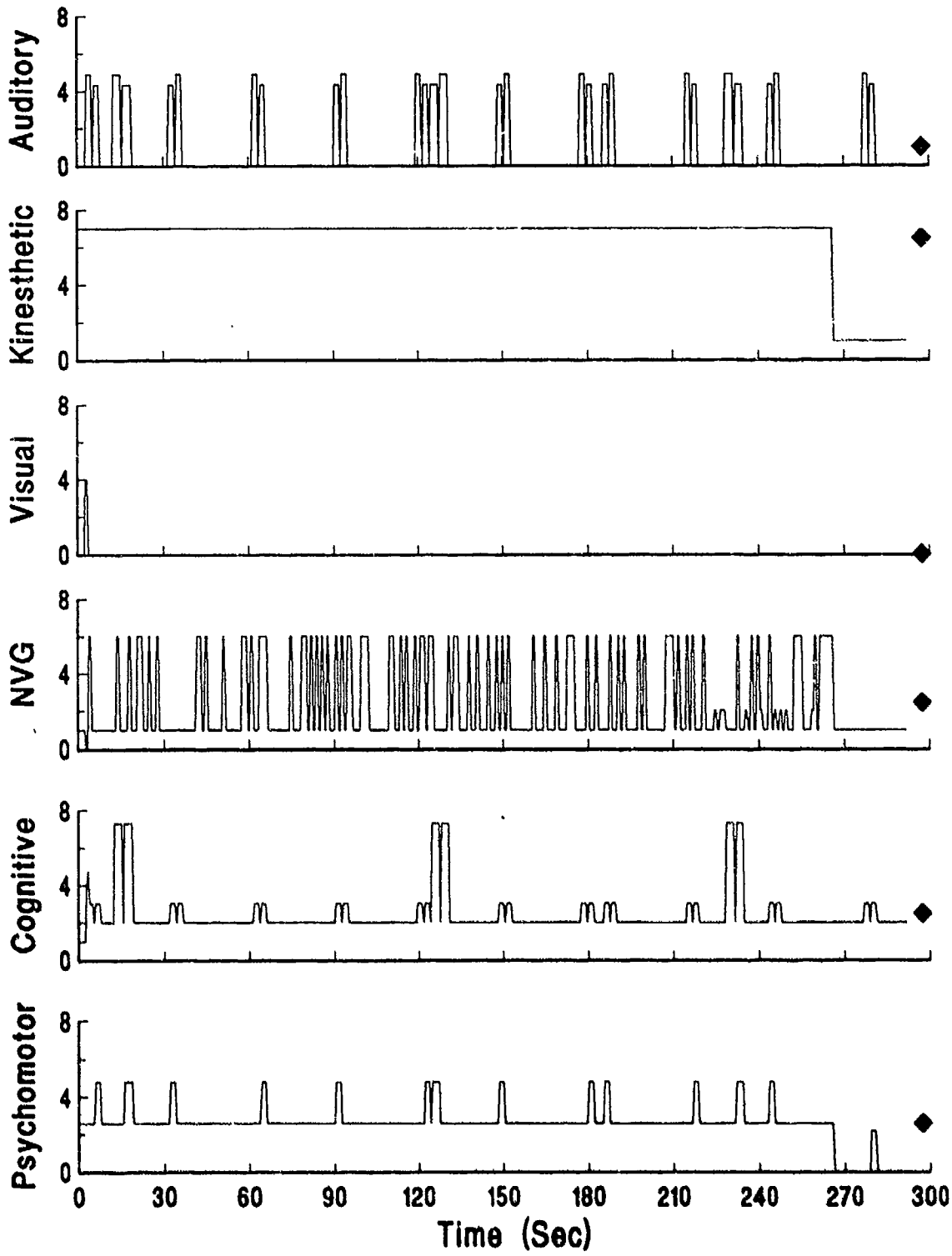
Segment 09: NOE Flight [ANVIS/ASE]
Pilot - MH-47E



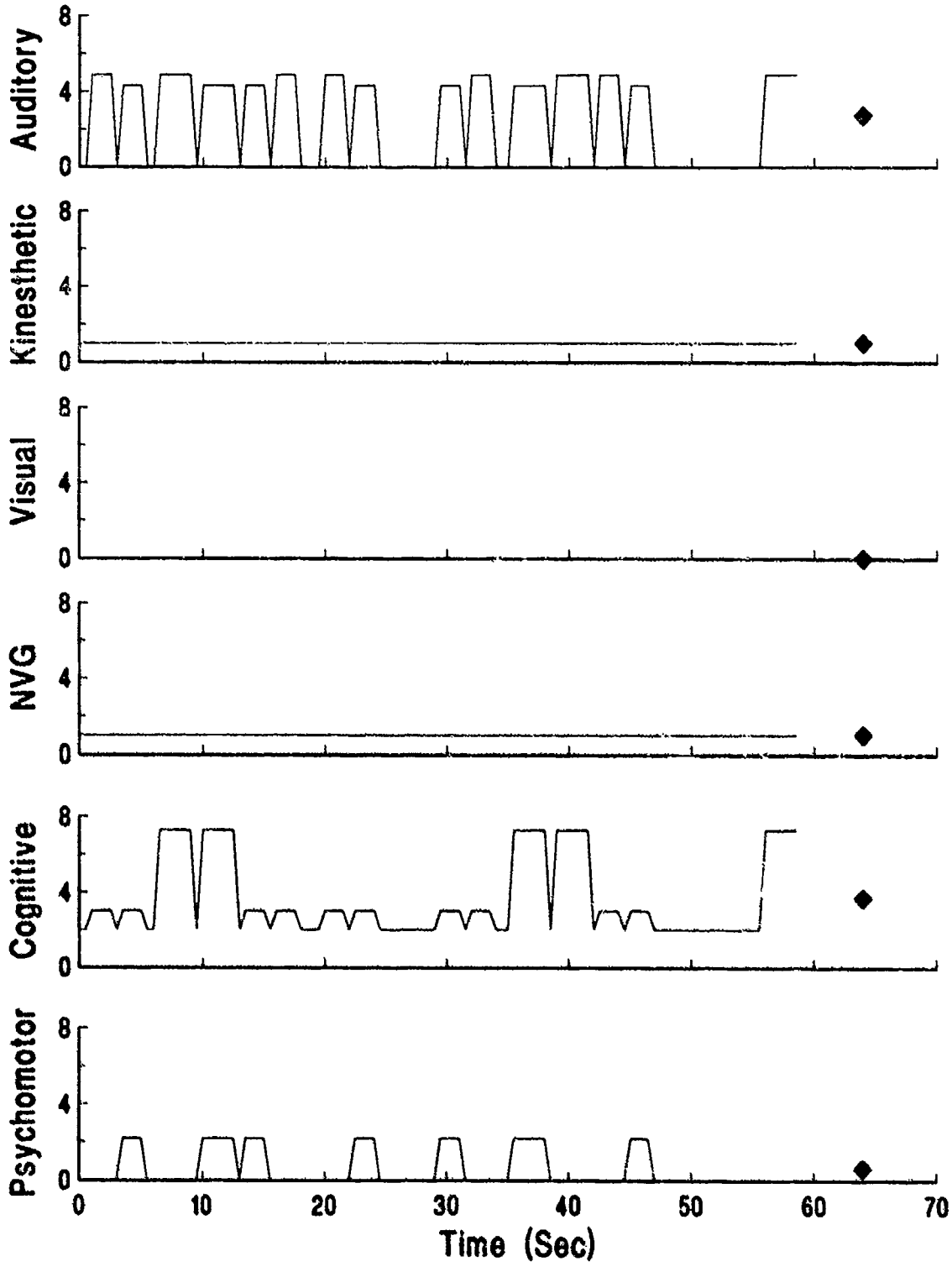
Segment 10: Approach (LZ) [ANVIS]
Pilot - MH-47E



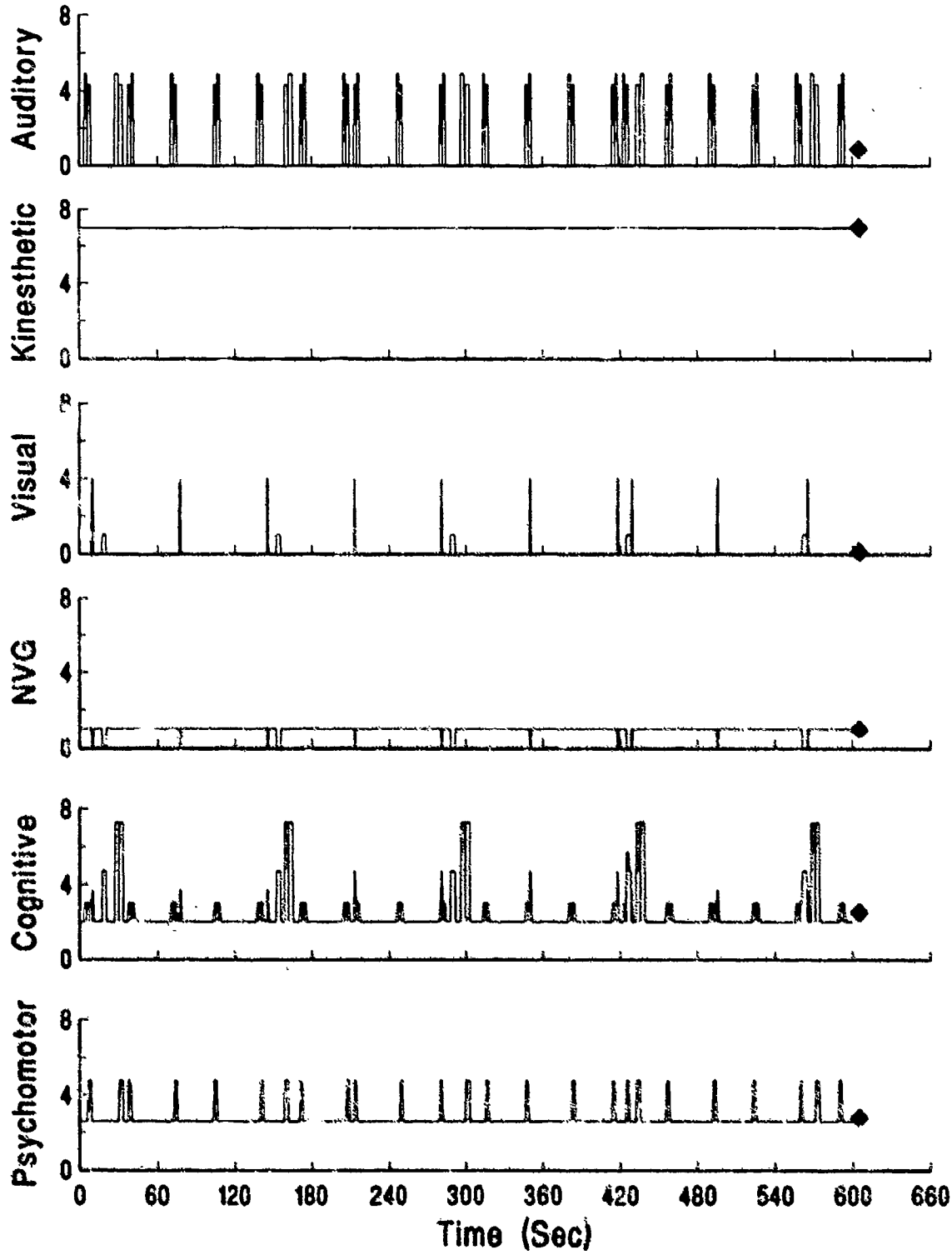
Segment 11: Landing (LZ/Internal Load) [ANVIS]
Pilot - MH-47E



