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Operator Workload Predictions for the Revised AH-64A Workload Prediction Model

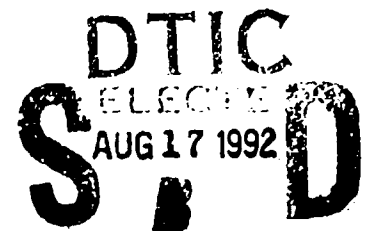
Volume II: Appendixes A Through H

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13. ABSTRACT (Maximum 200 words) Under a previous contract, researchers used a composite scenario to conduct a comprehensive task analysis of the AH-64A attack mission. The analysis produced workload estimates and decision rules for developing an AH-64A workload prediction model. For this research, the task analysis/workload (TAWL) methodology was used to construct a workload prediction model. The TAWL Operator Simulation System (TOSS) was used to implement the model on an IBM-compatible microcomputer, and the original function and task analysis was refined to produce a more accurate simulation of crew task activity. In addition, the ordinal workload rating scales used in the original analysis were replaced with equal-interval scales. The predictions generated by the model constructed for this research indicate that under optimum conditions (a) neither the pilot nor the copilot/gunner experiences excessive workload, (b) the pilot has higher overall workload than the copilot/gunner in most mission segments, and (c) AH-64A workload is high relative to other Army aircraft that have been analyzed for workload. This model can be used as a baseline for analyzing future modifications to the aircraft. Volume I (ARI Research Note 92-61) of the report (Continued)				
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summarizes the results of the research, and contains a 5.25-inch floppy diskette with model data files. This report (Volume II) contains the appendixes, which present the AH-64A mission/task/workload analysis, decision rules, and workload predictions.

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OPERATOR WORKLOAD PREDICTIONS FOR THE REVISED AH-64A WORKLOAD
PREDICTION MODEL: Volume II: Appendixes A Through H

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OPERATOR WORKLOAD PREDICTIONS FOR THE REVISED
AH-64A WORKLOAD PREDICTION MODEL

Volume II: Appendixes A Through H

Introduction

This two-volume report describes the methodology used to conduct a comprehensive task analysis of the AH-64A mission and the results of the analysis. Information provided by the AH-64A mission/task/workload analysis was used to establish a data base and to develop a computer model that predicts workload for the AH-64A pilot and copilot/gunner. 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. Volume II contains appendixes A through H.

Appendixes A through D present the results of the task analysis of the AH-64A mission scenario:

- Appendix A summarizes the segments within each AH-64A mission phase,
- Appendix B presents a list of the unique AH-64A mission functions,
- Appendix C summarizes the AH-64A functions within each mission segment, and
- Appendix D presents a list of the unique AH-64A tasks, their numerical identifiers, associated subsystems, and component workload ratings.

The task analysis results were used in the construction of the AH-64A workload prediction model. The workload rating scales and the subsystems referred to in Appendix D are presented in Volume I, Table 1 and Table 2, respectively.

Appendixes E through H present the decision rules for construction of the AH-64A workload prediction model and the results from exercising the model.

- Appendix E presents the Function Decision Rules,
- Appendix F presents the Segment Decision Rules, and
- Appendixes G and H contain graphs that present the workload predictions for the pilot and copilot/gunner for each of the 52 AH-64A mission segments.

The graphs in appendixes G and H present the total workload for each of the five components for all tasks the crewmember 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.

A P P E N D I X A

SUMMARY OF AH-64A MISSION PHASES AND SEGMENTS

The AH-64A mission scenario was divided into 7 unique mission phases. Subsequently, the 7 mission phases were divided into segments. Appendix A lists the 7 phases and the 52 unique mission segments that were derived during the AH-64A mission analysis.

AH-64A Mission Phases and Segments

Preflight Phase (1)

- Segment 01: Flight Planning
- 02: Exterior Cockpit Check
- 03: Preflight Walk Around
- 04: Interior Cockpit Check
- 05: Starting APU
- 06: After Starting APU

Departure Phase (2)

- Segment 07: Taxi
- * 08: Takeoff (Contour)

Enroute Phase (3)

- Segment 09: Contour Flight
- 10: NOE Flight
- * 11: Approach (Contour)
- * 12: Approach (NOE)
- * 13: Landing
- 14: Holding Area Operations (Inbound)
- 15: Holding Area Operations (Outbound)
- * 16: Takeoff (NOE)

Target Servicing Phase (4)

- Segment 17: Establishment of Battle Position
- 18: Deployment in Battle Area
- 19: Target Handover (Laser Spot Tracker)
- 20: Target Handover, Grid (Missile)
- 21: Target Handover, Grid (Gun, Pilot)
- 22: Target Handover, Grid (Gun, Gunner)
- 23: Target Handover, Grid (Gun, Gunner, Laser Range)
- 24: Target Handover, Grid (FFAR, Pilot)
- 25: Target Handover, Grid (FFAR, Cooperative)
- 26: Acquisition (DTV)
- 27: Acquisition (DTV, Laser Spot Tracker, Manual)
- 28: Acquisition (DTV, Laser Spot Tracker, Automatic)
- 29: Acquisition (DVO)
- 30: Acquisition (DVO, Laser Spot Tracker, Manual)
- 31: Acquisition (DVO, Laser Spot Tracker, Automatic)
- 32: Acquisition (FLIR)
- 33: Acquisition (FLIR, Laser Spot Tracker, Manual)
- 34: Acquisition (FLIR, Laser Spot Tracker, Automatic)
- 35: Engagement, LOAL (Autonomous, Manual Track)
- 36: Engagement, LOAL (Autonomous, IAT)

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

Target Servicing Phase (4) [Continued]

- 37: Engagement, LOAL (Autonomous, IAT Offset)
- 38: Engagement, LOAL (Remote Designation)
- 39: Engagement, LOBL (Autonomous, Manual Track)
- 40: Engagement, LOBL (Autonomous, IAT)
- 41: Engagement, LOBL (Autonomous, IAT Offset)
- 42: Engagement, LOBL (Remote Designation)
- 43: Engagement, Gun (Pilot, IHADSS)
- 44: Engagement, Gun (Gunner, IHADSS)
- 45: Engagement, Gun (Gunner, TADS, IAT)
- 46: Engagement, FFAR (Pilot)
- 47: Engagement, FFAR (Coop)
- 48: Engagement, LOAL (Rapid Fire)
- 49: Engagement, LOAL (Ripple Fire)

FARP Operations Phase (5)

- * Segment 12: Approach (NOE)
- * 13: Landing
- 50: FARP Procedures
- * 16: Takeoff (NOE)

Terminal Operations Phase (6)

- * Segment 11: Approach (Contour)
- * 13: Landing

Postflight Phase (7)

- Segment 51: Engine Shutdown
- 52: Before Leaving Aircraft

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

A P P E N D I X B

AH-64A MISSION FUNCTIONS AND NUMERICAL IDENTIFIERS

Each mission segment was divided into functions during the AH-64A mission analysis. One hundred eighty-four unique functions were identified. Subsequently, the 184 unique functions were each assigned a number. Appendix B lists the functions and their numerical identifiers.

NUMBER	FUNCTION
1	Acquire Target (DTV)
2	Acquire Target (Laser Spot Tracker, Automatic)
3	Acquire Target (Laser Spot Tracker, Manual)
4	Acquire Target (DVO)
5	Monitor Audio (Pilot)
6	Monitor Audio (Gunner)
7	Acquire Target (FLIR)
8	Disengage Image Autotracking
9	Disengage Image Autotracking Offset
10	Activate Ignition
11	Adjust IHADSS Boresight (Gunner)
12	Adjust IHADSS Boresight (Pilot)
13	Adjust Outfront Boresight
14	Arrange Cockpit (Gunner)
15	Arrange Cockpit (Pilot)
16	Change Battle Position
17	Check Aircraft Systems (Gunner)
18	Check Aircraft Systems (Pilot)
19	Check Area Security (Sensor Search)
20	Check Area Security (Visual Search)
21	Check Armament Subsystems (Gunner)
22	Check Armament Subsystems (Pilot)
23	Check Cockpit Conditions (Gunner)
24	Check Cockpit Conditions (Pilot)
25	Check Collective Switches (Gunner)
26	Check Collective Switches (Pilot)
27	Check Engine 1 ECU Lockout System
28	Check Engine 2 ECU Lockout System
29	Check Engine Chop Circuit
30	Check Fuel Sample

NUMBER	FUNCTION
31	Check Helmet (Gunner)
32	Check Helmet (Pilot)
33	Check Instrument Panel (Gunner)
34	Check Instrument Panel (Pilot)
35	Check Left Control Console (Gunner)
36	Check Left Control Console (Pilot)
37	Check Left Side - Fuselage and Nose
38	Check Left Side - Mast
39	Check Left Side - Rear Fuselage
40	Check Left Side - Wing
41	Check Overhead Panel
42	Check Right Control Console (Gunner)
43	Check Right Control Console (Pilot)
44	Check Right Side - Mast
45	Check Right Side - Rear Fuselage
46	Check Right Side - Under Fuselage
47	Check Right Side - Wing
48	Check Security Devices
49	Complete TAMMS Forms
50	Compute Fuel Burn Rate
51	Conduct Postflight Walk Around
52	Consolidate Forces
53	Coordinate Mission
54	Deactivate APU
55	Designate Target (LOAL)
56	Designate Target (LOBL)
57	Enter Fire Control Data
58	Enter Target Data
59	Establish Approach
60	Establish Climb
61	Establish Level of Flight

NUMBER	FUNCTION
62	Evaluate Position
63	Fire Weapon, Gun (Gunner)
64	Check Gun Parameters
65	Fire Weapon, Gun (Pilot)
66	Fire Weapon, Missile (LOAL)
67	Fire Weapon, Missile (LOBL)
68	This Function Slot Not Used
69	Call for Lase (Remote)
70	Prepare for Ripple Fire (LOAL)
71	Fire Weapon, Rocket
72	Fire Weapon, Rocket (Cooperative)
73	Fly Contour
74	Fly NOE
75	Hover Masked
76	Hover Unmasked
77	Idle Engines
78	Initiate Cockpit Communication (Coord-Gunner)
79	Initiate Cockpit Communication (Coord-Pilot)
80	Land Aircraft
81	Load Weapons (Rearming)
82	Mask Aircraft
83	Monitor Audio (Both)
84	Monitor Threat (Pilot)
85	Perform After Landing Check
86	Perform After Starting APU Check (Gunner)
87	Perform After Starting APU Check (Pilot)
88	Perform Aircraft Position Update
89	Perform Before Engine Shutdown Check
90	Perform Before Landing Check (Gunner)
91	Perform Before Landing Check (Pilot)
92	Perform Before Starting APU Check (Gunner)

NUMBER	FUNCTION
93	Perform Before Starting APU Check (Pilot)
94	Perform Before Starting Engines Check
95	Perform Before Takeoff Check (Gunner)
96	Perform Before Takeoff Check (Pilot)
97	Perform Before Taxi Check
98	Perform Before Taxi Check (FARP)
99	Perform Cockpit Safety Check (Gunner)
100	Perform Cockpit Safety Check (Pilot)
101	Perform Engine 1 Overspeed Test
102	Perform Engine 2 Overspeed Test
103	Perform External Communication (Gunner)
104	Perform External Communication (Pilot)
105	Perform Hover
106	Perform IHADSS Operational Check (Gunner)
107	Perform Navigation
108	Perform PNVIS Operational Check
109	Perform Postflight Cockpit Check (Gunner)
110	Perform Postflight Cockpit Check (Pilot)
111	Perform TADS Operational Checks
112	Perform Target Store Procedures
113	Perform Taxi
114	Perform Taxi Check
115	Place Aircraft in Constraints
116	Plan Mission
117	Prepare Laser Spot Tracker
118	Prepare Performance Planning Card
119	Prepare Weight and Balance Form
120	Program Doppler
121	Program Transponder
122	Receive External Communication (Gunner)
123	Receive External Communication (Pilot)

NUMBER	FUNCTION
124	Receive Handover
125	Refuel Aircraft
126	Respond to Threat
127	Restart Engine
128	Secure Aircraft
129	Secure Weapons Systems (Gunner)
130	Secure Weapons Systems (Pilot)
131	Select Firing Position
132	Select Sensor (DTV)
133	Select Sensor (DVO)
134	Select Sensor (FLIR)
135	Select Weapon, FFAR (Cooperative)
136	Select Weapon, FFAR (Pilot)
137	Select Weapon, Gun (Gunner)
138	Select Weapon, Gun (Gunner, Laser Range)
139	Select Weapon, Gun (Pilot)
140	Select Weapon, Missile
141	Select Weapon, Missile (Remote Designation)
142	Set TADS Internal Boresight (DTV)
143	Set TADS Internal Boresight (DVO)
144	Set TADS Internal Boresight (FLIR)
145	Shut Down Engines
146	Start APU (Postflight)
147	Start APU (Preflight)
148	Start First Engine
149	Start Second Engine
150	Track Target (IHADSS / Gunner)
151	Track Target (IHADSS / Pilot)
152	Track Target (Image Autotracker)
153	Track Target (Image Autotracker Offset)
154	Track Target (Manual)

NUMBER	FUNCTION
155	Transmit Message (Attack Coordination)
156	Unmask Aircraft
157	Update Doppler (Landmark)
158	Update Doppler (Stored Destination)
159	This Function Slot Not Used
160	Position Aircraft For Boresight
161	Perform Before Hover Check
162	Establish Hover
163	Monitor Flight Controls
164	Adjust Climb Parameters
165	Check Climb Parameters
166	This Function Slot Not Used
167	Check Level of Flight Parameters
168	Adjust Level of Flight Parameters
169	Check Fuel Consumption Parameters
170	Check Flight Parameters
171	Adjust Approach Parameters
172	Check Approach Parameters
173	This Function Slot Not Used
174	Check Exposure Time
175	Check Weapon Clearance
176	Evaluate Obstacle Clearance (Gunner)
177	Evaluate Obstacle Clearance (Pilot)
178	Initiate Cockpit Communication (Normal-Gunner)
179	Initiate Cockpit Communication (Normal-Pilot)
180	Monitor External Visual Scene (Gunner)
181	Monitor External Visual Scene (Pilot)
182	Monitor Threat (Gunner)
183	Perform Hover Hold
184	Monitor HAD (TOF, Lase)
185	This Function Slot Not Used

NUMBER	FUNCTION
186	This Function Slot Not Used
187	Monitor Audio (Pilot)
188	Check HAD Fire Message (Gunner)
189	Check HAD Message (Pilot)
190	This Function Slot Not Used
191	Acquire Laser Range

A P P E N D I X C

OUTLINE OF AH-64A MISSION SEGMENTS AND FUNCTIONS

A mission scenario was developed as the first step in the AH-64A mission/task/workload analysis. Subsequently, the AH-64A mission scenario was divided into 7 unique mission phases. The 7 mission phases were then divided into segments and functions. Appendix C lists the segments and functions as they occur in each of the 7 mission phases throughout the mission scenario.

PHASE 1: PREFLIGHT

Segment 1: Flight Planning

Function 116 Plan Mission
118 Prepare Performance Planning Card
119 Prepare Weight and Balance Form

Segment 2: Exterior Cockpit Check

Function 10 Activate Ignition
21 Check Armament Subsystems (Gunner)
22 Check Armament Subsystems (Pilot)
23 Check Cockpit Conditions (Gunner)
24 Check Cockpit Conditions (Pilot)
48 Check Security Devices
99 Perform Cockpit Safety Check (Gunner)
100 Perform Cockpit Safety Check (Pilot)

Segment 3: Preflight Walk Around

Function 30 Check Fuel Sample
37 Check Left Side - Fuselage and Nose
38 Check Left Side - Mast
39 Check Left Side - Rear Fuselage
40 Check Left Side - Wing
44 Check Right Side - Mast
45 Check Right Side - Rear Fuselage
46 Check Right Side - Under Fuselage
47 Check Right Side - Wing

Segment 4: Interior Cockpit Check

Function 14 Arrange Cockpit (Gunner)
15 Arrange Cockpit (Pilot)
25 Check Collective Switches (Gunner)
26 Check Collective Switches (Pilot)
31 Check Helmet (Gunner)
32 Check Helmet (Pilot)
33 Check Instrument Panel (Gunner)
34 Check Instrument Panel (Pilot)
35 Check Left Control Console (Gunner)
36 Check Left Control Console (Pilot)
41 Check Overhead Panel
42 Check Right Control Console (Gunner)
43 Check Right Control Console (Pilot)

Segment 5: Starting APU

Function 78 Initiate Cockpit Communication (Coord-Gunner)
79 Initiate Cockpit Communication (Coord-Pilot)
83 Monitor Audio (Both)
92 Perform Before Starting APU Check (Gunner)
93 Perform Before Starting APU Check (Pilot)
147 Start APU (Preflight)

Segment 6: After Starting APU

Function	11	Adjust IHADSS Boresight (Gunner)
	12	Adjust IHADSS Boresight (Pilot)
	27	Check Engine 1 ECU Lockout System
	28	Check Engine 2 ECU Lockout System
	29	Check Engine Chop Circuit
	54	Deactivate APU
	57	Enter Fire Control Data
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	83	Monitor Audio (Both)
	86	Perform After Starting APU Check (Gunner)
	87	Perform After Starting APU Check (Pilot)
	94	Perform Before Starting Engines Check
	101	Perform Engine 1 Overspeed Test
	102	Perform Engine 2 Overspeed Test
	106	Perform IHADSS Operational Check (Gunner)
	108	Perform PNVIS Operational Check
	111	Perform TADS Operational Checks
	120	Program Doppler
	121	Program Transponder
	142	Set TADS Internal Boresight (DTV)
	143	Set TADS Internal Boresight (DVO)
	144	Set TADS Internal Boresight (FLIR)
	148	Start First Engine
	149	Start Second Engine

PHASE 2: DEPARTURE

Segment 7: Taxi

Function	13	Adjust Outfront Boresight
	17	Check Aircraft Systems (Gunner)
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	83	Monitor Audio (Both)
	97	Perform Before Taxi Check
	103	Perform External Communication (Gunner)
	113	Perform Taxi
	114	Perform Taxi Check
	160	Position Aircraft For Boresight
	163	Monitor Flight Controls
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)

Segment 8: Takeoff (Contour)

Function	17	Check Aircraft Systems (Gunner)
	18	Check Aircraft Systems (Pilot)
	60	Establish Climb

Segment 8: Takeoff (Contour) [continued]

Function	61	Establish Level of Flight
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	95	Perform Before Takeoff Check (Gunner)
	96	Perform Before Takeoff Check (Pilot)
	103	Perform External Communication (Gunner)
	105	Perform Hover
	161	Perform Before Hover Check
	162	Establish Hover
	164	Adjust Climb Parameters
	165	Check Climb Parameters
	167	Check Level of Flight Parameters
	168	Adjust Level of Flight Parameters
	169	Check Fuel Consumption Parameters
	176	Evaluate Obstacle Clearance (Gunner)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)
	182	Monitor Threat (Gunner)

PHASE 3: EN ROUTE

Segment 9: Contour Flight

Function	5	Monitor Audio (Pilot)
	6	Monitor Audio (Gunner)
	17	Check Aircraft Systems (Gunner)
	18	Check Aircraft Systems (Pilot)
	50	Compute Fuel Burn Rate
	73	Fly Contour
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	84	Monitor Threat (Pilot)
	103	Perform External Communication (Gunner)
	104	Perform External Communication (Pilot)
	107	Perform Navigation
	122	Receive External Communication (Gunner)
	123	Receive External Communication (Pilot)
	126	Respond to Threat
	157	Update Doppler (Landmark)
	158	Update Doppler (Stored Destination)
	170	Check Flight Parameters
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)

Segment 10: NOE Flight

Function	5	Monitor Audio (Pilot)
	6	Monitor Audio (Gunner)
	17	Check Aircraft Systems (Gunner)
	18	Check Aircraft Systems (Pilot)
	50	Compute Fuel Burn Rate
	74	Fly NOE
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	84	Monitor Threat (Pilot)
	88	Perform Aircraft Position Update
	103	Perform External Communication (Gunner)
	104	Perform External Communication (Pilot)
	107	Perform Navigation
	122	Receive External Communication (Gunner)
	123	Receive External Communication (Pilot)
	126	Respond to Threat
	157	Update Doppler (Landmark)
	158	Update Doppler (Stored Destination)
	170	Check Flight Parameters
	176	Evaluate Obstacle Clearance (Gunner)
	177	Evaluate Obstacle Clearance (Pilot)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)

Segment 11: Approach (Contour)

Function	17	Check Aircraft Systems (Gunner)
	18	Check Aircraft Systems (Pilot)
	59	Establish Approach
	73	Fly Contour
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	83	Monitor Audio (Both)
	90	Perform Before Landing Check (Gunner)
	91	Perform Before Landing Check (Pilot)
	103	Perform External Communication (Gunner)
	171	Adjust Approach Parameters
	172	Check Approach Parameters
	176	Evaluate Obstacle Clearance (Gunner)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)
	187	Monitor Audio (Pilot)

Segment 12: Approach (NOE)

Function	17	Check Aircraft Systems (Gunner)
	18	Check Aircraft Systems (Pilot)
	59	Establish Approach

Segment 12: Approach (NOE) [continued]

Function 74 Fly NOE
78 Initiate Cockpit Communication (Coord-Gunner)
79 Initiate Cockpit Communication (Coord-Pilot)
83 Monitor Audio (Both)
84 Monitor Threat (Pilot)
90 Perform Before Landing Check (Gunner)
91 Perform Before Landing Check (Pilot)
103 Perform External Communication (Gunner)
171 Adjust Approach Parameters
172 Check Approach Parameters
176 Evaluate Obstacle Clearance (Gunner)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)
187 Monitor Audio (Pilot)

Segment 13: Landing

Function 17 Check Aircraft Systems (Gunner)
78 Initiate Cockpit Communication (Coord-Gunner)
79 Initiate Cockpit Communication (Coord-Pilot)
80 Land Aircraft
83 Monitor Audio (Both)
85 Perform After Landing Check
104 Perform External Communication (Pilot)
105 Perform Hover
162 Establish Hover
163 Monitor Flight Controls
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)

Segment 14: Holding Area Operations (Inbound)

Function 19 Check Area Security (Sensor Search)
20 Check Area Security (Visual Search)
53 Coordinate Mission
83 Monitor Audio (Both)
163 Monitor Flight Controls
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)

Segment 15: Holding Area Operations (Outbound)

Function 19 Check Area Security (Sensor Search)
20 Check Area Security (Visual Search)
52 Consolidate Forces
83 Monitor Audio (Both)
163 Monitor Flight Controls

Segment 15: Holding Area Operations (Outbound) [continued]
 Function 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)

Segment 16: Takeoff (NOE)
 Function 17 Check Aircraft Systems (Gunner)
 18 Check Aircraft Systems (Pilot)
 60 Establish Climb
 61 Establish Level of Flight
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 95 Perform Before Takeoff Check (Gunner)
 96 Perform Before Takeoff Check (Pilot)
 103 Perform External Communication (Gunner)
 105 Perform Hover
 161 Perform Before Hover Check
 162 Establish Hover
 164 Adjust Climb Parameters
 165 Check Climb Parameters
 167 Check Level of Flight Parameters
 168 Adjust Level of Flight Parameters
 169 Check Fuel Consumption Parameters
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 182 Monitor Threat (Gunner)

PHASE 4: TARGET SERVICING

Segment 17: Establishment of Battle Position
 Function 18 Check Aircraft Systems (Pilot)
 62 Evaluate Position
 75 Hover Masked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 131 Select Firing Position
 162 Establish Hover
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)

Segment 18: Deployment in Battle Area
 Function 16 Change Battle Position

Segment 18: Deployment in Battle Area [continued]
 Function 18 Check Aircraft Systems (Pilot)
 62 Evaluate Position
 75 Hover Masked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 124 Receive Handover
 131 Select Firing Position
 170 Check Flight Parameters
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 187 Monitor Audio (Pilot)

Segment 19: Target Handover (Laser Spot Tracker)
 Function 5 Monitor Audio (Pilot)
 6 Monitor Audio (Gunner)
 18 Check Aircraft Systems (Pilot)
 75 Hover Masked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 84 Monitor Threat (Pilot)
 117 Prepare Laser Spot Tracker
 124 Receive Handover
 141 Select Weapon, Missile (Remote Designation)
 181 Monitor External Visual Scene (Pilot)
 183 Perform Hover Hold

Segment 20: Target Handover, Grid (Missile)
 Function 5 Monitor Audio (Pilot)
 6 Monitor Audio (Gunner)
 18 Check Aircraft Systems (Pilot)
 58 Enter Target Data
 75 Hover Masked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 84 Monitor Threat (Pilot)
 124 Receive Handover
 140 Select Weapon, Missile
 181 Monitor External Visual Scene (Pilot)
 183 Perform Hover Hold

Segment 21: Target Handover, Grid (Gun, Pilot)
 Function 5 Monitor Audio (Pilot)
 6 Monitor Audio (Gunner)
 18 Check Aircraft Systems (Pilot)
 58 Enter Target Data
 75 Hover Masked

Segment 21: Target Handover, Grid (Gun, Pilot) [continued]
 Function 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 84 Monitor Threat (Pilot)
 124 Receive Handover
 139 Select Weapon, Gun (Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 183 Perform Hover Hold

Segment 22: Target Handover, Grid (Gun, Gunner)
 Function 5 Monitor Audio (Pilot)
 6 Monitor Audio (Gunner)
 18 Check Aircraft Systems (Pilot)
 58 Enter Target Data
 75 Hover Masked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 84 Monitor Threat (Pilot)
 124 Receive Handover
 137 Select Weapon, Gun (Gunner)
 181 Monitor External Visual Scene (Pilot)
 183 Perform Hover Hold

Segment 23: Target Handover, Grid (Gun, Gunner, Laser Range)
 Function 5 Monitor Audio (Pilot)
 6 Monitor Audio (Gunner)
 18 Check Aircraft Systems (Pilot)
 58 Enter Target Data
 75 Hover Masked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 84 Monitor Threat (Pilot)
 124 Receive Handover
 138 Select Weapon, Gun (Gunner, Laser Range)
 181 Monitor External Visual Scene (Pilot)
 183 Perform Hover Hold

Segment 24: Target Handover, Grid (FFAR, Pilot)
 Function 6 Monitor Audio (Gunner)
 18 Check Aircraft Systems (Pilot)
 58 Enter Target Data
 75 Hover Masked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 84 Monitor Threat (Pilot)
 124 Receive Handover
 136 Select Weapon, FFAR (Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 183 Perform Hover Hold

Segment 25: Target Handover, Grid (FFAR, Cooperative)

Function	5	Monitor Audio (Pilot)
	6	Monitor Audio (Gunner)
	18	Check Aircraft Systems (Pilot)
	58	Enter Target Data
	75	Hover Masked
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	84	Monitor Threat (Pilot)
	124	Receive Handover
	135	Select Weapon, FFAR (Cooperative)
	181	Monitor External Visual Scene (Pilot)
	183	Perform Hover Hold

Segment 26: Acquisition (DTV)

Function	1	Acquire Target (DTV)
	18	Check Aircraft Systems (Pilot)
	76	Hover Unmasked
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	112	Perform Target Store Procedures
	132	Select Sensor (DTV)
	156	Unmask Aircraft
	174	Check Exposure Time
	175	Check Weapon Clearance
	176	Evaluate Obstacle Clearance (Gunner)
	177	Evaluate Obstacle Clearance (Pilot)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	181	Monitor External Visual Scene (Pilot)

Segment 27: Acquisition (DTV, Laser Spot Tracker, Manual)

Function	3	Acquire Target (Laser Spot Tracker, Manual)
	18	Check Aircraft Systems (Pilot)
	76	Hover Unmasked
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	112	Perform Target Store Procedures
	132	Select Sensor (DTV)
	156	Unmask Aircraft
	174	Check Exposure Time
	175	Check Weapon Clearance
	176	Evaluate Obstacle Clearance (Gunner)
	177	Evaluate Obstacle Clearance (Pilot)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	181	Monitor External Visual Scene (Pilot)

Segment 28: Acquisition (DTV, Laser Spot Tracker, Automatic)

Function	2	Acquire Target (Laser Spot Tracker, Automatic)
	18	Check Aircraft Systems (Pilot)

Segment 28: Acquisition (DTV, Laser Spot Tracker, Automatic) [Cont]

Function 76 Hover Unmasked
83 Monitor Audio (Both)
84 Monitor Threat (Pilot)
112 Perform Target Store Procedures
132 Select Sensor (DTV)
156 Unmask Aircraft
174 Check Exposure Time
175 Check Weapon Clearance
176 Evaluate Obstacle Clearance (Gunner)
177 Evaluate Obstacle Clearance (Pilot)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
181 Monitor External Visual Scene (Pilot)

Segment 29: Acquisition (DVO)

Function 4 Acquire Target (DVO)
18 Check Aircraft Systems (Pilot)
76 Hover Unmasked
83 Monitor Audio (Both)
84 Monitor Threat (Pilot)
112 Perform Target Store Procedures
133 Select Sensor (DVO)
156 Unmask Aircraft
174 Check Exposure Time
175 Check Weapon Clearance
176 Evaluate Obstacle Clearance (Gunner)
177 Evaluate Obstacle Clearance (Pilot)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
181 Monitor External Visual Scene (Pilot)

Segment 30: Acquisition (DVO, Laser Spot Tracker, Manual)

Function 3 Acquire Target (Laser Spot Tracker, Manual)
18 Check Aircraft Systems (Pilot)
76 Hover Unmasked
83 Monitor Audio (Both)
84 Monitor Threat (Pilot)
112 Perform Target Store Procedures
133 Select Sensor (DVO)
156 Unmask Aircraft
174 Check Exposure Time
175 Check Weapon Clearance
176 Evaluate Obstacle Clearance (Gunner)
177 Evaluate Obstacle Clearance (Pilot)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
181 Monitor External Visual Scene (Pilot)

Segment 31: Acquisition (DVO, Laser Spot Tracker, Automatic)

Function 2 Acquire Target (Laser Spot Tracker, Automatic)

Segment 31: Acquisition (DVO, Laser Spot Tracker, Automatic) (Cont)

Function	18	Check Aircraft Systems (Pilot)
	76	Hover Unmasked
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	112	Perform Target Store Procedures
	133	Select Sensor (DVO)
	156	Unmask Aircraft
	174	Check Exposure Time
	175	Check Weapon Clearance
	176	Evaluate Obstacle Clearance (Gunner)
	177	Evaluate Obstacle Clearance (Pilot)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	181	Monitor External Visual Scene (Pilot)

Segment 32: Acquisition (FLIR)

Function	7	Acquire Target (FLIR)
	18	Check Aircraft Systems (Pilot)
	76	Hover Unmasked
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	112	Perform Target Store Procedures
	134	Select Sensor (FLIR)
	156	Unmask Aircraft
	174	Check Exposure Time
	175	Check Weapon Clearance
	176	Evaluate Obstacle Clearance (Gunner)
	177	Evaluate Obstacle Clearance (Pilot)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	181	Monitor External Visual Scene (Pilot)

Segment 33: Acquisition (FLIR, Laser Spot Tracker, Manual)

Function	3	Acquire Target (Laser Spot Tracker, Manual)
	18	Check Aircraft Systems (Pilot)
	76	Hover Unmasked
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	112	Perform Target Store Procedures
	134	Select Sensor (FLIR)
	156	Unmask Aircraft
	174	Check Exposure Time
	175	Check Weapon Clearance
	176	Evaluate Obstacle Clearance (Gunner)
	177	Evaluate Obstacle Clearance (Pilot)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	181	Monitor External Visual Scene (Pilot)

Segment 34: Acquisition (FLIR, Laser Spot Tracker, Automatic)
 Function 2 Acquire Target (Laser Spot Tracker, Automatic)
 18 Check Aircraft Systems (Pilot)
 76 Hover Unmasked
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 112 Perform Target Store Procedures
 134 Select Sensor (FLIR)
 156 Unmask Aircraft
 174 Check Exposure Time
 175 Check Weapon Clearance
 176 Evaluate Obstacle Clearance (Gunner)
 177 Evaluate Obstacle Clearance (Pilot)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 181 Monitor External Visual Scene (Pilot)

Segment 35: Engagement, LOAL (Autonomous, Manual Track)
 Function 18 Check Aircraft Systems (Pilot)
 55 Designate Target (LOAL)
 66 Fire Weapon, Missile (LOAL)
 76 Hover Unmasked
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 154 Track Target (Manual)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 184 Monitor HAD (TOF, Lase)

Segment 36: Engagement, LOAL (Autonomous, IAT)
 Function 8 Disengage Image Autotracking
 18 Check Aircraft Systems (Pilot)
 55 Designate Target (LOAL)
 66 Fire Weapon, Missile (LOAL)
 76 Hover Unmasked
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 152 Track Target (Image Autotracker)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 184 Monitor HAD (TOF, Lase)

Segment 37: Engagement, LOAL (Autonomous, IAT Offset)

Function	8	Disengage Image Autotracking
	9	Disengage Image Autotracking Offset
	18	Check Aircraft Systems (Pilot)
	55	Designate Target (LOAL)
	66	Fire Weapon, Missile (LOAL)
	76	Hover Unmasked
	82	Mask Aircraft
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	115	Place Aircraft in Constraints
	153	Track Target (Image Autotracker Offset)
	176	Evaluate Obstacle Clearance (Gunner)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)
	184	Monitor HAD (TOF,Lase)

Segment 38: Engagement, LOAL (Remote Designation)

Function	18	Check Aircraft Systems (Pilot)
	66	Fire Weapon, Missile (LOAL)
	75	Hover Masked
	76	Hover Unmasked
	82	Mask Aircraft
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	115	Place Aircraft in Constraints
	155	Transmit Message (Attack Coordination)
	176	Evaluate Obstacle Clearance (Gunner)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)
	187	Monitor Audio (Pilot)

Segment 39: Engagement, LOBL (Autonomous, Manual Track)

Function	18	Check Aircraft Systems (Pilot)
	56	Designate Target (LOBL)
	67	Fire Weapon, Missile (LOBL)
	76	Hover Unmasked
	82	Mask Aircraft
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	115	Place Aircraft in Constraints
	154	Track Target (Manual)
	176	Evaluate Obstacle Clearance (Gunner)
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)

Segment 40: Engagement, LOBL (Autonomous, IAT)
 Function 8 Disengage Image Autotracking
 18 Check Aircraft Systems (Pilot)
 56 Designate Target (LOBL)
 67 Fire Weapon, Missile (LOBL)
 76 Hover Unmasked
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 152 Track Target (Image Autotracker)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)

Segment 41: Engagement, LOBL (Autonomous, IAT Offset)
 Function 8 Disengage Image Autotracking
 9 Disengage Image Autotracking Offset
 18 Check Aircraft Systems (Pilot)
 56 Designate Target (LOBL)
 67 Fire Weapon, Missile (LOBL)
 76 Hover Unmasked
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 153 Track Target (Image Autotracker Offset)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)

Segment 42: Engagement, LOBL (Remote Designation)
 Function 18 Check Aircraft Systems (Pilot)
 67 Fire Weapon, Missile (LOBL)
 75 Hover Masked
 76 Hover Unmasked
 78 Initiate Cockpit Communication (Coord-Gunner)
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 122 Receive External Communication (Gunner)
 155 Transmit Message (Attack Coordination)
 156 Unmask Aircraft
 176 Evaluate Obstacle Clearance (Gunner)
 180 Monitor External Visual Scene (Gunner)

Segment 42: Engagement, LOBL (Remote Designation) [continued]
Function 181 Monitor External Visual Scene (Pilot)
187 Monitor Audio (Pilot)

Segment 43: Engagement, Gun (Pilot, IHADSS)
Function 17 Check Aircraft Systems (Gunner)
65 Fire Weapon, Gun (Pilot)
76 Hover Unmasked
82 Mask Aircraft
83 Monitor Audio (Both)
84 Monitor Threat (Pilot)
151 Track Target (IHADSS/Pilot)
176 Evaluate Obstacle Clearance (Gunner)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)
182 Monitor Threat (Gunner)
189 Check HAD Message (Pilot)

Segment 44: Engagement, Gun (Gunner, IHADSS)
Function 18 Check Aircraft Systems (Pilot)
63 Fire Weapon, Gun (Gunner)
64 Check Gun Parameters
76 Hover Unmasked
82 Mask Aircraft
83 Monitor Audio (Both)
84 Monitor Threat (Pilot)
150 Track Target (IHADSS/Gunner)
176 Evaluate Obstacle Clearance (Gunner)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)

Segment 45: Engagement, Gun (Gunner, TADS, IAT)
Function 18 Check Aircraft Systems (Pilot)
63 Fire Weapon, Gun (Gunner)
64 Check Gun Parameters
76 Hover Unmasked
82 Mask Aircraft
83 Monitor Audio (Both)
84 Monitor Threat (Pilot)
152 Track Target (Image Autotracker)
176 Evaluate Obstacle Clearance (Gunner)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)
191 Acquire Laser Range

Segment 46: Engagement, FFAR (Pilot)
 Function 17 Check Aircraft Systems (Gunner)
 71 Fire Weapon, Rocket
 76 Hover Unmasked
 82 Mask Aircraft
 83 Monitor Audio (Both)
 115 Place Aircraft in Constraints
 151 Track Target (IHADSS/Pilot)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 182 Monitor Threat (Gunner)

Segment 47: Engagement, FFAR (Coop)
 Function 72 Fire Weapon, Rocket (Cooperative)
 76 Hover Unmasked
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 151 Track Target (IHADSS/Pilot)
 152 Track Target (Image Autotracker)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)

Segment 48: Engagement, LOAL (Rapid Fire)
 Function 18 Check Aircraft Systems (Pilot)
 55 Designate Target (LOAL)
 66 Fire Weapon, Missile (LOAL)
 76 Hover Unmasked
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 154 Track Target (Manual)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 184 Monitor HAD (TOF, Lase)
 188 Check HAD Fire Message (Gunner)

Segment 49: Engagement, LOAL (Ripple Fire)
 Function 18 Check Aircraft Systems (Pilot)
 55 Designate Target (LOAL)
 66 Fire Weapon, Missile (LOAL)
 69 Call for Lase (Remote)
 70 Prepare for Ripple Fire (LOAL)
 76 Hover Unmasked
 82 Mask Aircraft
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 115 Place Aircraft in Constraints
 154 Track Target (Manual)
 155 Transmit Message (Attack Coordination)
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 184 Monitor HAD (TOF, Lase)
 187 Monitor Audio (Pilot)

PHASE 5: FARP OPERATIONS

Segment 12: Approach (NOE)
 Function 17 Check Aircraft Systems (Gunner)
 18 Check Aircraft Systems (Pilot)
 59 Establish Approach
 74 Fly NOE
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 83 Monitor Audio (Both)
 84 Monitor Threat (Pilot)
 90 Perform Before Landing Check (Gunner)
 91 Perform Before Landing Check (Pilot)
 103 Perform External Communication (Gunner)
 171 Adjust Approach Parameters
 172 Check Approach Parameters
 176 Evaluate Obstacle Clearance (Gunner)
 178 Initiate Cockpit Communication (Normal-Gunner)
 179 Initiate Cockpit Communication (Normal-Pilot)
 180 Monitor External Visual Scene (Gunner)
 181 Monitor External Visual Scene (Pilot)
 187 Monitor Audio (Pilot)

Segment 13: Landing
 Function 17 Check Aircraft Systems (Gunner)
 78 Initiate Cockpit Communication (Coord-Gunner)
 79 Initiate Cockpit Communication (Coord-Pilot)
 80 Land Aircraft
 83 Monitor Audio (Both)

Segment 13: Landing [continued]

Function	85	Perform After Landing Check
	104	Perform External Communication (Pilot)
	105	Perform Hover
	162	Establish Hover
	163	Monitor Flight Controls
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)

Segment 50: FARP Procedures

Function	77	Idle Engines
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	81	Load Weapons (Rearming)
	83	Monitor Audio (Both)
	98	Perform Before Taxi Check (FARP)
	113	Perform Taxi
	125	Refuel Aircraft
	127	Restart Engine
	163	Monitor Flight Controls
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)

Segment 16: Takeoff (NOE)

Function	17	Check Aircraft Systems (Gunner)
	18	Check Aircraft Systems (Pilot)
	60	Establish Climb
	61	Establish Level of Flight
	78	Initiate Cockpit Communication (Coord-Gunner)
	79	Initiate Cockpit Communication (Coord-Pilot)
	83	Monitor Audio (Both)
	84	Monitor Threat (Pilot)
	95	Perform Before Takeoff Check (Gunner)
	96	Perform Before Takeoff Check (Pilot)
	103	Perform External Communication (Gunner)
	105	Perform Hover
	161	Perform Before Hover Check
	162	Establish Hover
	164	Adjust Climb Parameters
	165	Check Climb Parameters
	167	Check Level of Flight Parameters
	168	Adjust Level of Flight Parameters
	169	Check Fuel Consumption Parameters
	178	Initiate Cockpit Communication (Normal-Gunner)
	179	Initiate Cockpit Communication (Normal-Pilot)
	180	Monitor External Visual Scene (Gunner)
	181	Monitor External Visual Scene (Pilot)

Segment 16: Takeoff (NOE) [continued]
Function 182 Monitor Threat (Gunner)

PHASE 6: TERMINAL OPERATIONS

Segment 11: Approach (Contour)
Function 17 Check Aircraft Systems (Gunner)
18 Check Aircraft Systems (Pilot)
59 Establish Approach
73 Fly Contour
78 Initiate Cockpit Communication (Coord-Gunner)
79 Initiate Cockpit Communication (Coord-Pilot)
83 Monitor Audio (Both)
90 Perform Before Landing Check (Gunner)
91 Perform Before Landing Check (Pilot)
103 Perform External Communication (Gunner)
171 Adjust Approach Parameters
172 Check Approach Parameters
176 Evaluate Obstacle Clearance (Gunner)
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)
187 Monitor Audio (Pilot)

Segment 13: Landing
Function 17 Check Aircraft Systems (Gunner)
78 Initiate Cockpit Communication (Coord-Gunner)
79 Initiate Cockpit Communication (Coord-Pilot)
80 Land Aircraft
83 Monitor Audio (Both)
85 Perform After Landing Check
104 Perform External Communication (Pilot)
105 Perform Hover
162 Establish Hover
163 Monitor Flight Controls
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)

PHASE 7: POSTFLIGHT

Segment 51: Engine Shutdown
Function 78 Initiate Cockpit Communication (Coord-Gunner)
79 Initiate Cockpit Communication (Coord-Pilot)
83 Monitor Audio (Both)
89 Perform Before Engine Shutdown Check
109 Perform Postflight Cockpit Check (Gunner)

Segment 51: Engine Shutdown [continued]

Function 110 Perform Postflight Cockpit Check (Pilot)
129 Secure Weapons Systems (Gunner)
130 Secure Weapons Systems (Pilot)
145 Shut Down Engines
146 Start APU (Postflight)
163 Monitor Flight Controls
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)
181 Monitor External Visual Scene (Pilot)

Segment 52: Before Leaving Aircraft

Function 49 Complete TAMMS Forms
51 Conduct Postflight Walk Around
83 Monitor Audio (Both)
128 Secure Aircraft
178 Initiate Cockpit Communication (Normal-Gunner)
179 Initiate Cockpit Communication (Normal-Pilot)
180 Monitor External Visual Scene (Gunner)

A P P E N D I X D

AH-64A TASK DATA BASE

During the AH-64A mission/task/workload analysis, each of the 184 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 184 functions, 698 unique tasks were identified. Appendix D lists the 698 tasks with assigned task numbers, subsystems, and task workload for each workload component.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
1 Set Accelerometer	FI	.	.	7.0 I	1.2	2.2 R
2 Note Acknowledgment	UC	4.3	.	.	5.3	.
3 Transmit Acknowledgment	UC	4.3	1.0 R	.	1.0	2.2 R
4 Check ACM Switch	VSC	.	.	4.0 I	3.7	.
5 Set ACM Switch	VSC	.	.	5.0 I	1.2	2.2 L
6 Check ACQ SEL Switch (G)	VSC	.	.	4.0 I	3.7	.
7 Set ACQ SEL Switch (G)	VSC	.	.	7.0 I	1.2	5.8 L
8 Check ACQ SEL Switch (P)	VSC	.	.	4.0 I	3.7	.
9 Set ACQ SEL Switch (P)	VSC	.	.	4.0 I	1.2	2.2 L
10 Check ADF Control Switch	NC	.	.	4.0 I	3.7	.
11 Set ADF Control Switch	NC	.	.	7.0 I	1.2	5.8 R
12 Check ADF Operation	NC	6.6	.	7.0 I	3.7	5.8 R
13 Check ADSS Switch	AFC	.	.	4.0 I	3.7	.
14 Set ADSS Switch	AFC	.	.	7.0 I	1.2	2.2 L
15 Check Aft Gravity Fuel Cap	EF	.	.	4.0 E	3.7	.
16 Check Aft Stowage Bay	FA	.	.	4.0 E	3.7	.
17 Check Aft Tailboom	FA	.	.	4.0 E	3.7	.
18 Check Air Data Sensor	AFC	.	.	4.0 E	3.7	.
19 Stabilize Aircraft	FC	.	6.7 B	.	1.0	2.6 B
20 This Task Slot Not Used						
21 Check Aircraft Covers	SG	.	.	4.0 E	3.7	2.6 B
22 Adjust Heading (Hover)	FC	.	6.7 F	.	1.0	2.6 F
23 Position Aircraft into Wind	FC	.	6.7 F	5.0 E	1.0	2.6 F
24 Check Aircraft Location (G)	ND	.	.	5.9 I	6.8	2.6 R
25 Verify Aircraft Location (G)	VEX	.	.	5.9 E	6.8	2.6 R
26 Check Aircraft Location (P)	VEX	.	.	7.0 E	4.6	.
27 Transmit Aircraft Status	UC	4.3	1.0 R	.	5.3	1.0 R
28 Survey Aircraft Surroundings (G)	VSD	.	.	7.0 I	4.6	2.6 R
29 Survey Aircraft Surroundings (P)	VEX	.	.	7.0 E	4.6	.
30 This Task Slot Not Used						
31 Control Airspeed	FC	.	6.7 B	1.0 E	1.0	2.6 B
32 Check Airspeed Indicator	FI	.	.	4.0 I	3.7	.
33 Change Airspeed Quickly	FC	.	6.7 B	5.4 E	1.0	2.6 B
34 Set Altimeter	FI	.	.	7.0 I	1.2	5.8 R
35 Adjust Altitude	FC	.	6.7 L	1.0 E	1.0	2.6 L

Task	Subsystems	AUD	KIN	VIS	COG	PSY
36 Control Altitude	FC	.	6.7 L	.	1.0	2.6 L
37 Change Altitude	FC	.	6.7 L	.	1.0	2.6 L
38 Change Altitude Sharply	FC VEX	.	6.7 B	5.4 E	1.0	2.6 B
39 Check Ammunition Bay Access	FA	.	.	4.0 E	3.7	.
40 Set AN / APR 39	US	.	.	7.0 I	1.2	5.8 R
41 Check AND Display (Laser Code)	AFC	.	.	5.9 I	5.3	.
42 Check AND Display (LMC)	AFC	.	.	5.9 I	5.3	.
43 Check AND Display (Missile)	AFC	.	.	5.9 I	5.3	.
44 Check AND Display (Offset)	AFC	.	.	5.9 I	5.3	.
45 Check AND Display (Polarity)	AFC	.	.	5.9 I	5.3	.
46 Check AND Display (Priority)	AFC	.	.	5.9 I	5.3	.
47 Check AND Display (Search)	AFC	.	.	5.9 I	5.3	.
48 Check AND Display (Tracking)	UL	.	.	4.0 I	3.7	.
49 Check Anticollision Light Switch	UAI	.	.	4.0 I	3.7	.
50 Check Anti-ice Control Switch	UAI	.	.	4.0 I	2.7	.
51 Check Anti-ice Test Switch	UAP	.	.	7.0 I	1.2	2.2 R
52 Initialize APU	UAP	.	.	4.0 I	3.7	.
53 Check APU Control Switch	UAP	.	.	7.0 I	1.2	2.2 R
54 Set APU Control Switch	UAP	.	.	4.0 E	3.7	.
55 Check APU Exhaust	UAD	.	.	1.0 I	3.7	.
56 Check APU FAIL Light	S	.	.	4.0 I	3.7	.
57 Check APU Fire Handle	FA	.	.	4.0 E	3.7	4.6 R
58 Check APU Oil Access Door	UAP	.	.	4.0 E	3.7	4.6 R
59 Check APU Oil Level	UAD	.	.	1.0 I	3.7	.
60 Check APU ON Light	UAP	1.0	.	4.0 I	3.7	.
61 Check APU Starting	VEX	.	.	7.0 E	3.7	.
62 Check Area Clear	VSD	.	.	1.0 I	3.7	.
63 Verify Area Secure (G)	FC	.	1.0 L	.	1.2	2.2 L
64 Set ATTD / Hover Hold Switch	FC	.	6.7 R	.	1.0	2.6 R
65 Control Attitude	UC US	1.0	.	.	1.0	.
66 Monitor Audio	UEN	.	.	4.0 I	3.7	.
67 Check Auxiliary Vent Handle	UC	.	.	4.0 E	3.7	4.6 R
68 Check Avionics Bay	FA	.	.	4.0 E	3.7	4.6 R
69 Check Avionics Bay Door	VSD	.	.	5.0 I	3.7	5.8 R
70 Adjust Azimuth						

Task	Subsystems	AUD	KIN	VIS	COG	PSY
71 Check Backdrop (G)	NM VSD	.	.	5.9 I	6.8	2.6 R
72 Check Backdrop (P)	VEX	.	.	7.0 E	4.6	.
73 Determine Basic Weight and Moment	UF	.	.	5.9 I	7.0	6.5 R
74 Check BAT OVRD Switch	UEL	.	.	4.0 I	3.7	.
75 Check BATT / EXT PWR Switch	UEL	.	.	4.0 I	3.7	.
76 Set BATT / EXT PWR Switch	UEL	.	.	7.0 I	1.2	2.2 L
77 Check Battle Area Access (G)	NM VSD	.	.	5.3 I	6.8	2.6 R
78 Check Battle Area Access (P)	VEX	.	.	7.0 E	4.6	.
79 Receive Battlefield Intelligence	UC	4.9	.	.	4.6	.
80 Transmit Battlefield Intelligence	UC	4.3	1.0 R	.	5.3	1.0 R
81 Check Belly Antennas	UC	.	.	4.0 E	3.7	.
82 Check Blade and Pitch Link	FR	.	.	4.0 E	3.7	.
83 Check Blade Anti-ice Fail Light	UAD	.	.	1.0 I	3.7	.
84 Verify Boresight (Internal)	VSD	.	.	1.0 I	3.7	.
85 Detect Boresight Target	VSD	.	.	1.0 I	3.7	.
86 Set BRSIT Enable Switch	VSC	.	1.0 L	.	1.2	2.2 L
87 Check BRSIT HMD / Polarity Switch	VSC	.	.	4.0 I	3.7	.
88 Check BRU	VSD	.	.	4.0 I	3.7	.
89 Adjust BRU Intensity	VSD	.	.	3.7 I	1.2	5.8 L
90 Check Canopy	FA	.	.	4.0 I	3.7	.
91 Check Canopy Defogger Switch	UAI	.	.	4.0 I	3.7	.
92 Check Canopy Door	FA	.	.	4.0 I	3.7	.
93 Position Canopy Door	FA	.	.	5.0 I	3.7	4.6 R
94 Check Canopy Door Advisory Light	UAD	.	.	1.0 I	1.0	.
95 Check Canopy Glass	FA	.	.	4.0 E	3.7	.
96 Check Canopy Heater Switch	UAI	.	.	4.0 I	3.7	.
97 Check CANOPY JETT Pin	S	.	.	4.0 I	3.7	.
98 Position CANOPY JETT Pin	S	.	.	5.0 I	3.7	4.6 L
99 Check Caution / Warning Panel Lights	UAD	.	.	7.0 I	3.7	.
100 Set Chaff Burst Count	US	.	.	7.0 E	1.2	5.8 R
101 Set Chaff Burst Interval	US	.	.	7.0 E	1.2	5.8 R
102 Set Chaff Counter	US	.	.	7.0 I	1.2	5.8 R
103 Check Chaff Dispenser ARM Switch	US	.	.	4.0 I	3.7	.
104 Set Chaff Dispenser ARM Switch	US	.	.	4.0 I	3.7	2.2 R
105 Set Chaff Dispenser Control Switch	US	.	.	7.0 I	1.2	5.8 R

Task	Subsystems	AUD	KIN	VIS	COG	PSY
106 Set Chaff Salvo Count	US	.	.	7.0E	1.2	5.8R
107 Set Chaff Salvo Interval	US	.	.	7.0E	1.2	5.8R
108 Set CHAN SEL Switch	AMC	.	.	7.0I	1.2	2.2L
109 Check Chocks and External ICS Cords	SG	.	.	4.0E	1.2	.
110 Check Circuit Breakers (G)	UEL	.	4.0L	7.0I	3.7	2.2L
111 Check Circuit Breakers (P)	UEL	.	4.0L	7.0I	3.7	2.2L
112 Set CRT A and CRT B Switches - ENG 1	EF	.	.	7.0I	1.2	2.2L
113 Set CRT A and CRT B Switches - ENG 2	EF	.	.	7.0I	1.2	2.2L
114 Set CRT A Switch - ENG 1	EF	.	.	7.0I	1.2	2.2L
115 Set CRT A Switch - ENG 2	EF	.	.	7.0I	1.2	2.2L
116 Set CRT B Switch - ENG 1	EF	.	.	7.0I	1.2	2.2L
117 Set CRT B Switch - ENG 2	EF	.	.	7.0I	1.2	2.2L
118 Set Clock	FI	.	.	7.0I	1.2	5.8R
119 Adjust Collective	EIN FC	.	6.7L	4.0I	3.7	2.6L
120 Decrease Collective	FC	.	6.7L	.	1.0	2.6L
121 Set Collective Friction	FC	.	6.7L	.	1.2	2.6L
122 Set COMM Control Panel Volume Switch	UC	.	.	7.0I	1.2	5.8R
123 Receive Cockpit Communication (Coordination)	UC	4.9	.	.	5.3	.
124 Transmit Cockpit Communication (Coordination)	UC	4.3	1.0R	.	5.3	2.2L
125 Check Concealment (G)	NM VSD	.	.	5.9I	6.8	2.5R
126 Check Concealment (P)	VEX	.	.	7.0E	4.6	.
127 Check Control Sweep and Force Trim / Cyclic	FC	.	7.0R	.	1.0	2.6R
128 Check Control Sweep and Force Trim / Pedals	FC	.	7.0F	.	1.0	5.8F
129 Check Control System / Collective	FC	.	7.0L	.	1.0	2.6L
130 Follow Course	NM VEX	.	.	5.9E	6.8	.
131 Check CPG ARM Switch	AW	.	.	4.0I	3.7	.
132 Set CPG ARM Switch	AW	.	.	7.0I	1.2	2.2L
133 Brief Crew	UC	4.3	.	.	5.3	1.0H
134 Determine Cruise VNE	UF	.	.	5.9I	7.0	6.5R
135 Set Cyclic WAS Switch	AW	.	1.0R	.	1.2	2.2R
136 Check DASE Caution Light	UAD	.	.	1.0I	1.2	.
137 Set DASE Pitch Switch	FC	.	.	4.0I	1.2	2.2L
138 Set DASE Release Switch	FC	.	1.0R	.	1.0	2.2R
139 Set DASE Roll Switch	FC	.	.	4.0I	1.2	2.2L
140 Set DASE Yaw Switch	FC	.	.	4.0I	1.2	2.2L

Task	Subsystems	AUD	KIN	VIS	COG	PSY
141 Check DEK Data Entry Selector Switch	AFC	.	.	4.0 I	3.7	.
142 Set DEK Data Entry Selector Switch	AFC	.	.	7.0 I	1.2	5.8 L
143 Enter DEK LASER Codes	AFC	.	.	5.9 I	5.3	7.0 L
144 Enter DEK Magnetic Variation	AFC	.	.	5.9 I	5.3	7.0 L
145 Enter DEK Range Data	AFC	.	.	5.9 I	5.3	7.0 L
146 Enter DEK Spheroid Data	AFC	.	.	5.9 I	5.3	7.0 L
147 Set DEST DISP Thumbwheel	NC	.	.	7.0 I	1.2	5.8 R
148 Check Direction Display	US	.	.	1.0 I	3.7	.
149 Press Doppler Data Entry Key	NC	.	.	5.9 I	5.3	2.2 R
150 Check Doppler Display	NC	.	.	5.9 I	5.3	.
151 Monitor Doppler Display	ND	.	.	5.9 I	6.8	.
152 Set Doppler Display Selector Switch	NC	.	.	7.0 I	1.2	5.8 R
153 Press Doppler KYBD Key	NC	.	.	5.0 I	3.7	2.2 R
154 Enter Doppler Magnetic Variation	NC	.	.	5.9 I	5.3	7.0 R
155 Check Doppler Mode Switch	NC	.	.	4.0 I	3.7	.
156 Set Doppler Mode Switch	NC	.	.	7.0 I	1.2	5.8 R
157 Check Doppler Panel Lights	NC	.	.	1.0 I	3.7	.
158 Enter Doppler Spheroid Data	NC	.	.	5.9 I	5.3	7.0 R
159 Enter Doppler Zone Data	NC	.	.	5.9 I	5.3	7.0 R
160 Control Drift	FC	.	6.7 R	.	1.0	2.6 R
161 Adjust DVO Crosshairs Alignment	VSD	.	.	5.0 I	3.7	2.2 R
162 Check EDGE LT PNL Switch	UL	.	.	4.0 I	3.7	.
163 Select Egress Routes (G)	NM	.	.	5.9 I	6.8	2.6 R
164 Select Egress Routes (P)	VEX	.	.	7.0 E	4.6	.
165 Check ELEC SYS FAIL Warning Light	UAD	.	.	1.0 I	3.7	.
166 Adjust Elevation	VSD	.	.	5.0 I	3.7	5.8 R
167 Check EMER HYD PWR Switch (G)	FH	.	.	4.0 I	3.7	.
168 Check EMER HYD PWR Switch (P)	FH	.	.	4.0 I	3.7	.
169 Check Empennage	FA	.	.	4.0 E	3.7	.
170 Check ENCU Switch	UEN	.	.	4.0 I	3.7	.
171 Check ENG 1 Anti-ice Warning Light	UAD	.	.	1.0 I	3.7	.
172 Set ENG 1 Fuel Switch	EF	.	.	7.0 I	1.2	2.2 L
173 Check ENG 1 Instruments and Lights	EIN	.	.	7.0 I	3.7	.
174 Check ENG 1 NG	EIN	.	.	4.0 I	3.7	.
175 Monitor ENG 1 NG	EIN	.	.	7.0 I	3.7	.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
176 Check ENG 1 NP	EIN	.	.	4.0 I	3.7	.
177 Check ENG 1 NP / NG / NR	EIN	.	.	4.0 I	3.7	.
178 Monitor ENG 1 OIL Pressure	EIN	.	.	7.0 I	3.7	.
179 Check ENG 1 OUT Light	UAD	.	.	1.0 I	3.7	.
180 Adjust ENG 1 PWR Lever	EF	.	7.0 L	7.0 I	3.7	2.6 L
181 Check ENG 1 PWR Lever	EF	.	.	4.0 I	3.7	.
182 Set ENG 1 PWR Lever	EF	.	4.8 L	.	1.2	5.8 L
183 Check ENG 1 START Switch	EI	.	.	4.0 I	3.7	.
184 Set ENG 1 START Switch	EI	.	.	7.0 I	1.2	2.2 L
185 Check ENG 1 TGT	EIN	.	.	4.0 I	3.7	.
186 Check ENG 1 Warning Light	UAD	.	.	1.0 I	3.7	.
187 Check ENG 2 Anti-ice Warning Light	UAD	.	.	1.0 I	3.7	.
188 Set ENG 2 Fuel Switch	EF	.	.	7.0 I	1.2	2.2 L
189 Check ENG 2 Instruments and Lights	EIN	.	.	7.0 I	3.7	.
190 Check ENG 2 NG	EIN	.	.	4.0 I	3.7	.
191 Monitor ENG 2 NG	EIN	.	.	7.0 I	3.7	.
192 Check ENG 2 NP	EIN	.	.	4.0 I	3.7	.
193 Check ENG 2 NP / NG / NR	EIN	.	.	4.0 I	3.7	.
194 Monitor ENG 2 OIL Pressure	EIN	.	.	4.0 I	3.7	.
195 Check ENG 2 OUT Light	EIN	.	.	7.0 I	3.7	.
196 Adjust ENG 2 PWR Lever	UAD	.	.	1.0 I	3.7	.
197 Set ENG 2 PWR Lever	EF	.	7.0 L	7.0 I	3.7	2.6 L
198 Check ENG 2 START Switch	EF	.	4.8 L	.	1.2	5.8 L
199 Set ENG 2 START Switch	EI	.	.	4.0 I	3.7	.
200 Check ENG 2 TGT	EI	.	.	7.0 I	1.2	2.2 L
201 Check ENG 2 Warning Light	EIN	.	.	4.0 I	3.7	.
202 Check ENG Anti-ice Warning Light	UAD	.	.	1.0 I	3.7	.
203 Check ENG CHOP Light	UAD	.	.	1.0 I	3.7	.
204 Check ENG INLET Anti-ice Switch	UAI	.	.	4.0 I	3.7	.
205 Check ENG Out Audio	UAD	1.0	.	.	3.7	2.2 R
206 Position Engine Cowling	FA	.	.	5.0 E	3.7	4.6 R
207 Check Engine Fire Handles	S	.	.	4.0 I	3.7	.
208 Check Engine Inlet	EE	.	.	4.0 E	3.7	.
209 Check Engine Instrument Lights (G)	UAD	.	.	1.0 I	3.7	.
210 Check Engine Instrument Lights (P)	UAD	.	.	1.0 I	3.7	.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
211 Check Engine Instruments	EIN	.	.	4.0 I	3.7	.
212 Check Engine Instruments (Condition)	EIN	.	.	4.0 I	3.7	.
213 Monitor Engine Instruments (P)	EIN	.	.	4.0 I	3.7	.
214 Set Engine Instruments Test Switch (G)	UAD	.	.	1.0 I	3.7	2.2 R
215 Set Engine Instruments Test Switch (P)	UAD	.	.	7.0 I	1.2	2.2 L
216 Check Engine Oil Level	EO	.	.	4.0 E	3.7	4.6 R
217 Check Equipment Stowage Compartment	FA	.	.	4.0 E	3.7	.
218 Determine Estimated Landing Gross Weight	UF	.	.	5.9 I	7.0	6.5 R
219 Check EXT TK Fuel Switch	EF	.	.	4.0 I	3.7	.
220 Position External Canopy Pin	S	.	.	5.0 E	3.7	4.6 R
221 Check External Power Receptacle	UEL	.	.	4.0 E	3.7	.
222 Set FAN Switch	UEN	.	.	7.0 I	1.2	2.2 L
223 Check FC SYM GEN Switch	ASG	.	.	4.0 I	3.7	.
224 Set FC SYM GEN Switch	ASG	.	.	7.0 I	1.2	2.2 L
225 Check FCC / MUX Switch	AFC	.	.	4.0 I	3.7	.
226 Check FDLS Results	AFC	.	.	5.9 I	5.3	.
227 Detect Feature	VSD	.	.	1.0 I	4.6	.
228 Track Feature	VSD	.	.	1.0 I	3.7	2.6 R
229 Check Feed Chute	AW	.	.	4.0 E	3.7	.
230 Enter Field Elevation	AFC	.	.	5.9 I	5.3	7.0 L
231 Select Field of Fire (G)	NM VSD	.	.	5.9 I	6.8	2.6 R
232 Select Field of Fire (P)	VEX	.	.	7.0 E	4.6	.
233 Check Fire Detector Lights	UAD	.	.	1.0 I	3.7	.
234 Set Fire Detector Test Switch (Position 1)	UAD	.	.	7.0 I	1.2	5.8 R
235 Set Fire Detector Test Switch (Position 2)	UAD	.	.	7.0 I	1.2	5.8 R
236 Check Fire Extinguisher	S	.	.	4.0 E	3.7	.
237 Check Fire Extinguisher Disc	S	.	.	4.0 E	3.7	.
238 Alert Fireguard	S	4.3	.	1.0 E	3.7	1.0 R
239 Verify Firing Constraints	VSD	.	.	3.7 I	3.7	.
240 Check First Aid Kit	S	.	.	5.9 I	3.7	.
241 Record Flight Hours	UF	.	.	5.9 I	5.3	6.5 R
242 Check Flight Instruments	FI	.	.	4.0 I	3.7	.
243 Check Flight Mode Symbology Switch	ASG	.	1.0 R	3.7 I	3.7	2.2 R
244 Set Flight Mode Symbology Switch	ASG FC	.	6.7 B	4.0 I	1.2	2.6 B
245 Complete Flight Plan (175)	UF	.	.	5.9 I	5.3	6.5 R

Task	Subsystems	AUD	KIN	VIS	COG	PSY
246 Adjust FLIR Level / Gain	VSD	.	.	3.7 I	1.2	5.8 L
247 Set FLIR Polarity Reversal Switch	VSD	.	1.0 R	3.7 I	1.2	2.2 R
248 Check Floodlight Switch	UL	.	.	4.0 I	3.7	.
249 Set FLY-TO-DEST Switch	NC	.	.	7.0 I	1.2	5.8 R
250 Check Formation Light Switch	UL	.	.	4.0 I	3.7	.
251 Check Forward Gravity Fuel Cap	EF	.	.	4.0 E	3.7	.
252 Control Forward Motion	FC	.	6.7 L	.	1.0	2.6 L
253 Set FOV Switch	VSC	.	1.0 L	1.0 I	1.2	2.2 L
254 Evaluate FOVs (DTV): W N Z	VSC	.	1.0 L	1.0 I	1.2	2.2 L
255 Evaluate FOVs (DVO): W N	VSC	.	1.0 L	1.0 I	1.2	2.2 L
256 Evaluate FOVs (FLIR): W M N Z	VSC	.	1.0 L	1.0 I	1.2	2.2 L
257 Determine Free Air Temperature (Arrival)	UF	.	.	5.9 I	5.3	6.5 R
258 Determine Free Air Temperature (Cruise)	UF	.	.	5.9 I	5.3	6.5 R
259 Determine Free Air Temperature (Departure)	UF	.	.	5.9 I	5.3	6.5 R
260 Check Fuel BOOST Switch	EF	.	.	4.0 I	3.7	.
261 Check Fuel Caps	EF	.	.	4.0 E	3.7	.
262 Check Fuel CROSSFEED Switch	EF	.	.	4.0 I	1.2	.
263 Check Fuel Filter Buttons	EF	.	.	4.0 E	3.7	.
264 Check Fuel ORIDE Switch	EF	.	.	4.0 I	3.7	.
265 Check FUEL PSI ENG 1 Warning Light	UAD	.	.	1.0 I	3.7	.
266 Check FUEL PSI ENG 2 Warning Light	UAD	.	.	1.0 I	3.7	.
267 Check Fuel Quantity Indicator (External)	EF	.	.	4.0 E	4.6	2.2 R
268 Check Fuel Quantity Indicator (Internal)	EF	.	.	4.0 I	4.6	.
269 Collect Fuel Sample	EF	.	.	5.0 E	4.6	4.6 B
270 Inspect Fuel Sample	EF	.	.	4.0 E	4.6	.
271 Check Fuel TK SEL Switch	EF	.	.	4.0 I	3.7	.
272 Check Fuel TRANS Switch	EF	.	.	4.0 I	3.7	.
273 Check GEN 1 Switch	UEL	.	.	4.0 I	3.7	.
274 Set GEN 1 Switch	UEL	.	.	7.0 I	1.2	2.2 L
275 Check GEN 1 / RECT 1 Warning Light	UAD	.	.	1.0 I	3.7	.
276 Check GEN 2 Switch	UEL	.	.	4.0 I	3.7	.
277 Set GEN 2 Switch	UEL	.	.	7.0 I	1.2	2.2 L
278 Check GEN 2 / RECT 2 Warning Light	UAD	.	.	1.0 I	3.7	.
279 Check Generator Lights	UAD	.	.	4.0 I	3.7	.
280 Determine Go / No-Go Torques (IGE)	UF	.	.	5.9 I	7.0	6.5 R

Task	Subsystems	AUD	KIN	VIS	COG	PSY
281 Determine Go / No-Go Torques (OGE)	UF	.	.	5.9 I	7.0	6.5 R
282 Enter Grid Convergence	AFC	.	.	5.9 I	5.3	7.0 L
283 Check Grounding Cables	S	.	.	4.0 E	3.7	2.6 B
284 Set GS Switch	VSD	.	.	1.0 I	1.2	2.2 L
285 Set Gun Burst Limits	AGC	.	.	7.0 E	1.2	5.8 R
286 Check Gun Mounting	AW	.	.	4.0 E	3.7	.
287 Check GUN SEL Switch	AGC	.	.	4.0 I	3.7	.
288 Set GUN SEL Switch	AGC	.	.	4.0 I	1.2	2.2 L
289 Check HAD Message (Gun)	AFC	.	.	5.9 I	3.7	.
290 Check HAD Message (Fire...Missile)	AFC	.	.	5.9 I	3.7	.
291 Check HAD Message (Mode)	AFC	.	.	5.9 I	3.7	.
292 Check HAD Message (Range)	AFC	.	.	5.9 I	3.7	.
293 Check HAD Message (Rocket)	AFC	.	.	5.9 I	3.7	.
294 Check HAD Message (Rounds)	AFC	.	.	5.9 I	3.7	.
295 This Task Slot Not Used						
296 Monitor HAD Message (TOF/LASE)	AFC	.	.	7.0 I	3.7	.
297 Check HAD Message (Tracking)	AFC	.	.	5.9 I	3.7	.
298 This Task Slot Not Used						
299 Perform Hard Turns	FC VEX	.	6.7 R	5.4 E	1.0	2.6 R
300 Check HARS Alignment	NC	.	.	4.0 I	3.7	.
301 Check HARS Control Switch	NC	.	.	4.0 I	1.2	.
302 Set HARS Control Switch	NC	.	.	4.0 I	1.2	5.8 R
303 Set HDD Switch	VSD	.	1.0 L	1.0 I	3.7	2.2 L
304 Adjust Heading (Inflight)	FC	.	6.7 R	.	1.0	2.6 F
305 Control Heading	FC	.	6.7 F	.	1.0	2.6 F
306 Check HELLFIRE Electrical Connector	AW	.	.	4.0 E	3.7	.
307 Check HELLFIRE Launcher ARM / SAFE Switch	AW	.	.	4.0 E	3.7	.
308 Check HELLFIRE Launcher Mounting	AW	.	.	4.0 E	3.7	.
309 Check HELLFIRE Missile Installation	AW	.	.	4.0 E	3.7	.
310 Connect Helmet	UC VSD	.	.	5.0 I	3.7	4.6 B
311 Disconnect Helmet	UC VSD	.	.	5.0 I	3.7	4.6 B
312 Don Helmet	UC VSD	.	4.0 H	.	3.7	4.6 B
313 Remove Helmet	UC VSD	.	4.0 B	.	3.7	4.6 B
314 Set HMD BRSIT Switch	VSC	.	.	7.0 I	1.2	2.2 L
315 Align HMD Reticle	VSD	.	.	5.0 I	3.7	2.6 H

