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PHASE 1 TEST PROCEDURES

FOR A MODIFICATION TO THE

ARTS IIIA A3.05 PROGRAM

FOR THE

FINAL APPROACH SPACING TOOL (FAST)

CONFIGURATION CONTROL DECISION (CCD)

T15712 AND T16295

CASE FILES CD300-CPT-003A and CD300-AR3A-003

FINAL, REVISION A

MAY 11, 1993

FEDERAL AVIATION ADMINISTRATION
ATC TECHNOLOGY BRANCH, ~~ACD-340~~
ATLANTIC CITY INTERNATIONAL AIRPORT, N.J., 08405

May 11, 1993

To: R. Scarberry - CTA

From: T.E. Van Dyke - TMA

Subject: Delivery of a Revision to the Final Phase one Test Procedures for a Modification to the ARTS IIIA Program for the Final Approach Spacing Tool (FAST) dated May 11, 1993.

Reference: Contract Number DTFA03-89-C-00023 (CTAS)

Enclosed are two copies of the subject document. This document has been modified to reflect changes resulting from the test procedure dry run and the addition of steps to test the spare TIU.

This Test Procedure was prepared by Joe Kowalewski and replaces the Test Procedure dated April 5, 1993.

Thomas E. Van Dyke
TMA

PHASE 1

TEST PROCEDURES

FOR A MODIFICATION TO THE

ARTS IIIA PROGRAM

FOR THE

FINAL APPROACH SPACING TOOL (FAST)

CONFIGURATION CONTROL DECISION (CCD)

NXXXX

CASE FILES CD300-CPT-003A and CD300-AR3A-003

FINAL, REVISION A

May 11, 1993

FEDERAL AVIATION ADMINISTRATION
ATC TECHNOLOGY BRANCH, ACD-340
ATLANTIC CITY INTERNATIONAL AIRPORT, N.J., 08405

Preface

This specification details the test procedures that are necessary to test the modification to the ARTS IIIA program for the Final Approach Spacing Tool (FAST) system. Current plans are to test the prototype FAST system capabilities early in 1993. Initial testing of the ARTS IIIA modification will be at the FAA Technical Center (FAATC) and then the FAST system will be tested and evaluated at the Dallas - Ft. Worth TRACON.

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1.0 IDENTIFICATION

This Specification defines the software test procedures for the modification to the ARTS IIIA system for the Final Approach Spacing Tool (FAST) system (CCD NXXXX) which will be implemented by patching the ARTS IIIA A3.05 program. Initial testing of the ARTS IIIA modification will be at the FAATC and then the ARTS IIIA modification and the FAST system will be tested and evaluated AT THE DALLAS/FT. WORTH TRACON.

1.1 Background

The Growth of air traffic has created capacity conditions at many of the airports that serve the National airspace System (NAS).

One resolution to the capacity problem is to improve the efficiency of the existing terminal operations. At high density airports, individual terminal air traffic controllers apply extraordinary skills in controlling the air traffic flow. Limits in equipment, metering and intrafacility coordination often prevent the full inherent capacity of the existing runways from being realized.

1.2 Scope

The conduct of metering (regularly spaced flow of air traffic) is one means of obtaining a needed increase in airport capacity.

The FAST system was developed to bring the proven benefits of metering into the terminal environment, creating a smooth air traffic flow all the way to the runway.

The FAST system will integrate with the ARTS IIIA single or dual beacon systems. The integration of the FAST system (auxiliary processing) with the ARTS IIIA system to form the ARTSIIIA/FAST system requires interfaces of both hardware and software. The FAST system will provide ATC advisories (heading and velocity) in the ARTS IIIA Full Data Block (FDB) to the individual terminal controllers that will create a smoother, better coordinated flow of air traffic to the runway. All controller advisories will be presented in the forth line of the FDB.

The controller interface with the FAST system will be through the ARTS Data Entry and Display System (DEDS). FAST DEDS entries (operational/training) shall not be processed by the ARTS IIIA system (except for the enable/disable FAST entries) but will be forwarded by the ARTS system to the FAST system for processing.

1.3 Introduction

The information contained within this document is organized into four sections.

1. IDENTIFICATION (Section 1) contains the following:

    a. The approved title and abbreviation of the test.

    b. The purpose of the function to be tested.

c. A top level summary of the contents of this document.

2. APPLICABLE DOCUMENTS (Section 2) contains a list of documents that pertain to this test.

3. RESOURCES REQUIRED (Section 3) contains an exact description of the ARTS IIIA system configuration that is required for this test.

4. ARTS IIIA MODIFICATION TEST PROCEDURES (Section 4) contains the following:

   a. Procedures needed to prepare the equipment for the test.

   b. Procedures needed to prepare the operational and support software for the test.

   c. Test data sheets defining each step in test execution.

   d. Detailed data reduction and analysis procedures necessary for evaluation of the test (if applicable).

   e. Listings of the test scenarios (if applicable).

2.0 APPLICABLE DOCUMENTS

The following documents include specifications, standards guidelines and other special publications. These documents form a part of this specification and are applicable to the extent specified herein.

2.1 Government Documents

The following documents form a part of this specification. Where the exact edition is not shown, the edition in effect on date of contract award shall apply.

2.1.1 Specifications

2.1.1.1 Federal Aviation Administration

DATE TBD	Design Data Specification for the Modification to the to the ARTS IIIA Program for the Final Approach Spacing Tool System
NAS-MD-631 A3.05	NAS En Route Stage A - ARTS IIIA
NAS-MD-632 A3.05	Conflict Alert Adaptation Standards and Guidelines
NAS-MD-633 A3.05	Standards for Defining and Adapting Values for MSAW site Variables
NAS-MD-634 A3.05	System Description and Specification series
NAS-MD-635 A3.05	Multiprocessor Executive (MPE)
NAS-MD-636 A3.05	Parallel SRAP Processing
NAS-MD-637 A3.05	Target Processing (Tracking) and ISL
NAS-MD-638 A3.05	Keyboard
NAS-MD-639 A3.05	Display Output Processing
NAS-MD-640	Interfacility Data Transfer

A3.05

NAS-MD-641 A3.05	Bulk Store Flight Plans
NAS-MD-642 A3.05	ASR-37 Non-Executive Error and Status Messages
NAS-MD-643 A3.05	Site Adaptation and status Messages
NAS-MD-644 A3.05	MSAW and Altitude Tracking and Status Messages
NAS-MD-645 A3.05	ASR-37 Non-Executive Console Teletype Input Processing and On-Call Tasks
NAS-MD-646 A3.05	Builder/BUP and CDR Editor
NAS-MD-647 A3.05	Recovery
NAS-MD-648 A3.05	Continuous Data Recording Processing
NAS-MD-649 A3.05	Remote Display Processing

2.1.2 Other Publications

2.1.2.1 Federal Aviation Administration

NASP-2501-04 A3.05	ARTS IIIA Systems Operators Manual
ARTS IIIA Program Coding Specifications A3.05	Volume I of III
ARTS IIIA Program Coding Specifications A3.05	Volume II of III
ARTS IIIA Program Coding Specifications A3.05	Volume III of III
ARTS IIIA Program Source Listing A3.05	A3.05
ARTS TIU Workshop Minutes	14 May 1991
TATCA Phased Approach Interface solution	7 June 1991
Specification for a modification of the ARTS Input/Output processor (IOP) software for the Final Approach Spacing Tool System	7 June 1991

CTAS ARTS/TIU Project Meeting	18 July 1991
CTAS Meeting Minutes	6 August 1991

2.1.2.2 Military

None

2.1.2.3 Other Government Activity

None

2.2 Non-Government Documents

None

3.0 RESOURCES REQUIRED

The personnel and additional equipment needed are described in the test section for each individual test. The following hardware and software is required for all testing. The setup of the hardware and software is described in sections 4.1 and 4.2.

3.1 Equipment Requirements

AMOUNT	DESCRIPTION
	FAATC HARDWARE LIST
4	Input/Output Processors "B" (IOPB)
14	Memory Modules (MMs)
1	Reconfiguration and Fault Detection Unit (RFDU)
5	TI Displays
1	Card Reader (CR)
2	Disc Control Unit (DCU)
2	Disc Drive Units (DDU)
1	Medium Speed Printer (MSP)
1	Magnetic Tape System (MTU)
1	Teletype (TTY)
1	TATCA Interface Unit (TIU)
2	Data Acquisition and Display Systems (DADS)

3.2 Software Requirements

- ARTS IIIA A3.05 Operational Program, Dual Sensor, Level 0 (AHR)
- ARTS IIIA A3.05 Operational Program, Dual Sensor, Level 0 with Event Recorder on (AHR).
- Retrack Program (AHR) Level 0
- Event Editor Program
- Editor Program

3.3 Personnel

The following personnel will be required for testing.

- Test Manager
- Test Conductors (2)

3.4 Test Location and Schedule

Testing is currently planned for early in 1993. Two test are planned, the first will be conducted at the FAA Technical Center (FAATC) and the second will be conducted at the Dallas/Ft. Worth TRACON.

3.5 Test Termination and Restart of Test

All tests will be run from beginning to the end without interruptions. If any interruptions occur that cause a need to repeat a step or steps, a determination at that point will be made by the test manager (after coordination with the FAA) to repeat the step or steps or the entire test.

4.0 TEST PROCEDURES FOR A MODIFICATION TO THE ARTS IIIA PROGRAM FOR FAST

The test procedures for the Final Approach Spacing Tool (FAST) consists of five major testing sections and are as follows:

1. Computer Utilization (Capacity) Test
2. Keyboard Entry Test
3. Interfacility Test
4. Central Track Store (CTS) Test
5. Fault Detection and Reconfiguration Test
6. Confidence and Stability Test

The design of the test procedures will be to allow for a logical break point every two hours. This is necessary in case computer time cannot be obtained for more than two hour blocks.

4.1 Hardware Set-UP Procedures

The following Power-on Bring-up procedures are assumed to be from a completely powered down state. Since most test categories will be performed in an already operational site environment, equipment initialization will be a process of inspection and verification of the proper switch settings as indicated for each individual piece of equipment needed to support a particular test script. As a result of this inspection/verification process when needed, the appropriate switch set action indicated in the procedures will be performed.

4.1.1 Equipment Initialization

The following ARTS IIIA equipment initialization procedures should be followed in the sequence presented within, so that the operational program can be loaded and initialized.

4.1.1.1 Data Processing Subsystem (DPS) Cabinet Initialization

Perform the following at each Processor Cabinet Control Panel.

Step	Station	Description
1	DPS	ACTION: Set UTILITY circuit breaker to ON
2	DPS	ACTION: SET MAIN POWER CIRCUIT BREAKER TO ON
3	DPS	ACTION: Set FAN switch to ON
4	DPS	ACTION: Set DC POWER switch to ON
5	DPS	ACTION: Set OVERTEMP HORN switch to NORMAL
6	DPS	ACTION: Set CABINET POWER SHUT DOWN switch to NORMAL
7	DPS	ACTION: Set all CHANNEL BACK-TO-BACK (CBB) switches to the down position

Comments:

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4.1.1.2 Magnetic Tape Unit Initialization (MTU)

Perform the following at each of the MTU power control Panels:

Step	Station	Description
1	MTU	ACTION: Mount the program tape to be read on the MTU.
2	MTU	ACTION: Set the tape transport switch to MANUAL.
3	MTU	ACTION: Depress the forward indicator until the tape has passed the load point (Silver marker)
4	MTU	ACTION: Momentarily depress the REWIND indicator (BOT indicator should be lit.)
5	MTU	ACTION: Set the TAPE TRANSPORT switch to AUTO

Comments:

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4.1.1.3 Teletype Unit Initialization (TTY)

Perform the following at each of the TTY power control Panels:

Step	Station	Description
1	TTY	ACTION: Insure POWER is ON
2	TTY	ACTION: Insure TTY is on-line (Local lites are not lit)

Comments:

_____

_____

4.1.1.4 Input/Output Processor Model "B" Initialization (IOPB)

Step	Station	Description	
1	IOPB	ACTION:	Set AC/DC Regulator POWER switch to ON
		OBSERVE:	On the AC/DC converter, The amber DC output indicator illuminates.
		OBSERVE:	On the DC/DC converter, the green -5.5v indicator illuminates
2	IOPB	ACTION:	Set CONSOLE switch up to SET
3	IOPB	ACTION:	Set LSO/START switch to the middle position
4	IOPB	ACTION:	Set DEBUG/STOP switch down to STOP
		OBSERVE:	Green RUN light is off
5	IOPB	ACTION:	Press MASTER CLEAR button
6	IOPB	ACTION:	Set JUMP/STOP 1, 2, 3 switches down
7	IOPB	ACTION:	Set JUMP/STOP 4, 5, 6, 7 switches UP (jump)
8	IOPB	ACTION:	Set AUTO START switch up to AUTO START
9	IOPB	ACTION:	Set RTC ENABLE switch up to RTC ENABLE
10	IOPB	ACTION:	Set NDRO ENABLE/DISABLE switch to ENABLE
11	IOPB	ACTION:	Rotate LOAD switch to I position
12	IOPB	ACTION:	Set I/O ACK LONG switch DOWN
13	IOPB	ACTION:	Set PARITY STOP switch DOWN
14	IOPB	ACTION:	Set FAULT STOP switch DOWN
15	IOPB	ACTION:	Set BUFFER STEP ENABLE switch DOWN
16	IOPB	ACTION:	Set DISABLE ADV P/FUNCT REPEAT switch to MIDDLE position
17	IOPB	ACTION:	Set switch DOWN at card 61H
16	IOPB	ACTION:	Set all BREAKPOINT PANEL switches to the DOWN position

Comments:

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4.1.1.5 IOPB Register Set Procedures

The following procedures are used when setting the contents of a central register on an IOPB. (Refer to the CENTRAL REGISTER area and CENTRAL REGISTER SELECT area of an IOPB.)

Step	Station	Description
		*Alter the contents of A-Register.
1	IOPB	ACTION: Press A at CENTRAL REGISTER SELECT area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set appropriate bits (0-29) to represent the value to be inserted
		*Alter the contents of Q-Register
2	IOPB	ACTION: Press Q at CENTRAL REGISTER SELECT area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set appropriate bits (0-29) to represent the value to be inserted
		*Alter the contents of a specific B-Register
3	IOPB	ACTION: Press ARITH/CM switch at CENTRAL REGISTER SELECT area ACTION: Press CLR button and appropriate buttons (0-5) at CM ADDRESS area to specify the B register to be altered ACTION: Set appropriate bits (0-29) at CENTRAL REGISTER area to represent the value to be inserted in the selected B register
		*Alter the contents of S-Register
4	IOPB	ACTION: Press the appropriate button (SR0-SR2) at EXT REGISTER SELECT area ACTION: Press CLR button at EXT REGISTER area ACTION: Set appropriate bits (13-17) to represent the value to be inserted in the selected S register

Comments:

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4.1.1.6 Central Memory Access (CMA) Initialization

Perform the following at each of the TTY power control Panels:

Step	Station	Description	
1	IOPB	ACTION:	Set AC/DC Regulator POWER switch to ON
		OBSERVE:	On the AC/DC converter, The amber DC output indicator illuminates.
		OBSERVE:	On the DC/DC converter, the green -5.5v indicator illuminates

Comments:

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4.1.1.7 Disc Subsystem (DCU)

Perform the following at the DCU Rack Power Control Panel:

Step	Station	Description
1	DCU	ACTION: Set POWER UTILITY switch to ON
2	DCU	ACTION: Set RACK POWER switch to ON
		* At the DCU Power Sequence Panel:
3	DCU	ACTION: Set SEQUENCE POWER J1 circuit breaker to ON
4	DCU	ACTION: Set DISC POWER J1 circuit breaker to ON
		* At the DCU Maintenance Panel:
5	DCU	ACTION: Set DCU/DRIVE POWER switch down to OFF
6	DCU	ACTION: Set BREAK POINT ADDRESS ENABLE switch DOWN
7	DCU	ACTION: Set MICRO BRANCH switches DOWN
8	DCU	ACTION: Set BITE DISABLE switch UP
9	DCU	ACTION: Set PROGRAM TIME OUT ENABLE switch DOWN
10	DCU	ACTION: Set OVER TEMP ENABLE/DISABLE switch up to ENABLE
11	DCU	ACTION: Set IOP INTERFACE ENABLES switches up to ENABLE for all operational IOPBs
12	DCU	ACTION: Set IOP INTERFACE ENABLES switches up down DISABLE for all intended off-line IOPBs
13	DCU	ACTION: Set DISC NUMBER 0 and 1 switches to down
14	DCU	ACTION: Set TEST/MONITOR 0 and 1 switches to down
15	DCU	ACTION: Set ON-LINE DRIVE SELECTION switches up to ON for all operational discs
16	DCU	ACTION: Set ON-line drive selection switches down to OFF for all off-line discs
17	DCU	ACTION: Set ON-LINE/IN-LINE/OFF-LINE switch up to ON-LINE
18	DCU	ACTION: Rotate FUNCTION switch to OFF
19	DCU	ACTION: Set DATA PROTECT switch up to ON
20	DCU	ACTION: Set DCU /DRIVE POWER switch up to ON
21	DCU	ACTION: Set MICRO RUN switch to STOP (middle)
22	DCU	ACTION: Press MASTER CLEAR button

23	DCU	ACTION:	Set MICRO RUN switch up to RUN
			* AT each Disc Drive

NOTE: Operational Program Disc should be mounted on DDU0 and DDU1

24	DCU	ACTION:	Mount the disc pack containing the desired programs
25	DCU	ACTION:	Press Start button
26	DCU	ACTION:	If READ ONLY indicator is on, press READ ONLY switch
		OBSERVE:	READ ONLY indicator goes off
27		ACTION:	Set PORT SELECTION switch to 1/2 (middle)

Comments:

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4.1.1.8 Medium Speed Printer (MSP) Initialization

Perform the following at the MSP:

Step	Station	Description
1	MSP	ACTION: Set THE POWER switch to the ON position (Switch is located at left rear of printer)
2	MSP	ACTION: Select CHANNEL A-B at the MSP controller
3	MSP	ACTION: Set the POWER switch to the ON position at the MSP
4	MSP	ACTION: Press FORM ADVANCE switch to home paper

Comments:

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4.1.1.9 Card Reader (CR) Initialization

Perform the following at the CR Rack Power Control Panel.

Step	Station	Description	
1	CR	ACTION:	Set the 15 AMP UTILITY POWER breaker switch to the ON position
2	CR	ACTION:	Set the 50 AMP RACK POWER breaker switch to the ON position
3	CR	ACTION:	Ensure all of the RACK OUTLETS fuse indicators are not illuminated
			• At the CR Controller:
4	CR	ACTION:	Set the POWER switch to the ON position
5	CR	ACTION:	Set the COMPUTER SELECT switch to the DUPLEX ENABLE position
6	CR	ACTION:	Press MASTER RESET switch
			• At the CR
7	CR	ACTION:	Set the POWER Switch to the ON position
8	CR	ACTION:	Press the RESET switch

Comments:

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4.1.1.10 Azimuth Distribution Unit (ADU) Initialization

Perform the following at each ADU (Set UTILITY and RACK POWER switches to ON).

Step	Station	Description
1	ADU	ACTION: Set POWER switch to the ON (up)
2	ADU	ACTION: Set MODE switch to APG
3	ADU	ACTION: Set UNIT switch to either A or B
4	ADU	ACTION: Set GATE switch to a predetermined site parameter value

Comments:

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4.1.1.11 Sensor Receiver and Processor (SRAP) Initialization

Perform the following at each SRAP rack power control panel.

Step	Station	Description
1	SRAP	ACTION: Set both the 15 and 35 AMP circuit breakers to ON
2	SRAP	ACTION: Verify that the SYSTEM POWER and BLOWER indicators are lit • At the maintenance panels of all modules
3	SRAP	ACTION: Set the CHANNEL SELECT toggle switches on the BDAS modules to the DUP position

Comments:

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4.1.1.12 Reconfiguration Fault Detection Unit (RFDU) Initialization

Perform the following at the RFDU Power Supply.