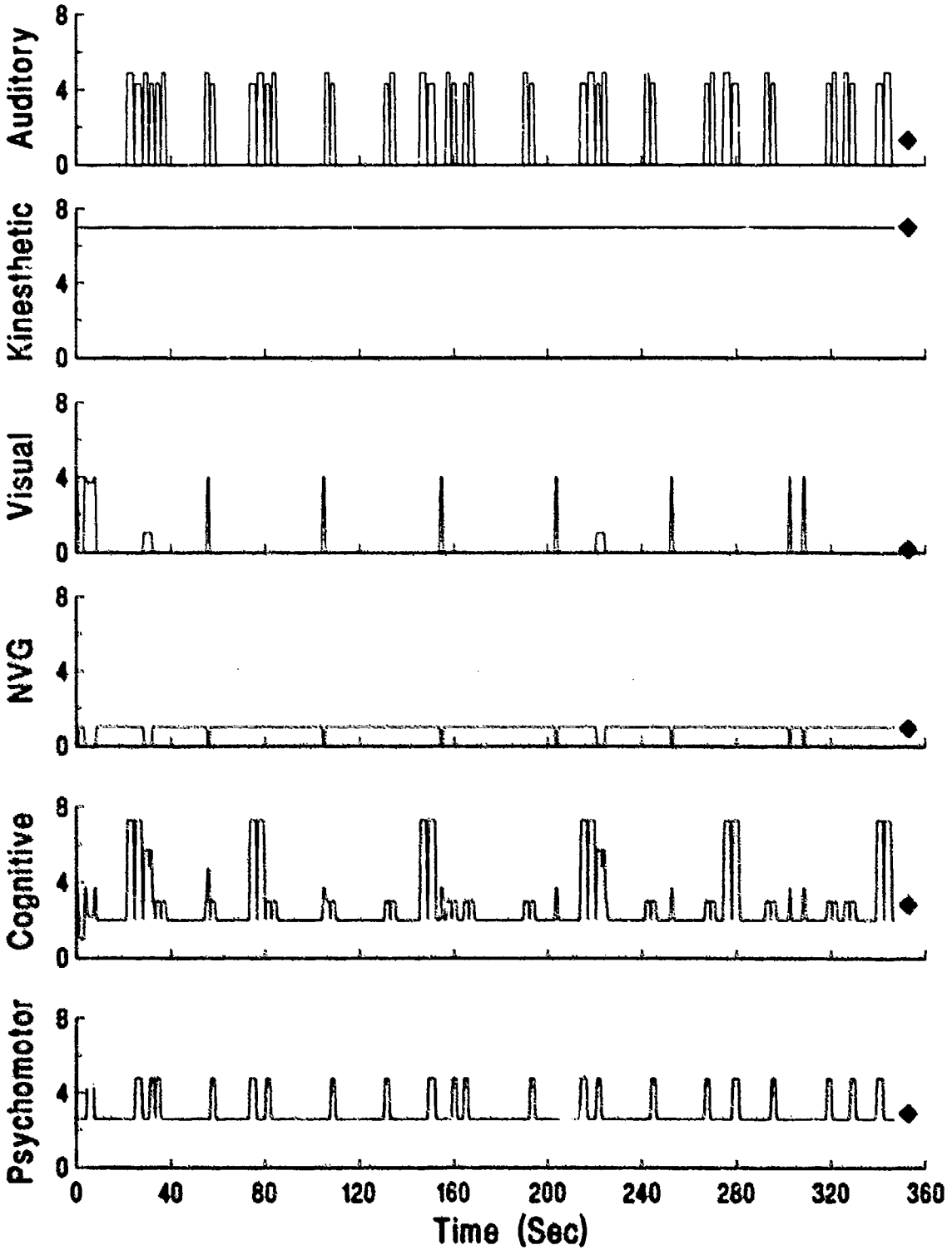
Segment 12: Before Takeoff (LZ) (ANVIS)
Pilot - MH-47E



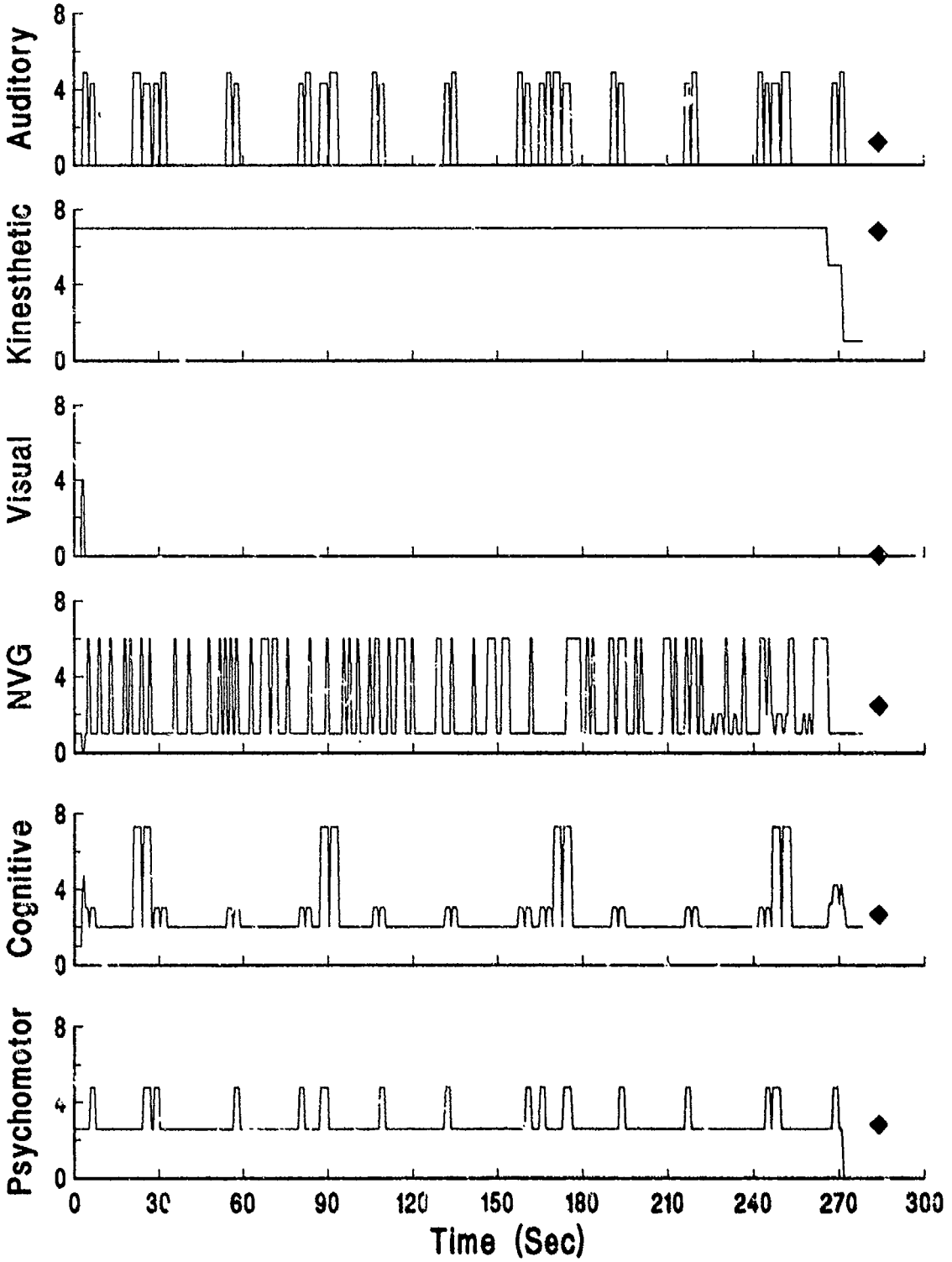
Segment 13: NOE Flight (Route Change) [ANVIS]
Pilot - MH-47E