Task	Subsystems	AUD	KIN	VIS	COG	PSY
316 Check Horizontal Situation Indicator (HSI)	FI	.	.	4.0 I	3.7	5.8 R
317 Determine Hover Torque (Arrival) (IGE)	UF	.	.	5.9 I	7.0	6.5 R
318 Determine Hover Torque (Arrival) (OGE)	UF	.	.	5.9 I	7.0	6.5 R
319 Determine Hover Torque (OGE)	UF	.	.	5.9 I	7.0	6.5 R
320 Set IAT OFS Switch	VSC	.	1.0 L	4.0 I	3.7	2.2 L
321 Check IAT Polarity Switch	VSD	.	4.0 R	4.0 I	3.7	.
322 Set IAT Polarity Switch	VSD	.	1.0 R	4.0 I	1.2	2.2 R
323 Set IAT Switch	VSC	.	1.0 L	4.0 I	3.7	2.2 L
324 Set ICS Switch	UC	.	.	7.0 I	1.2	2.2 R
325 Check ICS System (G)	UC	1.0	.	.	1.2	1.0 R
326 Check ICS System (P)	UC	1.0	.	.	1.2	1.0 R
327 Insert Ignition Key	UEL	.	.	5.0 I	3.7	4.6 L
328 Remove Ignition Key	UEL	.	.	5.0 I	3.7	4.6 L
329 Turn Ignition Key	UEL	.	.	5.0 I	1.2	4.6 L
330 Position IHADSS	VSD	.	.	1.0 I	3.7	4.6 R
331 Check IHADSS BRSIT Switch	VSC	.	.	4.0 I	3.7	.
332 Set IHADSS BRSIT Switch	VSC	.	.	7.0 I	1.2	2.2 L
333 Adjust IHADSS Display Brightness / Contrast (G)	VSD	.	.	3.7 I	1.2	2.2 R
334 Adjust IHADSS Display Brightness / Contrast (P)	VSD	.	.	3.7 I	1.2	5.8 L
335 Align IHADSS LOS Reticle on Target	VSD	.	.	5.0 I	3.7	2.6 H
336 Check IHADSS Switch	VSC	.	.	4.0 I	3.7	.
337 Set IHADSS Switch	VSC	.	.	7.0 I	1.2	2.2 L
338 Adjust IHADSS Symbol Brightness/Gain/Level (G)	VSD	.	.	3.7 I	1.2	5.8 R
339 Adjust IHADSS Symbol Brightness/Gain/Level (P)	VSD	.	.	3.7 I	1.2	5.8 L
340 Check Image and Turret Function	VSD	.	.	1.0 I	3.7	2.6 H
341 Determine Indicated Airspeed (Dual Engine)	UF	.	.	5.9 I	7.0	6.5 R
342 Determine Indicated Airspeed (Single Engine)	UF	.	.	5.9 I	7.0	6.5 R
343 Check Inertial Reel Lock	S	.	4.0 B	.	3.7	4.6 B
344 Check Infrared Jamming Control Switch	US	.	.	4.0 I	3.7	.
345 Set Infrared Jamming Control Switch	US	.	.	4.0 I	1.2	2.2 R
346 Select Ingress Routes (G)	NM VSD	.	.	5.9 I	6.8	2.6 R
347 Select Ingress Routes (P)	VEX	.	.	7.0 E	4.6	.
348 Check INST Light Switch	UL	.	.	4.0 I	3.7	.
349 Set INST Light Switch	UL	.	.	7.0 I	1.2	5.8 L
350 Adjust INST Lights	UL	.	.	3.7 I	1.2	5.8 L

Task	Subsystems	AUD	KIN	VIS	COG	PSY
351 Set Instrument Test Panel Brightness	UL	.	.	3.7 I	1.2	5.8 L
352 Set Instrument Test Panel Light Switch	UL	.	.	7.0 I	1.2	2.2 L
353 Check IR Suppressor / Engine Exhaust	EE	.	.	4.0 E	3.7	.
354 Check KY28 Power Switch	UC	.	.	4.0 I	3.7	.
355 Set XY28 Power Switch	UC	.	.	7.0 I	1.2	2.2 R
356 Check KY58 Power Switch	UC	.	.	4.0 I	3.7	.
357 Set KY58 Power Switch	UC	.	.	7.0 I	1.2	5.8 R
358 Set L CSL Light Switch	UL	.	.	7.0 I	1.2	5.8 L
359 Determine Landing Center of Gravity	UF	.	.	5.9 I	7.0	6.5 R
360 Determine Landing Weight and Moment	UF	.	.	5.9 I	7.0	6.5 R
361 Pull Laser Trigger	AL	.	1.0 R	.	1.2	2.2 R
362 Release Laser Trigger	AL	.	1.0 R	.	1.0	2.2 R
363 Inspect Left Side of Aircraft	FA	.	.	4.0 E	3.7	2.6 B
364 Press LMC Button	VSC	.	1.0 L	.	3.7	2.2 L
365 Check Locking Devices	SG	.	.	4.0 E	3.7	2.6 B
366 Check Loose Equipment	S	.	.	4.0 I	3.7	.
367 Check LOS Slave Status	VSC	.	1.0 R	1.0 I	1.0	2.2 R
368 Check LOW RPM ROTOR Light	UAD	.	.	1.0 I	3.7	.
369 Check LRF / D CCM Switch	AL	.	.	4.0 I	3.7	.
370 Check LRF / D CODE	AL	.	.	4.0 I	3.7	.
371 Set LRF / D Code Indicator	AL	.	.	7.0 I	1.2	5.8 L
372 Check LSR MSL CCM Switch	AL	.	.	4.0 I	3.7	.
373 Check LSR SEL Switch	AL	.	.	4.0 I	3.7	.
374 Set LSR SEL Switch	AL	.	.	7.0 I	1.2	2.2 L
375 Set LST Code Switch	AL	.	.	7.0 I	5.3	5.8 L
376 Check LT Switch	VSC	.	.	4.0 I	3.7	.
377 Set LT Switch	VSC	.	1.0 R	.	1.2	2.2 R
378 Check LWR CHAN Laser Code	AMC	.	.	4.0 I	3.7	.
379 Set LWR CHAN Laser Code	AMC	.	.	7.0 I	1.2	5.8 L
380 Check LWR CHAN Quantity	AMC	.	.	4.0 I	3.7	.
381 Set LWR CHAN Quantity	AMC	.	.	7.0 I	1.2	5.8 L
382 Check Magnetic Compass	FI	.	.	4.0 I	3.7	.
383 Check Main and Tail Rotor Anti-ice Switch	UAI	.	.	4.0 I	3.7	.
384 Check Main Landing Gear	FG	.	.	4.0 E	3.7	.
385 Check Main Rotor Head and Blades	FR	.	.	4.0 E	3.7	.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
386 Check Main Transmission Filter Button	FT	.	.	4.0E	3.7	.
387 Check Main Transmission Oil	FT	.	.	4.0E	3.7	4.6R
388 Check MAIN XMSN 1 Warning Light	UAD	.	.	1.0I	3.7	.
389 Check MAIN XMSN 2 Warning Light	UAD	.	.	1.0I	3.7	.
390 Record Maintenance Requirements	UF	.	.	5.9I	5.3	6.5R
391 Check MAN STAB Warning Light	UAD	.	.	1.0I	3.7	.
392 Manipulate MAN TKR Thumbforce Controller	VSC	.	6.7R	1.0I	2.6	2.6R
393 Complete Map Reconnaissance	NM	.	.	5.9I	5.3	4.6B
394 Read Maps	NC	.	.	5.9I	5.3	4.6L
395 Establish Masking Profile	FC VEX	.	6.7B	5.0E	1.0	2.6B
396 Check MASTER ARM Switch	AW	.	.	4.0I	3.7	.
397 Set MASTER ARM Switch	AW	.	.	4.0I	3.7	2.2L
398 Check Master CAUTION / WARNING Panel	UAD	.	.	1.0I	1.0	.
399 Reset MASTER CAUTION / WARNING Panel Lights	UAD	.	.	7.0I	3.7	2.2R
400 Check MASTER IGN Switch	EI	.	.	4.0I	3.7	.
401 Determine Maximum Gross Weight (Arrival)	UF	.	.	5.9I	7.0	6.5R
402 Determine Maximum Gross Weight (IGE)	UF	.	.	5.9I	7.0	6.5R
403 Determine Maximum Gross Weight (OGE)	UF	.	.	5.9I	7.0	6.5R
404 Determine Maximum Range IAS	UF	.	.	5.9I	7.0	6.5R
405 Determine Maximum Rate of Climb IAS	UF	.	.	5.9I	7.0	6.5R
406 Determine Maximum Torque (Arrival) (Dual)	UF	.	.	5.9I	7.0	6.5R
407 Determine Maximum Torque (Arrival) (Single)	UF	.	.	5.9I	7.0	6.5R
408 Determine Maximum Torque (Departure) (Dual)	UF	.	.	5.9I	7.0	6.5R
409 Determine Maximum Torque (Departure) (Single)	UF	.	.	5.9I	7.0	6.5R
410 Receive Message	UC	4.9	.	.	5.3	.
411 Transmit Message	UC	4.3	1.0R	.	5.3	1.0R
412 Note Message Alert	UC	4.2	.	.	5.3	.
413 Transmit Message Alert	UC	4.3	1.0R	.	5.3	1.0R
414 Transmit Message (Brief)	UC	4.3	1.0R	.	5.3	2.2R
415 Check Missile Control Switch	AMC	.	.	4.0I	3.7	.
416 Set Missile Control Switch	AMC	.	.	7.0I	1.2	5.8L
417 Verify Missile Launch	AFC VSD	.	.	1.0I	1.2	.
418 Check Missile Mode Switch	AMC	.	.	4.0I	3.7	.
419 Set Missile Mode Switch	AMC	.	.	7.0I	1.2	5.8L
420 Check Missile Type Switch	AMC	.	.	4.0I	3.7	.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
421 Receive Mission	UC	4.9	.	.	5.3	6.5 R
422 Enter Mission Preplanning Coordinates	AFC	.	.	5.9 I	5.3	7.0 L
423 Receive Mission Update	UC	4.9	.	.	4.6	.
424 Check MSL SEL Switch	AMC	.	.	4.0 I	3.7	.
425 Set MSL SEL Switch	AMC	.	.	4.0 I	1.2	2.2 L
426 Check MUX Switch	UEL	.	.	4.0 I	3.7	.
427 Check Nacelle Fire Louvers	S	.	.	4.0 E	3.7	.
428 Check Navigation Light Switch	UL	.	.	4.0 I	3.7	.
429 Check Night Vision Switch	VSC	.	.	4.0 I	3.7	.
430 Check Nose Gear Box Cowl	FT	.	.	4.0 E	3.7	.
431 Check Nose Gear Box Filter Button	FT	.	.	4.0 E	3.7	.
432 Check Nose Gear Box Oil	FT	.	.	4.0 E	3.7	.
433 Check Nose Gear Box Oil Cap	FT	.	.	4.0 E	3.7	.
434 Check NP and NG	EIN	.	.	4.0 I	3.7	.
435 Check NP and NR	EIN	.	.	4.0 I	3.7	.
436 Check OAT Gauge	FI	.	.	4.0 I	3.7	.
437 Check OAT Gauge Temperature	FI	.	.	4.0 E	3.7	.
438 Check OAT Temperature	FI	.	.	4.0 I	5.3	.
439 Maintain Obstacle Clearance	FC	.	6.7 F	.	1.0	2.6 F
440 Check Obstacles (G)	VSD	.	.	7.0 I	3.7	2.6 R
441 Check Obstacles (P)	VEX	.	.	7.0 E	3.7	.
442 Check Oil Filter Buttons	EO	.	.	4.0 E	3.7	.
443 Check OIL PSI ACC PUMP Warning Light	UAD	.	.	1.0 I	3.7	.
444 Check OIL PSI ENG 1 Warning Light	UAD	.	.	1.0 I	3.7	.
445 Check OIL PSI ENG 2 Warning Light	UAD	.	.	1.0 I	3.7	.
446 Check OIL PSI MAIN XMSN 1 Warning Light	UAD	.	.	1.0 I	3.7	.
447 Check OIL PSI MAIN XMSN 2 Warning Light	UAD	.	.	1.0 I	3.7	.
448 Check OIL PSI NOSE GRBX 1 Warning Light	UAD	.	.	1.0 I	3.7	.
449 Check OIL PSI NOSE GRBX 2 Warning Light	UAD	.	.	1.0 I	3.7	.
450 Determine Operating Weight and Moment	UF	.	.	5.9 I	7.0	6.5 R
451 Set ORT WAS Switch	AW	.	1.0 L	.	1.2	2.2 L
452 Enter Page #2 of SPI	AFC	.	.	5.9 I	1.0	2.2 L
453 Check Park Brake	FB	.	.	4.0 I	3.7	.
454 Release Park Brake	FB	.	4.0 F	.	1.2	5.8 F
455 Set Park Brake	FB	.	1.0 F	.	1.2	5.8 F

Task	Subsystems	AUD	KIN	VIS	COG	PSY
456 Adjust Pedals	FC	.	1.0 F	.	1.0	5.8 F
457 Set PEN-M Switch	ARC	.	.	7.0 I	1.2	5.8 L
458 Check Pilot RKT SEL Switch	ARC	.	.	4.0 I	3.7	.
459 Check Pitot Tube	FI	.	.	4.0 E	3.7	.
460 Check Pitot Tubes Antiice Switch	UAI	.	.	4.0 I	3.7	.
461 Check FLT / GND ORIDE Switch	UEL	.	.	4.0 I	3.7	.
462 Set PLT / GND ORIDE Switch	UEL	.	.	7.0 I	1.2	2.2 L
463 Check PNVS Polarity Reversal	VSD	.	.	7.0 I	1.2	2.2 L
464 Check PNVS Switch	VSC	.	.	4.0 I	3.7	.
465 Set PNVS Switch	VSC	.	.	5.0 I	1.2	2.2 L
466 Adjust Power	FC VEX	.	6.7 L	1.0 E	1.0	2.6 L
467 Perform Power Check	EIN FC	.	.	5.9 I	4.6	2.6 R
468 Enter PPOS	AFC	.	.	5.9 I	5.3	7.0 L
469 Determine Predicted Cruise Torque (Dual Engine)	UF	.	.	5.9 I	7.0	6.5 R
470 Determine Predicted Fuel Flow (Dual Engine)	UF	.	.	5.9 I	7.0	6.5 R
471 Determine Predicted Hover Torque	UF	.	.	5.9 I	7.0	6.5 R
472 Determine Pressure Altitude (Arrival)	UF	.	.	5.9 I	7.0	6.5 R
473 Determine Pressure Altitude (Cruise)	UF	.	.	5.9 I	7.0	6.5 R
474 Determine Pressure Altitude (Departure)	UF	.	.	5.9 I	7.0	6.5 R
475 Check PRI HYD PSI Warning Light	UAD	.	.	1.0 I	3.7	.
476 Check Publications	S	.	.	5.9 I	3.7	.
477 Check Publications / Logbook	S	.	.	5.9 I	3.7	6.5 R
478 Check PWR Levers	EF	.	.	4.0 I	3.7	.
479 Set PWR Levers	EF	.	4.8 L	5.0 I	1.2	5.8 L
480 Check PWR Levers Travel	EF	.	.	7.0 I	3.7	5.8 L
481 Check Pylon Safety Pins	AW	.	.	4.0 E	1.2	2.6 B
482 Check Pylons	FA	.	.	4.0 E	3.7	.
483 Set R CSL Light Switch	UL	.	.	7.0 I	1.2	5.8 L
484 Adjust RAD ALT Switches	FI	.	.	7.0 I	1.2	5.8 R
485 Check RAD ALT Switches	FI	.	.	4.0 I	3.7	.
486 Set RAD ALT Switches	FI	.	.	7.0 I	1.2	5.8 R
487 Check Radar Jamming Control Switch	US	.	.	4.0 I	3.7	.
488 Set Radar Jamming Control Switch	US	.	.	4.0 I	3.7	2.2 R
489 Check Radar Jamming Light	US	.	.	1.0 I	3.7	.
490 Check Radar Warning Antenna	US	.	.	4.0 E	3.7	.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
491 Check Radio Magnetic Indicator	FI	.	.	4.0 I	3.7	.
492 Enter Range to Bore-sight Target	AFC	.	.	5.9 I	5.3	7.0 L
493 Control Rate of Climb	FC	.	6.7 B	1.0 E	1.0	2.6 B
494 Control Rate of Descent	FC	.	6.7 B	1.0 E	1.0	2.6 B
495 Set R / CTR CSL Light Switch	UL	.	.	7.0 I	1.2	5.8 L
496 Inspect Rear Area of Aircraft	FA	.	.	4.0 E	3.7	2.6 B
497 Set Receiver Selector Volume Switches	UC	.	.	7.0 I	1.2	5.8 R
498 Check Refuel Valve Open Light	UAD	.	.	1.0 I	3.7	.
499 Check Refueling Access Door	FA	.	.	4.0 E	3.7	.
500 Check Refueling Level Control Valves	EF	.	.	4.0 E	3.7	.
501 Check Refueling Valve	EF	.	.	4.0 E	3.7	4.6 R
502 Check Remote Attitude Indicator	FI	.	.	4.0 I	3.7	.
503 This Task Slot Not Used						
504 Check Remote Transmitter Selector Switch	UC	.	.	1.0 I	3.7	2.2 R
505 Set Remote Transmitter Selector Switch	UC	.	.	1.0 I	1.2	2.2 R
506 Adjust Restraint Harness	S	.	4.0 L	.	3.7	4.6 L
507 Check Restraint Harness	S	.	.	4.0 I	3.7	.
508 Check Retaining Pins	FR	.	.	4.0 E	3.7	.
509 Check Reticle Alignment on Light Source	VSD	.	.	5.0 E	3.7	.
510 Maintain Reticle Alignment on Target	VSD	.	1.0 R	5.4 I	3.7	2.6 R
511 Align Reticle on Feature	VSD	.	6.7 R	5.0 I	3.7	2.6 R
512 Check Reticle on Target	VSD	.	.	1.0 I	3.7	.
513 Inspect Right Side of Aircraft	FA	.	.	4.0 E	3.7	2.6 B
514 Check RKT SEL Switch	ARC	.	.	4.0 I	3.7	.
515 Set RKT SEL Switch	ARC	.	.	4.0 I	1.2	2.2 L
516 Set RNG-KM Thumbwheel	ARC	.	.	7.0 I	5.3	5.8 L
517 Set Rocket Firing Quantity	ARC	.	.	7.0 I	5.3	5.8 L
518 Check Rocket Steering Cursor	VSD	.	.	1.0 I	3.7	.
519 Verify Rocket Steering Cursor Aligned	VSD	.	.	4.0 I	3.7	.
520 Set Rocket Zone	ARC	.	.	7.0 I	1.2	2.2 L
521 Check Rocket Zone Inventory	ARC	.	.	4.0 I	5.3	.
522 Check Rockets Electrical Connector	AW	.	.	4.0 E	3.7	.
523 Check Rockets Igniter Arms	AW	.	.	4.0 E	3.7	.
524 Check Rockets Installation	AW	.	.	4.0 E	4.6	.
525 Check Rockets Launcher	AW	.	.	4.0 E	3.7	.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
526 Check Rockets Launcher Mounting	AW	.	.	4.0 E	3.7	.
527 Check RTR BK Switch	FR	.	.	4.0 I	3.7	.
528 Set RTR BK Switch	FR	.	.	7.0 I	1.2	2.2 L
529 Check SAFE / ARM Indicator Light	UAD	.	.	1.0 I	3.7	.
530 Check Searchlight	UL	.	.	4.0 E	3.7	.
531 Check Searchlight Switch	UL	.	.	4.0 I	3.7	.
532 Check Seat Cushions	S	.	.	4.0 I	3.7	.
533 Adjust Seat Position	S	.	.	5.0 I	1.0	4.6 B
534 Check Selectable Digital Display Lights	UAD	.	.	7.0 I	3.7	5.8 R
535 Check Sensor Select Switch	VSC	.	1.0 L	1.0 I	4.6	.
536 Set Sensor Select Switch	VSC	.	1.0 L	1.0 I	4.6	2.2 L
537 Check SHAFT DRIVEN COMP Warning Light	UAD	.	.	1.0 I	3.7	.
538 Check SIGHT SEL Switch (G)	VSC	.	.	4.0 I	3.7	.
539 Set SIGHT SEL Switch (G)	VSC	.	.	7.0 I	1.2	5.8 L
540 Check SIGHT SEL Switch (P)	VSC	.	.	4.0 I	3.7	.
541 Set SIGHT SEL Switch (P)	VSC	.	.	5.0 I	1.2	5.8 L
542 Determine Single Engine IAS	UF	.	.	5.9 I	7.0	6.5 R
543 Check Single Point Fuel Access	EF	.	.	4.0 E	3.7	4.6 R
544 Set SLAVE Switch	VSC	.	1.0 R	3.7 I	3.7	2.2 R
545 Move Slide Collar on Collective	EF	.	6.7 L	.	3.7	2.6 L
546 Check Stabilator	FC	.	.	4.0 E	3.7	.
547 Check Stabilator Manual Control Switch	FC	.	.	7.0 I	1.0	2.2 R
548 Check Standby Attitude Indicator	FI	.	.	4.0 I	3.7	.
549 Set Standby Attitude Indicator	FI	.	.	7.0 I	1.2	5.8 L
550 Check Standoff Range (G)	NM VSD	.	.	5.9 I	6.8	.
551 Check Standoff Range (P)	VEX	.	.	7.0 E	4.6	.
552 Monitor Starter Light	UAD	.	.	7.0 I	3.7	.
553 Check Static Ground Cable	S	.	.	4.0 E	3.7	.
554 Check Static Port	FI	.	.	4.0 E	3.7	.
555 Check STBY FAN Switch	UEN	.	.	4.0 I	3.7	.
556 Check STORES JETT Switches	AW	.	.	4.0 I	3.7	.
557 Check Strap Assembly	FR	.	.	4.0 E	3.7	.
558 Monitor TADS AUTO Search	VSD	.	.	5.4 I	3.7	.
559 Check TADS BRSIT Switch	VSC	.	.	4.0 I	3.7	.
560 Set TADS BRSIT Switch	VSC	.	.	4.0 I	1.2	2.2 L

Task	Subsystems	AUD	KIN	VIS	COG	PSY
561 Adjust TADS Display Brightness / Contrast	VSD	.	.	3.7 I	1.2	2.2 R
562 Check TADS LRF / D Indicator	AL	.	.	4.0 I	3.7	.
563 Check TADS Switch	VSC	.	.	4.0 I	3.7	.
564 Set TADS Switch	VSC	.	.	7.0 I	1.2	2.2 L
565 Check TADS / PNVS Anti-ice Switch	UAI	.	.	4.0 I	3.7	.
566 Check TADS / PNVS Turret	VSC	.	.	4.0 E	3.7	.
567 Check Tail Landing Gear	FG	.	.	4.0 E	3.7	.
568 Check Tail Rotor Blades	FR	.	.	4.0 E	3.7	.
569 Check Tail Rotor Controls	FR	.	.	4.0 E	3.7	.
570 Check Tail Rotor Hub	FR	.	.	4.0 E	3.7	.
571 Check Tailwheel Advisory Light	UAD	.	.	1.0 I	1.2	.
572 Check TAILWHEEL Switch	FG	.	.	4.0 I	3.7	.
573 Set TAILWHEEL Switch	FG	.	.	4.0 I	1.2	2.2 L
574 Determine Takeoff Center of Gravity	UF	.	.	5.9 I	7.0	6.5 R
575 Determine Takeoff Fuel Weight	UF	.	.	5.9 I	7.0	6.5 R
576 Determine Gross Weight	UF	.	.	5.9 I	7.0	6.5 R
577 Determine Takeoff Weight and Moment	UF	.	.	5.9 I	7.0	6.5 R
578 Identify Target	VSD	.	.	7.0 I	6.8	.
579 Copy Target Coordinates	UC	4.9	.	5.9 I	5.3	6.5 R
580 Enter Target Coordinates	AFC	.	.	5.9 I	5.3	7.0 L
581 Enter Target Index Number	AFC	.	.	7.0 I	5.3	5.8 L
582 Copy Target Number and Type	UC	4.9	.	5.9 I	5.3	6.5 R
583 Follow Target With IHADSS	VSD	.	.	5.4 I	1.0	2.6 H
584 Set TEMP Switch	UEN	.	.	7.0 I	1.2	5.8 L
585 Check Terrain Clearance (G)	VSD	.	.	7.0 I	4.6	2.6 R
586 Check Terrain Clearance (P)	VEX	.	.	7.0 E	4.6	.
587 Monitor TGT	EIN	.	.	7.0 I	3.7	.
588 Set TGT / NAV Index Code	AFC	.	.	7.0 I	1.2	2.2 L
589 Detect Threat	US	.	.	1.0 I	3.7	.
590 Check Tiedowns	SG	.	.	4.0 E	3.7	2.6 B
591 Check Exposure Time	FI	.	.	4.0 I	4.6	.
592 Enter Time into DEK	AFC	.	.	5.9 I	5.3	7.0 L
593 Perform Touchdown	FC VEX	.	6.7 B	5.0 E	1.0	2.6 B
594 Check Tracking Gates	VSD	.	.	4.0 I	3.7	.
595 This Task Slot Not Used						

Task	Subsystems	AUD	KIN	VIS	COG	PSY
596 Check Transmission Deck Catwalk Doors	FA	.	.	4.0 E	3.7	.
597 Set Transmitter Selector Switch	UC	.	.	4.0 I	1.2	4.0 R
598 Check Transponder Control Switch	UC	.	.	4.0 I	3.7	.
599 Set Transponder Control Switch	UC	.	.	7.0 I	1.2	5.8 R
600 Adjust Trim	FC	.	6.7 F	.	1.0	2.6 F
601 Determine True Airspeed (Cruise)	UF	.	.	5.9 I	7.0	6.5 R
602 Check Turn and Slip Indicator	FI	.	.	4.0 I	3.7	.
603 Press U Key on DEK	AFC	.	.	5.0 I	5.3	2.2 L
604 Check UHF Control Switch	UC	.	.	4.0 I	3.7	.
605 Set UHF Control Switch	UC	.	.	7.0 I	1.2	5.8 R
606 Set UHF Frequency Selector Switches	UC	.	.	7.0 I	1.2	4.0 R
607 Check UHF Mode Selector Switch	UC	.	.	4.0 I	3.7	.
608 Set UHF Mode Selector Switch	UC	.	.	7.0 I	1.2	5.8 R
609 Set UHF Volume Switch	UC	6.6	.	7.0 I	1.2	5.8 R
610 Set UPDT / ST Switch	AFC	.	1.0 L	.	1.2	2.2 L
611 Check Upper Flight Controls and Swashplate	FC	.	.	4.0 E	3.7	.
612 Check UPR CHAN Laser Code	AMC	.	.	4.0 I	3.7	.
613 Set UPR CHAN Laser Code	AMC	.	.	7.0 I	1.2	5.8 L
614 Check UPR CHAN Quantity	AMC	.	.	4.0 I	3.7	.
615 Set UPR CHAN Quantity	AMC	.	.	7.0 I	1.2	5.8 L
616 Check UTIL HYD PSI Warning Light	UAD	.	.	1.0 I	3.7	.
617 Check Utility Hydraulic Accumulator	FH	.	.	4.0 E	3.7	4.6 R
618 Check Utility Light	UL	.	.	4.0 I	3.7	.
619 Enter UTM Coordinates	NC	.	.	5.9 I	5.3	7.0 R
620 Adjust VDU Brightness / Contrast	VSD	.	.	3.7 I	1.2	5.8 R
621 Check VDU Control Switch	VSC	.	.	4.0 I	3.7	.
622 Set VDU Control Switch	VSC	.	.	7.0 I	1.2	2.6 R
623 Check Vertical Speed Indicator	FI	.	.	4.0 I	3.7	.
624 Check VHF Control Switch	UC	.	.	4.0 I	3.7	.
625 Set VHF Control Switch	UC	.	.	7.0 I	1.2	5.8 R
626 Set VHF Frequency Selector Switches	UC	.	.	7.0 I	1.2	4.0 R
627 Check VHF Mode Selector Switch	UC	.	.	4.0 I	3.7	.
628 Set VHF Mode Selector Switch	UC	.	.	7.0 I	1.2	5.8 R
629 Set VHF Volume Switch	UC	6.6	.	7.0 I	1.2	5.8 R
630 Check VID SEL Switch (G)	VSC	.	.	4.0 I	3.7	.

Task	Subsystems	AUD	KIN	VIS	COG	PSY
631 Set VID SEL Switch (G)	VSC	.	.	7.0 I	1.2	2.2 L
632 Check VID SEL Switch (P)	VSC	.	.	4.0 I	3.7	.
633 Set VID SEL Switch (P)	VSC	.	.	7.0 I	1.2	2.2 L
634 Check Video Recorder Control Switch	UV	.	.	4.0 I	3.7	.
635 Check Video Recorder Mode Switch	UV	.	.	4.0 I	3.7	.
636 Check Video Recorder Play Switch	UV	.	.	4.0 I	3.7	.
637 Perform Visual Search	VEX	.	.	7.0 E	3.7	.
638 Test Warning and Advisory Lights	UAD	.	.	7.0 I	3.7	2.2 R
639 Note Weapon Impact	VSD	.	.	1.0 I	1.0	.
640 Check Weapon Path	VEX	.	.	5.0 E	3.7	.
641 Monitor Weapons Loading	AW	.	.	4.0 E	3.7	.
642 Transmit Weapons Status	UC	4.3	1.0 R	.	5.3	1.0 R
643 Pull Weapons Trigger	AW	.	1.0 L	.	1.2	2.2 L
644 Release Weapons Trigger	AW	.	1.0 L	.	1.0	2.2 L
645 Receive Weather Briefing	UC	4.9	.	.	5.3	.
646 Determine Weight of Load	UF	.	.	5.9 I	7.0	6.5 R
647 Check Wheel Brakes	FB	.	4.8 F	.	1.2	5.8 F
648 Check Windshield Wiper Switch (G)	S	.	.	4.0 I	3.7	.
649 Check Windshield Wiper Switch (P)	S	.	.	4.0 I	3.7	.
650 Check Wing	FA	.	.	4.0 E	3.7	.
651 Check Wing Anticollision Light	UL	.	.	4.0 E	3.7	.
652 Check Wing Formation Light	UL	.	.	4.0 E	3.7	.
653 Check Wing Navigation Light	UL	.	.	4.0 E	3.7	.
654 Check Airspeed Indicator (Inflight)	FC FI	.	.	4.0 I	3.7	.
655 Check Altimeter (Inflight)	FC FI	.	.	4.0 I	3.7	.
656 Set ANT Switch	US	.	.	7.0 I	1.2	2.2 R
657 Verify Area Secure (P)	VEX	.	.	1.0 E	3.7	.
658 Set Brake Lever	FB	.	.	5.0 I	1.0	5.8 R
659 Compute Fuel Consumption Rate	EF	.	.	5.9 I	7.0	7.0 R
660 Note Fuel Quantity	EF	.	.	4.0 I	5.3	7.0 R
661 Monitor Fuel Quantity Indicator (Internal)	EF	.	.	5.9 I	3.7	.
662 This Task Slot Not Used						
663 Check Heading Indicator (Inflight)	FC FI	.	.	4.0 I	3.7	.
664 Set M-1 Switch	US	.	.	7.0 I	1.2	2.2 R
665 Set M-1 Test Switch	US	.	.	1.0 I	3.7	2.2 R

Task	Subsystems	AUD	KIN	VIS	COG	PSY
666 Set M-2 Switch	US	.	.	7.0 I	1.2	2.2 R
667 Set M-2 Test Switch	US	.	.	1.0 I	3.7	2.2 R
668 Set M-3 Switch	US	.	.	7.0 I	1.2	2.2 R
669 Set M-3 Test Switch	US	.	.	1.0 I	3.7	2.2 R
670 Set M-C Switch	US	.	.	7.0 I	1.2	2.2 R
671 Set M-C Test Switch	US	.	.	1.0 I	3.7	2.2 R
672 Set Master Switch	US	.	.	7.0 I	1.2	5.8 R
673 Set Mode 1 Code	US	.	.	5.9 I	5.3	2.2 R
674 Set Mode 3A Code	US	.	.	5.9 I	5.3	2.2 R
675 Set Mode 4 Switch	US	.	.	7.0 I	1.2	5.8 R
676 Set NOE / APPCH Switch	FC	.	.	4.0 I	1.2	2.2 L
677 Set Pedal Adjustment Lever	S	.	.	7.0 I	1.2	5.8 R
678 Decrease Power	FC VEX	.	6.7 L	1.0 E	1.0	2.6 L
679 Increase Power	FC VEX	.	6.7 L	1.0 E	1.0	2.6 L
680 Release Radio Transmitter Switch	UC	.	1.0 R	.	1.0	1.0 R
681 Check Reply Light	US	.	.	1.0 I	3.7	2.2 R
682 Check Test Light	US	.	.	1.0 I	3.7	2.2 R
683 Check Test / MON Light	US	.	.	1.0 I	3.7	2.2 R
684 Note Time	FI	.	.	4.0 I	3.7	7.0 R
685 Check Trim Ball (Inflight)	FC FI	.	.	4.0 I	3.7	.
686 Check Vertical Situation Indicator (Inflight)	FC FI	.	.	4.0 I	3.7	.
687 Call Up Waypoint	NC	.	.	5.9 I	5.3	5.8 R
688 Check & Torque Indicator (Inflight)	FC FI	.	6.7 B	4.0 I	3.7	2.6 B
689 Control Heading (Taxi)	FC	.	6.7 F	.	1.0	2.6 F
690 Check Obstacle Clearance	VEX	.	.	5.0 E	1.0	.
691 Monitor Flight Controls	FC	.	1.0 B	.	1.0	1.0 B
692 Change Headings	FC VEX	.	6.7 F	5.0 E	1.0	2.6 F
693 Perform HIT Check	FC EIN	.	6.7 B	5.0 I	4.6	2.6 B
694 Check Rotor RPM	FC EIN	.	.	4.0 I	3.7	.
695 This Task Slot Not Used						
696 Neutralize Flight Controls	FC	.	4.8 F	.	3.7	2.6 F
697 Press Flare Dispenser Switch	US	.	.	.	.	.
698 Press Chaff Dispenser Switch	US	.	.	.	.	.
699 Receive Cockpit Communications (Normal)	UC	4.9	.	.	1.0	.
700 Transmit Cockpit Communication (Normal)	UC	4.3	1.0 R	.	1.0	2.2 R

Task	Subsystems	AUD	KIN	VIS	COG	PSY
701 Monitor External Visual Scene	VEX	.	.	1.0 E	1.0	.
702 Search Area	VSC	.	6.7 R	7.0 I	3.7	2.6 R
703 This Task Slot Not Used						
704 Check & Torque Indicator	FI	.	.	4.0 I	3.7	.
705 Record Battlefield Intelligence	UC	4.9	.	.	4.6	6.5 R
706 Record Mission Update	UC	4.9	.	.	4.6	6.5 R
707 This Task Slot Not Used						
708 Monitor Tracking Gates	VSD	.	.	1.0 I	1.0	.

A P P E N D I X E

AH-64A FUNCTION DECISION RULES

The AH-64A decision rules were written to describe the exact manner in which the tasks are combined to form each 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 frequency of the random task's occurrence within the function. Appendix E contains the 184 function decision rules.

Function 1: Acquire Target (DTV)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	538	Check SIGHT SEL Switch (G)	GUNNER (G)	0.0	1.0
3	227	Detect Feature	GUNNER (G)	21.5	2.5
4	511	Align Reticle on Feature	GUNNER (G)	24.0	2.5
5	253	Set FOV Switch	GUNNER (G)	27.0	1.0
6	511	Align Reticle on Feature	GUNNER (G)	28.5	2.0
7	253	Set FOV Switch	GUNNER (G)	31.0	1.0
8	511	Align Reticle on Feature	GUNNER (G)	32.5	2.0
9	578	Identify Target	GUNNER (G)	34.5	5.5
10	361	Full Laser Trigger	GUNNER (G)	40.5	1.5
11	362	Release Laser Trigger	GUNNER (G)	42.0	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	702	Search Area	GUNNER (G)	1.5	20.0

Function 2: Acquire Target (Laser Spot Tracker, Automatic)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	538	Check SIGHT SEL Switch (G)	GUNNER (G)	0.0	1.0
2	377	Set Lt Switch	GUNNER (G)	1.5	1.0
3	47	Check AND Display (Search)	GUNNER (G)	2.5	1.5
5	48	Check AND Display (Tracking)	GUNNER (G)	24.0	1.5
6	253	Set FOV Switch	GUNNER (G)	26.0	1.0
7	578	Identify Target	GUNNER (G)	27.0	5.5
8	377	Set Lt Switch	GUNNER (G)	33.0	1.0
9	361	Pull Laser Trigger	GUNNER (G)	34.5	1.5
10	362	Release Laser Trigger	GUNNER (G)	36.0	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
4	558	Monitor TADS AUTO Search	GUNNER (G)	4.0	20.0

Function 3: Acquire Target (Laser Spot Tracker, Manual)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	538	Check SIGHT SEL Switch (G)	GUNNER (G)	0.0	1.0
2	377	Set LT Switch	GUNNER (G)	1.5	1.0
4	48	Check AND Display (Tracking)	GUNNER (G)	13.0	1.5
5	253	Set FOV Switch	GUNNER (G)	15.0	1.0
6	578	Identify Target	GUNNER (G)	16.0	5.5
7	377	Set LT Switch	GUNNER (G)	22.0	1.0
8	361	Pull Laser Trigger	GUNNER (G)	23.5	1.5
9	362	Release Laser Trigger	GUNNER (G)	25.0	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
3	702	Search Area	GUNNER (G)	3.0	10.0

Function 4: Acquire Target (DVO)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	538	Check SIGHT SEL Switch (G)	GUNNER (G)	0.0	1.0
3	227	Detect Feature	GUNNER (G)	21.5	2.5
4	511	Align Reticle on Feature	GUNNER (G)	24.0	2.5
5	253	Set FOV Switch	GUNNER (G)	27.0	1.0
6	511	Align Reticle on Feature	GUNNER (G)	28.5	2.0
7	578	Identify Target	GUNNER (G)	30.5	5.5
8	361	Pull Laser Trigger	GUNNER (G)	36.5	1.5
9	362	Release Laser Trigger	GUNNER (G)	38.0	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	702	Search Area	GUNNER (G)	1.5	20.0

Function 5: Monitor Audio (Pilot)

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	66	Monitor Audio	PILOT (P)	0.0	-0.5

Function 6: Monitor Audio (Gunner)

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	65	Monitor Audio	GUNNER (G)	0.0	-0.5

Function 7: Acquire Target (FLIR)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	538	Check SIGHT SEL Switch (G)	GUNNER (G)	0.0	1.0
3	227	Detect Feature	GUNNER (G)	21.5	2.5
4	511	Align Reticule on Feature	GUNNER (G)	24.0	2.5
5	253	Set FOV Switch	GUNNER (G)	27.0	1.0
6	511	Align Reticule on Feature	GUNNER (G)	28.5	2.0
7	253	Set FOV Switch	GUNNER (G)	31.0	1.0
8	511	Align Reticule on Feature	GUNNER (G)	32.5	2.0
9	253	Set FOV Switch	GUNNER (G)	35.0	1.0
10	511	Align Reticule on Feature	GUNNER (G)	36.5	2.0
11	578	Identify Target	GUNNER (G)	38.5	5.5
12	361	Pull Laser Trigger	GUNNER (G)	44.5	1.5
13	362	Release Laser Trigger	GUNNER (G)	46.0	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	702	Search Area	GUNNER (G)	1.5	20.0

Function 8: Disengage Image Autotracking

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	323	Set IAT Switch	GUNNER (G)	0.0	1.0

Function 9: Disengage Image Autotracking Offset

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	320	Set IAT OFS Switch	CUNYER (G)	0.0	1.0

Function 10: Activate Ignition

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	327	Insert Ignition Key	PILOT (P)	0.0	4.0
2	329	Turn Ignition Key	PILOT (P)	4.5	2.0

Function 11: Adjust IHADSS Boresight (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	539	Set SIGHT SEL Switch (G)	GUNNER (G)	0.0	2.0
2	332	Set IHADSS BRSIT Switch	GUNNER (G)	2.5	1.0
3	89	Adjust BRU Intensity	GUNNER (G)	4.0	4.0
4	315	Align EMD Reticle	GUNNER (G)	8.5	4.0
5	314	Set EMD BRSIT Switch	GUNNER (G)	13.0	1.0
6	332	Set IHADSS BRSIT Switch	GUNNER (G)	14.5	1.0
7	350	Adjust INST Lights	GUNNER (G)	16.0	2.0
8	284	Set GS Switch	GUNNER (G)	18.5	1.0
9	333	Adjust IHADSS Display Brightness / Contr	GUNNER (G)	20.0	10.0
10	631	Set VID SEL Switch (G)	GUNNER (G)	30.5	1.0

Function 12: Adjust IHADSS Boresight (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	541	Set SIGHT SEL Switch (P)	PILOT (P)	0.0	1.0
2	332	Set IHADSS BRSIT Switch	PILOT (P)	1.5	1.0
3	89	Adjust BRU Intensity	PILOT (P)	3.0	4.0
4	315	Align HMD Reticle	PILOT (P)	7.5	4.0
5	314	Set HMD BRSIT Switch	PILOT (P)	12.0	1.0
6	332	Set IHADSS BRSIT Switch	PILOT (P)	13.5	1.0
7	350	Adjust INST Lights	PILOT (P)	15.0	2.0

Function 13: Adjust Outfront Boresight

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	492	Enter Range to Boresight Target	GUNNER (G)	0.0	11.0
2	536	Set Sensor Select Switch	GUNNER (G)	11.5	1.0
3	253	Set FOV Switch	GUNNER (G)	13.0	1.0
4	83	Detect Boresight Target	GUNNER (G)	14.5	2.0
5	246	Adjust FLIR Level / Gain	GUNNER (G)	17.0	4.0
6	323	Set IAT Switch	GUNNER (G)	21.5	1.0
7	536	Set Sensor Select Switch	GUNNER (G)	23.0	1.0
8	509	Check Reticle Alignment on Light Source	GUNNER (G)	24.5	2.0
9	560	Set TADS BRSIT Switch	GUNNER (G)	27.0	1.0
10	86	Set BRSIT Enable Switch	GUNNER (G)	28.5	1.0
11	70	Adjust Azimuth	GUNNER (G)	30.0	10.0
12	166	Adjust Elevation	GUNNER (G)	40.5	10.0
13	509	Check Reticle Alignment on Light Source	GUNNER (G)	51.0	2.0
14	86	Set BRSIT Enable Switch	GUNNER (G)	53.5	1.0
15	560	Set TADS BRSIT Switch	GUNNER (G)	55.0	1.0
16	323	Set IAT Switch	GUNNER (G)	56.5	1.0

Function 14: Arrange Cockpit (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	93	Position Canopy Door	GUNNER (G)	0.0	4.0
2	366	Check Loose Equipment	GUNNER (G)	4.5	15.0
3	533	Adjust Seat Position	GUNNER (G)	20.0	10.0
4	506	Adjust Restraint Harness	GUNNER (G)	30.5	30.0
5	343	Check Inertial Reel Lock	GUNNER (G)	61.0	30.0
6	677	Set Pedal Adjustment Lever	GUNNER (G)	91.5	2.0
7	456	Adjust Pedals	GUNNER (G)	94.0	25.0
8	677	Set Pedal Adjustment Lever	GUNNER (G)	119.5	2.0

Function 15: Arrange Cockpit (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	93	Position Canopy Door	PILOT (P)	0.0	4.0
2	366	Check Loose Equipment	PILOT (P)	4.5	15.0
3	533	Adjust Seat Position	PILOT (P)	20.0	10.0
4	506	Adjust Restraint Harness	PILOT (P)	30.5	30.0
5	343	Check Inertial Reel Lock	PILOT (P)	61.0	30.0
6	677	Set Pedal Adjustment Lever	PILOT (P)	91.5	2.0
7	456	Adjust Pedals	PILOT (P)	94.0	25.0
8	677	Set Pedal Adjustment Lever	PILOT (P)	119.5	2.0
9	455	Set Park Brake	PILOT (P)	122.0	2.0
10	658	Set Brake Lever	PILOT (P)	124.5	1.0

Function 16: Change Battle Position

Continuous Random Tasks

Start : 0.0
Finish: -0.5

Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	31	Control Airspeed	0.5
2	36	Control Altitude	0.5
3	65	Control Attitude	0.5
4	304	Adjust Heading (Inflight)	0.5
5	466	Adjust Power	0.5
6	600	Adjust Trim	0.5

Function 17: Check Aircraft Systems (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	211	Check Engine Instruments	GUNNER (G)	0.0	3.0
2	242	Check Flight Instruments	GUNNER (G)	3.5	3.0
3	398	Check Master CAUTION / WARNING Panel	GUNNER (G)	7.0	1.0
4	268	Check Fuel Quantity Indicator (Internal)	GUNNER (G)	8.5	2.0

Function 18: Check Aircraft Systems (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	211	Check Engine Instruments	PILOT (P)	0.0	3.0
2	398	Check Master CAUTION / WARNING Panel	PILOT (P)	-211.0	1.0
3	268	Check Fuel Quantity Indicator (Internal)	PILOT (P)	-398.0	2.0

Function 19: Check Area Security (Sensor Search)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	538	Check SIGHT SEL Switch (G)	GUNNER (G)	0.0	1.0
2	536	Set Sensor Select Switch	GUNNER (G)	1.5	1.0
3	253	Set FOV Switch	GUNNER (G)	3.0	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
4	392	Manipulate MAN TTR Thumbforce Controller	GUNNER (G)	4.5	60.0
5	63	Verify Area Secure (G)	GUNNER (G)	4.5	60.0

Function 20: Check Area Security (Visual Search)

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	637	Perform Visual Search	PILOT (P)	0.0	50.0
2	657	Verify Area Secure (P)	PILOT (P)	-637.0	10.0

Function 21: Check Armament Subsystems (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	131	Check CPG ARM Switch	GUNNER (G)	0.0	1.0
2	514	Check RPT SEL Switch	GUNNER (G)	1.5	1.0
3	287	Check GUN SEL Switch	GUNNER (G)	3.0	1.0
4	424	Check MSL SEL Switch	GUNNER (G)	4.5	1.0
5	373	Check LSR SEL Switch	GUNNER (G)	6.0	1.0
6	461	Check PLT / GND ORIDE Switch	GUNNER (G)	7.5	1.0

Function 22: Check Armament Subsystems (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	396	Check MASTER ARM Switch	PILOT (P)	0.0	1.0
2	514	Check RKT SEL Switch	PILOT (P)	1.5	1.0
3	287	Check GUN SEL Switch	PILOT (P)	3.0	1.0
4	424	Check MSL SEL Switch	PILOT (P)	4.5	1.0
5	556	Check STORES JETT Switches	PILOT (P)	6.0	1.0

Function 23: Check Cockpit Conditions (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	240	Check First Aid Kit	GUNNER (G)	0.0	5.0
2	532	Check Seat Cushions	GUNNER (G)	5.5	10.0
3	507	Check Restraint Harness	GUNNER (G)	16.0	10.0
4	90	Check Canopy	GUNNER (G)	26.5	8.0
5	366	Check Loose Equipment	GUNNER (G)	35.0	15.0
6	476	Check Publications	GUNNER (G)	50.5	25.0

Function 24: Check Cockpit Conditions (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	240	Check First Aid Kit	PILOT (P)	0.0	5.0
2	532	Check Seat Cushions	PILOT (P)	5.5	10.0
3	507	Check Restraint Harness	PILOT (P)	16.0	10.0
4	90	Check Canopy	PILOT (P)	26.5	8.0
5	366	Check Loose Equipment	PILOT (P)	35.0	15.0
6	477	Check Publications / Logbook	PILOT (P)	50.5	300.0

Function 25: Check Collective Switches (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	429	Check Night Vision Switch	GUNNER (G)	0.0	1.0
2	87	Check BRSIT HMD / Polarity Switch	GUNNER (G)	1.5	1.0
3	531	Check Searchlight Switch	GUNNER (G)	3.0	1.0
4	121	Set Collective Friction	GUNNER (G)	4.5	3.0

Function 26: Check Collective Switches (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	429	Check Night Vision Switch	PILOT (P)	0.0	1.0
2	87	Check ERSIR EMD / Polarity Switch	PILOT (P)	1.5	1.0
3	531	Check Searchlight Switch	PILOT (P)	3.0	1.0
4	121	Set Collective Friction	PILOT (P)	4.5	3.0

Function 27: Check Engine 1 ECU Lockout System

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	182	Set ENG 1 PWR Lever	PILOT (P)	0.0	3.0
2	177	Check ENG 1 NP / NG / NR	PILOT (P)	3.5	4.0
3	180	Adjust ENG 1 PWR Lever	PILOT (P)	8.0	5.0
4	177	Check ENG 1 NP / NG / NR	PILOT (P)	13.5	4.0
5	180	Adjust ENG 1 PWR Lever	PILOT (P)	18.0	5.0
6	182	Set ENG 1 PWR Lever	PILOT (P)	23.5	3.0
7	182	Set ENG 1 PWR Lever	PILOT (P)	27.0	3.0
8	176	Check ENG 1 NP	PILOT (P)	30.5	2.0

Function 28: Check Engine 2 ECU Lockout System

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	197	Set ENG 2 PWR Lever	PILOT (P)	0.0	3.0
2	193	Check ENG 2 NP / NG / NR	PILOT (P)	3.5	4.0
3	196	Adjust ENG 2 PWR Lever	PILOT (P)	8.0	5.0
4	193	Check ENG 2 NP / NG / NR	PILOT (P)	13.5	4.0
5	196	Adjust ENG 2 PWR Lever	PILOT (P)	18.0	5.0
6	197	Set ENG 2 PWR Lever	PILOT (P)	23.5	3.0
7	197	Set ENG 2 PWR Leve:	PILOT (P)	27.0	3.0
8	192	Check ENG 2 NP	PILOT (P)	30.5	2.0

Function 29: Check Engine Chop Circuit

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	545	Move Slide Collar on Collective	PILOT (P)	0.0	3.0
2	434	Check NP and NG	PILOT (P)	3.5	4.0
3	203	Check ENG CHOP Light	PILOT (P)	8.0	0.5
4	399	Reset MASTER CAUTION / WARNING Panel Lig	PILOT (P)	9.0	1.0
5	479	Set PWR Levers	PILOT (P)	10.5	5.0
6	545	Move Slide Collar on Collective	PILOT (P)	16.0	3.0
7	203	Check ENG CHOP Light	PILOT (P)	19.5	0.5
8	479	Set PWR Levers	PILOT (P)	20.5	5.0
9	435	Check NP and NR	PILOT (P)	26.0	4.0

Function 30: Check Fuel Sample

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	269	Collect Fuel Sample	PILOT (P)	0.0	20.0
2	270	Inspect Fuel Sample	PILOT (P)	20.5	5.0

Function 31: Check Helmet (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	312	Don Helmet	GUNNER (G)	0.0	25.0
2	310	Connect Helmet	GUNNER (G)	25.5	5.0
3	330	Position IHEADSS	GUNNER (G)	31.0	60.0

Function 32: Check Helmet (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	312	Don Helmet	PILOT (P)	0.0	25.0
2	310	Connect Helmet	PILOT (P)	25.5	5.0
3	330	Position IIRADSS	PILOT (P)	31.0	60.0

Function 33: Check Instrument Panel (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	98	Position CANOPY JETT Pin	GUNNER (G)	9.0	5.0
2	538	Check SIGHT SEL Switch (G)	GUNNER (G)	5.5	1.0
3	6	Check ACQ SEL Switch (G)	GUNNER (G)	7.0	2.0
4	426	Check MOX Switch	GUNNER (G)	9.5	1.0
5	225	Check FCC / MOX Switch	GUNNER (G)	11.0	1.0
6	331	Check IHADSS BRSIT Switch	GUNNER (G)	12.5	1.0
7	559	Check TADS BRSIT Switch	GUNNER (G)	14.0	1.0
8	372	Check LSR MSL CCM Switch	GUNNER (G)	15.5	1.0
9	461	Check PLT / D CCM Switch	GUNNER (G)	17.0	1.0
10	369	Check LRF / D CCM Switch	GUNNER (G)	18.5	1.0
11	223	Check FC SYM GEN Switch	GUNNER (G)	20.0	1.0
12	336	Check IHADSS Switch	GUNNER (G)	21.5	1.0
13	563	Check Engine Instruments (Condition)	GUNNER (G)	23.0	1.0
14	212	Check Airspeed Indicator	GUNNER (G)	24.5	4.0
15	32	Check Remote Attitude Indicator	GUNNER (G)	29.0	1.0
16	502	Check Radio Magnetic Indicator	GUNNER (G)	30.5	1.0
17	491	Set Altimeter	GUNNER (G)	32.0	1.0
18	34	Check Vertical Speed Indicator	GUNNER (G)	33.5	3.0
19	623	Set Clock	GUNNER (G)	37.0	1.0
20	118	Check LT Switch	GUNNER (G)	38.5	6.0
21	376		GUNNER (G)	45.0	1.0

Function 34: Check Instrument Panel (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	572	Check TAILWHEEL Switch	PILOT (P)	0.0	1.0
2	98	Position CANOPY JETT Pin	PILOT (P)	1.5	5.0
3	540	Check SICRT SEL Switch (P)	PILOT (P)	7.0	1.0
4	8	Check ACQ SEL Switch (P)	PILOT (P)	8.5	1.0
5	632	Check VID SEL Switch (P)	PILOT (P)	10.0	1.0
6	4	Check ACM Switch	PILOT (P)	11.5	1.0
7	464	Check PWVS Switch	PILOT (P)	13.0	1.0
8	331	Check HEADGS BRST Switch	PILOT (P)	14.5	1.0
9	212	Check Engine Instruments (Condition)	PILOT (P)	16.0	4.0
10	382	Check Magnetic Compass	PILOT (P)	20.5	5.0
11	88	Check BRU	PILOT (P)	26.0	3.0
12	352	Set Instrument Test Panel Light Switch	PILOT (P)	29.5	1.0
13	351	Set Instrument Test Panel Brightness	PILOT (P)	31.0	2.0
14	32	Check Airspeed Indicator	PILOT (P)	33.5	1.0
15	548	Check Standby Attitude Indicator	PILOT (P)	35.0	1.0
16	621	Check VDO Control Switch	PILOT (P)	36.5	1.0
17	602	Check Turn and Slip Indicator	PILOT (P)	38.0	1.0
18	485	Check RAD ALT Switches	PILOT (P)	39.5	1.0
19	34	Set Altimeter	PILOT (P)	41.0	3.0
20	623	Check Vertical Speed Indicator	PILOT (P)	44.5	1.0
21	316	Check Horizontal Situation Indicator (HS)	PILOT (P)	46.0	3.0
22	487	Check Radar Jamming Control Switch	PILOT (P)	49.5	1.0
23	344	Check Infrared Jamming Control Switch	PILOT (P)	51.0	1.0
24	103	Check Chaff Dispenser ARM Switch	PILOT (P)	52.5	1.0
25	105	Set Chaff Dispenser Control Switch	PILOT (P)	54.0	2.0
26	102	Set Chaff Counter	PILOT (P)	56.5	4.0
27	118	Set Clock	PILOT (P)	61.0	6.0
28	1	Set Accelerometer	PILOT (P)	67.5	2.0
29	301	Check EMRS Control Switch	PILOT (P)	70.0	1.0
30	168	Check EMER HUD PWR Switch (P)	PILOT (P)	71.5	1.0
31	122	Set COM Control Panel Volume Switch	PILOT (P)	73.0	1.0
32	497	Set Receiver Selector Volume Switches	PILOT (P)	74.5	4.0
33	597	Set Transmitter Selector Switch	PILOT (P)	79.0	1.0
34	324	Set ICS Switch	PILOT (P)	80.5	1.0

Function 35: Check Left Control Console (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	110	Check Circuit Breakers (G)	GUNNER (G)	0.0	8.0
2	618	Check Utility Light	GUNNER (G)	8.5	1.0
3	248	Check Floodlight Switch	GUNNER (G)	10.0	1.0
4	348	Check INST Light Switch	GUNNER (G)	11.5	1.0
5	358	Set L CSL Light Switch	GUNNER (G)	13.0	1.0
6	483	Set R CSL Light Switch	GUNNER (G)	14.5	1.0
7	264	Check Fuel ORIDE Switch	GUNNER (G)	16.0	1.0
8	272	Check Fuel TRANS Switch	GUNNER (G)	17.5	1.0
9	260	Check Fuel BOOST Switch	GUNNER (G)	19.0	1.0
10	271	Check Fuel TX SEL Switch	GUNNER (G)	20.5	1.0
11	478	Check PWR Levers	GUNNER (G)	22.0	2.0
12	167	Check EMER HYD PWR Switch (G)	GUNNER (G)	24.5	1.0
13	74	Check BAT OVRD Switch	GUNNER (G)	26.0	1.0
14	565	Check TADS / PNVG Anti-ice Switch	GUNNER (G)	27.5	1.0
15	648	Check Windshield Wiper Switch (G)	GUNNER (G)	29.0	1.0
16	555	Check STBY FAN Switch	GUNNER (G)	30.5	1.0
17	13	Check ADSS Switch	GUNNER (G)	32.0	1.0
18	634	Check Video Recorder Control Switch	GUNNER (G)	33.5	1.0
19	635	Check Video Recorder Mode Switch	GUNNER (G)	35.0	1.0
20	636	Check Video Recorder Play Switch	GUNNER (G)	36.5	1.0
21	420	Check Missile Type Switch	GUNNER (G)	38.0	1.0
22	418	Check Missile Mode Switch	GUNNER (G)	39.5	1.0
23	415	Check Missile Control Switch	GUNNER (G)	41.0	2.0
24	141	Check DEK Data Entry Selector Switch	GUNNER (G)	43.5	1.0

Function 36: Check Left Control Console (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	67	Check Auxiliary Vent Handle	PILOT (P)	0.0	1.0
2	618	Check Oil-Light Light	PILOT (P)	1.5	1.0
3	436	Check OAT Gauge	PILOT (P)	3.0	1.0
4	649	Check Windshield Wiper Switch (P)	PILOT (P)	4.5	1.0
5	460	Check Pitot Tubes Anti-Ice Switch	PILOT (P)	6.0	1.0
6	565	Check TRANS / FMS Anti-Ice Switch	PILOT (P)	7.5	1.0
7	204	Check ENG INLET Anti-Ice Switch	PILOT (P)	9.0	1.0
8	383	Check Main and Tail Rotor Anti-Ice Switc	PILOT (P)	10.5	1.0
9	50	Check Anti-Ice Control Switch	PILOT (P)	12.0	1.0
10	51	Check Anti-Ice Test Switch	PILOT (P)	13.5	1.0
11	96	Check Canopy Heater Switch	PILOT (P)	15.0	1.0
12	91	Check Canopy Defogger Switch	PILOT (P)	16.5	1.0
13	250	Check Formation Light Switch	PILOT (P)	18.0	1.0
14	428	Check Navigation Light Switch	PILOT (P)	19.5	1.0
15	49	Check Anticollision Light Switch	PILOT (P)	21.0	1.0
16	348	Check INST Light Switch	PILOT (P)	22.5	1.0
17	248	Check Floodlight Switch	PILOT (P)	24.0	1.0
18	358	Set L CSL Light Switch	PILOT (P)	25.5	1.0
19	495	Set R / CTR CSL Light Switch	PILOT (P)	27.0	1.0
20	219	Check EXT TK Fuel Switch	PILOT (P)	28.5	1.0
21	272	Check Fuel TRANS Switch	PILOT (P)	30.0	1.0
22	260	Check Fuel BOOST Switch	PILOT (P)	31.5	1.0
23	262	Check Fuel CROSSED Switch	PILOT (P)	33.0	1.0
24	172	Set ENG 1 Fuel Switch	PILOT (P)	34.5	1.0
25	188	Set ENG 2 Fuel Switch	PILOT (P)	36.0	1.0
26	480	Check PWR Levers Travel	PILOT (P)	37.5	10.0
27	478	Check PWR Levers	PILOT (P)	48.0	2.0
28	183	Check ENG 1 START Switch	PILOT (P)	50.5	1.0
29	198	Check ENG 2 START Switch	PILOT (P)	52.0	1.0
30	400	Check MASTER IGN Switch	PILOT (P)	53.5	1.0
31	527	Check RTR BK Switch	PILOT (P)	55.0	1.0
32	273	Check GEN 1 Switch	PILOT (P)	56.5	1.0
33	276	Check GEN 2 Switch	PILOT (P)	58.0	1.0
34	75	Check RAJT / EXT PWR Switch	PILOT (P)	59.5	1.0
35	556	Check STORES JEIT Switches	PILOT (P)	61.0	1.0
36	521	Check Rocket Zone Inventory	PILOT (P)	62.5	8.0
37	170	Check ETCU Switch	PILOT (P)	71.0	1.0
38	222	Set FAN Switch	PILOT (P)	72.5	1.0
39	584	Set TEMP Switch	PILOT (P)	74.0	1.0

Function 37: Check Left Side - Fuselage and Nose

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	95	Check Canopy Glass	PILOT (P)	0.0	10.0
2	220	Position External Canopy Pin	PILOT (P)	10.5	5.0
3	437	Check CAF Gauge Temperature	PILOT (P)	16.0	2.0
4	554	Check Radio Port	PILOT (P)	18.5	3.0
5	384	Check Main Landing Gear	PILOT (P)	22.0	30.0
6	553	Check Static Ground Cable	PILOT (P)	52.5	2.0
7	68	Check Avionics Bay	PILOT (P)	55.0	30.0
8	490	Check Radar Warning Antenna	PILOT (P)	85.5	3.0
9	566	Check RAD8 / PNV8 Turret	PILOT (P)	89.0	10.0

Function 38: Check Left Side - Mast

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	387	Check Main Transmission Oil	PILOT (P)	0.0	5.0
2	386	Check Main Transmission Filter Button	PILOT (P)	5.5	2.0
3	432	Check Nose Gear Box Oil	PILOT (P)	8.0	2.0
4	433	Check Nose Gear Box Oil Cap	PILOT (P)	10.5	3.0
5	431	Check Nose Gear Box Filter Button	PILOT (P)	14.0	2.0
6	430	Check Nose Gear Box Cowling	PILOT (P)	16.5	5.0
7	208	Check Engine Inlet	PILOT (P)	22.0	5.0
8	206	Position Engine Cowling	PILOT (P)	27.5	8.0
9	216	Check Engine Oil Level	PILOT (P)	36.0	5.0
10	442	Check Oil Filter Buttons	PILOT (P)	41.5	2.0
11	263	Check Fuel Filter Buttons	PILOT (P)	44.0	2.0
12	206	Position Engine Cowling	PILOT (P)	46.5	8.0
13	611	Check Upper Flight Controls and Swabpla	PILOT (P)	55.0	60.0
14	385	Check Main Rotor Head and Blades	PILOT (P)	115.5	90.0
15	82	Check Blade and Pitch Link	PILOT (P)	206.0	30.0
16	508	Check Retaining Pins	PILOT (P)	236.5	15.0
17	18	Check Air Data Sensor	PILOT (P)	252.0	8.0

Function 39: Check Left Side - Rear Fuselage

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	169	Check Empennage	PILOT (P)	0.0	10.0
2	569	Check Tail Rotor Controls	PILOT (P)	10.5	10.0
3	570	Check Tail Rotor Hub	PILOT (P)	21.0	15.0
4	568	Check Tail Rotor Blades	PILOT (P)	36.5	20.0
5	546	Check Stabilator	PILOT (P)	57.0	10.0
6	17	Check Aft Tailboom	PILOT (P)	67.5	15.0
7	596	Check Transmission Deck Catwalk Doors	PILOT (P)	83.0	20.0
8	217	Check Equipment Storage Compartment	PILOT (P)	103.5	3.0
9	353	Check IR Suppressor / Engine Exhaust	PILOT (P)	107.0	8.0
10	16	Check Aft Storage Bay	PILOT (P)	115.5	3.0
11	427	Check Macalle Fire Louvers	PILOT (P)	119.0	2.0
12	237	Check Fire Extinguisher Disp	PILOT (P)	121.5	2.0
13	39	Check Ammunition Bay Access	PILOT (P)	124.0	5.0

Function 40: Check Left Side - Wing

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	650	Check Wing	PILOT (P)	0.0	10.0
2	651	Check Wing Anticollision Light	PILOT (P)	10.5	2.0
3	653	Check Wing Navigation Light	PILOT (P)	13.0	2.0
4	652	Check Wing Formation Light	PILOT (P)	15.5	2.0
5	459	Check Pitot Tube	PILOT (P)	18.0	2.0
6	482	Check Pylons	PILOT (P)	20.5	10.0
7	307	Check HELIFIRE Launcher ARM / SAFE Switc	PILOT (P)	31.0	3.0
8	308	Check HELIFIRE Launcher Mounting	PILOT (P)	34.5	10.0
9	306	Check HELIFIRE Electrical Connector	PILOT (P)	45.0	5.0
10	309	Check HELIFIRE Missile Installation	PILOT (P)	50.5	10.0
11	526	Check Rockets Launcher Mounting	PILOT (P)	61.0	10.0
12	522	Check Rockets Electrical Connector	PILOT (P)	71.5	5.0
13	525	Check Rockets Launcher	PILOT (P)	77.0	10.0
14	524	Check Rockets Installation	PILOT (P)	87.5	15.0
15	523	Check Rockets Igniter Arms	PILOT (P)	103.0	10.0

Function 41: Check Overhead Panel

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	162	Check EDGE LT PNL Switch	PILOT (P)	0.0	1.0
2	111	Check Circuit Breakers (P)	PILOT (P)	1.5	10.0

Function 42: Check Right Control Console (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	122	Set COM4 Control Panel Volume Switch	GUNNER (G)	0.0	1.0
2	497	Set Receiver Selector Volume Switches	GUNNER (G)	1.5	4.0
3	597	Set Transmitter Selector Switch	GUNNER (G)	6.0	1.0
4	324	Set ICS Switch	GUNNER (G)	7.5	1.0
5	624	Check VHF Control Switch	GUNNER (G)	9.0	1.0
6	155	Check Doppler Mode Switch	GUNNER (G)	10.5	1.0
7	356	Check KY58 Power Switch	GUNNER (G)	12.0	1.0

Function 43: Check Right Control Console (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	356	Check KY58 Power Switch	PILOT (P)	0.0	1.0
2	604	Check UHF Control Switch	PILOT (P)	1.5	1.0
3	624	Check VHF Control Switch	PILOT (P)	3.0	1.0
4	354	Check KY28 Power Switch	PILOT (P)	4.5	1.0
5	598	Check Transponder Control Switch	PILOT (P)	6.0	1.0
6	10	Check ADF Control Switch	PILOT (P)	7.5	1.0

Function 44: Check Right Side - Mast

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	387	Check Main Transmission Oil	PILOT (P)	0.0	5.0
2	386	Check Main Transmission Filter Button	PILOT (P)	5.5	2.0
3	432	Check Nose Gear Box Oil	PILOT (P)	8.0	2.0
4	433	Check Nose Gear Box Oil Cap	PILOT (P)	10.5	3.0
5	431	Check Nose Gear Box Filter Button	PILOT (P)	14.0	2.0
6	430	Check Nose Gear Box Cowling	PILOT (P)	16.5	5.0
7	208	Check Engine Inlet	PILOT (P)	22.0	5.0
8	206	Position Engine Cowling	PILOT (P)	27.5	8.0
9	216	Check Engine Oil Level	PILOT (P)	36.0	5.0
10	442	Check Oil Filter Buttons	PILOT (P)	41.5	2.0
11	263	Check Fuel Filter Buttons	PILOT (P)	44.0	2.0
12	206	Position Engine Cowling	PILOT (P)	46.5	8.0
13	611	Check Upper Flight Controls and Swashplate	PILOT (P)	53.0	60.0
14	385	Check Main Motor Head and Blades	PILOT (P)	115.5	90.0
15	82	Check Blade and Pitch Link	PILOT (P)	206.0	30.0
16	557	Check Strap Assembly	PILOT (P)	236.5	20.0
17	508	Check Retaining Pins	PILOT (P)	257.0	15.0

Function 45: Check Right Side - Rear Fuselage

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	427	Check Nacelle Fire Louvers	PILOT (P)	0.0	2.0
2	59	Check APU Oil Level	PILOT (P)	2.5	3.0
3	58	Check APU Oil Access Door	PILOT (P)	6.0	2.0
4	15	Check Aft Gravity Fuel Cap	PILOT (P)	8.5	2.0
5	68	Check Avionics Bay	PILOT (P)	11.0	30.0
6	106	Set Chaff Salvo Count	PILOT (P)	41.5	5.0
7	107	Set Chaff Salvo Interval	PILOT (P)	47.0	5.0
8	100	Set Chaff Burst Count	PILOT (P)	52.5	5.0
9	101	Set Chaff Burst Interval	PILOT (P)	58.0	5.0
10	69	Check Avionics Bay Door	PILOT (P)	63.5	10.0
11	55	Check APU Exhaust	PILOT (P)	74.0	3.0
12	353	Check IR Suppressor / Engine Exhaust	PILOT (P)	77.5	8.0
13	617	Check Utility Hydraulic Accumulator	PILOT (P)	86.0	2.0
14	217	Check Equipment Stowage Compartment	PILOT (P)	88.5	3.0
15	221	Check External Power Receptacle	PILOT (P)	92.0	2.0
16	81	Check Belly Antennas	PILOT (P)	94.5	10.0
17	17	Check Aft Tailboom	PILOT (P)	105.0	15.0
18	169	Check Empennage	PILOT (P)	120.5	10.0
19	546	Check Stabilator	PILOT (P)	131.0	10.0
20	567	Check Tail Landing Gear	PILOT (P)	141.5	10.0

Function 46: Check Right Side - Under Fuselage

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	286	Check Gun Mounting	PILOT (P)	0.0	20.0
2	229	Check Feed Chute	PILOT (P)	20.5	15.0
3	530	Check Searchlight	PILOT (P)	36.0	3.0
4	490	Check Radar Warning Antenna	PILOT (P)	39.5	3.0
5	68	Check Avionics Bay	PILOT (P)	43.0	30.0
6	285	Set Gun Burst Limits	PILOT (P)	73.5	3.0
7	554	Check Static Port	PILOT (P)	77.0	3.0
8	384	Check Main Landing Gear	PILOT (P)	80.5	30.0
9	236	Check Fire Extinguisher	PILOT (P)	111.0	5.0
10	500	Check Refueling Level Control Valves	PILOT (P)	116.5	5.0
11	501	Check Refueling Valve	PILOT (P)	122.0	2.0
12	267	Check Fuel Quantity Indicator (External)	PILOT (P)	124.5	4.0
13	499	Check Refueling Access Door	PILOT (P)	129.0	2.0
14	251	Check Forward Gravity Fuel Cap	PILOT (P)	131.5	2.0
15	543	Check Single Point Fuel Access	PILOT (P)	134.0	10.0