Step	Station	Description
1	RFDU ACTION:	Set the power toggle switch on the AC/DC Regulator to the ON position
2	RFDU ACTION:	Ensure that the amber DC OUTPUT indicator on the AC-DC Regulator is illuminated
3	RFDU ACTION:	Ensure that the green -5.5 indicator on the DC-DC Converter is illuminated
		• At the RFDU panel
5	RFDU ACTION:	Set the MODE SELECT toggle switch to the MAINTENANCE position
6	RFDU ACTION:	Set the REPEAT/NORM/STEP switch to the NORM position
7	RFDU ACTION:	Set the RECONFIGURATION REGISTER switches to the NORM position
8	RFDU ACTION:	Set the PROCESSOR INTRPT NORMAL switches to the L.O position
9	RFDU ACTION:	Set all DISABLE MEMORY TIMEOUT switches to the NORMAL position
10	RFDU ACTION:	Press the SCATTER INTERRUPT ALARM RESET button
11	RFDU ACTION:	Set the SCATTER INTERRUPT AND ALARM ENBL switch to the DSBL position
12	RFDU ACTION:	Set the MODE SELECT switch to the operational position
13	RFDU ACTION:	Ensure that the toggle switch at card location 40C is in the downposition. (Scatter Interrupt Control)

Comments:

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4.1.1.13 ARTS IIIA Switch Setting Requirements at FAATC

Perform the following at the Switch Station:

Step	Station	Description
1	TSSF	ACTION: "CAPS LOCK" DEPRESSED
2	TSSF	ACTION: PRESS "A" TO DISPLAY MENU
3	TSSF	ACTION: ENTER CODE "TSSF" AND DEPRESS "ENTER"
4	TSSF	ACTION: MOVE CURSOR BY PRESSING APPROPRIATE ARROW KEYCAPS

Set panel according to the following:

SW #	ORIGIN	DEST A	DEST B	DEST C	DEST D
S1	BRITE	MDBM 0-2			
S2	CMCO-B	3A P0-13			
S3					
S4					
S5	MDBM1-A		3A P0-7		
S6	DEDS-7				
S7	DEDS-2				
S8	MDBM1-B	3A P1-7			
S9	MTS B				
S10	MTS A		3E P6-7		
S11	MSP 2B		3A P3-12		
S12	3A P3-10		S13 DEST B		
S13	DCU1-C		S12 DEST B		
S14	3A P1-4	SRAP0-B			
S15	SRAP2-A	3A P2-4			
S16	3A P1-5		S17 DEST B		
S17	SRAP3-A		S16 DEST B		
S18	3A P0-4	SRAP0-A			
S19	3A P0-5	SRAP1-A			

NOTE: After each selection press enter

5	TSSF	ACTION:	PRESS "HOME"
6	TSSF	ACTION:	ENTER CODE "TSSF" AND PRESS ENTER
7	TSSF	ACTION:	ENTER CONTROL AND ERASE SIMULTANEOUSLY
8	TSSF	ACTION:	PRESS "B" TO DISPLAY MENU
9	TSSF	ACTION:	ENTER CODE "TSSF" AND DEPRESS "ENTER"
10	TSSF	ACTION:	MOVE CURSOR BY PRESSING APPROPRIATE ARROW KEYCAPS

Set panel according to the following:

SW #	ORIGIN	DEST A	DEST B
S21	MDBM0-A		SW J DEST A
S22	MDBM0-B		3A P1-16
S23	MDBM1-A		SW K DEST A
S24	MDBM1-B		3A P1-17
S25	MDBM2-A		SW L DEST B
S26	MDBM2-B		SW M DEST B

NOTE: After each selection press enter

11 TSSF ACTION: PRESS "HOME"

12 TSSF ACTION: ENTER CODE "TSSF" AND PRESS ENTER

13 TSSF ACTION: ENTER CONTROL AND ERASE SIMULTANEOUSLY

In the center aisle, to the right of column E19 there are two manual switches that must be selected for ARTS IIIA so that MDBM 5 becomes part of the ARTS IIIA system. The two top sets of toggle switches must be selected for ARTS IIIA.

Perform the following at each of the FDADS:

Step	Station	Description
1	FDADS	ACTION: Set mode switch UP to ARTS IIIA mode located below the desk top directly in the middle of the panel.
2	FDADS	ACTION: Press the two red RESET buttons located above and to the right of the mode switch.

Comments: _____

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4.2 *Software Loading and Start-up Procedures*

This section describes the loading and start-up procedures for the Operational (OP) program, CDR editor, off-line programs and IOPB register settings procedures. Procedures are also provided for setting the ARTS IIIA to an operational state.

The equipment initialization procedures in section 4.1 will be referenced in this section but not repeated. Only deviations from the procedures in paragraph 4.1 will be noted.

4.2.1.1 Operational (OP) Program Cold Start or Restart

The operational program is loaded from DDU 0 if accessible, otherwise, DDU 1 is used.

The procedures in this subsection assume a first time or "cold" start. Therefore, no valid critical data is available.

Set up all the equipment available as described in paragraph 4.1.

Step	Station	Description
1	RFDU	ACTION: Set all RECONFIGURATION REGISTER switches to the INHB position and set the processors and memory modules to be accessed by the OP program to the NORM position.
2	RFDU	ACTION: Set the PROCESSOR INTRPT L/O switches to the NORM position for all processor to be accessed by the operational program (set all others to the L/O position)
3	RFDU	ACTION: Set all DISABLE MEMORY TIMEOUT switches to the DSBL position except those which will be accessed by the OP program (Set these to the NORM position)
4	RFDU	ACTION: Press SYSTEM START switch to the down position and release
	IOPB	OBSERVE: The system executes a scatter recovery, loads and initializes the operational program
6	CDT	OBSERVE: Recovery data is printed within 5-10 seconds after the system start switch is pressed
		CONDITIONAL BLOCK: Perform to purge old or invalid critical data from the disc pack. This step is to be used for a first time or cold start.
5	RFDU	ACTION: Press SYSTEM START switch to the down position again and release
		OBSERVE: The LOAD START-UP of the operational program is completed with the new critical data on the disc
		END CONDITIONAL BLOCK:
6	IOPB	ACTION: When program is cycling, set all DEBUG MODE switches to the UP position when running in in the debug mode
7	RFDU	ACTION: Depress the ALARM RESET button

Comments:

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4.2.1.2 Off-Line Program Load Procedures

The following procedures describe the steps required to manually load an off-line program from disc.

Step	Station	Description
1	DCU 0,1	ACTION: Mount the disc pack containing the desired off-line program on a available Disc Drive Unit (DDU)
2	DCU	ACTION: Verify the DDU used is enabled for the DCU to be used
3	DCU	ACTION: Set all IOPB INTERFACE ENABLE switches to the ENABLE position
4	DCU	ACTION: Set DISC NUMBER 0 and 1 switches to the up position
5	DCU	ACTION: Verify ON-LINE DRIVE SELECTION switches 0 and 1 are in the ON (up) position
6	RFDU	ACTION: Verify the RECONFIGURATION REGISTERS switches for the memory modules to be used are set to the NORM (down) position for the processors to be used
7	IOPB	ACTION: Press the DEBUG STOP switch to off (down)
8	IOPB	ACTION: Rotate LOAD switch to 1 for load from disc
9	IOPB	ACTION: Set the STOP/JUMP 4 and 7 switch to STOP (up) position
10	IOPB	ACTION: Press the MASTER CLEAR button * Set Q-Register UPPER to the DDU number on which the off-line program is loaded and Q-Register LOWER to the file number assigned to the program by BUP
11	IOPB	ACTION: Press Q at CENTRAL REGISTER SELECT area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set appropriate bits (15-29) for appropriate DDU number ACTION: Set appropriate bits (0-14) for file number assigned to the OP program CONDITIONAL BLOCK: Perform if memory module # 0 is not available
12	IOPB	ACTION: Press MLO button at CENTRAL REGISTER area ACTION: Press CLR button at CM ADDRESS area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set bits (16-19) for available MMs ACTION: Press STATUS button at CENTRAL REGISTER SELECT area ACTION: Set bit 6

END CONDITIONAL BLOCK:

13	IOPB	ACTION: Press the ENABLE/LOAD button
14	IOPB	ACTION: Press the LSO/START switch to start (down)
		OBSERVE: The OP program is read into memory
	IOPB	OBSERVE: STOP-7 light is on at the completion of read indicating successful read
		OBSERVE: If STOP-4 light is on an error has occurred during the read operation

Comments:

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4.2.1.3 CDR Editor Off-Line Program Load Procedures

The CDR Editor Off-Line Program will be used by test scripts to edit test data recorded during test conduct. The procedures below provide the step by step actions to set up and execute the program.

The following set up procedures must be performed for the off- line DCU and IOPB.

Step	Station	Description
1	DCU 0,1	ACTION: Mount the disc pack containing the CDR Editor off-line program on a available Disc Drive Unit (DDU)
2	DCU	ACTION: Verify the DDU used is enabled for the DCU to be used
3	IOPB	ACTION: Depress DEBUG MODE/STOP switch to STOP (down)
4	IOPB	ACTION: Set STOP/JUMP switches 4 and 7 to STOP (up)
5	IOPB	ACTION: Press the MASTER CLEAR button
		* Set Q-Register UPPER to the DDU number on which the CDR Editor program is loaded and Q-Register LOWER to the file number assigned to the Editor by BUP
6	IOPB	ACTION: Press Q at CENTRAL REGISTER SELECT area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set appropriate bits (15-29) for appropriate DDU number ACTION: Set appropriate bits (0-14) for file number assigned to the Editor by BUP
		CONDITIONAL BLOCK: Perform if memory module # 0 is not available
7	IOPB	ACTION: Press MLO button at CENTRAL REGISTER area ACTION: Press CLR button at CM ADDRESS area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set bits (16-19) for available MMs ACTION: Press STATUS button at CENTRAL REGISTER SELECT area ACTION: Set bit 6
		END CONDITIONAL BLOCK:
8	IOPB	ACTION: Press the ENABLE/LOAD button
9	IOPB	ACTION: Press the ENABLE/LOAD button
10	IOPB	ACTION: Press the LSO START switch to start (down)
		OBSERVE: The OP program is read into memory
	IOPB	OBSERVE: STOP-7 light is on at the completion of read indicating successful read
		OBSERVE: If STOP-4 light is on an error has occurred during the read operation, repeat

steps 1 through 10

11 DCU n ACTION: Mount disc to be edited on DDU n

* If back up disc used mount second disc

12 DCU n ACTION: Mount second disc to be edited on DDU n

13 IOPB ACTION: Press LSO/START switch to START (down)

CDT OBSERVE: The CDR Editor starts

OBSERVE: ED ENTER DEVICES
ED

* Select input device (X = disc number where data to be edited was mounted). Medium speed printer is the output device.

OPTIONS: D0, D1 or MT (TAPE).

14 CDT ACTION: Enter Dn or MT (no entry defaults to 0) and MP

ACTION: Press RETURN

OBSERVE: ED ENTER DATA CLASSES

ED

* Select DATA CLASSES to be edited (AA = data class designator; bb = second set or more data classes with no spaces between entries.)

OPTIONS: BT = Beacon Target Reports
RT = Radar Target Reports
RB = Radar Reinforced Target Reports
TG = Target Reports
DB = Duplicate Beacon Target Reports
TD = Tracking Data
RC = RT-BTL CTS Data
AT = Altitude Tracking Data
AF = Automatic Functions
KF = Keyboard Functions
MA = MSAW Alarms
MS = MSAW Display and Alarms
IF = Interfacility Messages
II = Interfacility (Input only)
IO = Interfacility (Output only)
MD = Memory Dumps
CA = Conflict Alert

15 CDT ACTION: Enter aabb (no entry - edit all classes

ACTION: Press enter

OBSERVE: ED ENTER FILTERS

ED

* Filters with the appropriate format can be entered at this time and repeated as necessary until all

requested filters have been entered. (X = filter code; aaa = filter format).

OPTIONS and Formats are as follows:

Filter Item	Code and Format
Aircraft ID	Aaaaaaaa,bbbbbbb,---Up to 5, (Seperated by commas)
Beacon Codes	Bbbbb,cccc,....Up to 5, (Non-discrete selects entire Block)
Controller Symbols	Csa,sb,sc,..Up to 30 with Subset (no commas or spaces between entries
Azimuth	Zbbb/eee = begin/end degrees
Disc Address	Dcccchhrrcccchhrr cylinder, head,record (ccc = 0-404, hh = 0-19, rr = 1-11)
ETG Data	E (block) or ETG (allow)
Interfacility Data	Icc (cc = data type) (Options: AM,CX,DA,DM,DR,DT, DX,FP,TA,TB,TI,TR,TU)
Altitude Limits	Lllluuu (Lower/Upper hundreds feet)
Range Limits	Rllluuu (Lower/Upper NMs)
Time Limits	TMMddyyhhmmssMMddyyhhmmss (Month,Day,Year,Hours,Minutes, Seconds)
Subsystems	Si (i = 0 or 1)
Associated/ Unassociated Tracks	U or UA or UU (U only deletes filter, UA = only assoc., UU = only unassoc.)
Non-Conflict Data	NC

16 CDT ACTION: Enter x(aaa) (Entry of Code x only will delete filter)

OBSERVE: ED

* Terminate filter entries.

17 CDT ACTION: Press RETURN

OBSERVE: ED ENTER COMMENTS
ED

* Enter comments (aaa...a = up to 40 characters allowed in a comment). After entering comments, CDR editor will automatically begin editing and continue until all data classes selected have been edited.

18	CDT	ACTION: Enter aaa...a ACTION: Press RETURN
		OBSERVE: Edited data printed out at the CDT
		OBSERVE: ED END OF DATA (when editing terminates) ED
		CONDITIONAL BLOCK: Perform if more editing is needed.
19	CDT	ACTION: Enter GO
		OBSERVE: ED ENTER DEVICE ED
		* Return to step 14 to select devices and repeat editor initialization process again.
		END CONDITIONAL BLOCK
		* Terminate CDR Editor
20	CDT	ACTION: Press RETURN
	IOPB	OBSERVE: Editor is terminated.

Comments:

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4.2.1.4 IOPB Register Setting Procedures

The following procedures are used when setting the contents of a central register on an IOPB. (Refer to the CENTRAL REGISTER area and CENTRAL REGISTER SELECT area of an IOPB.)

Step	Station	Description
		*Alter the contents of A-Register.
1	IOPB	ACTION: Press A at CENTRAL REGISTER SELECT area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set appropriate bits (0-29) to represent the value to be inserted
		*Alter the contents of Q-Register
2	IOPB	ACTION: Press Q at CENTRAL REGISTER SELECT area ACTION: Press CLR button at CENTRAL REGISTER area ACTION: Set appropriate bits (0-29) to represent the value to be inserted
		*Alter the contents of a specific B-Register
3	IOPB	ACTION: Press ARITH/CM switch at CENTRAL REGISTER SELECT area ACTION: Press CLR button and appropriate buttons (0-5) at CM ADDRESS area to specify the B register to be altered ACTION: Set appropriate bits (0-29) at CENTRAL REGISTER area to represent the value to be inserted in the selected B register
		*Alter the contents of S-Register
4	IOPB	ACTION: Press the appropriate button (SR0-SR2) at EXT REGISTER SELECT area ACTION: Press CLR button at EXT REGISTER area ACTION: Set appropriate bits (13-17) to represent the value to be inserted in the selected S register

Comments:

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4.3 Computer Utilization (Capacity) Test

The first major test named "Computer Utilization Test" has three sets of capacity test and each set of test consist of three test cases and are as follows:

1. TROUT Capacity Test

   The TROUT capacity test will test for capacity of the TROUT program and 100 percent utilization of the Central Track Store (CTS) files. This test will provide performance measurements and timing statistics of the ARTS IIIA program. Special emphasis will be placed on the timing statistics of the TROUT program.

   The Enhanced Target Generator (ETG) will provide the targets required for this test, all Data Entry and Display system (DEDS) entries will be made from a scenario. Three hundred and fifty associated tracks and three hundred and fifty unassociated tracks will be generated by the ETG program. Ninety six associated tracks (32 per sector) will be in sectors 2, 6, and 11. The remaining associate tracks (two hundred and fifty four) will be distributed equally over 360 degrees. The distribution of tracks between sensors will be equal. Associated tracks in sectors 2, 6, and 11 will be in sensor one. The following are the test cases for the 1st set of capacity test.

   - Test case 01 - ARTS IIIA Program Unmodified
   - Test case 02 - ARTS IIIA Program Modified, FAST Disabled
   - Test case 03 - ARTS IIIA Program Modified, FAST Enabled

2. 180 Degree Capacity Test

   The 180 degree capacity test will test for 100 percent utilization of the Central Track Store (CTS) files in 180 degrees. This test will provide performance measurements and timing statistics of the ARTS IIIA level 0 program with target bunching in 180 degrees.

   The Enhanced Target Generator (ETG) will provide the targets required for this test, all Data Entry and Display system (DEDS) entries will be made from a scenario. Three hundred and fifty associated tracks and three hundred and fifty unassociated tracks will be generated by the ETG program. The associated tracks will be distributed equally over 180 degrees. The distribution of tracks between sensors will be equal. The following are the test cases for the 2nd set of capacity test.

   - Test case 04 - ARTS IIIA Program Unmodified
   - Test case 05 - ARTS IIIA Program Modified, FAST Disabled
   - Test case 06 - ARTS IIIA Program Modified, FAST Enabled

3. ARTS IIIA Capacity Test

   The objective of the ARTS IIIA capcity test is to obtain performance measurements and timing statistics of the ARTS IIIA level 0 program with a distribution of CTS files for associated tracks, unassociated tracks and flight plans.

   The ETG program will provide the data required for this test. The data will be recorded and replay using the RETRACK program. During the playback of the recorded data the event recorder will be enabled.

   The recorded data will provide 238 associated tracks, 175 will be in a strait line of flight and 63 will be maneuvering. Track velocities will vary from 120 to 180 knots. The associated targets are distributed equally between the two sensors. The associated targets use 34 percent of the CTS files.

   ETG will also generate 66 unassociated targets. Forty four will be in a strait line of flight and 22 will be maneuvering. Track velocities will vary from 120 to 180 knots. Sixty six unassociated targets will be generated for both sensors. These 132 targets plus the 238 unassociated target generated because of track association will use 53 percent of the CTS files.

The remaining 13 percent of the CTS files are used for flight plans (92).

The following are the test cases for the 3rd set of capacity test.

- Test case 07 - ARTS IIIA Program Unmodified
- Test case 08 - ARTS IIIA Program Modified, FAST Disabled
- Test case 09 - ARTS IIIA Program Modified, FAST Enabled

The Computer Utilization (Capacity) Testing will not be formally demonstrated. The Test will be performed prior to the FAATC formal test, the results documented and forwarded to ATR-410, ATO-300 and ATO-400.

Computer Utilization (Capacity) Testing does not require test procedures.

4.4 *Keyboard Entry Test Procedures*

The second major test named "Keyboard Entries" has one test case.

4.4.1 Test Case 01 - Keyboard Entries

The keyboard entry test will test to insure that the following six objectives have been satisfied.

1. To ensure that the FAST system has received all of the intended, valid ARTS IIIA keyboard entries and all of the ARTS IIIA FAST keyboard entries, valid and invalid. Keyboard entries will be tested under the following conditions.

   - Valid ARTS IIIA keyboard entries with FAST disabled
   - Valid FAST keyboard entries with FAST disabled
   - Valid ARTS IIIA keyboard entries with FAST enabled and CDR disabled
   - Valid FAST keyboard entries with FAST enabled and CDR disabled
   - Valid ARTS IIIA keyboard entries with FAST enabled and CDR enabled
   - Valid FAST keyboard entries with FAST enabled and CDR enabled
   - Invalid ARTS IIIA keyboard entries with FAST enabled and CDR enabled
   - Invalid FAST keyboard entries with FAST enabled and CDR enabled

2. To ensure that when a Track Drop occurs that a Trackdrop message is transmitted by ARTS to the FAST system.

3. To ensure that when a Associated track is disassociated from the associated thread that a tread drop message is transmitted by ARTS to the FAST system.

4. To ensure that when a display is off centered or the display centering has been moved that FAST receives the new "X" and "Y" display centering values.

5. To ensure that the FAST system recognizes valid and invalid FAST keyboard entries.

6. To ensure that the values in the ARTS IIIA message counters are identical to the values in the message counters that are in the TIU.

4.4.1.1 Definitions

SYSTEM DATA AREA	SDA
TELETYPE	TTY
DADS WORKSTATION	DWS
TI DISPLAY 5, DESK TOP KEYBOARD	1S
TI DISPLAY 6, DESK TOP KEYBOARD	1G
TI DISPLAY 7, DESK TOP KEYBOARD	1X
TI DISPLAY 9, DESK TOP KEYBOARD	1N

4.4.1.2 Software Preparation

Load and start the operational program using the initial start up procedures described in the Software Loading and Start-Up Procedures, Section 4.2.

4.4.1.3 *Test Execution Procedures*

The following test data sheets define the detail steps to be executed in the Keyboard Entry Test Case 01, Keyboard entries.

These data sheets will be used to score the results of each of the test steps.

KEYBOARD ENTRY TEST CASE 01.