Segment 14: Approach [ANVIS]
Pilot - MH-47E



Segment 15: Landing [ANVIS]
Pilot - MH-47E

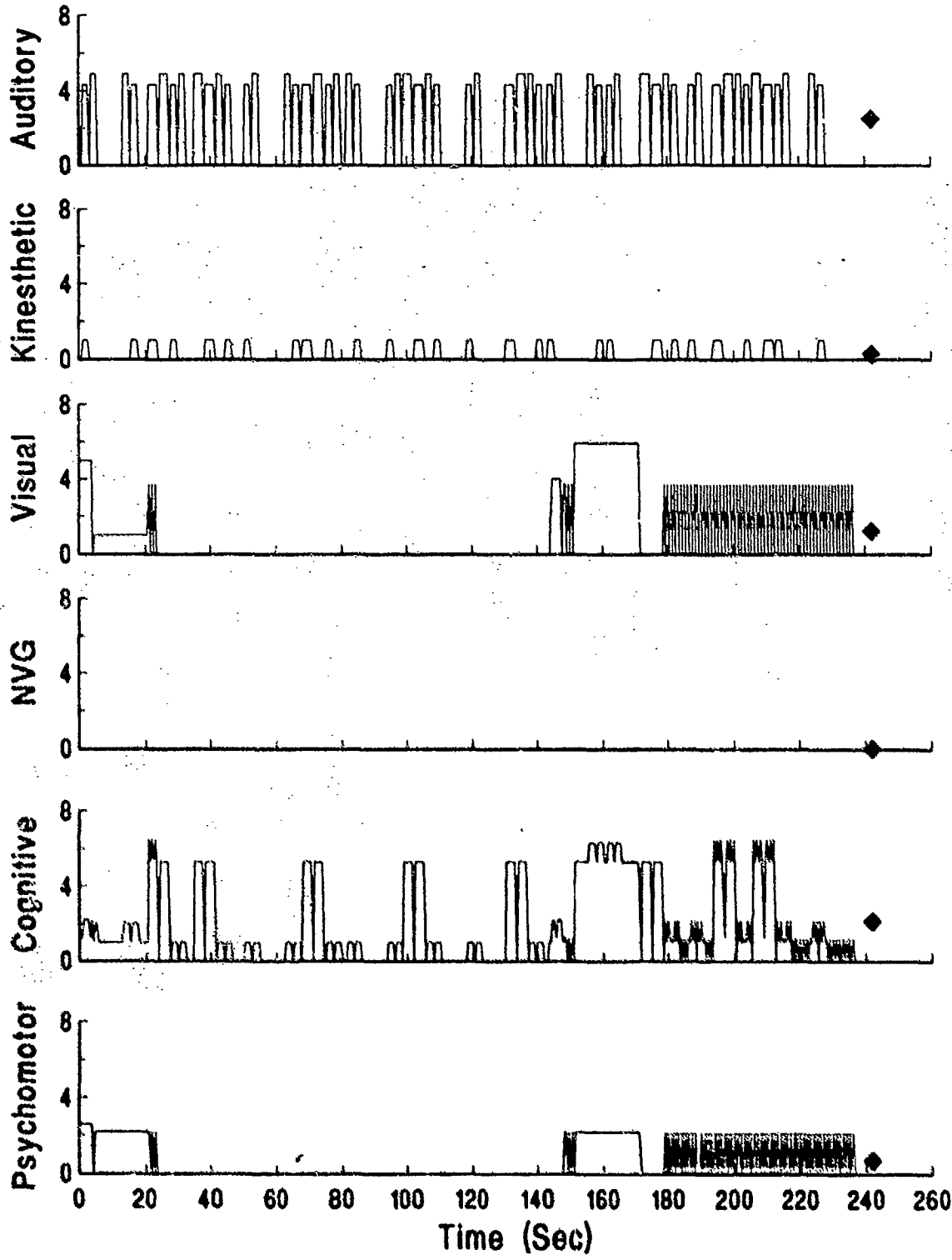


A P P E N D I X M

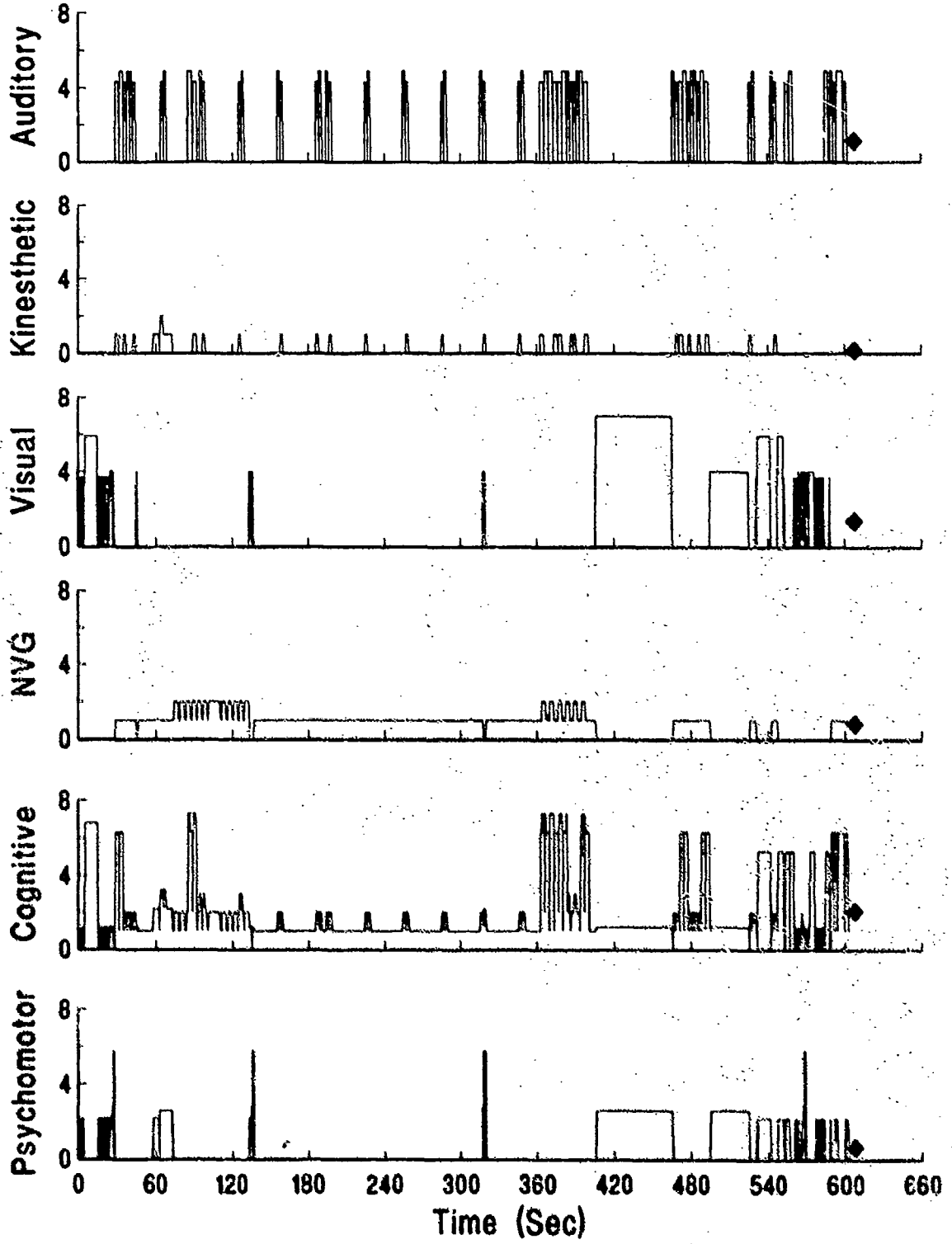
MH-47E COPILOT WORKLOAD PREDICTION GRAPHS

This appendix contains the workload prediction graphs for the copilot for each of the 15 MH-47E segments. Each page displays the predicted copilot workload for one segment using six graphs, one for each workload component. The diamond at the end of each graph indicates the average component workload for the segment.

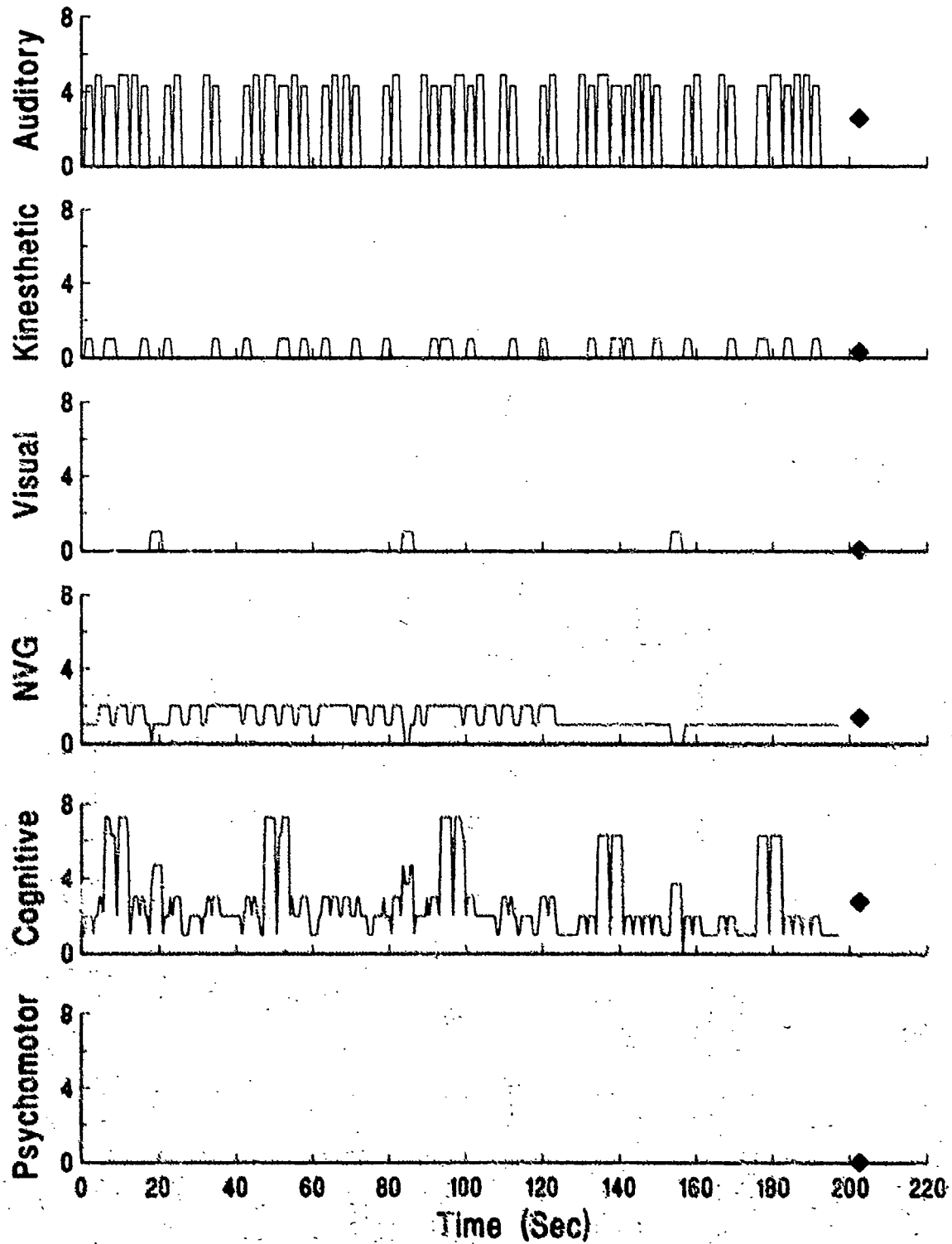
Segment 01: Configure Systems for Mission
Copilot - MH-47E



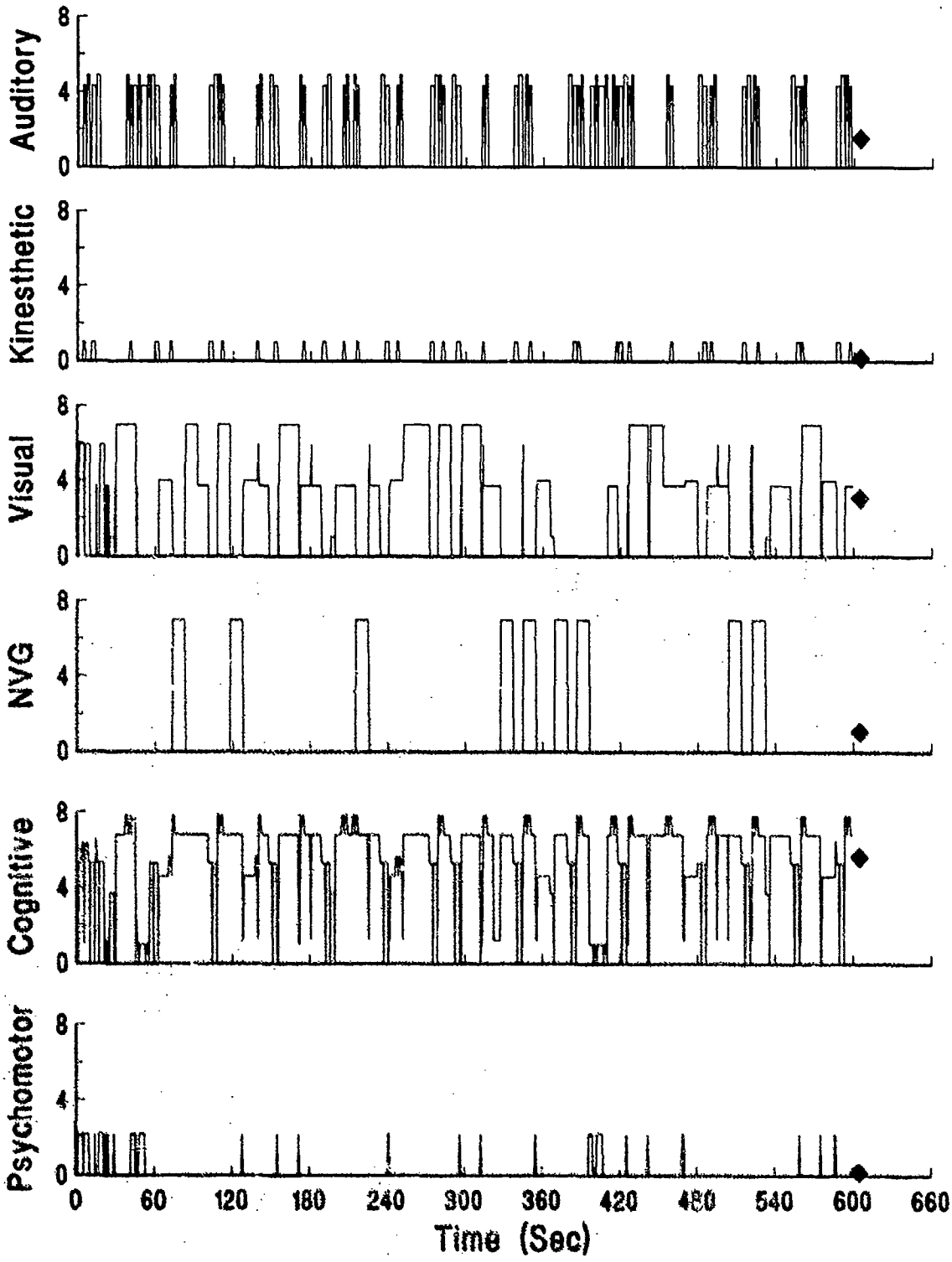
Segment 02: Before Takeoff (Base/Internal Load)
Copilot - MH-47E