Function 47: Check Right Side - Wing

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	650	Check Wing	PILOT (P)	0.0	10.0
2	482	Check Pylons	PILOT (P)	10.5	10.0
3	307	Check HELIFIRE Launcher ARM / SAFE Switc	PILOT (P)	21.0	3.0
4	308	Check HELIFIRE Launcher Mounting	PILOT (P)	24.5	10.0
5	309	Check HELIFIRE Electrical Connector	PILOT (P)	35.0	5.0
6	309	Check HELIFIRE Missile Installation	PILOT (P)	40.5	10.0
7	526	Check Rockets Launcher Mounting	PILOT (P)	51.0	10.0
8	522	Check Rockets Electrical Connector	PILOT (P)	61.5	5.0
9	525	Check Rockets Launcher	PILOT (P)	67.0	10.0
10	524	Check Rockets Installation	PILOT (P)	77.5	15.0
11	523	Check Rockets Igniter Arms	PILOT (P)	93.0	10.0
12	459	Check Pitot Tube	PILOT (P)	103.5	2.0
13	651	Check Wing Anticollision Light	PILOT (P)	106.0	2.0
14	653	Check Wing Navigation Light	PILOT (P)	108.5	2.0
15	652	Check Wing Formation Light	PILOT (P)	111.0	2.0
16	39	Check Ammunition Bay Access	PILOT (P)	113.5	5.0

Function 48: Check Security Devices

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	21	Check Aircraft Covers	PILOT (P)	0.0	90.0
2	365	Check Locking Devices	PILOT (P)	90.5	90.0
3	590	Check Fledowns	PILOT (P)	181.0	90.0
4	283	Check Grounding Cables	PILOT (P)	271.5	18.0
5	481	Check Pylon Safety Pins	PILOT (P)	290.0	2.0

Function 49: Complete TAMMS Forms

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	241	Record Flight Hours	PILOT (P)	0.0	30.0
2	390	Record Maintenance Requirements	PILOT (P)	-241.0	180.0

Function 50: Compute Fuel Burn Rate

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	660	Note Fuel Quantity	GUNNER (G)	0.0	3.0
2	684	Note Time	GUNNER (G)	3.5	7.0
3	659	Compute Fuel Consumption Rate	GUNNER (G)	11.0	30.0

Function 51: Conduct Postflight Walk Around

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	481	Check Pylon Safety Pins	GUNNER (G)	0.0	2.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	513	Inspect Right Side of Aircraft	GUNNER (G)	-481.0	90.0
3	496	Inspect Rear Area of Aircraft	GUNNER (G)	-513.0	90.0
4	363	Inspect Left Side of Aircraft	GUNNER (G)	-496.0	90.0

Function 52: Consolidate Forces

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	505	Set Remote Transmitter Selector Switch	GUNNER (G)	0.0	1.0
3	642	Transmit Weapons Status	GUNNER (G)	1.5	5.0
4	80	Transmit Battlefield Intelligence	GUNNER (G)	7.0	30.0
5	27	Transmit Aircraft Status	GUNNER (G)	37.5	5.0
6	680	Release Radio Transmitter Switch	GUNNER (G)	43.0	0.5
7	423	Receive Mission Update	PILOT (P)	44.0	30.0
8	706	Record Mission Update	GUNNER (G)	44.0	30.0
10	3	Transmit Acknowledgment	GUNNER (G)	74.5	3.0
11	680	Release Radio Transmitter Switch	GUNNER (G)	78.0	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	66	Monitor Audio	PILOT (P)	0.0	44.0
9	66	Monitor Audio	PILOT (P)	74.0	-0.5

Function 53: Coordinate Mission

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	505	Set Remote Transmitter Selector Switch	GUNNER (G)	0.0	1.0
2	642	Transmit Weapons Status	GUNNER (G)	1.5	5.0
3	680	Release Radio Transmitter Switch	GUNNER (G)	7.0	0.5
4	79	Receive Battlefield Intelligence	PILOT (P)	8.0	30.0
5	705	Record Battlefield Intelligence	GUNNER (G)	8.0	30.0
6	423	Receive Mission Update	PILOT (P)	38.5	30.0
7	706	Record Mission Update	GUNNER (G)	38.5	30.0
8	3	Transmit Acknowledgment	GUNNER (G)	69.0	3.0
9	680	Release Radio Transmitter Switch	GUNNER (G)	72.5	0.5

Function 54: Deactivate APU

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	54	Set APU Control Switch	PILOT (P)	0.0	2.0
2	60	Check APU ON Light	PILOT (P)	2.5	1.0

Function 55: Designate Target (LOAL)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	361	Pull Laser Trigger	GUNNER (G)	0.0	8.5
2	639	Note Weapon Impact	GUNNER (G)	3.0	5.0
3	362	Release Laser Trigger	GUNNER (G)	-639.0	0.5

Function 56: Designate Target (LOBL)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	361	Pull Laser Trigger	GUNNER (G)	0.0	21.5
2	639	Note Respon Impact	GUNNER (G)	16.0	5.0
3	362	Release Laser Trigger	GUNNER (G)	-639.0	0.5

Function 57: Enter Fire Control Data

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	142	Set DEK Data Entry Selector Switch	GUNNER (G)	0.0	2.0
2	592	Enter Time into DEK	GUNNER (G)	2.5	10.0
3	468	Enter PPOS	GUNNER (G)	13.0	20.0
4	230	Enter Field Elevation	GUNNER (G)	33.5	10.0
5	452	Enter Page #2 of SPI	GUNNER (G)	44.0	1.0
6	146	Enter DEK Spheroid Data	GUNNER (G)	45.5	15.0
7	144	Enter DEK Magnetic Variation	GUNNER (G)	61.0	15.0
8	282	Enter Grid Convergence	GUNNER (G)	76.5	15.0
9	142	Set DEK Data Entry Selector Switch	GUNNER (G)	92.0	2.0
11	142	Set DEK Data Entry Selector Switch	GUNNER (G)	395.0	2.0
13	371	Set LRF / D Code Indicator	GUNNER (G)	698.0	10.0
14	613	Set UPR CHAN Laser Code	GUNNER (G)	708.5	10.0
15	615	Set UPR CHAN Quantity	GUNNER (G)	719.0	5.0
16	379	Set LWR CHAN Laser Code	GUNNER (G)	724.5	10.0
17	381	Set LWR CHAN Quantity	GUNNER (G)	735.0	5.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
10	422	Enter Mission Preplanning Coordinates	GUNNER (G)	94.5	300.0
12	143	Enter DEK LASER Codes	GUNNER (G)	397.5	300.0

Function 58: Enter Target Data

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	142	Set DEK Data Entry Selector Switch	GUNNER (G)	0.0	2.0
2	581	Enter Target Index Number	GUNNER (G)	2.5	4.0
3	580	Enter Target Coordinates	GUNNER (G)	7.0	10.0
4	142	Set DEK Data Entry Selector Switch	GUNNER (G)	17.5	2.0
5	588	Set TGT / NAV Index Code	GUNNER (G)	20.0	2.0
6	6	Check ACQ SEL Switch (G)	GUNNER (G)	22.5	2.0
7	544	Set SLAVE Switch	GUNNER (G)	25.0	1.0
8	544	Set SLAVE Switch	GUNNER (G)	26.5	1.0
9	7	Set ACQ SEL Switch (G)	GUNNER (G)	28.0	2.0

Function 59: Establish Approach

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	244	Set Flight Mode Symbology Switch	PILOT (P)	0.0	2.5
2	688	Check & Torque Indicator (Inflight)	PILOT (P)	2.5	1.5
3	678	Decrease Power	PILOT (P)	4.0	2.5
4	688	Check & Torque Indicator (Inflight)	PILOT (P)	6.5	1.5

Function 60: Establish Climb

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	244	Set Flight Mode Symbology Switch	PILOT (P)	0.0	2.0
2	688	Check & Torque Indicator (Inflight)	PILOT (P)	2.0	1.0
3	679	Increase Power	PILOT (P)	3.0	2.0
4	688	Check & Torque Indicator (Inflight)	PILOT (P)	5.0	1.0

Function 61: Establish Level of Flight

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	244	Set Flight Mode Symbology Switch	PILOT (P)	0.0	2.0
2	688	Check & Torque Indicator (Inflight)	PILOT (P)	2.0	1.0
3	678	Decrease Power	PILOT (P)	3.0	2.0
4	688	Check & Torque Indicator (Inflight)	PILOT (P)	5.0	1.0

Function 62: Evaluate Position

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	622	Set VDU Control Switch	PILOT (P)	0.0	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	26	Check Aircraft Location (P)	PILOT (P)	1.5	30.0
3	24	Check Aircraft Location (G)	CUNNER (G)	1.5	30.0
4	78	Check Battle Area Access (P)	PILOT (P)	32.0	30.0
5	77	Check Battle Area Access (G)	CUNNER (G)	32.0	30.0
6	29	Survey Aircraft Surroundings (P)	PILOT (P)	62.5	30.0
7	28	Survey Aircraft Surroundings (G)	CUNNER (G)	62.5	30.0
8	441	Check Obstacles (P)	PILOT (P)	93.0	20.0
9	440	Check Obstacles (G)	CUNNER (G)	93.0	20.0

Function 63: Fire Weapon, Gun (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	643	Pull Weapons Trigger	GUNNER (G)	0.0	2.0
2	644	Release Weapons Trigger	GUNNER (G)	2.5	0.5
3	639	Note Weapon Impact	GUNNER (G)	3.0	2.0

Function 64: Check Gun Parameters

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	292	Check RAD Message (Range)	CUNTER (G)	0.0	1.5
2	294	Check RAD Message (Rounds)	CUNTER (G)	1.5	1.5

Function 65: Fire Weapon, Gun (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	643	Pull Weapons Trigger	PILOT (P)	0.0	2.0
2	644	Release Weapons Trigger	PILOT (P)	2.5	0.5
3	639	Note Weapon Impact	PILOT (P)	3.0	2.0

Function 66: Fire Weapon, Missile (LOAL)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	239	Verify Firing Constraints	CUNTER (G)	0.0	1.5
2	643	Full Weapons Trigger	CUNTER (G)	-239.0	3.0
3	417	Verify Missile Launch	CUNTER (G)	3.0	1.5
4	644	Release Weapons Trigger	CUNTER (G)	-417.0	0.5

Function 67: Fire Weapon, Missile (LOBL)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	297	Check EMD Message (Tracking)	CUNTER (G)	0.0	1.5
2	239	Verify Firing Constraints	CUNTER (G)	1.5	1.5
3	643	Pull Weapons Trigger	CUNTER (G)	-239.0	3.0
4	417	Verify Missile Launch	CUNTER (G)	4.5	1.5
5	644	Release Weapons Trigger	CUNTER (G)	-417.0	0.5

Function 68: This Function Slot Not Used

Function 69: Call for Lase (Remote)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	411	Transmit Message	COMMUN	0.0	4.0

Function 70: Prepare for Ripple Fire (LOAL)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	544	Set SLAVE Switch	CUNNING (G)	0.0	1.0
2	290	Check RAD Message	CUNNING (G)	1.0	1.0
3	46	Check AND Display (Priority)	CUNNING (G)	3.0	1.0

Function 71: Fire Weapon, Rocket

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	519	Verify Rocket Steering Cursor Aligned	PILOT (P)	0.0	1.0
2	643	Pull Weapons Trigger	PILOT (P)	1.5	1.0
3	644	Release Weapons Trigger	PILOT (P)	3.0	0.5
4	639	Note Weapon Impact	PILOT (P)	4.0	5.0
5	135	Set Cyclic WAS Switch	PILOT (P)	9.5	0.5

Function 72: Fire Weapon, Rocket (Cooperative)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	361	Pull Laser Trigger	CUNNER (G)	0.0	1.0
2	362	Release Laser Trigger	CUNNER (G)	1.5	0.5
3	292	Check RAD Message (Range)	PILOT (P)	2.5	2.0
4	292	Check RAD Message (Range)	CUNNER (G)	2.5	2.0
5	519	Verify Rocket Steering Cursor Aligned	PILOT (P)	5.0	1.0
6	643	Pull Weapons Trigger	PILOT (P)	6.5	1.0
7	644	Release Weapons Trigger	PILOT (P)	8.0	0.5
8	639	Note Weapon Impact	PILOT (P)	9.0	5.0
9	639	Note Weapon Impact	CUNNER (G)	9.0	5.0
10	135	Set Cyclic WAS Switch	PILOT (P)	14.5	0.5

Function 73: Fly Contour

Continuous Random Tasks

Start : 0.0

Finish: 875.0

Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	31	Control Airspeed	0.5
2	35	Adjust Altitude	0.5
3	65	Control Attitude	0.5
4	304	Adjust Heading (Inflight)	0.5
5	439	Maintain Obstacle Clearance	0.5
6	466	Adjust Power	0.5
7	600	Adjust Trim	0.5

Function 74: Fly NOE

Continuous Random Tasks

Start : 0.0
Finish: 875.0
Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	31	Control Airspeed	0.5
2	35	Adjust Altitude	0.5
3	65	Control Attitude	0.5
4	304	Adjust Heading (Inflight)	0.5
5	439	Maintain Obstacle Clearance	0.5
6	466	Adjust Power	0.5
7	600	Adjust Trim	0.5

Function 75: Hover Masked

Continuous Random Tasks

Start :	0.0		
Finish:	-0.5		
Crewmember:	PILOT (P)		
Entry #	Task #	Task Name	Duration
1	36	Control Altitude	0.5
2	65	Control Altitude	0.5
3	160	Control Drift	0.5
4	305	Control Heading	0.5

Function 76: Hover Unmasked

Continuous Random Tasks

Start : 0.0
Finish: -0.5
Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	36	Control Altitude	0.5
2	160	Control Drift	0.5
3	305	Control Heading	0.5
4	65	Control Attitude	0.5

Function 77: Idle Engines

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	197	Set ENG 2 PWR Lever	PILOT (P)	0.0	3.0
2	587	Monitor TGT	PILOT (P)	3.5	2.0

Function 78: Initiate Cockpit Communication (Coord-Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	124	Transmit Cockpit Communication (Coordina	COORDINATOR (G)	0.0	3.0
2	123	Receive Cockpit Communication (Coordinat	PILOT (P)	0.0	3.0
3	124	Transmit Cockpit Communication (Coordina	PILOT (P)	3.5	3.0
4	123	Receive Cockpit Communication (Coordinat	COORDINATOR (G)	3.5	3.0

Function 79: Initiate Cockpit Communication (Coord-Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	124	Transmit Cockpit Communication (Coordina	PILOT (P)	0.0	3.0
2	123	Receive Cockpit Communication (Coordinat	CUSMER (G)	0.0	3.0
3	124	Transmit Cockpit Communication (Coordina	CUSMER (G)	3.5	3.0
4	123	Receive Cockpit Communication (Coordinat	PILOT (P)	3.5	3.0

Function 80: Land Aircraft

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	593	Perform Touchdown	PILOT (P)	10.5	3.5

Discrete Random Tasks

Entry #	Task #	Task Name	Duration	Start	Finish	Times
1	690	Check Obstacle Clearance	1.0	0.0	10.0	5

Continuous Random Tasks

Start : 0.0
 Finish: 10.5
 Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	65	Control Attitude	0.5
2	160	Control Drift	0.5
3	305	Control Heading	0.5
4	439	Maintain Obstacle Clearance	0.5
5	466	Adjust Power	0.5

Function 81: Load Weapons (Rearming)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	396	Check MASTER ARM Switch	PILOT (P)	0.0	1.0
2	461	Check PLT / CMD CRIME Switch	CORNER (G)	0.0	1.0
3	573	Set FAULT/RESET Switch	PILOT (P)	1.5	1.0
4	455	Set Park Brake	PILOT (P)	3.0	2.0
5	658	Set Brake Lever	PILOT (P)	5.5	1.0
6	481	Check Pylon Safety Pins	CORNER (G)	7.0	2.0
7	283	Check Grounding Cables	CORNER (G)	9.5	18.0
8	283	Check Grounding Cables	CORNER (G)	928.5	18.0
9	481	Check Pylon Safety Pins	CORNER (G)	947.0	2.0

Discrete Random Tasks

Entry #	Task #	Task Name	Duration	Crewmember	Start	Finish	Times
1	641	Monitor Weapons Loading	3.0	CORNER (G)	28.0	928.0	25

Function 82: Mask Aircraft

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	439	Maintain Obstacle Clearance	PILOT (P)	0.0	1.5
2	678	Decrease Power	PILOT (P)	1.5	2.5
3	395	Establish Masking Profile	PILOT (P)	4.0	3.0

Function 83: Monitor Audio (Both)

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	66	Monitor Audio	COWAN (C)	0.0	-0.5
2	66	Monitor Audio	PILOT (P)	0.0	-0.5

Function 84: Monitor Threat (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	148	Check Direction Display	PILOT (P)	0.0	3.5

Function 85: Perform After Landing Check

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	696	Neutralize Flight Controls	PILOT (P)	0.0	1.0
3	573	Set TAILWHEEL Switch	PILOT (P)	1.5	1.0
4	607	Check VHF Mode Selector Switch	PILOT (P)	3.0	1.0
5	606	Set VHF Frequency Selector Switches	PILOT (P)	4.5	10.0
6	627	Check VHF Mode Selector Switch	PILOT (P)	15.0	1.0
7	626	Set VHF Frequency Selector Switches	PILOT (P)	16.5	10.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	691	Monitor Flight Controls	PILOT (P)	-696.0	-0.5

Function 86: Perform After Starting APU Check (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	625	Set VHF Control Switch	GUNNER (G)	0.0	1.0
2	626	Set VHF Frequency Selector Switch	GUNNER (G)	1.5	10.0
3	628	Set VHF Mode Selector Switch	GUNNER (G)	12.0	2.0
4	629	Set VHF Volume Switch	GUNNER (G)	14.5	2.0
5	357	Set KY58 Power Switch	GUNNER (G)	17.0	1.0
6	14	Set ADSS Switch	GUNNER (G)	18.5	2.0
7	224	Set FC SYN GEN Switch	GUNNER (G)	21.0	1.0
8	337	Set IHADSS Switch	GUNNER (G)	22.5	1.0
9	564	Set TADS Switch	GUNNER (G)	24.0	1.0
10	514	Check RXT SEL Switch	GUNNER (G)	25.5	1.0
11	287	Check GUN SEL Switch	GUNNER (G)	27.0	1.0
12	424	Check MSL SEL Switch	GUNNER (G)	28.5	1.0
13	373	Check LSR SEL Switch	GUNNER (G)	30.0	1.0
14	93	Position Canopy Door	GUNNER (G)	31.5	4.0

Function 87: Perform After Starting APU Check (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	465	Set FMVS Switch	PILOT (P)	0.0	1.0
2	549	Set Standby Attitude Indicator	PILOT (P)	1.5	2.0
3	622	Set VDO Control Switch	PILOT (P)	4.0	1.0
4	620	Adjust VDO Brightness / Contrast	PILOT (P)	5.5	5.0
5	622	Set VDO Control Switch	PILOT (P)	11.0	1.0
6	484	Adjust RAD ALF Switches	PILOT (P)	12.5	15.0
7	40	Set AM / APR 39	PILOT (P)	28.0	2.0
8	597	Set Transmitter Selector Switch	PILOT (P)	30.5	1.0
9	504	Check Remote Transmitter Selector Switch	PILOT (P)	32.0	3.0
10	357	Set KY58 Power Switch	PILOT (P)	35.5	1.0
11	605	Set UHF Control Switch	PILOT (P)	37.0	2.0
12	608	Set UHF Mode Selector Switch	PILOT (P)	39.5	1.0
13	606	Set UHF Frequency Selector Switches	PILOT (P)	41.0	10.0
14	609	Set UHF Volume Switch	PILOT (P)	51.5	2.0
15	625	Set VHF Control Switch	PILOT (P)	54.0	1.0
16	628	Set VHF Mode Selector Switch	PILOT (P)	55.5	2.0
17	626	Set VHF Frequency Selector Switches	PILOT (P)	58.0	10.0
18	629	Set VHF Volume Switch	PILOT (P)	68.5	2.0
19	355	Set KY28 Power Switch	PILOT (P)	71.0	1.0
20	599	Set Transponder Control Switch	PILOT (P)	72.5	2.0
21	11	Set ADF Control Switch	PILOT (P)	75.0	2.0
22	12	Check ADF Operation	PILOT (P)	77.5	10.0
23	93	Position Canopy Door	PILOT (P)	88.0	4.0
24	127	Check Control Sweep and Force Trim Sys	PILOT (P)	92.5	10.0
25	128	Check Control Sweep and Force Trim Sys	PILOT (P)	103.0	8.0
26	129	Check Control System / Collective	PILOT (P)	111.5	5.0
27	547	Check Stabilator Manual Control Switch	PILOT (P)	117.0	30.0
28	302	Set HARS Control Switch	PILOT (P)	147.5	1.0

Function 88: Perform Aircraft Position Update

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	588	Set TGT / NAV Index Code	GUNNER (G)	0.0	2.0
2	529	Check SAFE / ARM Indicator Light	GUNNER (G)	2.5	0.5
3	370	Check LRF / D CODE	GUNNER (G)	3.5	1.0
4	511	Align Reticle on Feature	GUNNER (G)	5.0	2.0
5	361	Pull Laser Trigger	GUNNER (G)	7.5	1.0
6	362	Release Laser Trigger	GUNNER (G)	9.0	0.5
7	292	Check RAD Message (Range)	GUNNER (G)	10.0	2.0
8	228	Track Feature	GUNNER (G)	12.5	5.0
9	610	Set UPDT / ST Switch	GUNNER (G)	18.0	1.0
10	142	Set DEK Data Entry Selector Switch	GUNNER (G)	19.5	2.0
11	603	Press U Key on DEK	GUNNER (G)	22.0	2.0
12	152	Set Doppler Display Selector Switch	GUNNER (G)	24.5	2.0
13	153	Press Doppler KYBD Key	GUNNER (G)	27.0	1.0
14	619	Enter UTM Coordinates	GUNNER (G)	28.5	12.0
15	149	Press Doppler Data Entry Key	GUNNER (G)	41.0	1.0
16	152	Set Doppler Display Selector Switch	GUNNER (G)	42.5	2.0
17	142	Set DEK Data Entry Selector Switch	GUNNER (G)	45.0	2.0

Function 89: Perform Before Engine Shutdown Check

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	572	Check TAILWHEEL Switch	PILOT (P)	0.0	1.0
2	571	Check Tailwheel Advisory Light	PILOT (P)	1.5	0.5
3	455	Set Park Brake	PILOT (P)	2.5	2.0
4	658	Set Brake Lever	PILOT (P)	5.0	1.0

Function 90: Perform Before Landing Check (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	132	Set CPG ARM Switch	GUNNER (G)	0.0	1.0
2	515	Set RXT SEL Switch	GUNNER (G)	1.5	1.0
3	288	Set GUN SEL Switch	GUNNER (G)	3.0	1.0
4	425	Set MSL SEL Switch	GUNNER (G)	4.5	1.0
5	374	Set LSR SEL Switch	GUNNER (G)	6.0	1.0

Function 91: Perform Before Landing Check (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	397	Set MASTER ARM Switch	PILOT (P)	0.0	1.0
2	515	Set RKT SEL Switch	PILOT (P)	1.5	1.0
3	288	Set GUN SEL Switch	PILOT (P)	3.0	1.0
4	425	Set MSL SEL Switch	PILOT (P)	4.5	1.0
5	572	Check TAILWHEEL Switch	PILOT (P)	6.0	1.0
6	453	Check Park Brake	PILOT (P)	7.5	1.0
7	488	Set Radar Jamming Control Switch	PILOT (P)	9.0	1.0
8	345	Set Infrared Jamming Control Switch	PILOT (P)	10.5	1.0
9	104	Set Chaff Dispenser ARM Switch	PILOT (P)	12.0	1.0

Function 92: Perform Before Starting APU Check (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	325	Check ICS System (G)	GUNNER (G)	0.0	30.0
2	368	Check LOW RPM ROTOR Light	GUNNER (G)	30.5	0.5
3	179	Check ENG 1 OUT Light	GUNNER (G)	31.5	0.5
4	195	Check ENG 2 OUT Light	GUNNER (G)	32.5	0.5
5	638	Test Warning and Advisory Lights (MASTER	GUNNER (G)	33.5	30.0
6	475	Check PRI HYD PSI Warning Light	GUNNER (G)	64.0	0.5
7	616	Check UTIL HYD PSI Warning Light	GUNNER (G)	65.0	0.5
8	391	Check MAIN STAB Warning Light	GUNNER (G)	66.0	0.5
9	388	Check MAIN XMSN 1 Warning Light	GUNNER (G)	67.0	0.5
10	389	Check MAIN XMSN 2 Warning Light	GUNNER (G)	68.0	0.5
11	186	Check ENG 1 Warning Light	GUNNER (G)	69.0	0.5
12	201	Check ENG 2 Warning Light	GUNNER (G)	70.0	0.5
13	165	Check ELEC SYS FAIL Warning Light	GUNNER (G)	71.0	0.5
14	202	Check ENG Anti-ice Warning Light	GUNNER (G)	72.0	0.5
15	214	Set Engine Instruments Test Switch (G)	GUNNER (G)	73.0	2.0
16	209	Check Engine Instrument Lights (G)	GUNNER (G)	75.5	6.0
17	534	Check Selectable Digital Display Lights	GUNNER (G)	82.0	8.0

Function 93: Perform Before Starting APU Check (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	76	Set BATT / EXT PWR Switch	PILOT (P)	0.0	1.0
2	205	Check ENG Out Audio	PILOT (P)	1.5	1.0
3	326	Check ICS System (P)	PILOT (P)	3.0	30.0
4	368	Check LOW RPM ROTOR Light	PILOT (P)	33.5	0.5
5	179	Check ENG 1 OOT Light	PILOT (P)	34.5	0.5
6	195	Check ENG 2 OOT Light	PILOT (P)	35.5	0.5
7	617	Check Utility Hydraulic Accumulator	PILOT (P)	36.5	2.0
8	638	Test Warning and Advisory Lights (MASTER)	PILOT (P)	39.0	30.0
9	475	Check PRI HYD PSI Warning Light	PILOT (P)	69.5	0.5
10	616	Check UTIL HYD PSI Warning Light	PILOT (P)	70.5	0.5
11	391	Check MAN STAB Warning Light	PILOT (P)	71.5	0.5
12	443	Check OIL PSI ACC PUMP Warning Light	PILOT (P)	72.5	0.5
13	448	Check OIL PSI NOSE GRBX 1 Warning Light	PILOT (P)	73.5	0.5
14	446	Check OIL PSI MAIN XMSN 1 Warning Light	PILOT (P)	74.5	0.5
15	447	Check OIL PSI MAIN XMSN 2 Warning Light	PILOT (P)	75.5	0.5
16	449	Check OIL PSI NOSE GRBX 2 Warning Light	PILOT (P)	76.5	0.5
17	444	Check OIL PSI ENG 1 Warning Light	PILOT (P)	77.5	0.5
18	445	Check OIL PSI ENG 2 Warning Light	PILOT (P)	78.5	0.5
19	275	Check GEN 1 / RECT 1 Warning Light	PILOT (P)	79.5	0.5
20	278	Check GEN 2 / RECT 2 Warning Light	PILOT (P)	81.5	0.5
21	265	Check FUEL PSI ENG 1 Warning Light	PILOT (P)	81.5	0.5
22	537	Check SHAFT DRIVEN COMP Warning Light	PILOT (P)	82.5	0.5
23	266	Check FUEL PSI ENG 2 Warning Light	PILOT (P)	83.5	0.5
24	83	Check Blade Anti-ice Fail Light	PILOT (P)	84.5	0.5
25	94	Check Canopy Door Advisory Light	PILOT (P)	85.5	0.5
26	171	Check ENG 1 Anti-ice Warning Light	PILOT (P)	86.5	0.5
27	187	Check ENG 2 Anti-ice Warning Light	PILOT (P)	87.5	0.5
28	234	Set Fire Detector Test Switch (Position	PILOT (P)	88.5	4.0
29	233	Check Fire Detector Lights	PILOT (P)	93.0	4.0
30	235	Set Fire Detector Test Switch (Position	PILOT (P)	97.5	4.0
31	233	Check Fire Detector Lights	PILOT (P)	102.0	4.0
32	215	Set Engine Instruments Test Switch (P)	PILOT (P)	106.5	2.0
33	210	Check Engine Instrument Lights (P)	PILOT (P)	109.0	8.0

Function 94: Perform Before Starting Engines Check

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	537	Check SEAT DRIVE COMP Warning Light	PILOT (P)	0.0	0.5
2	62	Check Area Clear	PILOT (P)	1.0	5.0
3	238	Alert Fireguard	PILOT (P)	6.5	2.0

Function 95: Perform Before Takeoff Check (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	132	Set CPG ARM Switch	GUNNER (G)	0.0	1.0
2	515	Set RKT SEL Switch	GUNNER (G)	1.5	1.0
3	288	Set GUN SEL Switch	GUNNER (G)	3.0	1.0
4	425	Set MSL SEL Switch	GUNNER (G)	4.5	1.0
5	43	Check AND Display (Missile)	GUNNER (G)	5.0	1.0
6	374	Set LSR SEL Switch	GUNNER (G)	7.5	1.0
7	462	Set PLT / GND ORIDE Switch	GUNNER (G)	9.0	2.0
8	142	Set DEK Data Entry Selector Switch	GUNNER (G)	11.5	2.0
9	226	Check FDLs Results	GUNNER (G)	14.0	3.0
10	142	Set DEK Data Entry Selector Switch	GUNNER (G)	17.5	2.0

Function 96: Perform Before Takeoff Check (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	301	Check HARS Control Switch	PILOT (P)	0.0	1.5
2	573	Set TAILWHEEL Switch	PILOT (P)	1.5	1.5
3	571	Check Tailwheel Advisory Light	PILOT (P)	3.0	1.0
4	262	Check Fuel CROSSTIED Switch	PILOT (P)	4.0	1.5
5	268	Check Fuel Quantity Indicator (Internal)	PILOT (P)	5.5	3.5
6	213	Monitor Engine Instruments (P)	PILOT (P)	9.0	5.5
7	398	Check Master CAUTION / WARNING Panel	PILOT (P)	14.5	1.5
8	467	Perform Power Check	PILOT (P)	16.0	20.5
9	397	Set MASTER ARM Switch	PILOT (P)	36.5	1.5
10	515	Set RTY SEL Switch	PILOT (P)	38.0	1.5
11	288	Set GUN SEL Switch	PILOT (P)	39.5	1.5
12	425	Set MSL SEL Switch	PILOT (P)	41.0	1.5
13	9	Set ACQ SEL Switch (P)	PILOT (P)	42.5	1.5
14	488	Set Radar Jamming Control Switch	PILOT (P)	44.0	1.5
15	345	Set Infrared Jamming Control Switch	PILOT (P)	45.5	1.5
16	104	Set Chaff Dispenser ARM Switch	PILOT (P)	47.0	1.5

Function 97: Perform Before Taxi Check

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	92	Check Canopy Door	PILOT (P)	0.0	1.0
2	94	Check Canopy Door Advisory Light	PILOT (P)	1.5	0.5
3	481	Check Pylon Safety Pins	PILOT (P)	2.5	2.0
4	109	Check Checks and External ICS Cords	PILOT (P)	5.0	2.0
5	300	Check EARS Alignment	PILOT (P)	7.5	1.0
6	302	Set EARS Control Switch	PILOT (P)	9.0	1.0
7	676	Set NOG / APPCH Switch	PILOT (P)	10.5	1.0
8	160	Set DASE Yaw Switch	PILOT (P)	12.0	1.0
9	139	Set DASE Roll Switch	PILOT (P)	13.5	1.0
10	137	Set DASE Pitch Switch	PILOT (P)	15.0	1.0
11	136	Check DASE Caution Light	PILOT (P)	16.5	0.5
12	454	Release Park Brake	PILOT (P)	17.5	1.0
13	573	Set TAILWHEEL Switch	PILOT (P)	19.0	1.0
14	571	Check Tailwheel Advisory Light	PILOT (P)	20.5	0.5
15	23	Position Aircraft into Wind	PILOT (P)	21.5	15.0
16	438	Check OAT Temperature	PILOT (P)	37.0	2.0
17	197	Set ENG 2 PWR Lever	PILOT (P)	39.5	3.0
18	119	Adjust Collective	PILOT (P)	43.0	20.0
19	185	Check ENG 1 TGT	PILOT (P)	63.5	4.0
20	197	Set ENG 2 PWR Lever	PILOT (P)	68.0	3.0
21	182	Set ENG 1 PWR Lever	PILOT (P)	71.5	3.0
22	119	Adjust Collective	PILOT (P)	75.0	20.0
23	200	Check ENG 2 TGT	PILOT (P)	95.5	4.0
24	120	Decrease Collective	PILOT (P)	100.0	5.0
25	182	Set ENG 1 PWR Lever	PILOT (P)	105.5	3.0

Function 98: Perform Before Taxi Check (FARP)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	454	Release Park Brake	PILOT (P)	0.0	1.0
2	573	Set TAILWHEEL Switch	PILOT (P)	1.5	1.0
3	571	Check Tailwheel Advisory Light	PILOT (P)	3.0	0.5

Function 99: Perform Cockpit Safety Check (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	74	Check BAT OVRD Switch	GUNNER (G)	0.0	1.0
2	97	Check CANOPY JETT Pin	GUNNER (G)	1.5	1.0
3	207	Check Engine Fire Handles	GUNNER (G)	3.0	1.0

Function 100: Perform Cockpit Safety Check (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	75	Check BATT / EXT PWR Switch	PILOT (P)	0.0	1.0
2	97	Check CANOPY JETT Pin	PILOT (P)	1.5	1.0
3	207	Check Engine Fire Handles	PILOT (P)	3.0	1.0
4	57	Check APU Fire Handle	PILOT (P)	4.5	1.0
5	53	Check APU Control Switch	PILOT (P)	6.0	1.0

Function 101: Perform Engine 1 Overspeed Test

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	114	Set CMT A Switch - ENG 1	PILOT (P)	0.0	3.0
2	116	Set CMT B Switch - ENG 1	PILOT (P)	3.5	3.0
3	112	Set CMT A and CMT B Switches - ENG 1	PILOT (P)	7.0	4.0

Function 102: Perform Engine 2 Overspeed Test

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	115	Set CRY A Switch - ENG 2	PILOT (P)	0.0	3.0
2	117	Set CRY B Switch - ENG 2	PILOT (P)	3.5	3.0
3	113	Set CRY A and CRY B Switches - ENG 2	PILOT (P)	7.0	4.0

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Function 104: Perform External Communication (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	597	Set Transmitter Selector Switch	PILOT (P)	0.0	1.0
2	414	Transmit Message (Brief)	PILOT (P)	1.5	10.0
3	680	Release Radio Transmitter Switch	PILOT (P)	12.0	0.5
4	410	Receive Message	PILOT (P)	13.0	10.0
5	3	Transmit Acknowledgment	PILOT (P)	23.5	3.0
6	680	Release Radio Transmitter Switch	PILOT (P)	27.0	0.5

Function 105: Perform Hover

Continuous Random Tasks

Start : 0.0
Finish: -0.5
Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	36	Control Altitude	0.5
2	65	Control Altitude	0.5
3	160	Control Drift	0.5
4	305	Control Heading	0.5

Function 106: Perform IHADSS Operational Check (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	539	Set SIGHT SEL Switch (G)	GUNNER (G)	0.0	2.0
2	338	Adjust IHADSS Symbol Brightness / Gain /	GUNNER (G)	2.5	10.0
3	340	Check Image and Turret Function	GUNNER (G)	13.0	10.0

Function 107: Perform Navigation

Continuous Random Tasks

Start : 0.0
Finish: -0.5
Crewmember: GUNNER (C)

Entry #	Task #	Task Name	Duration
1	130	Follow Course	4.0
2	151	Monitor Doppler Display	4.0
3	394	Read Maps	4.0
4	687	Call Up Waypoint	4.0

Function 108: Perform PNVs Operational Check

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	633	Set VID SEL Switch (P)	PILOT (P)	0.0	1.0
2	334	Adjust IRADS Display Brightness / Contr	PILOT (P)	1.5	10.0
3	633	Set VID SEL Switch (P)	PILOT (P)	12.0	1.0
4	341	Set SIGHT SEL Switch (P)	PILOT (P)	13.5	1.0
5	340	Check Image and Turret Function	PILOT (P)	15.0	10.0
6	339	Adjust IRADS Symbol Brightness / Gain /	PILOT (P)	25.5	10.0
7	243	Check Flight Mode Symbology Switch	PILOT (P)	36.0	8.0
8	463	Check PNVs Polarity Reversal	PILOT (P)	44.5	4.0
9	5	Set ACM Switch	PILOT (P)	69.0	1.0

Function 109: Perform Postflight Cockpit Check (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	625	Set VHF Control Switch	GUNNER (G)	0.0	1.0
2	156	Set Doppler Mode Switch	GUNNER (G)	1.5	1.0
3	357	Set KY58 Power Switch	GUNNER (G)	3.0	1.0
4	349	Set INST Light Switch	GUNNER (G)	4.5	1.0
5	358	Set L CSL Light Switch	GUNNER (G)	6.0	1.0
6	93	Position Canopy Door	GUNNER (G)	7.5	4.0
7	98	Position CANOPY JETT Pin	GUNNER (G)	12.0	5.0
8	313	Remove Helmet	GUNNER (G)	17.5	3.0
9	311	Disconnect Helmet	GUNNER (G)	21.0	3.0

Function 110: Perform Postflight Cockpit Check (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	329	Turn Ignition Key	PILOT (P)	0.0	2.0
2	328	Remove Ignition Key	PILOT (P)	2.5	4.0
3	40	Set AN / APR 39	PILOT (P)	7.0	2.0
4	357	Set KY58 Power Switch	PILOT (P)	9.5	1.0
5	605	Set UHF Control Switch	PILOT (P)	11.0	2.0
6	625	Set VHF Control Switch	PILOT (P)	13.5	1.0
7	355	Set KY28 Power Switch	PILOT (P)	15.0	1.0
8	599	Set Transponder Control Switch	PILOT (P)	16.5	2.0
9	11	Set ADP Control Switch	PILOT (P)	19.0	2.0
10	49	Check Anticollision Light Switch	PILOT (P)	21.5	1.0
11	349	Set INST Light Switch	PILOT (P)	23.0	1.0
12	358	Set 1 CSL Light Switch	PILOT (P)	24.5	1.0
13	495	Set R / CTR CSL Light Switch	PILOT (P)	26.0	1.0
14	528	Set RTR BK Switch	PILOT (P)	27.5	1.0
15	274	Set GEN 1 Switch	PILOT (P)	29.0	2.0
16	277	Set GEN 2 Switch	PILOT (P)	31.5	2.0
17	54	Set APG Control Switch	PILOT (P)	34.0	2.0
18	60	Check APG ON Light	PILOT (P)	36.5	1.0
19	76	Set BATT / EXT PWR Switch	PILOT (P)	38.0	1.0
20	98	Position CANOPY JETT Pin	PILOT (P)	39.5	5.0
21	93	Position Canopy Door	PILOT (P)	45.0	4.0
22	313	Remove Helmet	PILOT (P)	49.5	3.0
23	311	Disconnect Helmet	PILOT (P)	53.0	3.0

Function 111: Perform TADS Operational Checks

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	563	Check TADS Switch	GUNNER (G)	0.0	1.0
2	284	Set GS Switch	GUNNER (G)	1.5	1.0
3	561	Adjust TADS Display Brightness / Contr	GUNNER (G)	3.0	10.0
4	303	Set HDD Switch	GUNNER (G)	13.5	1.0
5	561	Adjust TADS Display Brightness / Contr	GUNNER (G)	15.0	10.0
6	303	Set HDD Switch	GUNNER (G)	25.5	1.0
7	630	Check VID SEL Switch (G)	GUNNER (G)	27.0	1.0
8	538	Check SIGHT SEL Switch (G)	GUNNER (G)	28.5	1.0
9	535	Check Sensor Select Switch	GUNNER (G)	30.0	1.0
10	544	Set SLAVE Switch	GUNNER (G)	31.5	1.0
11	544	Set SLAVE Switch	GUNNER (G)	33.0	1.0
12	254	Evaluate FOVs (DTV): W, N, Z	GUNNER (G)	55.0	4.0
13	322	Set IAT Polarity Switch	GUNNER (G)	59.5	1.0
14	323	Set IAT Switch	GUNNER (G)	61.0	1.0
15	323	Set IAT Switch	GUNNER (G)	62.5	1.0
16	536	Set Sensor Select Switch	GUNNER (G)	64.0	1.0
17	255	Evaluate FOVs (DVO): W, N	GUNNER (G)	65.5	3.0
18	536	Set Sensor Select Switch	GUNNER (G)	69.0	1.0
19	246	Adjust FLIR Level / Gain	GUNNER (G)	70.5	4.0
20	5	Set ACM Switch	GUNNER (G)	75.0	1.0
21	256	Evaluate FOVs (FLIR): W, M, N, Z	GUNNER (G)	76.5	6.0
22	323	Set IAT Switch	GUNNER (G)	83.0	1.0
23	323	Set IAT Switch	GUNNER (G)	84.5	1.0
24	247	Set FLIR Polarity Reversal Switch	GUNNER (G)	86.0	1.0
25	536	Set Sensor Select Switch	GUNNER (G)	87.5	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
12	392	Manipulate MAN TKR Thumbforce Controller	GUNNER (G)	34.5	20.0

Function 112: Perform Target Store Procedures

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	588	Set TGT / NAV Index Code	GUNNER (G)	0.0	2.0
2	512	Check Reticle on Target	GUNNER (G)	2.5	2.5
3	610	Set UPDT / ST Switch	GUNNER (G)	5.0	1.0

Function 113: Perform Taxi

Discrete Random Tasks

Entry #	Task #	Task Name	Duration	Crewmember	Start	Finish	Times
1	690	Check Obstacle Clearance	1.0	GUNNER (G)	0.0	-0.5	25

Continuous Random Tasks

Start : 0.0
 Finish: -0.5
 Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	252	Control Forward Motion	0.5
2	439	Maintain Obstacle Clearance	0.5
3	689	Control Heading (Taxi)	0.5

Function 114: Perform Taxi Check

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	647	Check Wheel Brakes	PILOT (P)	0.0	5.0
2	213	Monitor Engine Instruments (P)	PILOT (P)	5.5	5.0
3	242	Check Flight Instruments	PILOT (P)	11.0	5.0

Function 115: Place Aircraft in Constraints

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	22	Adjust Heading (Hover)	PILOT (P)	0.0	3.5
2	19	Stabilize Aircraft	PILOT (P)	3.5	3.5

Function 116: Plan Mission

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	421	Receive Mission	PILOT (P)	0.0	480.0
2	421	Receive Mission	GUNNER (G)	0.0	480.0
3	393	Complete Map Reconnaissance	PILOT (P)	480.5	540.0
4	393	Complete Map Reconnaissance	GUNNER (G)	480.5	540.0
5	245	Complete Flight Plan (175)	PILOT (P)	1021.0	300.0
6	645	Receive Weather Briefing	GUNNER (G)	1021.0	300.0
7	133	Brief Crew	PILOT (P)	1321.5	600.0

Function 117: Prepare Laser Spot Tracker

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	375	Set LST Code Switch	CUNNING	0.0	2.0
2	41	Check AND Display (Laser Code)	CUNNING	2.5	1.0

Function 118: Prepare Performance Planning Card

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	374	Determine Pressure Altitude (Departure)	PILOT (P)	0.0	3.0
2	259	Determine Free Air Temperature (Departure)	PILOT (P)	3.5	3.0
3	576	Determine Gross Weight	PILOT (P)	7.0	3.0
4	546	Determine Weight of Load	PILOT (P)	10.5	3.0
5	575	Determine Takeoff Fuel Weight	PILOT (P)	14.0	3.0
6	408	Determine Maximum Torque Available (Departure)	PILOT (P)	17.5	17.0
7	409	Determine Maximum Torque Available (Departure)	PILOT (P)	35.0	17.0
8	402	Determine Maximum Allowable Gross Weight	PILOT (P)	52.5	12.0
9	403	Determine Maximum Allowable Gross Weight	PILOT (P)	65.0	12.0
10	280	Determine Go / No-Go Torques (ICR)	PILOT (P)	77.5	8.0
11	281	Determine Go / No-Go Torques (OCR)	PILOT (P)	86.0	8.0
12	471	Determine Predicted Hover Torque	PILOT (P)	94.5	8.0
13	319	Determine Hover Torque (OCR)	PILOT (P)	103.0	8.0
14	405	Determine Maximum Rate of Climb IAS	PILOT (P)	111.5	14.0
15	404	Determine Maximum Range IAS	PILOT (P)	126.0	8.0
16	542	Determine Single Engine IAS	PILOT (P)	134.5	8.0
17	472	Determine Pressure Altitude (Arrival)	PILOT (P)	143.0	3.0
18	257	Determine Free Air Temperature (Arrival)	PILOT (P)	146.5	3.0
19	218	Determine Estimated Landing Gross Weight	PILOT (P)	150.0	7.0
20	401	Determine Maximum Allowable Gross Weight	PILOT (P)	157.5	12.0
21	406	Determine Maximum Torque Available (Arrival)	PILOT (P)	170.0	17.0
22	407	Determine Maximum Torque Available (Arrival)	PILOT (P)	187.5	17.0
23	317	Determine Hover Torque (ICR)	PILOT (P)	205.0	8.0
24	318	Determine Hover Torque (OCR)	PILOT (P)	213.5	8.0
25	473	Determine Pressure Altitude (Cruise)	PILOT (P)	222.0	3.0
26	258	Determine Free Air Temperature (Cruise)	PILOT (P)	225.5	3.0
27	134	Determine Cruise VNE	PILOT (P)	229.0	22.0
28	341	Determine Indicated Airspeed (Cruise) (D)	PILOT (P)	230.5	30.0
29	342	Determine Indicated Airspeed (Cruise) (S)	PILOT (P)	230.5	20.0
30	601	Determine True Airspeed (Cruise)	PILOT (P)	232.5	10.0
31	469	Determine Predicted Cruise Torque (Dual)	PILOT (P)	313.0	10.0
32	470	Determine Predicted Fuel Flow (Dual Eng)	PILOT (P)	323.5	10.0

Function 119: Prepare Weight and Balance Form

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	73	Determine Basic Weight and Moment	CUNTER (G)	0.0	120.0
2	450	Determine Operating Weight and Moment	CUNTER (G)	120.5	80.0
3	577	Determine Takeoff Weight and Moment	CUNTER (G)	201.0	150.0
4	574	Determine Takeoff Center of Gravity	CUNTER (G)	351.5	80.0
5	360	Determine Landing Weight and Moment	CUNTER (G)	432.0	150.0
6	359	Determine Landing Center of Gravity	CUNTER (G)	582.5	80.0

Function 120: Program Doppler

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	156	Set Doppler Mode Switch	CUNTER (G)	0.0	1.0
2	157	Check Doppler Panel Lights	CUNTER (G)	1.5	2.0
3	156	Set Doppler Mode Switch	CUNTER (G)	4.0	1.0
4	150	Check Doppler Display	CUNTER (G)	5.5	19.0
5	156	Set Doppler Mode Switch	CUNTER (G)	24.0	1.0
6	152	Set Doppler Display Selector Switch	CUNTER (G)	25.5	2.0
7	147	Set DIST DISP Thumbwheel	CUNTER (G)	28.0	5.0
8	153	Press Doppler KYBD Key	CUNTER (G)	33.5	1.0
9	153	Press Doppler KYBD Key	CUNTER (G)	35.0	1.0
10	158	Enter Doppler Spheroid Data	CUNTER (G)	36.5	10.0
11	152	Press Doppler KYBD Key	CUNTER (G)	47.0	1.0
12	154	Press Doppler KYBD Key	CUNTER (G)	48.5	10.0
13	149	Enter Doppler Magnetic Variation	CUNTER (G)	59.0	1.0
14	152	Press Doppler Data Entry Key	CUNTER (G)	60.5	2.0
15	147	Set Doppler Display Selector Switch	CUNTER (G)	63.0	5.0
16	153	Set DIST DISP Thumbwheel	CUNTER (G)	68.5	1.0
17	153	Press Doppler KYBD Key	CUNTER (G)	70.0	1.0
18	159	Press Doppler KYBD Key	CUNTER (G)	71.5	8.0
19	153	Enter Doppler Zone Data	CUNTER (G)	80.0	1.0
20	619	Press Doppler KYBD Key	CUNTER (G)	81.5	12.0
21	149	Enter UTM Coordinates	CUNTER (G)	94.0	1.0
22	249	Press Doppler Data Entry Key	CUNTER (G)	95.5	5.0
		Set FLY-TO-DIST Switch	CUNTER (G)		

Function 121: Program Transponder

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	672	Set Master Switch	PILOT (P)	0.0	2.0
2	673	Set Mode 1 Code	PILOT (P)	2.5	5.0
3	674	Set Mode 3A Code	PILOT (P)	8.0	10.0
4	682	Check Test Light	PILOT (P)	18.5	0.5
5	683	Check Test / NON Light	PILOT (P)	19.5	0.5
6	681	Check Reply Light	PILOT (P)	20.5	0.5
7	656	Set AWT Switch	PILOT (P)	21.5	1.0
8	672	Set Master Switch	PILOT (P)	23.0	2.0
9	665	Set M-1 Test Switch	PILOT (P)	25.5	2.0
10	664	Set M-1 Switch	PILOT (P)	28.0	1.0
11	667	Set M-2 Test Switch	PILOT (P)	29.5	2.0
12	666	Set M-2 Switch	PILOT (P)	32.0	1.0
13	669	Set M-3 Test Switch	PILOT (P)	33.5	2.0
14	668	Set M-3 Switch	PILOT (P)	36.0	1.0
15	671	Set M-C Test Switch	PILOT (P)	37.5	2.0
16	670	Set M-C Switch	PILOT (P)	40.0	1.0
17	656	Set AWT Switch	PILOT (P)	41.5	1.0
18	665	Set M-1 Test Switch	PILOT (P)	43.0	2.0
19	664	Set M-1 Switch	PILOT (P)	45.5	1.0
20	667	Set M-2 Test Switch	PILOT (P)	47.0	2.0
21	666	Set M-2 Switch	PILOT (P)	49.5	1.0
22	669	Set M-3 Test Switch	PILOT (P)	51.0	2.0
23	668	Set M-3 Switch	PILOT (P)	53.5	1.0
24	671	Set M-C Test Switch	PILOT (P)	55.0	2.0
25	670	Set M-C Switch	PILOT (P)	57.5	1.0
26	656	Set AWT Switch	PILOT (P)	59.0	1.0
27	665	Set M-1 Test Switch	PILOT (P)	60.5	2.0
28	664	Set M-1 Switch	PILOT (P)	63.0	1.0
29	667	Set M-2 Test Switch	PILOT (P)	64.5	2.0
30	666	Set M-2 Switch	PILOT (P)	67.0	1.0
31	669	Set M-3 Test Switch	PILOT (P)	68.5	2.0
32	668	Set M-3 Switch	PILOT (P)	71.0	1.0
33	671	Set M-C Test Switch	PILOT (P)	72.5	2.0
34	670	Set M-C Switch	PILOT (P)	75.0	1.0
35	675	Set Mode 4 Switch	PILOT (P)	76.5	2.0
36	664	Set M-1 Switch	PILOT (P)	79.0	1.0
37	666	Set M-2 Switch	PILOT (P)	80.5	1.0
38	668	Set M-3 Switch	PILOT (P)	82.0	1.0
39	670	Set M-C Switch	PILOT (P)	83.5	1.0

Function 122: Receive External Communication (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	412	Note Message Alert	GUNNER (G)	0.0	2.0
2	3	Transmit Acknowledgment	GUNNER (G)	2.5	3.0
3	680	Release Radio Transmitter Switch	GUNNER (G)	6.0	0.5
4	410	Receive Message	GUNNER (G)	7.0	10.0
5	3	Transmit Acknowledgment	GUNNER (G)	17.5	3.0
6	680	Release Radio Transmitter Switch	GUNNER (G)	21.0	0.5

Function 123: Receive External Communication (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	412	Note Message Alert	PILOT (P)	0.0	2.0
2	3	Transmit Acknowledgment	PILOT (P)	2.5	3.0
3	680	Release Radio Transmitter Switch	PILOT (P)	6.0	0.5
4	410	Receive Message	PILOT (P)	7.0	10.0
5	3	Transmit Acknowledgment	PILOT (P)	17.5	3.0
6	680	Release Radio Transmitter Switch	PILOT (P)	21.0	0.5

Function 124: Receive Handover

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	412	Note Message Alert	CUNTER (C)	0.0	2.0
2	3	Transmit Acknowledgment	CUNTER (C)	2.5	3.0
3	680	Release Radio Transmitter Switch	CUNTER (C)	6.0	0.5
4	579	Copy Target Coordinates	CUNTER (C)	7.0	12.0
5	582	Copy Target Number and Type	CUNTER (C)	19.5	5.0
6	3	Transmit Acknowledgment	CUNTER (C)	25.0	3.0
7	680	Release Radio Transmitter Switch	CUNTER (C)	28.5	0.5

Function 125: Refuel Aircraft

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	396	Check MASTER ARM Switch	PILOT (P)	0.0	1.0
2	573	Set TAILWHEEL Switch	PILOT (P)	1.5	1.0
3	455	Set Park Brake	PILOT (P)	3.0	2.0
4	658	Set Brake Lever	PILOT (P)	5.5	1.0
5	498	Check Refuel Valve Open Light	PILOT (P)	7.0	0.5
6	498	Check Refuel Valve Open Light	PILOT (P)	308.5	0.5
7	261	Check Fuel Caps	PILOT (P)	309.5	0.5

Discrete Random Tasks

Entry #	Task #	Task Name	Duration	Crewmember	Start	Finish	Times
1	661	Monitor Fuel Quantity Indicator (Internal)	3.0	PILOT (P)	8.0	308.0	10

Function 126: Respond to Threat

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	589	Detect Threat	PILOT (P)	0.0	3.5
2	135	Set Cycloic WAS Switch	PILOT (P)	3.5	1.0
3	489	Check Radar Jamming Light	PILOT (P)	32.0	1.0
4	697	Press Flare Dispenser Switch	PILOT (P)	33.0	1.0
5	698	Press Chaff Dispenser Switch	PILOT (P)	34.0	1.0

Continuous Random Tasks

Start : 0.0
 Finish: -0.5
 Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	33	Change Airspeed Quickly	3.0
2	38	Change Altitude Sharply	3.0
3	299	Perform Hard Turns	3.0

Function 127: Restart Engine

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	199	Set ENG 2 START Switch	PILOT (P)	0.0	1.0
3	189	Check ENG 2 Instruments and Lights	PILOT (P)	1.5	8.0
4	191	Monitor ENG 2 NG	PILOT (P)	10.0	10.0
5	587	Monitor TGT	PILOT (P)	20.5	10.0
6	197	Set ENG 2 PWR Lever	PILOT (P)	31.0	3.0
7	552	Monitor Starter Light	PILOT (P)	34.5	5.0
8	194	Monitor ENG 2 OIL Pressure	PILOT (P)	40.0	4.0
9	200	Check ENG 2 TGT	PILOT (P)	44.5	4.0
10	190	Check ENG 2 NG	PILOT (P)	49.0	4.0
11	99	Check Caution / Warning Panel Lights	PILOT (P)	53.5	4.0
12	197	Set ENG 2 PWR Lever	PILOT (P)	58.0	3.0
13	200	Check ENG 2 TGT	PILOT (P)	61.5	4.0
14	190	Check ENG 2 NG	PILOT (P)	66.0	4.0
15	194	Monitor ENG 2 OIL Pressure	PILOT (P)	70.5	4.0
16	181	Check ENG 1 PWR Lever	PILOT (P)	75.0	1.0
17	435	Check KP and NR	PILOT (P)	76.5	4.0
18	99	Check Caution / Warning Panel Lights	PILOT (P)	81.0	4.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
2	691	Monitor Flight Controls	PILOT (P)	0.0	-0.5

Function 128: Secure Aircraft

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	365	Check Locking Devices	PILOT (P)	0.0	90.0
2	590	Check Tie-downs	PILOT (P)	-365.0	90.0
3	283	Check Grounding Cables	PILOT (P)	-590.0	14.0
4	21	Check Aircraft Covers	PILOT (P)	-283.0	90.0

Function 129: Secure Weapons Systems (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	5	Set ACM Switch	GUNNER (G)	0.0	1.0
2	539	Set SIGHT SEL Switch (G)	GUNNER (G)	1.5	2.0
3	564	Set TADS Switch	GUNNER (G)	4.0	1.0
4	337	Set IHADSS Switch	GUNNER (G)	5.5	1.0
5	224	Set FC SYN GEN Switch	GUNNER (G)	7.0	1.0
6	514	Check RRT SEL Switch	GUNNER (G)	8.5	1.0
7	287	Check GUN SEL Switch	GUNNER (G)	10.0	1.0
8	424	Check MSL SEL Switch	GUNNER (G)	11.5	1.0
9	373	Check LSR SEL Switch	GUNNER (G)	13.0	1.0
10	132	Set CPG ARM Switch	GUNNER (G)	14.5	1.0
11	461	Check PLT / GND ORIDE Switch	GUNNER (G)	16.0	1.0
12	14	Set ADSS Switch	GUNNER (G)	17.5	2.0

Function 130: Secure Weapons Systems (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	561	Set SIGHT SEL Switch (P)	PILOT (P)	0.0	1.0
2	9	Set ACQ SEL Switch (P)	PILOT (P)	1.5	1.0
3	632	Check VID SEL Switch (P)	PILOT (P)	3.0	1.0
4	5	Set ACM Switch	PILOT (P)	4.5	1.0
5	465	Set PWVS Switch	PILOT (P)	6.0	1.0
6	514	Check RKT SEL Switch	PILOT (P)	7.5	1.0
7	287	Check GUN SEL Switch	PILOT (P)	9.0	1.0
8	424	Check MSL SEL Switch	PILOT (P)	10.5	1.0
9	397	Set MASTER ARM Switch	PILOT (P)	12.0	1.0

Function 131: Select Firing Position

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	588	Set TGT / NAV Index Code	GUNNER (G)	0.0	2.0
2	7	Set ACQ SEL Switch (G)	GUNNER (G)	2.5	2.0
3	544	Set SLAVE Switch	GUNNER (G)	5.0	1.0
4	544	Set SLAVE Switch	GUNNER (G)	6.5	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
5	551	Check Standoff Range (P)	PILOT (P)	8.0	30.0
6	550	Check Standoff Range (G)	GUNNER (G)	8.0	30.0
7	232	Select Field of Fire (P)	PILOT (P)	38.5	30.0
8	231	Select Field of Fire (G)	GUNNER (G)	38.5	30.0
9	586	Check Terrain Clearance (P)	PILOT (P)	69.0	10.0
10	585	Check Terrain Clearance (G)	GUNNER (G)	69.0	10.0
11	347	Select Ingress Routes (P)	PILOT (P)	79.5	20.0
12	12	Select Ingress Routes (G)	GUNNER (G)	79.5	20.0
13	346	Select Egress Routes (P)	PILOT (P)	100.0	20.0
14	164	Select Egress Routes (G)	GUNNER (G)	100.0	20.0
15	72	Check Backdrop (P)	PILOT (P)	120.5	20.0
16	71	Check Backdrop (G)	GUNNER (G)	120.5	20.0
17	126	Check Concealment (P)	PILOT (P)	141.0	20.0
18	125	Check Concealment (G)	GUNNER (G)	141.0	20.0

Function 132: Select Sensor (DTV)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	535	Check Sensor Select Switch	CUNNER (G)	0.0	1.0
2	253	Set FOV Switch	CUNNER (G)	-535.0	1.0
3	367	Check LOS Slave Status	CUNNER (G)	-233.0	1.0

Function 133: Select Sensor (DVO)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	536	Set Sensor Select Switch	CUNNER (G)	0.0	1.0
2	253	Set FOV Switch	CUNNER (G)	-536.0	1.0
3	367	Check LOS Slave Status	CUNNER (G)	-253.0	1.0

Function 134: Select Sensor (FLIR)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	536	Set Sensor Select Switch	CORNER (G)	0.0	1.0
2	253	Set POV Switch	CORNER (G)	-536.0	1.0
3	367	Check LOS Slave Status	CORNER (G)	-253.0	1.0

Function 135: Select Weapon, FFAR (Cooperative)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	514	Check RKT SEL Switch	PILOT (P)	0.0	1.0
2	514	Check RKT SEL Switch	CUNNER (G)	0.0	1.0
3	135	Set Cyclis WAS Switch	PILOT (P)	1.5	0.5
4	451	Set CRT WAS Switch	CUNNER (G)	1.5	0.5
5	253	Check HAD Message (Rocket)	PILOT (P)	2.5	1.0
6	293	Check HAD Message (Rocket)	CUNNER (G)	2.5	1.0
7	518	Check Rocket Steering Cursor	PILOT (P)	4.0	0.5
8	539	Set SIGHT SEL Switch (G)	CUNNER (G)	4.0	2.0
9	457	Set FEM-M Switch	PILOT (P)	5.0	5.0
10	517	Set Rocket Firing Quantity	PILOT (P)	10.5	4.0
11	520	Set Rocket Zone	PILOT (P)	15.0	2.0

Function 136: Select Weapon, FFAR (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	458	Check Pilot RKT SRL Switch	PILOT (P)	0.0	1.0
2	135	Set Gyrolic WAS Switch	PILOT (P)	1.5	0.5
3	293	Check RAD Message (Rocket)	PILOT (P)	2.5	1.0
4	516	Set RNC-NM Thumbwheel	PILOT (P)	4.0	3.0
5	292	Check RAD Message (Range)	PILOT (P)	7.5	2.0
6	520	Set Rocket Zone	PILOT (P)	10.0	2.0
7	457	Set PRN-M Switch	PILOT (P)	12.5	5.0
8	517	Set Rocket Firing Quantity	PILOT (P)	18.0	4.0
9	518	Check Rocket Steering Cursor	PILOT (P)	22.5	0.5

Function 137: Select Weapon, Gun (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	287	Check GUN SEL Switch	GUNNER (G)	0.0	1.0
2	451	Set ORT WAS Switch	GUNNER (G)	1.5	0.5
3	539	Set SIGHT SEL Switch (G)	GUNNER (G)	2.5	2.0
4	142	Set DEK Data Entry Selector Switch	GUNNER (G)	5.0	2.0
5	145	Enter DEK Range Data	GUNNER (G)	7.5	5.0
6	292	Check RAD Message (Range)	GUNNER (G)	13.0	2.0
7	294	Check RAD Message (Rounds)	GUNNER (G)	15.5	2.0
8	142	Set DEK Data Entry Selector Switch	GUNNER (G)	18.0	2.0

Function 138: Select Weapon, Gun (Gunner, Laser Range)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	287	Check GUN SEL Switch	GUNNER (G)	0.0	1.0
2	451	Set CRT WAS Switch	GUNNER (G)	1.5	0.5
3	539	Set SIGHT SEL Switch (G)	GUNNER (G)	2.5	2.0
4	373	Check LSR SEL Switch	GUNNER (G)	5.0	1.0

Function 139: Select Weapon, Gun (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	287	Check GUN SEL Switch	PILOT (P)	0.0	1.0
2	135	Set Cyclic WAS Switch	PILOT (P)	1.5	0.5
3	516	Set RING-IN Thumbwheel	PILOT (P)	2.5	3.0
4	292	Check RAD Message (Range)	PILOT (P)	6.0	2.0
5	294	Check RAD Message (Scuds)	PILOT (P)	8.5	2.0

Function 140: Select Weapon, Missile

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	416	Set Missile Control Switch	GUNNER (G)	0.0	2.0
2	451	Set ORT WAS Switch	GUNNER (G)	2.5	0.5
3	419	Set Missile Mode Switch	GUNNER (G)	3.5	1.0
4	612	Check UPR CHAN Laser Code	GUNNER (G)	5.0	0.5
5	614	Check UPR CHAN Quantity	GUNNER (G)	6.0	0.5
6	378	Check LWR CHAN Laser Code	GUNNER (G)	7.0	0.5
7	380	Check LWR CHAN Quantity	GUNNER (G)	8.0	0.5
8	562	Check TADS LRF / D Indicator	GUNNER (G)	9.0	1.0
9	108	Set CHAN SEL Switch	GUNNER (G)	10.5	1.0
10	291	Check RAD Message (Mode)	GUNNER (G)	12.0	1.0
11	290	Check RAD Message (Fire...Missile)	GUNNER (G)	13.5	1.0
12	46	Check AND Display (Priority)	GUNNER (G)	15.0	1.0

Function 141: Select Weapon, Missile (Remote Designation)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	416	Set Missile Control Switch	CUNNER (G)	0.0	2.0
2	419	Set Missile Mode Switch	CUNNER (G)	2.5	1.0
3	451	Set ORT WAS Switch	CUNNER (G)	4.0	0.5
4	612	Check UPR CHAN Laser Code	CUNNER (G)	5.0	0.5
5	614	Check UPR CHAN Quantity	CUNNER (G)	6.0	0.5
6	378	Check LWR CHAN Laser Code	CUNNER (G)	7.0	0.5
7	380	Check LWR CHAN Quantity	CUNNER (G)	8.0	0.5
8	108	Set CHAN SEL Switch	CUNNER (G)	9.0	1.0
9	46	Check AND Display (Priority)	CUNNER (G)	10.5	1.0
10	291	Check HAD Message (Mode)	CUNNER (G)	12.0	1.0
11	290	Check HAD Message (Fire...Missile)	CUNNER (G)	13.5	1.0

Function 142: Set TADS Internal Boresight (DTV)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	538	Check SIGHT SEL Switch (G)	CUNTER (G)	0.0	1.0
2	535	Check Sensor Select Switch	CUNTER (G)	1.5	1.0
3	253	Set FOV Switch	CUNTER (G)	3.0	1.0
4	322	Set LAT Polarity Switch	CUNTER (G)	4.5	1.0
5	560	Set TADS BRSIT Switch	CUNTER (G)	6.0	1.0
6	374	Set LSR SEL Switch	CUNTER (G)	7.5	1.0
7	461	Check FLT / CMD ORING Switch	CUNTER (G)	9.0	1.0
8	132	Set CPQ ARM Switch	CUNTER (G)	10.5	1.0
9	361	Pull Laser Trigger	CUNTER (G)	12.0	1.0
10	86	Set BRSIT Enable Switch	CUNTER (G)	13.5	1.0
12	86	Set BRSIT Enable Switch	CUNTER (G)	45.5	1.0
13	84	Verify Boresight (Internal)	CUNTER (G)	47.0	3.0
14	362	Release Laser Trigger	CUNTER (G)	50.5	0.5
15	253	Set FOV Switch	CUNTER (G)	51.5	1.0
16	361	Pull Laser Trigger	CUNTER (G)	53.0	1.0
17	86	Set BRSIT Enable Switch	CUNTER (G)	54.5	1.0
19	84	Verify Boresight (Internal)	CUNTER (G)	86.5	3.0
20	86	Set BRSIT Enable Switch	CUNTER (G)	90.0	1.0
21	362	Release Laser Trigger	CUNTER (G)	91.5	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
11	594	Check Tracking Gates	CUNTER (G)	15.0	30.0
18	594	Check Tracking Gates	CUNTER (G)	56.0	30.0

Function 143: Set TADS Internal Boresight (DVO)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	536	Set Sensor Select Switch	CUNTER (G)	0.0	1.0
2	253	Set FOV Switch	CUNTER (G)	1.5	1.0
3	86	Set BRSIT Enable Switch	CUNTER (G)	3.0	1.0
4	161	Adjust DVO Crosshairs Alignment	CUNTER (G)	4.5	15.0
5	86	Set BRSIT Enable Switch	CUNTER (G)	20.0	1.0
6	560	Set TADS BRSIT Switch	CUNTER (G)	21.5	1.0
7	6	Check ACQ SEL Switch (G)	CUNTER (G)	23.0	2.0
8	544	Set SLAVE Switch	CUNTER (G)	25.5	1.0

Function 144: Set TADS Internal Boresight (FLIR)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	536	Set Sensor Select Switch	GUNNER (G)	0.0	1.0
2	253	Set FOV Switch	GUNNER (G)	1.5	1.0
3	246	Adjust FLIR Level / Gain	GUNNER (G)	3.0	4.0
4	361	Pull Laser Trigger	GUNNER (G)	7.5	1.0
5	247	Set FLIR Polarity Reversal Switch	GUNNER (G)	9.0	1.0
6	86	Set BRSIT Enable Switch	GUNNER (G)	10.5	1.0
8	84	Verify Boresight (Internal)	GUNNER (G)	42.5	3.0
9	86	Set BRSIT Enable Switch	GUNNER (G)	46.0	1.0
10	362	Release Laser Trigger	GUNNER (G)	47.5	0.5
11	253	Set FOV Switch	GUNNER (G)	48.5	1.0
12	361	Pull Laser Trigger	GUNNER (G)	50.0	1.0
13	86	Set BRSIT Enable Switch	GUNNER (G)	51.5	1.0
15	84	Verify Boresight (Internal)	GUNNER (G)	83.5	3.0
16	86	Set BRSIT Enable Switch	GUNNER (G)	87.0	1.0
17	362	Release Laser Trigger	GUNNER (G)	88.5	0.5
18	132	Set CPG ARM Switch	GUNNER (G)	89.5	1.0
19	374	Set LSR SEL Switch	GUNNER (G)	91.0	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
7	594	Check Tracking Gates	GUNNER (G)	12.0	30.0
14	594	Check Tracking Gates	GUNNER (G)	53.0	30.0

Function 145: Shut Down Engines

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	138	Set DASH Release Switch	PILOT (P)	0.0	0.5
2	549	Set Standby Attitude Indicator	PILOT (P)	1.0	2.0
3	622	Set VDG Control Switch	PILOT (P)	3.5	1.0
4	486	Set RAD ALF Switches	PILOT (P)	5.0	1.0
5	302	Set HARS Control Switch	PILOT (P)	6.5	1.0
6	537	Check SHAFT DRIVEN COMP Warning Light	PILOT (P)	8.0	0.5
7	479	Set PWR Levers	PILOT (P)	9.0	5.0
8	219	Check EXT TK Fuel Switch	PILOT (P)	14.5	1.0
9	262	Check Fuel CROSSED Switch	PILOT (P)	16.0	1.0
10	587	Monitor TGT	PILOT (P)	17.5	4.0
11	528	Set RTR BK Switch	PILOT (P)	22.0	1.0

Function 146: Start APU (Postflight)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	54	Set APU Control Switch	PILOT (P)	0.0	2.0
2	54	Set APU Control Switch	PILOT (P)	2.5	2.0
3	61	Check APU Starting	PILOT (P)	5.0	2.0
4	56	Check APU FAIL Light	PILOT (P)	7.5	5.0
5	60	Check APU ON Light	PILOT (P)	13.0	1.0

Function 147: Start APU (Preflight)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	238	Alert Fireguard	PILOT (P)	0.0	2.0
2	617	Check Utility Hydraulic Accumulator	PILOT (P)	2.5	2.0
3	52	Initialize APU	PILOT (P)	5.0	5.0
4	54	Set APU Control Switch	PILOT (P)	10.5	2.0
5	61	Check APU Starting	PILOT (P)	13.0	2.0
6	56	Check APU FAIL Light	PILOT (P)	15.5	5.0
7	60	Check APU ON Light	PILOT (P)	21.0	1.0
8	274	Set GEN 1 Switch	PILOT (P)	22.5	2.0
9	277	Set GEN 2 Switch	PILOT (P)	25.0	2.0
10	279	Check Generator Lights	PILOT (P)	27.5	2.0