Step	Work Station	Description

The Following Is Entered Manually From Keyboard 1Z

		* Disable Beacon RSM printouts
1	1Z	ACTION: ENTER <F7>R1
1A	TTY	OBSERVE: HH:MM:SS RSM 1 1Z INH
		SCORE: PASS / FAIL

Comments: ______________________________

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		* Disable Beacon RSM printouts
2	1Z	ACTION: ENTER <F7>R2
2A	TTY	OBSERVE: HH:MM:SS RSM 2 1Z INH
		SCORE: PASS / FAIL

Comments: ______________________________

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		* Disable sign on identifiers
3	1Z	ACTION: ENTER <F7>TS
3A	1Z	OBSERVE: AC, AH, and AM inhibited
		SCORE: PASS / FAIL

Comments: ______________________________

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		* Valid DWS Keyboard Entries to idle the TIU program
4	DWS	ACTION: ENTER Any key
4A	DWS	OBSERVE: Name faatc Password:

Enter password to unlock; select ICON to lock.

		SCORE:	PASS / FAIL
4B	DWS	ACTION:	ENTER tiufaa
4C	DWS	OBSERVE:	After a couple of seconds the DADS and the keyboard windows are displayed
		SCORE:	PASS / FAIL
4D	DWS	INSURE:	In the keyboard window that the TIU is in IDLE
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

5	DWS	ACTION:	SELECT RUN and CLICK
5A	DWS	OBSERVE:	In the keyboard window the TIU is in RUN state
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

6	IZ	ACTION:	ENTER <F12>E
6A	TTY	OBSERVE:	HH:MM:SS FAST IZ ENABLE !! OPNL
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

* Invalid FAST Keyboard Entries, invalid FAST keyboard

7	IS	ACTION:	ENTER <F12>V
7A	IS	OBSERVE:	In the PREVIEW AREA "ILL FNCT"
		SCORE:	PASS / FAIL
7B	IS	OBSERVE:	In the SDA KBD MSG counter (640006) is not incremented
		SCORE:	PASS / FAIL

Comments: ____

= =

• Invalid FAST Keyboard Entries, invalid FAST keyboard

8 IS ACTION: ENTER <F12>W

8A IS OBSERVE: In the PREVIEW AREA "ILL FNCT"

SCORE: PASS / FAIL

8B IS OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

SCORE: PASS / FAIL

Comments: ____

= =

• Invalid FAST Keyboard Entries, invalid FAST keyboard

9 IS ACTION: ENTER <F12>Y

9A IS OBSERVE: In the PREVIEW AREA "ILL FNCT"

SCORE: PASS / FAIL

9B IS OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

SCORE: PASS / FAIL

Comments: ____

= =

• Valid FAST Keyboard Entries, invalid FAST keyboard

10 IS ACTION: ENTER <F12>T15

10A IS OBSERVE: In the PREVIEW AREA "ILL FNCT"

SCORE: PASS / FAIL

10B IS OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

SCORE: PASS / FAIL

Comments: ____

= =

• Valid FAST Keyboard Entries, invalid FAST keyboard

11 IS ACTION: ENTER <F12>T19

11A IS OBSERVE: In the PREVIEW AREA "ILL FNCT"

SCORE: PASS / FAIL

11B IS OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

12 IZ ACTION: ENTER <F12>I

12A TTY OBSERVE: HH:MM:SS FAST IZ DISABLED **

SCORE: PASS / FAIL

12B DWS OBSERVE: Disabled message received...

SCORE: PASS / FAIL

12C IZ OBSERVE: In the SDA All MSG. counters have stopped incrementing

SCORE: PASS / FAIL

Comments: ____

= =

* Load the ETG program

13 TTY ACTION: ENTER TK IA TG

13A TTY OBSERVE: TK IA TG L-001

SCORE: PASS / FAIL

13B TTY OBSERVE: HH:MM:SS OK 001 TK IA TG

SCORE: PASS / FAIL

Comments: ____

= =

****

The Following Is Entered Manually From Keyboard 1N

****

* Remove Display 9 from Training

14 1N ACTION: ENTER <F15>ZT

14A 1N OBSERVE: Keyboard entry is accepted

SCORE: PASS / FAIL

Comments: ____

= =

• Remove Display 9 from Training

15 1N ACTION: ENTER <F15>ZM

15A TTY OBSERVE: HH:MM:SS STAT 1N 03=ACT

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Enter XTS Mode

16 1Z ACTION: ENTER <F7>2TE

16A 1Z OBSERVE: Entry is accepted, Message counters remain zero

SCORE: PASS / FAIL

16B TTY OBSERVE: HH:MM:SS RCFG 1Z TEST MODE SEL

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Enter XTS Mode

17 1Z ACTION: ENTER <F15>XTS

17A 1Z OBSERVE: Unassociated tracks on all Displays are inhibited,
Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Enable Memory Readout

18 1Z ACTION: ENTER M<F7>R

18A 1Z OBSERVE: KEYBOARD ENTRY IS ACCEPTED

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Readout message counters

19 1Z ACTION: ENTER 640003 0

19A 1Z OBSERVE: In the SDA

640003 = 0000000000 (CTS Messages)
640004 = 0000000000 (Thread Drop Messages)
640005 = 0000000000 (Track Drop Messages)
640006 = 0000000000 (Keyboard Entry Messages)
640007 = 0000000000 (TROUT Demarcation Messages SS0)
640010 = 0000000000 (TROUT Demarcation Messages SS1)
640011 = 0000000000 (Interfacility Messages)
640012 = 0000000000 (Leader Change Messages)
640013 = 0000000000 (Offset Change Messages)
640014 = 0000000000 (TYP1 Messages)

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

20 1Z ACTION: ENTER <F7>S/MMDDYY

20A TTY OBSERVE: HH:MM:SS DATE 1Z mmddyy

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

21 1Z ACTION: ENTER <F7>10SCR

21A TTY OBSERVE: HH:MM:SS CKEY 1Z 10SCR
HH:MM:SS CDR DISC 0 0250003

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

22 1Z ACTION: ENTER <F12>E

22A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLE !! OPNL

SCORE: PASS / FAIL

Comments: ____

= =

This keyboard entry will enable a scenario. The run time for this scenario is 38 minutes and will generate 346 associated targets and 354 unassociated targets. The primary purpose of this scenario

is to create capacity conditions for the transfer of messages to FAST. See APPENDIX "A" for the listing of the scenario.

* Valid ARTS IIIA Keyboard Entries

23 1Z ACTION: ENTER <F15>XIT

23A 1Z OBSERVE: IN the preview area "SCENARIO ACTIVE"

In the SDA KBD MSG counter (640006) incremented by one and

SCORE: PASS / FAIL

The following nunber of messages will be generated during the test.

1. Message code 011 KYBD MSGs 675
2. Message code 012 CTS DATA 25,516
3. Message code 013 INTERFACILITY MSGs 31
4. Message code 021 THREAD DROP MSGs 316
5. Message code 022 TRACK DROP MSGs 273
6. Message code 024 TYPIT MSGs 42,572
7. Message code 040 TROUT DEMARC S0 7,329
8. Message code 041 TROUT DEMARC S1 7,523

Comments: ____

When "SCENARIO OFF" is displayed in the SDA at approximately 1617 hours. Execute the following Keyboard entry.

* Valid ARTS IIIA/FAST Keyboard Entry

24 1Z ACTION: ENTER <F12>I

24A MSP OBSERVE: HH:MM:SS FAST 1Z DISABLED **

SCORE: PASS / FAIL

24B DWS OBSERVE: Disabled message received...

SCORE: PASS / FAIL

24C 1Z OBSERVE: In the SDA All MSG. counters have stopped incrementing

SCORE: PASS / FAIL

Comments: ____

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* Valid ARTS IIIA/FAST Keyboard Entry

25 1Z ACTION: ENTER <F7> R640003 P10

25A MSP OBSERVE: Message counters are printed on the MSP

SCORE: PASS / FAIL

25B MSP ACTION: Fetch the hard copy print out of the message counters and save.

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

26 1Z ACTION: ENTER < F7 > 1T

26A MSP OBSERVE: HH:MM:SS CKEY 1Z CDR OFF (X --- X)

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

27 DWS ACTION: SELECT IDLE and CLICK

27A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to obtain the TIU message counters

Using the mouse move the arrow to the keyboard window

28 DWS ACTION: SELECT COUNT and CLICK

28A DWS OBSERVE: In the DADS window the TIU message counter values

SCORE: PASS / FAIL

Comments: ____

= =

* DWS entries to obtain a hard copy of message counters

29 DWS ACTION: SELECT Console window

29A DWS OBSERVE: Console window opened and tatca9% prompt

29B DWS ACTION: ENTER screendump scrn.dmp

29C DWS OBSERVE: At the prompt

29D DWS ACTION: ENTER lpr -Plp scrn.dmp

Pick up the hard copy of message counters in the TATCA lab.

SCORE: PASS / FAIL

Comments: ____________________

= =

* Compare ARTS message counters to the FAST message counters

30 DWS ACTION: Select the Calculator

30A DWS ACTION: Convert the DADS decimal counters to OCTAL and compare to the ARTS message counters

SCORE: PASS / FAIL

30B DWS ACTION: Insure That the DADS message counters for the following message types are in agreement

Initialization message MC20 = 1
Disable FAST message MC25 = 1

SCORE: PASS / FAIL

Comments: ____________________

= =

* Valid DWS Keyboard Entries to close console window

Using the mouse move the arrow to the left corner of console window

31 DWS ACTION: Depress and hold down right button

31A DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select close

31B DWS ACTION: Release right button

31C DWS OBSERVE: Console window closed

SCORE: PASS / FAIL

Comments: ____

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= =

RESTART THE OPERATIONAL PROGRAM FOR PART 2

= =
= =

* Disable Beacon RSM printouts

32 IZ ACTION: ENTER <F7>R1

32A TTY OBSERVE: HH:MM:SS RSM 1 IZ INH

SCORE: PASS / FAIL

Comments: ____

= =

* Disable Beacon RSM printouts

33 IZ ACTION: ENTER <F7>R2

33A TTY OBSERVE: HH:MM:SS RSM 2 IZ INH

SCORE: PASS / FAIL

Comments: ____

= =

* Disable display sign on indicators

34 IZ ACTION: ENTER <F7>TS

34A IZ OBSERVE: AC, AH, and AM inhibited

SCORE: PASS / FAIL

Comments: ____

= =

* Load the TTG program

35 TTY ACTION: ENTER TK IA TG

35A TTY OBSERVE: TK IA TG L-001

SCORE: PASS / FAIL

35B TTY OBSERVE: HH:MM:SS OK 001 TK IA TG

SCORE: PASS / FAIL

Comments: ____

= =

The Following Is Entered Manually From Keyboard 1N

* Remove Display 9 from Training

36 1N ACTION: ENTER <F15>ZT

36A 1N OBSERVE: Keyboard entry is accepted

SCORE: PASS / FAIL

Comments: ____

= =

* Remove Display 9 from Training

37 1N ACTION: ENTER <F15>ZM

37A TTY OBSERVE: HH:MM:SS STAT 1N 03=ACT

SCORE: PASS / FAIL

Comments: ____

= =

* Select stand-by TIU SYSTEM

38 TWS ACTION: Depress all "B" switches
TWS ACTION: Depress reset button

38A OBSERVE: No other ARTS interference

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to idle the TIU program

Using the mouse move the arrow to the keyboard window

39 DWS ACTION: SELECT RUN and CLICK

39A DWS OBSERVE: WARNING: file "pipe.c" line 512: connection reset by peer

#Warn io.c @ 273 : system call failure

#Warn main.c @ 389 : tiu disconnected

#Warn main.c @ 233 : tiu connected

#Warn main.c @ 454 : tiu idling

SCORE: PASS / FAIL

39B DWS)BSERVE: In the keyboard window that the TIU is in IDLE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable Memory Readout

40 1Z ACTION: ENTER M <F7> R

40A 1Z OBSERVE: KEYBOARD ENTRY IS ACCEPTED

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Readout FAST Flag

41 1Z ACTION: ENTER 640000

41A 1Z OBSERVE: In the SDA
640000 = 000000000 (FAST FLAG)

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Readout message counters

42 1Z ACTION: ENTER 640003 6

42A 1Z OBSERVE: In the SDA
640003 = 0000000000 (CTS Messages)
640004 = 0000000000 (Thread Drop Messages)
640005 = 0000000000 (Track Drop Messages)
640006 = 0000000000 (Keyboard Entry Messages)
640007 = 0000000000 (TROUT Demarcation Messages SS0)
640010 = 0000000000 (TROUT Demarcation Messages SS1)

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Readout message counters

43 1Z ACTION: ENTER 640012 3

43A 1Z OBSERVE: In the SDA
640012 = 0000000000 (Leader Change Messages)
640013 = 0000000000 (Offset Change Messages)
640014 = 0000000000 (TYP1 Messages)

SCORE: PASS / FAIL

NOTES:

1. The interfacility Message Counter is not displayed, IF TEST interfacility messages are the only messages being generated during this test. The interfacily message counter will be displayed at the end of the test and the contents of this counter must be in agreement with the interfacility counter in the FAST system.

2. The contents of all of the counters will remain at 0000000000 until the FAST function is enabled.

Comments: ______________________________

= =

* Enter XTS Mode

44 1Z ACTION: ENTER <F7>2TE

44A 1Z OBSERVE: Entry is accepted, Message counters remain zero

SCORE: PASS / FAIL

44B TTY OBSERVE: HH:MM:SS RCFG 1Z TEST MODE SEL

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enter XTS Mode

45 1Z ACTION: ENTER <F15>XTS

45A 1Z OBSERVE: Unassociated tracks on all Displays are inhibited,
Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

46 1Z ACTION: ENTER <F1>AA1 4101

46A 1Z OBSERVE: AA1 is displayed in the Tabular list, tab line ID=A,
Message counters remain zero

SCORE: PASS / FAIL

Comments: ____

==

* Valid ARTS IIIA Keyboard Entries

47 1Z ACTION: ENTER <F15> 01A030B4101 SLEW 12 nm NE

47A 1Z OBSERVE: Target 1 is displayed 12 nm NE, AA1 Acquires on target 1, Message counters remain zero

SCORE: PASS / FAIL

Comments: ____

==

* Valid ARTS IIIA Keyboard Entries

48 1Z ACTION: ENTER <F15> 02A030B4102 SLEW 15 nm NE

48A 1Z OBSERVE: Target 2 is displayed 15 nm NE, Message counters remain zero

SCORE: PASS / FAIL

Comments: ____

==

* Valid ARTS IIIA Keyboard Entries

49 1Z ACTION: ENTER <F2> SLEW to AA1

49A 1Z ACTION: ENTER SLEW to Target 2

49B 1Z OBSERVE: AA1 is repositioned on target 2 and the RBC is flashing in line two of the FDB. Message counters remain zero.

SCORE: PASS / FAIL

Comments: ____

==

* Valid ARTS IIIA Keyboard Entries

50 1Z ACTION: SLEW to AA1

50A 1Z OBSERVE: The RBC becomes the ABC for AA1, Message counters remain zero

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

51 1Z ACTION: ENTER <F3>SLEW to AA1

51A 1Z OBSERVE: AA1 is displayed in the CST/Suspend list, tab line ID is 0.
Message counters remain zero

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

52 1Z ACTION: ENTER <F1>AA1

52A 1Z OBSERVE: AA1 acquires on target 2, Message counters remain zero

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

53 1Z ACTION: ENTER <F5> 1G SLEW to AA1

53A 1Z OBSERVE: AA1 in handoff to 1G and
Message counters remain zero

53B 1G OBSERVE: Blinking FDB for AA1

SCORE: PASS / FAIL

Comments: ____

---

* Disable display sign on indicators

54 1G ACTION: ENTER <F7>TS

54A 1G OBSERVE: M4, M5, and M6 inhibited

SCORE: PASS / FAIL

Comments: ____

---

* Enable Memory Readout

55 1G ACTION: ENTER <F7>R

55A 1G OBSERVE: Ten memory locations are displayed in the SDA

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

56 1G ACTION: ENTER <F5>SLEW to AA1

56A 1G OBSERVE: AA1 control position symbol is 1G and
Message counters remain zero

56B 1Z OBSERVE: Blinking FDB for AA1

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

57 1G ACTION: ENTER <F6>AA2 4103

57A 1G OBSERVE: AA2 in tabular list, tab line ID is A
and Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

58 1G ACTION: ENTER <F4>AA2

58A 1G OBSERVE: AA2 is dropped from tab list
and Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

59 1G ACTION: ENTER <F7>B01

59A 1G OBSERVE: In the SDA 01 added to selected code list
and Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

60 1G ACTION: ENTER <F7> YSCR SLEW to AA1

60A 1G OBSERVE: SCR is time sharing in line 2 in AA1 FDB and Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

61 1G ACTION: ENTER <F10> DR

61A TTY OBSERVE: HH:MM:SS IF 1G SEL DR

SCORE: PASS / FAIL

61B 1G OBSERVE: Message counters in SDA remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

62 1G ACTION: ENTER <F10> DR

62A TTY OBSERVE: HH:MM:SS IF 1G INH DR

SCORE: PASS / FAIL

62B 1G OBSERVE: Message counters in SDA remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

63 1G ACTION: ENTER <F11> AI

63A TTY OBSERVE: HH:MM:SS CA 1G CA INH

SCORE: PASS / FAIL

63B 1G OBSERVE: Message counters in SDA remain zero

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid ARTS IIIA Keyboard Entries

64 1G ACTION: ENTER <F11> AE

64A TTY OBSERVE: HH:MM:SS CA 1G CA ENB

SCORE: PASS / FAIL

64B 1G OBSERVE: Message counters in SDA remain zero

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid FAST Keyboard Entries

65 1G ACTION: ENTER <F12>O

65A 1G OBSERVE: In the display readout area ILL FNCT
and Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid FAST Keyboard Entries

66 1G ACTION: ENTER <F12>F

66A 1G OBSERVE: In the display readout area ILL FNCT
and Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid FAST Keyboard Entries

67 1G ACTION: ENTER <F12>E

67A TTY OBSERVE: HH:MM:SS FAST 1G ENABLE !! OPNL

SCORE: PASS / FAIL

67B 1G OBSERVE: Memory readout inhibited and
FAST FAIL blinking in the SDA for all displays

SCORE: PASS / FAIL

67C TTY OBSERVE: HH:MM:SS TIU HEARTBEAT FAILURE XXXX

SCORE: PASS / FAIL

67D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

67E 1G OBSERVE: FAST FAIL inhibited in the SDA after 15 seconds
and memory readout enabled

SCORE: PASS / FAIL

NOTE: Some message counters may get incremented, however the messages were not sent to FAST because the TIU was not enabled. Using the memory read function zero out the message counters that were incremented.

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

68 1G ACTION: ENTER <F14> 0

68A 1G OBSERVE: Interfacility test is enabled
and Message counters are unchanged

SCORE: PASS / FAIL

68W TTY OBSERVE: HH:MM:SS IF TEST PROGRAM SELECT

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

69 1G ACTION: ENTER <F14> 0

69A 1G OBSERVE: Interfacility test is disabled
and Message counters are unchanged

SCORE: PASS / FAIL

69B TTY OBSERVE: HH:MM:SS IF TEST PROGRAM INHIBIT

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

70 1G ACTION: ENTER <F16> SLEW to AA1

70A 1G OBSERVE: IN the SDA
Beginning CTS (CTST) address for AA1, controller symbol, firmness, flags, tracks RDR/BCN history for the last ten scans and tracks Status

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

71 1G ACTION: ENTER <F16>

71B 1G OBSERVE: All data pertaining to AA1 is inhibited in the SDA

SCORE: PASS / FAIL

Comments: ____

= =

* Enable Memory Readout

72 1G ACTION: ENTER <F7>R

72A 1G OBSERVE: Ten memory locations are displayed in the SDA and message counters are unchanged

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

73 1G ACTION: ENTER <F4>AA1

73A 1G OBSERVE: AA1 FDB is dropped and Message counters are unchanged

SCORE: PASS / FAIL

Comments: ____

= =

The keyboard packets that are used for FAST are built in the CDR routine CDKEYF. These packets are almost identical to the keyboard packets used for CDR. The only difference is that

FAST requires an additional header word. The following steps will demonstrate that FAST keyboard packets will be built and transmitted to FAST with CDR disabled.