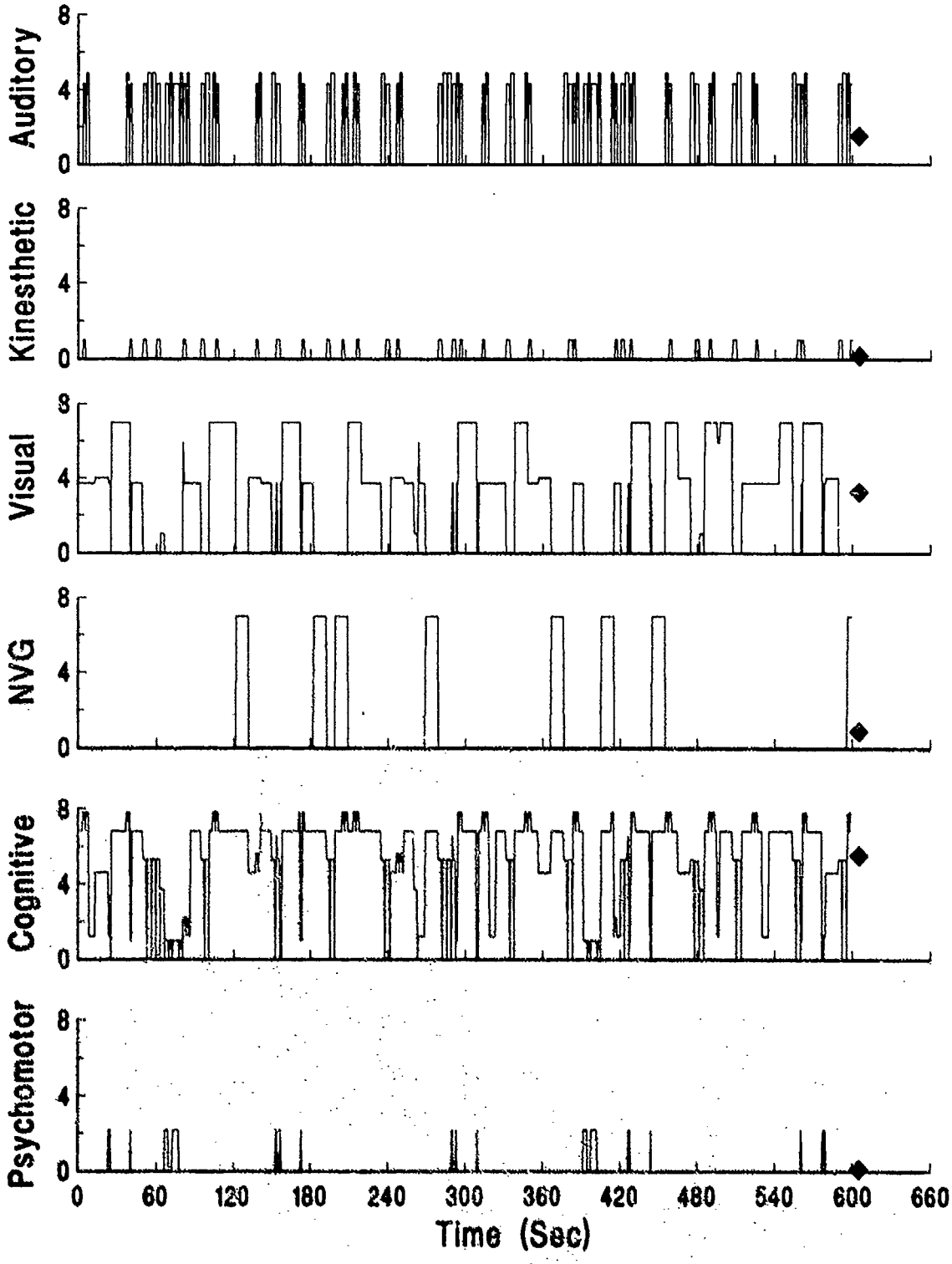
Segment 03: Takeoff [ANVIS]
Copilot - MH-47E



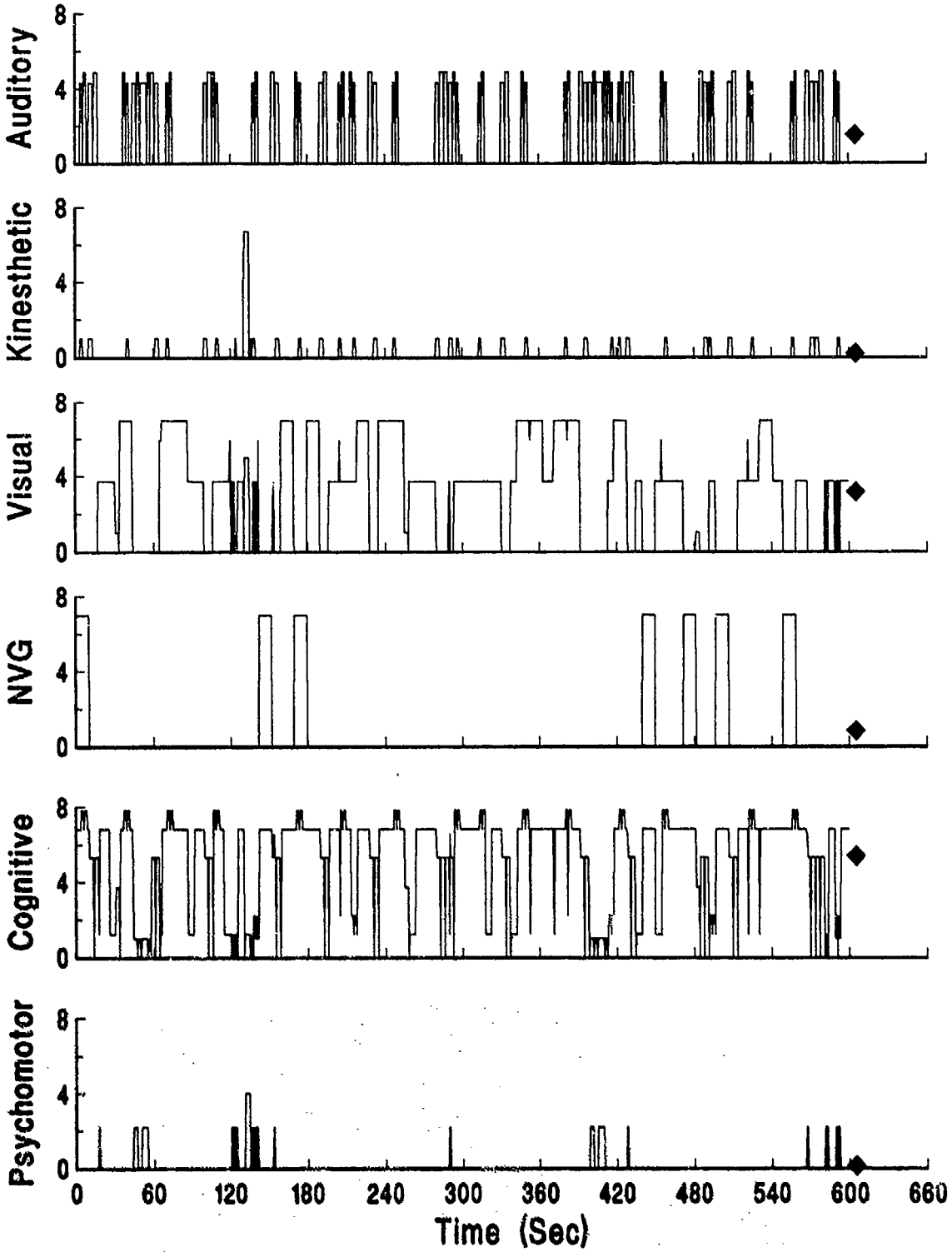
Segment 04: Enroute Flight (ANVIS)
Copilot - MH-47E



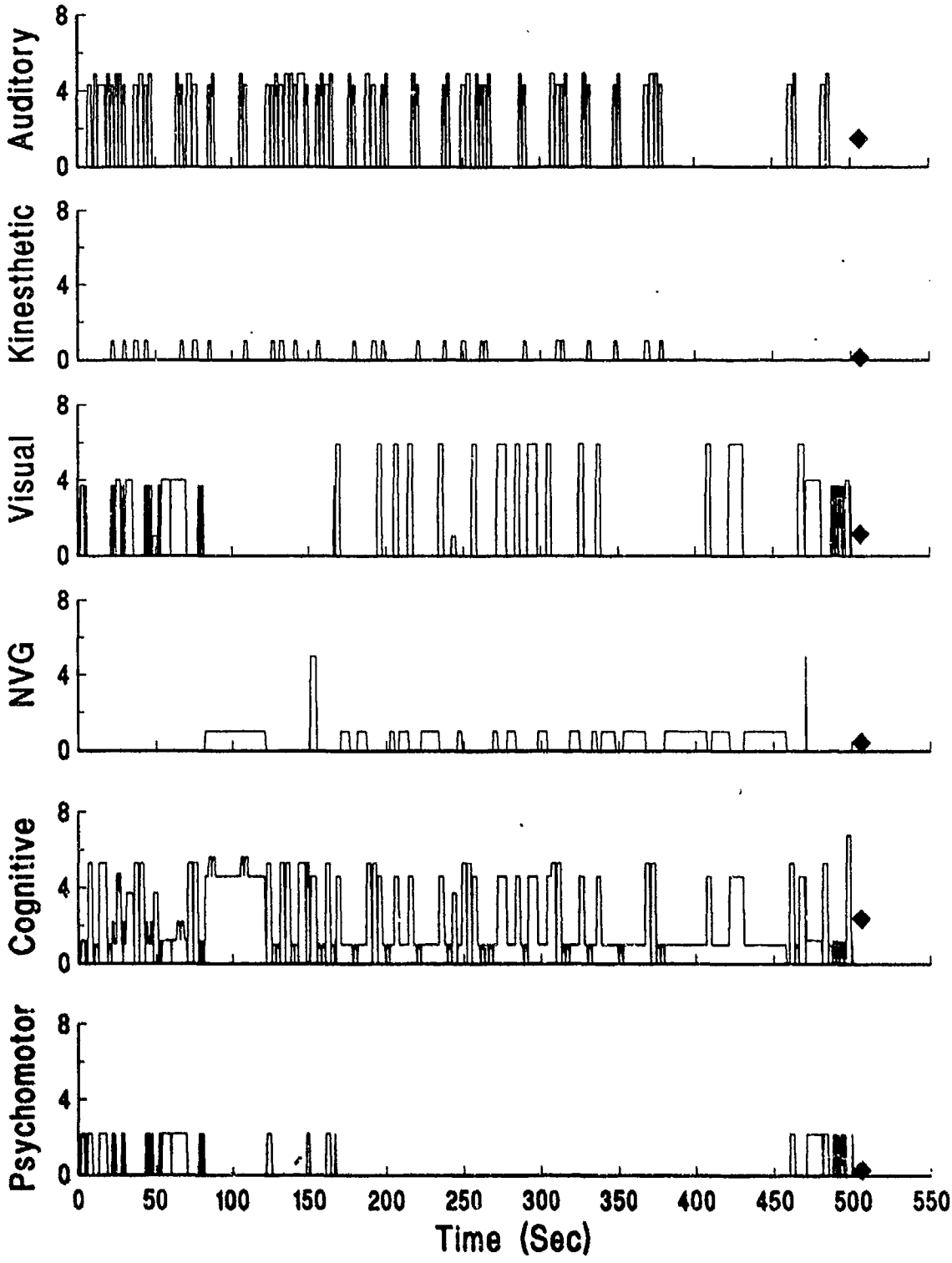
Segment 05: Contour Flight (No Update) [ANVIS]
Copilot - MH-47E