Function 148: Start First Engine

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	527	Check RTR EM Switch	PILOT (P)	0.0	1.0
2	184	Set ENG 1 START Switch	PILOT (P)	1.5	1.0
3	173	Check ENG 1 Instruments and Lights	PILOT (P)	3.0	8.0
4	175	Monitor ENG 1 NG	PILOT (P)	11.5	10.0
5	182	Set ENG 1 PWR Lever	PILOT (P)	22.0	3.0
6	552	Monitor Starter Light	PILOT (P)	25.5	5.0
7	178	Monitor ENG 1 OIL Pressure	PILOT (P)	31.0	4.0
8	185	Check ENG 1 TOT	PILOT (P)	35.5	4.0
9	174	Check ENG 1 NG	PILOT (P)	40.0	4.0
10	99	Check Caution / Warning Panel Lights	PILOT (P)	44.5	4.0
11	204	Check ENG INSTR Anti-ice Switch	PILOT (P)	49.0	1.0
12	528	Set RTR EM Switch	PILOT (P)	50.5	1.0
13	182	Set ENG 1 PWR Lever	PILOT (P)	52.0	3.0
14	185	Check ENG 1 TOT	PILOT (P)	55.5	4.0
15	174	Check ENG 1 NG	PILOT (P)	60.0	4.0
16	178	Monitor ENG 1 OIL Pressure	PILOT (P)	64.5	4.0

Function 149: Start Second Engine

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	199	Set ENG 2 START Switch	PILOT (P)	0.0	1.0
2	189	Check ENG 2 Instruments and Lights	PILOT (P)	1.5	8.0
3	191	Monitor ENG 2 NG	PILOT (P)	10.0	10.0
4	197	Set ENG 2 PWR Lever	PILOT (P)	20.5	3.0
5	552	Monitor Starter Light	PILOT (P)	24.0	5.0
6	194	Monitor ENG 2 OIL Pressure	PILOT (P)	29.5	4.0
7	200	Check ENG 2 TGT	PILOT (P)	34.0	4.0
8	190	Check ENG 2 NG	PILOT (P)	38.5	4.0
9	99	Check Caution / Warning Panel Lights	PILOT (P)	43.0	4.0
10	197	Set ENG 2 PWR Lever	PILOT (P)	47.5	3.0
11	200	Check ENG 2 TGT	PILOT (P)	51.0	4.0
12	190	Check ENG 2 NG	PILOT (P)	55.5	4.0
13	194	Monitor ENG 2 OIL Pressure	PILOT (P)	60.0	4.0
14	435	Check NP and NR	PILOT (P)	64.5	4.0
15	99	Check Caution / Warning Panel Lights	PILOT (P)	69.0	4.0

Function 150: Track Target (IHADSS / Gunner)

Discrete Fixed Tasks

Entry # 1	Task # 335	Task Name Align IHADSS LOS Reticle on Target	Crewmember GUNNER (G)	Start 0.0	Duration 4.0

Continuous Fixed Tasks

Entry # 2	Task # 583	Task Name Follow Target With IHADSS	Crewmember GUNNER (G)	Start 4.0	Duration -0.5

Function 151: Track Target (IHADSS / Pilot)

Discrete Fixed Tasks

Entry # 1	Task # 335	Task Name Align IHADSS LOS Reticle on Target	Crewmember PILOT (P)	Start 0.0	Duration 4.0

Continuous Fixed Tasks

Entry # 2	Task # 583	Task Name Follow Target With IHADSS	Crewmember PILOT (P)	Start 4.5	Duration -0.5

Function 152: Track Target (Image Autotracker)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	321	Check IAF Polarity Switch	GUNNER (G)	0.0	1.0
2	323	Set IAF Switch	GUNNER (G)	1.0	1.0
3	594	Check Tracking Gates	GUNNER (G)	2.0	1.0
4	48	Check AND Display (Tracking)	GUNNER (G)	3.0	0.5
5	45	Check AND Display (Polarity)	GUNNER (G)	3.5	0.5

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
6	708	Monitor Tracking Gates	GUNNER (G)	4.0	-0.5

Function 153: Track Target (Image Autotracker Offset)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	321	Check IAR Polarity Switch	CUNNER (G)	0.0	1.0
2	323	Set IAR Switch	CUNNER (G)	1.0	1.0
3	594	Check Tracking Gates	CUNNER (G)	2.0	1.0
4	48	Check AND Display (Tracking)	CUNNER (G)	3.0	0.5
5	45	Check AND Display (Polarity)	CUNNER (G)	3.5	0.5
6	320	Set IAR OFS Switch	CUNNER (G)	4.0	1.0
7	44	Check AND Display (Offset)	CUNNER (G)	5.0	0.5
8	392	Manipulate MAN TKR Thumbforce Controller	CUNNER (G)	5.5	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
9	708	Monitor Tracking Gates	CUNNER (G)	6.5	-0.5

Function 154: Track Target (Manual)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	364	Press IAC Button	GUNNER (G)	0.0	1.0
2	42	Check AND Display (IAC)	GUNNER (G)	1.5	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
3	510	Maintain Reticle Alignment on Target	GUNNER (G)	3.0	-0.5

Function 155: Transmit Message (Attack Coordination)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	413	Transmit Message Alert	CUNNING (G)	0.0	3.0
2	680	Release Radio Transmitter Switch	CUNNING (G)	3.5	0.5
3	2	Note Acknowledgment	CUNNING (G)	4.5	2.0
4	411	Transmit Message	CUNNING (G)	7.0	10.0
5	680	Release Radio Transmitter Switch	CUNNING (G)	17.5	0.5
6	2	Note Acknowledgment	CUNNING (G)	18.5	2.0

Function 156: Unmask Aircraft

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	37	Change Altitude	PILOT (P)	0.0	5.0
2	19	Stabilize Aircraft	PILOT (P)	10.0	4.0

Continuous Random Tasks

Start : 5.0
 Finish: 10.0
 Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	36	Control Altitude	0.5
2	65	Control Attitude	0.5
3	160	Control Drift	0.5
4	305	Control Heading	0.5

Function 157: Update Doppler (Landmark)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	147	Set DEST DISP Thumbwheel	GUNNER (G)	0.0	5.0
2	152	Set Doppler Display Selector Switch	GUNNER (G)	5.5	2.0
3	153	Press Doppler KYBD Key	GUNNER (G)	8.0	1.0
4	394	Read Maps	GUNNER (G)	9.5	4.0
5	619	Enter UTM Coordinates	GUNNER (G)	14.0	12.0
6	394	Read Maps	GUNNER (G)	26.5	4.0
7	25	Verify Aircraft Location (G)	GUNNER (G)	31.0	40.0
8	149	Press Doppler Data Entry Key	GUNNER (G)	71.5	1.0
9	152	Set Doppler Display Selector Switch	GUNNER (G)	73.0	2.0

Function 158: Update Doppler (Stored Destination)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	152	Set Doppler Display Selector Switch	GUNNER (G)	0.0	2.0
2	394	Read Maps	GUNNER (G)	2.5	4.0
4	153	Press Doppler KRD Key	GUNNER (G)	47.5	1.0
5	149	Press Doppler Data Entry Key	GUNNER (G)	49.0	1.0
6	249	Set FLY-TO-DIST Switch	GUNNER (G)	50.5	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
3	25	Verify Aircraft Location (G)	GUNNER (G)	7.0	40.0

Function 159: This Function Slot Not Used

Function 160: Position Aircraft For Boresight

Discrete Fixed Tasks

Entry # 2	Task # 19	Task Name Stabilize Aircraft	Crewmember PILOT (P)	Start 118.5	Duration 1.0

Continuous Fixed Tasks

Entry # 1	Task # 692	Task Name Change Headings	Crewmember PILOT (P)	Start 0.0	Duration 118.0

Function 161: Perform Before Hover Check

Discrete Fixed Tasks

Entry #	Task #	Task Name	Member	Start	Duration
2	691	Monitor Flight Controls	PILOT (P)	180.0	2.5
3	694	Check Rotor RPM	PILOT (P)	180.5	2.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Member	Start	Duration
1	693	Perform HIT Check	PILOT (P)	0.0	180.0

Function 162: Establish Hover

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	244	Set Flight Mode Symbolology Switch	PILOT (P)	0.0	2.0
2	688	Check & Torque Indicator (Inflight)	PILOT (P)	2.0	1.0
3	679	Increase Power	PILOT (P)	3.0	2.0
4	688	Check & Torque Indicator (Inflight)	PILOT (P)	5.0	1.0

Function 163: Monitor Flight Controls

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	691	Monitor Flight Controls	PILOT (P)	0.0	-0.5

Function 164: Adjust Climb Parameters

Continuous Random Tasks

Start : 0.0
 Finish: -0.5
 Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	31	Control Airspeed	0.5
2	65	Control Attitude	0.5
3	304	Adjust Heading (Inflight)	0.5
4	493	Control Rate of Climb	0.5

Function 165: Check Climb Parameters

Continuous Random Tasks

Start :	0.0		
Finish:	-0.5		
Crewmember:	PILOT (P)		
Entry #	Task #	Task Name	Duration
1	686	Check Vertical Situation Indicator (Inflight)	1.0
2	654	Check Airspeed Indicator (Inflight)	1.0
3	663	Check Heading Indicator (Inflight)	1.0

Function 166: This Function Slot Not Used

Function 167: Check Level of Flight Parameters

Continuous Random Tasks

Start :	0.0		
Finish:	-0.5		
Crewmember:	PILOT (P)		
Entry #	Task #	Task Name	Duration
1	655	Check Altimeter (Inflight)	1.0
2	656	Check Airspeed Indicator (Inflight)	1.0
3	663	Check Heading Indicator (Inflight)	1.0

Function 168: Adjust Level of Flight Parameters

Continuous Random Tasks

Start :	0.0		
Finish:	-0.5		
Crewmember:	PILOT (P)		
Entry #	Task #	Task Name	Duration
1	31	Control Airspeed	0.5
2	36	Control Altitude	0.5
3	65	Control Attitude	0.5
4	304	Adjust Heading (Inflight)	0.5

Function 169: Check Fuel Consumption Parameters

Discrete Fixed Tasks

Entry #	Task #	Task Name Note Fuel Quantity Note Time	Crewmember GUNNER (G) GUNNER (G)	Start 0.0 3.5	Duration 3.0 3.0
1	660				
2	684				

Function 170: Check Flight Parameters

Continuous Random Tasks

Start :	0.0			
Finish:	-0.5			
Crewmember:	PILOT (P)			
Entry #	Task #	Task Name	Duration	
1	654	Check Airspeed Indicator (Inflight)	1.0	
2	655	Check Altimeter (Inflight)	1.0	
3	663	Check Heading Indicator (Inflight)	1.0	
4	685	Check Trim Ball (Inflight)	1.0	
5	704	Check # Torque Indicator	1.0	

Function 171: Adjust Approach Parameters

Continuous Random Tasks

Start : 0.0
Finish: -0.5

Crewmember: PILOT (P)

Entry #	Task #	Task Name	Duration
1	31	Control Airspeed	0.5
2	65	Control Attitude	0.5
3	160	Control Drift	0.5
4	304	Adjust Heading (Inflight)	0.5
5	494	Control Rate of Descent	0.5

Function 172: Check Approach Parameters

Continuous Random Tasks

Start : 0.0
Finish: -0.5
Crewmember: 2XLOT (P)

Entry #	Task #	Task Name	Duration
1	686	Check Vertical Situation Indicator (Inflight)	1.0
2	654	Check Airspeed Indicator (Inflight)	1.0
3	663	Check Heading Indicator (Inflight)	1.0

Function 173: This Function Slot Not Used

Function 174: Check Exposure Time

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	591	Check Exposure Time	PILOT (P)	0.0	0.5

Function 175: Check Weapon Clearance

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	640	Check Weapon Path	PILOT (P)	0.0	1.0

Function 176: Evaluate Obstacle Clearance (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	690	Check Obstacle Clearance	GUNNER (C)	0.0	1.0

Function 177: Evaluate Obstacle Clearance (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	690	Check Obstacle Clearance	PILOT (P)	0.0	1.0

Function 178: Initiate Cockpit Communication (Normal-Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	700	Transmit Cockpit Communications (Normal)	GUNNER (G)	0.0	2.0
2	699	Receive Cockpit Communications (Normal)	PILOT (P)	0.0	2.0
3	700	Transmit Cockpit Communications (Normal)	PILOT (P)	2.5	2.0
4	699	Receive Cockpit Communications (Normal)	GUNNER (G)	2.5	2.0

Function 179: Initiate Cockpit Communication (Normal-Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	700	Transmit Cockpit Communications (Normal)	PILOT (P)	0.0	2.0
2	699	Receive Cockpit Communications (Normal)	GUNNER (G)	0.0	2.0
3	700	Transmit Cockpit Communications (Normal)	GUNNER (G)	2.5	2.0
4	699	Receive Cockpit Communications (Normal)	PILOT (P)	2.5	2.0

Function 180: Monitor External Visual Scene (Gunner)

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	701	Monitor External Visual Scene	GUNNER (G)	0.0	-0.5

Function 181: Monitor External Visual Scene (Pilot)

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	701	Monitor External Visual Scene	PILOT (P)	0.0	-0.5

Function 182: Monitor Threat (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	148	Check Direction Display	CONNER (C)	0.0	3.0

Function 183: Perform Hover Hold

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	64	Set ATTD / Hover Hold Switch	PILOT (P)	0.0	1.0
2	31	Control Airspeed	PILOT (P)	0.0	1.0

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
3	691	Monitor Flight Controls	PILOT (P)	1.0	-0.5

Function 184: Monitor HAD (TOF, Lase)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	296	Monitor HAD Message (TOF/LASE)	GUNTER (C)	0.0	1.0

Function 185: This Function Slot Not Used

Function 186: This Function Slot Not Used

Function 187: Monitor Audio (Pilot)

Continuous Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	66	Monitor Audio	PILOT (P)	0.0	-0.5

Function 188: Check HAD Fire Message (Gunner)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Fire...Missile)	Remember	Start	Duration
1	290	Check HAD Message	(Fire...Missile)	GUNNER (G)	0.0	1.0

Function 189: Check HAD Message (Pilot)

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	289	Check HAD Message (Cum)	PILOT (P)	0.0	1.0

Function 190: This Function Slot Not Used

Function 191: Acquire Laser Range

Discrete Fixed Tasks

Entry #	Task #	Task Name	Crewmember	Start	Duration
1	361	Pull Laser Trigger	CUNNER (G)	0.0	4.5
2	362	Release Laser Trigger	CUNNER (G)	-361.0	0.5

A P P E N D I X F

AH-64A SEGMENT DECISION RULES

The AH-64A decision rules were written to describe the exact manner in which the functions are combined to form each segment. The Segment Decision Rules in this appendix define the sequence of the functions performed by each crewmember and the times on the mission segment timelines at which the functions begin and end. Appendix F contains the 52 Segment Decision Rules.

Segment 1: Flight Planning

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
116	Plan Mission	0.0	1922.0	
119	Prepare Weight and Balance Form	1321.5	663.0	
118	Prepare Performance Planning Card	-119.0	334.0	

Relevant Function Clash Pairs

None

Segment 2: Exterior Cockpit Check

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
48	Check Security Devices	0.0	292.5	
100	Perform Cockpit Safety Check (Pilot)	-48.0	7.5	
22	Check Armament Subsystems (Pilot)	-100.0	7.5	
10	Activate Ignition	-22.0	7.0	
24	Check Cockpit Conditions (Pilot)	-10.0	351.0	
99	Perform Cockpit Safety Check (Gunner)	0.0	4.5	
21	Check Armament Subsystems (Gunner)	-99.0	9.0	
23	Check Cockpit Conditions (Gunner)	-21.0	76.0	

Relevant Function Clash Pairs

None

Segment 3: Preflight Walk Around

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
30	Check Fuel Sample	0.0	26.0	
46	Check Right Side - Under Fuselage	-30.0	144.5	
44	Check Right Side - Mast	-46.0	272.5	
47	Check Right Side - Wing	-44.0	119.0	
45	Check Right Side - Rear Fuselage	-47.0	152.0	
39	Check Left Side - Rear Fuselage	-45.0	129.5	
40	Check Left Side - Wing	-39.0	113.5	
38	Check Left Side - Mast	-40.0	260.5	
37	Check Left Side - Fuselage and Nose	-38.0	99.5	

Relevant Function Clash Pairs

None

Segment 4: Interior Cockpit Check

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
15	Arrange Cockpit (Pilot)	0.0	126.0	
41	Check Overhead Panel	-15.0	12.0	
26	Check Collective Switches (Pilot)	-41.0	8.0	
36	Check Left Control Console (Pilot)	-26.0	75.5	
34	Check Instrument Panel (Pilot)	-36.0	82.0	
43	Check Right Control Console (Pilot)	-34.0	9.0	
32	Check Helmet (Pilot)	-43.0	91.5	
14	Arrange Cockpit (Gunner)	0.0	122.0	
25	Check Collective Switches (Gunner)	-14.0	8.0	
35	Check Left Control Console (Gunner)	-25.0	45.0	
33	Check Instrument Panel (Gunner)	-35.0	46.5	
42	Check Right Control Console (Gunner)	-33.0	13.5	
31	Check Helmet (Gunner)	-42.0	91.5	

Relevant Function Clash Pairs

None

Segment 5: Starting APU

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
93	Perform Before Starting APU Check (Pilot)	0.0	117.5	9999
147	Start APU (Preflight)	-93.0	30.0	9999
92	Perform Before Starting APU Check (Gunner)	0.0	90.5	9999

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-On)	7.0	0.0	-0.5	2	
79	Initiate Cockpit Communication (Coord-Fi)	7.0				

Relevant Function Clash Pairs

78: 79
79: 78

Segment 6: After Starting APU

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
87	Perform After Starting APU Check (Pilot)	0.0	149.0	9999
94	Perform Before Starting Engines Check	-87.0	9.0	9999
148	Start First Engine	-94.0	69.0	9999
149	Start Second Engine	-149.0	73.5	9999
29	Check Engine Chop Circuit	-149.0	30.5	9999
101	Perform Engine 1 Overspeed Test	-39.0	11.5	9999
102	Perform Engine 2 Overspeed Test	-101.0	11.5	9999
27	Check Engine 1 ECU Lockout System	-102.0	33.0	9999
28	Check Engine 2 ECU Lockout System	-27.0	33.0	9999
54	Deactivate APU	-28.0	4.0	9999
12	Adjust IHADSS Boreasight (Pilot)	-54.0	17.5	9999
108	Perform FWS Operational Check	-12.0	50.5	9999
121	Program Transponder	-208.0	85.0	9999
86	Perform After Starting APU Check (Gunner)	0.0	36.0	9999
57	Enter Fire Control Data	-86.0	740.5	9999
11	Adjust IHADSS Boreasight (Gunner)	-57.0	32.0	9999
111	Perform TADS Operational Checks	-11.0	89.0	9999
120	Program Doppler	-111.0	101.0	9999
142	Set TADS Internal Boreasight (DRV)	-120.0	92.5	9999
144	Set TADS Internal Boreasight (FLIR)	-142.0	92.5	9999
143	Set TADS Internal Boreasight (DVO)	-144.0	27.0	9999
106	Perform IHADSS Operational Check (Gunner)	-143.0	23.5	9999

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-Gu)	7.0	0.0	-0.5	14	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				

Relevant Function Clash Pairs

78: 79
79: 78

Segment 7: Taxi

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
97	Perform Before Taxi Check	0.0	109.0	178 179 78 79
114	Perform Taxi Check	-97.0	16.5	78 79 178 179
160	Position Aircraft For Bore-sight	-113.0	120.0	
13	Adjust Outfront Bore-sight	-160.0	58.0	179 178 78 79
103	Perform External Communication (Gunner)	-97.0	28.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
113	Perform Taxi	-114.0	30.0	
163	Monitor Flight Controls	-160.0	-16.5	
83	Monitor Audio (Both)	0.0	-0.5	103 178 179 78 79
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	97 114
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	17 103 13

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	12	
179	Initiate Cockpit Communication (Normal-P)	5.0				
17	Check Aircraft Systems (Gunner)	11.0	-103.0	120.0	1	
78	Initiate Cockpit Communication (Coord-Gu)	7.0	0.0	-0.5	2	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				

Relevant Function Clash Pairs

17:	78	79	103
78:	178	179	103
79:	178	179	103
103:	78	79	178
178:	179	78	79
179:	178	78	79

Segment 8: Takeoff (Contour)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
161	Perform Before Hover Check	0.0	182.5	
162	Establish Hover	-161.0	6.0	
105	Perform Hover	-162.0	120.0	
95	Perform Before Takeoff Check (Gunner)	260.0	20.0	
103	Perform External Communication (Gunner)	-95.0	28.0	
96	Perform Before Takeoff Check (Pilot)	260.0	48.5	
60	Establish Climb	-96.0	6.0	
164	Adjust Climb Parameters	-60.0	60.0	
61	Establish Level of Flight	-164.0	6.0	
168	Adjust Level of Flight Parameters	-61.0	-90.0	
169	Check Fuel Consumption Parameters	-60.0	7.0	176

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
82	Monitor Audio (Both)	0.0	-0.5	78 79 178 179 103
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	95 169 182 17
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	161 162 96 60 61

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-Gn)	7.0	182.5	-0.5	3	
79	Initiate Cockpit Communication (Coord-P1)	7.0				
18	Check Aircraft Systems (Pilot)	7.5	-161.0	-0.5	1	
84	Monitor Threat (Pilot)	3.5	-60.0	-0.5	2	
165	Check Climb Parameters	1.0	-96.0	60.0	10	
167	Check Level of Flight Parameters	1.0	-164.0	90.0	15	
17	Check Aircraft Systems (Gunner)	11.0	0.0	-0.5	1	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	20	
179	Initiate Cockpit Communication (Normal-P)	5.0				
182	Monitor Threat (Gunner)	3.5	-60.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	316.0	376.0	10	

Relevant Function Clash Pairs

[illegible]

Segment 9: Contour Flight

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
158	Update Doppler (Stored Destination)	60.0	52.0	78 79 178 179 122
103	Perform External Communication (Gunner)	-158.0	28.0	78 79 178 179 122 123
50	Compute Fuel Burn Rate	250.0	41.5	78 79 178 179 122
157	Update Doppler (Landmark)	-50.0	75.5	78 79 178 179 122
104	Perform External Communication (Pilot)	-157.0	28.0	78 79 178 179 122 123

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
73	Fly Contour	0.0	-450.0	126
107	Perform Navigation	0.0	-0.5	17 50 78 79 103 122 157 158 178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84 170 126
5	Monitor Audio (Pilot)	0.0	-0.5	78 79 178 179 123 104
6	Monitor Audio (Gunner)	0.0	-0.5	78 79 178 179 122 103 50
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	107 158 50 157

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
17	Check Aircraft Systems (Gunner)	11.0	0.0	-0.5	4	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	8	
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	10	126
78	Initiate Cockpit Communication (Coord-Gu)	7.0	0.0	-0.5	6	122 123
79	Initiate Cockpit Communication (Coord-Pi)	7.0	0.0	-0.5	1	
122	Receive External Communication (Gunner)	22.0	0.0	-0.5	1	78 79 178 179
123	Receive External Communication (Pilot)	22.0	0.0	-0.5	2	78 79 178 179
126	Respond to Threat	35.0	300.0	-0.5	1	
170	Check Flight Parameters	1.0	0.0	-0.5	70	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	7	122 123
179	Initiate Cockpit Communication (Normal-P)	5.0	0.0	-0.5	7	122 123

Relevant Function Clash Pairs

17:	78	79	50	103	157	158	122	122:	123	17
18:	84	170	78	79	126	123	104	123:	170	18
50:	78	79	178	179	17			126:	170	18
84:	18	78	79	170	123	104	126	157:	17	78
103:	78	79	179	178	17			158:	78	79
104:	78	79	18	84	178	179		170:	84	18
178:	179	78	79	103	50	104	178			
179:	178	78	79	103	50	104	179			
78:	178	179	103	84	17	18	158			
79:	178	179	103	84	17	18	158			

Discrete Fixed Functions

Continuous Fixed Functions

Discrete Random Functions

Relevant Function Clash Pairs

F-11

Segment 11: Approach (Contour)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
91	Perform Before Landing Check (Pilot)	0.0	13.5	
99	Establish Approach	-91.0	8.0	
103	Perform External Communication (Gunner)	0.0	26.0	
90	Perform Before Landing Check (Gunner)	-103.0	7.5	176

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
171	Adjust Approach Parameters	-59.0	120.0	
73	Fly Contour	0.0	13.5	
83	Monitor Audio (Both)	0.0	-0.5	103 78 79 178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	170 13 172
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	90 17
187	Monitor Audio (Pilot)	0.0	-0.5	78 79 178 179 83

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-Gu)	7.0	0.0	-0.5	4	176
79	Initiate Cockpit Communication (Coord-P1)	7.0				
17	Check Aircraft Systems (Gunner)	11.0	0.0	-0.5	2	176
172	Check Approach Parameters	1.0	-59.0	120.0	25	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	10	176
179	Initiate Cockpit Communication (Normal-P)	5.0				
176	Evaluate Obstacle Clearance (Gunner)	1.0	13.5	-0.5	5	

Relevant Function Clash Pairs

17:	78	79	103	90	176
18:	78	79	59	172	
59:	18				
78:	178	179	103	17	18 172 79
79:	178	179	103	17	18 172 78
90:	17				
103:	78	79	179	178	17
172:	78	79	18		
176:	17				
178:	179	78	79	103	178
179:	178	78	79	103	179

Segment 12: Approach (NOE)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
91	Perform Before Landing Check (Pilot)	0.0	13.5	78 79 84
99	Establish Approach	-91.0	8.0	
103	Perform External Communication (Gunner)	0.0	28.0	17
90	Perform Before Landing Check (Gunner)	-103.0	7.5	17 78 79 176

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
171	Adjust Approach Parameters	-59.0	60.0	
74	Fly NOE	0.0	13.5	
83	Monitor Audio (Both)	0.0	-0.5	78 79 178 179 103
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	91 59 172 18 84
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	20 17 90
187	Monitor Audio (Pilot)	0.0	-0.5	72 79 178 179 83

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-Gn)	7.0	0.0	-0.5	2	176
79	Initiate Cockpit Communication (Coord-P1)	7.0				
17	Check Aircraft Systems (Gunner)	11.0	0.0	-0.5	2	
172	Check Approach Parameters	1.0	21.5	81.5	10	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	1	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	4	176
179	Initiate Cockpit Communication (Normal-P)	5.0				
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	-0.5	5	

Relevant Function Clash Pairs

17:	78	79	103	90	176
18:	84	78	79	59	172
59:	18				
78:	178	179	103	84	17 18 172 79
79:	178	179	103	84	17 18 172 78
84:	18	78	79	172	
90:	17				
103:	78	79	178	17	
172:	78	79	18	84	
176:	17				
178:	179	78	79	103	178
179:	178	78	79	103	179

Segment 13: Landing

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
162	Establish Hover	0.0	6.0	
80	Land Aircraft	-105.0	14.0	
104	Perform External Communication (Pilot)	-80.0	28.0	
35	Perform After Landing Check	-104.0	27.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
105	Perform Hover	-162.0	120.0	85
163	Monitor Flight Controls	-80.0	28.0	78 79 178 179 104
83	Monitor Audio (Both)	0.0	-0.5	18 85
161	Monitor External Visual Scene (Pilot)	0.0	-0.5	17
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-Gu)	7.0	6.0	140.0	1	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				
17	Check Aircraft Systems (Gunner)	11.0	0.0	-0.5	1	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	5	
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

17:	78	79	85
78:	178	179	162
79:	178	179	162
85:	17	78	79
104:	78	79	178
162:	78	79	
178:	179	78	79
179:	178	78	79

Segment 14: Holding Area Operations (Inbound)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
53	Coordinate Mission	-20.0	-73.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
20	Check Area Security (Visual Search)	0.0	60.0	
180	Monitor External Visual Scene (Rear)	-20.0	-0.5	
181	Monitor External Visual Scene (Pilot)	-20.0	-0.5	
83	Monitor Audio (Both)	0.0	0.0	178 179 53
19	Check Area Security (Sensor Search)	0.0	-0.5	53
163	Monitor Flight Controls	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	60.0	3	53
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

53: 178 179
 178: 179 53 178
 179: 178 53 179

Segment 15: Holding Area Operations (Outbound)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
52	Consolidate Forces	-20.0	-73.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
20	Check Area Security (Visual Search)	0.0	60.0	
180	Monitor External Visual Scene (Gunner)	-20.0	-0.5	
181	Monitor External Visual Scene (Pilot)	-20.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	178 179 52
19	Check Area Security (Sensor Search)	0.0	-0.5	52
163	Monitor Flight Controls	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	60.0	3	52
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

52: 178 179
 178: 179 52 178
 179: 178 52 179

Discrete Fixed Functions

Continuous Fixed Functions

Discrete Random Functions

Relevant Function Clash Pairs

17:	95	78	79	103	182						165:	78	79	84	18	60
18:	84	60	61	165	167	162	96	78	79		167:	78	79	84	18	61
60:	84	18	165	78	79						169:	78	79	178	179	182
61:	84	18	167								182:	78	79	169	103	17
84:	18	162	60	78	79	61	165	167			162:	84	18	78	79	
95:	17	78	79													
96:	18	78	79													
103:	78	79	179	178	17	182										
178:	179	78	79	103	169	178										
179:	178	78	79	103	169	179										
76:	178	179	103	84	169	165	167	182	95	96	162	60	17	18	79	
79:	178	179	103	84	169	165	167	182	95	96	162	60	17	18	78	

Segment 17: Establishment of Battle Position

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
162	Establish Hover	0.0	6.0	
62	Evaluate Position	-162.0	113.5	18 78 79 84
131	Select Firing Position	-62.0	161.5	18 86 78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
75	Hover Masked	-162.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	78 79 178 179
180	Monitor External Visual Scene (Gunner)	0.0	6.0	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	-162.0	-0.5	2	
18	Check Aircraft Systems (Pilot)	7.5	-162.0	-0.5	2	
78	Initiate Cockpit Communication (Coord-Gu)	7.0	0.0	-0.5	4	
79	Initiate Cockpit Communication (Coord-P1)	7.0				
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	15	
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

18:	84	162	78	79
84:	18	162	78	79
78:	178	179	84	162
79:	178	179	84	162
162:	84	18	78	79
178:	179	78	79	178
179:	178	78	79	179

Segment 18: Deployment in Battle Area

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receivable Handover	0.0	29.5	
62	Evaluate Position	-16.0	113.5	18 78 79 84
131	Select Firing Position	-62.0	161.5	18 78 79 84

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
16	Change Battle Position	-124.0	60.0	
75	Hover Masked	0.0	29.5	
83	Monitor Audio (Both)	0.0	-0.5	78 79 178 179 124
181	Monitor External Visual Scene (Pilot)	0.0	29.5	
187	Monitor Audio (Pilot)	0.0	-0.5	78 79 178 179 83
180	Monitor External Visual Scene (Gunner)	0.0	89.5	
75	Hover Masked	89.5	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	3	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	3	
78	Initiate Cockpit Communication (Coord-6u)	7.0	29.5	-0.5	4	
79	Initiate Cockpit Communication (Coord-P1)	7.0				
170	Check Flight Parameters	1.0	-124.0	60.0	20	
178	Initiate Cockpit Communication (Normal-G)	5.0	29.5	425.0	15	
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

18:	84	170	78	79
78:	178	179	84	18
79:	178	179	84	18
84:	18	78	79	170
124:	178	179	78	79
170:	84	18	78	79
178:	179	78	79	178
179:	178	78	79	179

Segment 19: Target Handover (Laser Spot Tracker)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receive Handover	0.0	29.5	
117	Prepare Laser Spot Tracker	-124.0	4.0	78 79
141	Select Weapon, Missile (Remote Designati	-117.0	-15.0	78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
183	Perform Hover Hold	-124.0	-0.5	
75	Hover Masked	0.0	-0.5	183
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
5	Monitor Audio (Pilot)	0.0	-0.5	78 79

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	1	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
78	Initiate Cockpit Communication (Coord-Gu	7.0	-124.0	-0.5	1	
79	Initiate Cockpit Communication (Coord-Pi	7.0				

Relevant Function Clash Pairs

18: 84 78 79
 78: 84 18 79 124
 79: 84 18 78 124
 84: 18 78 79
 124: 78 79

Segment 20: Target Handover, Grid (Missile)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receive Handover	0.0	29.5	
58	Enter Target Data	-124.0	30.5	78 79
140	Select Weapon, Missile	-58.0	-16.5	78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
183	Perform Hover Hold	-124.0	-0.5	
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
75	Hover Masked	0.0	-0.5	183
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
5	Monitor Audio (Pilot)	0.0	-0.5	78 79

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
78	Initiate Cockpit Communication (Coord-Gu)	7.0	-124.0	-0.5	1	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				

Relevant Function Clash Pairs

18: 84 78 79
 78: 84 18 79 124
 79: 84 18 78 124
 84: 18 78 79
 124: 78 79

Segment 21: Target Handover, Grid (Gun, Pilot)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receive Handover	0.0	29.5	
58	Enter Target Data	-124.0	30.5	78 79
139	Select Weapon, Gun (Pilot)	-58.0	-11.0	78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
180	Monitor External Visual Scene (Gunner)	-58.0	-0.5	
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
183	Perform Hover Hold	-124.0	-0.5	
75	Hover Masked	0.0	-0.5	183
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	139 18 84
5	Monitor Audio (Pilot)	0.0	-0.5	78 79

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
18	Check Aircraft Systems (Pilot)	7.5	0.0	60.0	1	
84	Monitor Threat (Pilot)	3.5	0.0	60.0	2	
78	Initiate Cockpit Communication (Coord-Gu)	7.0	-124.0	-0.5	1	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				

Relevant Function Clash Pairs

18: 84 78 79
 78: 84 18 79 124
 79: 84 18 78 124
 84: 18 78 79
 124: 78 79

Segment 22: Target Handover, Grid (Gun, Gunner)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receive Handover	0.0	29.5	
58	Enter Target Data	-124.0	30.5	78 79
137	Select Weapon, Gun (Gunner)	-58.0	-20.5	78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
183	Perform Mover Hold	-124.0	-0.5	
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84
75	Mover Masked	0.0	-0.5	183
5	Monitor Audio (Pilot)	0.0	-0.5	78 79

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
78	Initiate Cockpit Communication (Coord-Gu)	7.0	-124.0	-0.5	1	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				

Relevant Function Clash Pairs

18: 84 78 79
 78: 84 18 79 124
 79: 84 18 78 124
 84: 18 78 79
 124: 78 79

Segment 23: Target Handover, Grid (Gun, Gunner, Laser Range)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receives Handover	0.0	29.5	
58	Enter Target Data	-124.0	30.5	78 79
138	Select Weapon, Gun (Gunner, Laser Range)	-58.0	-6.5	78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
183	Perform Hover Hold	-124.0	-0.5	
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84
75	Hover Masked	0.0	-0.5	183
5	Monitor Audio (Pilot)	0.0	-0.5	78 79

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
78	Initiate Cockpit Communication (Coord-Gu)	7.0	-124.0	-0.5	1	
73	Initiate Cockpit Communication (Coord-P1)	7.0				

Relevant Function Clash Pairs

18: 84 78 79
 78: 84 18 79 124
 79: 84 18 78 124
 84: 18 78 79
 124: 78 79

Segment 24: Target Handover, Grid (FFAR, Pilot)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receive Handover	0.0	29.5	
58	Enter Target Data	-124.0	30.5	78 79
136	Select Weapon, FFAR (Pilot)	-58.0	-23.5	78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
180	Monitor External Visual Scene (Gunner)	-58.0	-0.5	
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
183	Perform Hover Hold	-124.0	-0.5	
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	136 18 84
75	Hover Masked	0.0	-0.5	183

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	60.0	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	60.0	1	
78	Initiate Cockpit Communication (Coord-On)	7.0	-124.0	-0.5	1	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				

Relevant Function Clash Pairs

18: 84 78 79
 78: 84 18 79 124
 79: 84 18 78 124
 84: 18 78 79
 124: 78 79

Segment 25: Target Handover, Grid (FFAR, Cooperative)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
124	Receive Handover	0.0	29.5	
58	Enter Target Data	-124.0	30.5	78 79
135	Select Weapon, FFAR (Cooperative)	-58.0	-17.5	78 79

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
6	Monitor Audio (Gunner)	-124.0	-0.5	78 79
183	Perform Hover Hold	-124.0	-0.5	
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	135 18 84
75	Hover Masked	0.0	-0.5	183
5	Monitor Audio (Pilot)	0.0	-0.5	78 79

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	60.0	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	60.0	1	
78	Initiate Cockpit Communication (Coord-On)	7.0	29.5	-0.5	1	
79	Initiate Cockpit Communication (Coord-P1)	7.0				

Relevant Function Clash Pairs

18: 84 78 79
 78: 84 18 79 124
 79: 84 18 78 124
 84: 18 78 79
 124: 78 79

Segment 26: Acquisition (DTV)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
132	Select Sensor (DTV)	0.0	4.5	176
1	Acquire Target (DTV)	-132.0	43.0	176
178	Initiate Cockpit Communication (Normal-G)	-1.0	5.0	
112	Perform Target Store Procedures	-1.0	-6.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	-156.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84 174 175

Discrete Random Functions

Function #	Function Name	Start	Duration	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	53.0	4	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84	174	177	175
84:	18	177	174	175
174:	18	177	84	175
175:	18	84	174	177
177:	18	84	174	175
177:	18	84	174	175
178:	179	178		
178:	179	178		
179:	178	179		

Segment 27: Acquisition (DTV, Laser Spot Tracker, Manual)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
132	Select Sensor (DTV)	0.0	4.5	176
3	Acquire Target (Laser Spot Tracker, Manu)	-132.0	26.0	176
178	Initiate Cockpit Communication (Normal-G	-3.0	5.0	
112	Perform Target Store Procedures	-3.0	-6.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Rever Unmasked	-156.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84 174 175

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G	5.0	0.0	36.0	3	
179	Initiate Cockpit Communication (Normal-P	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84 174 177 175
84:	18 177 174 175
174:	18 177 84 175
175:	18 84 174 177
177:	18 84 174 175
178:	18 84 174 175
179:	179 178
178:	179 178
179:	178 179

Segment 28: Acquisition (DTV, Laser Spot Tracker, Automatic)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
132	Select Sensor (DTV)	0.0	4.5	176
2	Acquire Target (Laser Spot Tracker, Auto)	-132.0	37.0	176
178	Initiate Cockpit Communication (Normal-G)	-2.0	5.0	
112	Perform Target Store Procedures	-2.0	-6.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	-156.0	-0.5	178 179
83	Monitor Audio (Both)	0.0	-0.5	18 84 174 175 177
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	47.0	4	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84	174	177	175
84:	18	177	174	175
174:	18	177	84	175
175:	18	84	174	177
177:	18	84	174	175
177:	18	84	174	175
178:	179	178		
178:	179	178		
179:	178	179		

Segment 29: Acquisition (DVO)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
133	Select Sensor (DVO)	0.0	4.5	176
4	Acquire Target (DVO)	-133.0	39.0	176
178	Initiate Cockpit Communication (Normal-g)	-4.0	5.0	
112	Perform Target Store Procedures	-4.0	-6.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Rever Unmasked	-156.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84 174 175 177

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	49.0	4	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84	174	177	175
84:	18	177	174	175
174:	18	177	84	175
175:	18	84	174	177
177:	18	84	174	175
177:	18	84	174	175
178:	179	178		
178:	179	178		
179:	178	179		

Segment 30: Acquisition (DVO, Laser Spot Tracker, Manual)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
133	Select Sensor (DVO)	0.0	4.5	176
3	Acquire Target (Laser Spot Tracker, Manu)	-133.0	26.0	176
178	Initiate Cockpit Communication (Normal-G	-3.0	5.0	
112	Perform Target Store Procedures	-3.0	-6.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Rever Unmasked	-156.0	-0.5	178 179
83	Monitor Audio (Both)	0.0	-0.5	18 84 174 175 177
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G	5.0	0.0	36.0	3	
179	Initiate Cockpit Communication (Normal-P	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84	174	177	175
84:	18	177	174	175
174:	18	177	84	175
175:	18	84	174	177
177:	18	84	174	175
177:	18	84	174	175
178:	179	178		
178:	179	178		
179:	178	179		

Segment 31: Acquisition (DVO, Laser Spot Tracker, Automatic)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
133	Select Sensor (DVO)	0.0	4.5	176
2	Acquire Target (Laser Spot Tracker, Auto)	-133.0	37.0	176
112	Perform Target Store Procedures	-2.0	-6.5	
178	Initiate Cockpit Communication (Normal-G)	-2.0	5.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	-156.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84 174 175 177

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	40.0	4	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84	174	177	175
84:	18	177	174	175
174:	18	177	84	175
175:	18	84	174	177
177:	16	84	174	175
177:	18	84	174	175
178:	179	178		
178:	179	178		
179:	178	179		

Segment 32: Acquisition (FLIR)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
134	Select Sensor (FLIR)	0.0	4.5	176
7	Acquire Target (FLIR)	-134.0	47.0	176
178	Initiate Cockpit Communication (Normal-G)	-7.0	5.0	
112	Perform Target Store Procedures	-7.0	-6.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	-156.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84 174 175 177

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	45.0	4	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84	174	177	175
84:	18	177	174	175
174:	18	177	84	175
175:	18	84	174	177
177:	18	84	174	175
177:	18	84	174	175
178:	179	178		
178:	179	178		
179:	178	179		

Segment 33: Acquisition (FLIR, Laser Spot Tracker, Manual)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
134	Select Sensor (FLIR)	0.0	4.5	176
3	Acquire Target (Laser Spot Tracker, Manu	-134.0	26.0	176
178	Initiate Cockpit Communication (Normal-G	-3.0	5.0	
112	Perform Target Store Procedures	-3.0	-6.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Rever Unmasked	-156.0	-0.5	
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	18 84 174 175 177

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G	5.0	0.0	30.0	3	
179	Initiate Cockpit Communication (Normal-P	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18:	84	174	177	175
84:	18	177	174	175
174:	18	177	84	175
175:	18	84	174	177
177:	18	84	174	175
177:	18	84	174	175
178:	179	178		
178:	179	178		
179:	178	179		

Segment 34: Acquisition (FLIR, Laser Spot Tracker, Automatic)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
156	Unmask Aircraft	0.0	14.0	
175	Check Weapon Clearance	-156.0	1.0	
134	Select Sensor (FLIR)	0.0	4.5	176
2	Acquire Target (Laser Spot Tracker, Auto)	-134.0	37.0	176
112	Perform Target Store Procedures	-2.0	-6.5	
178	Initiate Cockpit Communication (Normal-G)	-2.0	5.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Rever Unmasked	-156.0	-0.5	178 179
83	Monitor Audio (Both)	0.0	-0.5	18 84 174 175 177
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	40.0	4	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	2	
177	Evaluate Obstacle Clearance (Pilot)	1.0	0.0	14.0	3	
177	Evaluate Obstacle Clearance (Pilot)	1.0	-156.0	-0.5	1	
174	Check Exposure Time	1.0	-156.0	-0.5	3	
84	Monitor Threat (Pilot)	3.5	-156.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	0.0	14.0	3	

Relevant Function Clash Pairs

18: 84 174 177 175
 84: 18 177 174 175
 174: 18 177 84 175
 175: 18 84 174 177
 177: 18 84 174 175
 177: 18 84 174 175
 178: 179 178
 178: 179 178
 179: 178 179

Segment 35: Engagement, LOAL (Autonomous, Manual Track)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
66	Fire Weapon, Missile (LOAL)	3.5	5.5	
55	Designate Target (LOAL)	18.0	9.0	
82	Mask Aircraft	-55.0	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	178 179
121	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
76	Monitor Unmasked	0.0	-0.5	115 82
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	66 154 55 184
154	Track Target (Manual)	0.0	26.0	184 66

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
184	Monitor RAD (TCF, base)	1.0	12.0	18.0	3	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-55.0	-0.5	3	

Relevant Function Clash Pairs

18: 84 82
 82: 18
 84: 18
 178: 179 178
 179: 178 179

Segment 36: Engagement, LOAL (Autonomous, IAT)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
66	Fire Weapon, Missile (LOAL)	4.5	5.5	
55	Designate Target (LOAL)	19.0	9.0	
82	Mask Aircraft	-55.0	-7.0	
8	Disengage Image Autotracking	-55.0	1.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
76	Hover Unmasked	0.0	-0.5	115 82
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	66 152 55 184
152	Track Target (Image Autotracker)	0.0	27.0	184 66

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
184	Monitor RAD (TOF, Laser)	1.0	13.0	19.0	3	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-55.0	-0.5	3	

Relevant Function Clash Pairs

18:	84	82
82:	18	
84:	18	
152:	184	
178:	179	178
179:	178	179
184:	152	

Segment 37: Engagement, LOAL (Autonomous, IAT Offset)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
66	Fire Weapon, Missile (FOW)	7.0	5.5	
55	Designate Target (LOAL)	21.5	9.0	
8	Disengage Image Autotracking	-55.0	1.0	
82	Mask Aircraft	-55.0	-7.0	
9	Disengage Image Autotracking Offset	22.5	1.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
76	Monitor Unmasked	0.0	-0.5	115 72
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	66 153 55 184
153	Track Target (Image Autotracker Offset)	0.0	29.5	184 66

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
184	Monitor RAD (FOW, Laser)	1.0	15.5	21.5	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-55.0	-0.5	3	

Relevant Function Clash Pairs

18: 84 82
 82: 18
 84: 18
 178: 179 178
 179: 178 179

Segment 38: Engagement, LOAL (Remote Designation)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
66	Fire Weapon, Missile (LOAL)	3.5	5.5	
82	Mask Aircraft	-66.0	7.0	
155	Transmit Message (Attack Coordination)	-66.0	-20.5	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	178 179 135
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	66
187	Monitor Audio (Pilot)	0.0	-0.5	83 178 179
76	Hover Unmasked	0.0	-0.5	115 82 75
75	Hover Masked	-82.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	8.0	1	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-66.0	-0.5	3	

Relevant Function Clash Pairs

18: 84 82
 82: 18
 84: 18
 155: 178 179
 178: 179 178 155
 179: 178 179 155

Segment 39: Engagement, LOBL (Autonomous, Manual Track)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
16	Designate Target (LOBL)	3.5	22.0	
82	Check Aircraft	-56.0	-7.0	
67	Fire Weapon, Missile (LOBL)	5.0	7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
76	Hover Unmasked	0.0	-0.5	115 82
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	154 67
154	Track Target (Manual)	0.0	25.0	67

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-56.0	-0.5	3	

Relevant Function Clash Pairs

18:	84	82
67:	178	
82:	18	
84:	18	
178:	179	178 67
179:	178	179

Segment 40: Engagement, LOBL (Autonomous, IAT)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
56	Designate Target (LOBL)	4.5	22.0	
82	Mask Aircraft	-56.0	-7.0	
8	Disengage Image Autotracking	-56.0	1.0	
67	Fire Weapon, Missile (LOBL)	6.5	7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	178 179
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	67 152
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
76	Hover Unmasked	0.0	-0.5	115 82
152	Track Target (Image Autotracker)	0.0	26.0	67

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0	0.0	-0.5	1	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-56.0	-0.5	3	

Relevant Function Clash Pairs

18: 84 82
 57: 178
 42: 18
 84: 18
 178: 179 178 67
 179: 178 179

Segment 41: Engagement, LOBL (Autonomous, IAT Offset)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
56	Designate Target (LOBL)	7.5	22.0	
8	Disengage Image Autotracking	-56.0	1.0	
82	Mask Aircraft	-56.0	-7.0	
67	Fire Weapon, Missile (LOBL)	9.5	7.0	
9	Disengage Image Autotracking Offset	18.0	1.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	0.0	-0.5	115 82
120	Monitor External Visual Scene (Gunner)	0.0	-0.5	67 153 56
83	Monitor Audio (Both)	0.0	-0.5	178 179
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
153	Track Target (Image Autotracker Offset)	0.0	31.0	184 67

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-56.0	-0.5	3	

Relevant Function Clash Pairs

18: 84 82
 67: 178
 82: 18
 84: 18
 178: 179 178 67
 179: 178 179

Segment 42: Engagement, LOBL (Remote Designation)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
122	Receive External Communication (Gunner)	0.0	21.5	
78	Initiate Cockpit Communication (Coord-Gu)	-122.0	6.5	
156	Unmask Aircraft	-78.0	14.0	
115	Place Aircraft in Constraints	-156.0	7.0	
67	Fire Weapon, Missile (LOBL)	-115.0	7.0	
82	Mask Aircraft	-67.0	7.0	
153	Transmit Message (Attack Coordination)	-67.0	-21.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	-115.0	7.0	156 76 92 115
75	Hover Masked	0.0	-0.5	178 179 155 122 78
83	Monitor Audio (Both)	0.0	-0.5	83 178 179 78
187	Monitor Audio (Pilot)	0.0	-0.5	84 18
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	67
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	-67.0	-0.5	3	

Relevant Function Clash Pairs

18: 84 78 82
 78: 84 18
 82: 18
 84: 18 78

Segment 43: Engagement, Gun (Pilot, IHADSS)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
189	Check BAD Message (Pilot)	0.0	1.0	
151	Track Target (IHADSS / Pilot)	1.5	13.5	18 84
65	Fire Weapon, Gun (Pilot)	5.5	5.0	
65	Fire Weapon, Gun (Pilot)	16.0	5.0	
82	Mask Aircraft	21.0	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	0.0	-0.5	82
83	Monitor Audio (Both)	0.0	-0.5	178 179
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	182
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	65 84 189 151

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
182	Monitor Threat (Gunner)	3.0	0.0	-0.5	2	
84	Monitor Threat (Pilot)	3.0	0.0	-0.5	2	
17	Check Aircraft Systems (Gunner)	10.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	21.0	28.0	3	

Relevant Function Clash Pairs

17: 182 176
 65: 84
 65: 84
 84: 65
 176: 17 178
 178: 179 178
 179: 178 179
 182: 17

Segment 44: Engagement, Gun (Gunner, IHADSS)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
150	Track Target (IHADSS / Gunner)	0.0	18.0	64
64	Check Gun Parameters	4.5	3.0	
63	Fire Weapon, Gun (Gunner)	7.0	5.0	
64	Check Gun Parameters	16.0	3.0	
63	Fire Weapon, Gun (Gunner)	19.0	5.0	
82	Mask Aircraft	20.5	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	0.0	-0.5	82
83	Monitor Audio (Both)	0.0	-0.5	178 179
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	64 150
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	24.0	31.0	3	

Relevant Function Clash Pairs

18: 84 82
 82: 18
 84: 18
 178: 179 178
 179: 178 179

Segment 45: Engagement, Gun (Gunner, TADS, IAT)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
191	Acquire Laser Range	4.5	3.0	
64	Check Gun Parameters	8.0	3.0	
63	Fire Weapon, Gun (Gunner)	10.5	5.0	
64	Check Gun Parameters	19.5	3.0	
63	Fire Weapon, Gun (Gunner)	22.5	5.0	
82	Mask Aircraft	24.0	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	0.0	-0.5	82
83	Monitor Audio (Both)	0.0	-0.5	178 179
152	Track Target (Image Autotracker)	0.0	20.0	64
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	152 64
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-P)	5.0				
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	24.0	31.0	3	

Relevant Function Clash Pairs

18: 84 82
 82: 18
 84: 18
 178: 179 178
 179: 178 179

Segment 46: Engagement, FFAR (Pilot)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	4.0	7.0	
71	Fire Weapon, Rocket	11.0	10.5	
115	Place Aircraft in Constraints	31.5	7.0	
71	Fire Weapon, Rocket	38.5	10.5	
82	Mask Aircraft	49.0	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	0.0	-0.5	115 82
83	Monitor Audio (Both)	0.0	-0.5	178 179
151	Track Target (IHADSS / Pilot)	0.0	39.0	71
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	182 17
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	151

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
17	Check Aircraft Systems (Gunner)	10.5	0.0	-0.5	1	
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	0.5	2	71
179	Initiate Cockpit Communication (Normal-P)	5.0				
182	Monitor Threat (Gunner)	3.0	0.0	-0.5	2	
176	Evaluate Obstacle Clearance (Gunner)	1.0	49.0	56.0	3	

Relevant Function Clash Pairs

17: 182 176
 176: 17
 178: 179 178
 179: 178 179
 182: 17

Segment 47: Engagement, FFAR (Coop)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	4.0	7.0	
72	Fire Weapon, Rocket (Cooperative)	11.0	15.0	
115	Place Aircraft in Constraints	36.0	7.0	
72	Fire Weapon, Rocket (Cooperative)	43.5	15.0	
82	Mask Aircraft	59.0	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
151	Track Target (IRADSS / Pilot)	0.0	58.5	72 84
83	Monitor Audio (Both)	0.0	-0.5	78 79 178 179
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	152
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	72 151 84
152	Track Target (Image Autotracker)	0.0	58.5	
76	Hover Unmasked	0.0	-0.5	115 82

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	72
78	Initiate Cockpit Communication (Coord-Gu)	7.0	4.0	11.0	1	
79	Initiate Cockpit Communication (Coord-P1)	7.0				
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	2	78 79
179	Initiate Cockpit Communication (Normal-P)	5.0				
78	Initiate Cockpit Communication (Coord-Gu)	0.0	0.0	0.0	0	
79	Initiate Cockpit Communication (Coord-P1)	0.0				
176	Evaluate Obstacle Clearance (Gunner)	1.0	59.0	66.0	3	

Relevant Function Clash Pairs

72:	84
72:	84
78:	178 179 84 79
79:	178 179 84 78
84:	78 79 72
178:	179 78 79 178
179:	178 78 79 179

Segment 48: Engagement, LOAL (Rapid Fire)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
115	Place Aircraft in Constraints	0.0	7.0	
66	Fire Weapon, Missile (LOAL)	3.5	5.5	
188	Check RAD Fire Message (Gunner)	10.5	1.0	
66	Fire Weapon, Missile (LOAL)	11.5	5.5	
184	Monitor RAD (TOF, Lease)	17.0	1.0	
55	Designate Target (LOAL)	18.0	9.0	
174	Monitor RAD (TOF, Lease)	27.0	1.0	
57	Designate Target (LOAL)	28.0	9.0	
82	Mark Aircraft	37.0	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Demasked	0.0	-0.5	115 82
83	Monitor Audio (Both)	0.0	-0.5	178 179
154	Track Target (Manual)	0.0	36.0	184 66 188
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	66 154 55 184

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-2)	5.0	0.0	-0.5	2	
179	Initiate Cockpit Communication (Normal-2)	5.0				
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
176	Evaluate Obstacle Clearance (Gunner)	1.0	37.0	44.0	3	

Relevant Function Clash Pairs

18: 84 82
 82: 18
 84: 18
 178: 179 178
 179: 178 179

Segment 49: Engagement, LOAL (Ripple Fire)

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
155	Transmit Message (Attack Coordination)	0.0	21.0	
115	Place Aircraft in Constraints	21.0	7.0	
66	Fire Weapon Missile (LOAL)	24.5	5.5	
70	Prepare for Ripple Fire (LOAL)	30.0	3.0	
66	Fire Weapon, Missile (LOAL)	32.5	5.5	
184	Monitor EAD (TOF, Laser)	38.0	1.0	
69	Call for Laser (Remote)	39.0	4.0	
55	Designate Target (LOAL)	49.0	9.0	
82	Mask Aircraft	58.0	-7.0	

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
76	Hover Unmasked	0.0	-0.5	115 82
83	Monitor Audio (Both)	0.0	-0.5	178 179 155 69
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	66 154 55 184
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	84 18
187	Monitor Audio (Pilot)	0.0	-0.5	178 179 83
154	Track Target (Manual)	21.0	36.5	184 66 70 69

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
84	Monitor Threat (Pilot)	3.5	0.0	-0.5	2	
18	Check Aircraft Systems (Pilot)	7.5	0.0	-0.5	1	
178	Initiate Cockpit Communication (Normal-G)	5.0	21.0	-0.5	2	69
179	Initiate Cockpit Communication (Normal-P)	5.0				
184	Monitor EAD (TOF, Laser)	1.0	43.0	49.0	3	
176	Evaluate Obstacle Clearance (Gunner)	1.0	53.0	65.0	3	

Relevant Function Clash Pairs

18: 84 82
 69: 178 179
 82: 18
 84: 18
 155: 178 179
 178: 179 178 155 69
 179: 178 179 155 69

Segment 50: FARP Procedures

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
127	Restart Engine	-125.0	85.0	
81	Load Weapons (Rearming)	-113.0	249.0	78 79
98	Perform Before Taxi Check (FARP)	-81.0	4.0	78 79 178 179
125	Refuel Aircraft	-77.0	100.0	78 79
77	Idle Engines	0.0	6.0	78 79
98	Perform Before Taxi Check (FARP)	-127.0	4.0	78 79 178 179

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
113	Perform Taxi	-98.0	60.0	
83	Monitor Audio (Both)	0.0	-0.5	78 79 178 179
163	Monitor Flight Controls	0.0	-0.5	127 113
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	98 77 127

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-G)	7.7	0.0	-0.5	4	98
79	Initiate Cockpit Communication (Coord-P)	7.0				
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	10	98
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

78: 178 179 79 127
 79: 178 179 78 127
 127: 78 79
 178: 179 78 79 178
 179: 178 78 79 179

Segment 51: Engine Shutdown

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
89	Perform Before Engine Shutdown Check	0.0	6.5	78 79 178 179
146	Start APU (Postflight)	-89.0	14.5	78 79 178 179
130	Secure Weapons Systems (Pilot)	-146.0	13.5	78 79 178 179
145	Shut Down Engines	-130.0	23.5	78 79 178 179
110	Perform Postflight Cockpit Check (Pilot)	-145.0	56.5	78 79 178 179
129	Secure Weapons Systems (Gunner)	0.0	20.0	78 79 178 179
109	Perform Postflight Cockpit Check (Gunner)	-129.0	24.5	78 79 178 179

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	78 79 178 179
180	Monitor External Visual Scene (Gunner)	0.0	-0.5	129 109
181	Monitor External Visual Scene (Pilot)	0.0	-0.5	145 110 146
163	Monitor Flight Controls	0.0	-0.5	

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
78	Initiate Cockpit Communication (Coord-Gu)	7.0	0.0	-0.5	2	
79	Initiate Cockpit Communication (Coord-Pi)	7.0				
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	4	
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

78: 178 179 79
 79: 178 179 78
 178: 179 78 79 178
 179: 178 78 79 179

Segment 52: Before Leaving Aircraft

Discrete Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
128	Secure Aircraft	-49.0	-289.5	178 179
51	Conduct Postflight Walk Around	-49.0	273.5	178 179

Continuous Fixed Functions

Function #	Function Name	Start	Duration	Interrupted By
83	Monitor Audio (Both)	0.0	-0.5	178 179 78 79
180	Monitor External Visual Scene (Gunner)	0.0	120.0	
49	Complete TAMES Forms	0.0	210.5	178 179

Discrete Random Functions

Function #	Function Name	Duration	Start	Finish	Times	Interrupted By
178	Initiate Cockpit Communication (Normal-G)	5.0	0.0	-0.5	8	
179	Initiate Cockpit Communication (Normal-P)	5.0				

Relevant Function Clash Pairs

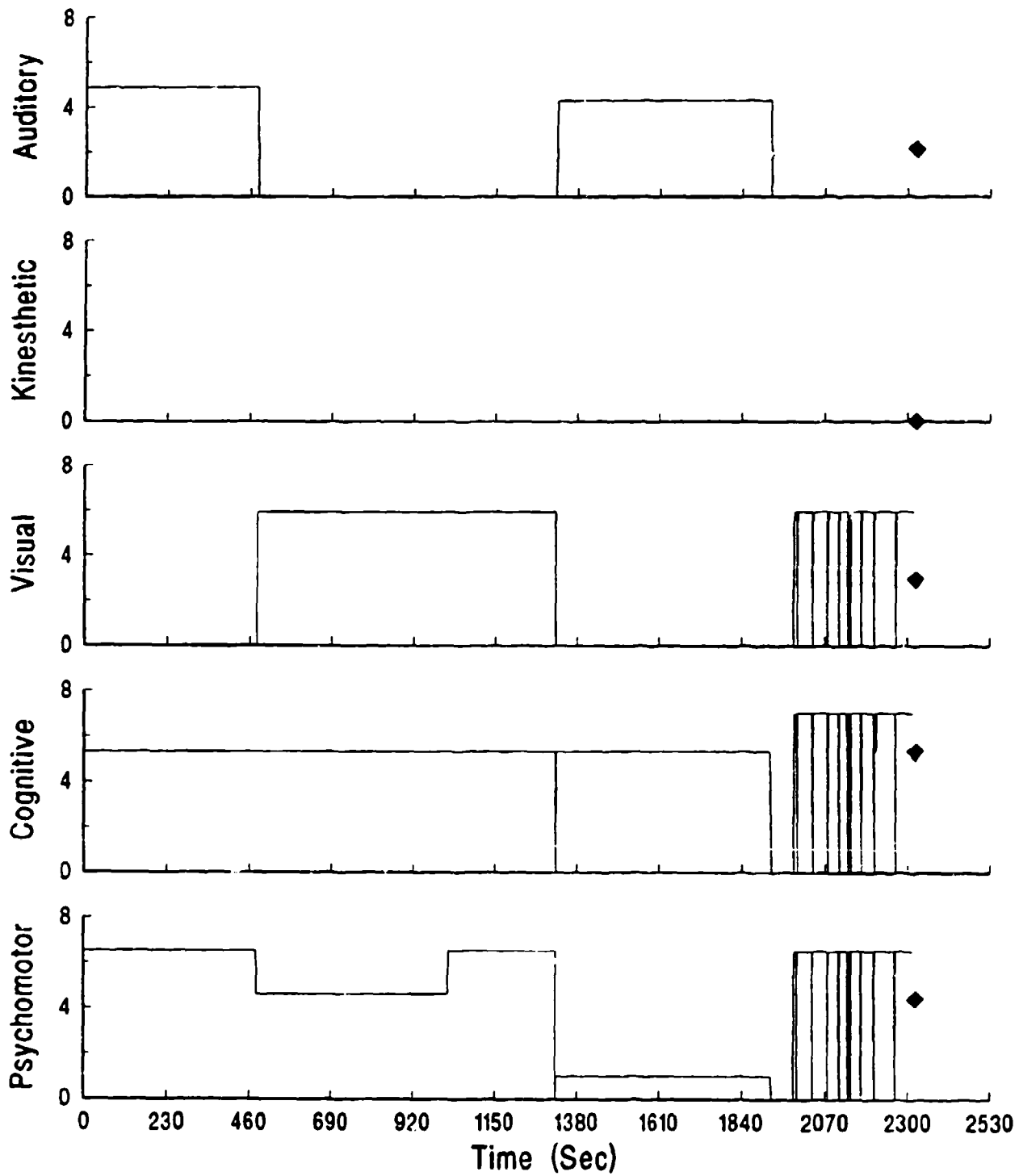
178: 179 178
179: 178 179

A P P E N D I X G

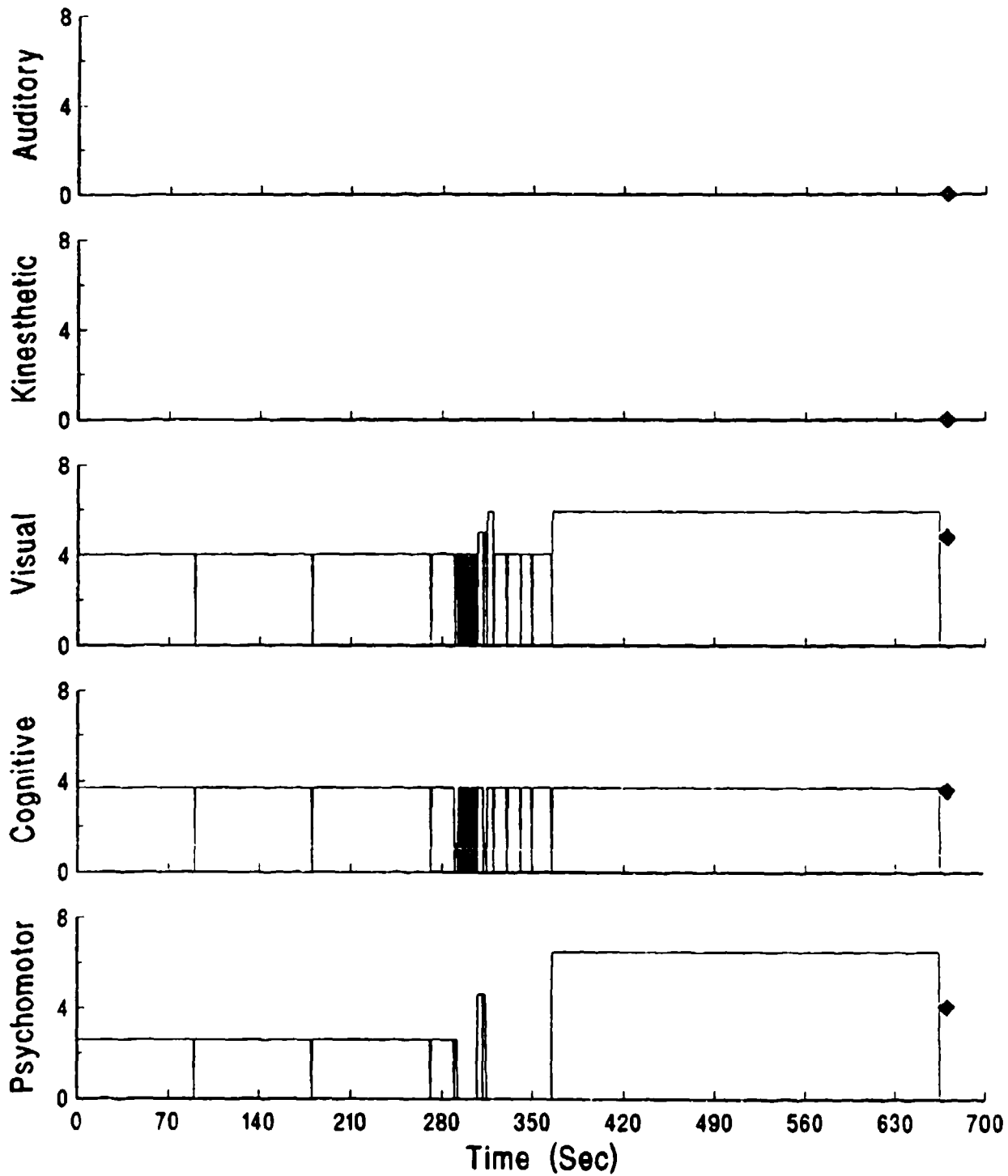
AH-64A PILOT WORKLOAD PREDICTION GRAPHS

Appendix G contains the workload prediction graphs for the pilot for each of the 52 AH-64A segments. Each page displays the predicted pilot workload for one segment using 5 graphs, one for each workload component. The diamond symbol at the end of each graph indicates the average component workload for the segment.