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

74 DWS ACTION: SELECT RUN and CLICK

74A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA, FAST Keyboard Entry

75 IG ACTION: ENTER <F7>2M

75A MSP OBSERVE: All printouts directed to the MSP

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA FAST Keyboard Entry

76 IG ACTION: ENTER <F7> R224363 P47

76A MSP OBSERVE: Memory dump of PAIRT on the MSP

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA FAST Keyboard Entry

77 IG ACTION: ENTER <F7> R224442 P47

77A MSP OBSERVE: Memory dump of QUIKT on the MSP

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA FAST Keyboard Entry

78 IG ACTION: ENTER <F7> R224521 P47

78A MSP OBSERVE: Memory dump of SYMT on the MSP

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

79 IG ACTION: ENTER < F7 > R225015 P47

79A MSP OBSERVE: Memory dump of PREVT on the MSP

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

80 IG ACTION: ENTER < F7 > R225074 P47

80A MSP OBSERVE: Memory dump of PULST on the MSP

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA FAST Keyboard Entry

81 IG ACTION: ENTER < F7 > R221254 P50

81A MSP OBSERVE: Memory dump of DCONT and DFLAG on the MSP

SCORE: PASS / FAIL

82 MSP ACTION: FETCH and SAVE the hard copy print outs from Steps 76, 77, 78, 79, 80, and 81. They will be used at the end of the TEST.

Comments: ____

= =

Wait a couple of minutes for the printouts on the MSP to finish

* Valid ARTS IIIA FAST Keyboard Entry

83 IG ACTION: ENTER < F7 > 2T

83A TTY OBSERVE: All printouts directed to the TTY

		SCORE:	PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

84	IG	ACTION:	ENTER <F12>E
84A	TTY	OBSERVE:	HH:MM:SS FAST 1Z ENABLE !! OPNL
		SCORE:	PASS / FAIL
84B	DWS	OBSERVE:	Initialization message received...
		SCORE:	PASS / FAIL
84C	IG	OBSERVE:	IN the SDA 640000 = 7777777777 640003 = 0000000000 640004 = 0000000000 640005 = 0000000000 640006 = 0000000000 640007 = Incrementing 640010 = Incrementing 640012 = 0000000000 640013 = 0000000000 640014 = 0000000000
		SCORE:	PASS / FAIL

A DEDS may generate continuous TYP1 words with "X" and "y" changes because of a hardware malfunction. These changes to these typ1 words will cause the counter in address 640014 to be continuously incremented. To correct the situation identify the DEDS that is causing the problem. off center the DEDS and then center DEDS. However, it is suggested not to correct the situation. This will provide for a large value in the TYP1 counter at the end of the test and the TIU counter must match exactly.

The TIU is in the IDLE state and has not received any of the TYP1 messages. To insure that the ARTS and the TIU message counters match at the end of the test, reset the ARTS TYP1 counter with the following ARTS keyboard entry <F7> R640014 0000000000.

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

85	IG	ACTION:	ENTER <F1>AAL874 4101
85A	IG	OBSERVE:	AAL874 acquires on target 1, In the SDA 640000 = 7777777777 640003 = Incrementing 640006 = 0000000001 640007 = Incrementing 640010 = Incrementing

SCORE: PASS / FAIL

NOTE: Address 640000 will contains all 7' for the remainder of,the test or until FAST is disabled. Address 640003 will increment until AAL874 is dropped. Addresses 640007 and 640010 will be incrementing for the remainder of the test.

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

86 1G ACTION: ENTER <F7> YSCR SLEW to AAL874

86A 1G OBSERVE: SCR is time sharing in line 2 for AAL874

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

NOTE: Line Two and Three are time sharing

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

87 1G ACTION: ENTER <F2> SLEW to AAL874

1G ACTION: ENTER SLEW to Target 2

87A 1G OBSERVE: AAL874 is repositioned on target 2 and the RBC is flashing in line two of the FDB.

In the SDA KBD MSG counter (640006) incremented by one
TRK DRP counter (640005) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

88 1G ACTION: SLEW to AAL874

88A 1G OBSERVE: The RBC becomes the ABC for AAL874,

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid ARTS IIIA Keyboard Entries

89 1G ACTION: ENTER <F3>SLEW to AAL874

89A 1G OBSERVE: AAL874 is displayed in the CST/Suspend list, tab line ID is 0,

In the SDA THIRD DRP counter (640005) incremented by one
KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

90 1G ACTION: ENTER <F1>AAL874

90A 1G OBSERVE: AAL874 acquires on target 2

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

91 1G ACTION: ENTER <F5> 1Z SLEW to AAL874

91A 1G OBSERVE: AAL874 in handoff to 1Z

In the SDA KBD MSG counter (640006) incremented by one

91B 1Z OBSERVE: Blinking FDB for AAL874

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

92 1Z ACTION: ENTER <F5>SLEW to AAL874

92A 1Z OBSERVE: AAL874 control position symbol is 1Z

In the SDA KBD MSG counter (640006) incremented by one

92B 1G OBSERVE: Blinking FDB for AAL874

SCORE: PASS / FAIL

Comments: ____

==

• Valid ARTS IIIA Keyboard Entries

93 1Z ACTION: ENTER <F6> AA2 4103

93A 1Z OBSERVE: AA2 in tabular list, tab line ID is A

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

==

• Valid ARTS IIIA Keyboard Entries

94 1Z ACTION: ENTER <F4> AA2

94A 1Z OBSERVE: AA2 is dropped from tab list

In the SDA KBD MSG counter (640006) incremented by one
TRK DRP MSG counter (640005) incremented by one

SCORE: PASS / FAIL

Comments: ____

==

• Valid ARTS IIIA Keyboard Entries

95 1Z ACTION: ENTER <F10> DR

95A TTY OBSERVE: HH:MM:SS IF 1Z SEL DR

SCORE: PASS / FAIL

95B 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

==

• Valid ARTS IIIA Keyboard Entries

96 1Z ACTION: ENTER <F10> DR

96A TTY OBSERVE: HH:MM:SS IF 1Z INH DR

SCORE: PASS / FAIL

96B 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

97 1Z ACTION: ENTER <F11> AI

97A TTY OBSERVE: HH:MM:SS CA 1Z CA INH

SCORE: PASS / FAIL

97B 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

98 1Z ACTION: ENTER <F11> AE

98A TTY OBSERVE: HH:MM:SS CA 1Z CA ENB

SCORE: PASS / FAIL

98B 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

99 1Z ACTION: ENTER <F12> O

99A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

100 1Z ACTION: ENTER <F12> F

100A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

101 IZ ACTION: ENTER <F14> 0

101A IZ OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

101B TTY OBSERVE: HH:MM:SS IF TEST PROGRAM SELECT

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

102 IZ ACTION: ENTER <F14> 0

102A IZ OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

102B TTY OBSERVE: HH:MM:SS IF TEST PROGRAM INHIBIT

SCORE: PASS FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

103 IZ ACTION: ENTER <F16> SLEW to AAL874

103A IZ OBSERVE: In the SDA, memory readout inhibited
Beginning CTS (CTST) address for AAL874, controller symbol, firmness, flags, tracks RDR/BCN history for the last ten scans and tracks Status

SCORE: PASS / FAIL

Comments: ______________________________

= -

* Valid ARTS IIIA Keyboard Entries

104 IZ ACTION: ENTER <F16>

104A IZ OBSERVE: In the SDA All data pertaining to AAL874 is inhibited

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable Memory Readout

105 1Z ACTION: ENTER <F7>R

105A 1Z OBSERVE: Ten memory locations are displayed in the SDA
and address 640006 contains 0000000025

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

106 1Z ACTION: ENTER <F15>02

106A 1Z OBSERVE: Target 2 is dropped, AAL874 CST

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

NOTE: Wait for AAL874 to CST into the CST tab list.

106B 1Z OBSERVE: AA874 in CST list, tab line ID 0

In the SDA THRD DRP MSG counter (640004) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

107 1Z ACTION: ENTER <F4>AAL874

107A 1Z OBSERVE: AAL874 is dropped from tab list

In the SDA KBD MSG counter (640006) incremented by one
TRK DRP MSG counter (640005) is incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Valid ARTS IIIA Keyboard Entries

108 1Z ACTION: ENTER <F7>S/MMDDYY

108A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

108B TTY OBSERVE: HH:MM:SS DATE 1Z mmddyy

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Valid ARTS IIIA Keyboard Entries

109 1Z ACTION: ENTER <F7> I10SCR

109A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

109B TTY OBSERVE: HH:MM:SS CKEY 1Z I0SCR and
HH:MM:SS CDR DISC 0 0250003

SCORE: PASS / FAIL

NOTE: The keyboard packets that were sent to FAST were prepared by the FAST modification to the ARTS program. When CDR is enabled the keyboard packets prepared by the CDR routine will be sent to FAST. The only difference is that the FAST modification will add another header word to the packet that is sent to FAST.

Comments: ______________________________

= =

• Invalid FAST Keyboard Entries

110 1Z ACTION: ENTER M <F12> and 32 "A"s, space and 6 "A"s

110A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Invalid FAST Keyboard Entries

111 1Z ACTION: ENTER 32 "A"s

111A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

112 1Z ACTION: ENTER EA

112A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

113 1Z ACTION: ENTER B

113A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

114 1Z ACTION: ENTER C

114A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

115 1Z ACTION: ENTER D

115A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

116 1Z ACTION: ENTER G

116A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

117	1Z	ACTION: ENTER H
117A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

118	1Z	ACTION: ENTER J
118A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

119	1Z	ACTION: ENTER K
119A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

120	1Z	ACTION: ENTER L
120A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

121 1Z ACTION: ENTER M

121A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Invalid FAST Keyboard Entries

122 1Z ACTION: ENTER N

122A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Invalid FAST Keyboard Entries

123 1Z ACTION: ENTER P

123A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Invalid FAST Keyboard Entries

124 1Z ACTION: ENTER Q

124A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Invalid FAST Keyboard Entries

125 1Z ACTION: ENTER S

125A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Invalid FAST Keyboard Entries

126	1Z	ACTION: ENTER T
126A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

• Invalid FAST Keyboard Entries

127	1Z	ACTION: ENTER U
127A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

• Invalid FAST Keyboard Entries

128	1Z	ACTION: ENTER V
128A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

• Invalid FAST Keyboard Entries

129	1Z	ACTION: ENTER W
129A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

Comments: ____

= =

• Invalid FAST Keyboard Entries

130	1Z	ACTION: ENTER Y
130A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

131 1Z ACTION: ENTER Z

131A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

132 1Z ACTION: ENTER +

132A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

133 1Z ACTION: ENTER *

133A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

134 1Z ACTION: ENTER Delta

134A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid FAST Keyboard Entries

135 1Z ACTION: ENTER Period

135A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

---

* Invalid ARTS/FAST Keyboard Entries

136 1Z ACTION: ENTER <F12>E

136A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the display readout area ILL FNCT

SCORE: PASS / FAIL

Comments: ______________________________

* Valid ARTS IIIA Keyboard Entries

137 1Z ACTION: ENTER <F15>02A030B4102 SLEW 15 nm NE

137A 1Z OBSERVE: Target 2 is displayed 15 nm NE

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid ARTS IIIA Keyboard Entries

138 1Z ACTION: ENTER <F15>03A030B4103 SLEW 18 nm NE

138A 1Z OBSERVE: Target 3 is displayed 18 nm NE

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid ARTS IIIA Keyboard Entries

139 1Z ACTION: ENTER <F1>AAL1256 4101

139A 1Z OBSERVE: AAL1256 is displayed in the Tabular list, tab line ID = A,

In the SDA KBD MSG counter (640006) incremented by one

In two scans AAL1256 acquires on target 1

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

140 1Z ACTION: ENTER < F1 > TWA525 4102

140A 1Z OBSERVE: TWA525 is displayed in the Tabular list, tab line ID = A,

In the SDA KBD MSG counter (640006) incremented by one

In two scans TWA525 acquires on target 2

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

141 1Z ACTION: ENTER < F1 > DAL511 4103

141A 1Z OBSERVE: DAL511 is displayed in the Tabular list, tab line ID = A,

In the SDA KBD MSG counter (640006) incremented by one

In two scans DAL511 acquires on target 3

SCORE: PASS / FAIL

Comments: ____

---

* Valid FAST Keyboard Entries

142 1Z ACTION: ENTER M < F12 > T1

142A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

---

* Valid FAST Keyboard Entries

143 1Z ACTION: ENTER T15

143A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

144 1Z ACTION: ENTER T19

144A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

145 1Z ACTION: ENTER T2

145A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

146 1Z ACTION: ENTER T25

146A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

147 1Z ACTION: ENTER T29

147A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

148 1Z ACTION: ENTER T3

148A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

149 1Z ACTION: ENTER T35

149A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

150 1Z ACTION: ENTER T39

150A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

151 1Z ACTION: ENTER T4

151A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

152 1Z ACTION: ENTER R SLEW to AAL1256

152A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

153 1Z ACTION: ENTER R SLEW to TWA525

153A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

154 1Z ACTION: ENTER R SLEW to DAL511

154A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

155 1Z ACTION: ENTER R SLEW to AAL1256

155A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

156 1Z ACTION: ENTER R SLEW to TWA525

156A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

157 1Z ACTION: ENTER R SLEW to DAL511

157A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

158 1Z ACTION: ENTER X SLEW to AAL1256

158A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

159 1Z ACTION: ENTER X SLEW to TWA525

159A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

160 1Z ACTION: ENTER X SLEW to DAL511

160A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

161 1Z ACTION: ENTER X SLEW to AAL1256

161A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

162 1Z ACTION: ENTER X SLEW to TWA525

162A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

163 1Z ACTION: ENTER X SLEW to DAL511

163A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

164 1Z ACTION: ENTER O

164A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

165 1Z ACTION: ENTER O

165A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

The CDR function builds keyboard packets for invalid ARTS keyboard entries, these keyboard packets will not be sent to the FAST system.

* Invalid ARTS Keyboard Entries

166 1Z ACTION: ENTER <F7>J

166A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the display readout area ILL FNCT

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Invalid ARTS Keyboard Entries

167 1Z ACTION: ENTER <F7>U

167A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the display readout area ILL FNCT

SCORE: PASS / FAIL

Comments: ____________________

= =

* Invalid ARTS Keyboard Entries

168 1Z ACTION: ENTER <F7> A11

168A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the display readout area FORMAT

SCORE: PASS / FAIL

Comments: ____________________

= =

* Invalid ARTS Keyboard Entries

169 1Z ACTION: ENTER <F7> AAA

169A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the display readout area FORMAT

SCORE: PASS FAIL

Comments: ____________________

= =

* Invalid ARTS Keyboard Entries

170 1Z ACTION: ENTER <F7> B SLEW 10 nm south

170A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the display readout area ILL TRK

SCORE: PASS / FAIL

Comments: ____________________

= =

* Invalid ARTS Keyboard Entries

171 1Z ACTION: ENTER <F7> D SLEW 10 nm south

171A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the display readout area ILL TRK

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

172 1Z ACTION: ENTER < F7 > 2VE

172A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

172B TTY OBSERVE: HH:MM:SS RCFG 1Z SUPR CNTR SEL

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

173 1Z ACTION: ENTER < F7 > P 1Z

173A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

In the readout area POS 1Z NOT SUP

SCORE: PASS / FAIL

173B TTY OBSERVE: HH:MM:SS STAT 1Z 1Z = CLR

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid ARTS Keyboard Entries

174 1Z ACTION: ENTER < F7 > G1

174A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the readout area ILL FNCT

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid ARTS Keyboard Entries

175 1Z ACTION: ENTER < F7 > S230000

175A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the readout area ILL POS

SCORE: PASS / FAIL

Comments: ____

= =

• Valid ARTS Keyboard Entries

176 1Z ACTION: ENTER <F7>P 1Z

176A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

In the readout area POS 1Z IS SUP

SCORE: PASS / FAIL

176B TTY OBSERVE: HH:MM:SS 1Z STAT 1Z=SET

SCORE: PASS / FAIL

Comments: ____

= =

• Valid ARTS Keyboard Entries

177 1Z ACTION: ENTER <F7>2VI

177A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

177B TTY OBSERVE: HH:MM:SS RCFG 1Z SUPR CNTR INH

SCORE: PASS / FAIL

Comments: ____

= =

• Invalid ARTS Keyboard Entries

178 1Z ACTION: ENTER <F7>P1

178A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the readout area ILL FNCT

SCORE: PASS / FAIL

Comments: ____

= =

* Invalid ARTS Keyboard Entries

179 1Z ACTION: ENTER <F6>AAL1256

179A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the readout area DUP ID

SCORE: PASS / FAIL

Comments: ____________________

= =

* Invalid ARTS Keyboard Entries

180 1Z ACTION: ENTER <F6>DAL511

180A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the readout area DUP ID

SCORE: PASS / FAIL

Comments: ____________________

= =

* Invalid ARTS Keyboard Entries

181 1Z ACTION: ENTER <F7>B15

181A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented

In the readout area CAPACITY .

SCORE: PASS / FAIL

Comments: ____________________

= =

* Valid ARTS Keyboard Entries

182 1Z ACTION: ENTER <F7>R640013 2

182A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

Memory readout for 640013 and 640014 is inhibited

SCORE: PASS / FAIL

Comments: ____________________

= =

* Valid ARTS Keyboard Entries

183 1Z ACTION: ENTER < F7 > R230605

183A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one address 230605 and contents 0127701200 are displayed

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

184 1Z ACTION: ENTER < F7 > R230613

184A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one address 230613 and contents 0007601200 are displayed

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

185 1Z ACTION: ENTER < F7 > R230605 0120101200

185A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one address 230605 and contents 0120101200 are displayed

SCORE: PASS / FAIL

185B TTY OBSERVE: HH:MM:SS MEM 1Z 230605 0120101200

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

186 1Z ACTION: ENTER < F7 > R230613 0000101200

186A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one address 230613 and contents 0000101200 are displayed

SCORE: PASS / FAIL

186B TTY OBSERVE: HH:MM:SS MEM 1Z 230613 0000101200

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Invalid ARTS Keyboard Entries

187 1Z ACTION: ENTER <F6> DAL513 /

187A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
In the TAB list DAL513 1201

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Invalid ARTS Keyboard Entries

188 1Z ACTION: ENTER <F6> DAL514 /

188A 1Z OBSERVE: In the SDA KBD MSG counter (640006) is not incremented
In the readout area CAPACITY

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

189 1Z ACTION: ENTER <F7> R230605 0127701200

189A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
address 230605 and contents 0127701200 are displayed

SCORE: PASS / FAIL

189B TTY OBSERVE: HH:MM:SS MEM 1Z 230605 0127701200

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

190 1Z ACTION: ENTER <F7> R230613 0007601200

190A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
address 230613 and contents 0007601200 are displayed

SCORE: PASS / FAIL

190B TTY OBSERVE: HH:MM:SS MEM 1Z 230613 0007601200

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

191 1Z ACTION: ENTER <F7>R230605

191A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one address 230605 and contents are inhibited

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

192 1Z ACTION: ENTER <F7>R230613

192A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one address 230613 and contents are inhibited

SCORE: PASS FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

193 1Z ACTION: ENTER <F7>R640013 2

193A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one addresses 640013 and 640014 are displayed

SCORE: PASS FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

194 1Z ACTION: ENTER <F7>A1

194A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one and a 1 is displayed in line 2 of SDA

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

195 1Z ACTION: ENTER <F7>A0

195A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one and the 1 in line 2 of the SDA is inhibited

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

196 1G ACTION: ENTER <F7>2M

196A 1G OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

196B MSP OBSERVE: All printouts directed to the MSP

SCORE: PASS FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

197 1Z ACTION: ENTER <F7>CP1

197A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

197B MSP OBSERVE: CFG 1 is listed on the MSP

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

198 1Z ACTION: ENTER <F7>CP2

198A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

198B MSP OBSERVE: CFG 2 is listed on the MSP

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA/FAST Keyboard Entry

199 1G ACTION: ENTER <F7>2T

199A TTY OBSERVE: All printouts directed to the TTY

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

200 1Z ACTION: ENTER <F7>D DAL513

200A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

In the PREVIEW AREA Is the flight plan for DAL513

In the READOUT AREA DAL513 is in the modify mode

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

201 1Z ACTION: ENTER 4104

201A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

In the PREVIEW AREA Beacon code for DAL513 is 4104

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

202 1Z ACTION: ENTER <F7>F

202A 1Z OBSERVE: In the SDA KBD MSG counter (640006) incremented by one

In the PREVIEW AREA
Lower/upper filter limits associated tracks
Lower/upper filter limits unassociated tracks

SCORE: PASS / FAIL

Comments: ____

= =

NOTE: Multifunction function G ((Beacon Reports and Tracking Summary)BRATS) will not be tested during this test. It requires the BRATS on call program to be resident and only one on call program can be resident. The on call ETG program is currently resident.