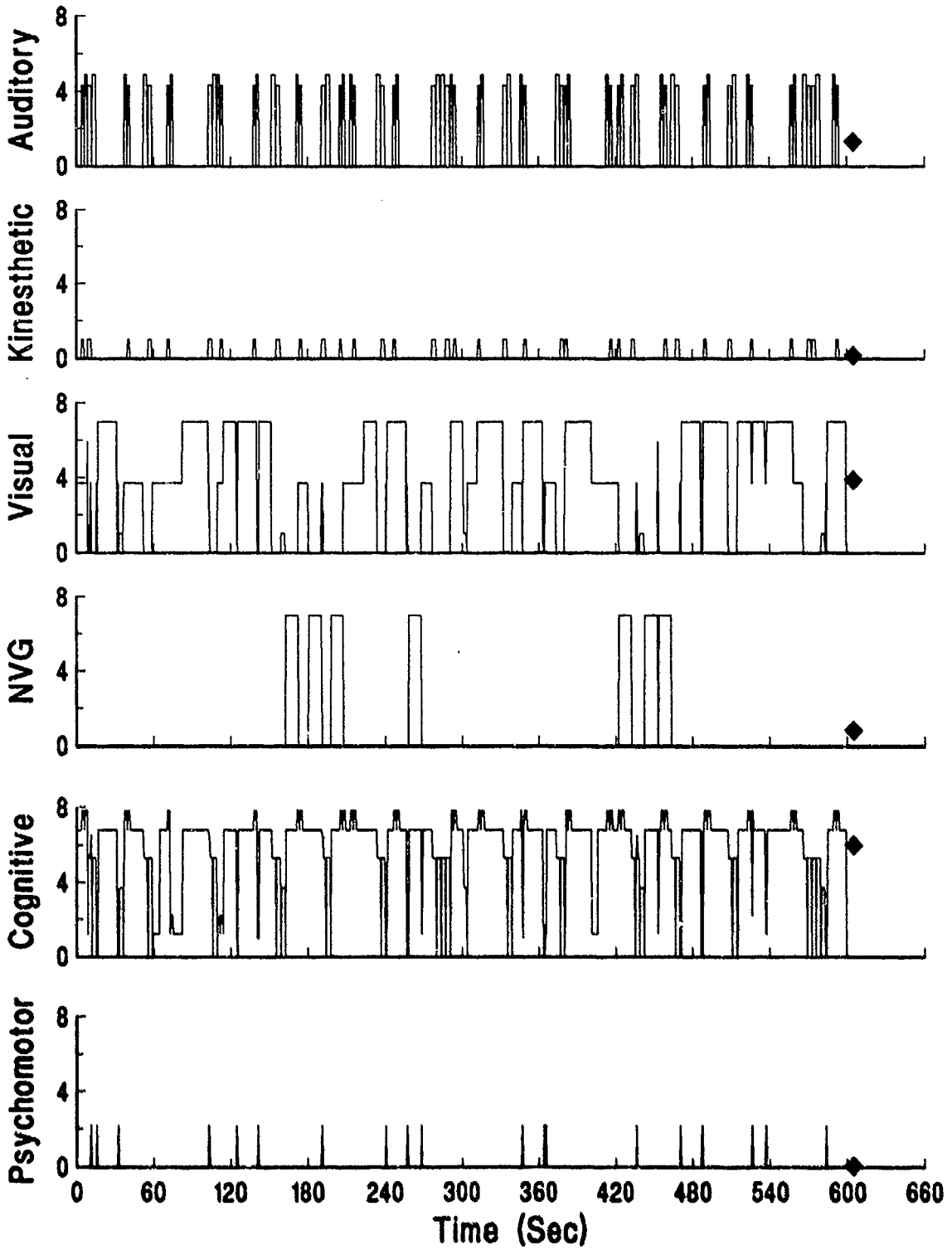
Segment 06: Contour Flight (Update) [ANVIS]
Copilot - MH-47E



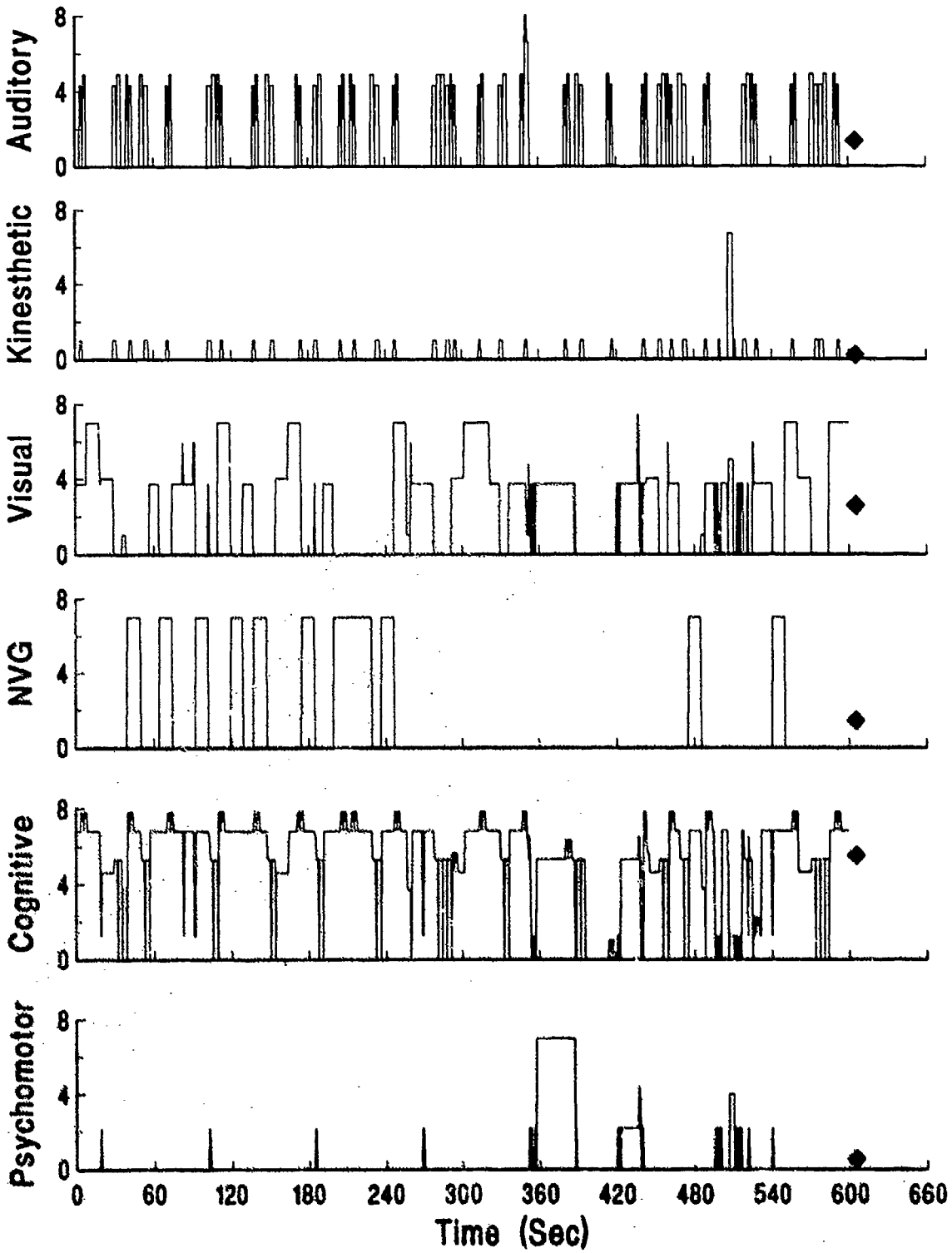
Segment 07: Rendezvous [ANVIS]
Copilot - MH-47E



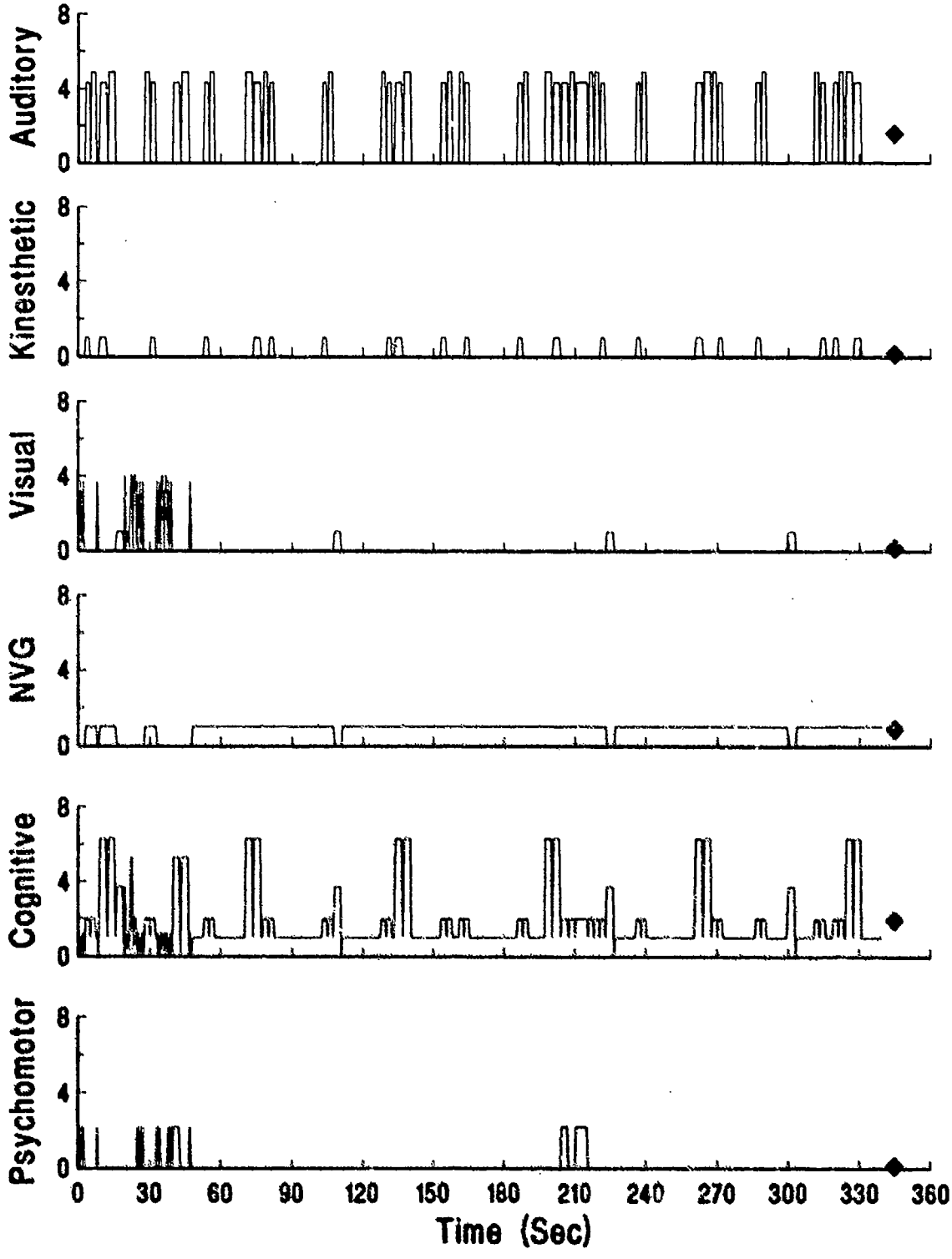
Segment 08: NOE Flight [ANVIS]
Copilot - MH-47E



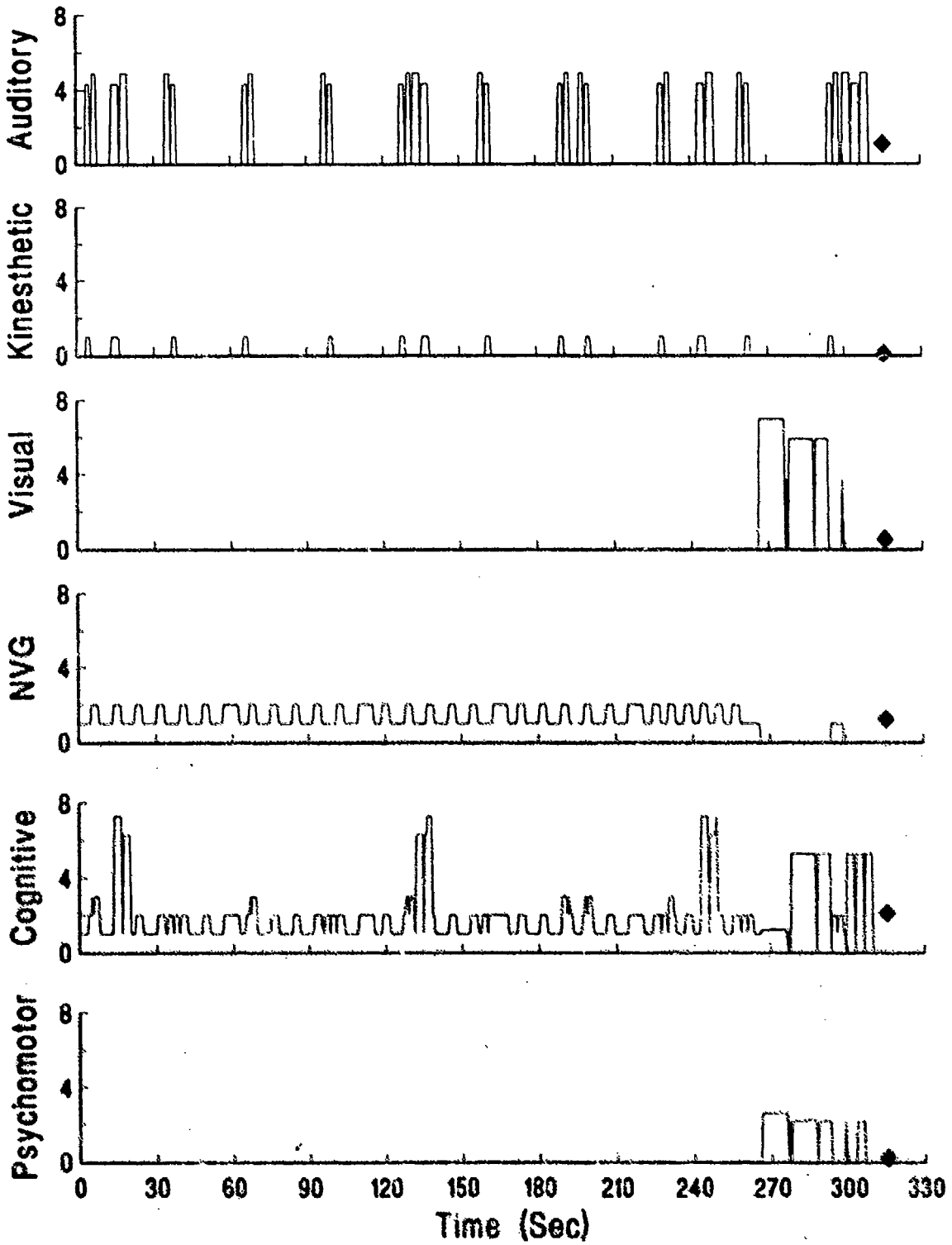
Segment 09: NOE Flight [ANVIS/ASE]
Copilot - MH-47E