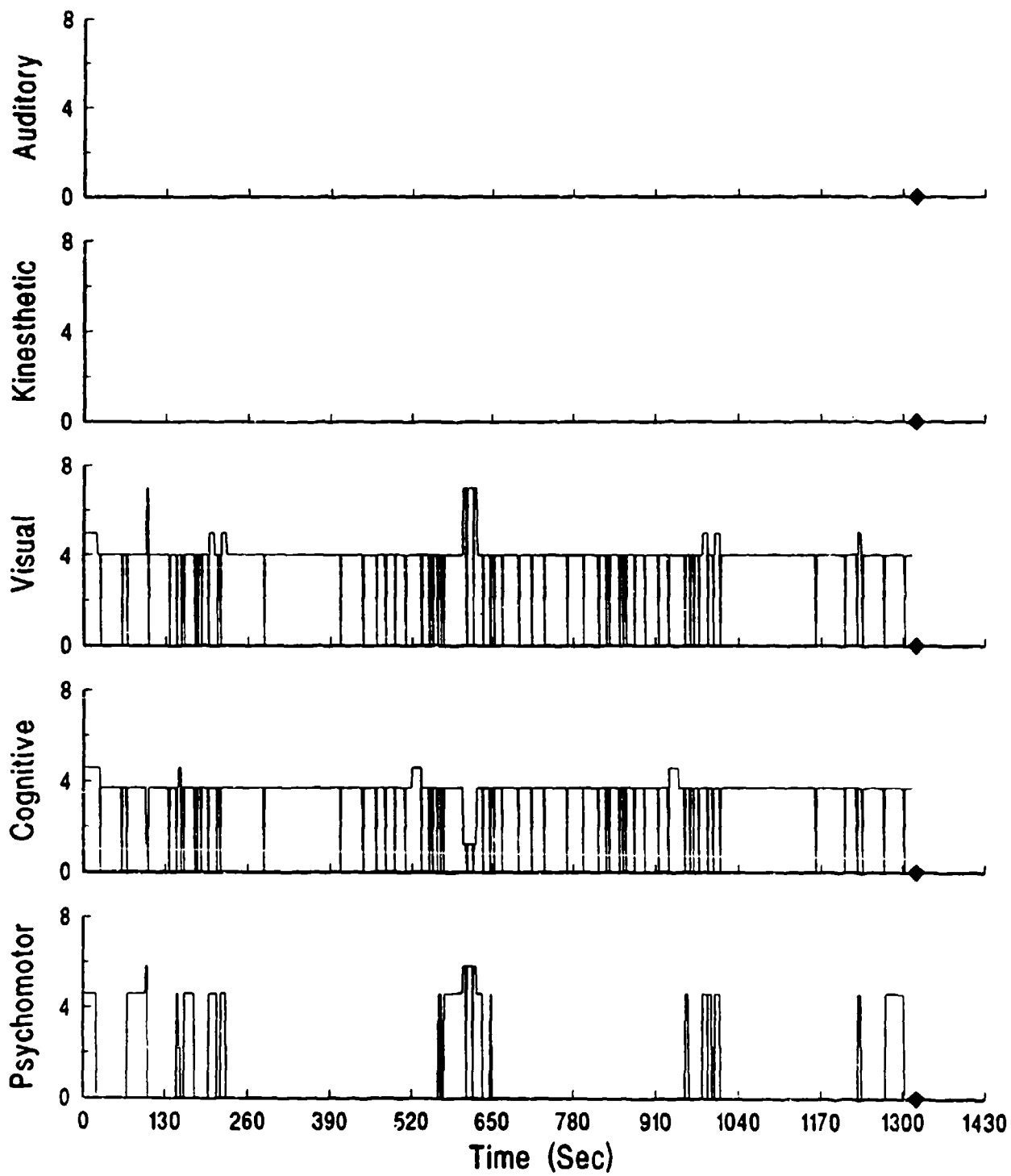
Segment 1: Flight Planning
PILOT - AH-64A



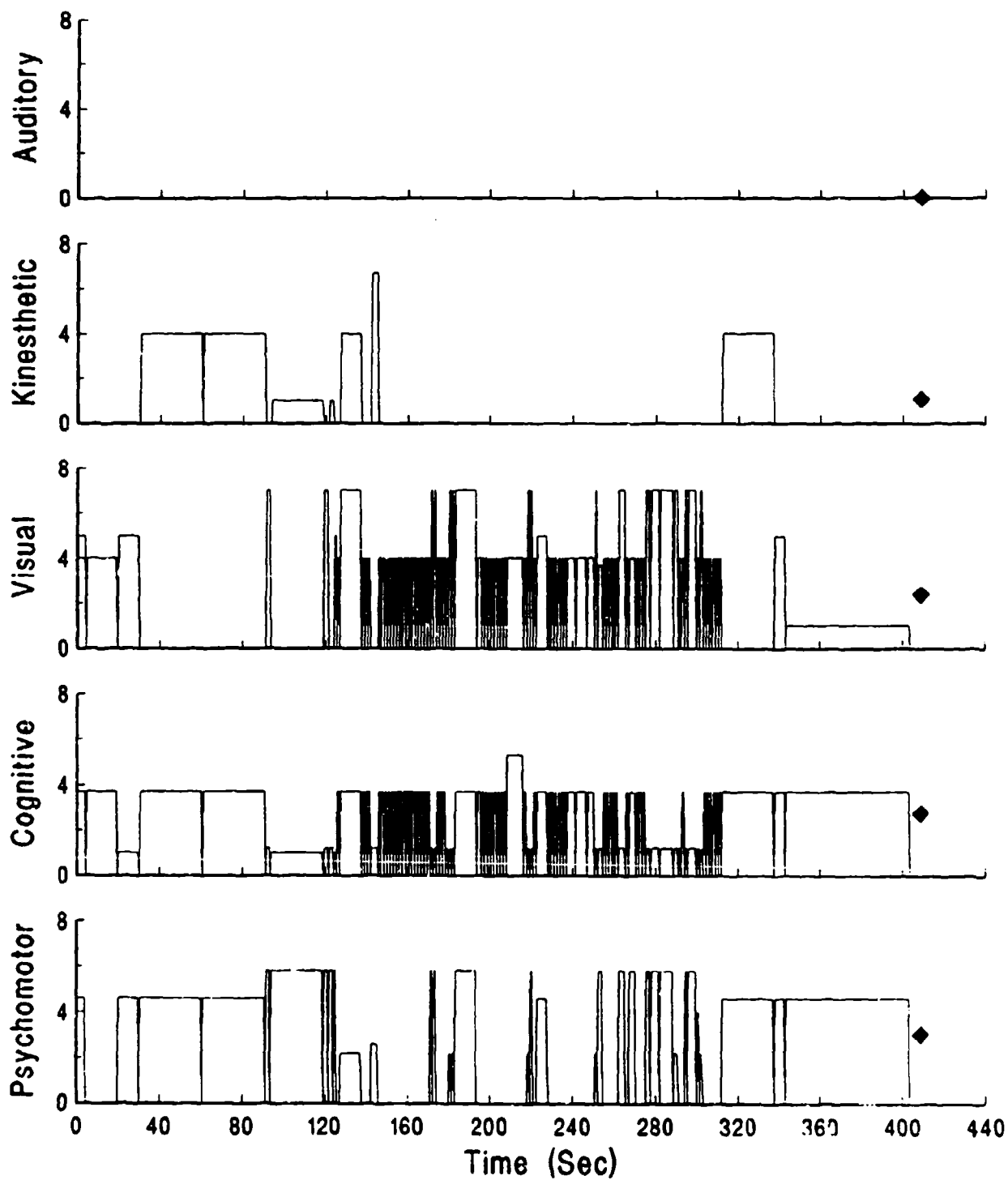
Segment 2: Exterior Cockpit Check
PILOT - AH-64A



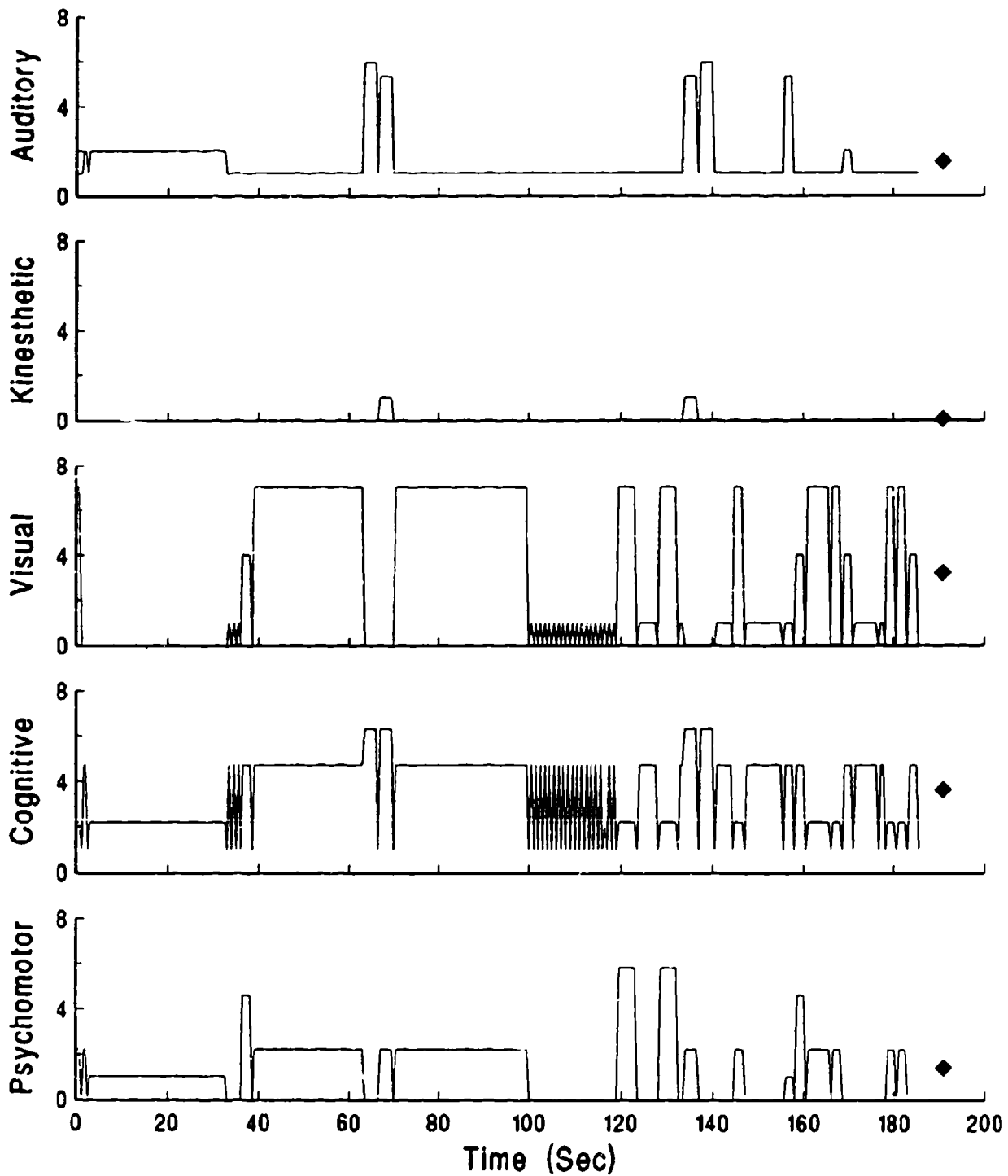
Segment 3: Preflight Walk Around
PILOT - AH-64A



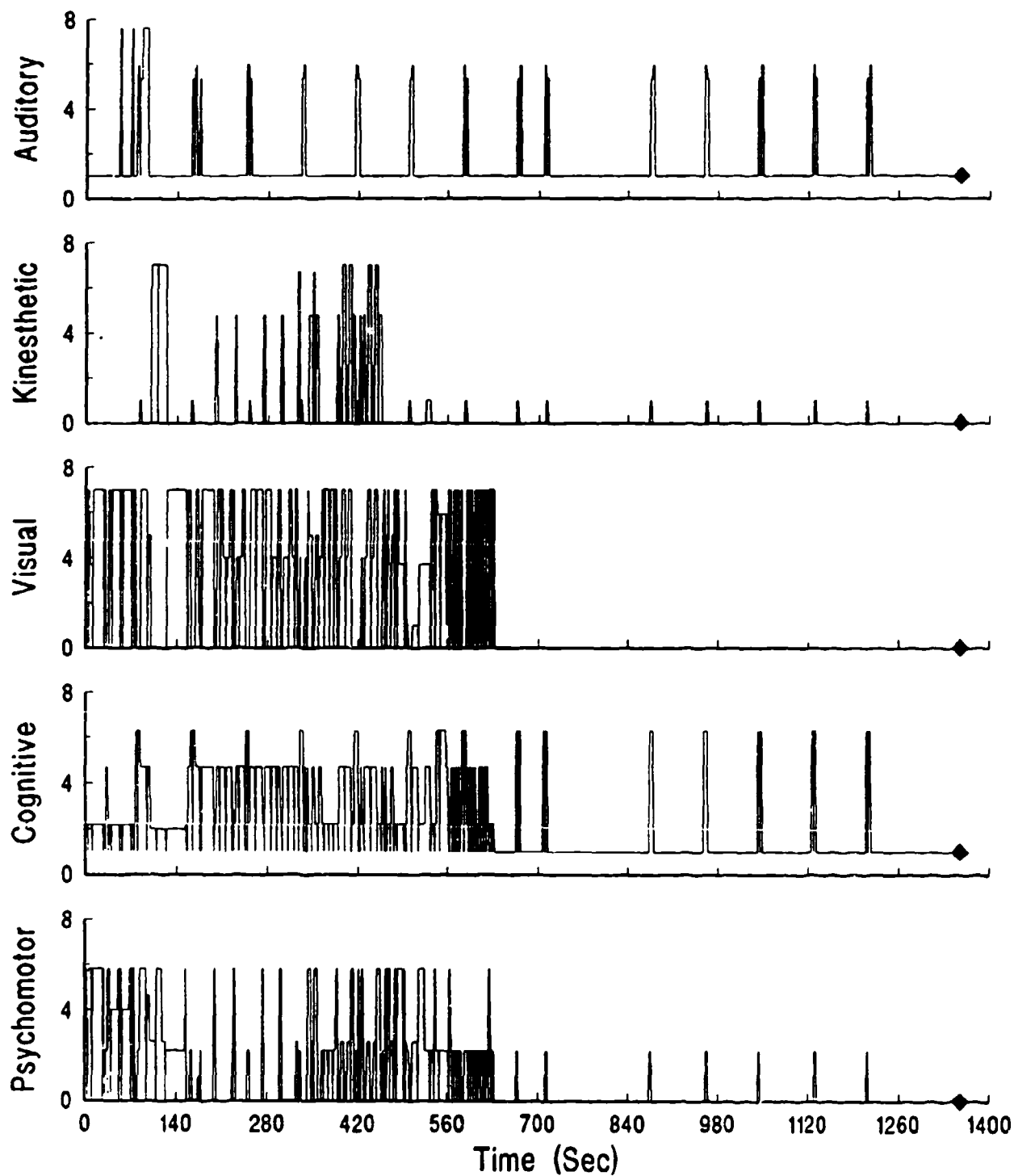
Segment 4: Interior Cockpit Check PILOT - AH-64A



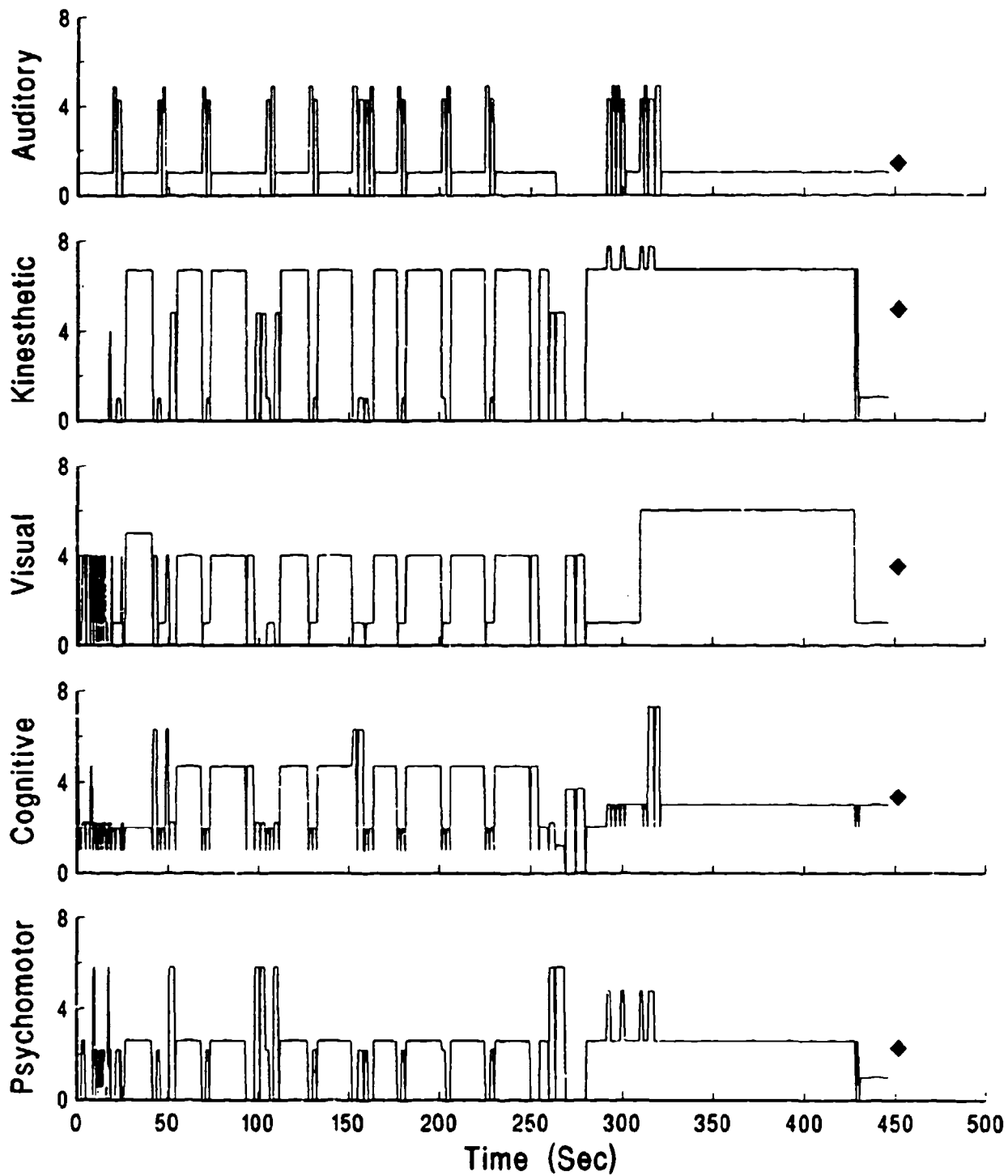
Segment 5: Starting APU
PILOT - AH-64A



Segment 6: After Starting APU
PILOT - AH-64A

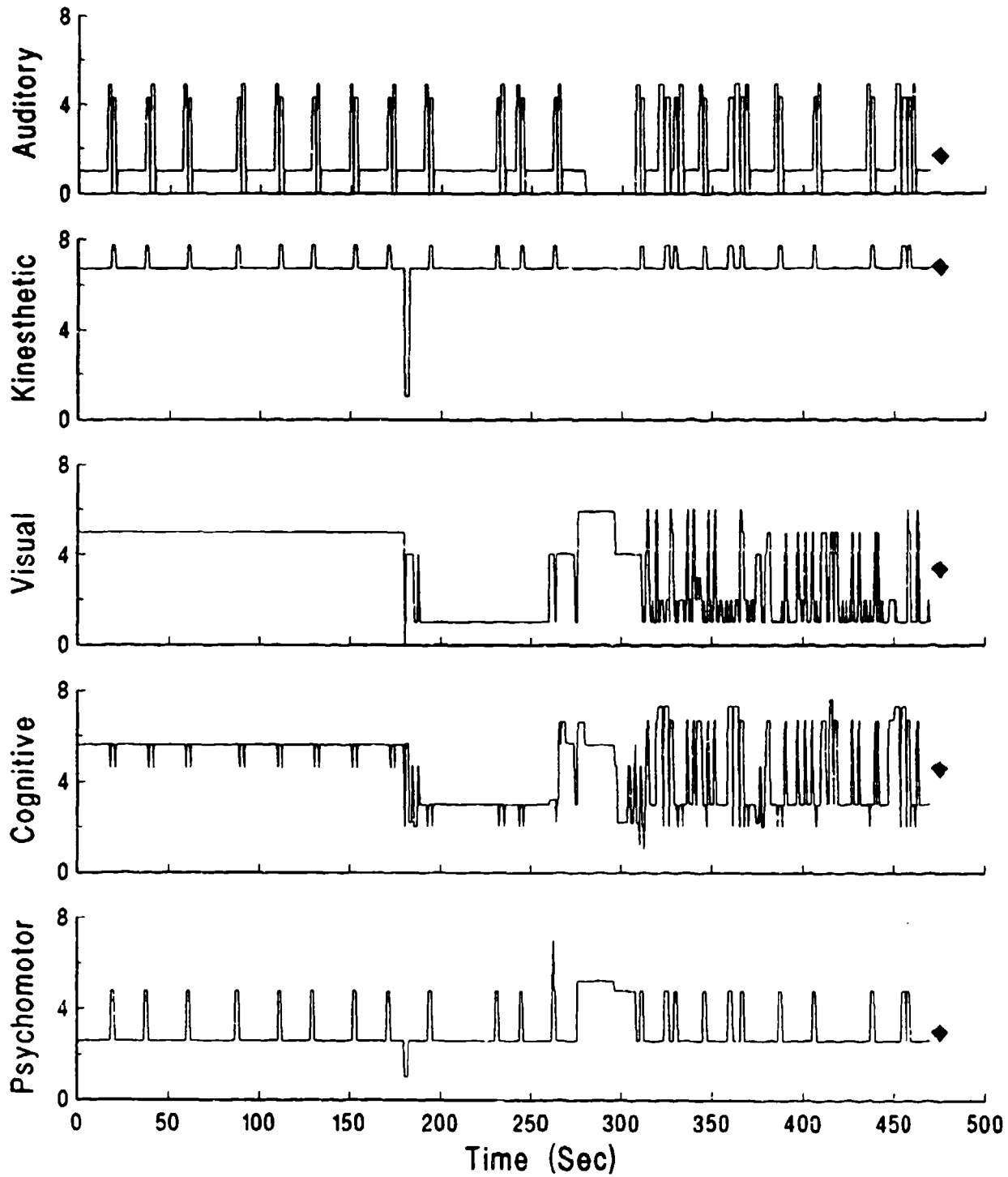


Segment 7: Taxi
PILOT - AH-64A

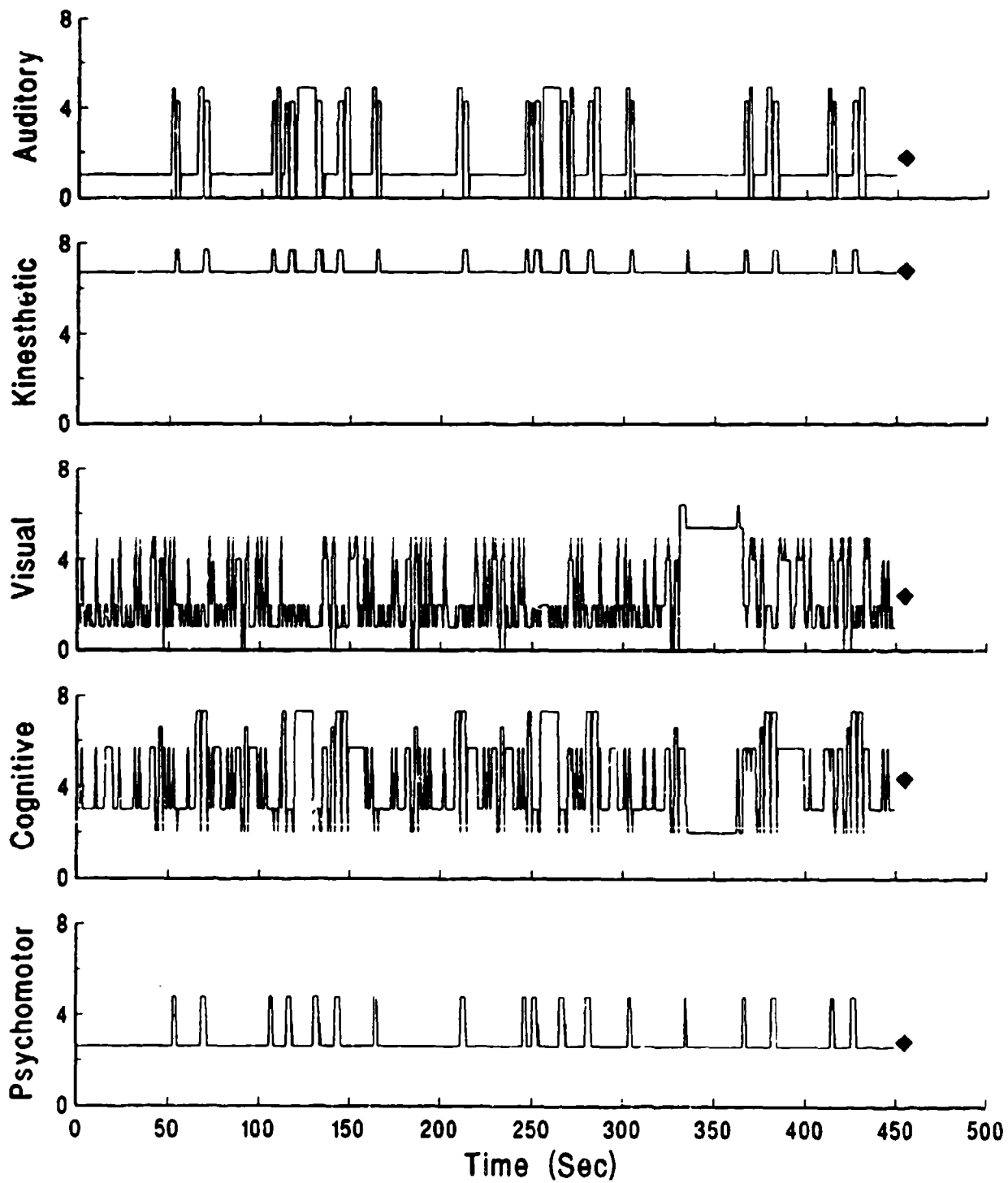


Segment 8: Takeoff (Contour)

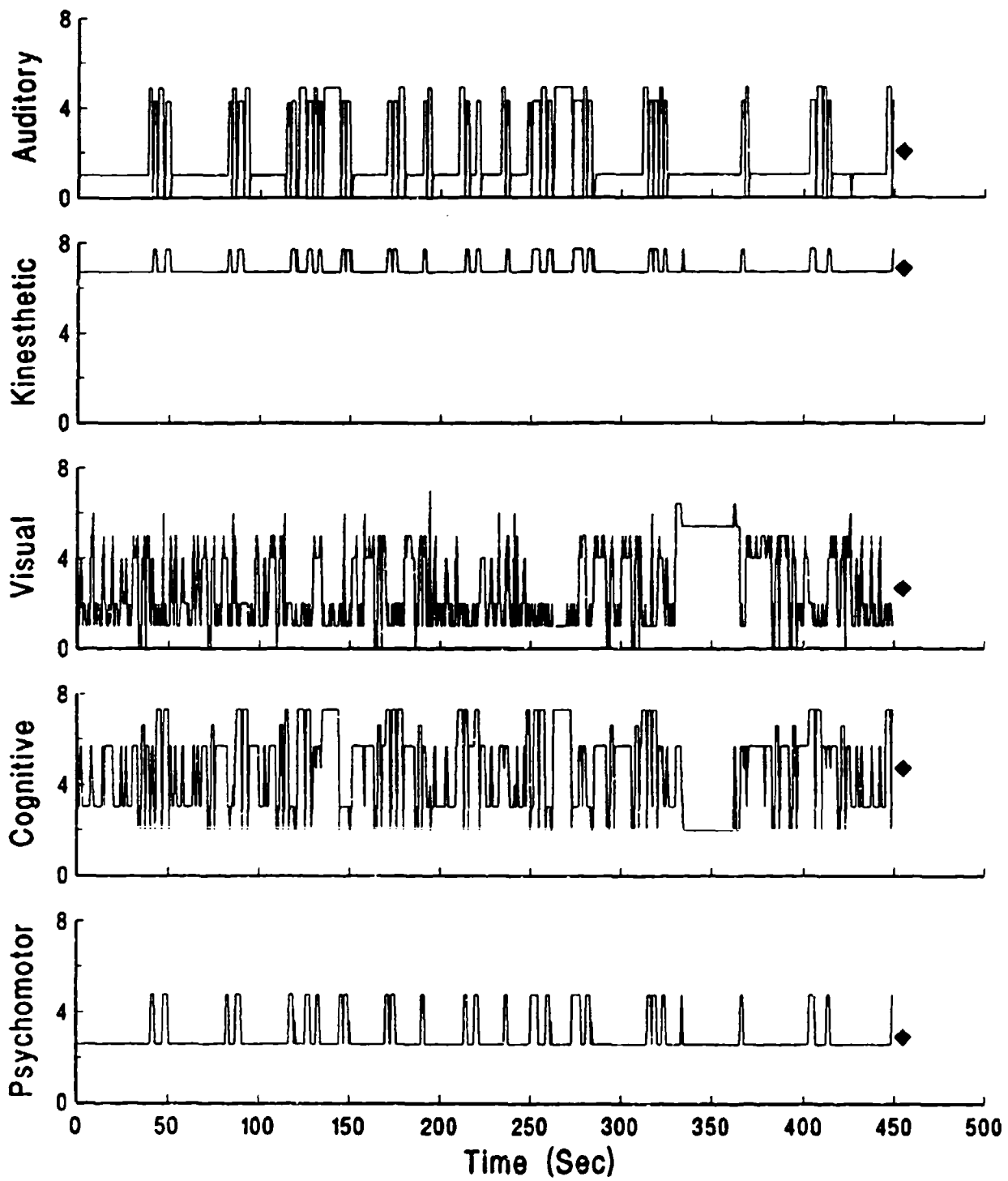
PILOT - AH-64A



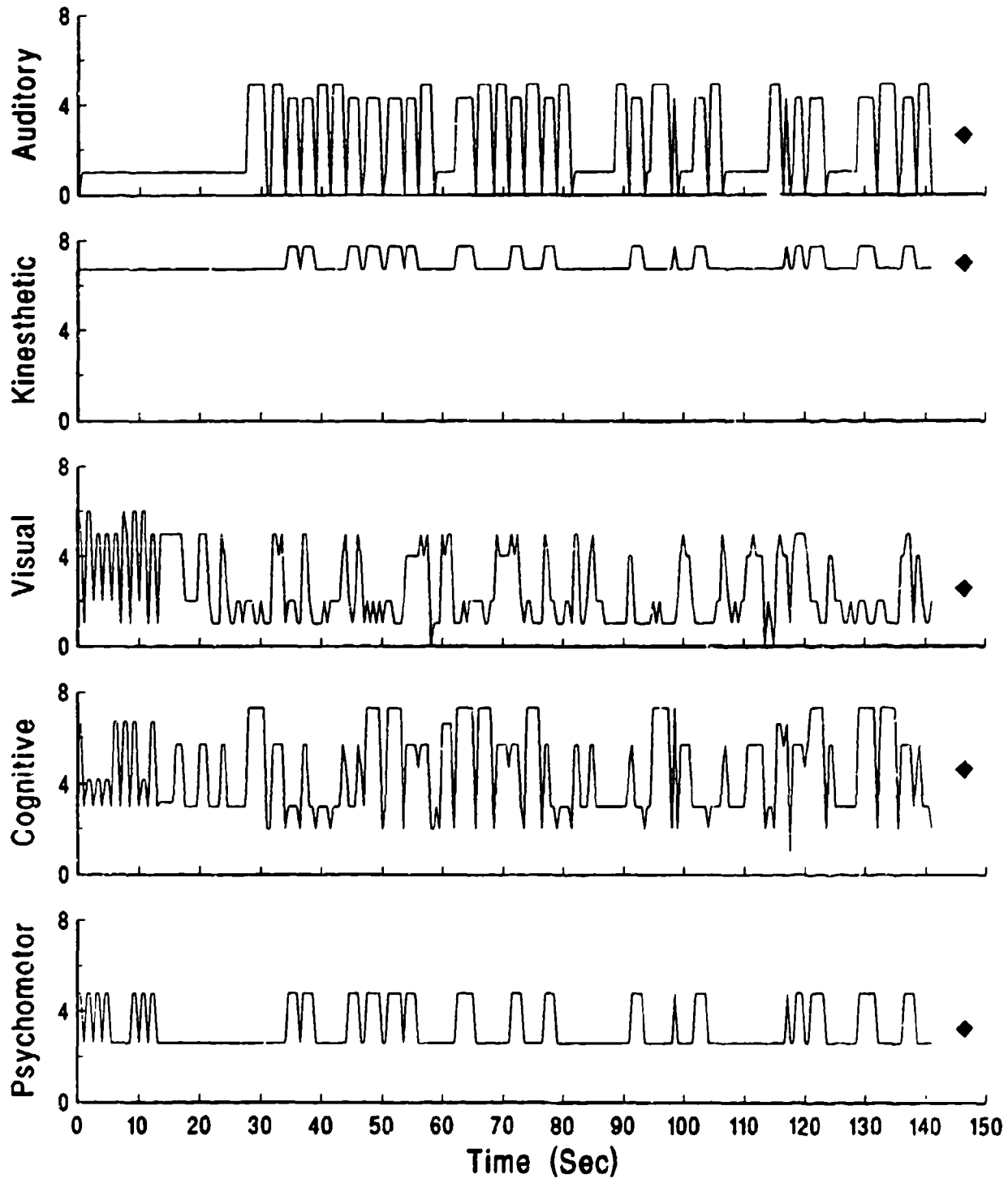
Segment 9: Contour Flight
PILOT - AH-64A



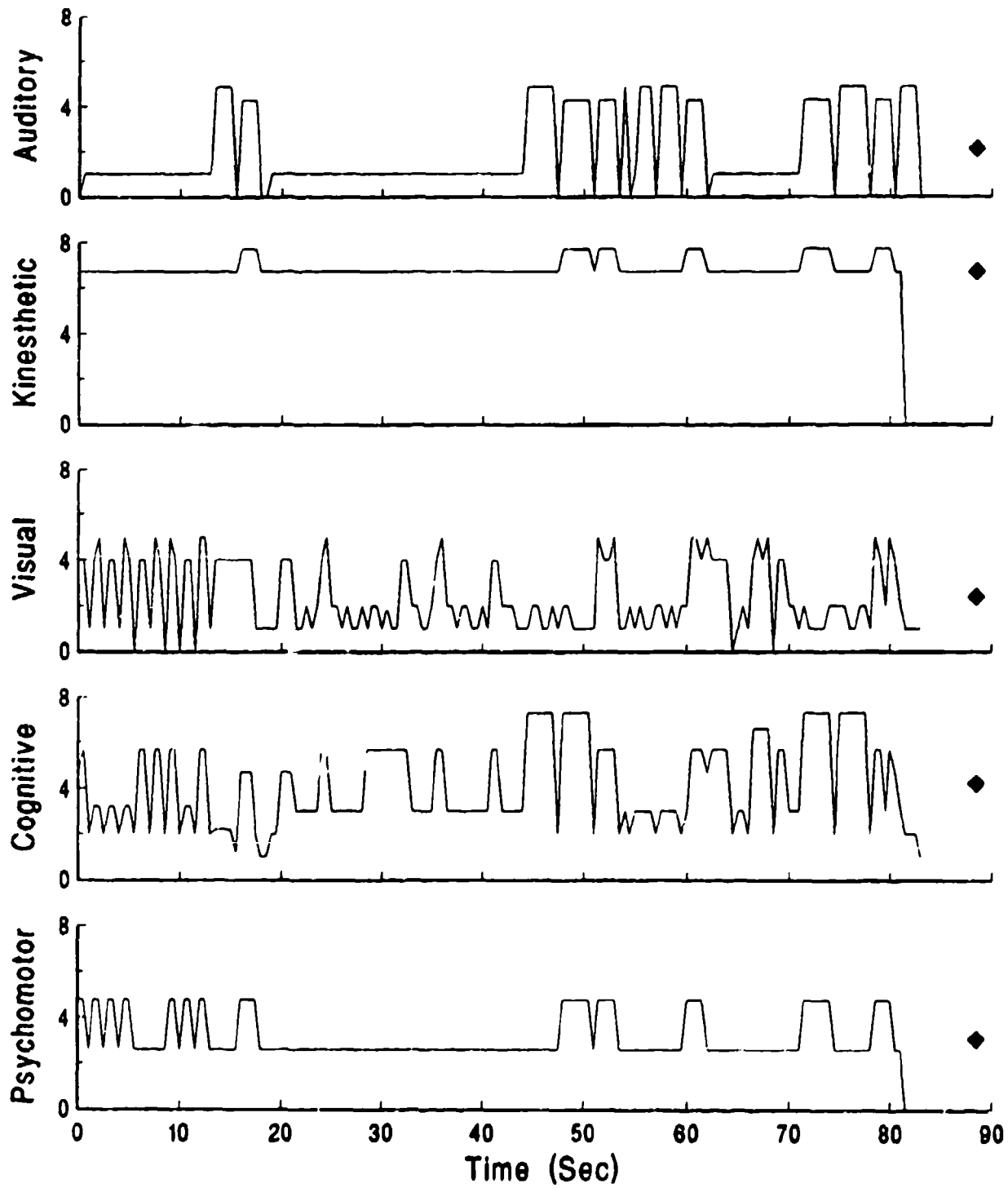
Segment 10: NOE Flight
PILOT - AH-64A



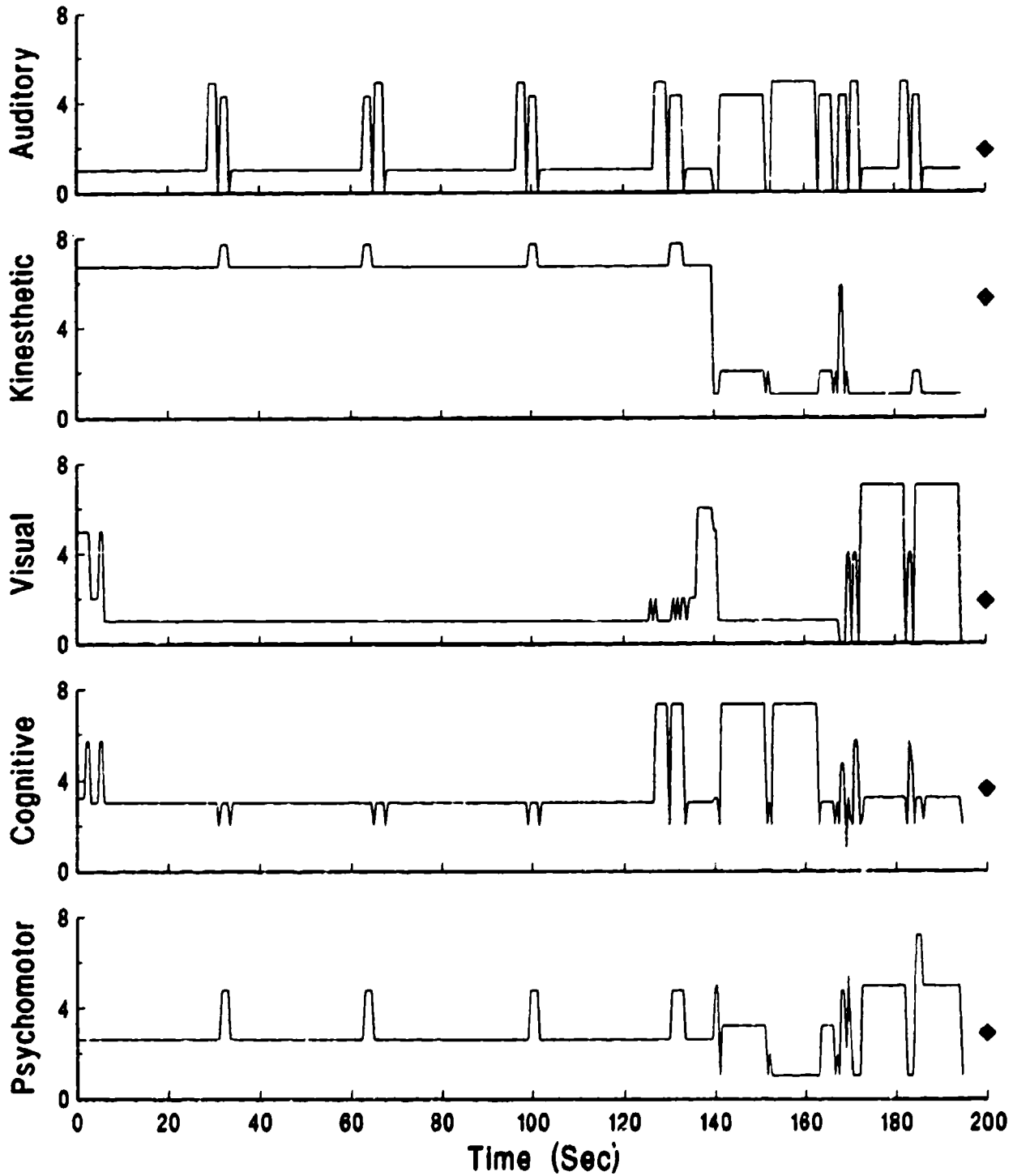
Segment 11: Approach (Contour)
PILOT - AH-64A



Segment 12: Approach (NOE)
PILOT - AH-64A

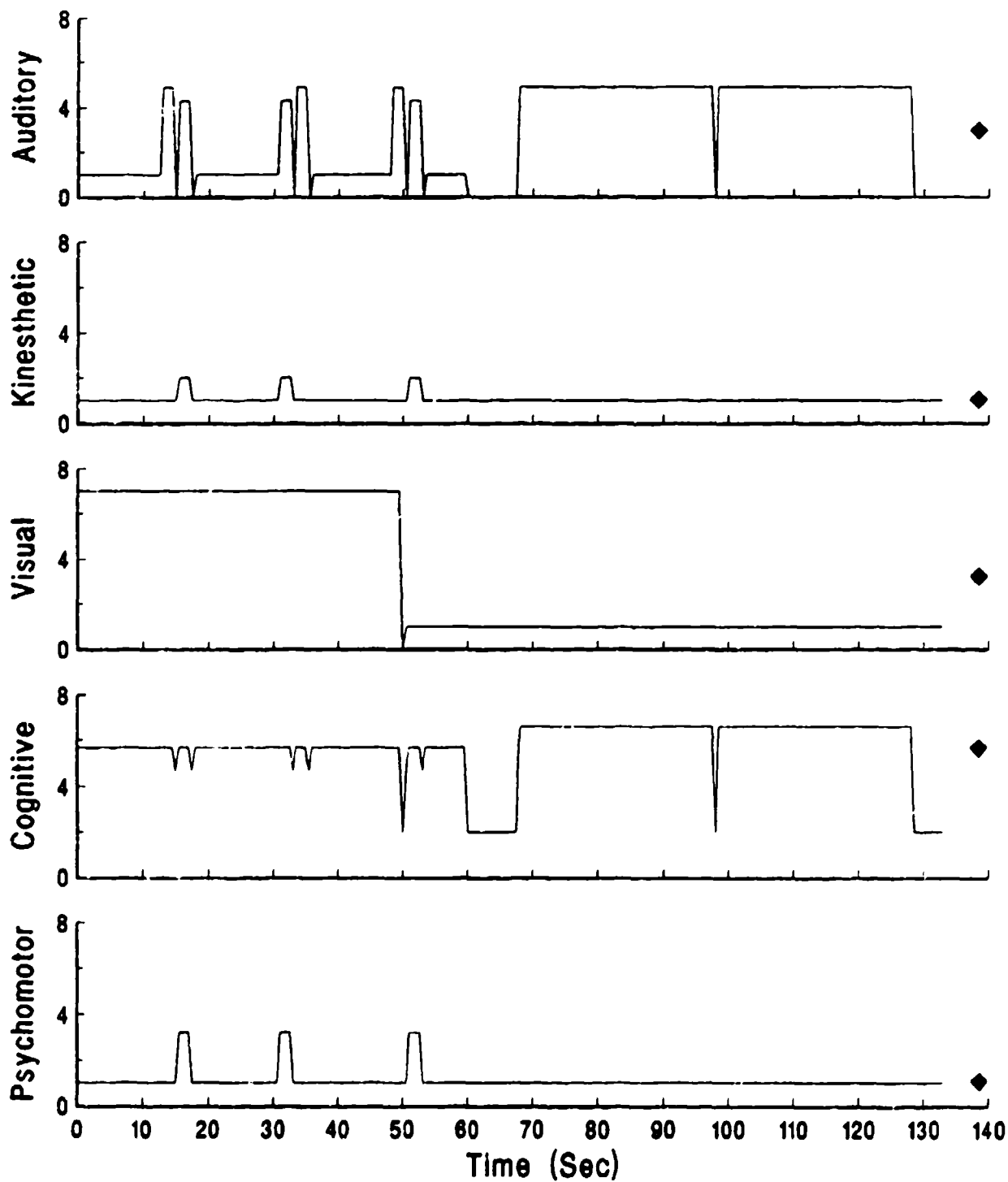


Segment 13: Landing
PILOT - AH-64A



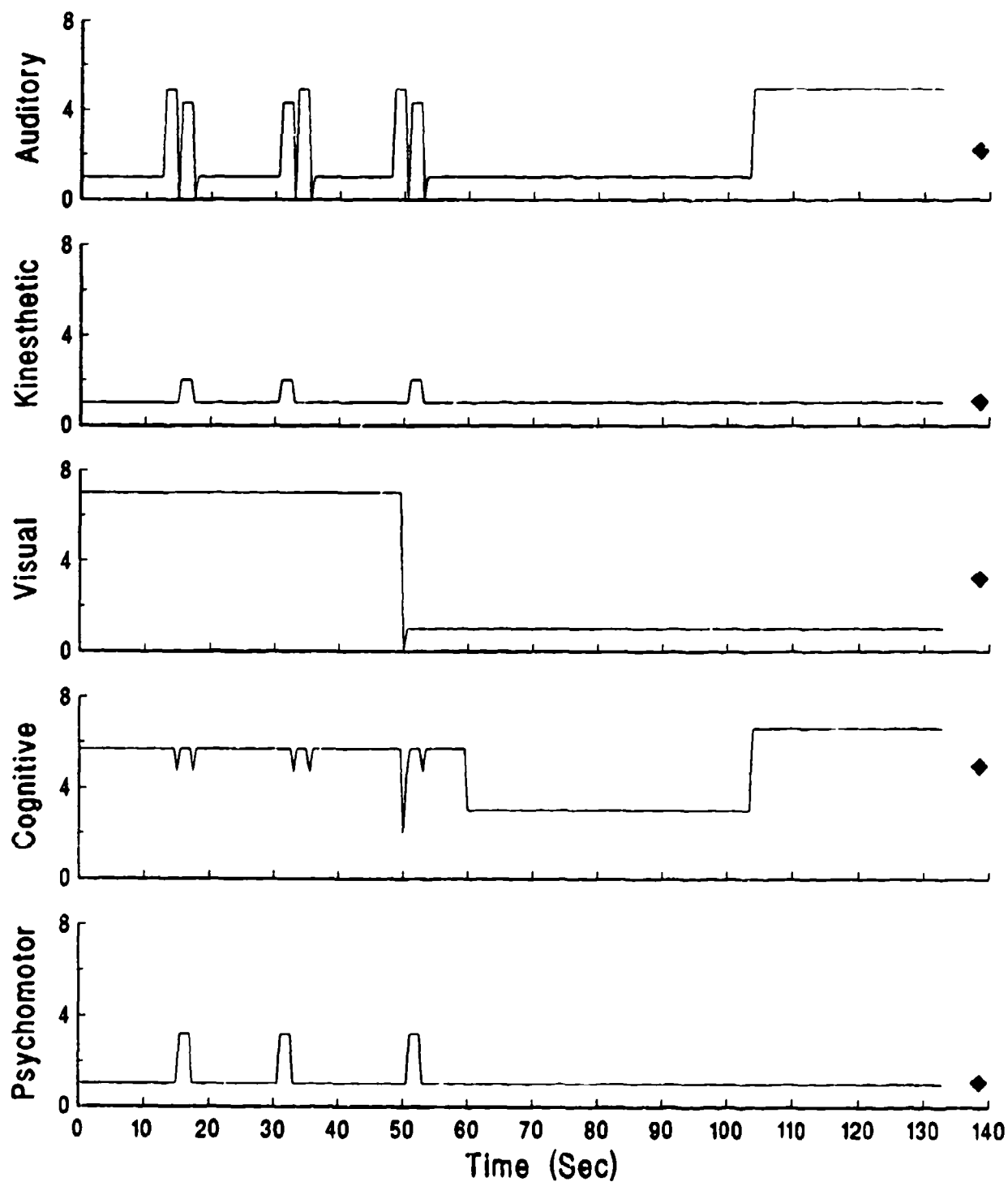
Segment 14: Holding Area Operations (Inbound)

PILOT - AH-64A



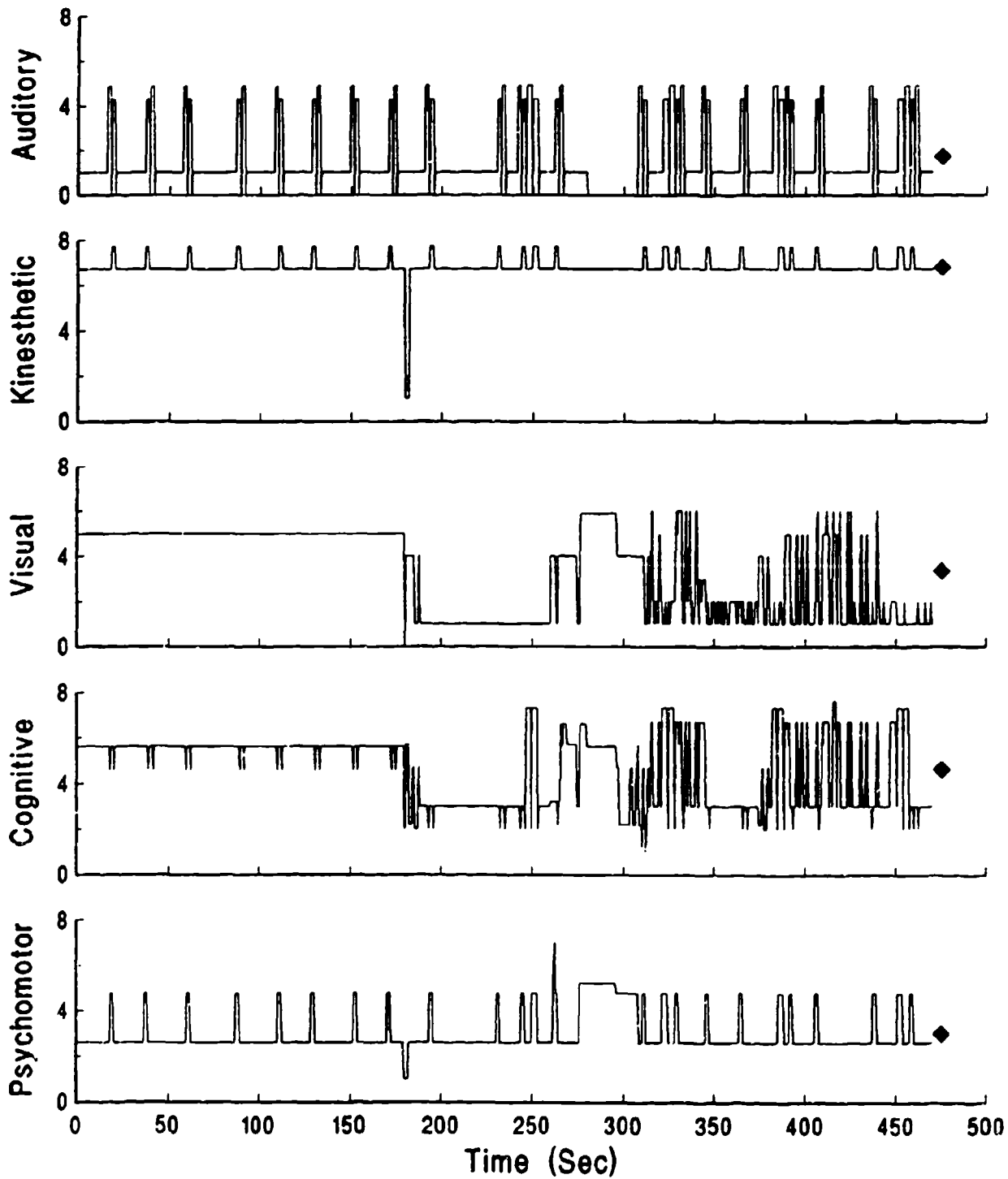
Segment 15: Holding Area Operations (Outbound)

PILOT - AH-64A

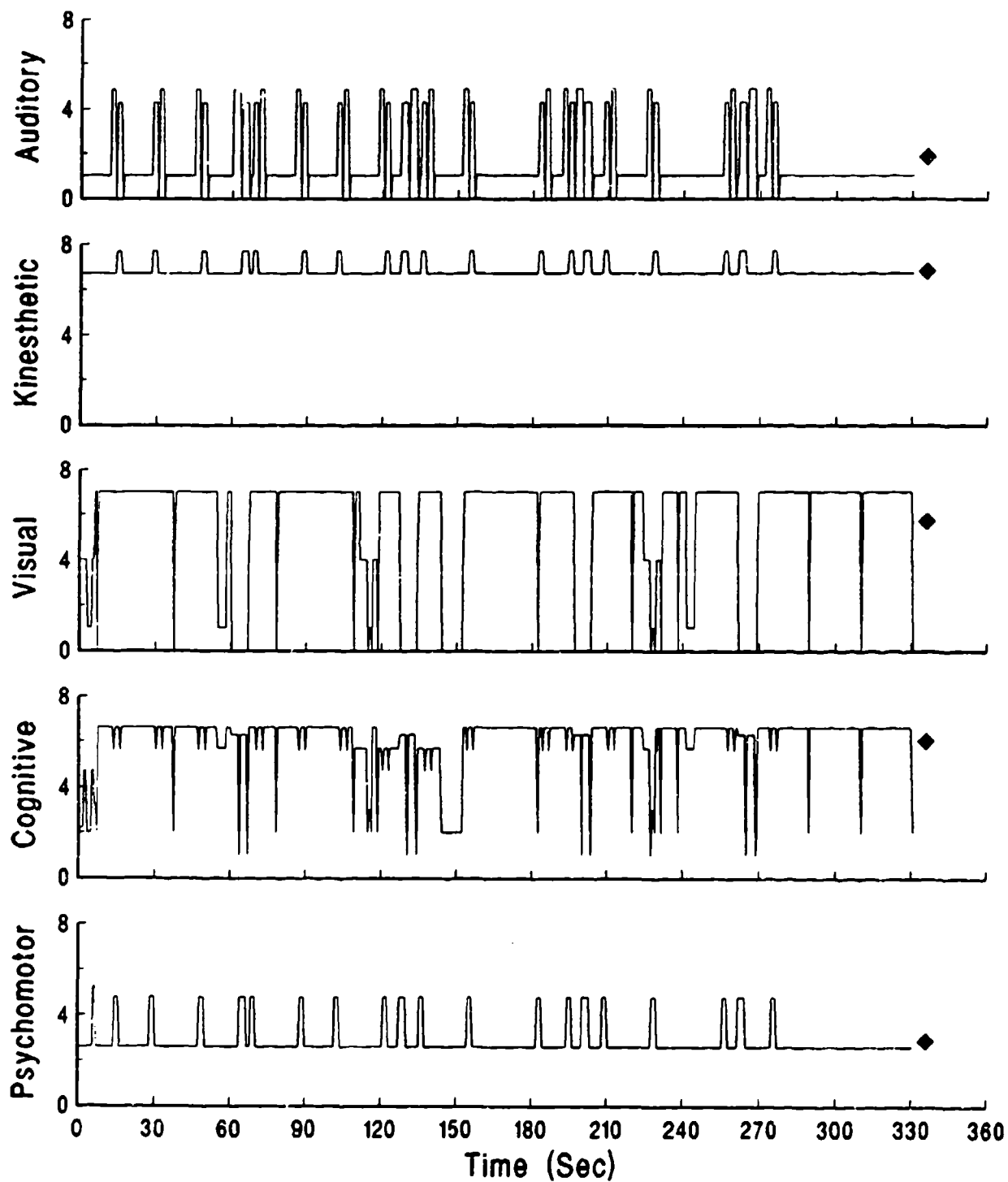


Segment 16: Takeoff (NOE)

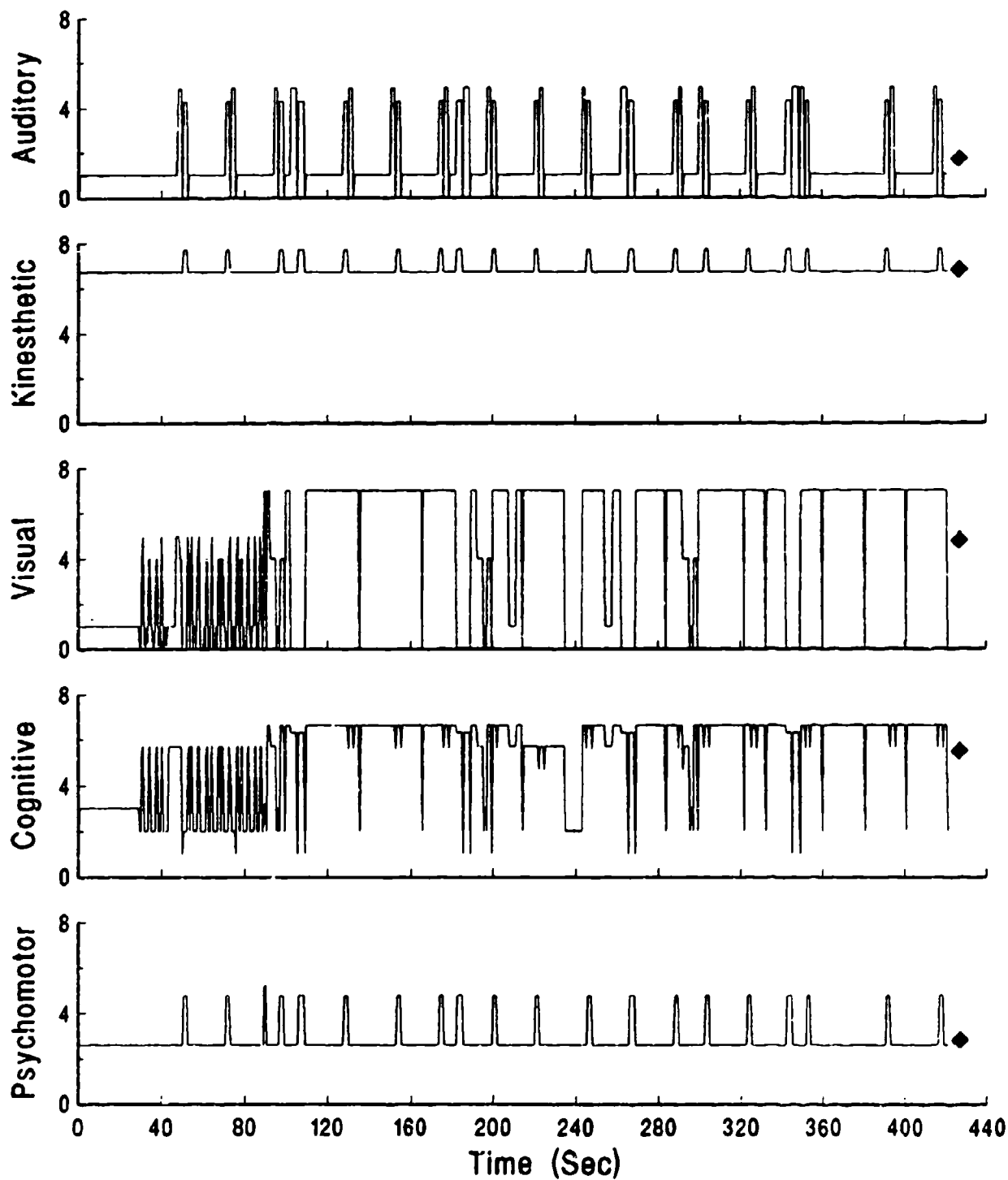
PILOT - AH-64A



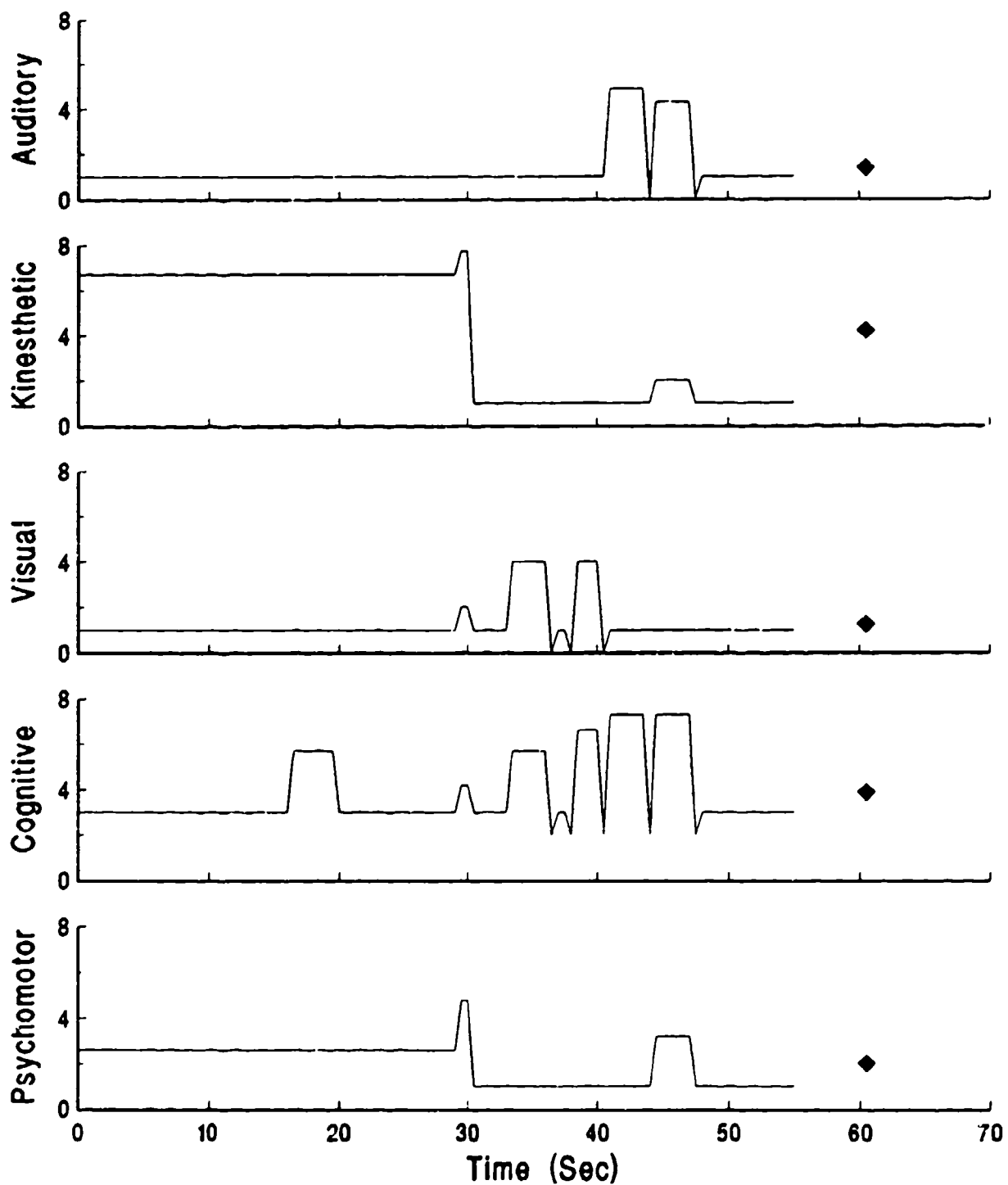
Segment 17: Establishment of Battle Position
PILOT - AH-64A



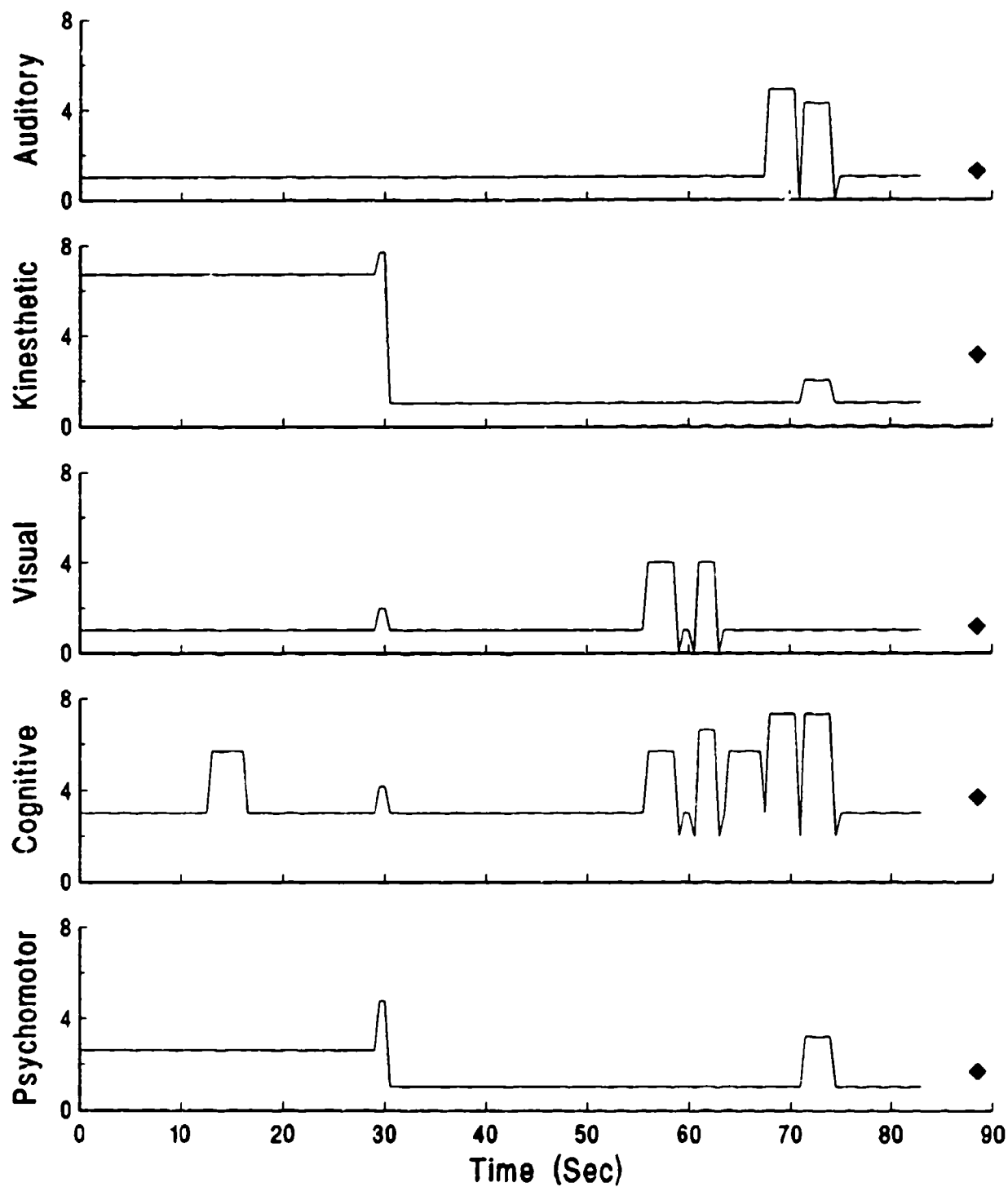
Segment 18: Deployment in Battle Area
PILOT - AH-64A



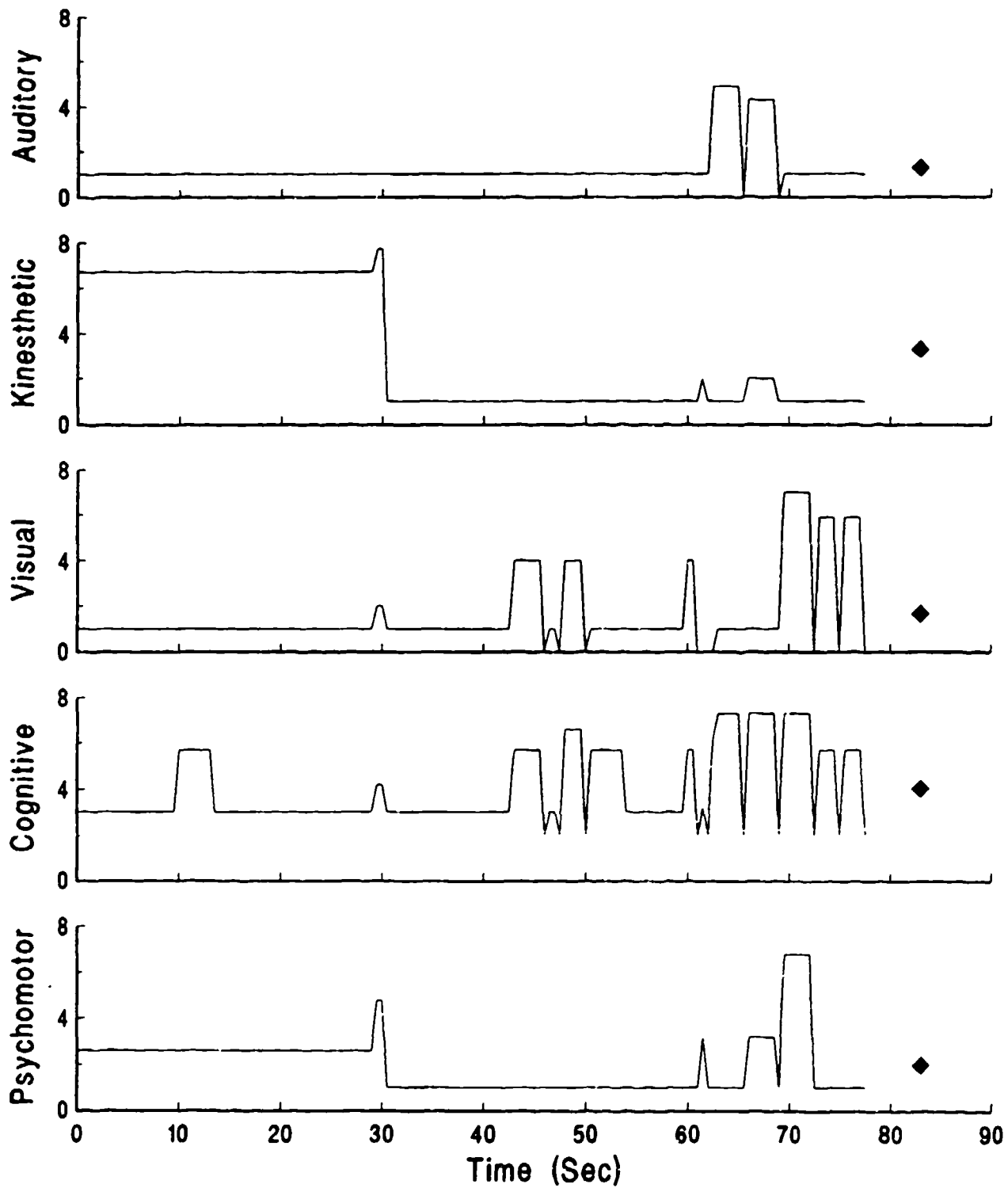
Segment 19: Target Handover (Laser Spot Tracker)
PILOT - AH-64A



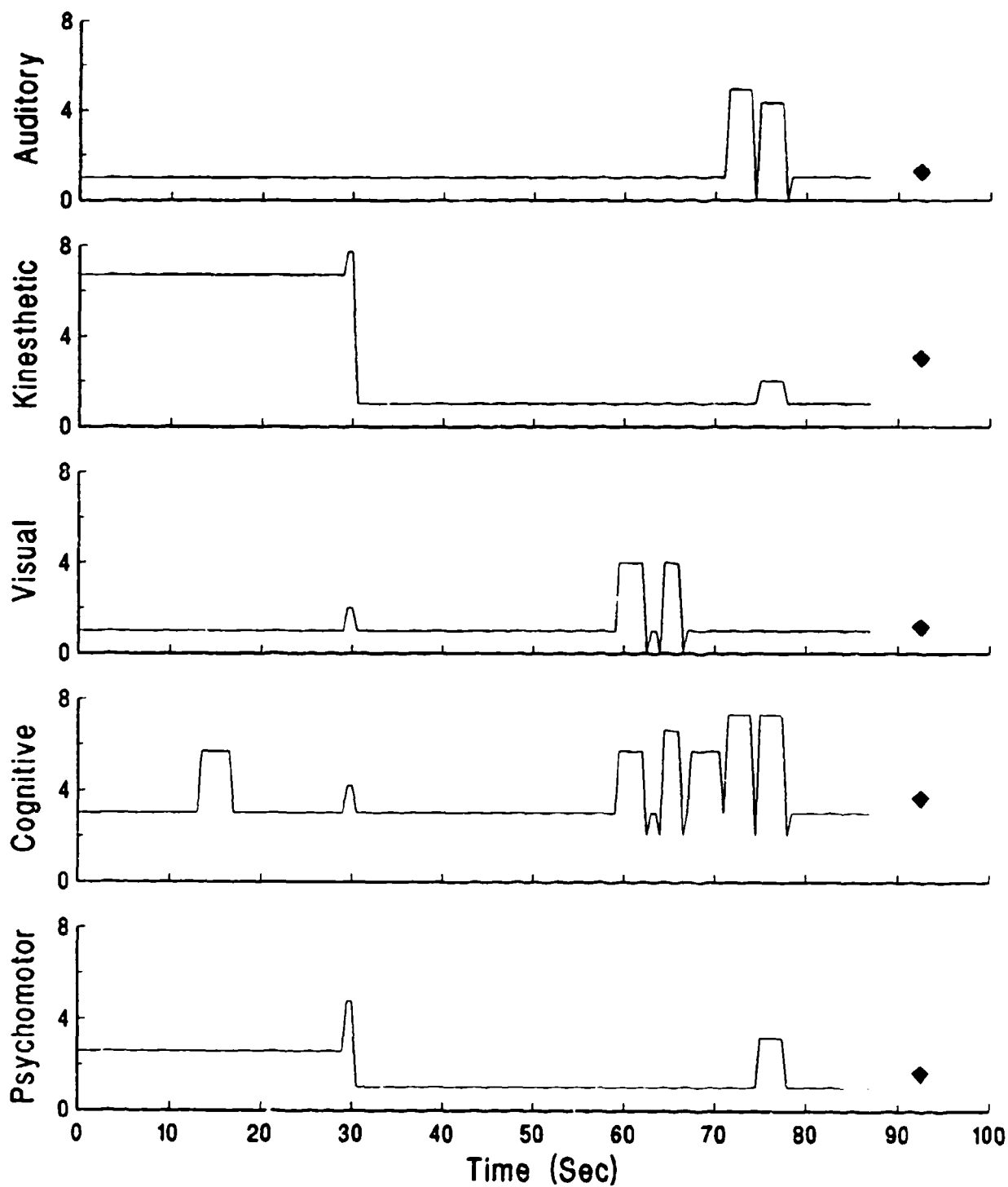
Segment 20: Target Handover, Grid (Missile)
PILOT - AH-64A