* Valid ARTS Keyboard Entries

203 1Z ACTION: ENTER <F7>HH SLEW to AAL1256

203A 1Z OBSERVE: Heavy indicator in the 2nd line,
position 8 of AAL1256 FDB

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

204 1Z ACTION: ENTER <F7>HB737 SLEW to TWA525

204A 1Z OBSERVE: B737 displayed in line two,
field four of TWA5256 FDB

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

NOTE: The multifunction I capabilities will not be tested because the Bulk Store Flight Plan Maintenance program is not available and this function is will be removed in A3.06.

NOTE: Multifunction J is currently undefined.

* Valid ARTS IIIA Keyboard Entries

205 1Z ACTION: ENTER <F7>K

205A 1Z OBSERVE: Auto offset is enabled

In the SDA KBD MSG counter (640006) incremented by one and 640013 is incrementing for each leader direction change

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

206 1Z ACTION: ENTER <F7>O

206A 1Z OBSERVE: Auto offset is disabled

In the SDA KBD MSG counter (640006) incremented by one and 640013 has stopped incrementing

SCORE: PASS / FAIL

Comments: ____

= =

Insure that the direction toggle is in the "X" position

* Valid ARTS IIIA Keyboard Entries

207 1Z ACTION: ENTER <F7>L1 SLEW to AAL1257

207A 1Z OBSERVE: AAL1257 leader direction is northwest

In the SDA KBD MSG counter (640006) incremented by one 640013 was incrementing by one

SCORE: PASS FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

208 1Z ACTION: ENTER <F7>L7

208A 1Z OBSERVE: Leader direction for all FDBs is South West

In the SDA KBD MSG counter (640006) incremented by one 640012 was incrementing by three

SCORE: PASS FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

209 1Z ACTION: ENTER <F7>MIG SLEW TO DAL511

209A 1G OBSERVE: DAL511 is controlled by position 1G

The FDB remains at 1Z

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

210 1G ACTION: ENTER <F7> M1Z SLEW TO DAL511

210A 1Z OBSERVE: DAL511 is controlled by position 1Z

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

211 1Z ACTION: ENTER <F7> M1S SLEW TO DAL511

211A 1S OBSERVE: DAL511 is controlled by position 1S

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

212 1S ACTION: ENTER <F7> M1ZSLEW TO DAL511

212A 1Z OBSERVE: DAL511 is controlled by position 1Z

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

213 1Z ACTION: ENTER <F7> N

213A 1Z OBSERVE: In the SDA GHOST OFF is displayed

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

214 1Z ACTION: ENTER <F7>N

214A 1Z OBSERVE: In the SDA GHOST OFF is inhibited

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

215 1Z ACTION: ENTER <F7>O

215A 1Z OBSERVE: Auto offset is enabled

In the SDA KBD MSG counter (640006) incremented by one and 640013 is incrementing for each leader direction change

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

216 1Z ACTION: ENTER <F7>O

216A 1Z OBSERVE: Auto offset is disabled

In the SDA KBD MSG counter (640006) incremented by one and 640013 has stopped incrementing

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

217 1Z ACTION: ENTER <F15>01A005F

217A 1Z OBSERVE: AAL1256 descending to 500 feet

In the LA/CA TAB AAL1256
Line 0 of AAL1256 FDB contains LA
MSAW alarm enabled

SCORE: PASS / FAIL

Comments: ______________________________

= =

NOTE: Multifunction P has been tested in steps 173 and 176

* Valid ARTS IIIA Keyboard Entries

218 1Z ACTION: ENTER <F7>Q SLEW to AAL1256

218A 1Z OBSERVE: An asterisk is displayed following AAL1256

In the LA/CA TAB AAL1256 inhibited

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

218B TTY OBSERVE: HH:MM:SS MSAWD 1Z INHIB AAL1256

SCORE: PASS / FAIL

Comments: ______________________________

= =

NOTE: Multifunction R has been tested in steps 182 through 186 and 219 through 193.

* Valid ARTS IIIA Keyboard Entries

220 1Z ACTION: ENTER <F7>S SLEW to 45 nm West

220A 1Z OBSERVE: The SDA is move from north to west

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

221 1Z ACTION: ENTER <F7>S SLEW to 45 nm North

221A 1Z OBSERVE: The SDA is move from West to North

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

• Valid ARTS IIIA Keyboard Entries

222 1Z ACTION: ENTER <F7>T SLEW to 45 nm West

222A 1Z OBSERVE: The Tabular list is repositioned 45 nm west

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

• Valid ARTS IIIA Keyboard Entries

223 1Z ACTION: ENTER <F7>T SLEW to 45 nm North East

223A 1Z OBSERVE: The Tabular list is repositioned 45 nm North East

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

• Valid ARTS IIIA Keyboard Entries

224 1Z ACTION: ENTER <F3> DAL 513

224A 1Z OBSERVE: DAL513 in the coast suspend list ID = 0

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

Comments: ____

= =

• Valid ARTS IIIA Keyboard Entries

225 1Z ACTION: ENTER <F7>VMI

225A 1Z OBSERVE: MSAW processing is inhibited

In the SDA KBD MSG counter (640006) incremented by one
The asterisk in AAL1256 FDB and MSAW alarm inhibited

SCORE: PASS / FAIL

225B TTY OBSERVE: HH:MM:SS MSAW 1Z INB

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

226 1Z ACTION: ENTER <F7>VME

226A 1Z OBSERVE: MSAW processing is enabled

In the SDA KBD MSG counter (640006) incremented by one
AAL1256 in MSAW alert
In the LA/CA TAB AAL1256
MSAW alarm enabled

SCORE: PASS / FAIL

226B TTY OBSERVE: HH:MM:SS MSAW 1Z SEL

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

227 1Z ACTION: ENTER <F15>01A030F

227A 1Z OBSERVE: AAL1256 Climbing to 3000 feet

In the MSAW TAB AAL1256 is inhibited
AAL1256 FDB does not contain line 0

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

228 1Z ACTION: ENTER <F4>ALL

228A 1Z OBSERVE: ALL FDBs and FPs are Dropped

In the SDA KBD MSG counter (640006) incremented by one and
TRK DRP MSG counter (640005) incremented by four

SCORE: PASS / FAIL

Comments: ____

---

* Valid ARTS IIIA Keyboard Entries

229 1Z ACTION: ENTER <F15> 1

229A 1Z OBSERVE: Target 1 is Dropped

In the SDA KBD MSG counter (640006) incremented by one and

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

230 1Z ACTION: ENTER <F15> 2

230A 1Z OBSERVE: Target 2 is Dropped

In the SDA KBD MSG counter (640006) incremented by one and

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

231 1Z ACTION: ENTER <F15> 3

231A 1Z OBSERVE: Target 3 is Dropped

In the SDA KBD MSG counter (640006) incremented by one and

SCORE: PASS FAIL

Comments: ____

= =

This keyboard entry will enable a scenario. The run time for this scenario is 17 minutes and will generate 316 associate targets and 316 unassociated targets. The primary purpose of this scenario is to increase the volume of ARTS messages that will be transmitted to FAST. See APPENDIX "A" for the listing of the scenario.

* Valid ARTS IIIA Keyboard Entries

232 1Z ACTION: ENTER <F15> XIT

232A 1Z OBSERVE: IN the preview area "SCENARIO ACTIVE"

In the SDA KBD MSG counter (640006) incremented by one and

SCORE: PASS / FAIL

The following is the number of messages that were generated by this scenario during a dry run test.

1. Message code 011 KYBD MSGs 675
2. Message code 012 CTS DATA 25,516
3. Message code 021 TREAD DROP 316
4. Message code 022 TRACK DROP 273
5. Message code 024 TYP1T MSGs 42,572
6. Message code 040 TROUT DEMARC S0 7,329
7. Message code 041 TROUT DEMARC S1 7,523

NOTE: Message code 024, TYP1T messages are generate because of a hardware problem with one of the displays. The volume of messages for this message type may vary.

Comments: ____

= =

When "SCENARIO OFF" is displayed in the SDA at approximately 1617 hours. Execute the following Keyboard entry.

* Valid ARTS IIIA/FAST Keyboard Entry

233	1Z	ACTION:	ENTER <F12> I
233A	MSP	OBSERVE:	HH:MM:SS FAST 1Z DISABLED **
		SCORE:	PASS / FAIL
233B	DWS	OBSERVE:	Disabled message received...
		SCORE:	PASS / FAIL
233C	1Z	OBSERVE:	In the SDA All MSG. counters have stopped incrementing
		SCORE:	PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

234	1Z	ACTION:	ENTER <F7> R640003 P10
234A	MSP	OBSERVE:	Message counters are printed on the MSP
		SCORE:	PASS / FAIL
234B	MSP	ACTION:	Fetch the hard copy print out of the message counters, they will be used for a compare to the TIU counters.
		SCORE:	PASS / FAIL
234C	1Z	OBSERVE:	In the SDA All MSG. counters have stopped incrementing
		SCORE:	PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

235 DWS ACTION: SELECT IDLE and CLICK

235A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to obtain the TIU message counters

Using the mouse move the arrow to the keyboard window

236 DWS ACTION: SELECT COUNT and CLICK

236A DWS OBSERVE: In the DADS window the TIU message counter values

SCORE: PASS FAIL

Comments: ____

= =

* DWS entries to obtain a hard copy of message counters

237 DWS ACTION: SELECT Console window

237A DWS OBSERVE: Console window opened and tatca9% prompt

237B DWS ACTION: ENTER screendump scrn.dmp

237C DWS OBSERVE: At the prompt

237D DWS ACTION: ENTER lpr -Plp scrn.dmp

Pick up the hard copy of message counters in the TATCA lab.

SCORE: PASS / FAIL

Comments: ____

= =

* Compare ARTS message counters to the FAST message counters

238 DWS ACTION: Select the Calculator

238A DWS ACTION: Convert the DADS decimal counters to OCTAL and compare to the ARTS message counters

SCORE: PASS / FAIL

238B DWS ACTION: Insure That the DADS message counters for the following message types are in agreement

Initialization message MC20 = 1
Disable FAST message MC25 = 1
Test pattern one message MC26 = 3
Test pattern two message MC27 = 3
Test pattern Three message MC30 = 3
Test pattern four message MC31 = 1

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to close console window

Using the mouse move the arrow to the left corner of console window

239 DWS ACTION: CLICK right button

239A DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select close

239B DWS ACTION: CLICK right button

239C DWS OBSERVE: Console window closed

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to close TIU window

Using the mouse move the arrow to the desk top (blue) area

240 DWS ACTION: Depress and hold down right button

240A DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select utilities

240B DWS ACTION: Continue to hold right button down

240C DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select lock screen

240D DWS ACTION: Release the right button

240E DWS OBSERVE: TIU window locked

SCORE: PASS / FAIL

Comments: ____

= =

241 IOP0 ACTION: Load/start the Editor program using the CDR Editor off-line program load procedures defined in section 4.2.1.3.

241A TTY OBSERVE: ED ENTER DEVICES

241B TTY ENTER: D0MP, CONTROL EOT

241C TTY OBSERVE: ED ENTER DATA CLASSES

241D TTY ENTER: KF, CONTROL EOT

241E TTY OBSERVE: ED ENTER FILTERS

241F TTY ENTER: CONTROL EOT

241G TTY OBSERVE: ED ENTER COMMENTS

241H TTY ENTER: FAST KEYBOARD ENTRY TEST, CONTROL EOT

241I MSP ACTION: Retrieve and save the hardcopy printout of the keyboard entries.

SCORE: PASS / FAIL

Analyze the hard copy printout provided by the EDITOR program for the keyboard entries that were made after CDR was enabled. Compare some of the keyboard printouts with the hard copy keyboard data that was provided by the FAST system.

Comments: ____

= =

* Compare ARTS initialization message to the FAST initialization message

242 TWS ACTION: Provide hard copy of the initialization message

Compare the hard copy of the initialization message received from the TIU to the hard copy (steps 76 through 81) received from the ARTS system and the assembly

listing of elements SDB2 and CNFGD.

SCORE: PASS / FAIL

Comments: ____

= =

* Compare Formats

243 TWS ACTION: Provide a hard copy of at least Two of the Following message types (except for message code 031, provide one).

MC 012 CTS Data message
MC 021 Thread drop Data message
MC 022 Track drop Data message
MC 024 TYPIT Data message
MC 025 Disable FAST Data message
MC 026 Test pattern one Data message
MC 027 Test pattern two Data message
MC 030 Test pattern three Data message
MC 031 Test pattern four Data message
MC 040 TROUT Demarc SS0 Data message
MC 041 TROUT Demarc SS1 Data message
MC 050 Automatic off set Data message
MC 051 Leader direction change Data message

243A ACTION: Compare all of the data messages to the formats contained in Appendix "B"

SCORE: PASS / FAIL

Comments: ____

= =

4.5 *Interfacility Test Procedures*

The third major test named "Interfacility" has one test case.

4.5.1 Test Case 01 - Interfacility

The Interfacility test will insure that the following objectives are satisfied.

1. To ensure that the FAST system has received all of the ARTS to ARTCC Interfacility messages.
2. To ensure that the FAST system has received all of the ARTCC to ARTS Interfacility messages.
3. To ensure that the formats and contents of the interfacility messages are correct.

The interfacility messages will be generated by the RETRACK program from CDR data that was collected by scheduling the ARTCC (HOST) UDS, Target Generator Facility (TGF) and the ARTS IIIA systems. This CDR data is on disc P264.

To satisfy the TGF requirements, the ARTS IIIA system was reassembled to replace the Sensor Receiver and processor (SRAP) with the Sensor Communications Interfaeility Processor (SCIP). This was accomplished for sensor zero and consisted of changing the scan time from four seconds to four point eight seconds. This program is on disc P485.

The following interfacility messages are contained in the CDR data.

1. ARTCC to ARTS
   - Flight plans (21) messages
   - Track initiate messages
   - Track Updates (Six sets of X and Y data) messages
   - Track Updates (Five sets of X and Y data) messages
   - Track Updates (Four sets of X and Y data) messages
   - Track Updates (Three sets of X and Y data) messages
   - Track Updates (Two sets of X and Y data) messages
   - Track Updates (One set of X and Y data) messages
   - Track accept messages
   - Amendment messages
   - Cancellation messages
   - Data accept messages
2. ARTS to ARTCC
   - Departure messages
   - Track initiate messages
   - Track Updates (Five sets of X and Y data) messages
   - Track Updates (Four sets of X and Y data) messages
   - Track Updates (Three sets of X and Y data) messages

- Track Updates (Two sets of X and Y data) messages
- Track Updates (One set of X and Y data) messages
- Terminate beacon messages
- Data accept messages

4.5.1.1 Definitions

SYSTEM DATA AREA	SDA
TELETYPE	TTY
DADS WORK STATION	DWS
TI DISPLAY 6, DESK TOP KEYBOARD	1G
TI DISPLAY 7, DESK TOP KEYBOARD	1Z
TI DISPLAY 9, DESK TOP KEYBOARD	1N
FDAD 6, DESK TOP KEYBOARD	2W

4.5.1.2 Software Preparation

Load and start the operational program using the initial start up procedures described in the Software Loading and Start-Up Procedures, Section 4.2.

4.5.1.3 Test Execution Procedures

The following test data sheets define the detail steps to be executed in the Interfacility Test Case 01.

These data sheets will be used to score the results of each of the test steps.

INTERFACILITY TEST CASE 01.

The Interfacility data packets that are used for FAST are built in the CDR routine CDINFM. These packets are almost identical to the interfacility data packets used for CDR. The only difference is that FAST requires an additional header word. The following steps will demonstrate that FAST interfacility data packets will be built and transmitted to FAST with CDR disabled.

Step	Work Station	Description
----	-------	-------------

* Valid DWS Keyboard Entries to idle the TIU program

1 DWS ACTION: ENTER Any key

1A DWS OBSERVE: Name faatc
Password
Enter password to unlock: select ICON to lock.

SCORE: PASS / FAIL

1B DWS ACTION: ENTER tiufaa

1C DWS OBSERVE: After a couple of seconds the DADS and the keyboard windows are displayed

SCORE: PASS / FAIL

1D DWS INSURE: In the keyboard window that the TIU is in IDLE

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

2 DWS ACTION: SELECT RUN and CLICK

2A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

****

The Following Is Entered Manually From Keyboard 1Z

****

* Disable Beacon RSM printouts

3 1Z ACTION: ENTER <F7>R1

3A TTY OBSERVE: HH:MM:SS RSM 1 1Z INH

SCORE: PASS / FAIL

Comments: ____

= =

* Disable Beacon RSM printouts

4 1Z ACTION: ENTER <F7> R2

4A TTY OBSERVE: HH:MM:SS RSM 2 1Z INH

SCORE: PASS / FAIL

Comments: ____

= =

* Select sensor 0 for sensor 1 (SWABS)

5 1Z ACTION: ENTER <F7> X0

5A TTY OBSERVE: HH:MM:SS BCN 1Z SYS 0

SCORE: PASS / FAIL

Comments: ____

= =

* Enable memory read

6 1Z ACTION: ENTER <F7> R

6A 1Z OBSERVE: Memory read enabled

SCORE: PASS / FAIL

Comments: ____

= =

* Readout message counters

7 1Z ACTION: ENTER 640003 0

7A 1Z OBSERVE: In the SDA

640003 = 0000000000 (CTS Messages)
640004 = 0000000000 (Thread Drop Messages)
640005 = 0000000000 (Track Drop Messages)
640006 = 0000000000 (Keyboard Entry Messages)
640007 = 0000000000 (TROUT Demarcation Messages SS0)
640010 = 0000000000 (TROUT Demarcation Messages SS1)
640011 = 0000000000 (Interfacility Messages)
640012 = 0000000000 (Leader Change Messages)
640013 = 0000000000 (Offset Change Messages)
640014 = 0000000000 (TYP1 Messages)

SCORE: PASS / FAIL

NOTE: The contents of all of the counters will remain at 0000000000 until the FAST function is enabled.

Comments: ____

= =

* Move System Data Area

8 1Z ACTION: ENTER <F7>S SLEW to 45 nm North West

8A 1Z OBSERVE: the SDA is displayed North West

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

9 1Z ACTION: ENTER <F7>S/090192

9B TTY OBSERVE: HH:MM:SS DATE 1Z 090192

SCORE: PASS FAIL

Comments: ____

= =

* Valid ARTS IIIA FAST Keyboard Entry

10 1Z ACTION: ENTER <F12>E

10A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLE !! OPNL

SCORE: PASS / FAIL

10B DWS OBSERVE: Initialization message received...

SCORE: PASS / FAIL

10C 1Z OBSERVE: IN the SDA

640003 = 0000000000
640004 = 0000000000
640005 = 0000000000
640006 = 0000000000
640007 = Incrementing
640010 = 0000000000
640011 = 0000000000
640012 = 0000000000
640013 = 0000000000
640014 = 0000000000

SCORE: PASS / FAIL

A DEDS may generate continuous TYP1 words with "X" and "y" changes because of a hardware malfunction. These changes to these typ1 words will cause the counter in address 640014 to be continuously incremented. To correct the situation identify the DEDS that is causing the problem, off center the DEDS and then center DEDS. However, it is suggested not to correct the situation. This will provide for a large value in the TYP1 counter at the end of the test and the TIU counter must match exactly.

Comments: ____

= =

* Valid ARTS IIIA Keyboard Entries

11	1Z	ACTION: ENTER <F7>S125900
11A	1Z	OBSERVE: The SDA time 12:59:00
		SCORE: PASS / FAIL
11B	TTY	OBSERVE: HH:MM:SS TIME 1Z 125900
		SCORE: PASS / FAIL

Changing the system time has started the RETRACK program and all FDBS will be on display 7. The following data messages will be generated during this test. the number of messages for each data message is an approximation.

1. Message code 011 KYBD MSGs = 101
2. Message code 012 CTS DATA = 3,047
3. Message code 013 INTERFACILITY DATA = 450
4. Message code 021 TREAD DROP = 11
5. Message code 022 TRACK DROP = 11
6. Message code 024 TYP1T MSGs = 33,194
7. Message code 040 TROUT DEMARC S0 = 7,820
8. Message code 041 TROUT DEMARC S1 = 0 (SWABS entry step 4)

NOTE: Message code 024, TYP1T messages are generated because of a hardware problem with one of the displays. The volume of messages for this message type may vary.

Comments: ____

= =

AT 1305 EXECUTE THE FOLLOWING KEYBOARD ENTRY

* Valid ARTS IIIA Keyboard Entries

12	1Z	ACTION: ENTER <F7>H0SCR
12A	1Z	OBSERVE: In the SDA KBD MSG counter (640006) incremented by one
		SCORE: PASS / FAIL

12B	TTY	OBSERVE:	HH:MM:SS CKEY 1Z I0SCR and HH:MM:SS CDR DISC 0 0250003
		SCORE:	PASS / FAIL

NOTE: The Interfacility packets that were sent to FAST were prepared by the FAST modification to the ARTS program. When CDR is enabled the interfacility packets prepared by the CDR routine will be sent to FAST. The only difference is that the FAST modification will add another header word to the packet that is sent to FAST.