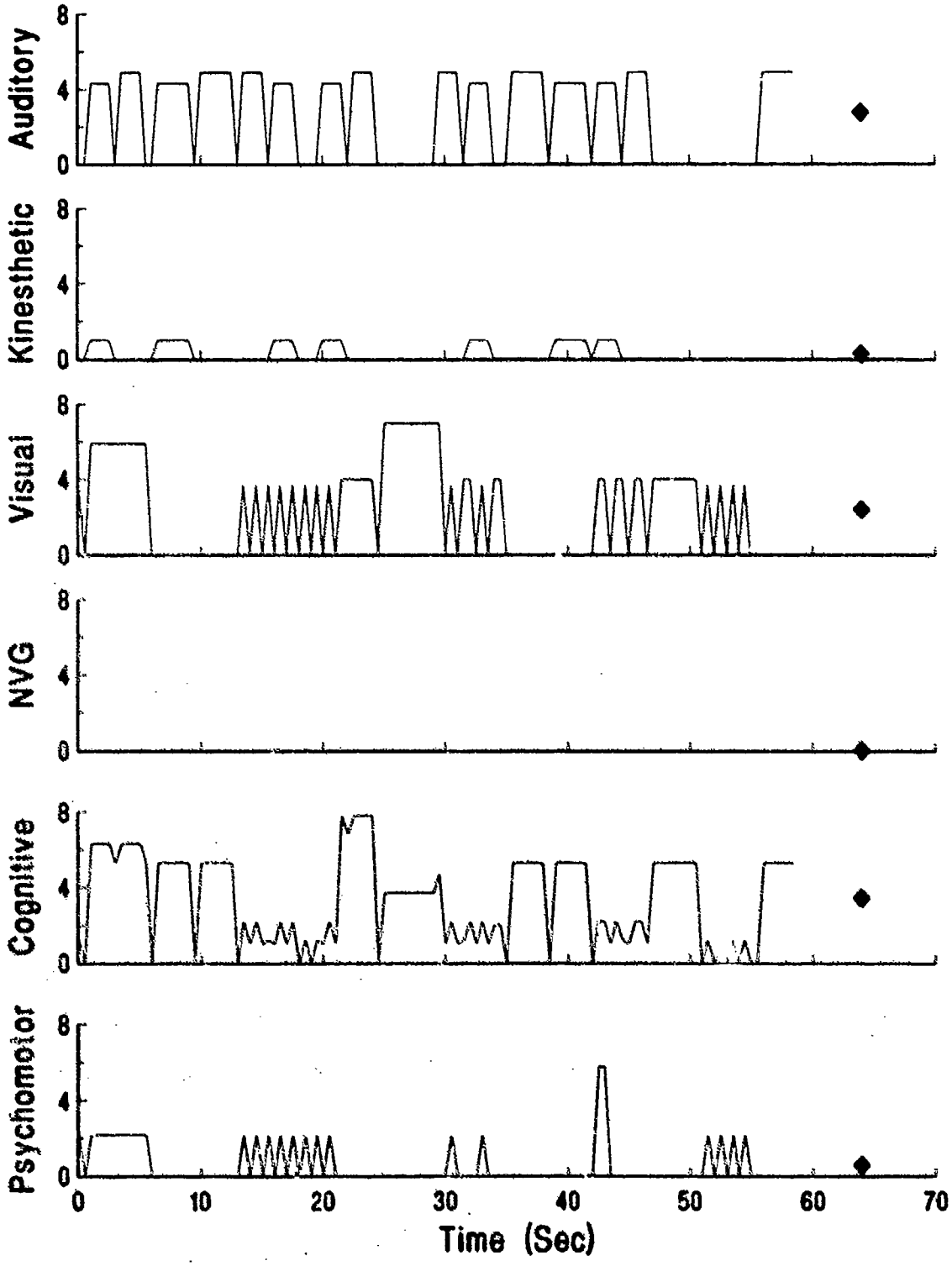
Segment 10: Approach (LZ) [ANVIS]
Copilot - MH-47E



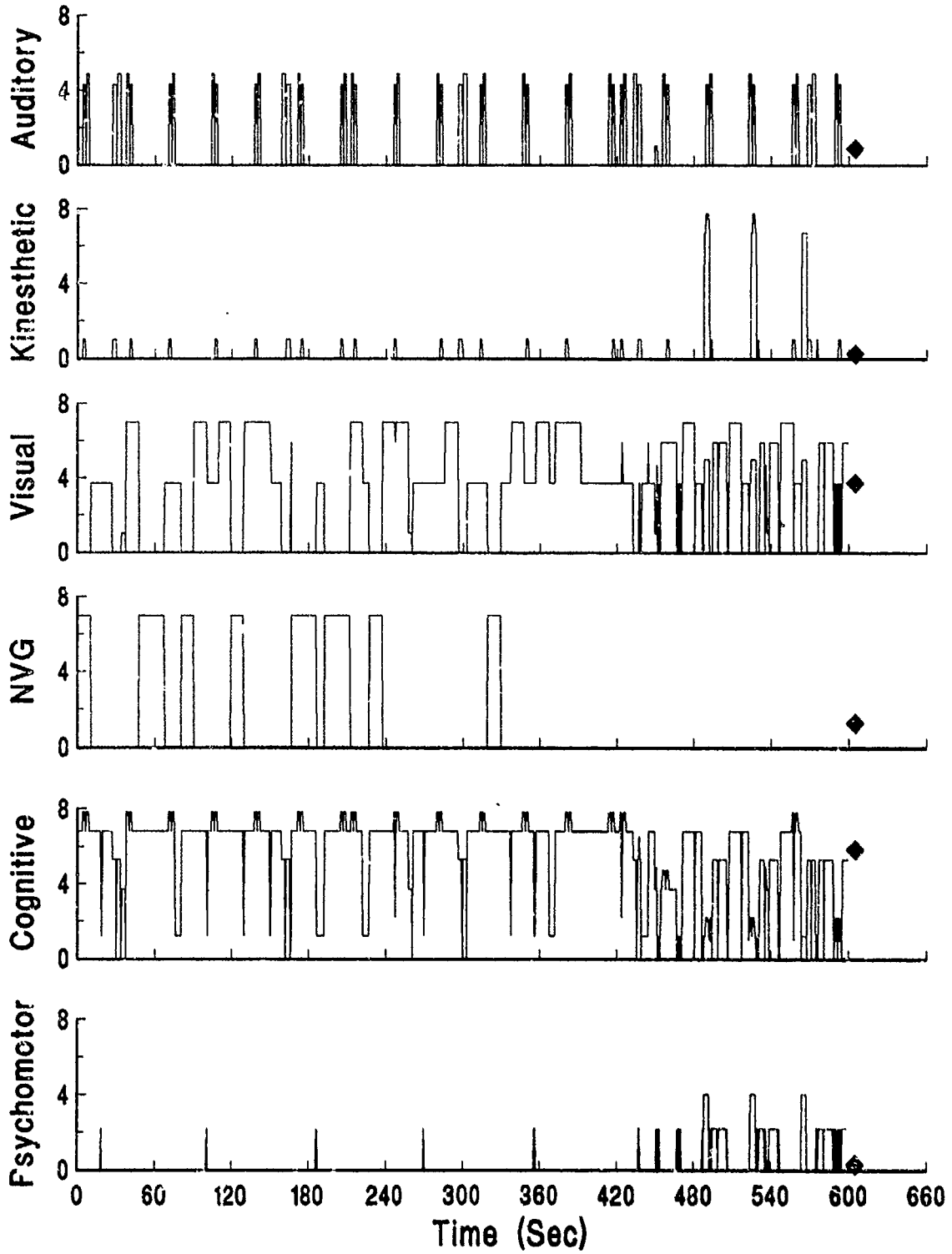
Segment 11: Landing (LZ/Internal Load) [ANVIS]
Copilot - MH-47E



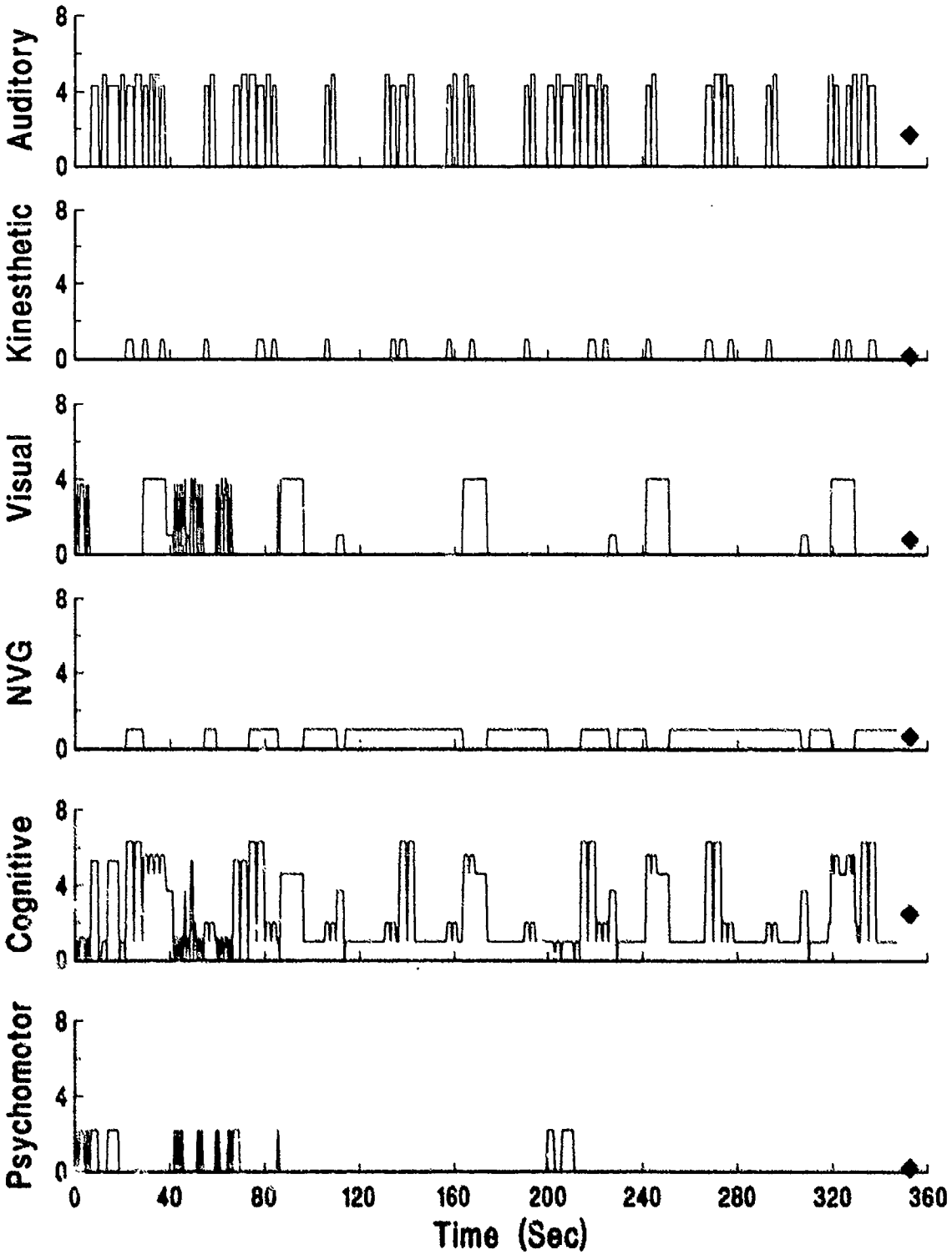
Segment 12: Before Takeoff (LZ) (ANVIS)
Copilot - MH-47E