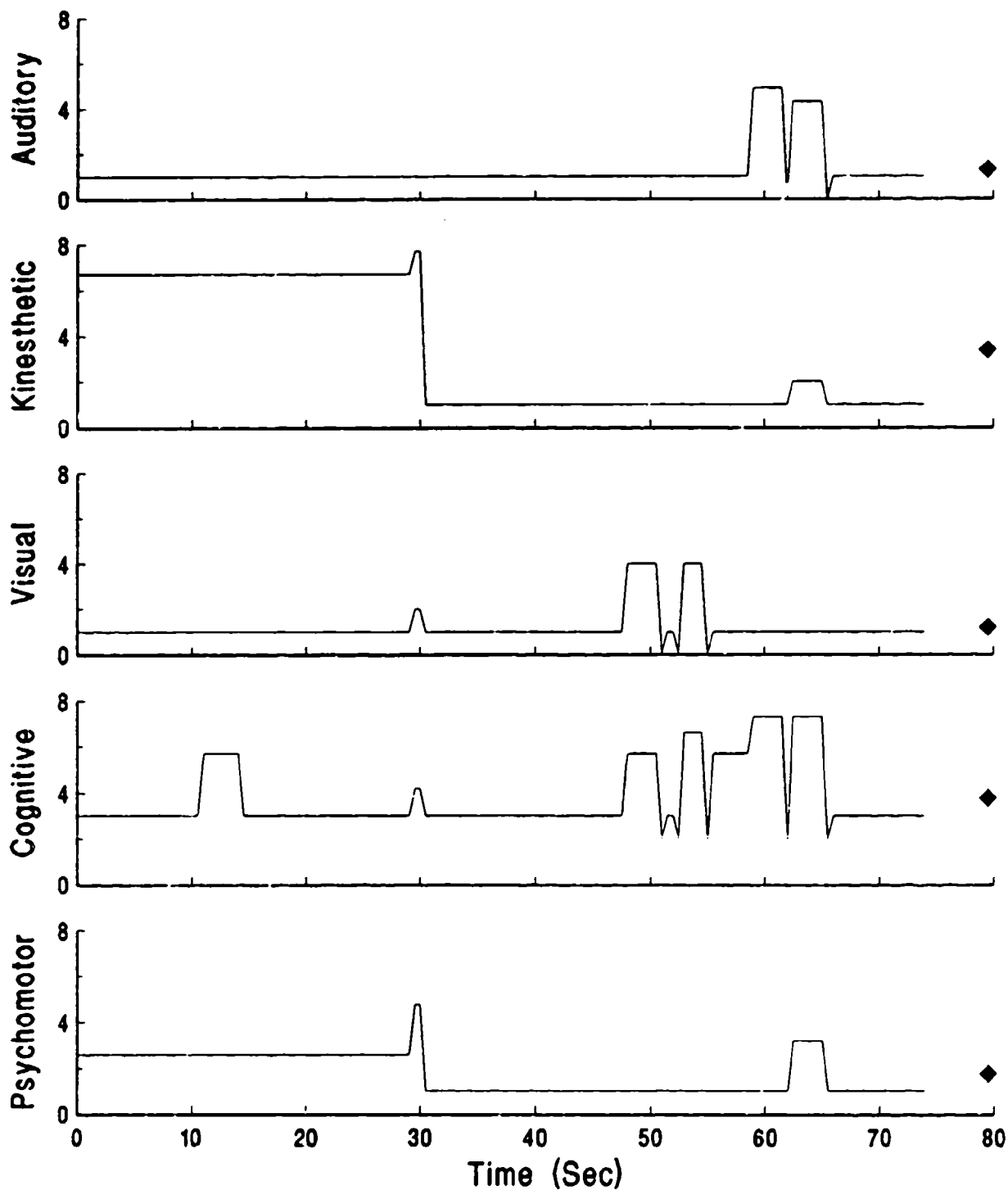
Segment 21: Target Handover, Grid (Gun, Pilot)
PILOT - AH-64A



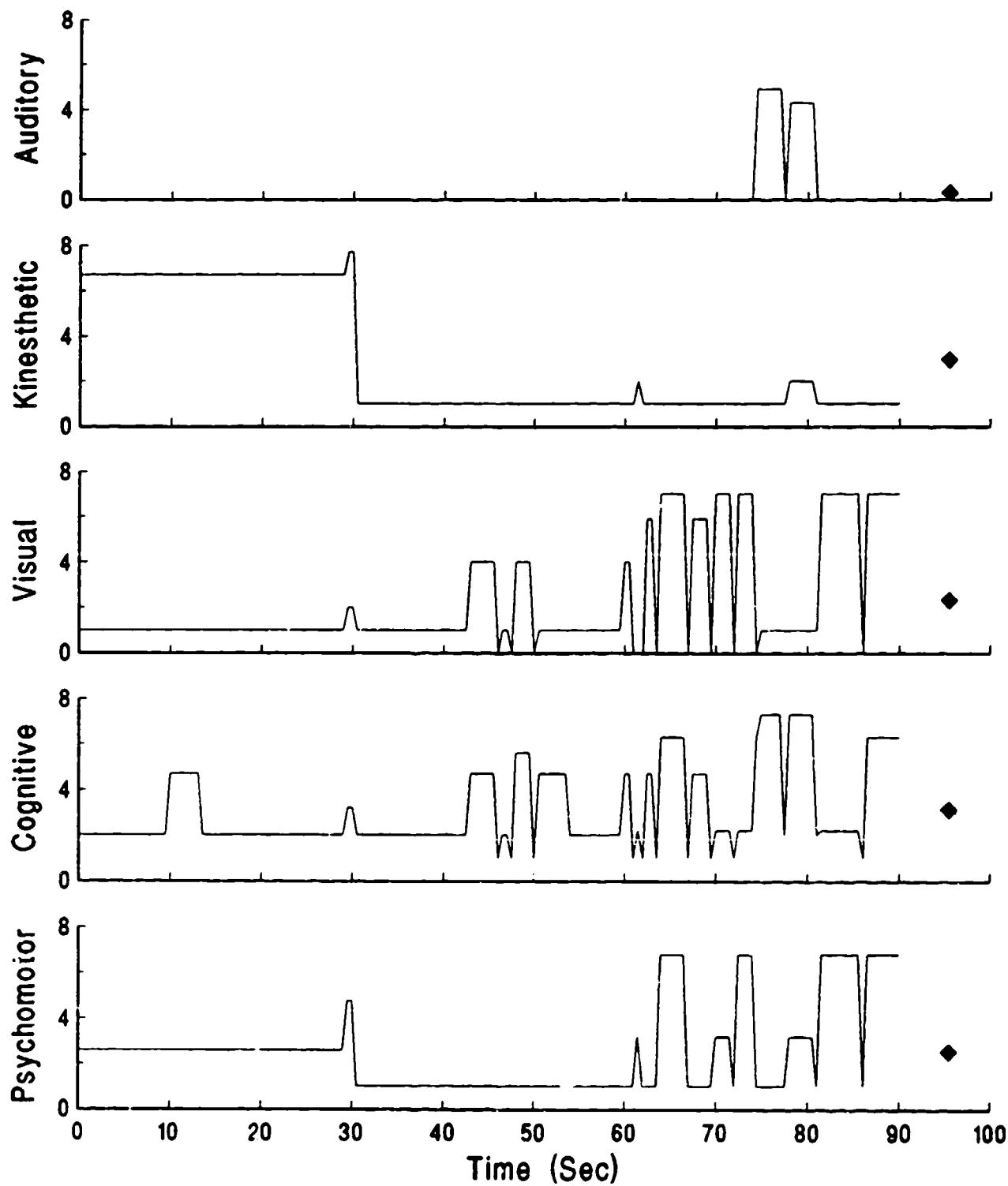
Segment 22: Target Handover, Grid (Gun, Gunner)
PILOT - AH-64A



Segment 23: Target Handover, Grid (Gun, Gunner, Laser Range)
PILOT - AH-64A

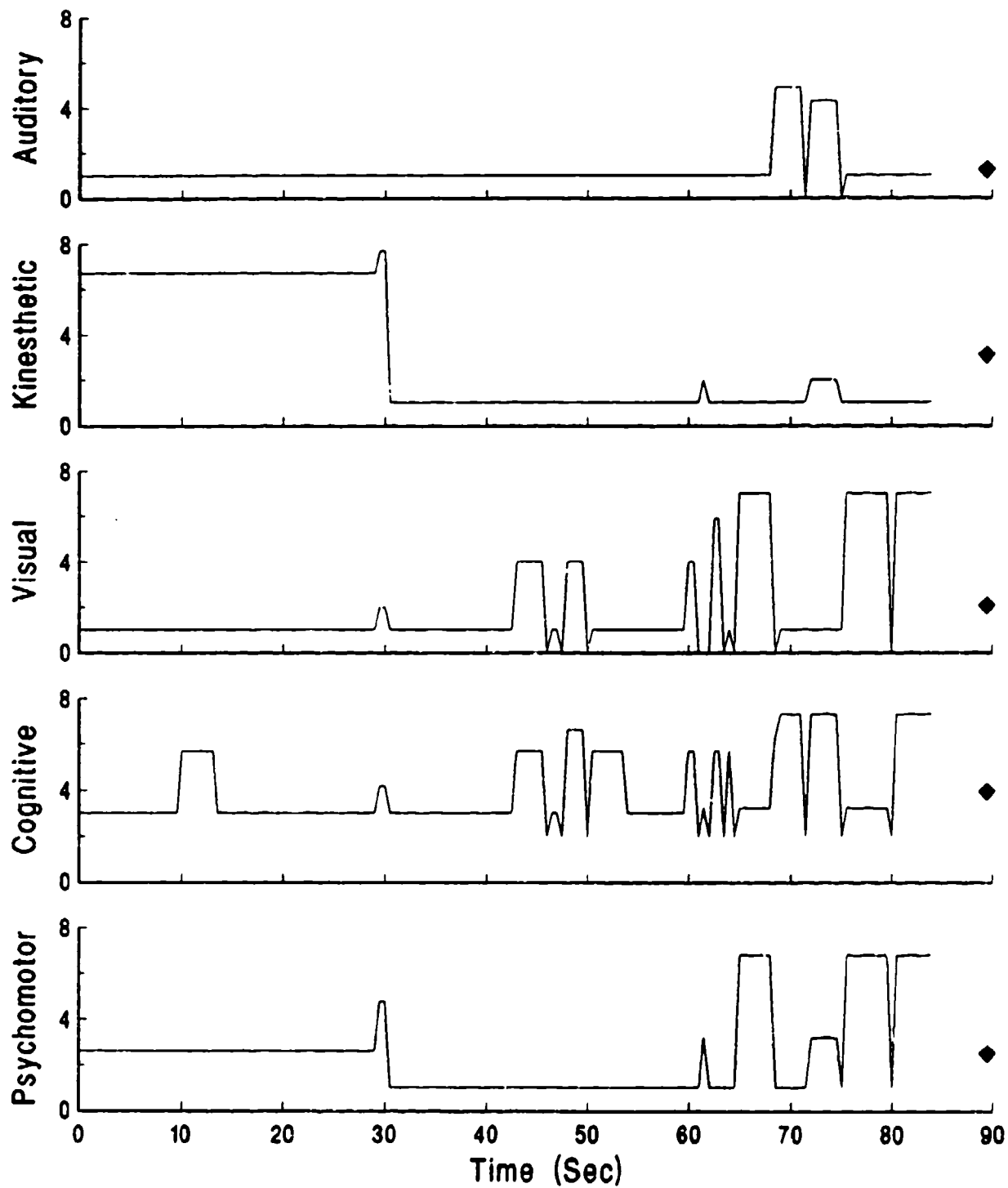


Segment 24: Target Handover, Grid (FFAR, Pilot)
PILOT - AH-64A

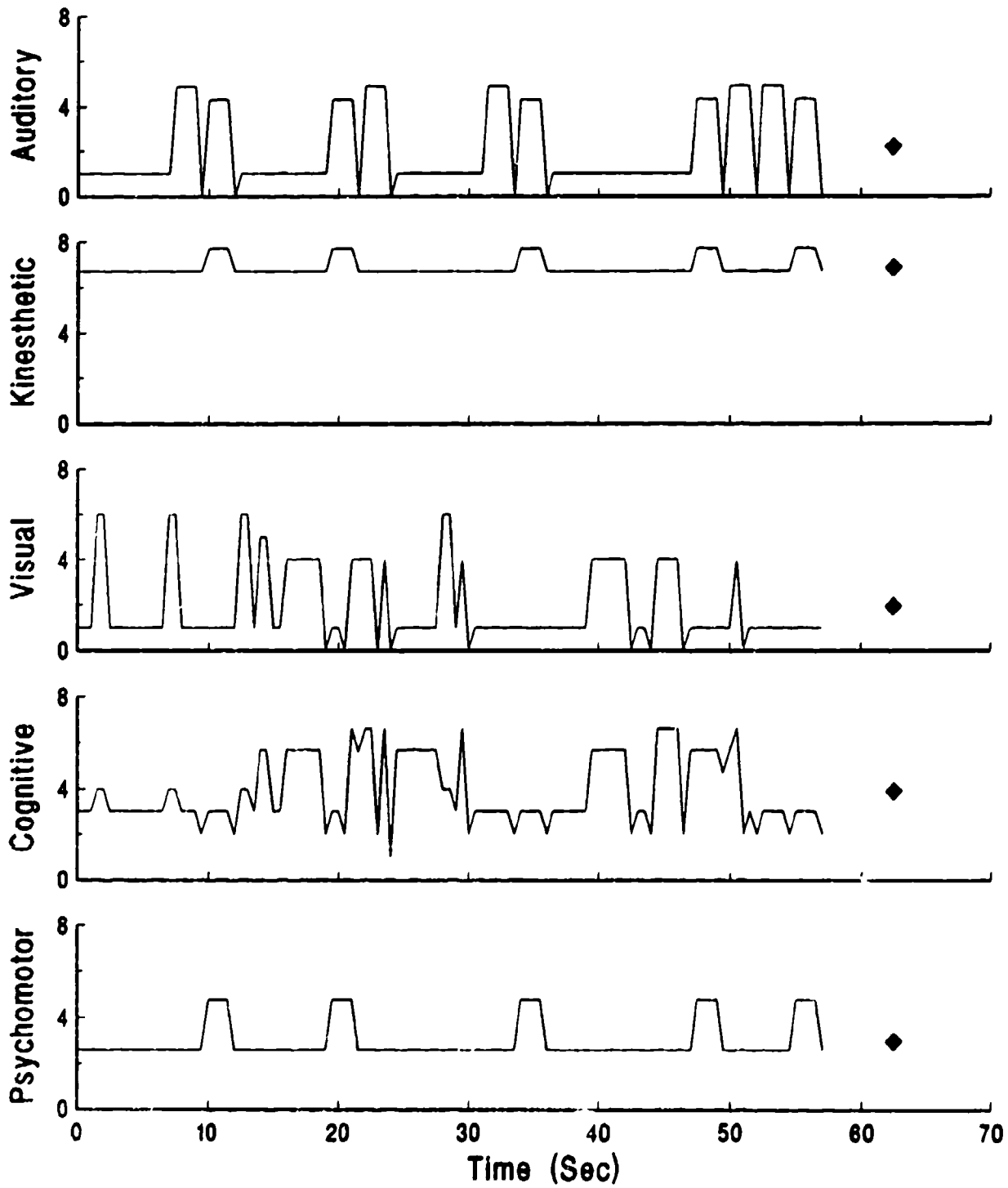


Segment 25: Target Handover, Grid (FFAR, Cooperative)

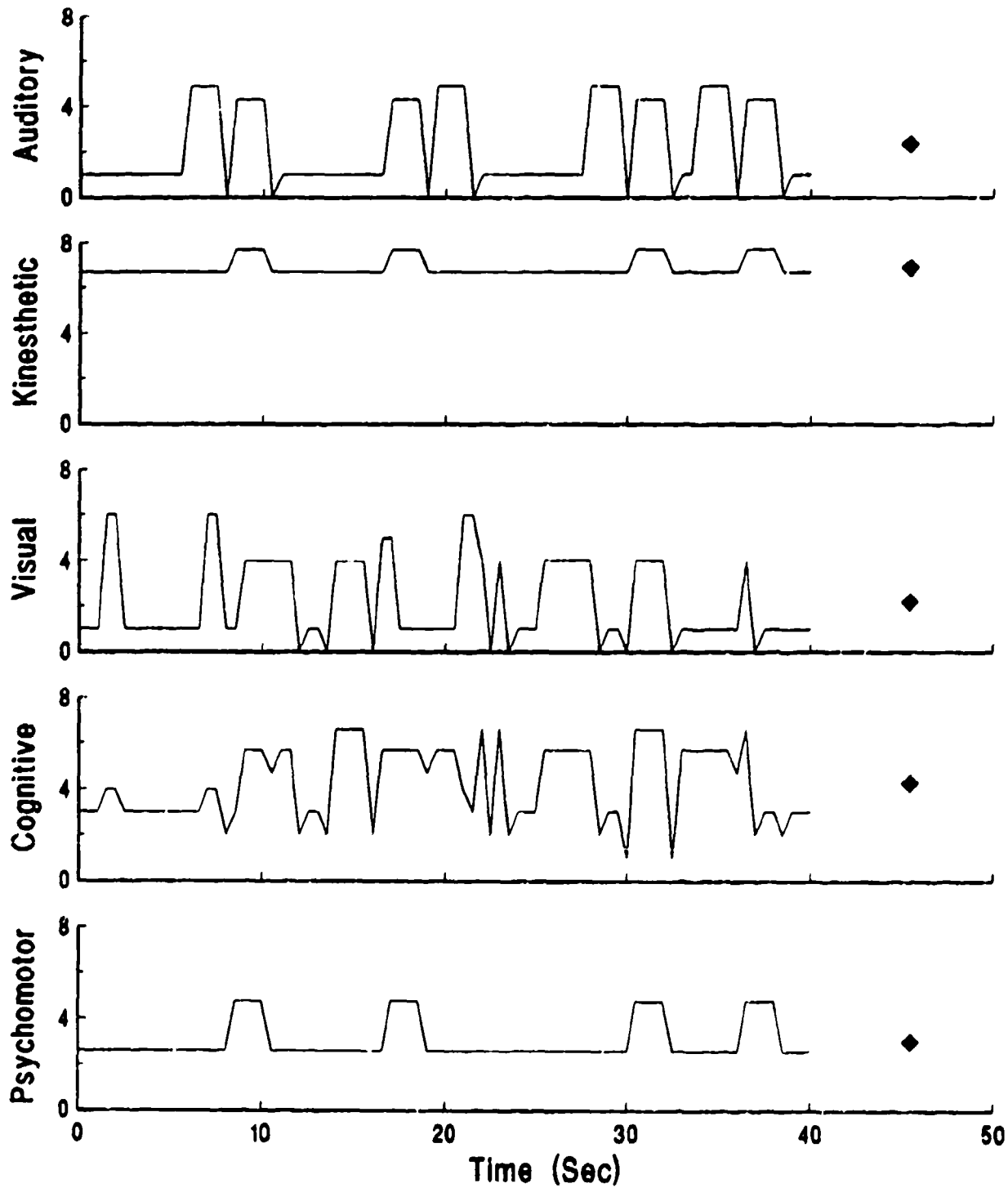
PILOT - AH-64A



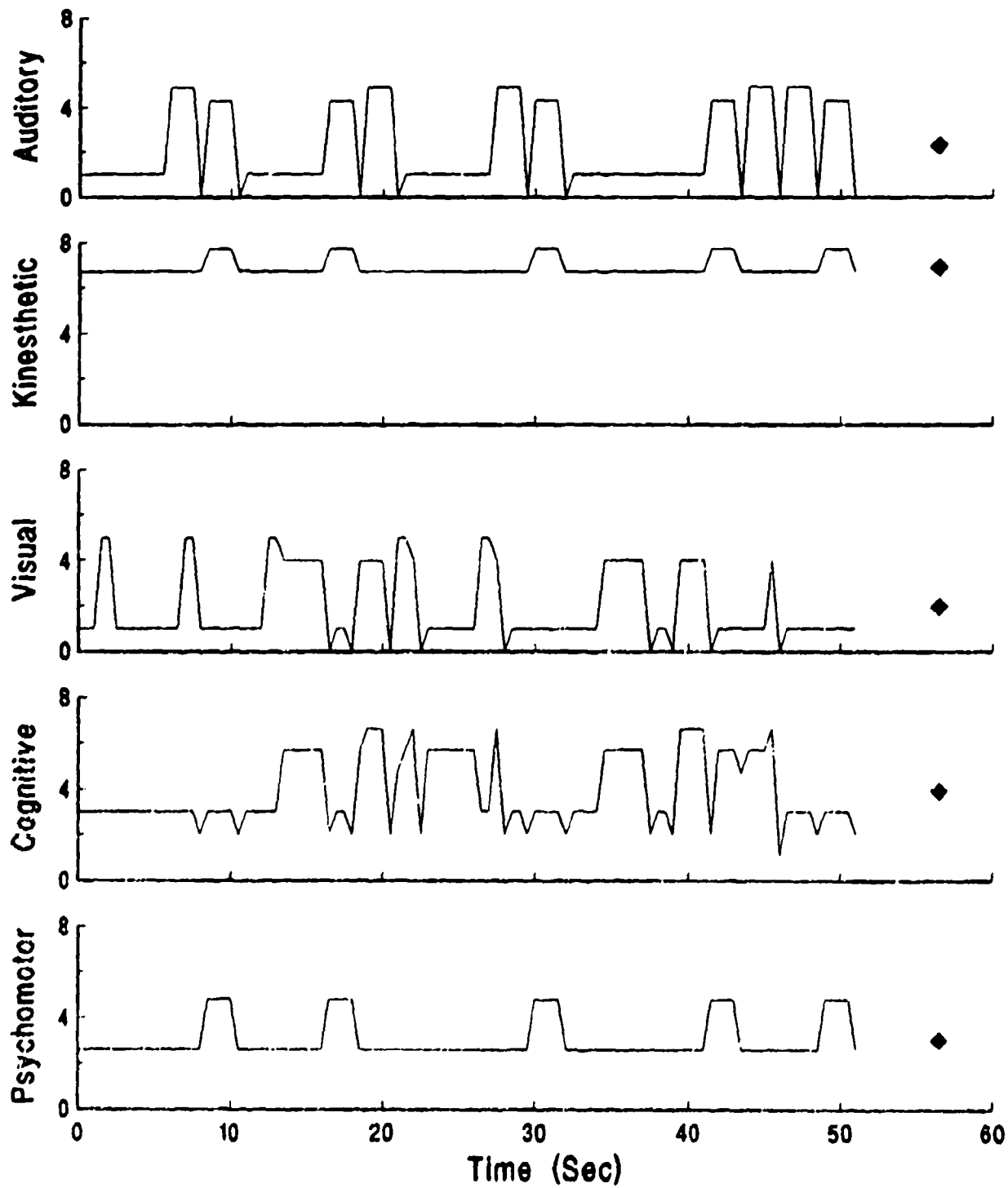
Segment 26: Acquisition (DTV)
PILOT - AH-64A



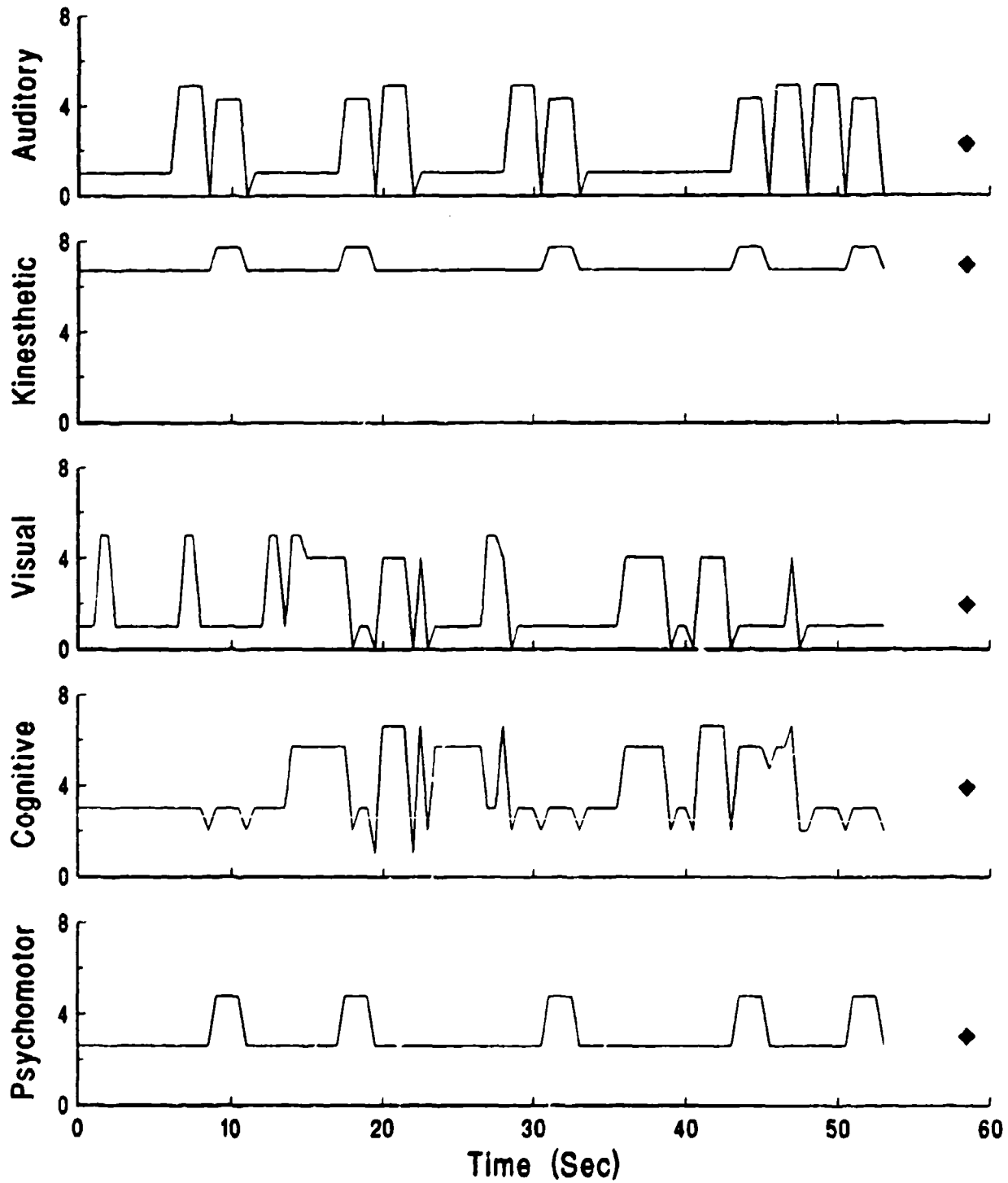
Segment 27: Acquisition (DTV, Laser Spot Tracker, Manual)
PILOT - AH-64A



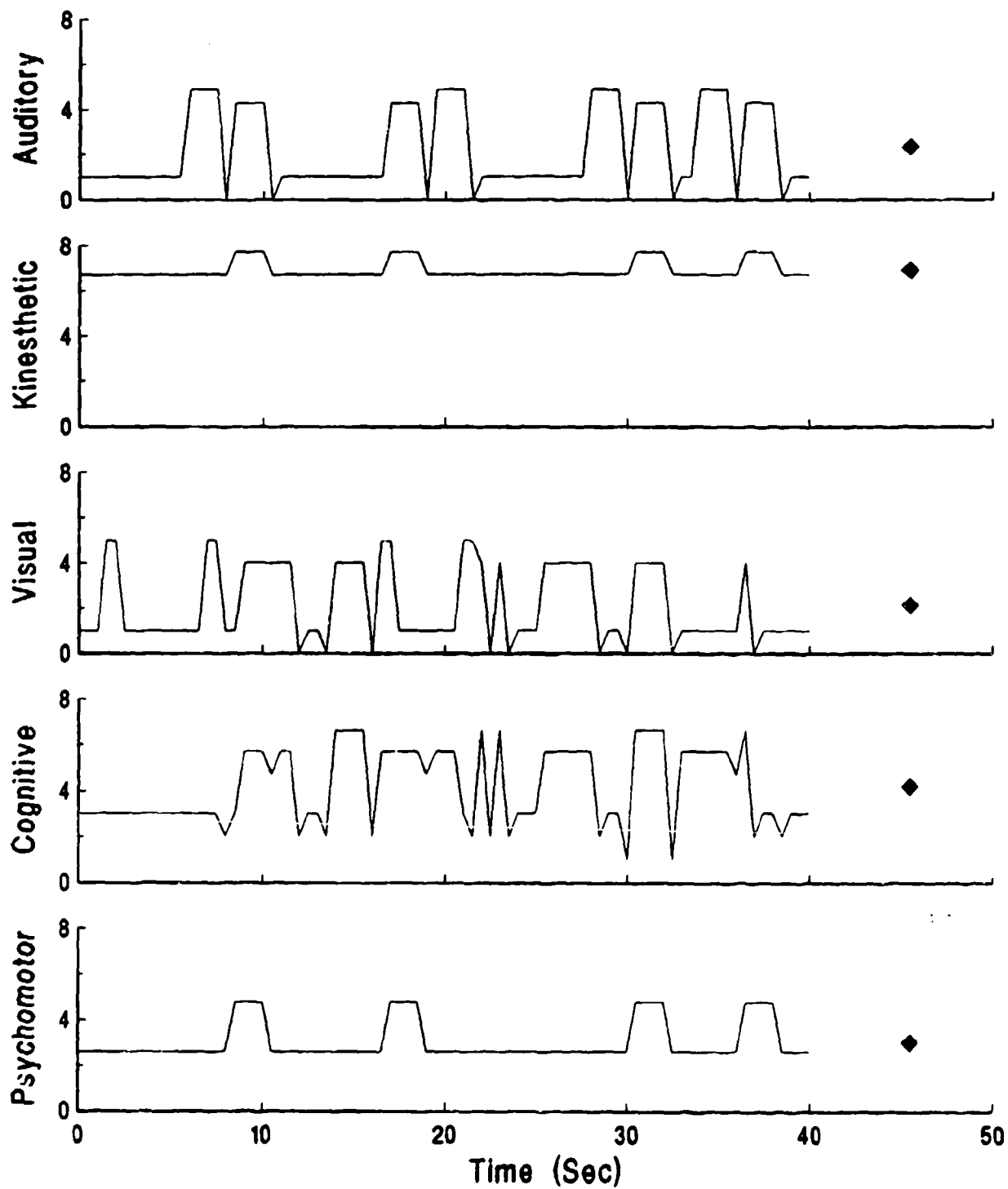
Segment 28: Acquisition (DTV, Laser Spot Tracker, Automatic)
PILOT - AH-64A



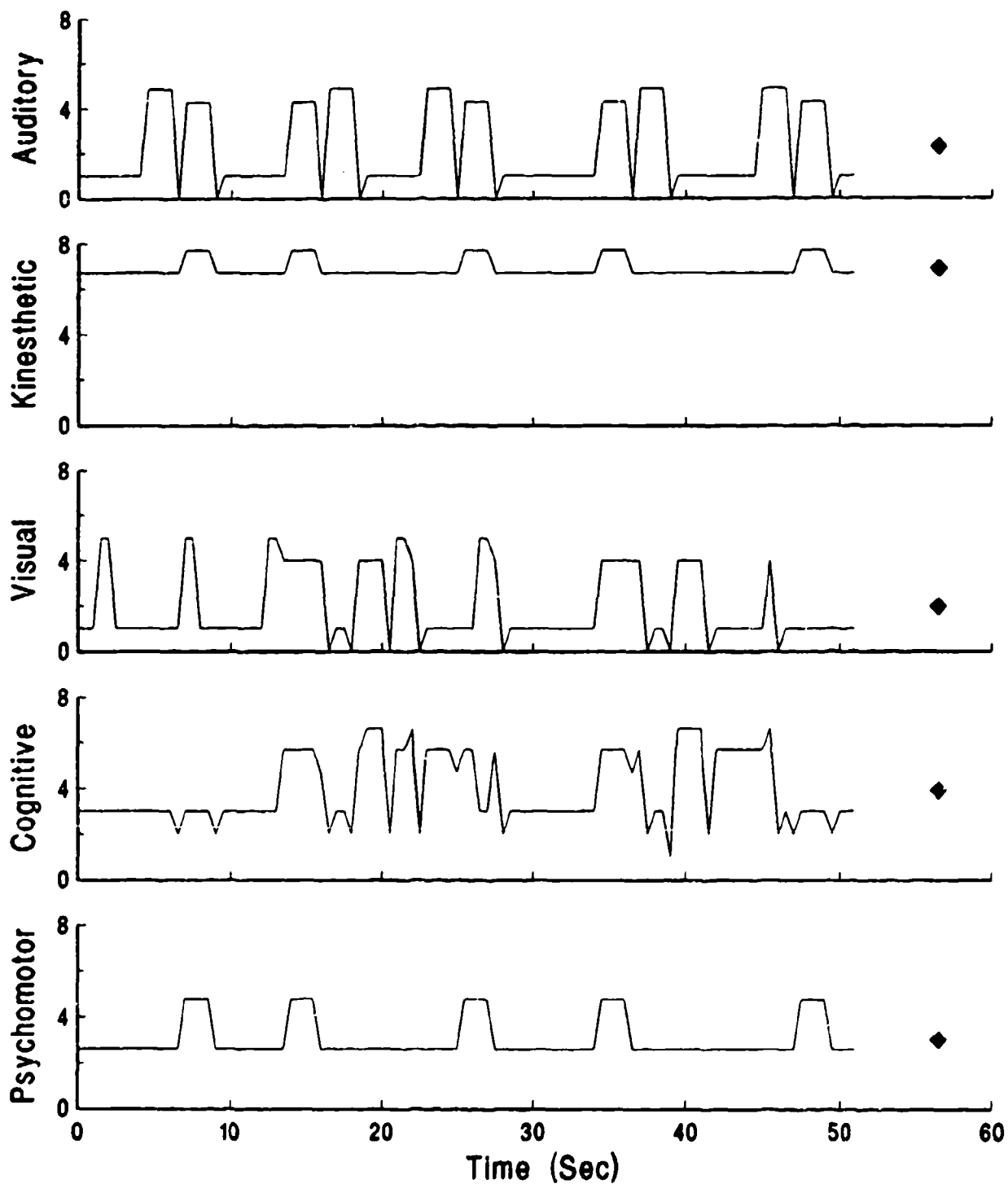
Segment 29: Acquisition (DVO)
PILOT - AH-64A



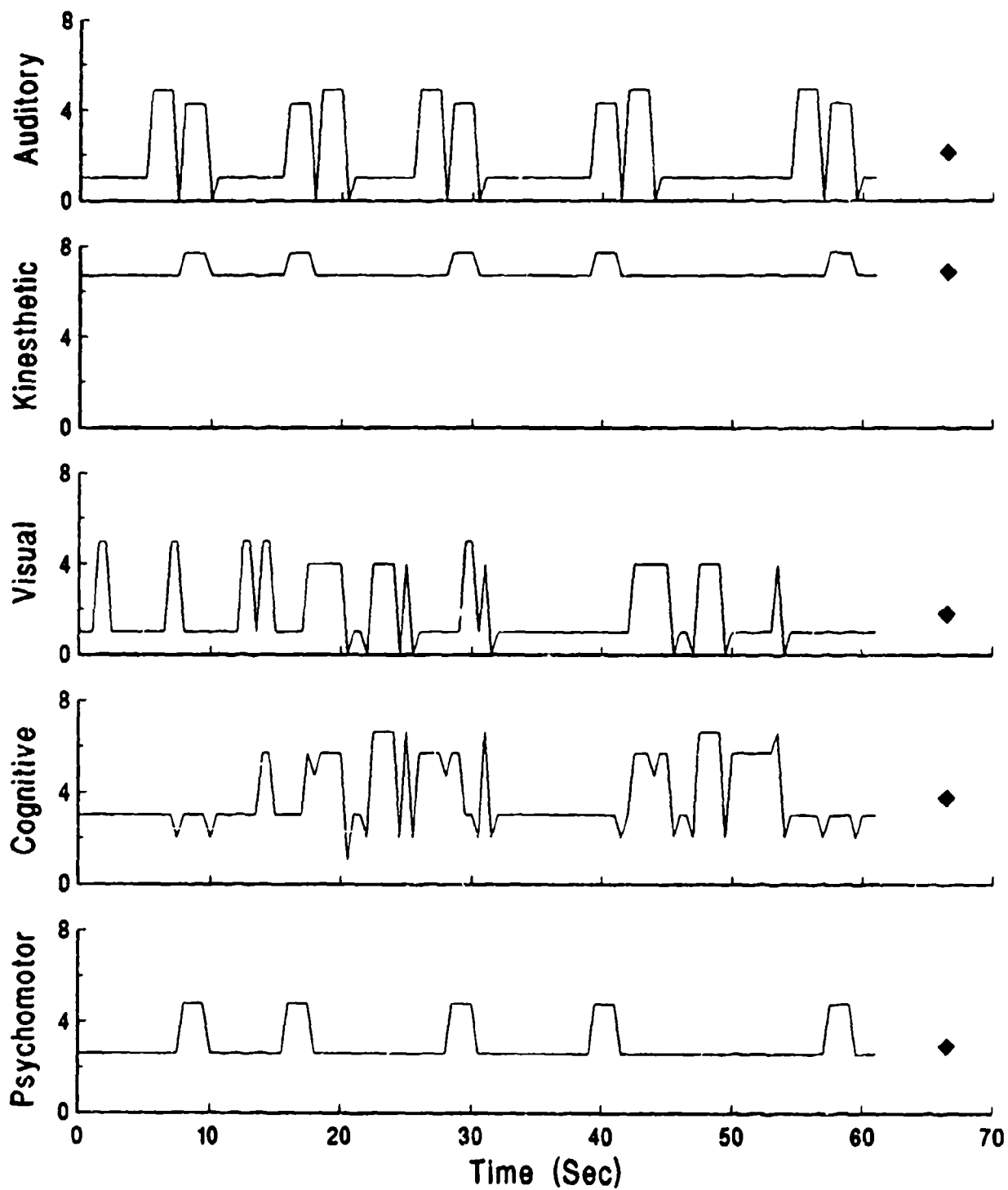
Segment 30: Acquisition (DVO, Laser Spot Tracker, Manual)
PILOT - AH-64A



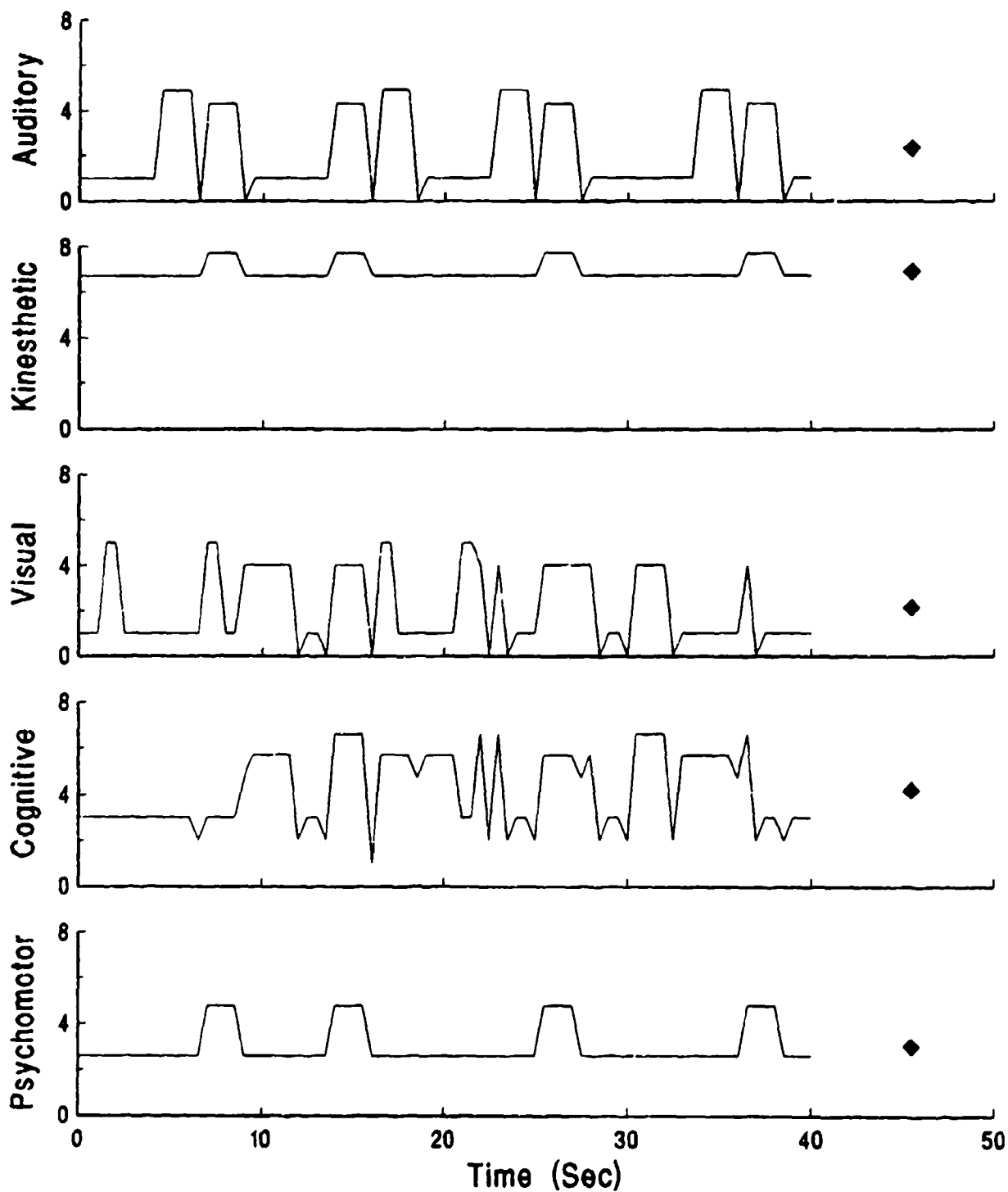
Segment 31: Acquisition (DVO, Laser Spot Tracker, Automatic)
PILOT - AH-64A



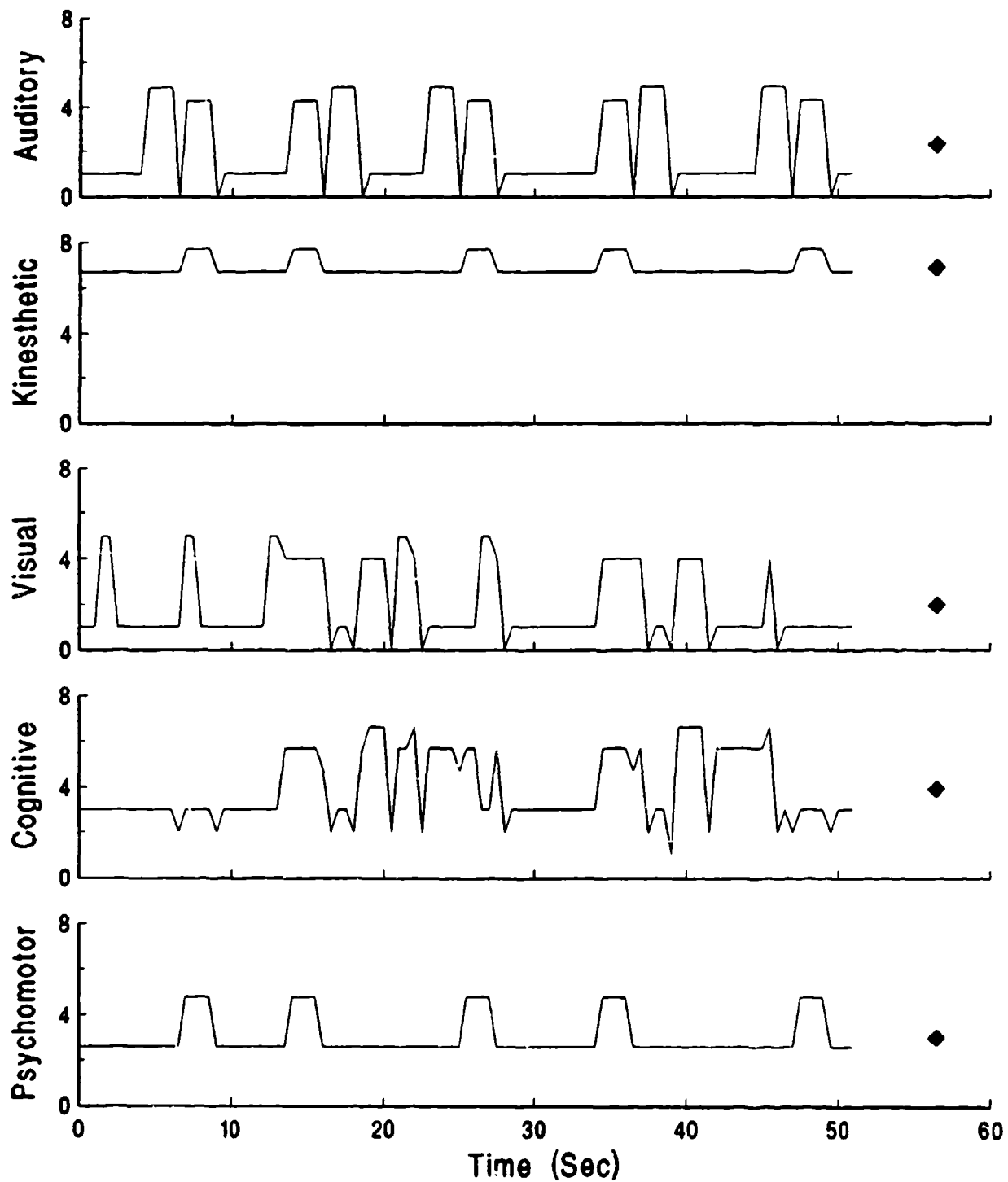
Segment 32: Acquisition (FLIR)
PILOT - AH-64A



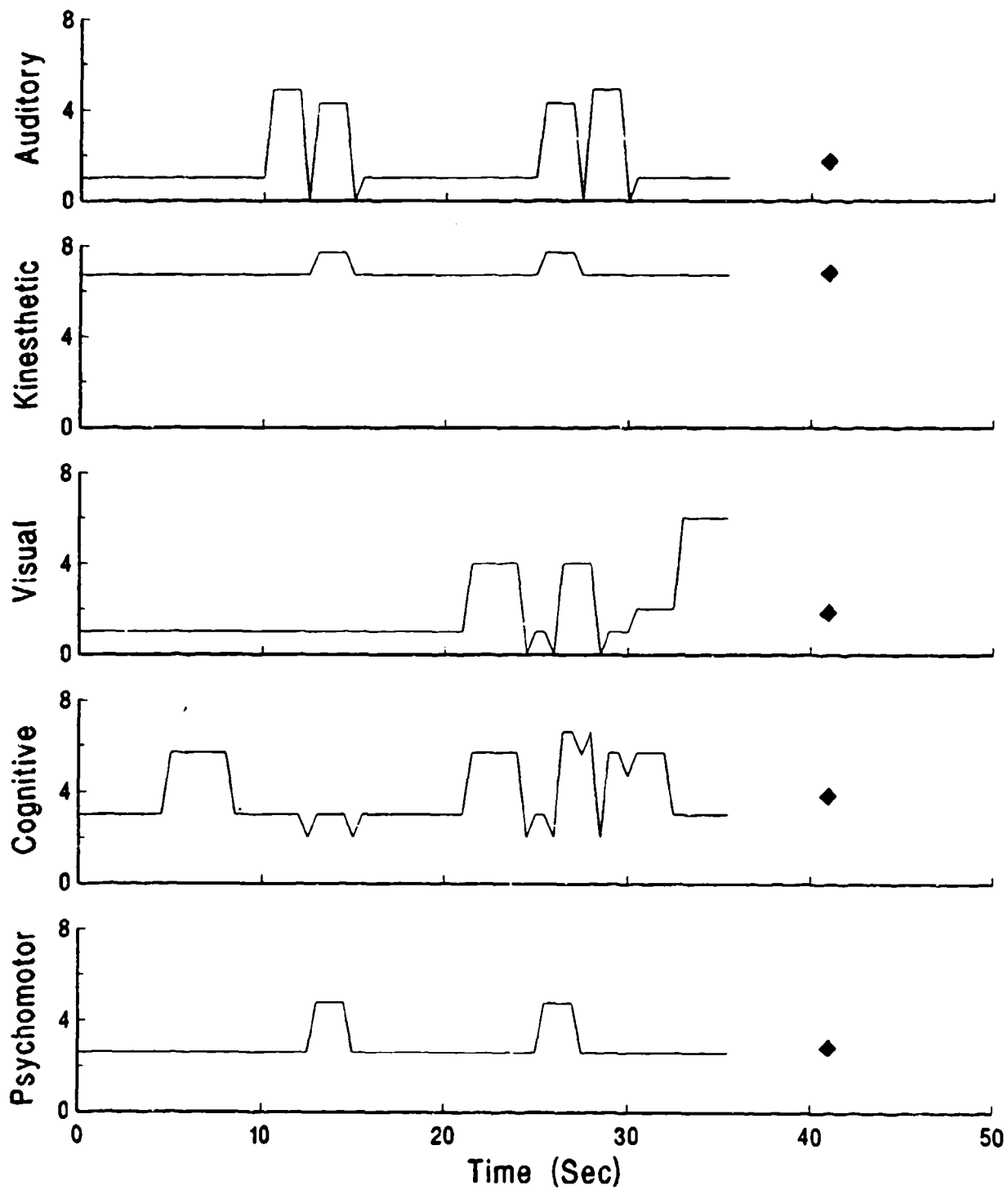
Segment 33: Acquisition (FLIR, Laser Spot Tracker, Manual)
PILOT - AH-64A



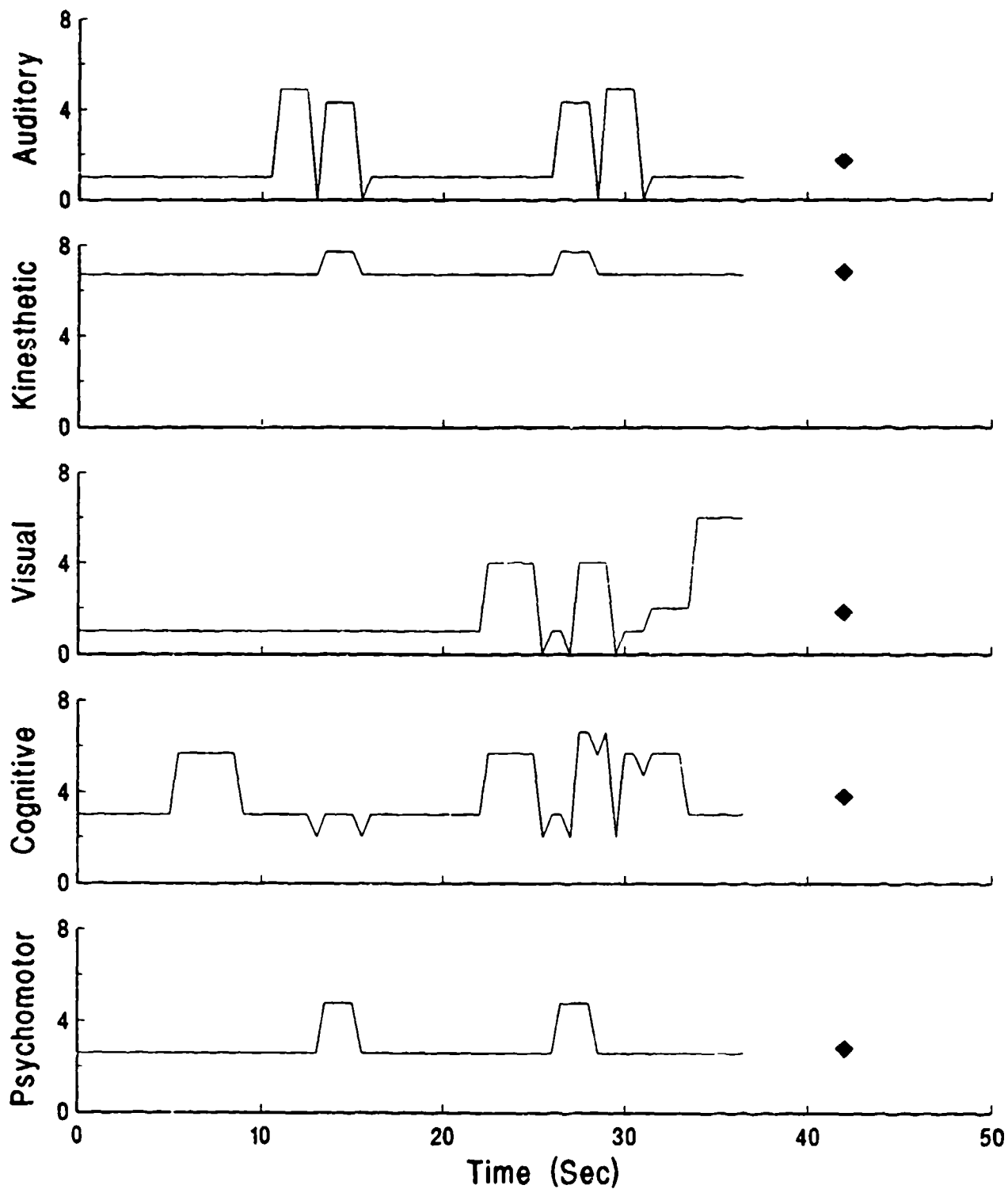
Segment 34: Acquisition (FLIR, Laser Spot Tracker, Automatic)
PILOT - AH-64A



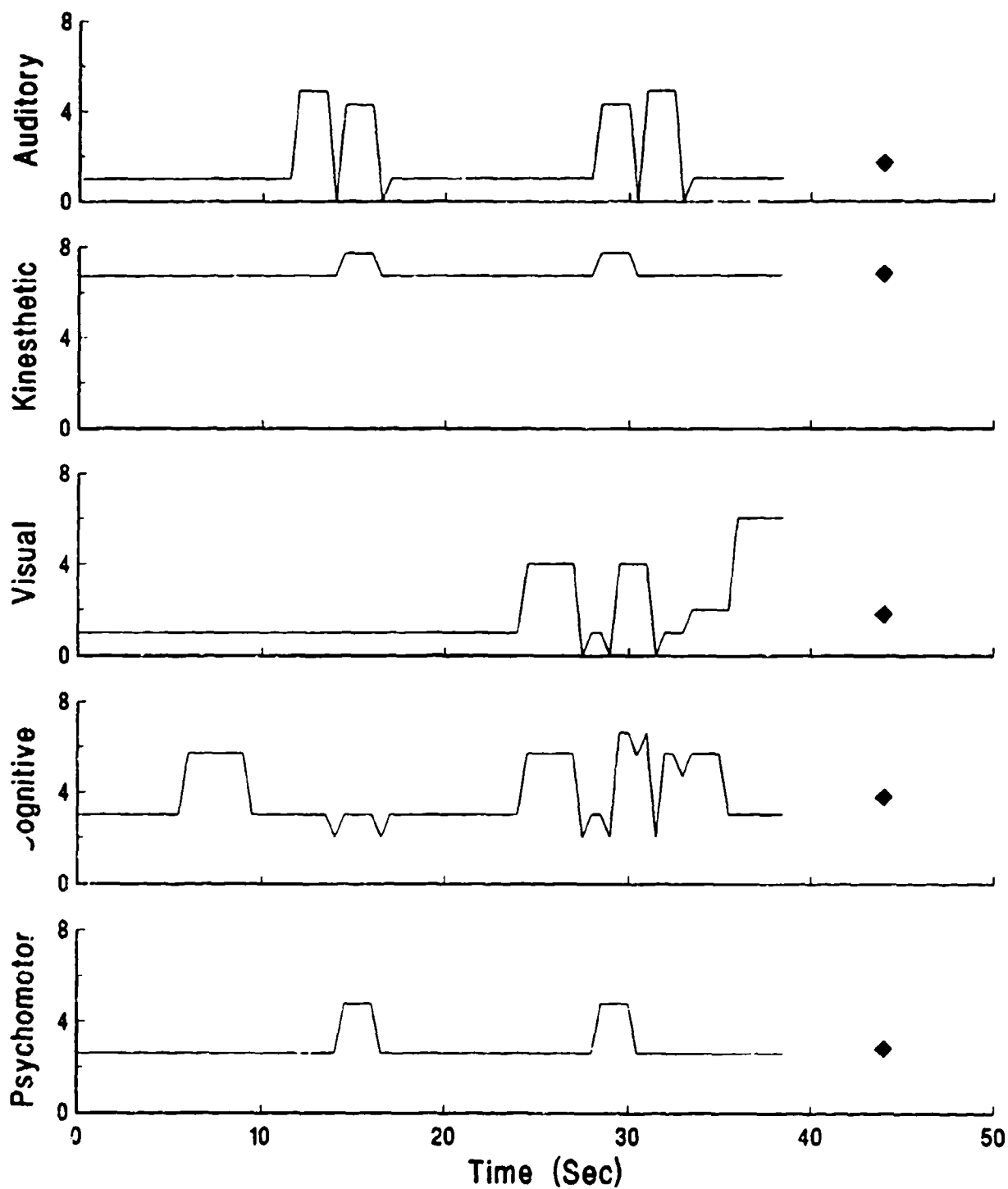
Segment 35: Engagement, LOAL (Autonomous, Manual Track)
PILOT - AH-64A



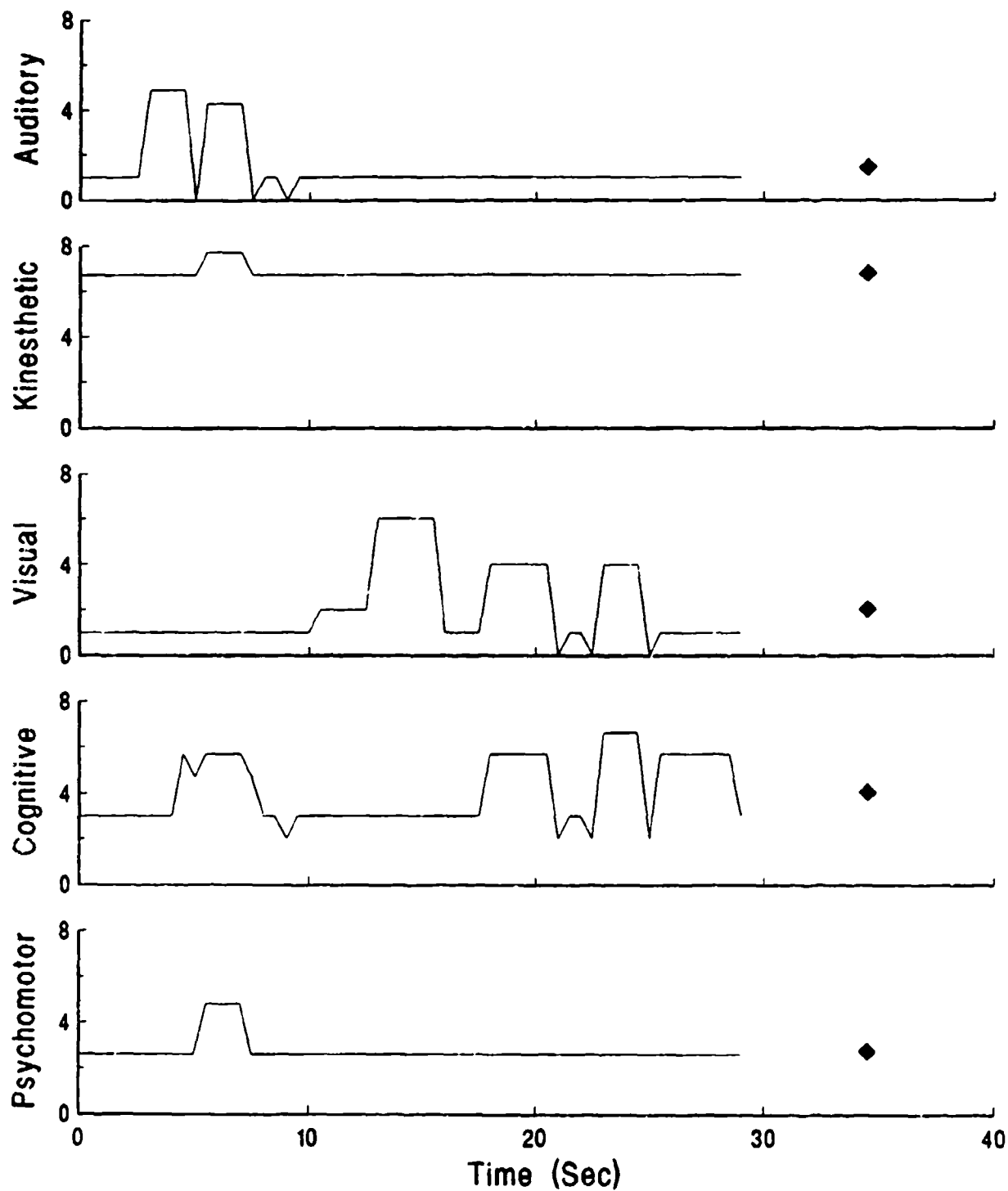
Segment 36: Engagement, LOAL (Autonomous, IAT)
PILOT - AH-64A



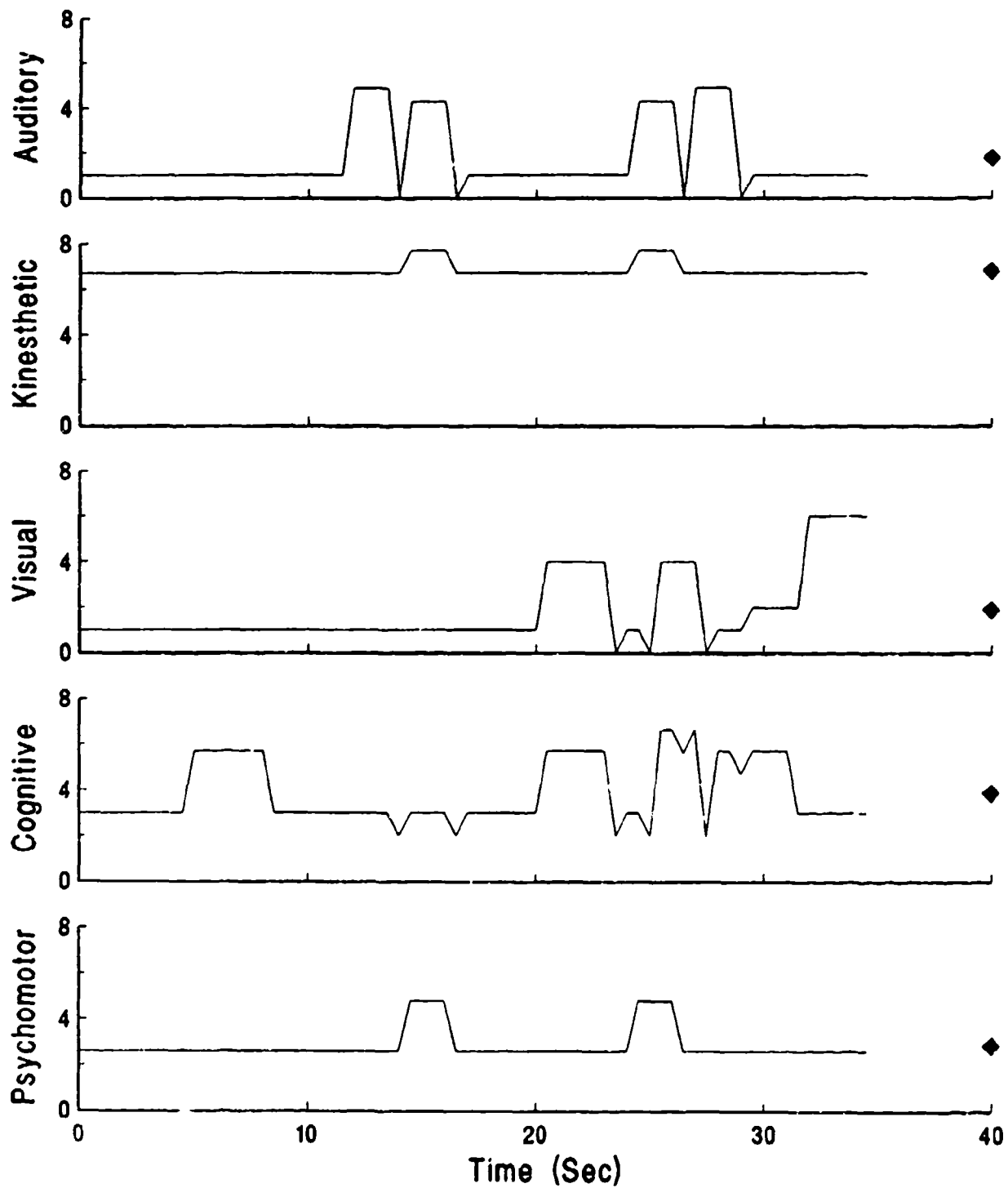
Segment 37: Engagement, LOAL (Autonomous, IAT Offset)
PILOT - AH-64A



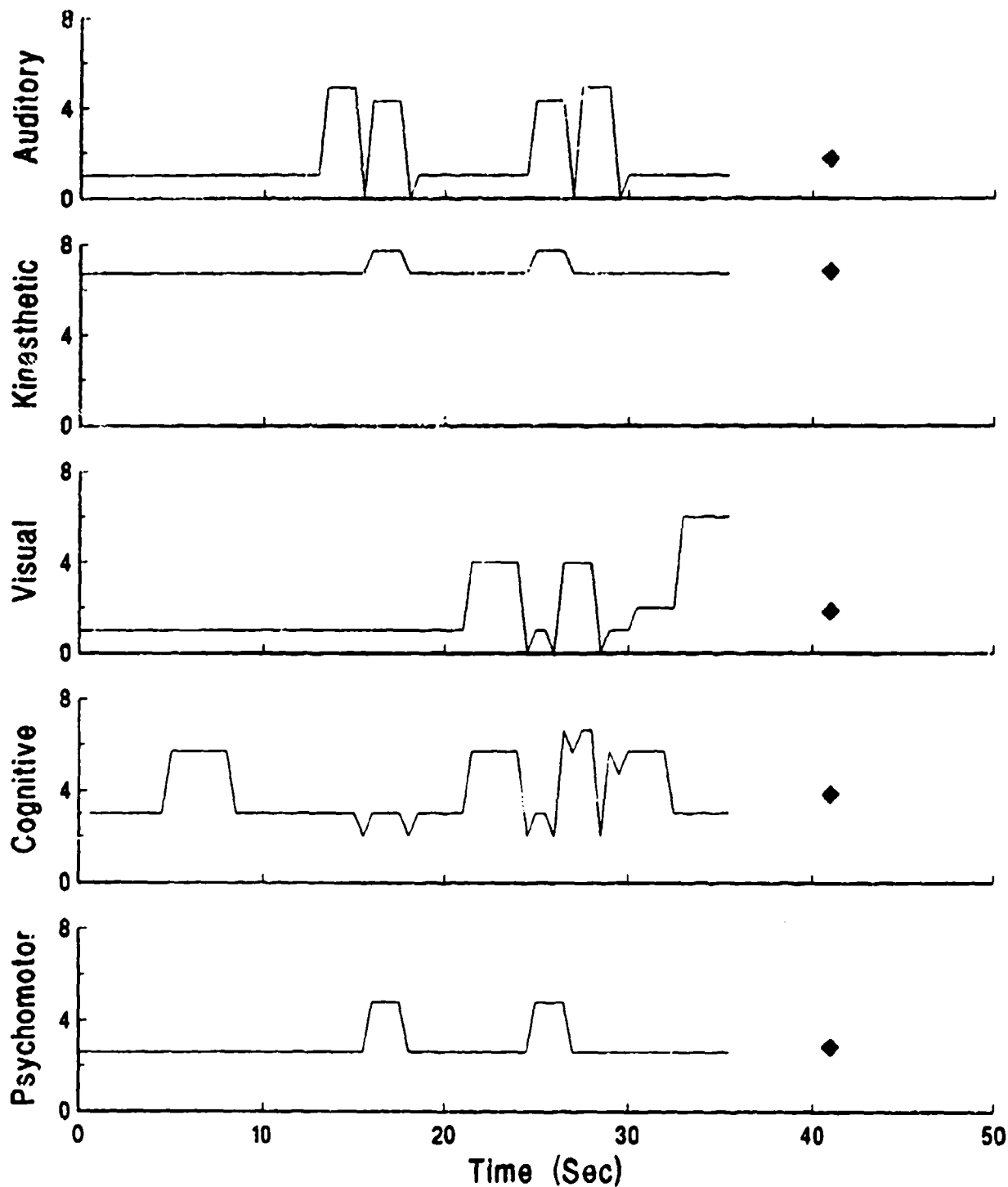
Segment 38: Engagement, LOAL (Remote Designation)
PILOT - AH-64A