Comments: ____

= =

AT 1316 execute the following keyboard entry

* Valid ARTS IIIA FAST Keyboard Entry

13	1Z	ACTION:	ENTER <F12>I
13A	TTY	OBSERVE:	HH:MM:SS FAST 1Z DISABLED **
		SCORE:	PASS FAIL
13B	DWS	OBSERVE:	Disabled message received...
		SCORE:	PASS / FAIL
13C	1Z	OBSERVE:	In the SDA All MSG. counters have stopped incrementing
		SCORE:	PASS FAIL

Comments: ____

= =

* Change printouts to the MSPrd Entry

14	1Z	ACTION:	ENTER <F7>2M
14A	MSP	OBSERVE:	All printouts are on the MSP
		SCORE:	PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA FAST Keyboard Entry

15	1Z	ACTION:	ENTER <F7>R640003 P10
15A	TTY	OBSERVE:	Message counters are printed on the MSP
		SCORE:	PASS / FAIL
15B	MSP	ACTION:	Fetch the hard copy print out of the message counters, they will be used in step 15

SCORE: PASS / FAIL

15C 1Z OBSERVE: In the SDA All MSG. counters have stopped incrementing

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to obtain the TIU message counters

Using the mouse move the arrow to the keyboard window

16 DWS ACTION: SELECT IDLE and CLICK

16A DWS OBSERVE: In the keyboard window the TIU in IDLE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to obtain the TIU message counters

Using the mouse move the arrow to the keyboard window

17 DWS ACTION: SELECT COUNT and CLICK

17A DWS OBSERVE: In the DADS window the TIU message counter values

SCORE: PASS FAIL

Comments: ______________________________

= =

* DWS entries to obtain a hard copy of message counters

18 DWS ACTION: SELECT Console window

18A DWS OBSERVE: Console window opens and tatca9% prompt

18B DWS ACTION: ENTER screendump scrn.dmp

18C DWS OBSERVE: At the prompt

18D DWS ACTION: ENTER lpr -Plp scrn.dmp

Pick up the hard copy of message counters in the TATCA lab.

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Compare ARTS message counters to the FAST message counters

19	DWS	ACTION:	Select the Calculator
19A	DWS	ACTION:	Convert the DADS decimal counters to OCTAL and compare to the ARTS message counters
		SCORE:	PASS / FAIL
19B	DWS	ACTION:	Insure That the DADS message counters for the following message types are in agreement Initialization message MC20 = 1 Disable FAST message MC25 = 1
		SCORE:	PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to close console window

Using the mouse move the arrow to the left corner of console window

20	DWS	ACTION:	CLICK right button
20A	DWS	OBSERVE:	Menu appears
		SCORE:	PASS / FAIL

Move the mouse and select close

20B	DWS	ACTION:	CLICK right button
20C	DWS	OBSERVE:	Console window closed
		SCORE:	PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to close TIU window

Using the mouse move the arrow to the desk top (blue) area

21	DWS	ACTION:	Depress and hold right button
21A	DWS	OBSERVE:	Menu appears
		SCORE:	PASS / FAIL

Move the mouse and select utilities

21B	DWS	ACTION:	continue to hold right button down
21C	DWS	OBSERVE:	Menu appears
		SCORE:	PASS / FAIL

Move the mouse and select lock screen

21D	DWS	ACTION:	Release the right button
21E	DWS	OBSERVE:	TIU window locked
		SCORE:	PASS / FAIL

Comments: ____

= =

22	IOP0	ACTION:	Load/start the Editor program using the CDR Editor off-line program load procedures defined in section 4.2.1.3.
22A	TTY	OBSERVE:	ED ENTER DEVICES
22B	TTY	ENTER:	D0MP, CONTROL EOT
22C	TTY	OBSERVE:	ED ENTER DATA CLASSES
22D	TTY	ENTER:	IF, CONTROL EOT
22E	TTY	OBSERVE:	ED ENTER FILTERS
22F	TTY	ENTER:	CONTROL EOT
22G	TTY	OBSERVE:	ED ENTER COMMENTS
22H	TTY	ENTER:	INTERFACILITY TEST, CONTROL EOT
22I	MSP	ACTION:	Retrieve and save the hard copy printout of the keyboard entries.
		SCORE:	PASS / FAIL

Save the hard copy printout provided by the EDITOR program for the interfacility messages that were recorded after CDR was enabled.

Comments: ____

= =

* Compare Contents

23	TWS	ACTION:	Provide a hard copy of at least Two of the Following Interfacility messages.

ARTCC to ARTS

Flight plans messages
Track initiate messages
Track Updates (Six sets of X and Y data) messages
Track Updates (Five sets of X and Y data) messages
Track Updates (Four sets of X and Y data) messages
Track Updates (Three sets of X and Y data) messages
Track Updates (Two sets of X and Y data) messages
Track Updates (One set of X and Y data) messages
Track accept messages
Amendment messages
Cancellation messages
Data accept messages

ARTS to ARTCC

Departure messages
Track initiate messages
Track Updates (Five sets of X and Y data) messages
Track Updates (Four sets of X and Y data) messages
Track Updates (Three sets of X and Y data) messages
Track Updates (Two sets of X and Y data) messages
Track Updates (One set of X and Y data) messages
Terminate beacon messages
Data accept messages

SCORE: PASS / FAIL

23A ACTION: Convert contents to readable format and compare with the CDR hard copy of Interfacility messages.

SCORE: PASS / FAIL

Comments: ____

= =

4.6 Central Track Store (CTS(Tracking)) Test Procedures

The second major test named "Central Track Store (CTS)" has one test case.

4.6.1 Test Case 01 - Central Track Store (CTS)

The Central Track Store test will insure that the following objective is satisfied.

1. To ensure that FAST is capable of processing high volumes data messages under ARTS capacity conditions and that no messages are lost in the transfer of the data.

4.6.1.1 Definitions

SYSTEM DATA AREA	SDA
TELETYPE	TTY
DADS WORK STATION	DWS
TIU WORK STATION	TWS
TI DISPLAY 5, DESK TOP KEYBOARD	1S
TI DISPLAY 6, DESK TOP KEYBOARD	1G
TI DISPLAY 7, DESK TOP KEYBOARD	1Z
TI DISPLAY 9, DESK TOP KEYBOARD	1N

4.6.1.2 Software Preparation

Load and start the operational program using the initial start up procedures described in the Software Loading and Start-Up Procedures, Section 4.2.

4.6.1.3 Test Execution Procedures

The following test data sheets define the detail steps to be executed in the CTS Test Case 01.

These data sheets will be used to score the results of each of the test steps.

CTS TEST CASE 01,

Step	Work Station	Description
		**
		The Following Is Entered Manually From Keyboard 1Z
		**
		* Disable Beacon RSM printouts
1	1Z	ACTION: ENTER <F7>R1
1A	TTY	OBSERVE: HH:MM:SS RSM 1 1Z INH
		SCORE: PASS / FAIL

Comments: ______________________________

= =

		* Disable Beacon RSM printouts
2	1Z	ACTION: ENTER <F7>R2
2A	TTY	OBSERVE: HH:MM:SS RSM 2 1Z INH
		SCORE: PASS / FAIL

Comments: ______________________________

= =

		* Disable sign on identifiers
3	1Z	ACTION: ENTER <F7>TS
3A	1Z	OBSERVE: AC, AH, and AM inhibited
		SCORE: PASS / FAIL

Comments: ______________________________

= =

		* Select Alternate FAST channel, Invalid FAST keyboard
4	1S	ACTION: ENTER <F7>2F
4A	1S	OBSERVE: In the preview area "ILL FNCT"
		SCORE: PASS / FAIL

Comments: ______________________________

= =

* Select Alternate FAST channel

5 1Z ACTION: ENTER < F7 > 2F

5A TTY OBSERVE: HH:MM:SS RCFG 1Z FAST CHAN SELEC ALT

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Load the ETG program

6 TTY ACTION: ENTER TK IA TG

6A TTY OBSERVE: TK IA TG L-001

SCORE: PASS / FAIL

6B TTY OBSERVE: HH:MM:SS OK 001 TK IA TG

SCORE: PASS / FAIL

Comments: ______________________________

= =

****

The Following Is Entered Manually From Keyboard 1N

****

* Remove Display 9 from Training

7 1N ACTION: ENTER < F15 > ZT

7A 1N OBSERVE: Keyboard entry is accepted

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Remove Display 9 from Training

8 1N ACTION: ENTER < F15 > ZM

8A TTY OBSERVE: HH:MM:SS STAT 1N 03 = ACT

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enter XTS Mode

9 1Z ACTION: ENTER < F7 > 2TE

9A 1Z OBSERVE: Entry is accepted. Message counters remain zero

SCORE: PASS / FAIL

9B TTY OBSERVE: HH:MM:SS RCFG 1Z TEST MODE SEL

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enter XTS Mode

10 1Z ACTION: ENTER < F15 > XTS

10A 1Z OBSERVE: Unassociated tracks on all Displays are inhibited,
Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable Memory Readout

11 1Z ACTION: ENTER M < F7 > R

11A 1Z OBSERVE: KEYBOARD ENTRY IS ACCEPTED

SCORE: PASS FAIL

Comments: ______________________________

= =

* Readout message counters

12 1Z ACTION: ENTER 640003 0

12A 1Z OBSERVE: In the SDA

640003 = 0000000000 (CTS Messages)
640004 = 0000000000 (Thread Drop Messages)
640005 = 0000000000 (Track Drop Messages)
640006 = 0000000000 (Keyboard Entry Messages)
640007 = 0000000000 (TROUT Demarcation Messages SS0)
640010 = 0000000000 (TROUT Demarcation Messages SS1)
640011 = 0000000000 (Interfacility Messages)
640012 = 0000000000 (Leader Change Messages)
640013 = 0000000000 (Offset Change Messages)
640014 = 0000000000 (TYP1 Messages)

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

13 1Z ACTION: ENTER <F7> 1D

13A TTY OBSERVE: HH:MM:SS CKEY 1Z D

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

14 1Z ACTION: ENTER <F7> 1E CT

14A TTY OBSERVE: HH:MM:SS CKEY 1Z E CT

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

15 1Z ACTION: ENTER <F7> 1FR25

15A TTY OBSERVE: HH:MM:SS CKEY 1Z FR25

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

16 1Z ACTION: ENTER <F7> 1FA030

16A TTY OBSERVE: HH:MM:SS CKEY 1Z FA030

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

17 1Z ACTION: ENTER <F7> 1FCA

17A TTY OBSERVE: HH:MM:SS CKEY 1Z FCA

SCORE: PASS / FAIL

Comments: ____________________

= =

• Valid ARTS IIIA Keyboard Entries

18 1Z ACTION: ENTER <F7>S/MMDDYY

18A TTY OBSERVE: HH:MM:SS DATE 1Z mmddyy

SCORE: PASS / FAIL

Comments: ____________________

= =

• Valid ARTS IIIA Keyboard Entries

19 1Z ACTION: ENTER <F7>HSCR

19A TTY OBSERVE: HH:MM:SS CKEY 1Z HSCR and
HH:MM:SS CDR DISC 1 0250003

SCORE: PASS / FAIL

Comments: ____________________

= =

• Valid DWS Keyboard Entries to idle the TIU program

20 DWS ACTION: ENTER Any key

20A DWS OBSERVE: Name faatc
Password
Enter password to unlock: select ICON to lock.

SCORE: PASS / FAIL

20B DWS ACTION: ENTER tiufaa

20C DWS OBSERVE: After a couple of seconds the DADS and the keyboard windows are displayed

SCORE: PASS / FAIL

20D DWS INSURE: In the keyboard window that the TIU is in IDLE

SCORE: PASS / FAIL

Comments: ____________________

= =

• Valid DWS Keyboard Entries to Change ARTS/TIU channels

Using the mouse move the arrow to the PORT 1 window

21 DWS ACTION: CLICK left button

21A DWS OBSERVE: In the DADS window

TIU STATUS: TAP IS NOW SET TO USE PIM #1

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

22 DWS ACTION: SELECT RUN and CLICK

22A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

23 1Z ACTION: ENTER <F12> E

23A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLE !! OPNL

SCORE: PASS / FAIL

Comments: ____

= =

This keyboard entry will enable a scenario. The run time for this scenario is 38 minutes and will generate 346 associated targets and 354 unassociated targets. The primary purpose of this scenario is to create capacity conditions for the transfer of messages to FAST. See APPENDIX "C" for the listing of the scenario.

* Valid ARTS IIIA Keyboard Entries

24 1Z ACTION: ENTER <F15> XIT

24A 1Z OBSERVE: IN the preview area "SCENARIO ACTIVE"

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

The following number of messages will be generated during the test.

1. Message code 011 KYBD MSGs 918

2. Message code 012 CTS DATA 106,162

3. Message code 013 INTERFACILITY MSGs 51

4. Message code 021 THREAD DROP MSGs 21

5. Message code 022 TRACK DROP MSGs 347

6. Message code 024 TYPIT MSGs 118,269

7. Message code 040 TROUT DEMARC S0 15,090

8. Message code 041 TROUT DEMARC S1 15,487

9. Message code 050 Leader direction change 1500

10. Message code 051 Offset direction change 300

Comments: ____

= =

When "SCENARIO OFF" is displayed in the SDA at approximately 1637 hours. Execute the following Keyboard entry.

		* Valid ARTS IIIA/FAST Keyboard Entry	
25	1Z	ACTION:	ENTER <F12> I
25A	TTY	OBSERVE:	HH:MM:SS FAST 1Z DISABLED **
		SCORE:	PASS / FAIL
25B	DWS	OBSERVE:	Disabled message received...
		SCORE:	PASS / FAIL
25C	1Z	OBSERVE:	In the SDA All MSG. counters have stopped incrementing
		SCORE:	PASS / FAIL

Comments: ____

= =

		* Valid ARTS IIIA/FAST Keyboard Entry	
26	1Z	ACTION:	ENTER <F7> 2M
26A	MSP	OBSERVE:	All printouts directed to the MSP
		SCORE:	PASS / FAIL

Comments: ____

= =

		* Valid ARTS IIIA/FAST Keyboard Entry	
27	1Z	ACTION:	ENTER <F7> R640003 P10

27A TTY OBSERVE: Message counters are printed on the MSP

SCORE: PASS / FAIL

27B MSP ACTION: Fetch the hard copy print out of the message counters.

SCORE: PASS / FAIL

Comments: ____________________

= =

• Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

28 DWS ACTION: SELECT IDLE and CLICK

28A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS / FAIL

Comments: ____________________

= =

• Valid DWS Keyboard Entries to obtain the TIU message counters

Using the mouse move the arrow to the keyboard window

29 DWS ACTION: SELECT COUNT and CLICK

29A DWS OBSERVE: In the DADS window the TIU message counter values

SCORE: PASS / FAIL

Comments: ____________________

= =

• DWS entries to obtain a hard copy of message counters

30 DWS ACTION: SELECT Console window

30A DWS OBSERVE: Console window opened and tatca9% prompt

30B DWS ACTION: ENTER screendump scrn.dmp

30C DWS OBSERVE: At the prompt

30D DWS ACTION: ENTER lpr -Plp scrn.dmp

Pick up the hard copy of message counters in the TATCA lab.

SCORE: PASS / FAIL

Comments: ____

= =

* Compare ARTS message counters to the FAST message counters

31	DWS	ACTION:	Select the Calculator
31A	DWS	ACTION:	Convert the DADS decimal counters to OCTAL and compare to the ARTS message counters
		SCORE:	PASS / FAIL
31B	DWS	ACTION:	Insure That the DADS message counters for the following message types are in agreement Initialization message MC20 = 1 Disable FAST message MC25 = 1
		SCORE:	PASS / FAIL

Comments: ____

= =

==========

RESTART THE OPERATIONAL PROGRAM FOR PART 2

==========

* Disable Beacon RSM printouts

32 IZ ACTION: ENTER <F7>R1

32A TTY OBSERVE: HH:MM:SS RSM 1 IZ INH

SCORE: PASS / FAIL

Comments: _____

==========

* Disable Beacon RSM printouts

33 IZ ACTION: ENTER <F7>R2

33A TTY OBSERVE: HH:MM:SS RSM 2 IZ INH

SCORE: PASS / FAIL

Comments: _____

==========

* Disable sign on identifiers

34 IZ ACTION: ENTER <F7>TS

34A IZ OBSERVE: AC, AH, and AM inhibited

SCORE: PASS / FAIL

Comments: _____

==========

* Select Alternate FAST channel

35 IZ ACTION: ENTER <F7>2F

35A TTY OBSERVE: HH:MM:SS RCFG IZ FAST CHAN SELEC ALT

SCORE: PASS / FAIL

Comments: _____

==========

* Load the ETG program

36 TTY ACTION: ENTER TK IA TG

36A TTY OBSERVE: TK IA TG L-001

SCORE: PASS / FAIL

36B TTY OBSERVE: HH:MM:SS OK 001 TK IA TG

SCORE: PASS / FAIL

Comments: ____

= =

The Following Is Entered Manually From Keyboard 1N

* Remove Display 9 from Training

37 1N ACTION: ENTER <F15>ZT

37A 1N OBSERVE: Keyboard entry is accepted

SCORE: PASS / FAIL

Comments: ____

= =

* Remove Display 9 from Training

38 1N ACTION: ENTER <F15>ZM

38A TTY OBSERVE: HH:MM:SS STAT 1N 03=ACT

SCORE: PASS / FAIL

Comments: ____

= =

* Enter XTS Mode

39 1Z ACTION: ENTER <F7>2TE

39A 1Z OBSERVE: Entry is accepted, Message counters remain zero

SCORE: PASS / FAIL

39B TTY OBSERVE: HH:MM:SS RCFG 1Z TEST MODE SEL

SCORE: PASS / FAIL

Comments: ____

= =

* Enter XTS Mode

40   1Z   ACTION: ENTER <F15>XTS

40A   1Z   OBSERVE: Unassociated tracks on all Displays are inhibited,
Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Enable Memory Readout

41   1Z   ACTION: ENTER M <F7> R

41A   1Z   OBSERVE: KEYBOARD ENTRY IS ACCEPTED

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Readout message counters

42   1Z   ACTION: ENTER 640003 0

42A   1Z   OBSERVE: In the SDA

640003 = 0000000000 (CTS Messages)
640004 = 0000000000 (Thread Drop Messages)
640005 = 0000000000 (Track Drop Messages)
640006 = 0000000000 (Keyboard Entry Messages)
640007 = 0000000000 (TROUT Demarcation Messages SS0)
640010 = 0000000000 (TROUT Demarcation Messages SS1)
640011 = 0000000000 (Interfacility Messages)
640012 = 0000000000 (Leader Change Messages)
640013 = 0000000000 (Offset Change Messages)
640014 = 0000000000 (TYP1 Messages)

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Valid ARTS IIIA Keyboard Entries

43   1Z   ACTION: ENTER <F7>S MMDDYY

43A   TTY   OBSERVE: HH:MM:SS DATE 1Z mmddyy

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS Keyboard Entries

44 1Z ACTION: ENTER <F7> 1D

44A TTY OBSERVE: HH:MM:SS CKEY 1Z D

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

45 1Z ACTION: ENTER <F7> 1E CT

45A TTY OBSERVE: HH:MM:SS CKEY 1Z E CT

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

46 1Z ACTION: ENTER <F7> 1FR25

46A TTY OBSERVE: HH:MM:SS CKEY 1Z FR25

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

47 1Z ACTION: ENTER <F7> 1FA030

47A TTY OBSERVE: HH:MM:SS CKEY 1Z FA030

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS Keyboard Entries

48 1Z ACTION: ENTER <F7> 1FCA

48A TTY OBSERVE: HH:MM:SS CKEY 1Z FCA

SCORE: PASS / FAIL

Comments: ____

==

* Valid ARTS IIIA Keyboard Entries

49 1Z ACTION: ENTER <F7> 110SCR

49A TTY OBSERVE: HH:MM:SS CKEY 1Z I0SCR
HH:MM:SS CDR DISC 0 0250003

SCORE: PASS / FAIL

Comments: ____

==

* Select stand-by TIU SYSTEM

50 TWS ACTION: Depress all "B" switches
TWS ACTION: Depress reset button

50A OBSERVE: No other ARTS interference

SCORE: PASS FAIL

Comments: ____

==

* Valid DWS Keyboard Entries to idle the TIU program

Using the mouse move the arrow to the keyboard window

51 DWS ACTION: SELECT RUN and CLICK

51A DWS OBSERVE: WARNING: file "pipe.c" line 512: connection
reset by peer

#Warn io.c @ 273 : system call failure

#Warn main.c @ 389 : tiu disconnected

#Warn main.c @ 233 : tiu connected

#Warn main.c @ 454 : tiu idling

SCORE: PASS / FAIL

51B DWS OBSERVE: In the keyboard window that the TIU is in IDLE

SCORE: PASS / FAIL

Comments: ____

==

* Valid DWS Keyboard Entries to Change ARTS/TIU channels

Using the mouse move the arrow to the PORT 1 window

52 DWS ACTION: CLICK left button

52A DWS OBSERVE: In the DADS window

TIU STATUS: TAP IS NOW SET TO USE PIM #1

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

53 DWS ACTION: SELECT RUN and CLICK

53A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

54 1Z ACTION: ENTER <F12>E

54A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLE !! OPNL

SCORE: PASS / FAIL

Comments: ______________________________

= =

This keyboard entry will enable a scenario. The run time for this scenario is 38 minutes and will generate 346 associated targets and 354 unassociated targets. The primary purpose of this scenario is to create capacity conditions for the transfer of messages to FAST. See APPENDIX "C" for the listing of the scenario.