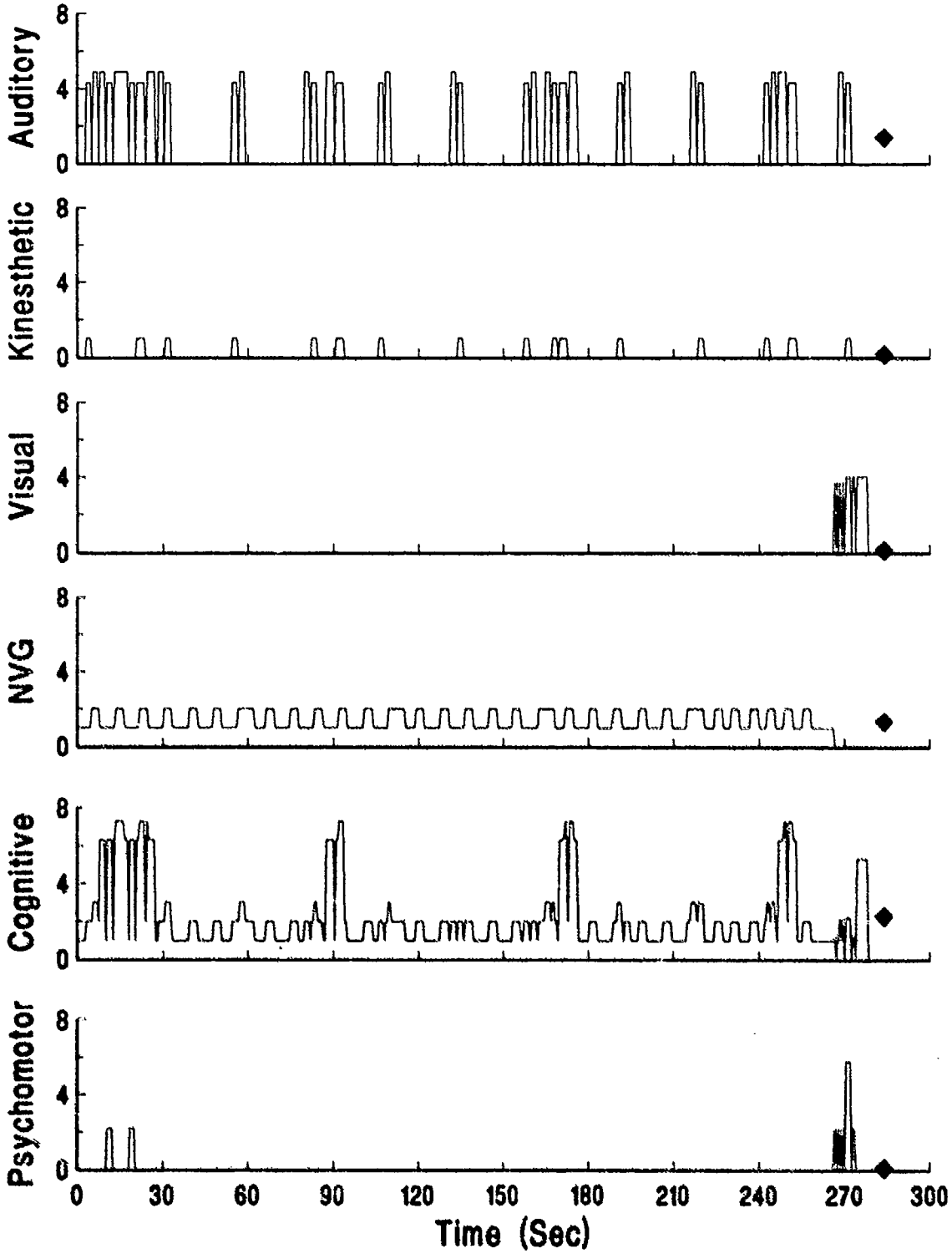
Segment 13: NOE Flight (Route Change) [ANVIS]
Copilot - MH-47E



Segment 14: Approach [ANVIS]
Copilot - MH-47E



Segment 15: Landing [ANVIS]
Copilot - MH-47E



A P P E N D I X N

COMPARISON OF MH-47E AND CH-47D SEGMENT AND FUNCTION LISTS

This appendix contains a list of MH-47E and CH-47D segments and functions that were compared. The MH-47E segments and functions are listed in the left column; the comparable CH-47D segments and functions are listed in the right column. Comparable functions are listed side by side. When no comparable function exists, the column is left blank. Functions added for the MH-47E are indicated by an asterisk.

MH-47E	CH-47D
DEPARTURE (BASE)	**DEPARTURE (ASSEMBLY AREA)**
1--Configure Systems for Mission *Load Mission Plan *Align Navigation Systems *Check Avionics System *Check Map Display System (Pilot) *Check Map Display System (Copilot) *Configure Flight Director *Configure Navigation Radios *Set up Communication Radios Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) Program Transponder *Boresight FLIR Monitor Flight Controls Monitor External Visual Field [NVG] (Pilot)	
2--Before Takeoff (Base/Internal Load) Monitor Flight Controls Perform Before Taxi Check Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) Perform Taxi [NVG] Perform Taxiing Check Perform Before Hover Check Perform Hover Check [NVG] Land Aircraft [NVG] Load Aircraft (Internal) Program Transponder Perform Before Takeoff Check Perform External Communication (Receive Coordination) Monitor External Visual Field [NVG] (Pilot) Monitor External Visual Field [NVG] (Copilot)	**3--Before Takeoff (Assembly Area) [NVG]** Monitor Flight Controls Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Perform Before Taxi Check Perform Taxi Perform Taxiing Check Program Doppler Program Transponder Perform Before Takeoff Check Perform External Communication (Transmit Code) Monitor External Visual Field [NVG] (Pilot) Monitor External Visual Field [NVG] (Copilot)
3--Takeoff [ANVIS] Establish Hover [NVG] Monitor External Visual Field [NVG] (Pilot) Monitor External Visual Field [NVG] (Copilot) Perform Hover [NVG] Establish Climb [NVG] Adjust Climb Parameters [NVG] Check Climb Parameters Establish Level of Flight [NVG] Adjust Level of Flight Parameters [NVG] Check Level of Flight Parameters Monitor Threat (Pilot) Monitor Threat (Copilot) Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination)	**4--Takeoff [NVG]** Establish Hover [NVG] Monitor External Visual Field [NVG] (Pilot) Check External Scene [NVG] (Copilot) Perform Hover Establish Climb [NVG] Adjust Climb Parameters [NVG] Check Climb Parameters Establish Level of Flight [NVG] Adjust Level of Flight Parameters [NVG] Check Level of Flight Parameters Check Fuel Consumption Parameters Check Aircraft Systems (Pilot) Check Aircraft Systems (Copilot) Monitor Threat (Pilot) Monitor Threat (Copilot) Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot)

*Function added for MH-47E

MH-47E	CH-47D
ENROUTE (BASE-RENDEZVOUS)	**ENROUTE (AA-PZ)**
4--Enroute Flight	**6--Contour Flight [NVG]**
	Adjust Flight Parameters [NVG]
	Check Flight Parameters
*Engage Level Flight (Auto)	
Monitor Flight Controls	
Monitor External Visual Field [NVG] (Pilot)	
*Adjust Map Display (Copilot)	
*Adjust Map Display (Pilot)	
*Check Flight Instruments (Auto)	
Perform Navigation [NVG]	Perform Navigation [NVG]
*Perform Navigation (RADAR)	
Monitor Threat (Pilot)	Monitor Threat (Pilot)
Monitor Threat (Copilot)	Monitor Threat (Copilot)
*Monitor FLIR Image (Pilot)	
*Monitor FLIR Image (Copilot)	
Perform Cockpit Communication (Copilot) (Normal)	
Perform Cockpit Communication (Pilot) (Normal)	
Perform Cockpit Communication (Copilot) (Coordination)	
Perform Cockpit Communication (Pilot) (Coordination)	
Perform External Communication (Transmit Code)	
5--Contour Flight (No Update) [ANVIS]	**6--Contour Flight [NVG]**
Adjust Flight Parameters [NVG]	Adjust Flight Parameters [NVG]
Check Flight Parameters	Check Flight Parameters
*Adjust Map Display (Copilot)	
*Adjust Map Display (Pilot)	
Perform Navigation [NVG]	Perform Navigation [NVG]
*Perform Navigation (RADAR)	
Monitor Threat (Pilot)	Monitor Threat (Pilot)
Monitor Threat (Copilot)	Monitor Threat (Copilot)
*Monitor FLIR Image (Pilot)	
*Monitor FLIR Image (Copilot)	
Perform Cockpit Communication (Copilot) (Normal)	
Perform Cockpit Communication (Pilot) (Normal)	
Perform Cockpit Communication (Copilot) (Coordination)	
Perform Cockpit Communication (Pilot) (Coordination)	
Perform External Communication (Transmit Code)	
Monitor External Visual Field [NVG] (Pilot)	
6--Contour Flight (Update) [ANVIS]	**6--Contour Flight [NVG]**
Adjust Flight Parameters [NVG]	Adjust Flight Parameters [NVG]
Check Flight Parameters	Check Flight Parameters
*Adjust Map Display (Copilot)	
Perform Navigation [NVG]	Perform Navigation [NVG]
Monitor Threat (Pilot)	Monitor Threat (Pilot)
Monitor Threat (Copilot)	Monitor Threat (Copilot)
*Monitor RADAR Image (Pilot)	
*Monitor FLIR Image (Pilot)	
*Update Navigation (FLIR)	
*Update Navigation (NRP)	
	Check Aircraft Systems (Copilot)
	Check Aircraft Systems (Pilot)
	Compute Fuel Burn Rate
	Update Doppler (Landmark) [NVG]
	Update Doppler (Stored Destination) [NVG]
Perform Cockpit Communication (Copilot) (Normal)	Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)	Perform Cockpit Communication (Pilot) (Normal)
Perform Cockpit Communication (Copilot) (Coordination)	Perform Cockpit Communication (Copilot)
Perform Cockpit Communication (Pilot) (Coordination)	Perform Cockpit Communication (Pilot)
Perform External Communication (Transmit Code)	Perform External Communication (Transmit Code)
Monitor External Visual Field [NVG] (Pilot)	Monitor External Visual Field [NVG] (Pilot)

*Function added for MH-47E

MH-47E	CH-47D
7--Rendezvous [ANVIS] Monitor Threat (Pilot) Monitor Threat (Copilot) Perform External Communication (Frequency Change) *Perform Rendezvous Check *Perform IFF Proceduras *Perform Rendezvous [NVG] *Perform Aerial Refueling [NVG] *Depart Rendezvous [NVG] Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) *Monitor FLIR Image (Pilot) *Monitor FLIR Image (Copilot) Adjust Level of Flight Parameters [NVG] Check Flight Parameters Monitor External Visual Field [NVG] (Pilot)	
	****FARP OPERATIONS** **36--FARP Procedures [NVG]** Perform Taxi [NVG] Refuel Aircraft Perform Before Taxi Check (FARP) Perform Taxi [NVG] Monitor Flight Control Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Monitor External Visual Field [NVG] (Pilot) Check External Scene [NVG] (Copilot)
ENROUTE (RENDEZVOUS-LZ)	**ENROUTE (PZ-LZ)**
8--NOE Flight [ANVIS] Adjust Flight Parameters [NVG] Check Flight Parameters *Adjust Map Display (Copilot) Perform Navigation [NVG] *Perform Navigation (RADAR) Monitor Threat (Pilot) Monitor Threat (Copilot) Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) Monitor External Visual Field (Pilot) [NVG]	**23--NOE Flight [NVG]** Adjust Flight Parameters [NVG] Check Flight Parameters Perform Navigation [NVG] Monitor Threat (Pilot) Monitor Threat (Copilot) Check Aircraft Systems (Copilot) Check Aircraft Systems (Pilot) Compute Fuel Burn Rate Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Monitor External Visual Field [NVG] (Pilot)

*Function added for MH-47E

**The segments for Approach, Landing, Before Takeoff (FARP), and Takeoff (FARP) are required before and after FARP operations.