Segment 39: Engagement, LOBL (Autonomous, Manual Track)
PILOT - AH-64A

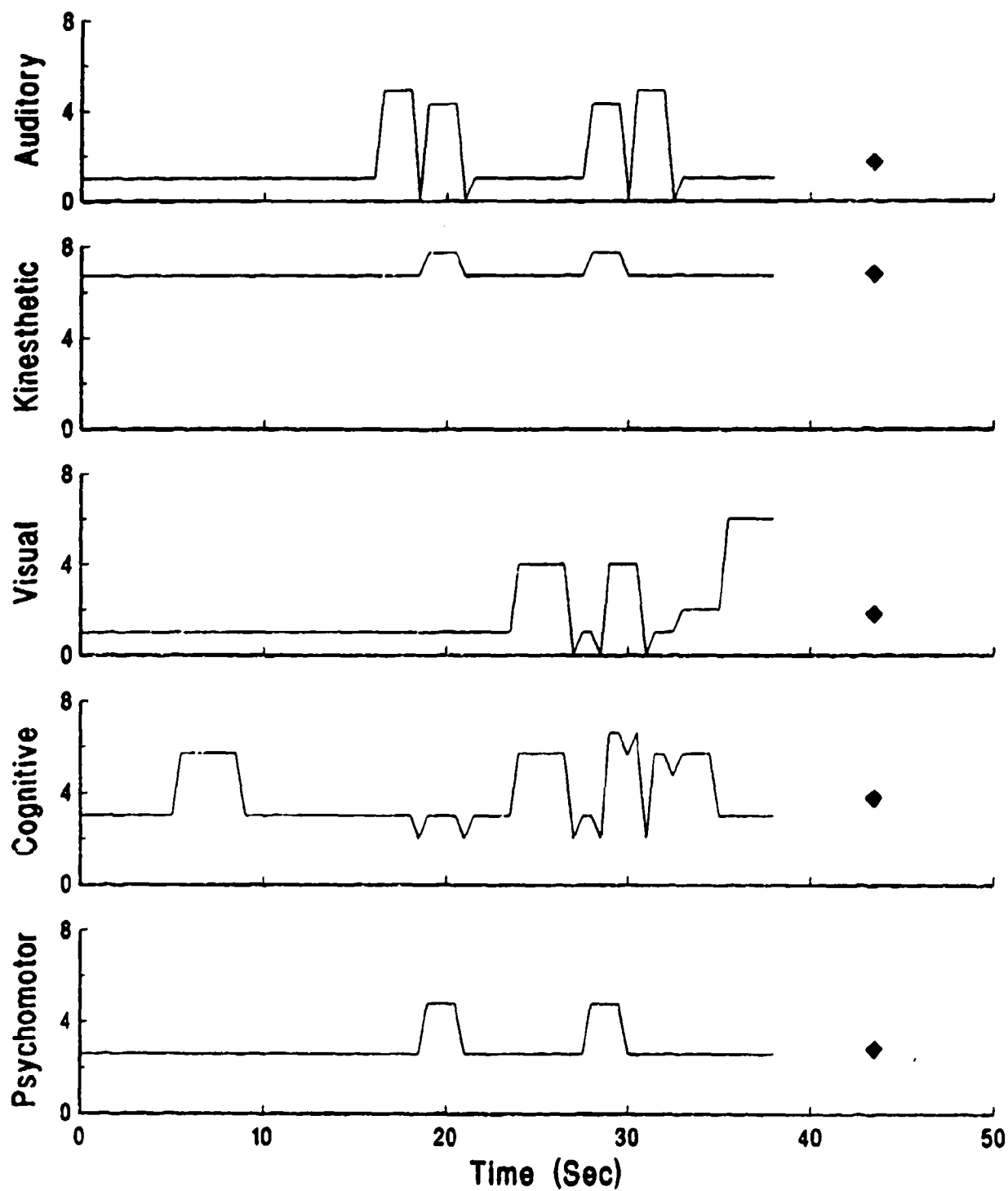


Segment 40: Engagement, LOBL (Autonomous, IAT)
PILOT - AH-64A

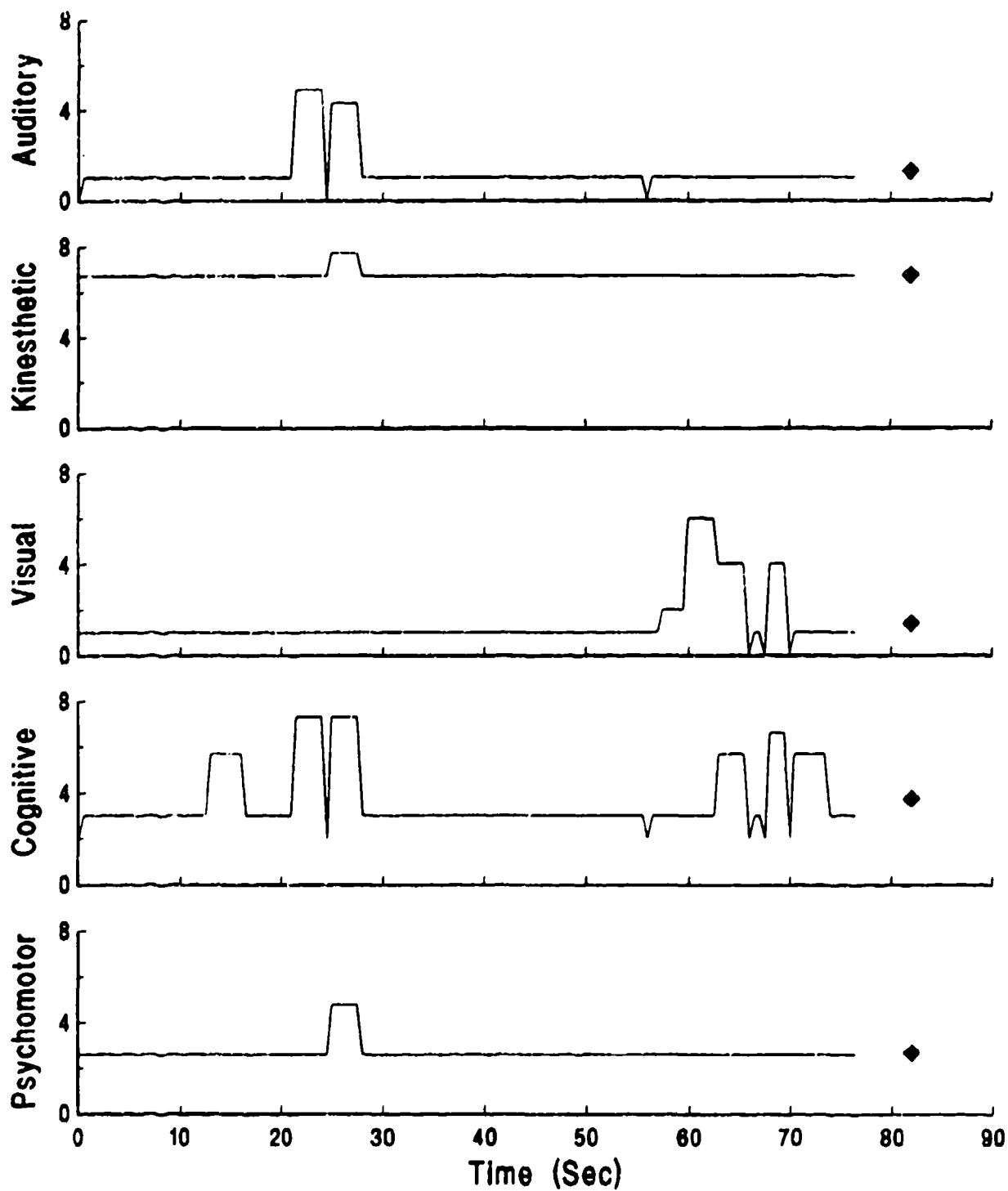


Segment 41: Engagement, LOBL (Autonomous, IAT Offset)

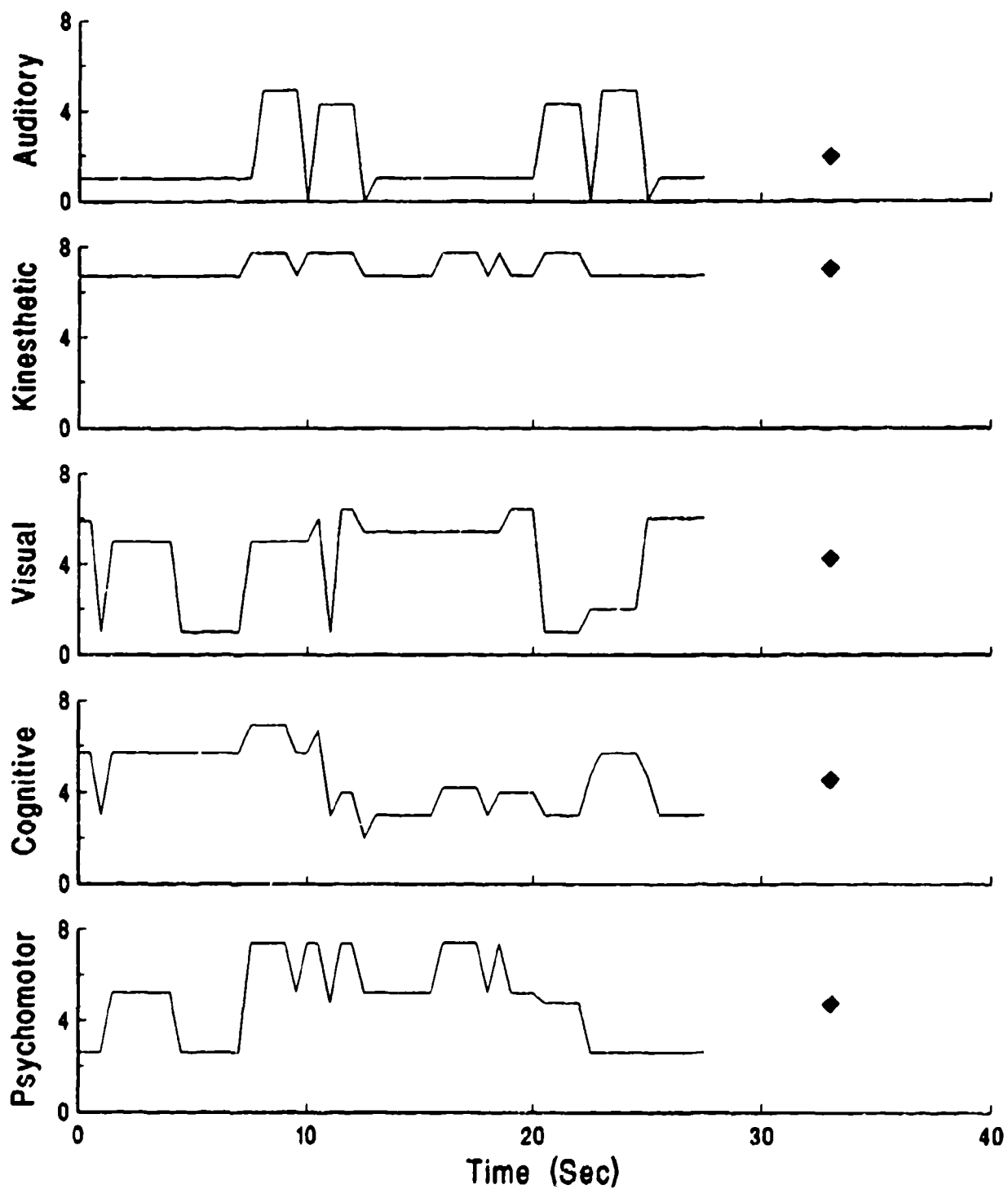
PILOT - AH-64A



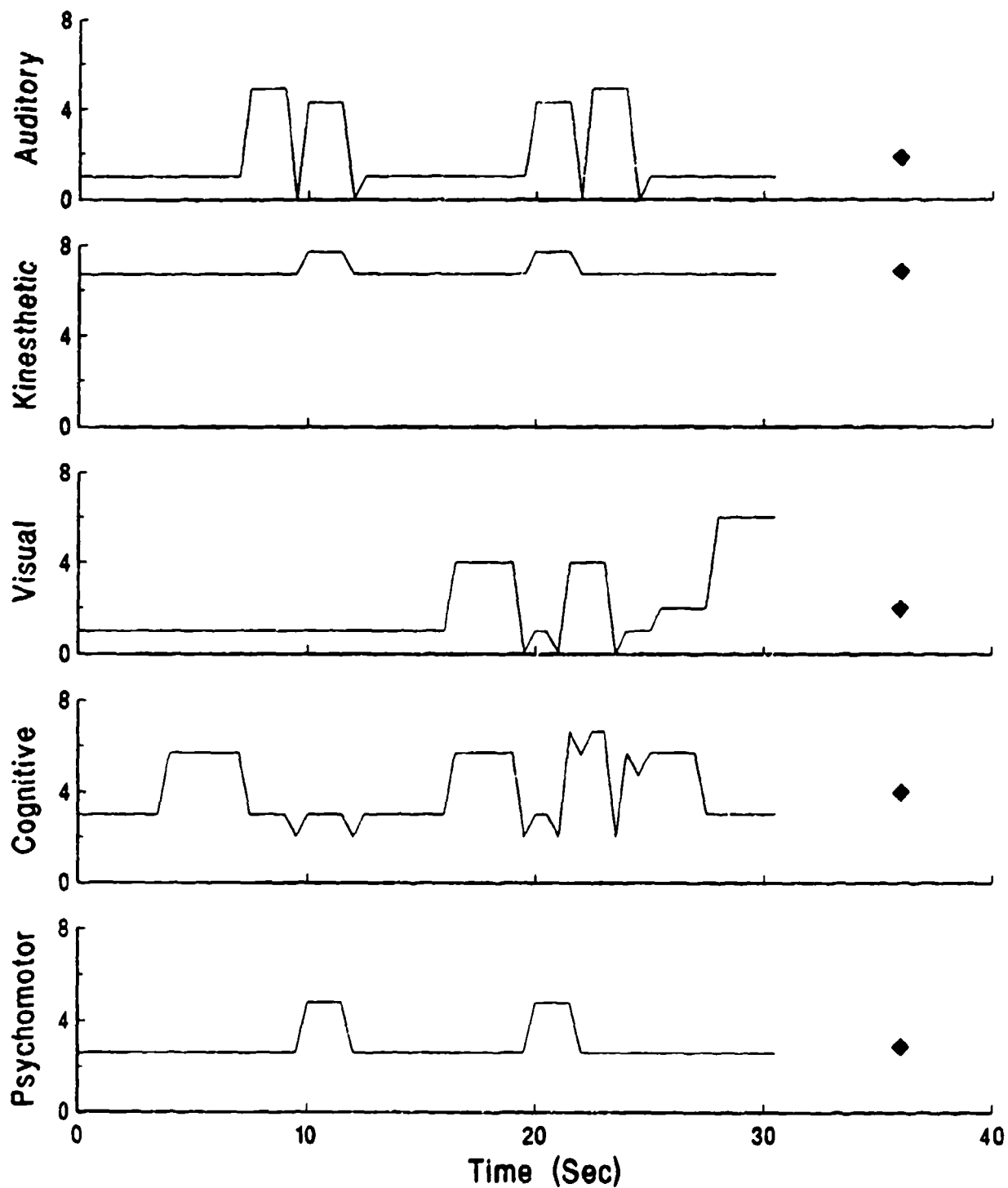
Segment 42: Engagement, LOBL (Remote Designation)
PILOT - AH-64A



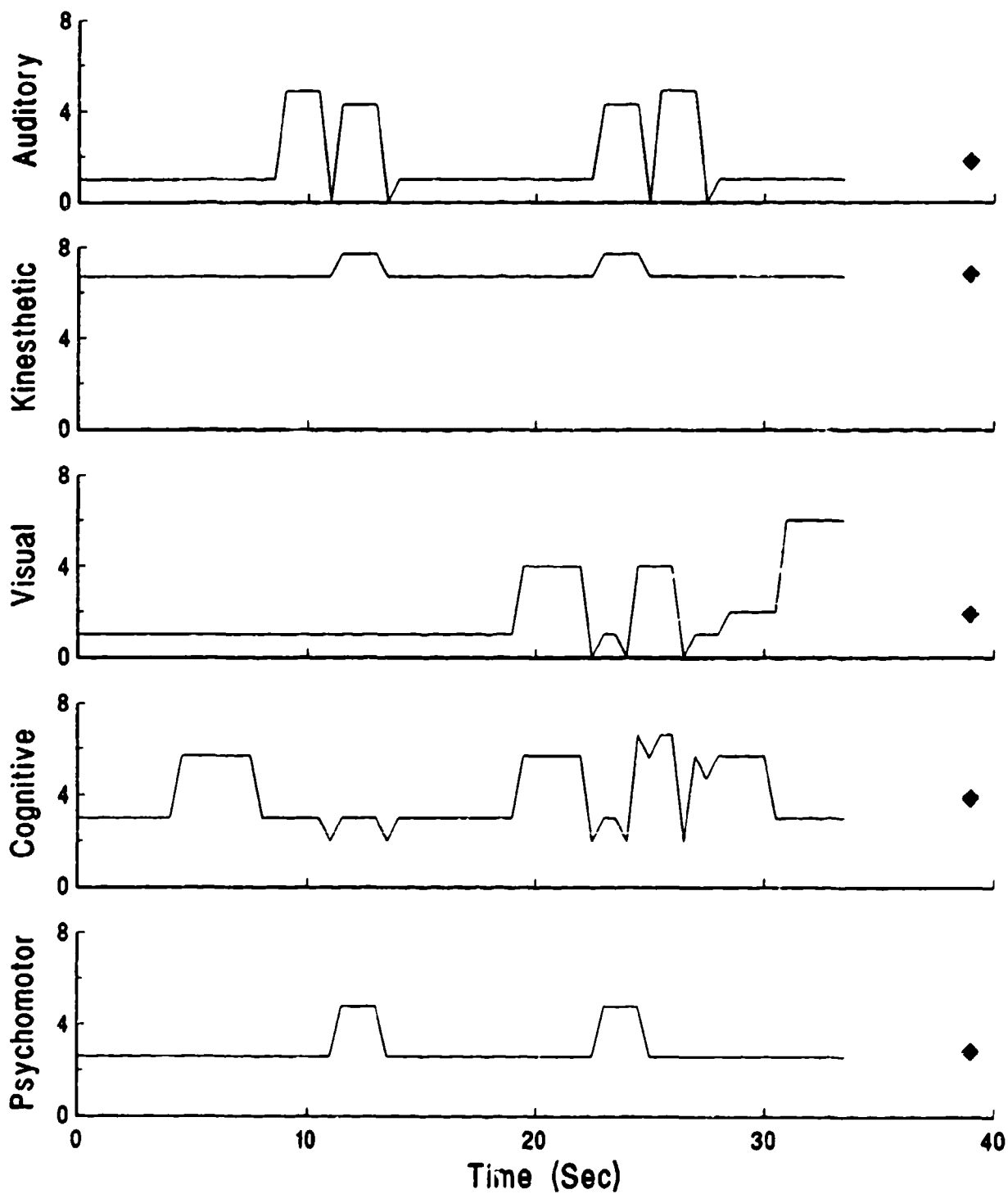
Segment 43: Engagement, Gun (Pilot, IHADSS)
PILOT - AH-64A



Segment 44: Engagement, Gun (Gunner, IHADSS)
PILOT - AH-64A

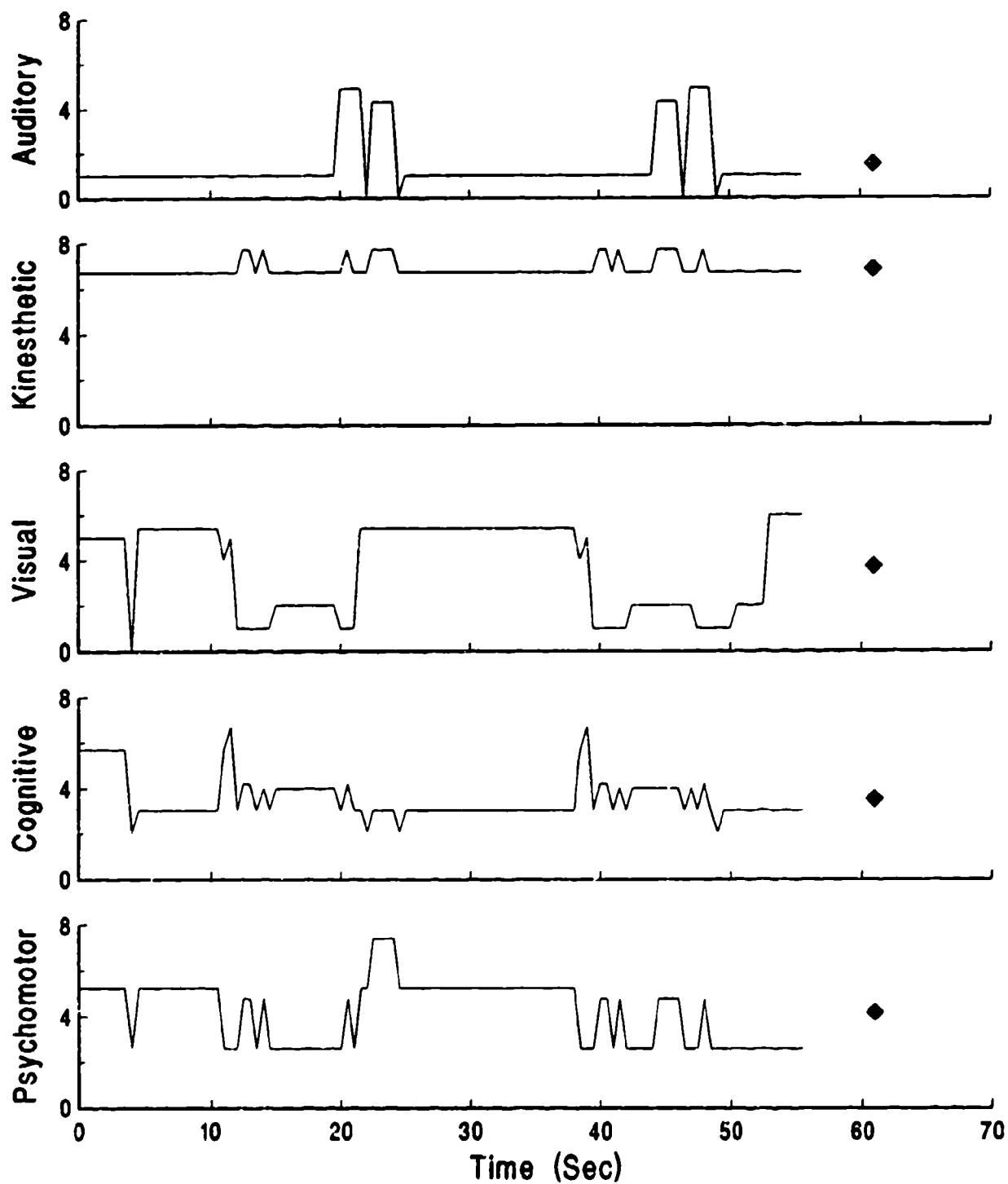


Segment 45: Engagement, Gun (Gunner, TADS, IAT)
PILOT - AH-64A

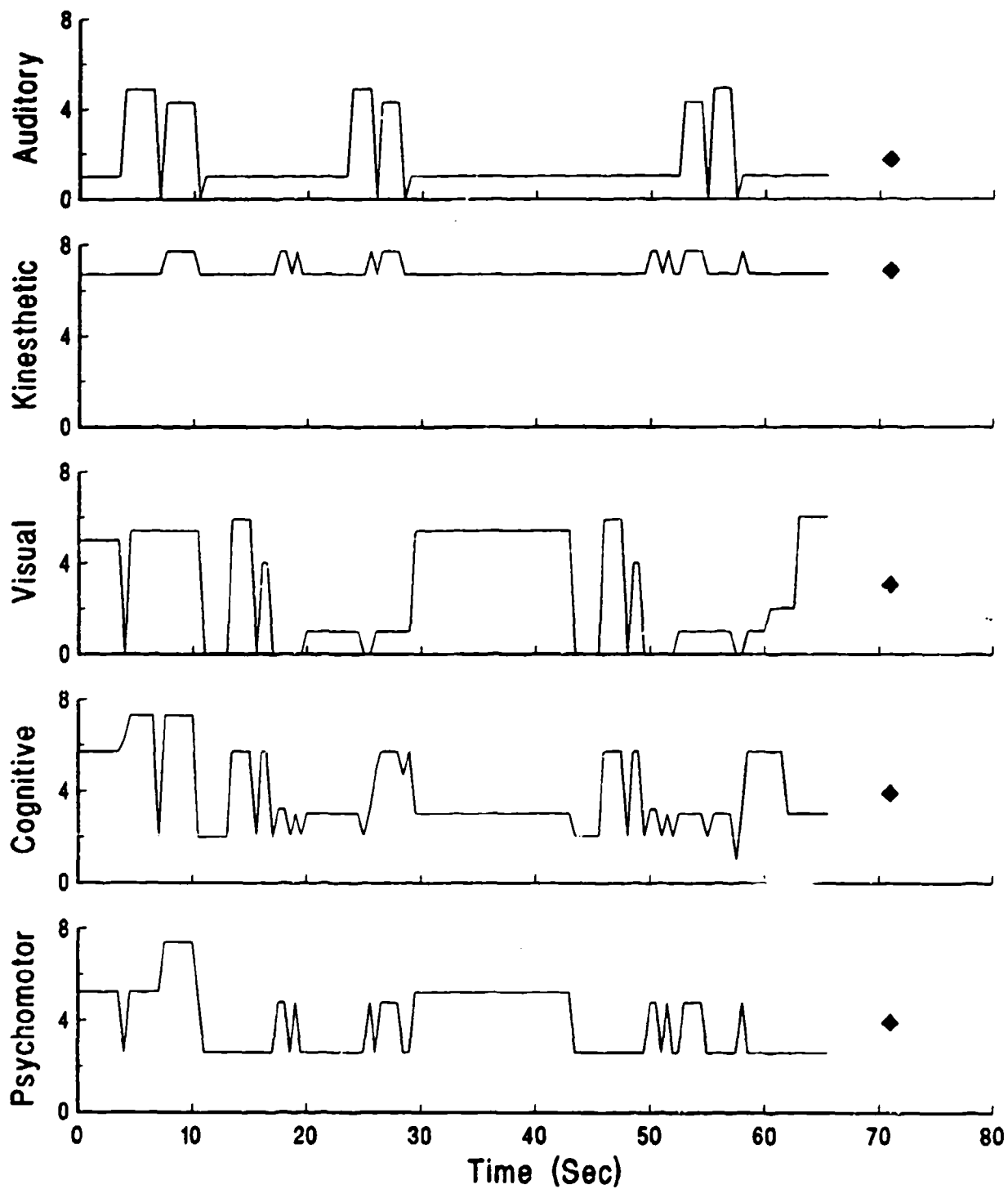


Segment 46: Engagement, FFAR (Pilot)

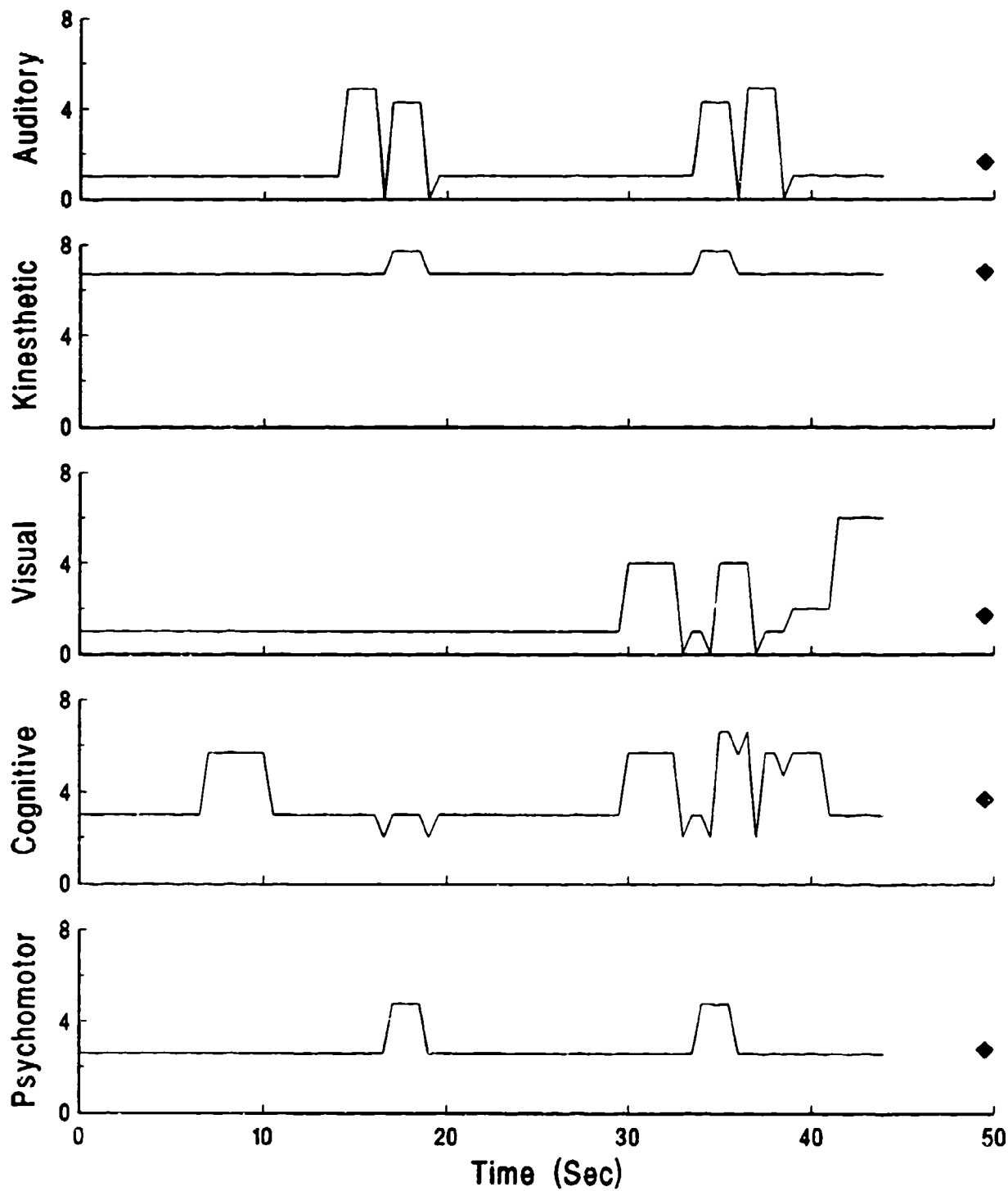
PILOT - AH-64A



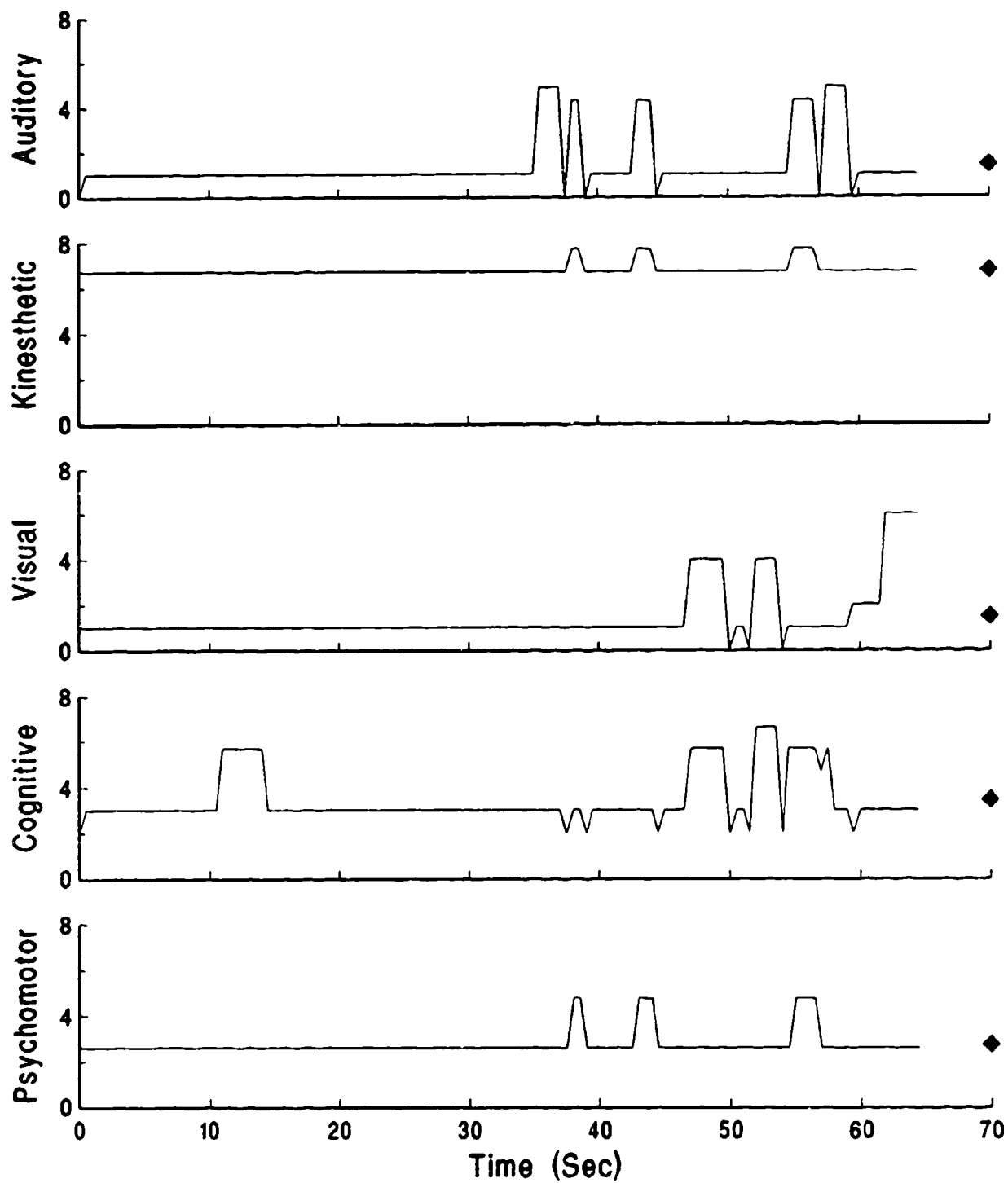
Segment 47: Engagement, FFAR (Coop)
PILOT - AH-64A



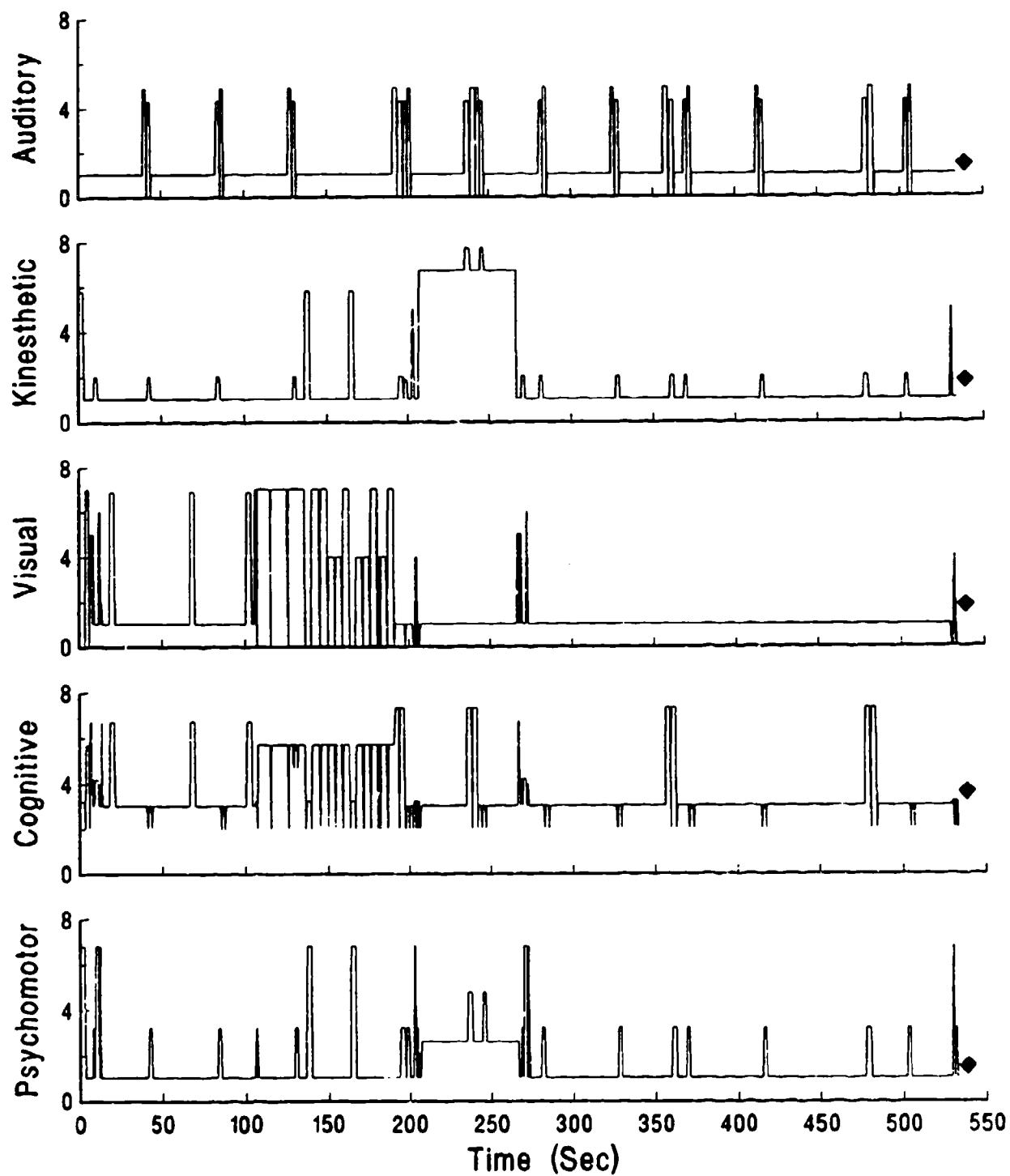
Segment 48: Engagement, LOAL (Rapid Fire)
PILOT - AH-64A



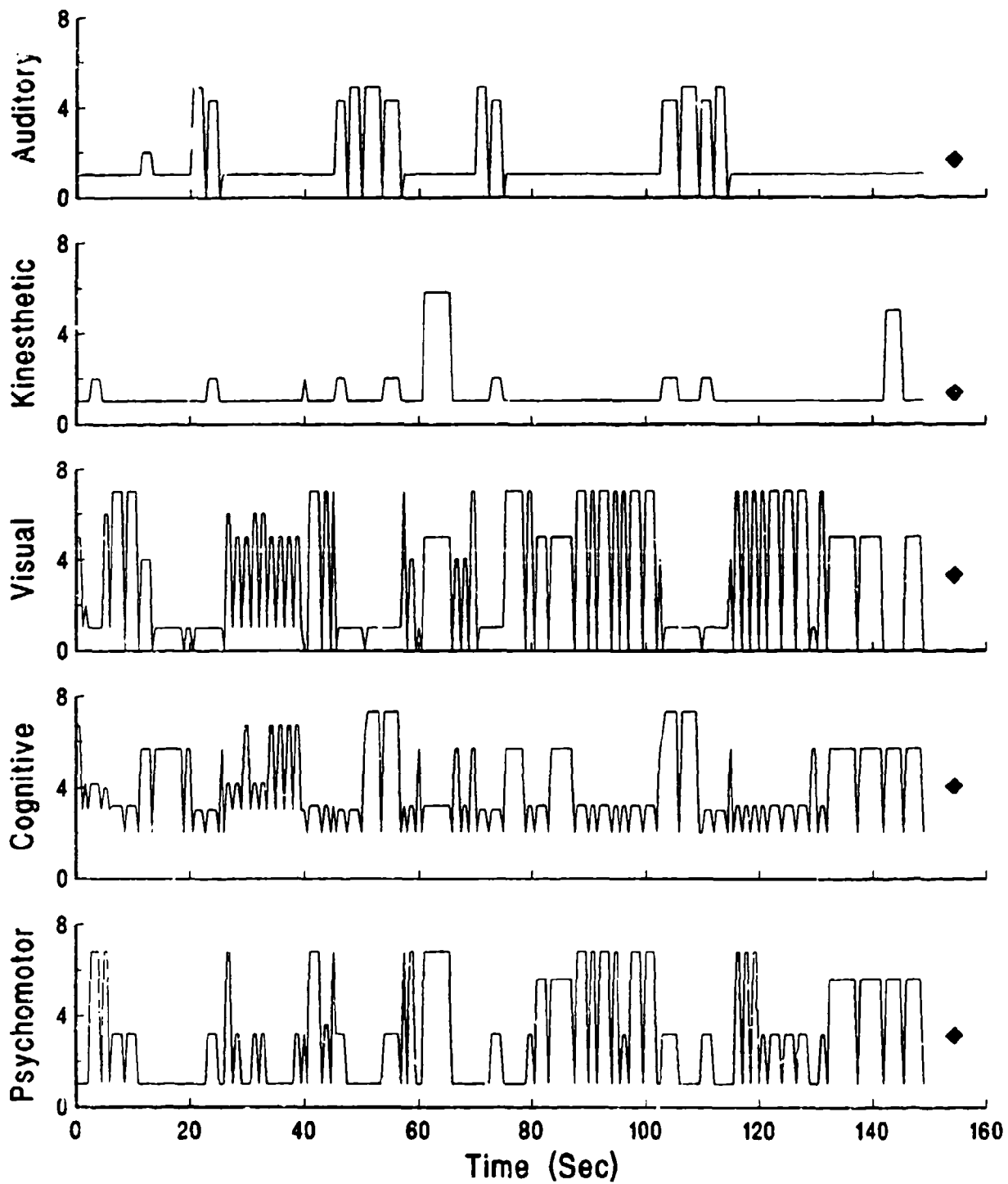
Segment 49: Engagement, LOAL (Ripple Fire)
PILOT - AH-64A



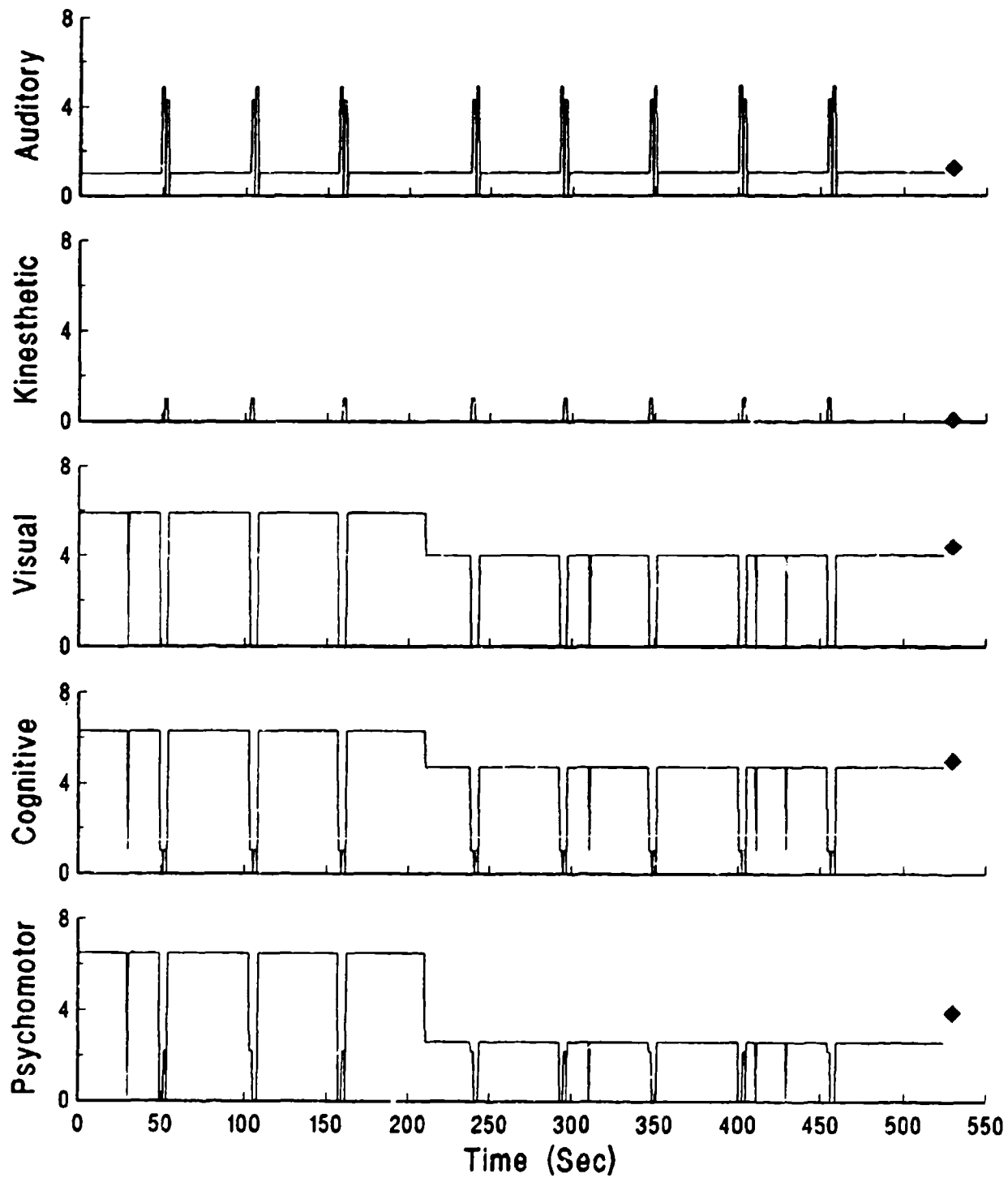
Segment 50: FARP Procedures
PILOT - AH-64A



Segment 51: Engine Shutdown
PILOT - AH-64A



Segment 52: Before Leaving Aircraft
PILOT - AH-64A

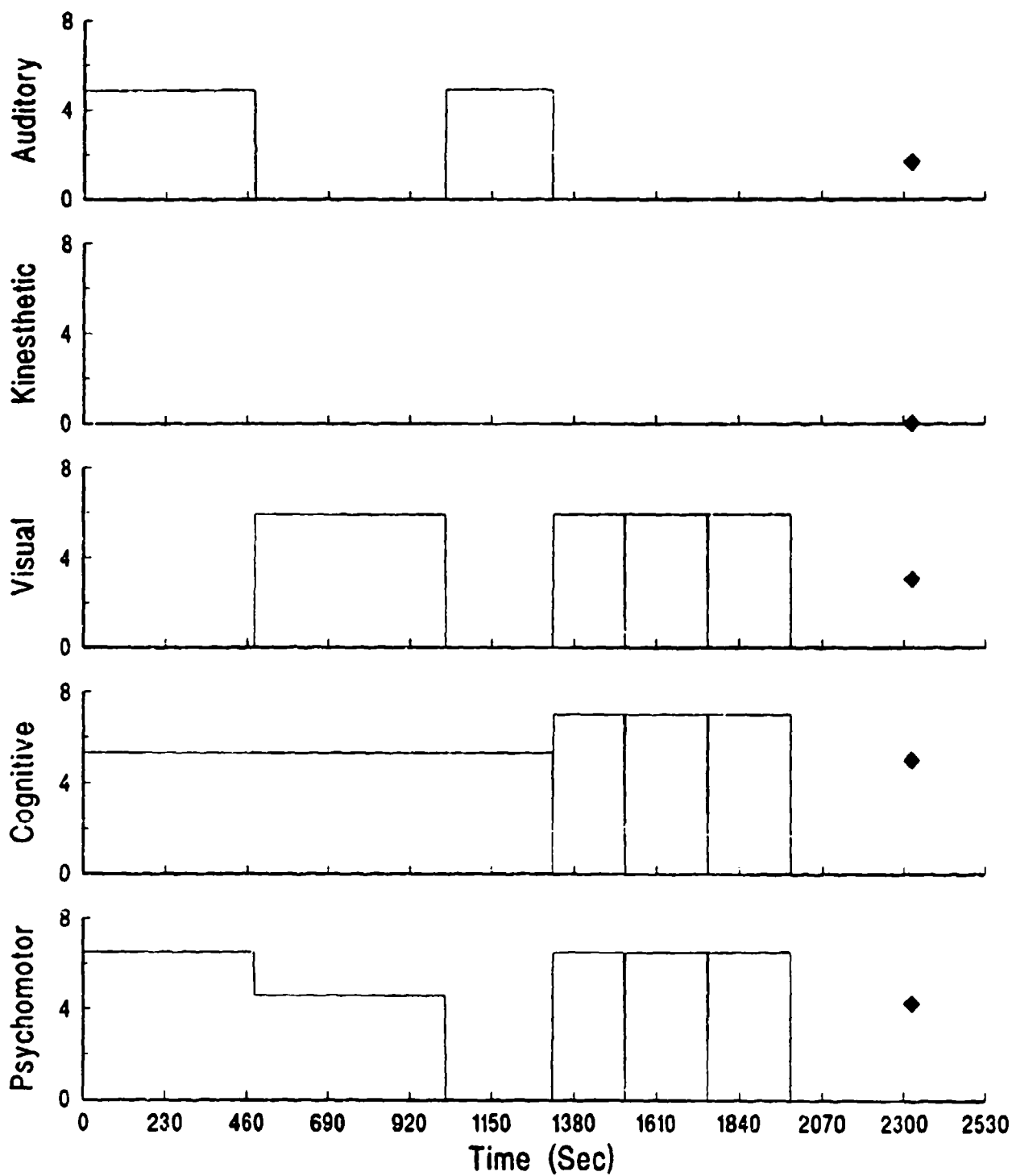


A P P E N D I X H

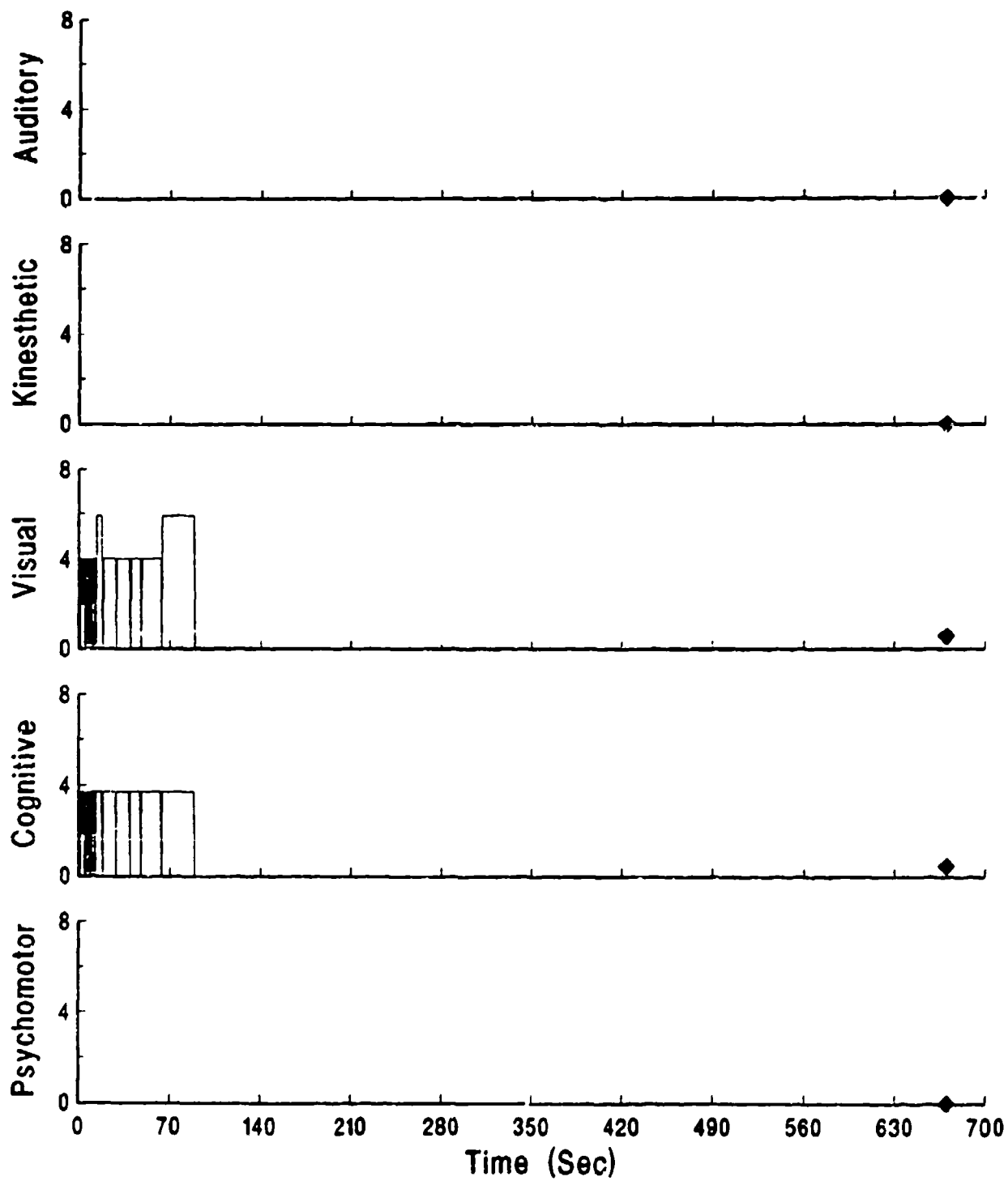
AH-64A COPILOT/GUNNER WORKLOAD PREDICTION GRAPHS

Appendix H contains the workload prediction graphs for the copilot/gunner for each of the 52 AH-64A segments. Each page displays the predicted copilot workload for one segment using 5 graphs, one for each workload component. The diamond symbol at the end of each graph indicates the average component workload for the segment.

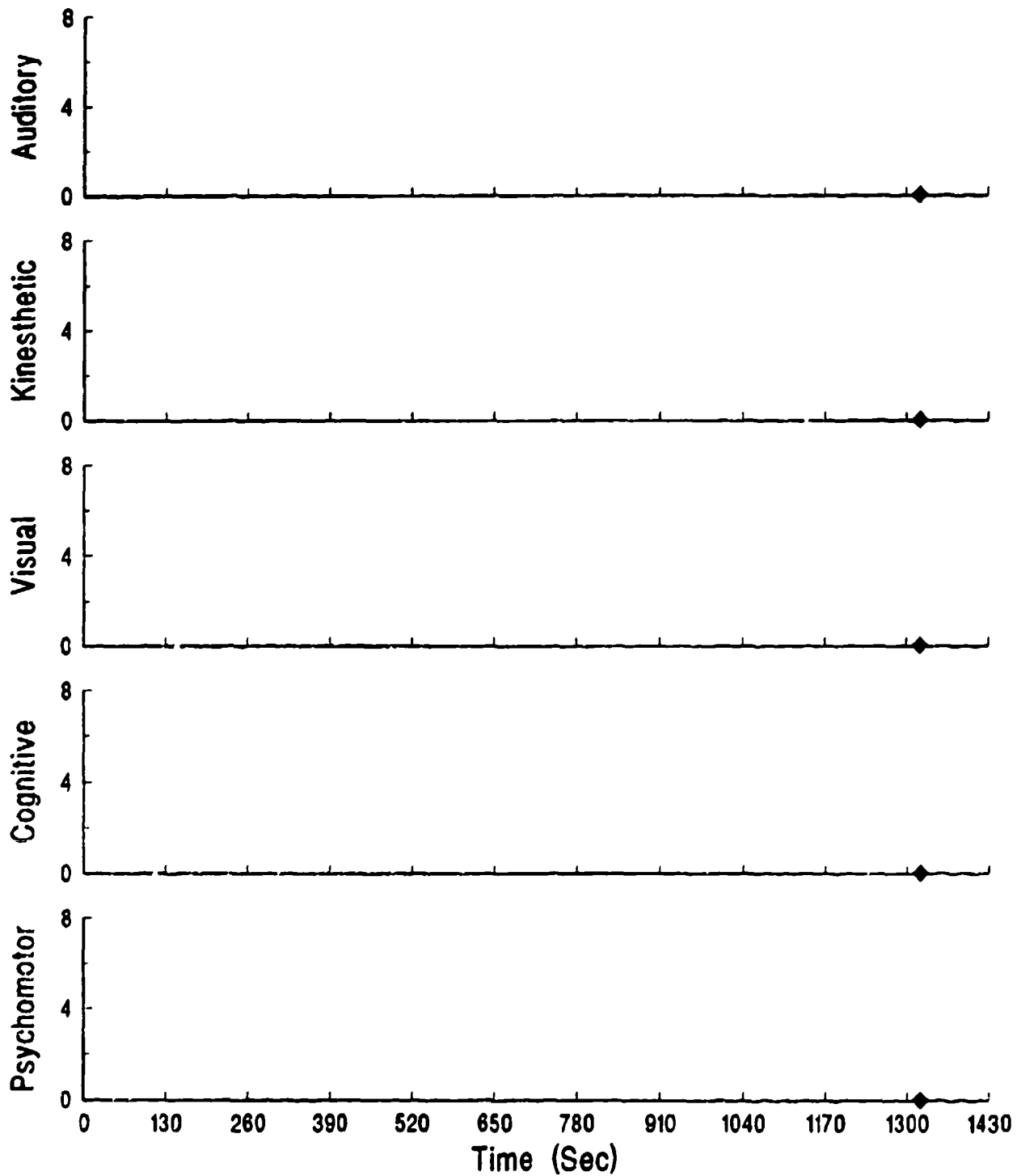
Segment 1: Flight Planning
GUNNER - AH-64A



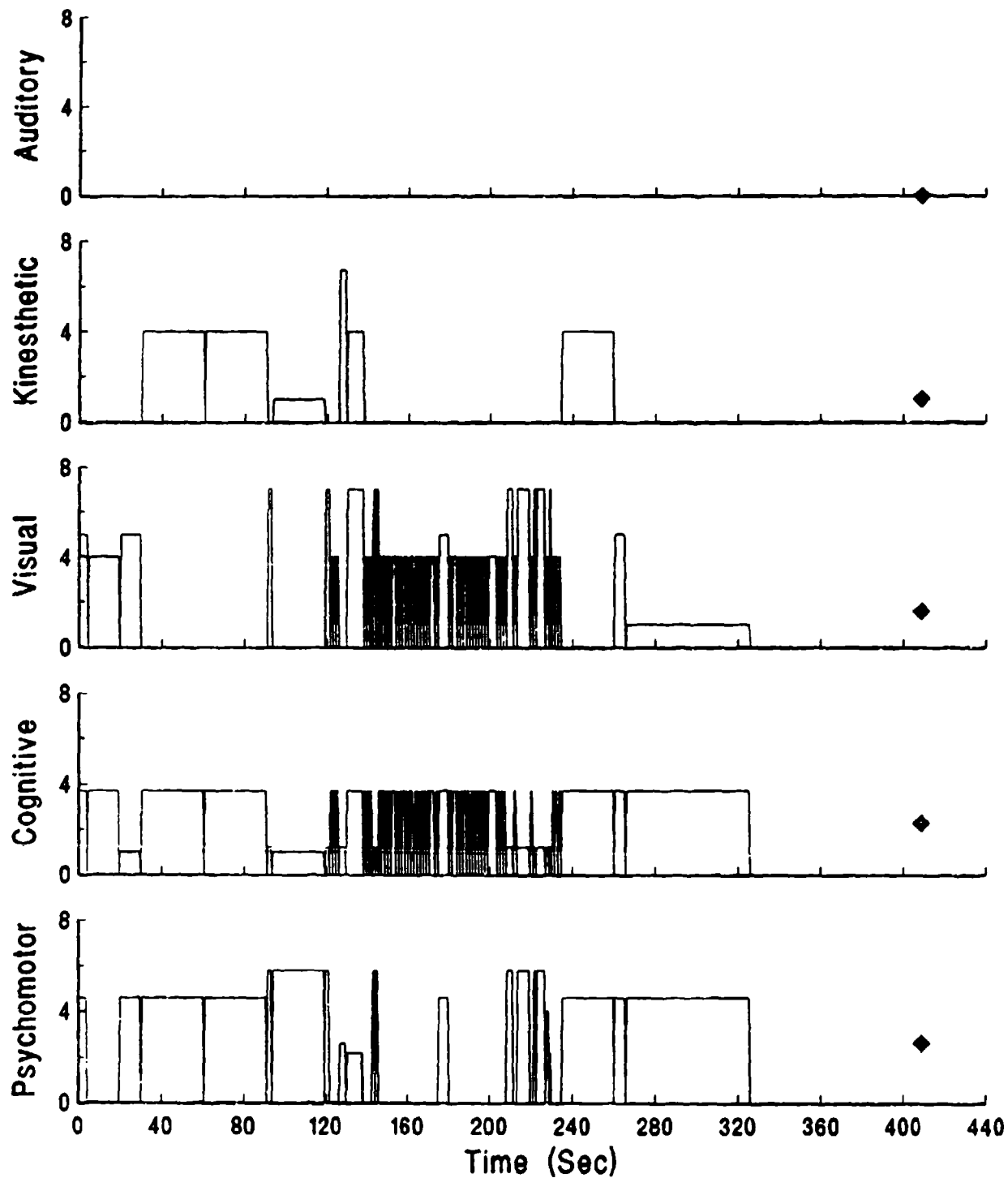
GUNNER - AH-64A



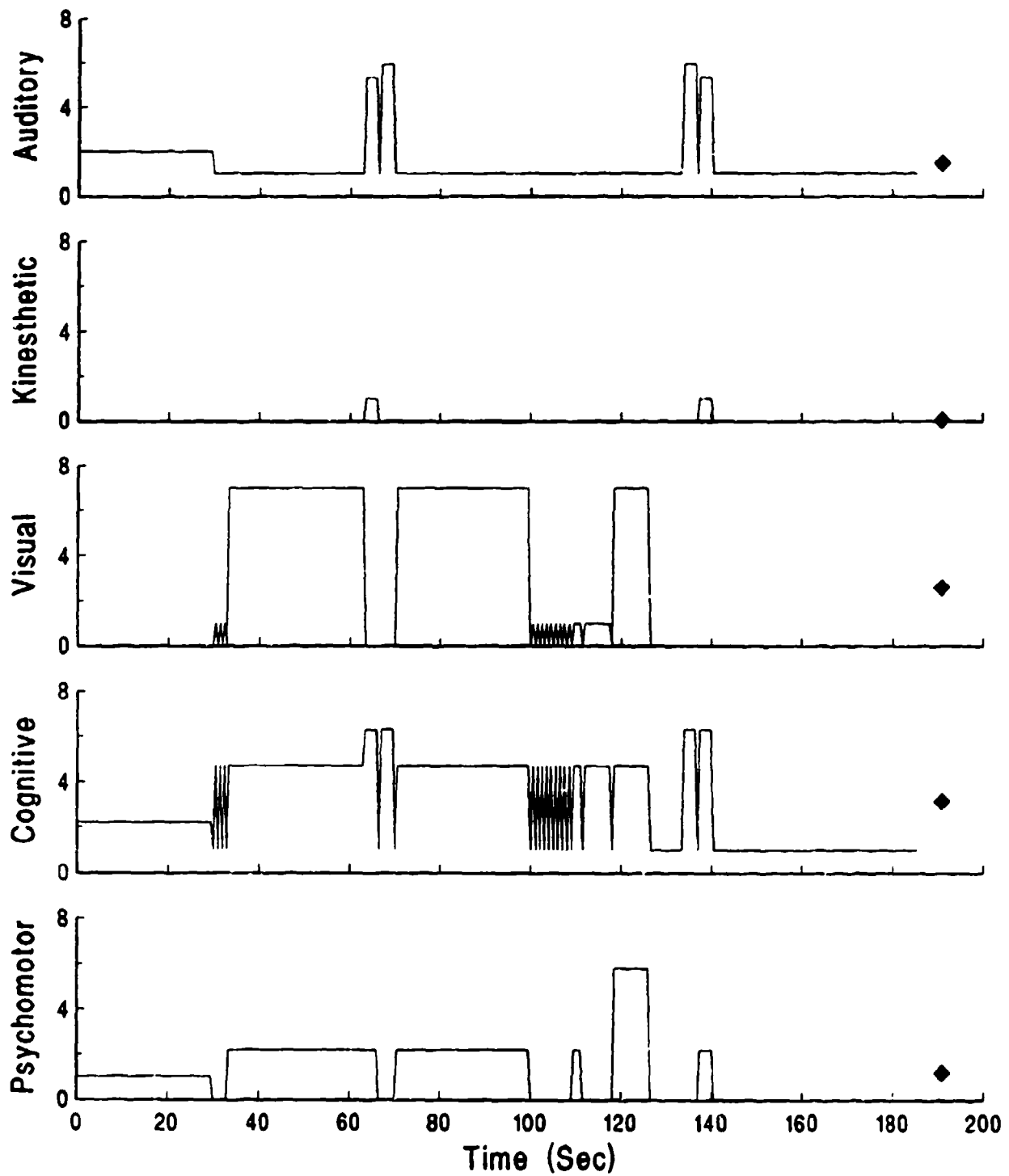
Segment 3: Preflight Walk Around
GUNNER - AH-64A



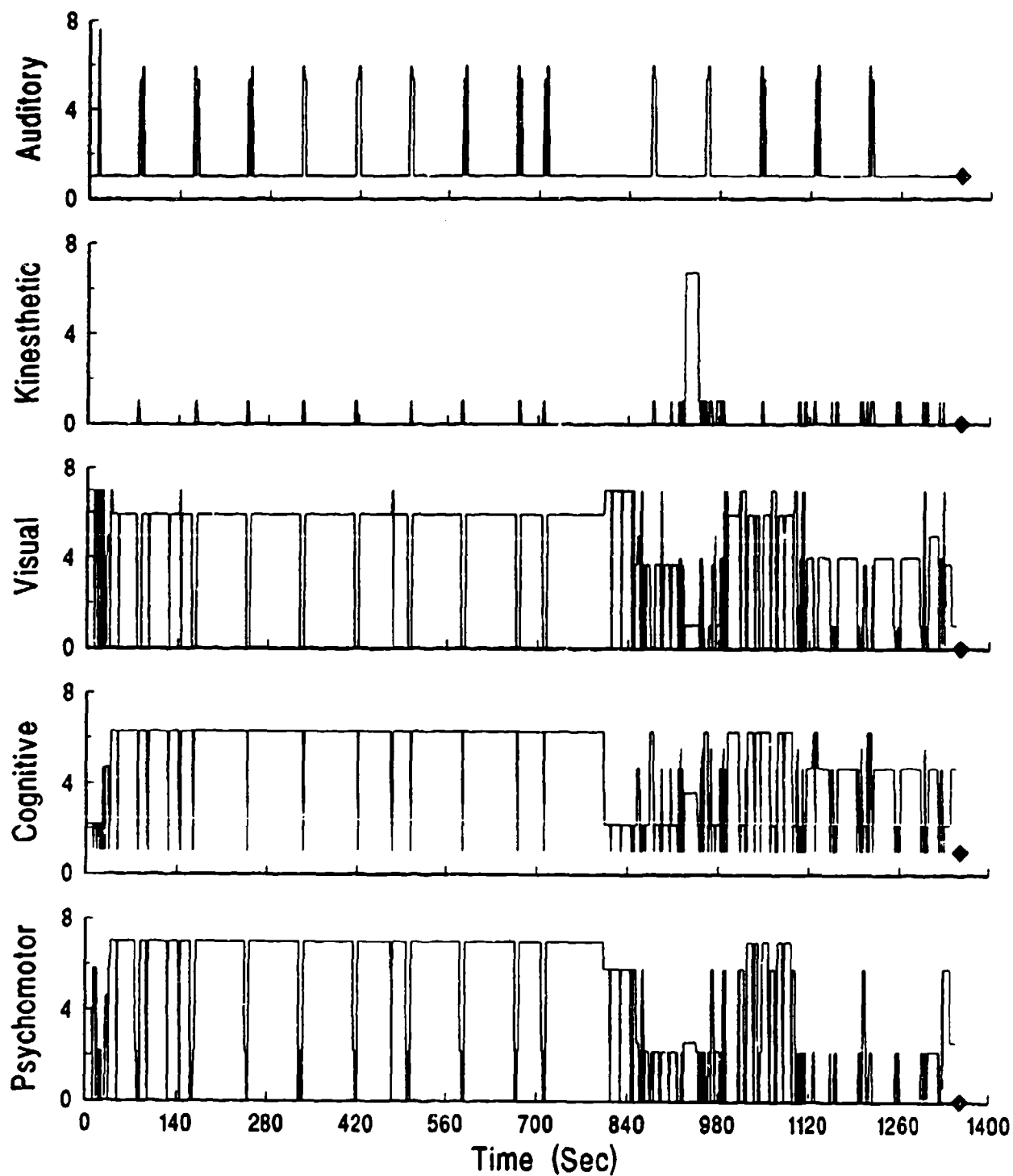
Segment 4: Interior Cockpit Check GUNNER - AH-64A