* Valid ARTS IIIA Keyboard Entries

55 1Z ACTION: ENTER <F15>XIT

55A 1Z OBSERVE: IN the preview area "SCENARIO ACTIVE"

In the SDA KBD MSG counter (640006) incremented by one

SCORE: PASS / FAIL

The following nunber of messages will be generated during the test.

1. Message code 011 KYBD MSGs 918

2. Message code 012 CTS DATA 106.162

3. Message code 043 INTERFACILITY MSGs 51

4. Message code 021 THREAD DROP MSGs 21

5. Message code 022 TRACK DROP MSGs 347

6. Message code 024 TYPIT MSGs 118,269

7. Message code 040 TROUT DEMARC S0 15,090

8. Message code 041 TROUT DEMARC S1 15,487

Comments: ____

= =

When "SCENARIO OFF" is displayed in the SDA at approximately 1637 hours, Execute the following Keyboard entry.

* Valid ARTS IIIA/FAST Keyboard Entry

56 1Z ACTION: ENTER <F12>I

56A TTY OBSERVE: HH:MM:SS FAST 1Z DISABLED **

SCORE: PASS / FAIL

56B DWS OBSERVE: Disabled message received...

SCORE: PASS / FAIL

56C 1Z OBSERVE: In the SDA All MSG. counters have stopped incrementing

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

57 1Z ACTION: ENTER <F7>2M

57A MSP OBSERVE: All printouts directed to the MSP

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA/FAST Keyboard Entry

58 1Z ACTION: ENTER <F7>R640003 P10

58A MSP OBSERVE: Message counters are printed on the MSP

SCORE: PASS / FAIL

58B MSP ACTION: Fetch the hard copy print out of the message counters.

SCORE: PASS / FAIL

Comments: ____

= =

* Valid ARTS IIIA FAST Keyboard Entry

59 1Z ACTION: ENTER <F7> IT

59A MSP OBSERVE: HH:MM:SS CKEY 1Z CDR OFF (X --- X)

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

60 DWS ACTION: SELECT IDLE and CLICK

60A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to obtain the TIU message counters

Using the mouse move the arrow to the keyboard window

61 DWS ACTION: SELECT COUNT and CLICK

61A DWS OBSERVE: In the DADS window the TIU message counter values

SCORE: PASS / FAIL

Comments: ____

= =

* DWS entries to obtain a hard copy of message counters

62 DWS ACTION: SELECT Console window

62A DWS OBSERVE: Console window opened and tatca9% prompt

62B DWS ACTION: ENTER screendump scrn.dmp

62C DWS OBSERVE: At the prompt

62D DWS ACTION: ENTER lpr -Plp scrn.dmp

Pick up the hard copy of message counters in the TATCA lab.

SCORE: PASS / FAIL

Comments: ____

= =

• Compare ARTS message counters to the FAST message counters

63 DWS ACTION: Select the Calculator

63A DWS ACTION: Convert the DADS decimal counters to OCTAL and compare to the ARTS message counters

SCORE: PASS / FAIL

63B DWS ACTION: Insure That the DADS message counters for the following message types are in agreement

Initialization message MC20 = 1
Disable FAST message MC25 = 1

SCORE: PASS / FAIL

Comments: ____

= =

• Valid DWS Keyboard Entries to Change TIU channel

Using the mouse move the arrow to the PORT 0 window

64 DWS ACTION: CLICK left button

64A DWS OBSERVE: In the DADS window

TIU STATUS: TAP IS NOW SET TO USE PIM #0

SCORE: PASS / FAIL

Comments: ____

= =

• Valid DWS Keyboard Entries to close console window

Using the mouse move the arrow to the left corner of console window

65 DWS ACTION: Depress and hold down right button

65A DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select close

65B DWS ACTION: Release right button

65C DWS OBSERVE: Console window closed

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to close TIU window

Using the mouse move the arrow to the desk top (blue) area

66 DWS ACTION: Depress and hold down right button

66A DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select utilities

66B DWS ACTION: continue to hold right button down

66C DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select lock screen

66D DWS ACTION: Release the right button

66E DWS OBSERVE: TIU window locked

SCORE: PASS / FAIL

Comments: ____

= =

* Compare Formats

67 TWS ACTION: Provide a hard copy of at least two of the following message types

MC 012 CTS Data message
MC 021 Thread drop Data message
MC 022 Track drop Data message
MC 024 TYPIT Data message
MC 025 Disable FAST Data message

			MC 040 TROUT Demarc SS0 Data message MC 041 TROUT Demarc SS1 Data message
67A		ACTION:	Compare all of the data messages to the formats contained in Appendix "B"
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

68	IOP0	ACTION:	Load/start the Editor program using the CDR Editor off-line program load procedures defined in section 4.2.1.3.
68A	TTY	OBSERVE:	ED ENTER DEVICES
68B	TTY	ENTER:	D0MP, CONTROL EOT
68C	TTY	OBSERVE:	ED ENTER DATA CLASSES
68D	TTY	ENTER:	RC, CONTROL EOT
68E	TTY	OBSERVE:	ED ENTER FILTERS
68F	TTY	ENTER:	ACTS1,CTS2 CONTROL EOT
68G	TTY	OBSERVE:	ED ENTER COMMENTS
68H	TTY	ENTER:	CTS TEST, CONTROL EOT
68I	MSP	ACTION:	Retrieve and save the hard copy printout of the keyboard entries.
		SCORE:	PASS / FAIL

Save the hard copy printout provided by the EDITOR program for the interfacility messages that were recorded after CDR was enabled.

Comments: ______________________________

= =

* Compare Contents

69	TWS	ACTION:	Provide a hard copy of at least six CTS data messages for each of the following ACIDs, CTS1 and CTS2
69A	TWS	ACTION:	Compare the contents of the CTS data messages to the hard copy printout received from the EDITOR program
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

4.7 *Fault Detection Test Procedures*

The second major test named "Fault detection" has one test case.

4.7.1 Test Case 01 - Fault Detection

The Fault Detection test will insure that the following objectives are satisfied.

1. To ensure that the integrity of the ARTS IIIA program has not been derogated
2. To ensure that the TIU/FAST processors can be isolated from the IOPBs.
3. To ensure that ARTS/TIU interface does not affect the ARTS recovery capability
4. That FAST will be disabled when ARTS messages to FAST contain parity errors
5. That FAST will be disabled when FAST messages to ARTS contain parity errors
6. That FAST will be disabled when ARTS messages are not accepted by FAST
7. That FAST will be disabled when ARTS Tracking is four sectors behind
8. That FAST will be disabled when ARTS high priority stack overflows
9. That FAST will be disabled when ARTS low priority stack overflows
10. That FAST will be disabled when TIU detects a bad message code
11. To ensure that ARTS IIIA will not be derogated by a TIU power failure

4.7.1.1 Definitions

SYSTEM DATA AREA	SDA
TELETYPE	TTY
DADS WORK STATION	DWS
TIU WORK STATION	TWS
A and B SWITCH	ABS
TI DISPLAY 5, DESK TOP KEYBOARD	1S
TI DISPLAY 6, DESK TOP KEYBOARD	1G
TI DISPLAY 7, DESK TOP KEYBOARD	1X
TI DISPLAY 9, DESK TOP KEYBOARD	1N

4.7.1.2 Software Preparation

Load and start the operational program using the initial start up procedures described in the Software Loading and Start-Up Procedures, Section 4.2.

4.7.1.3 *Test Execution Procedures*

The following test data sheets define the detail steps to be executed in the Fault Detection test Case 01.

These data sheets will be used to score the results of each of the test steps.

FAULT DETECTION TEST CASE 01.

Step	Work Station	Description
----	-------	-------------

****
The Following Is Entered Manually From Keyboard 1Z
****

Step	Work Station	Description
		* Disable Beacon RSM printouts
1	1Z	ACTION: ENTER <F7>R1
1A	TTY	OBSERVE: HH:MM:SS RSM 1 1Z INH
		SCORE: PASS / FAIL

Comments: ______________________________

= =

Step	Work Station	Description
		* Disable Beacon RSM printouts
2	1Z	ACTION: ENTER <F7>R2
2A	TTY	OBSERVE: HH:MM:SS RSM 2 1Z INH
		SCORE: PASS FAIL

Comments: ______________________________

= =

Step	Work Station	Description
		* Disable sign on identifiers
3	1Z	ACTION: ENTER <F7>TS
3A	1Z	OBSERVE: AC, AH, and AM inhibited
		SCORE: PASS / FAIL

Comments: ______________________________

= =

Step	Work Station	Description
		* Disable sign on identifiers
4	1N	ACTION: ENTER <F7>TS
4A	1N	OBSERVE: TN inhibited

SCORE: PASS / FAIL

Comments: ______________________________

==

* Training enables FAST

5 IN ACTION: ENTER <F12>E

5A IN OBSERVE: In the preview "ILL FNCT"

SCORE: PASS / FAIL

On call ETG program has not been enabled

Comments: ______________________________

==

* Load the ETG program

6 TTY ACTION: ENTER TK IA TG

6A TTY OBSERVE: TK IA TG L-001

SCORE: PASS / FAIL

6B TTY OBSERVE: HH:MM:SS OK 001 TK IA TG

SCORE: PASS / FAIL

Comments: ______________________________

==

When the TIU/FAST system is isolated from the ARTS system or when the FAST system is in Idle mode, one of the following two error conditions will be detected by the ARTS program when FAST is enabled and the ARTS program will automatically disable FAST.

1. The ARTS output data is not being accepted by the FAST system

2. The ARTS system is not receiving the heartbeat message from FAST.

To control the error conditions under which the FAST system will be disabled, memory changes to system parameters must be made.

* Time out parameter for "TIU HEARTBEAT FAILURE"

7 IZ ACTION: ENTER <F7>R

7A IZ OBSERVE: Memory read out enabled

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Time out parameter for "TIU HEARTBEAT FAILURE" is 5 seconds

8 1Z ACTION: ENTER <F7> R642337

8A 1Z OBSERVE: In the SDA 642337 2160012000

SCORE: PASS / FAIL

Comments: ____

= =

* Decrease Time out parameter for "TIU HEARTBEAT FAILURE" from 5 seconds to 2 seconds. This will increase the chances of getting a TIU HEARTBEAT FUILURE error.

9 1Z ACTION: ENTER <F7> R642337 2160004000

9A 1Z OBSERVE: In the SDA 642337 2160004000

SCORE: PASS / FAIL

9B TTY OBSERVE: HH:MM:SS MEM 1Z 642337 2160004000

SCORE: PASS / FAIL

Comments: ____

= =

* Time out parameter for "TIU OUTPUT CHANNEL TIMEOUT" is 50 seconds

10 1Z ACTION: ENTER <F7> R641517

10A 1Z OBSERVE: In the SDA 641517 0000144000

SCORE: PASS / FAIL

Comments: ____

= =

* Increase Time out parameter for "TIU OUTPUT CHANNEL TIMEOUT" from 50 seconds to 1 minute. This will increase the chances of getting a TIU HEARTBEAT FUILURE error.

11 1Z ACTION: ENTER <F7> R641517 0000170000

11A 1Z OBSERVE: In the SDA 641517 0000170000

SCORE: PASS / FAIL

11B TTY OBSERVE: HH:MM:SS MEM 1Z 641517 0000170000

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

12 DWS ACTION: ENTER Any key

12A DWS OBSERVE: Name faatc
Password
Enter password to unlock: select ICON to lock.

SCORE: PASS / FAIL

12B DWS ACTION: ENTER tiufaa

12C DWS OBSERVE: After a couple of seconds the DADS and the keyboard windows are displayed

SCORE: PASS / FAIL

12D DWS INSURE: In the keyboard window insure that the TIU is in IDLE

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Training mode

13 1N ACTION: ENTER < F12 > E

13A TTY OBSERVE: HH:MM:SS FAST 1N ENABLED !! TRNG

SCORE: PASS / FAIL

13B 1N OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

13C TTY OBSERVE: HH:MM:SS TIU HEARTBEAT FAILURE 01

SCORE: PASS / FAIL

13D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Operational Mode

14 1Z ACTION: ENTER < F12 > E

14A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS / FAIL

14B 1Z OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

14C TTY OBSERVE: HH:MM:SS TIU HEARTBEAT FAILURE 01

SCORE: PASS / FAIL

14D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

15 DWS ACTION: SELECT RUN and CLICK

15A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable FAST in the Training Mode

16 1N ACTION: ENTER <F12>E

16A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! TRNG

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

17 DWS ACTION: SELECT IDLE and CLICK

17A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS / FAIL

17B 1N OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

17C TTY OBSERVE: HH:MM:SS TIU HEARTBEAT FAILURE 01

SCORE: PASS / FAIL

17D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

18 DWS ACTION: SELECT RUN and CLICK

18A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Training mode

19 IN ACTION: ENTER <F12>E

19A TTY OBSERVE: HH:MM:SS FAST IN ENABLED !! TRNG

SCORE: PASS / FAIL

Comments: ____

= =

* Isolate the TIU from the ARTS using ths channel back to back switches

20 IOP2 ACTION: Toggle the Channel back to back switches for channel 12 to the up position

20A IZ OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

20B TTY OBSERVE: HH:MM:SS TIU HEARTBEAT FAILURE 01

SCORE: PASS / FAIL

20C TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

• Unite the FAST system with the ARTS system

21 IOP2 ACTION: Toggle the Channel back to back switches for channel 12 to the down position

SCORE: PASS / FAIL

Comments: ______________________________

• Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

22 DWS ACTION: SELECT RUN and CLICK

22A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

• Enable FAST in the Training mode

23 IN ACTION: ENTER <F12>E

23A TTY OBSERVE: HH:MM:SS FAST IN ENABLED !! TRNG

SCORE: PASS FAIL

A error may occur because of steps 20 and 21 (toggling the back to back switches). if so redo steps 22 and 23.

Comments: ______________________________

• Generate Parity Error

24 IOP2 ACTION: Group 2, card slot 26A. Jumper TP 04 to GRD

24A IN OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

24b TTY OBSERVE: HH:MM:SS TIU RECEIVED DATA WITH BAD PARITY 01

SCORE: PASS / FAIL

24C TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

24D DWS OBSERVE: RED window indicating ARTS parity error

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

25 DWS ACTION: SELECT RUN and CLICK

25A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Operational Mode

26 1Z ACTION: ENTER <F12>E

26A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

27 DWS ACTION: SELECT IDLE and CLICK

27A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS / FAIL

27B 1Z OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

27C TTY OBSERVE: HH:MM:SS TIU HEARTBEAT FAILURE 01

SCORE: PASS / FAIL

27D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

28 DWS ACTION: SELECT RUN and CLICK

28A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable FAST in the Operational Mode

29 1Z ACTION: ENTER <F12>E

29A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Isolate the TIU from the ARTS using ths channel back to back switches

30 IOP2 ACTION: Toggle the Channel back to back switches for channel 12 to the up position

30A 1Z OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

30B TTY OBSERVE: HH:MM:SS TIU HEARTBEAT FAILURE 01

SCORE: PASS / FAIL

30C TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Unite the FAST system with the ARTS system

31 IOP2 ACTION: Toggle the Channel back to back switches for channel 12 to the down position

SCORE: PASS / FAIL

Comments: ____

= =

• Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

32 DWS ACTION: SELECT RUN and CLICK

32A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

• Enable FAST in the Operational Mode

33 IZ ACTION: ENTER <F12>E

33A TTY OBSERVE: HH:MM:SS FAST IN ENABLED !! OPNL

SCORE: PASS / FAIL

A error may occur because of steps 30 and 31 (toggling the back to back switches). if so redo steps 32 and 33.

Comments: ____

= =

• Generate Parity Error

34 IOP ACTION: Group 2, card slot 26A, Jumper TP 04 to GRD

34A IN OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

34b TTY OBSERVE: HH:MM:SS TIU RECEIVED DATA WITH BAD PARITY 01

SCORE: PASS / FAIL

34C TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

34D DWS OBSERVE: RED window indicating ARTS parity error

SCORE: PASS / FAIL

Comments: ____

= =

* Increase Time out parameter for "TIU HEARTBEAT FAILURE" from 5 seconds to 1 minute. In step 11 the parameter for TIU OUTPUT CHANNEL TIMEOUT was set to 1 minute. With both set to one minute only a TIU SYSTEM FAILUE will be detected.

35	IZ	ACTION: ENTER <F7> R642337 2160170000
35A	IZ	OBSERVE: In the SDA 642337 2160170000
		SCORE: PASS / FAIL
35B	TTY	OBSERVE: HH:MM:SS MEM IZ 642337 2160170000
		SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

36	DWS	ACTION: SELECT RUN and CLICK
36A	DWS	OBSERVE: In the keyboard window the TIU is in RUN state
		SCORE: PASS FAIL

Comments: ____

= =

* Enable FAST in the Training Mode

37	IN	ACTION: ENTER <F12>E
37A	TTY	OBSERVE: HH:MM:SS FAST IN ENABLED !! TRNG
		SCORE: PASS , FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries for the TIU program

Using the mouse move the arrow to the keyboard window

38	DWS	ACTION: SELECT FORCE PARITY ERROR and CLICK
38A	DWS	OBSERVE: In the keyboard window CONFIRMATION prompt
		SCORE: PASS FAIL

Using the mouse move the arrow to Confirm window

38B	DWS	ACTION:	SELECT CONFIRM and CLICK
		SCORE:	PASS / FAIL
38C	1N	OBSERVE:	In the SDA Flashing FAST FAIL
		SCORE:	PASS / FAIL
38D	TTY	OBSERVE:	HH:MM:SS TIU HEARTBEAT SEQUENCE FAILURE 01 and HH:MM:SS TIU INPUT BUFFER PARITY 01
		SCORE:	PASS / FAIL
38E	TTY	OBSERVE:	HH:MM:SS TIU SYSTEM FAILURE
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

39	DWS	ACTION:	SELECT RUN and CLICK
39A	DWS	OBSERVE:	In the keyboard window the TIU is in RUN state
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

* Enable FAST in the Operational Mode

40	1Z	ACTION:	ENTER <F12>E
40A	TTY	OBSERVE:	HH:MM:SS FAST 1Z ENABLED !! OPNL
		SCORE:	PASS FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries for the TIU program

Using the mouse move the arrow to the keyboard window

41	DWS	ACTION:	SELECT FORCE PARITY ERROR and CLICK
41A	DWS	OBSERVE:	In the keyboard window CONFIRMATION prompt

SCORE: PASS / FAIL

Using the mouse move the arrow to Confirm window

41B DWS ACTION: SELECT CONFIRM and CLICK

SCORE: PASS / FAIL

41C IN OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

41D TTY OBSERVE: HH:MM:SS TIU HEARTBEAT SEQUENCE FAILURE 01 and
HH:MM:SS TIU INPUT BUFFER PARITY 01

SCORE: PASS / FAIL

41E TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Training mode

42 IN ACTION: ENTER <F12>E

42A TTY OBSERVE: HH:MM:SS FAST IN ENABLED !! TRNG

SCORE: PASS / FAIL

42B IN OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

42C TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Operational Mode

43 IZ ACTION: ENTER <F12>E

43A TTY OBSERVE: HH:MM:SS FAST IZ ENABLED !! OPNL

SCORE: PASS / FAIL

43B IZ OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

43C TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Decrease Time out parameter for "TIU OUTPUT CHANNEL TIMEOUT" from 1 minute to 4 seconds. In step 11 the parameter for TIU HEARTBEAT FAILURE was set to 1 minute. Decreasing this parameter will insure a TIU OUTPUT CHANNEL TIMEOUT.