MH-47E	CH-47D
ENROUTE (RENDEZVOUS-LZ) [Continued]	**ENROUTE (PZ-LZ) [Continued]**
9--NOE Flight [ANVIS/ASE]	**25--NOE Flight (Threat) [NVG]**
Adjust Flight Parameters [NVG]	Adjust Flight Parameters [NVG]
Check Flight Parameters	Check Flight Parameters
*Adjust Map Display (Copilot)	
Perform Navigation [NVG]	Perform Navigation [NVG]
Monitor Threat (Pilot)	Monitor Threat (Pilot)
Monitor Threat (Copilot)	Monitor Threat (Copilot)
*Monitor RADAR Image (Copilot)	
Respond to Threat [NVG]	
*Update Navigation (FLIR)	
*Perform External Communication (ATHS)	
	Check Aircraft Systems (Copilot)
	Check Aircraft Systems (Pilot)
	Compute Fuel Burn Rate
	Perform External Communication (Threat)
	Respond to Threat [NVG]
Perform Cockpit Communication (Copilot) (Normal)	Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)	Perform Cockpit Communication (Pilot) (Normal)
Perform Cockpit Communication (Copilot) (Coordination)	Perform Cockpit Communication (Copilot)
Perform Cockpit Communication (Pilot) (Coordination)	Perform Cockpit Communication (Pilot)
Monitor External Visual Field [NVG] (Pilot)	Monitor External Visual Field [NVG] (Pilot)
10--Approach (LZ) [ANVIS]	**31--Approach (LZ) [NVG]**
Perform Before Landing Check (LZ)	Perform Before Landing Check (LZ)
Establish Approach [NVG]	Establish Approach [NVG]
Adjust Approach Parameters [NVG]	Adjust Approach Parameters [NVG]
Check Approach Parameters	Check Approach Parameters
Perform Cockpit Communication (Copilot) (Normal)	Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)	Perform Cockpit Communication (Pilot) (Normal)
Perform Cockpit Communication (Copilot) (Coordination)	Perform Cockpit Communication (Copilot)
Perform Cockpit Communication (Pilot) (Coordination)	Perform Cockpit Communication (Pilot)
Monitor Threat (Pilot)	Monitor Threat (Pilot)
Monitor Threat (Copilot)	Monitor Threat (Copilot)
	Check Aircraft Systems (Copilot)
	Check Aircraft Systems (Pilot)
Monitor External Visual Field [NVG] (Pilot)	Monitor External Visual Field [NVG] (Pilot)
Monitor External Visual Field [NVG] (Copilot)	Check External Scene [NVG] (Copilot)
Perform External Communication (Transmit Code)	Perform External Communication (Transmit Code)
11--Landing (LZ Internal Load) [ANVIS]	**32--Landing (LZ Internal Load) [NVG]**
Establish Hover [NVG]	Establish Hover [NVG]
Perform Hover [NVG]	Perform Hover [NVG]
Land Aircraft [NVG]	Land Aircraft [NVG]
Unload Aircraft (Internal)	Unload Aircraft (Internal)
Perform Cockpit Communication (Copilot) (Normal)	Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)	Perform Cockpit Communication (Pilot) (Normal)
Perform Cockpit Communication (Copilot) (Coordination)	Perform Cockpit Communication (Copilot)
Perform Cockpit Communication (Pilot) (Coordination)	Perform Cockpit Communication (Pilot)
Monitor External Visual Field [NVG] (Pilot)	Monitor External Visual Field [NVG] (Pilot)
Monitor External Visual Field [NVG] (Copilot)	Check External Scene [NVG] (Copilot)
Monitor Flight Controls	Monitor Flight Controls

*Function added for MH-47E

MH-47E	CH-47D
ENROUTE (LZ-RENDEZVOUS)	**ENROUTE (LZ-PZ or LZ-FARP)**
12--Before Takeoff (LZ) Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) Perform Before Takeoff Check (LZ) Update Navigation (LZ) Monitor External Visual Field (Pilot) [NVG] Monitor Flight Controls	**38--Before Takeoff (LZ)** Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Perform Before Takeoff Check Update Doppler (PZ) Monitor External Visual Field (Pilot) Monitor Flight Controls
3--Takeoff [ANVIS] Establish Hover [NVG] Monitor External Visual Field [NVG] (Pilot) Perform Hover [NVG] Establish Climb [NVG] Monitor External Visual Field [NVG] (Copilot) Adjust Climb Parameters [NVG] Check Climb Parameters Establish Level of Flight [NVG] Adjust Level of Flight Parameters [NVG] Check Level of Flight Parameters Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) Monitor Threat (Pilot) Monitor Threat (Copilot)	**4--Takeoff [NVG]** Establish Hover [NVG] Perform Hover Establish Climb [NVG] Adjust Climb Parameters [NVG] Check Climb Parameters Establish Level of Flight [NVG] Adjust Level of Flight Parameters [NVG] Check Level of Flight Parameters Check Fuel Consumption Parameters Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Check Aircraft Systems (Pilot) Check Aircraft Systems (Copilot) Monitor Threat (Pilot) Monitor Threat (Copilot) Monitor External Visual Field [NVG] (Pilot) Check External Scene [NVG] (Copilot)
13--NOE Flight (Route Change) [ANVIS] Adjust Flight Parameters [NVG] Check Flight Parameters *Adjust Map Display (Copilot) Perform Navigation [NVG] Monitor Threat (Pilot) Monitor Threat (Copilot) Mission Change Update Navigation (Mission Change) Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) Monitor External Visual Field [NVG] (Pilot)	**27--NOE Flight (Mission Change) [NVG]** Adjust Flight Parameters [NVG] Check Flight Parameters Perform Navigation [NVG] Monitor Threat (Pilot) Monitor Threat (Copilot) Check Aircraft Systems (Copilot) Check Aircraft Systems (Pilot) Compute Fuel Burn Rate Mission Change Update Doppler (Mission Change) Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Monitor External Visual Field [NVG] (Pilot)

*Function added for MH-47E

MH-47E	CH-47D
ENROUTE (LZ-RENDEZVOUS) [Continued]	
7--Rendezvous [ANVIS] Monitor Threat (Pilot) Monitor Threat (Copilot) Perform External Communication (Frequency Change) *Perform Rendezvous Check *Perform Rendezvous [NVG] *Perform IFF Procedures *Perform Aerial Refueling [NVG] *Depart Rendezvous [NVG] Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) *Monitor FLIR Image (Pilot) *Monitor FLIR Image (Copilot) Adjust Level of Flight Parameters [NVG] Check Flight Parameters Monitor External Visual Field [NVG] (Pilot)	
	****FARP OPERATIONS** **36--FARP Procedures [NVG]** Perform Taxi [NVG] Refuel Aircraft Perform Before Taxi Check (FARP) Perform Taxi [NVG] Monitor Flight Control Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Monitor External Visual Field (Pilot) [NVG] Check External Scene [NVG] (Copilot)
ENROUTE (RENDEZVOUS-BASE)	**ENROUTE (AA-PZ)**
6--Contour Flight (Update) [ANVIS] Adjust Flight Parameters [NVG] Check Flight Parameters *Adjust Map Display (Copilot) Perform Navigation [NVG] Monitor Threat (Pilot) Monitor Threat (Copilot) *Monitor RADAR Image (Pilot) *Monitor FLIR Image (Pilot) *Update Navigation (FLIR) *Update Navigation (NRP)	**6--Contour Flight [NVG]** Adjust Flight Parameters [NVG] Check Flight Parameters Perform Navigation [NVG] Monitor Threat (Pilot) Monitor Threat (Copilot) Check Aircraft Systems (Copilot) Check Aircraft Systems (Pilot) Compute Fuel Burn Rate Update Doppler (Landmark) [NVG] Update Doppler (Stored Destination) [NVG]
Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) (Coordination) Perform Cockpit Communication (Pilot) (Coordination) Perform External Communication (Transmit Code) Monitor External Visual Field [NVG] (Pilot)	Perform Cockpit Communication (Copilot) (Normal) Perform Cockpit Communication (Pilot) (Normal) Perform Cockpit Communication (Copilot) Perform Cockpit Communication (Pilot) Perform External Communication (Transmit Code) Monitor External Visual Field [NVG] (Pilot)

*Function added for MH-47E

**The segments for Approach, Landing, Before Takeoff (FARP), and Takeoff (FARP) are required before and after FARP operations.

MH-47E	CH-47D
ENROUTE (RENDEZVOUS-BASE) [Continued]	**ENROUTE (AA-PZ) [Continued]**
14--Approach [ANVIS]	**13--Approach [NVG]**
Perform External Communication (Frequency Change)	Perform External Communication (Frequency Change)
Perform Before Landing Check	Perform Before Landing Check
Establish Approach [NVG]	Establish Approach [NVG]
Adjust Approach Parameters [NVG]	Adjust Approach Parameters [NVG]
Check Approach Parameters	Check Approach Parameters
Monitor External Visual Field [NVG] (Copilot)	
*Monitor FLIR Image (Copilot)	
Perform Cockpit Communication (Copilot) (Normal)	Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)	Perform Cockpit Communication (Pilot) (Normal)
Perform Cockpit Communication (Copilot) (Coordination)	Perform Cockpit Communication (Copilot)
Perform Cockpit Communication (Pilot) (Coordination)	Perform Cockpit Communication (Pilot)
	Check Aircraft Systems (Copilot)
	Check Aircraft Systems (Pilot)
Perform External Communication (Transmit Code)	Perform External Communication (Transmit Code)
Monitor Threat (Pilot)	Monitor Threat (Pilot)
Monitor Threat (Copilot)	Monitor Threat (Copilot)
Monitor External Visual Field (Pilot) [NVG]	Monitor External Visual Field [NVG] (Pilot)
	Check External Scene [NVG] (Copilot)
15--Landing [ANVIS]	**14--Landing [NVG]**
Establish Hover [NVG]	Establish Hover [NVG]
Perform Hover [NVG]	Perform Hover [NVG]
Monitor External Visual Field [NVG] (Copilot)	Check External Scene [NVG] (Copilot)
Land Aircraft [NVG]	Land Aircraft [NVG]
Perform After Landing Check	Perform After Landing Check
Perform External Communication (Receive Coordination)	Perform External Communication (Receive Coordination)
Perform Cockpit Communication (Copilot) (Normal)	Perform Cockpit Communication (Copilot) (Normal)
Perform Cockpit Communication (Pilot) (Normal)	Perform Cockpit Communication (Pilot) ((Normal)
Perform Cockpit Communication (Copilot) (Coordination)	Perform Cockpit Communication (Copilot)
Perform Cockpit Communication (Pilot) (Coordination)	Perform Cockpit Communication (Pilot)
Monitor External Visual Field (Pilot) [NVG]	Monitor External Visual Field (Pilot) [NVG]

*Function added for MH-47E