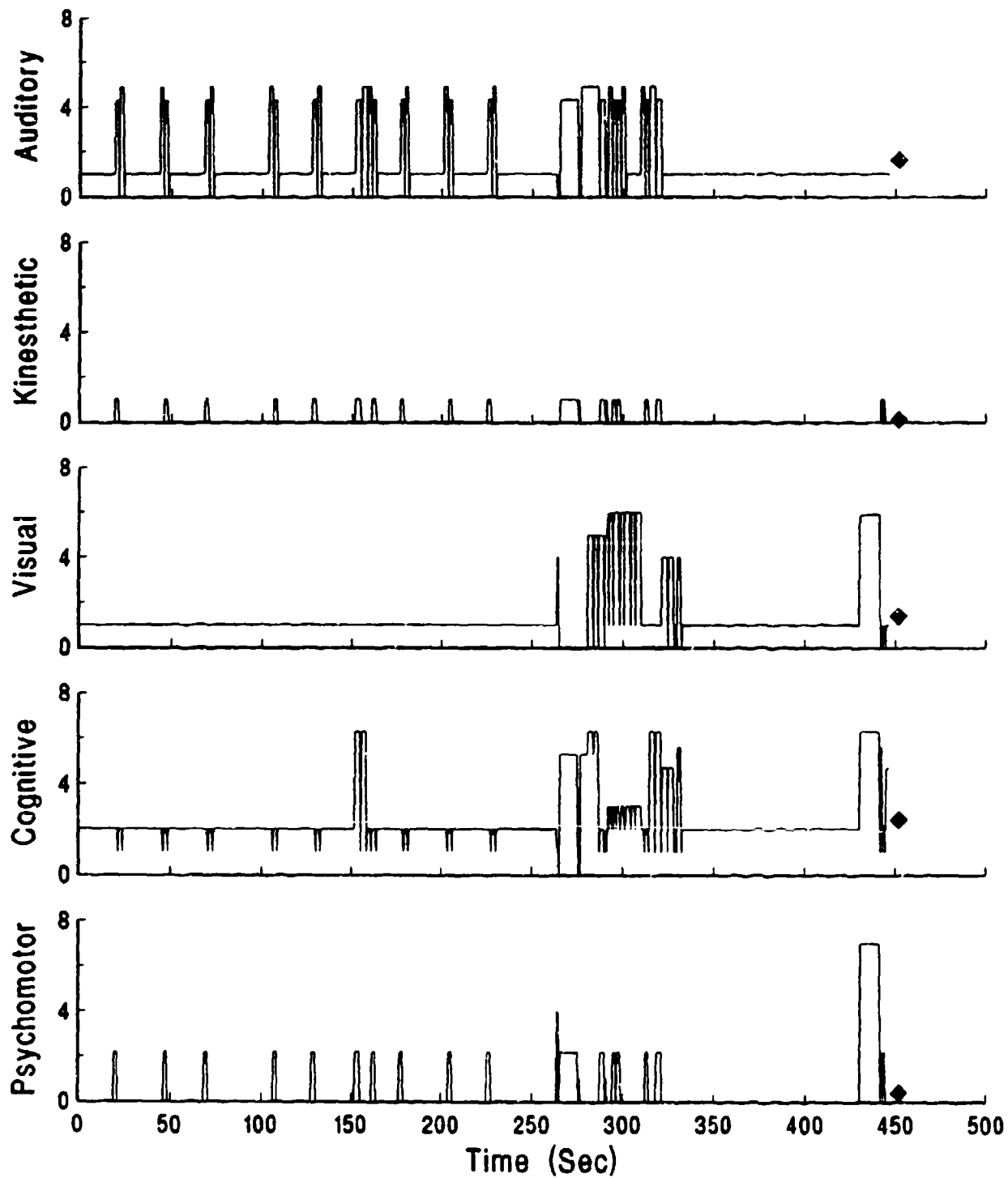
Segment 5: Starting APU
GUNNER - AH-64A



Segment 6: After Starting APU
GUNNER - AH-64A

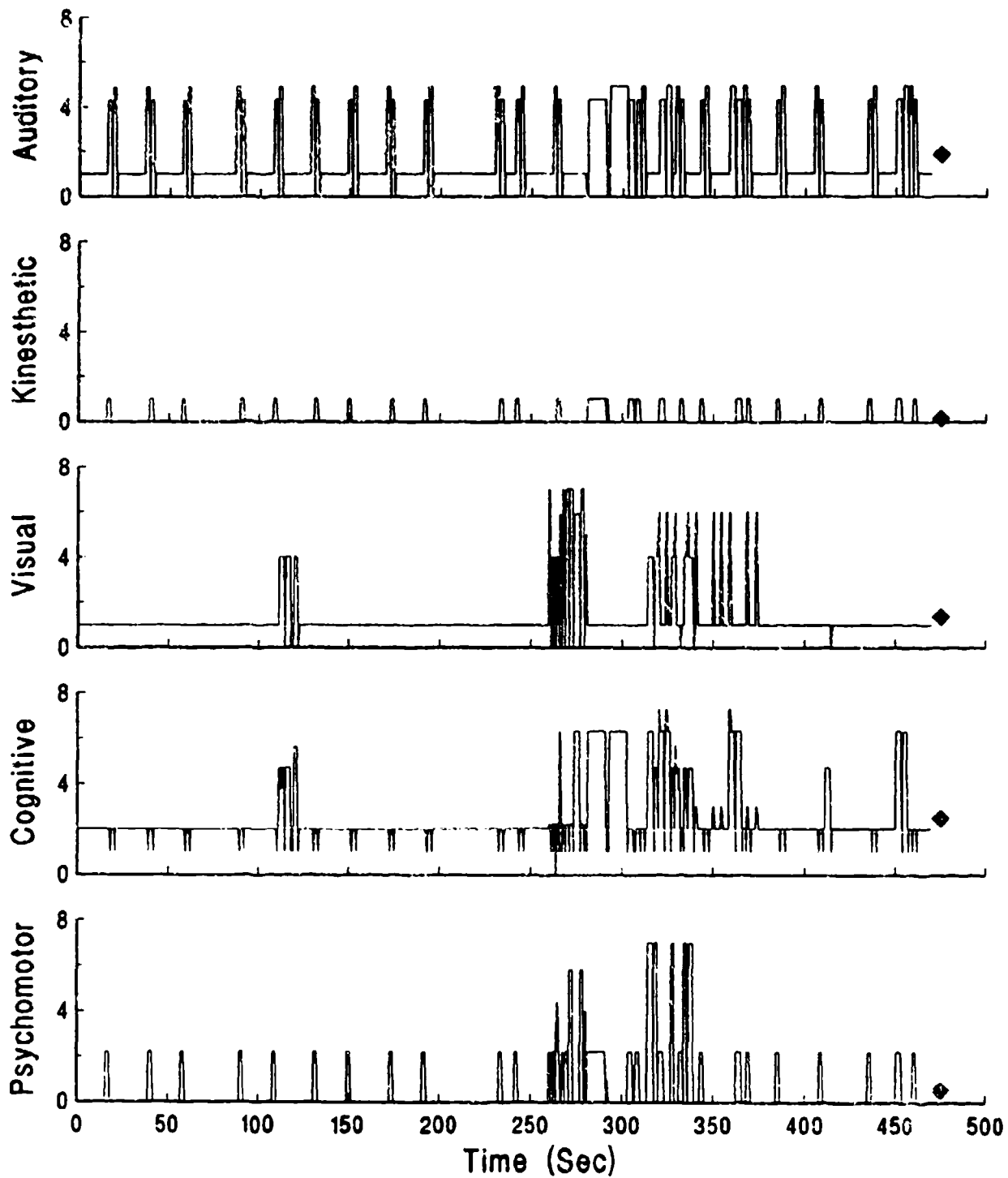


Segment 7: Taxi
GUNNER - AH-64A

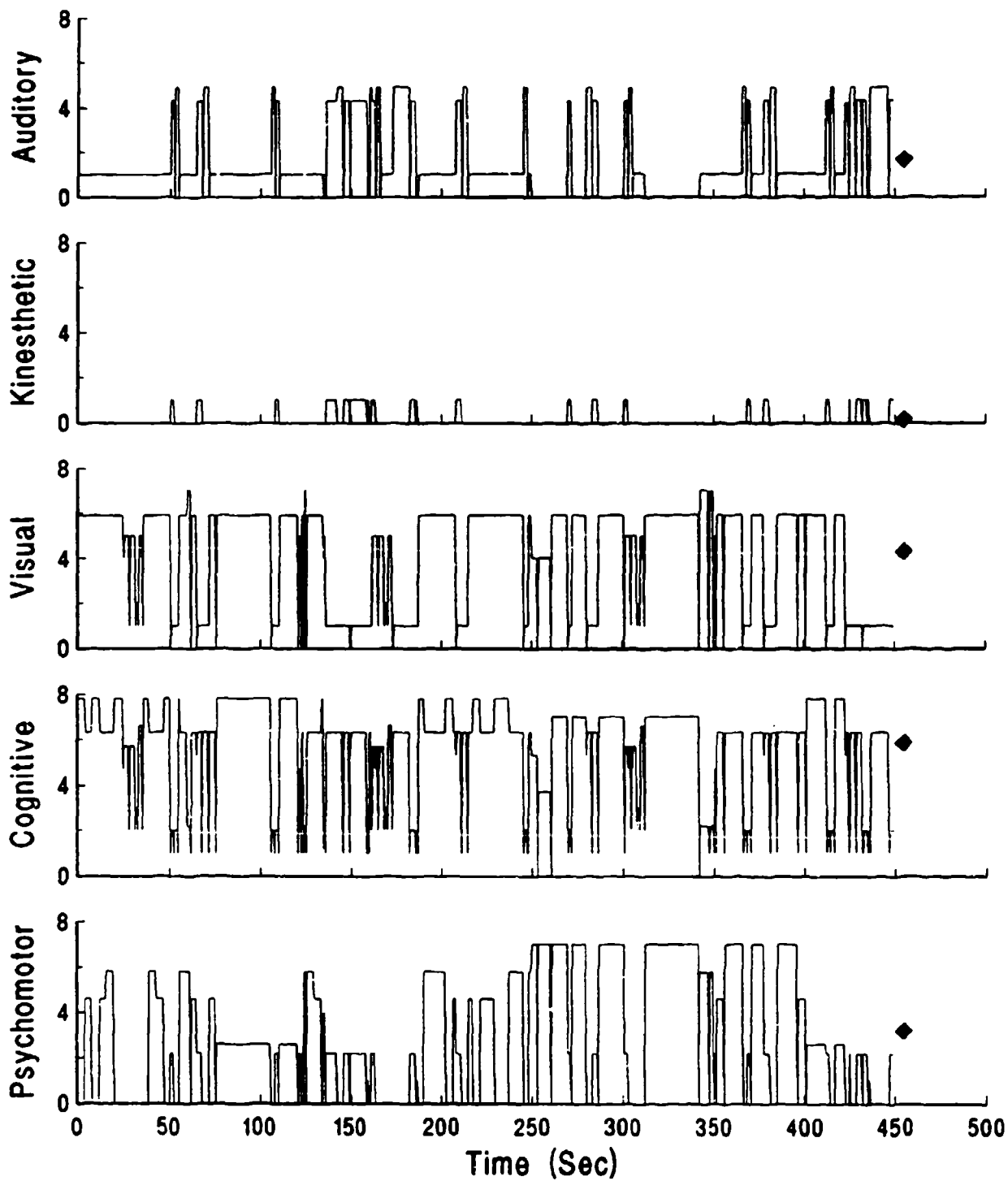


Segment 8: Takeoff (Contour)

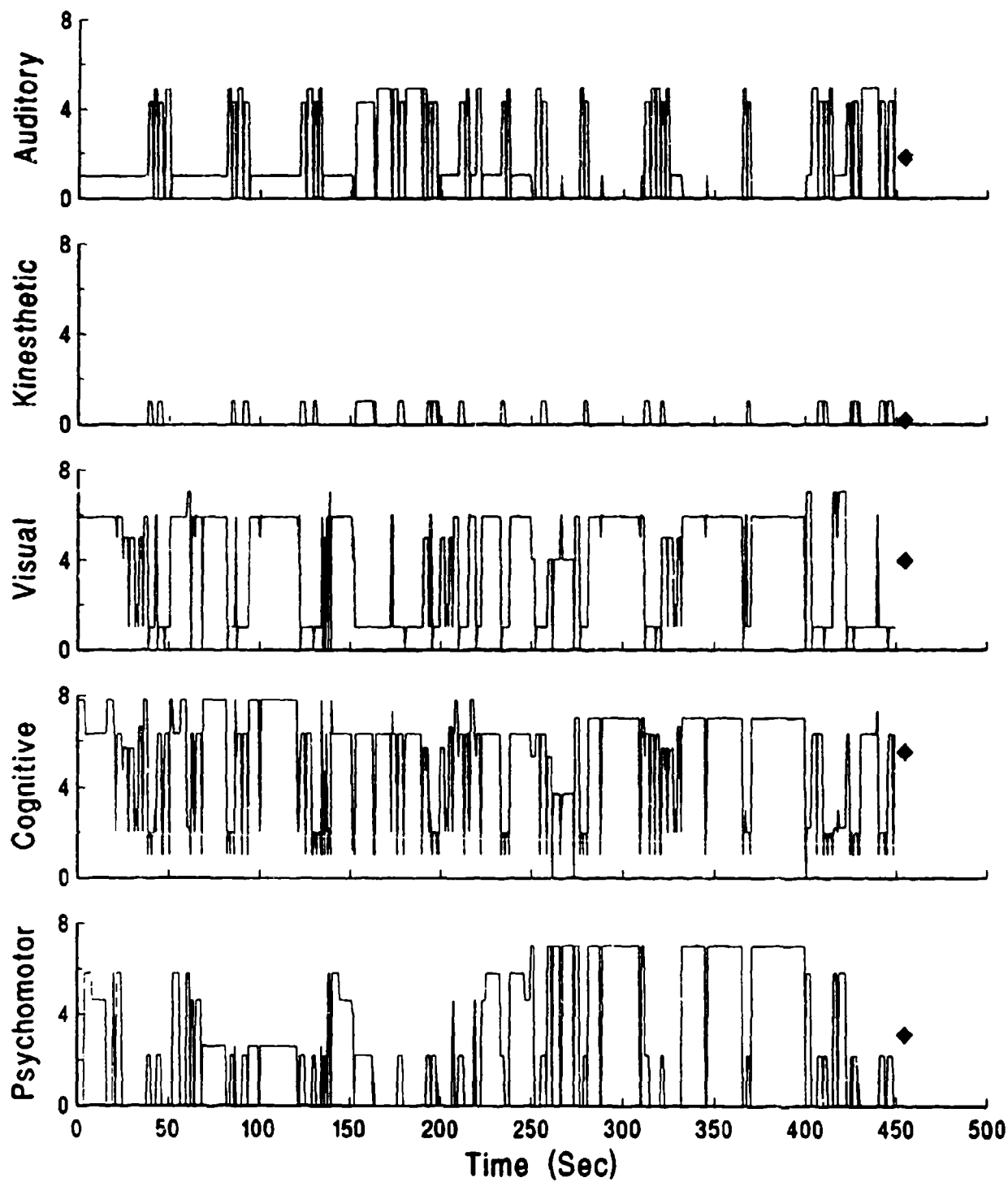
GUNNER - AH-64A



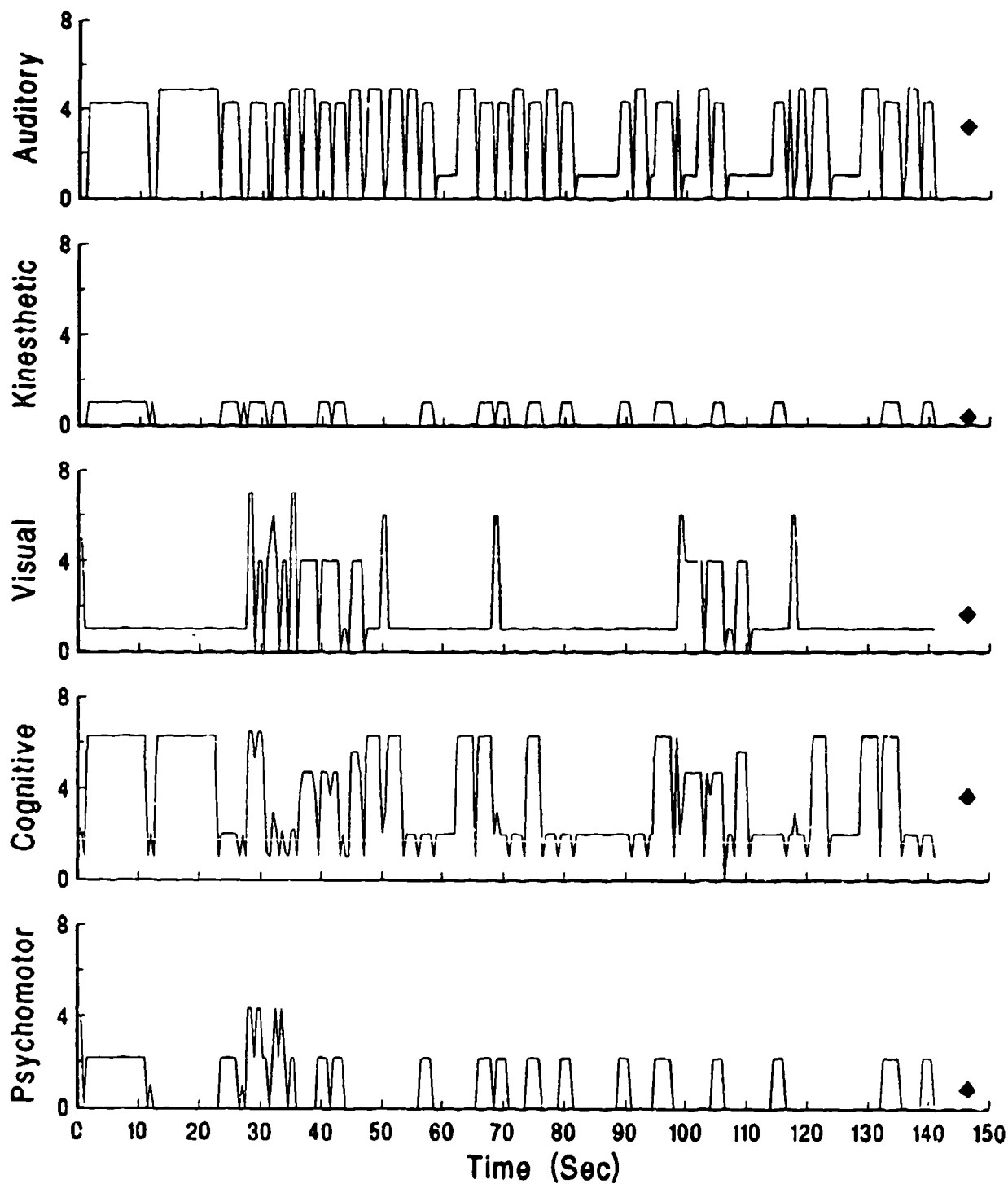
Segment 9: Contour Flight
GUNNER - AH-64A



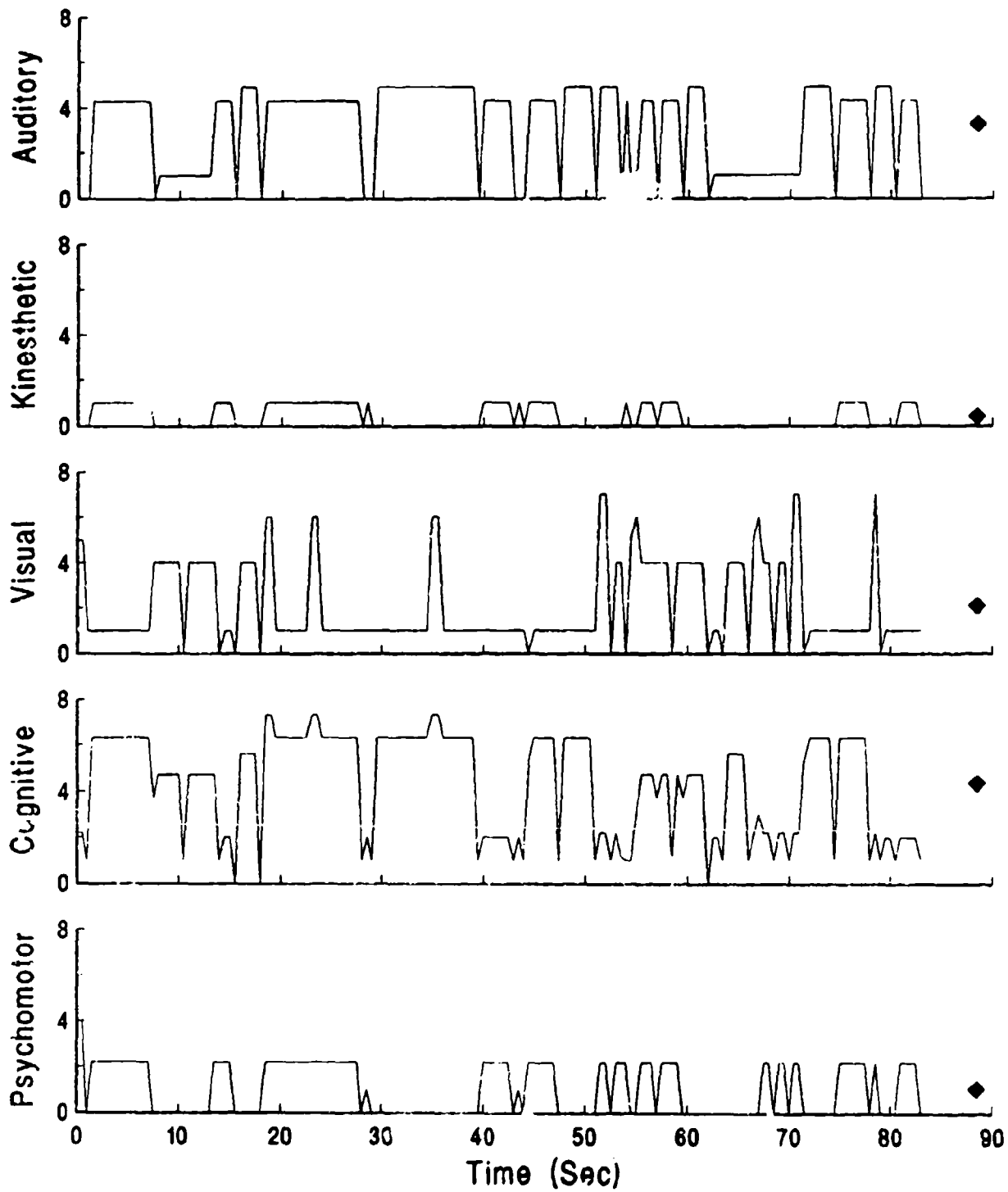
Segment 10: NOE Flight
GUNNER - AH-64A



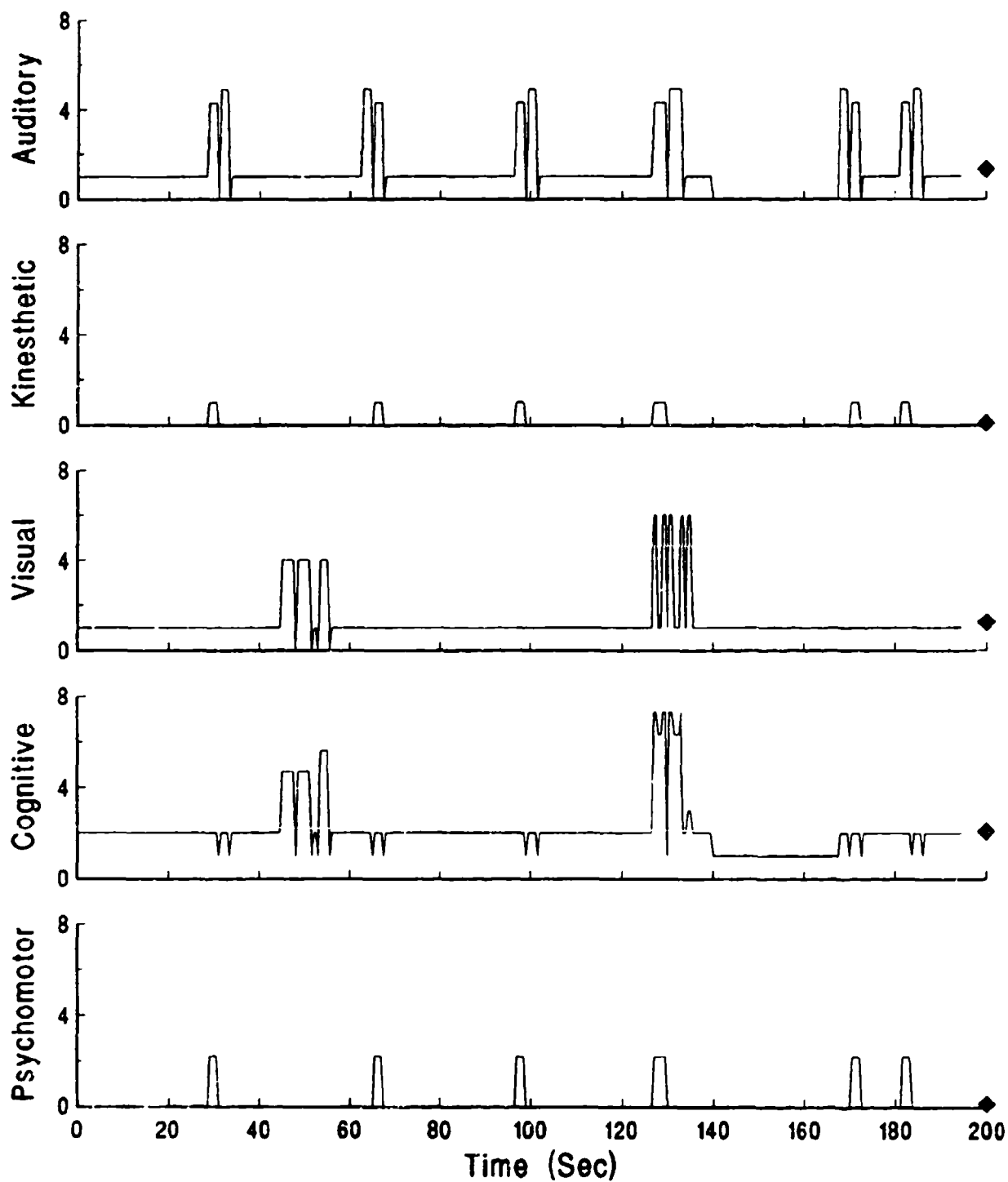
Segment 11: Approach (Contour)
GUNNER - AH-64A



Segment 12: Approach (NOE)
GUNNER - AH-64A

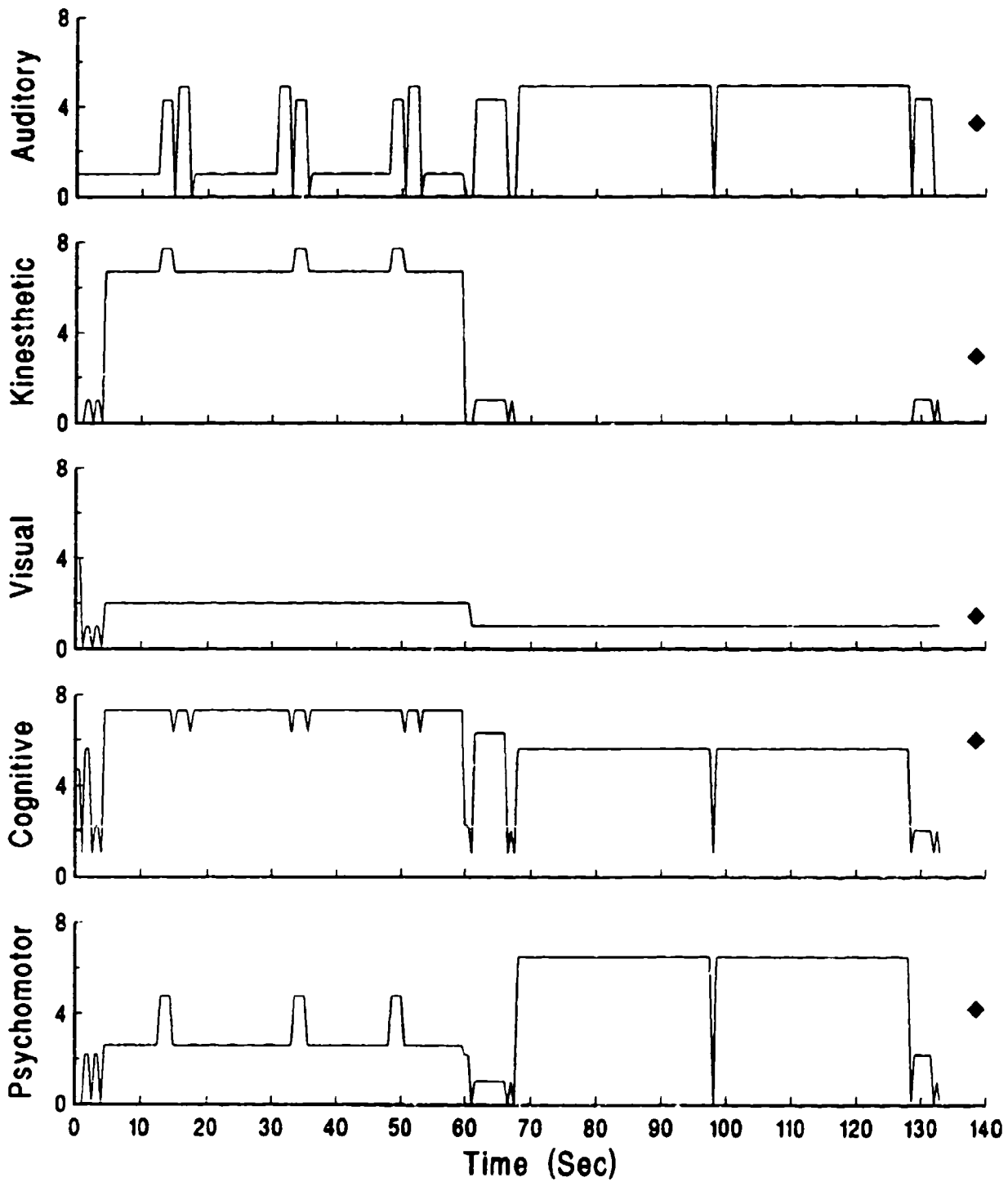


Segment 13: Landing
GUNNER - AH-64A

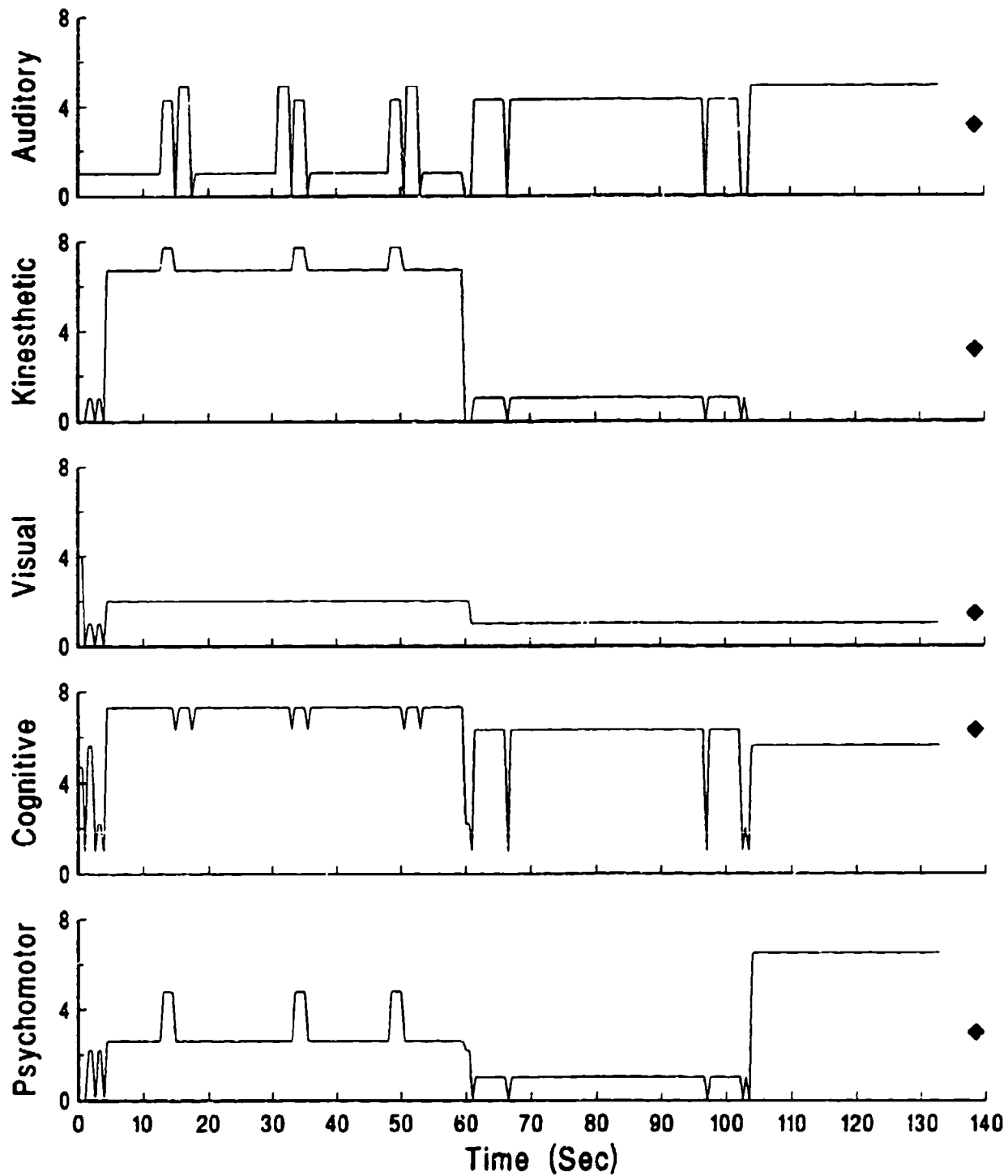


Segment 14: Holding Area Operations (Inbound)

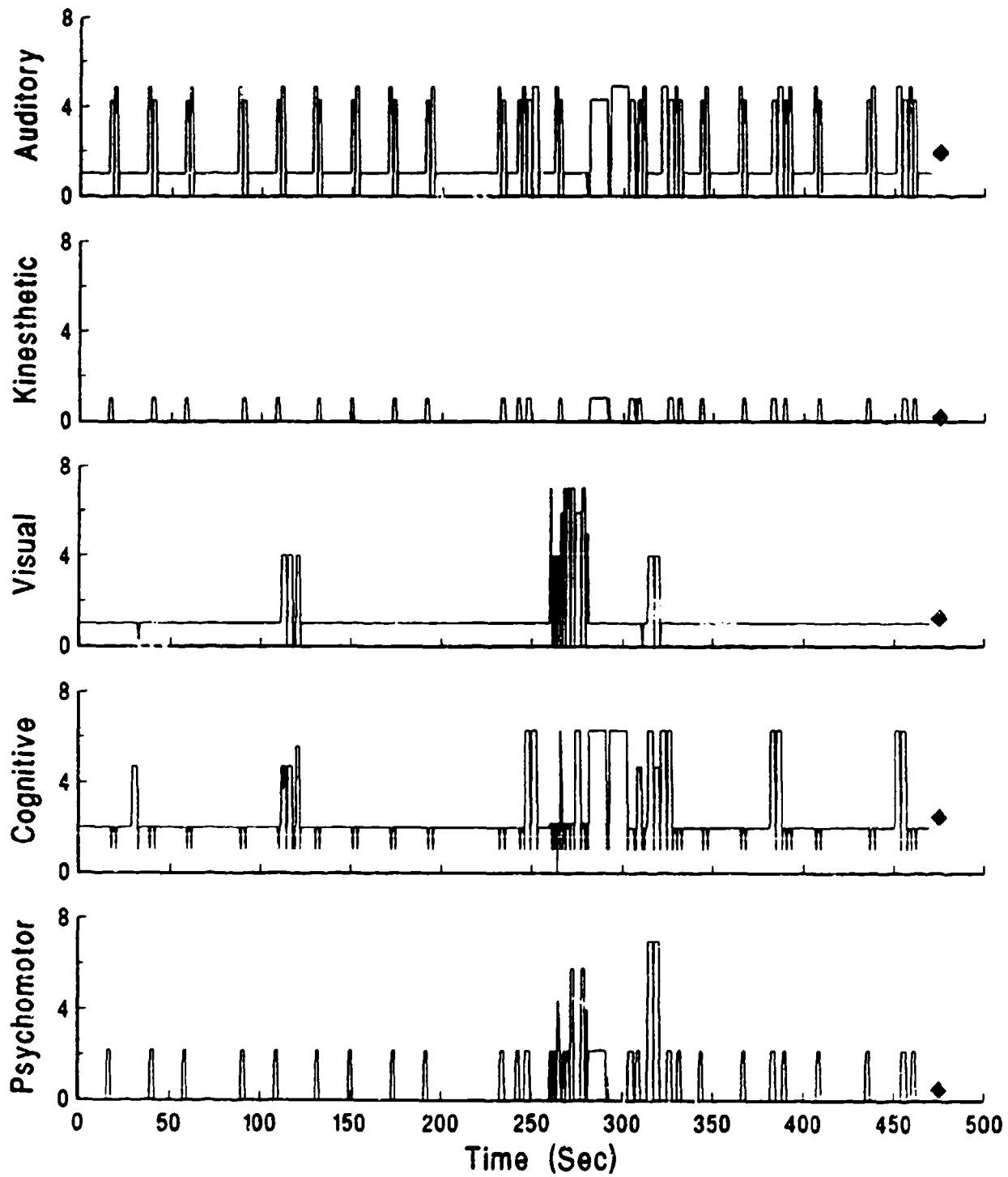
GUNNER - AH-64A



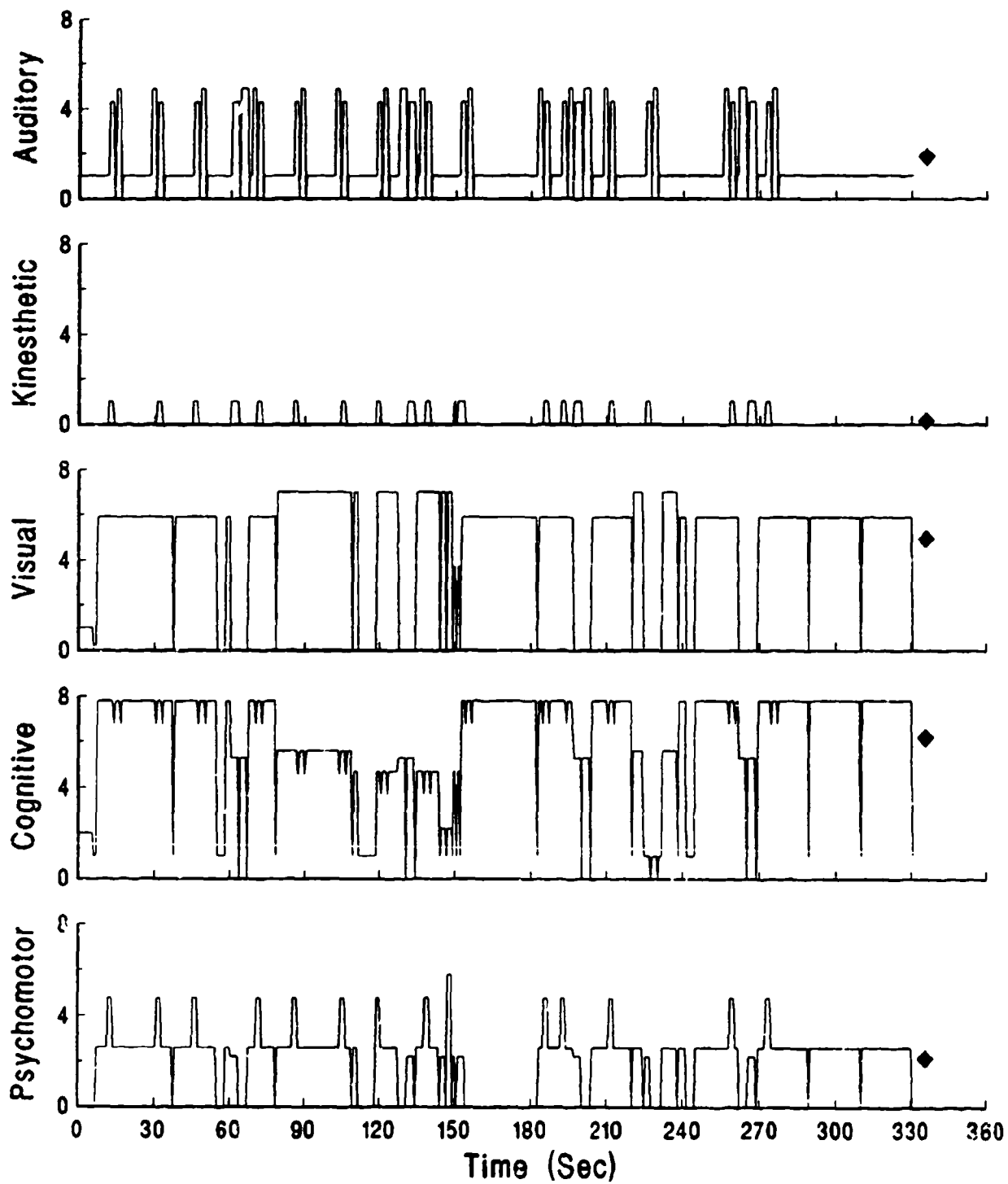
Segment 15: Holding Area Operations (Outbound)
GUNNER - AH-64A



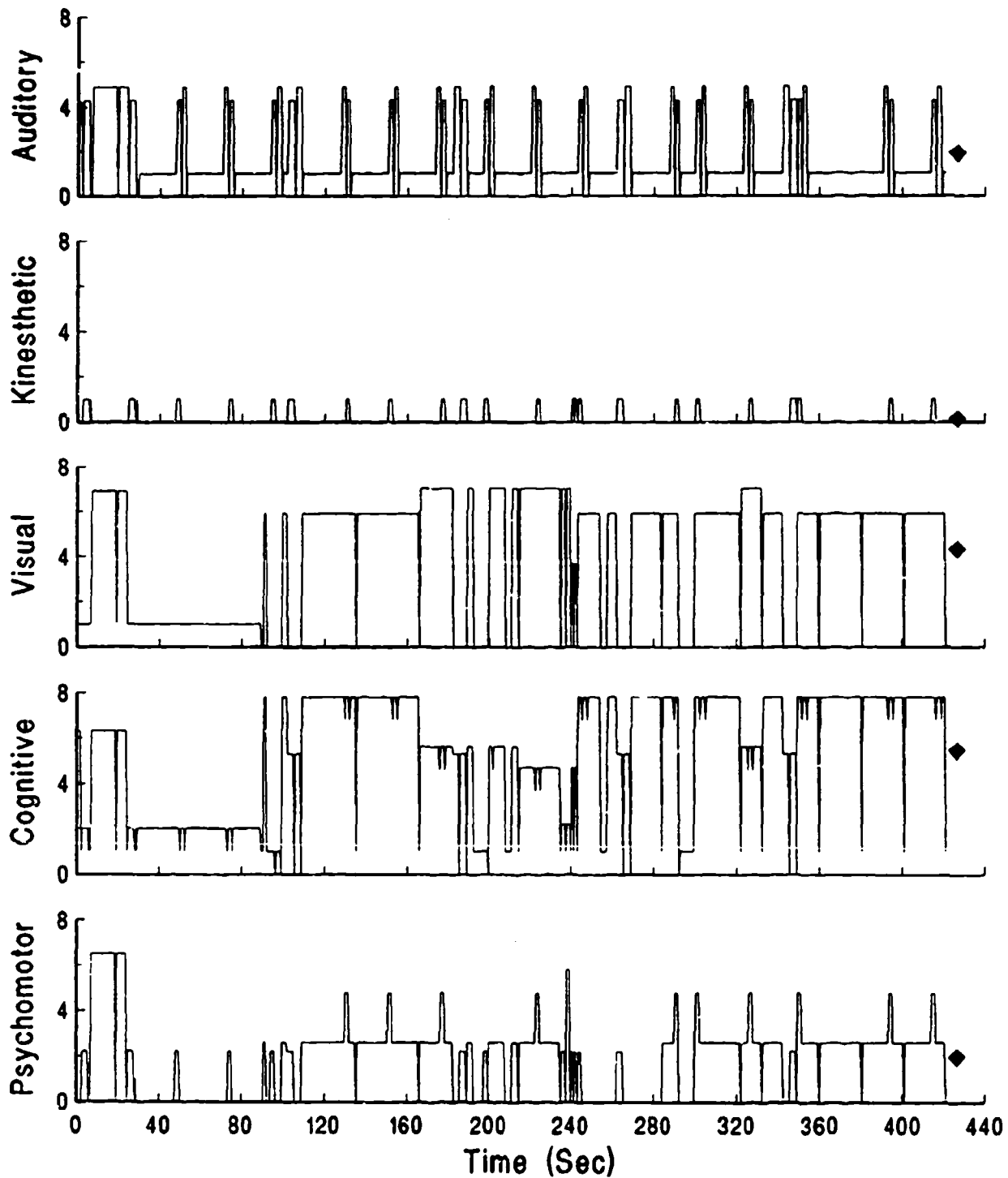
Segment 16: Takeoff (NOE)
GUNNER - AH-64A



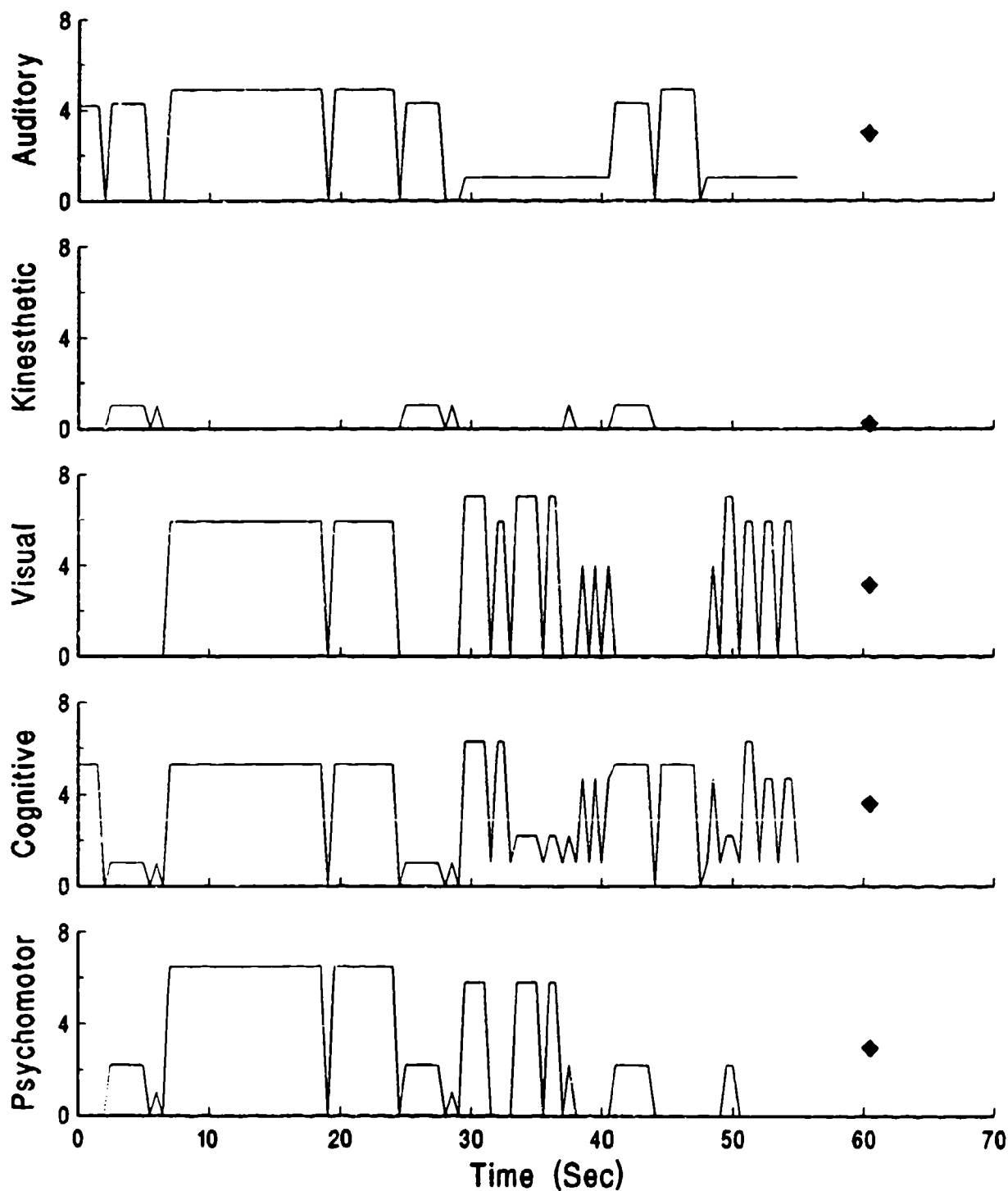
Segment 17: Establishment of Battle Position
GUNNER - AH-64A



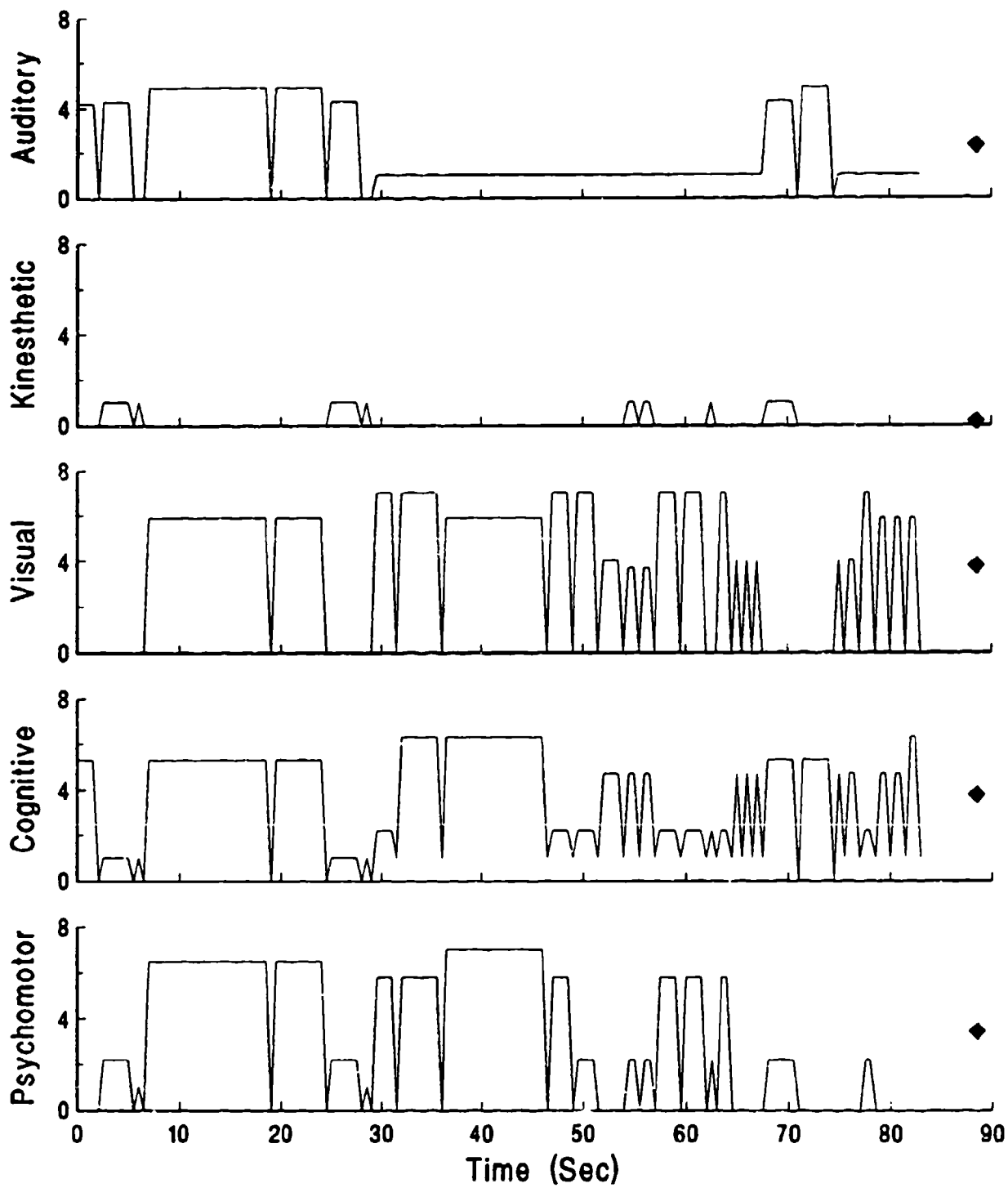
Segment 18: Deployment in Battle Area
GUNNER - AH-64A



Segment 19: Target Handover (Laser Spot Tracker)
GUNNER - AH-64A

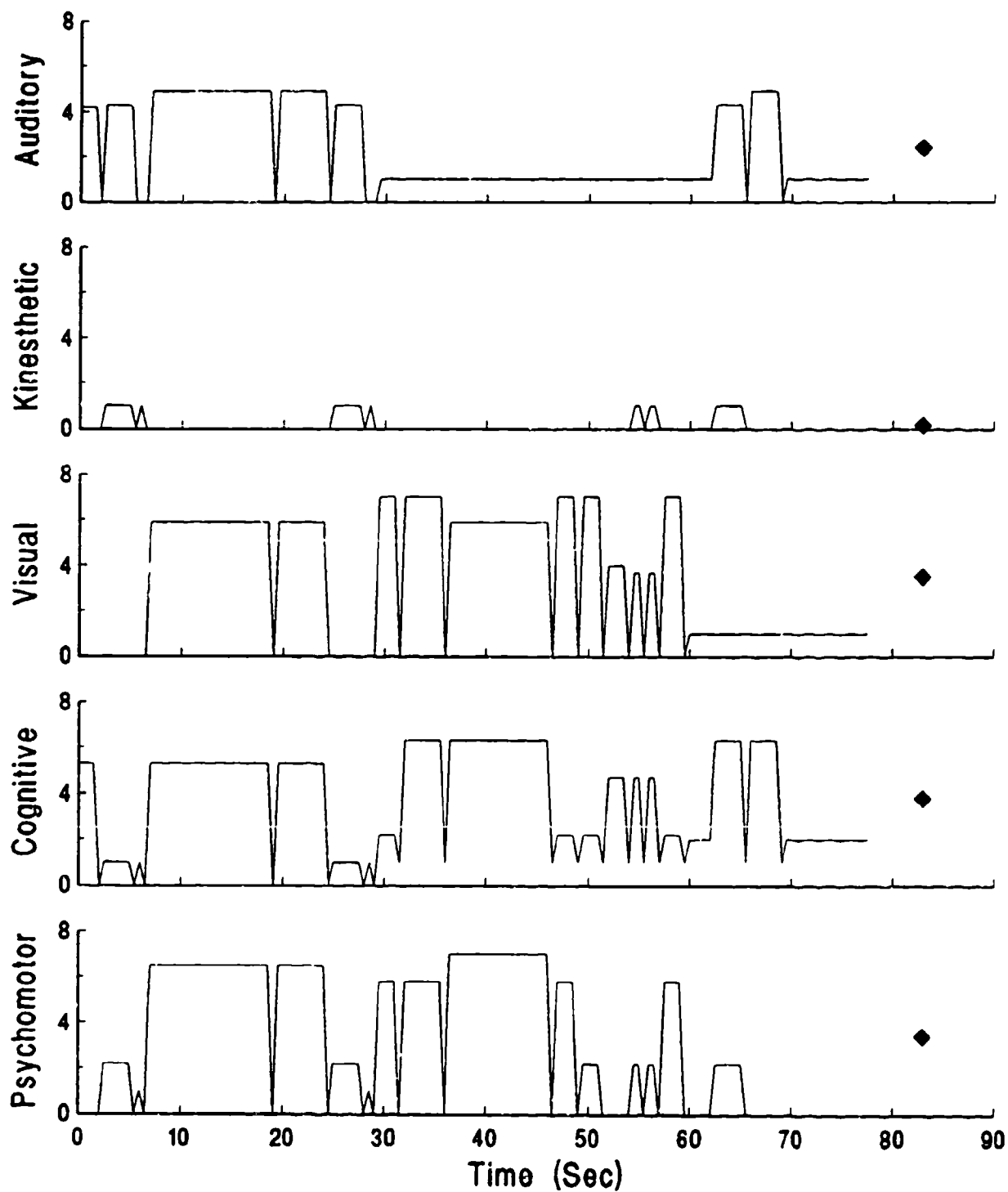


Segment 20: Target Handover, Grid (Missile)
GUNNER - AH-64A

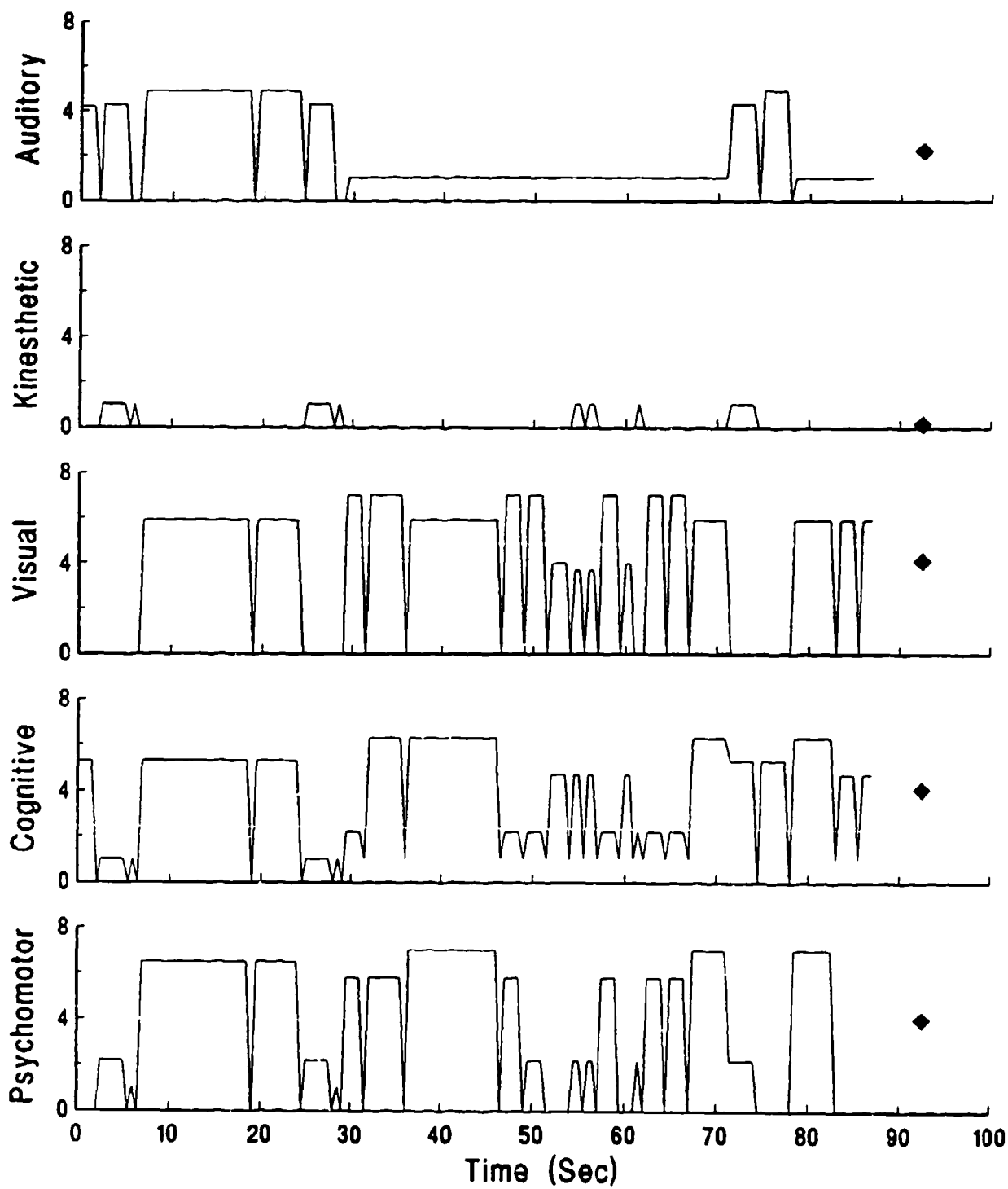


Segment 21: Target Handover, Grid (Gun, Pilot)

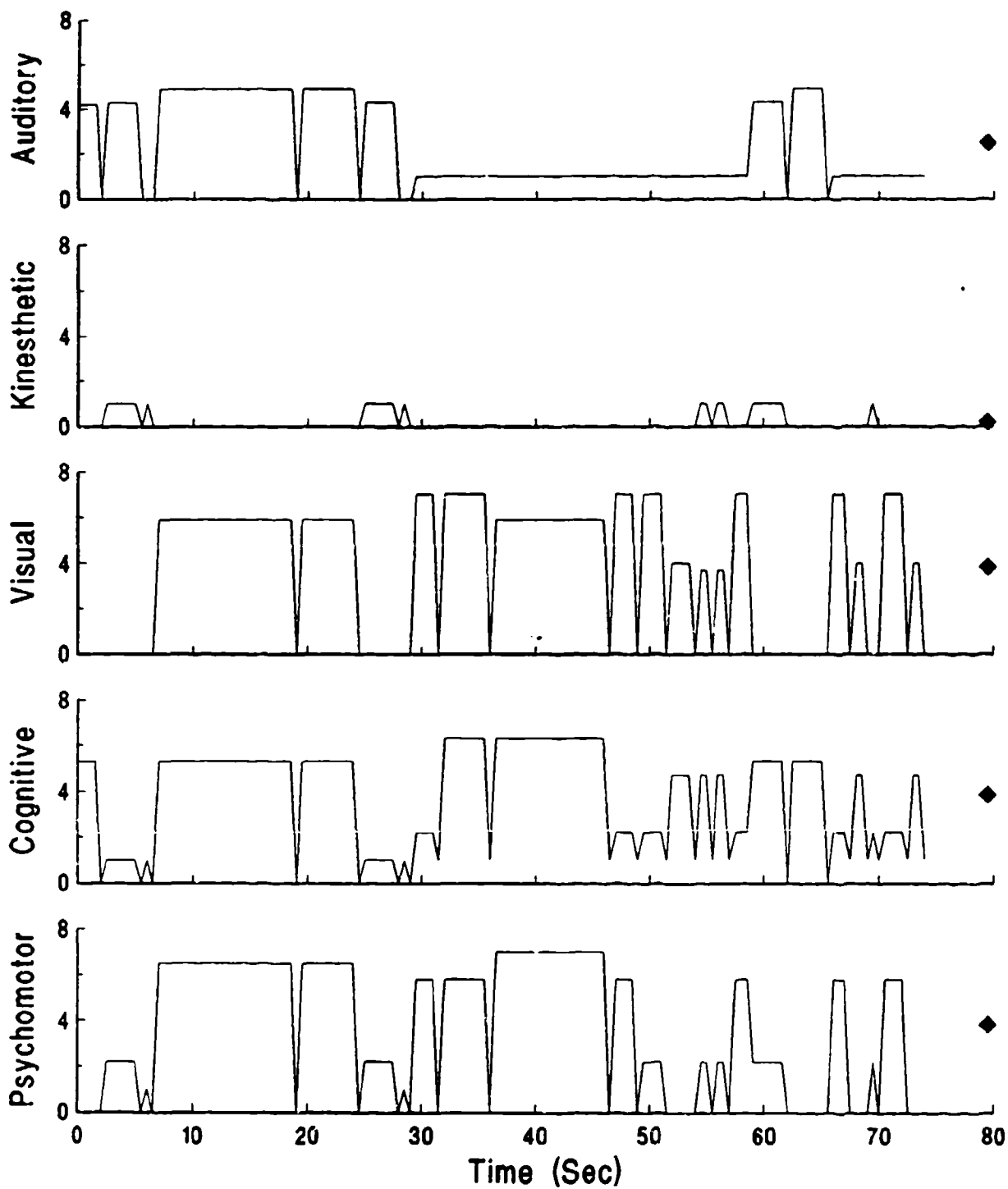
GUNNER - AH-64A



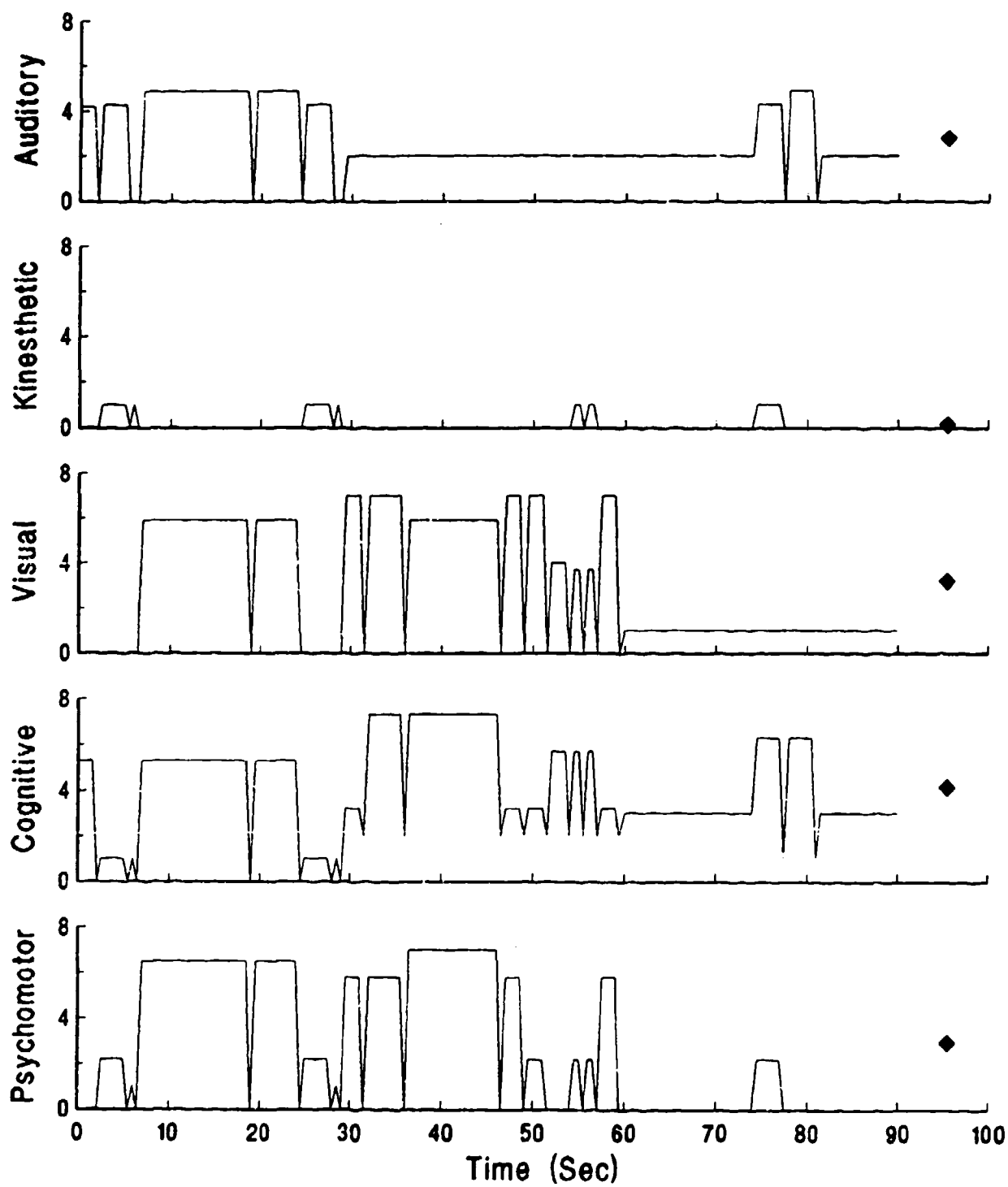
Segment 22: Target Handover, Grid (Gun, Gunner)
GUNNER - AH-64A



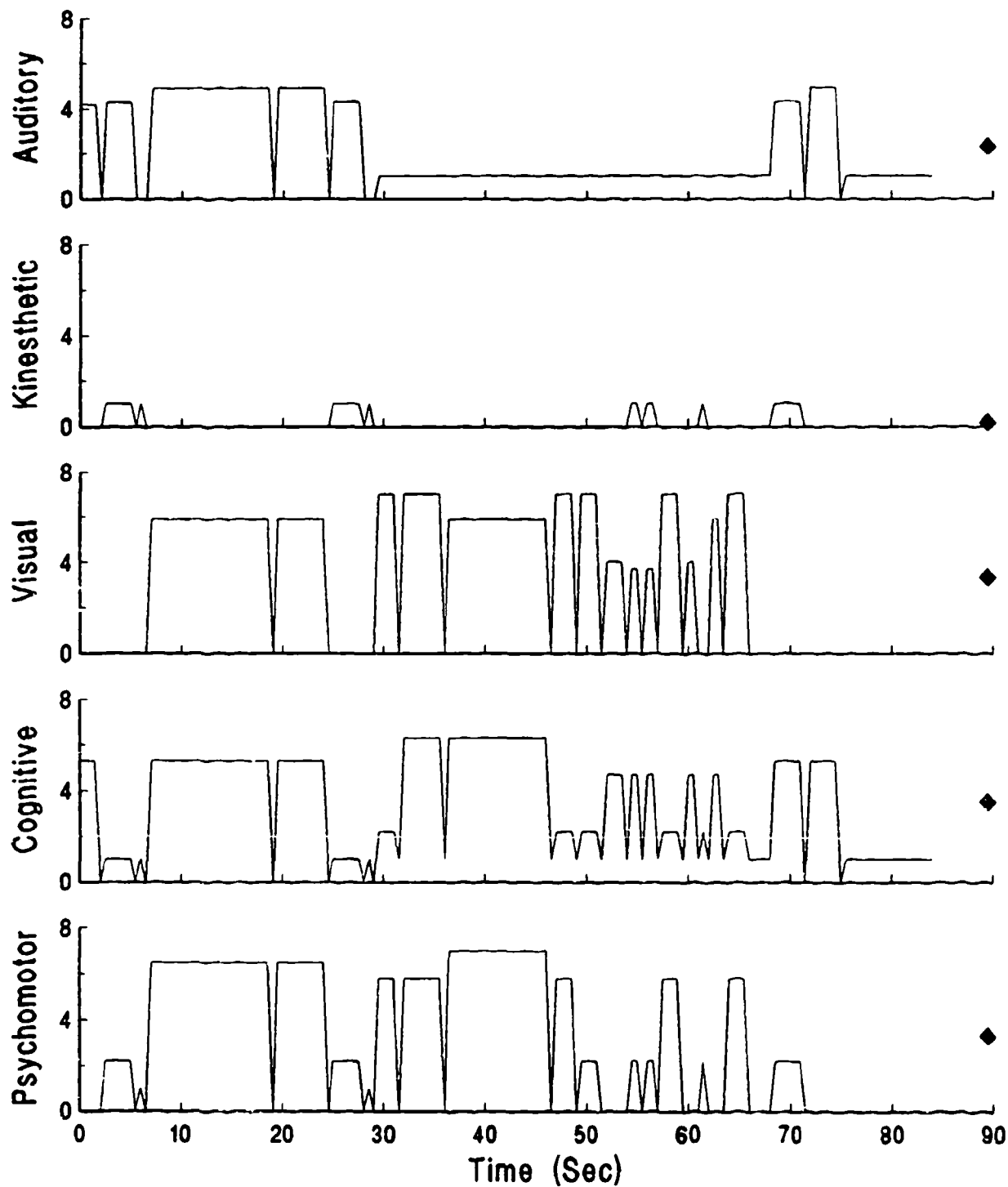
Segment 23: Target Handover, Grid (Gun, Gunner, Laser Range)
GUNNER - AH-64A



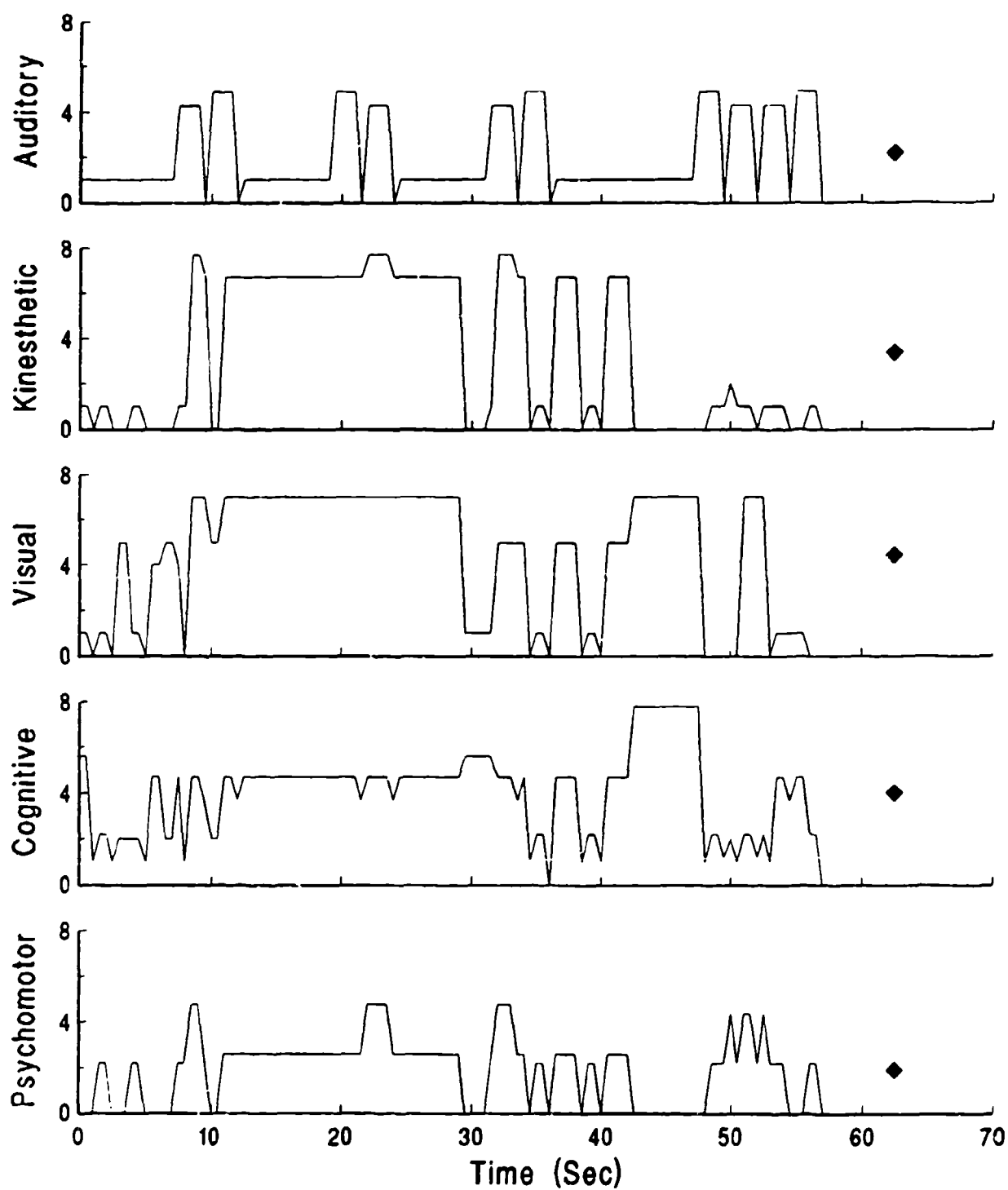
Segment 24: Target Handover, Grid (FFAR, Pilot)
GUNNER - AH-64A



Segment 25: Target Handover, Grid (FFAR, Cooperative)
GUNNER - AH-64A



Segment 26: Acquisition (DTV)
GUNNER - AH-64A



Segment 27: Acquisition (DTV, Laser Spot Tracker, Manual)
GUNNER - AH-64A