44 IZ ACTION: ENTER < F7 > R641517 0000004000

44A IZ OBSERVE: In the SDA 641517 0000004000

SCORE: PASS / FAIL

44B TTY OBSERVE: HH:MM:SS MEM IZ 641517 0000004000

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

45 DWS ACTION: SELECT RUN and CLICK

45A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Training Mode

46 IN ACTION: ENTER < F12 > E

46A TTY OBSERVE: HH:MM:SS FAST IZ ENABLED !! TRNG

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

47 DWS ACTION: SELECT IDLE and CLICK

47A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS / FAIL

47B 1N OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

47C TTY OBSERVE: HH:MM:SS TIU OUTPUT CHANNEL TIMEOUT 01

SCORE: PASS / FAIL

47D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

48 DWS ACTION: SELECT RUN and CLICK

48A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Operational Mode

49 1Z ACTION: ENTER <F12>E

49A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to IDLE the TIU program

Using the mouse move the arrow to the keyboard window

50 DWS ACTION: SELECT IDLE and CLICK

50A DWS OBSERVE: In the keyboard window the TIU is in IDLE state

SCORE: PASS / FAIL

50B IZ OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

50C TTY OBSERVE: HH:MM:SS TIU OUTPUT CHANNEL TIMEOUT 01-

SCORE: PASS / FAIL

50D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Return Time out parameter for "TIU HEARTBEAT FAILURE" to 5 seconds

51 IZ ACTION: ENTER < F7 > R642337 2160012000

51A IZ OBSERVE: In the SDA 642337 2160012000

SCORE: PASS / FAIL

51B TTY OBSERVE: HH:MM:SS MEM IZ 642337 2160012000

SCORE: PASS / FAIL

Comments: ____

= =

* Return Time out parameter for "TIU OUTPUT CHANNEL TIMEOUT" to 50 seconds

52 IZ ACTION: ENTER < F7 > R641517 0000144000

52A IZ OBSERVE: In the SDA 641517 0000144000

SCORE: PASS / FAIL

52B TTY OBSERVE: HH:MM:SS MEM IZ 641517 0000144000

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

53 DWS ACTION: SELECT RUN and CLICK

53A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Message code for DEMARC message, sensor one is 41

54 1Z ACTION: ENTER <F7> R640045

54A 1Z OBSERVE: In the SDA 640045 0000000041

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Change message code for "TIU DETECTED BAD MESSAGE CODE" error from 041 to 01

55 1Z ACTION: ENTER <F7> R640045 0000000001

55A 1Z OBSERVE: In the SDA 640045 0000000001

SCORE: PASS / FAIL

55B TTY OBSERVE: HH:MM:SS MEM 1Z 640045 0000000001

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable FAST in the Training mode

56 1N ACTION: ENTER <F12> E

56A TTY OBSERVE: HH:MM:SS FAST 1N ENABLED !! TRNG

SCORE: PASS / FAIL

56B 1N OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

56C TTY OBSERVE: HH:MM:SS TIU DETECTED BAD MESSAGE CODE 01

SCORE: PASS / FAIL

56D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

57 DWS ACTION: SELECT RUN and CLICK

57A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

• Enable FAST in the Operational Mode

58 1Z ACTION: ENTER <F12>E

58A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS / FAIL

58B 1Z OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

58C TTY OBSERVE: HH:MM:SS TIU DETECTED BAD MESSAGE CODE 01

SCORE: PASS / FAIL

58D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

• Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

59 DWS ACTION: SELECT RUN and CLICK

59A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

• Return message code for DEMARC message, sensor 1 to 041

60 1Z ACTION: ENTER < F7 > R640045 0000000041

60A 1Z OBSERVE: In the SDA 640045 0000000041

SCORE: PASS / FAIL

60B TTY OBSERVE: HH:MM:SS MEM 1Z 640044 0000000041

SCORE: PASS / FAIL

Comments: ____

= =

* Message code for TIU heartbeat is 01

61 1Z ACTION: ENTER < F7 > R642274

61A 1Z OBSERVE: In the SDA 642274 2150000001

SCORE: PASS / FAIL

Comments: ____

= =

* Change message code for "TIU ILLEGAL INPUT MESSAGE CODE" error from 01 to 02

62 1Z ACTION: ENTER < F7 > R642274 2150000002

62A 1Z OBSERVE: In the SDA 642274 2150000002

SCORE: PASS / FAIL

62B TTY OBSERVE: HH:MM:SS MEM 1Z 642274 2150000002

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Training mode

63 1N ACTION: ENTER < F12 > E

63A TTY OBSERVE: HH:MM:SS FAST 1N ENABLED !! TRNG

SCORE: PASS / FAIL

63B 1N OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

63C TTY OBSERVE: HH:MM:SS TIU ILLEGAL INPUT MESSAGE CODE 01

SCORE: PASS / FAIL

63D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

64 DWS ACTION: SELECT RUN and CLICK

64A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

Wait at least sixty seconds before making this entry.

* Enable FAST in the Operational Mode

65 IZ ACTION: ENTER <F12>E

65A TTY OBSERVE: HH:MM:SS FAST IZ ENABLED !! OPNL

SCORE: PASS / FAIL

65B IZ OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

65C TTY OBSERVE: HH:MM:SS TIU ILLEGAL INPUT MESSAGE CODE 01

SCORE: PASS / FAIL

65D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

66 DWS ACTION: SELECT RUN and CLICK

66A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Return message code for TIU ILLEGAL INPUT
MESSAGE CODE to 01

67 1Z ACTION: ENTER < F7 > R642274 2150000001

67A 1Z OBSERVE: In the SDA 642274 2150000001

SCORE: PASS / FAIL

67B TTY OBSERVE: HH:MM:SS MEM 1Z 642274 2150000001

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Training mode

68 1N ACTION: ENTER < F12 > E

68A TTY OBSERVE: HH:MM:SS FAST IN ENABLED !! TRNG

SCORE: PASS / FAIL

Comments: ____

= =

* Current sequence number for the TIU heartbeat
is in the upper half of the word

69 1Z ACTION: ENTER < F7 > R641521

69A 1Z OBSERVE: In the SDA 641521 ?????00000

SCORE: PASS / FAIL

Comments: ____

= =

* Change Sequence number for the TIU heartbeat

70 1Z ACTION: ENTER < F7 > R641521 7777700000

70A 1Z OBSERVE: In the SDA 641521 7777700000

SCORE: PASS / FAIL

70B TTY OBSERVE: HH:MM:SS MEM 1Z 641521 7777700000

SCORE: PASS / FAIL

70C 1N OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

70D TTY OBSERVE: HH:MM:SS TIU HEARTBEAT SEQUENCE FAIL 01

SCORE: PASS / FAIL

70E TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

71 DWS ACTION: SELECT RUN and CLICK

71A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Enable FAST in the Operational Mode

72 1Z ACTION: ENTER <F12> E

72A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS / FAIL

Comments: ____

= =

* Change Sequence number for the TIU heartbeat

73 1Z ACTION: ENTER <F7> R641521 7777700000

73A 1Z OBSERVE: In the SDA 641521 7777700000

SCORE: PASS / FAIL

73B TTY OBSERVE: HH:MM:SS MEM 1Z 641521 7777700000

SCORE: PASS / FAIL

73C 1N OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

73D TTY OBSERVE: HH:MM:SS TIU HEARTBEAT SEQUENCE FAIL 01

SCORE: PASS / FAIL

73E TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

74 DWS ACTION: SELECT RUN and CLICK

74A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

---

* Enable FAST in the Training Mode

75 IN ACTION: ENTER <F12>E

75A TTY OBSERVE: HH:MM:SS FAST IN ENABLED !! TRNG

SCORE: PASS / FAIL

Comments: ______________________________

---

* Remove Display 9 from Training

76 IN ACTION: ENTER <F15>ZT

76A IN OBSERVE: Keyboard entry is accepted

SCORE: PASS / FAIL

Comments: ______________________________

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* Remove Display 9 from Training

77 IN ACTION: ENTER <F15>ZM

77A TTY OBSERVE: In the preview area ILL FNCT

SCORE: PASS / FAIL

Cannot exit training with FAST enabled.

Comments: ______________________________

= =

* Inhibit FAST in the Training Mode

78 1N ACTION: ENTER <F12>I

78A TTY OBSERVE: HH:MM:SS FAST 1N DISABLED ** TRNG

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Remove Display 9 from Training

79 1N ACTION: ENTER <F15>ZM

79A TTY OBSERVE: HH:MM:SS STAT 1N 03=ACT

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enter XTS Mode

80 1Z ACTION: ENTER <F7>2TE

80AB TTY OBSERVE: HH:MM:SS RCFG 1Z TEST MODE SEL

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enter XTS Mode

81 1Z ACTION: ENTER <F15>XTS

81A 1Z OBSERVE: Unassociated tracks on all Displays are inhibited,
Message counters remain zero

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable FAST in the Operational Mode

82 1Z ACTION: ENTER <F12>E

82A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS / FAIL

Comments: ____

= =

* Reduce BCWS for "TIU HIGH PRIORITY OUTPUT STACK OVERFLOW" error

83 1Z ACTION: ENTER <F7>R640762

83A 1Z OBSERVE: In the SDA 640762 0134640764

SCORE: PASS / FAIL

Comments: ____

= =

* Reduce BCWs for "TIU HIGH PRIORITY OUTPUT STACK OVERFLOW" error

84 1Z ACTION: ENTER <F7>R640762 0000640764

84A 1Z OBSERVE: In the SDA 640762 0000640764

SCORE: PASS / FAIL

84B TTY OBSERVE: HH:MM:SS MEM 1Z 640762 0000670764

SCORE: PASS / FAIL

Comments: ____

= =

This keyboard entry will enable a scenario. The run time for this scenario is 38 minutes.

* Valid ARTS IIIA Keyboard Entries

85 1Z ACTION: ENTER <F15>XIT

85A 1Z OBSERVE: IN the preview area "SCENARIO ACTIVE"

SCORE: PASS / FAIL

twenty seconds after the start of the scenario keyboard entries will start and cause the following:

85B 1Z OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

85C TTY OBSERVE: HH:MM:SS TIU HIGH PRIORITY OUTPUT STACK OVERFLOW 01

SCORE: PASS / FAIL

85D TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Return BCWs for "TIU HIGH PRIORITY OUTPUT STACK"

86 1Z ACTION: ENTER < F7 > R640762 0134640764

86A 1Z OBSERVE: In the SDA 640762 0134640764

SCORE: PASS / FAIL

86B TTY OBSERVE: HH:MM:SS MEM 1Z 640762 0134640764

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable FAST in the Operational Mode

87 1Z ACTION: ENTER < F12 > E

87A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Reduce BCWs for "TIU LOW PRIORITY OUTPUT STACK OVERFLOW" error

88 1Z ACTION: ENTER < F7 > R641126

88A 1Z OBSERVE: In the SDA 641126 0250641133

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Reduce BCWS for "TIU LOW PRIORITY OUTPUT STACK OVERFLOW" error

89 1Z ACTION: ENTER < F7 > R641126 0000641133

89A 1Z OBSERVE: In the SDA 641126 0000641133

SCORE: PASS / FAIL

89B TTY OBSERVE: HH:MM:SS MEM 1Z 641126 0000641133

SCORE: PASS / FAIL

When track association occurs on about 24 targets the following will occur.

89C 1Z OBSERVE: In the SDA Flashing FAST FAIL

SCORE: PASS / FAIL

89D TTY OBSERVE: HH:MM:SS TIU LOW PRIORITY OUTPUT STACK OVERFLOW 01

SCORE: PASS / FAIL

89F TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ____

= =

* Return BCWS for "TIU LOW PRIORITY OUTPUT STACK"

90 1Z ACTION: ENTER < F7 > R641126 0250641133

90A 1Z OBSERVE: In the SDA 641126 0250641133

SCORE: PASS FAIL

90B TTY OBSERVE: HH:MM:SS MEM 1Z 641126 0250671133

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

91 DWS ACTION: SE[illegible] RUN and CLICK

91A DWS OBSERVE[illegible]e keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ____

= =

* Valid FAST Keyboard Entries

92 1Z ACTION: ENTER <F12>E

92A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLE !! OPNL

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Sectors behind parameter for "TIU AUTO DISABLE SECTORS BEHIND" is 5 scans

93 1Z ACTION: ENTER <F7>R640372

93A 1Z OBSERVE: In the SDA 640372 0000000005

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Change Sectors behind parameter for "TIU AUTO DISABLE SECTORS BEHIND" from 5 sectors to 1 sector

94 1Z ACTION: ENTER <F7>R640372 0000000001

94A 1Z OBSERVE: In the SDA 640372 0000000001

SCORE: PASS / FAIL

94B TTY OBSERVE: HH:MM:SS MEM 1Z 640372 0000000001

SCORE: PASS / FAIL

94C 1Z OBSERVE: In the SDA flashing FAST FAIL

SCORE: PASS / FAIL

94D TTY OBSERVE: HH:MM:SS TIU AUTO DISABLE SECTORS BEHIND 01

SCORE: PASS / FAIL

94E TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

Comments: ______________________________

= =

When "TIU AUTO DISABLE SECTORS BEHIND" is printed on the TTY execute the following Keyboard entry to disable the scenario.

* Valid ARTS IIIA/FAST Keyboard Entry

95 IZ ACTION: ENTER <F15>ZI

95A IZ OBSERVE: In the preview area "SCENARIO OFF"

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Return Sectors behind parameter for "TIU AUTO DISABLE SECTORS BEHIND" to normal

96 IZ ACTION: ENTER <F7> R640372 0000000005

96A IZ OBSERVE: In the SDA 640372 0000000005

SCORE: PASS / FAIL

96B TTY OBSERVE: HH:MM:SS MEM IZ 640372 0000000005

SCORE: PASS FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

97 DWS ACTION: SELECT RUN and CLICK

97A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Clear memory read out in the SDA to normal

98 IZ ACTION: ENTER <F7>R*

98A IZ OBSERVE: In the SDA All memory read out cleared

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Display FAST FLAG in memory read out

99 1Z ACTION: ENTER <F7> R640000

99A 1Z OBSERVE: In the SDA 640000 0000000000

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable FAST in the Operational Mode

100 1Z ACTION: ENTER <F12> E

100A TTY OBSERVE: HH:MM:SS FAST 1Z ENABLED !! OPNL

SCORE: PASS / FAIL

100A 1Z OBSERVE: In the SDA 640000 7777777777

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Change RTC to create scatter

101 1Z ACTION: ENTER <F7> R001210

101A 1Z OBSERVE: In the SDA 001210 Contents of real time clock

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Create Scatter

102 1Z ACTION: ENTER <F7> R001210 0000000000

102A 1Z OBSERVE: System Faults and recovers

SCORE: PASS / FAIL

102B 1Z OBSERVE: System in operational mode

SCORE: PASS / FAIL

After all recoveries the FAST capability will always be disabled and the TIU will be in the idle mode.

Comments: ______________________________

= =

* Create Scatter

103 IZ ACTION: ENTER <F7> R001210 0000000000

103A IZ OBSERVE: System Faults and recovers

SCORE: PASS / FAIL

103B IZ OBSERVE: System in operational mode

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

104 DWS ACTION: SELECT RUN and CLICK

104A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid FAST Keyboard Entries

105 IZ ACTION: ENTER <F12> E

105A TTY OBSERVE: HH:MM:SS FAST IZ ENABLE !! OPNL

SCORE: PASS / FAIL

Comments: ______________________________

= =

* POWER OFF the TIU SYSTEM

106 TWS ACTION: TOGGLE POWER OFF

106A IZ OBSERVE: In the SDA flashing FAST FAIL

SCORE: PASS / FAIL

Either one of the following messages will appear on the TTY

106B TTY OBSERVE: HH:MM:SS TIU OUTPUT CHANNEL TIMEOUT 01 or
TIU HEARTBEAT FAILURE 01

SCORE: PASS / FAIL

106C TTY OBSERVE: HH:MM:SS TIU SYSTEM FAILURE

SCORE: PASS / FAIL

106D OBSERVE: No other ARTS interference

SCORE: PASS / FAIL

Comments: ______________________________

= =

* POWER ON the TIU SYSTEM

107 TWS ACTION: TOGGLE POWER ON

107A IZ OBSERVE: NO ARTS interference

SCORE: PASS FAIL

DWS OBSERVE: In the keyboard window the TIU is in RUN

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to idle the TIU program

Using the mouse move the arrow to the keyboard window

108 DWS ACTION: SELECT RUN and CLICK

108A DWS OBSERVE: WARNING: file "pipe.c" line 512: connection reset by peer

=Warn io.c @ 273 : system call failure

=Warn main.c @ 389 : tiu disconnected

=Warn main.c @ 233 : tiu connected

=Warn main.c @ 454 : tiu idling

SCORE: PASS / FAIL

108B DWS OBSERVE: In the keyboard window that the TIU is in IDLE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* POWER OFF the TIU SYSTEM

109 TWS ACTION: TOGGLE POWER OFF

109A OBSERVE: No other ARTS interference

SCORE: PASS / FAIL

Comments: ______________________________

= =

* POWER ON the TIU SYSTEM

110 TWS ACTION: TOGGLE POWER ON

110A IZ OBSERVE: NO ARTS interference

SCORE: PASS / FAIL

DWS OBSERVE: In the keyboard window the TIU is in IDLE

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to idle the TIU program

Using the mouse move the arrow to the keyboard window

111 DWS ACTION: SELECT RUN and CLICK

111A DWS OBSERVE: WARNING: file "pipe.c" line 512: connection reset by peer

#Warn io.c @ 273 : system call failure

#Warn main.c @ 389 : tiu disconnected

#Warn main.c @ 233 : tiu connected

#Warn main.c @ 454 : tiu idling

SCORE: PASS FAIL

111B DWS)BSERVE: In the keyboard window that the TIU is in IDLE

SCORE: PASS FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to close TIU window

Using the mouse move the arrow to the desk top (blue) area

112 DWS ACTION: Depress and hold down right button

112A DWS OBSERVE: Menu appears

SCORE: PASS FAIL

Move the mouse and select utilities

112B DWS ACTION: continue to hold right button down

112C DWS OBSERVE: Menu appears

SCORE: PASS FAIL

Move the mouse and select lock screen

112D DWS ACTION: Release the right button

112E DWS OBSERVE: TIU window locked

SCORE: PASS FAIL

Comments: ____

= =

4.8 Confidence and Stability Test Procedures

The second major test named "Confidence and stability" has one test case.

4.8.1 Test Case 01 - Confidence and Stability

The Confidence and Stability test will insure that the following objectives are satisfied.

1. The Stability of the ARTS software modification
2. The Stability of the FAST system hardware/software
3. The Stability of the ARTS/FAST interface

4.8.1.1 Definitions

SYSTEM DATA AREA	SDA
TELETYPE	TTY
DADS WORK STATION	DWS
TI DISPLAY 6, DESK TOP KEYBOARD	1G
TI DISPLAY 7, DESK TOP KEYBOARD	1Z
TI DISPLAY 9, DESK TOP KEYBOARD	1N

4.8.1.2 Software Preparation

Load and start the operational program using the initial start up procedures described in the Software Loading and Start-Up Procedures. Section 4.2.

4.8.1.3 Test Execution Procedures

The following test data sheets define the detail steps to be executed in the CTS Test Case 01.

These data sheets will be used to score the results of each of the test steps.

Step	Work Station	Description	
----	-------	-------------	
DAY ONE			
		* Valid DWS Keyboard Entries to idle the TIU program	
1	DWS	ACTION:	ENTER Any key
1A	DWS	OBSERVE:	Name faatc Password Enter password to unlock: select ICON to lock.
		SCORE:	PASS / FAIL
1B	DWS	ACTION:	ENTER tiufaa
1C	DWS	OBSERVE:	After a couple of seconds the DADS and the keyboard windows are displayed
		SCORE:	PASS / FAIL
1D	DWS	INSURE:	In the keyboard window that the TIU is in IDLE
		SCORE:	PASS / FAIL

Comments: ____

= =

****

The Following Is Entered Manually From Keyboard 1Z

****

		* Disable Beacon RSM printouts	
2	1Z	ACTION:	ENTER <F7>R1
2A	TTY	OBSERVE:	HH:MM:SS RSM 1 1Z INH
		SCORE:	PASS / FAIL

Comments: ____

= =

		* Disable Beacon RSM printouts	
3	1Z	ACTION:	ENTER <F7>R2
3A	TTY	OBSERVE:	HH:MM:SS RSM 2 1Z INH
		SCORE:	PASS / FAIL

Comments: ______________________________

= =

• Load the ETG program

4 TTY ACTION: ENTER TK IA TG

4A TTY OBSERVE: TK IA TG L-001

SCORE: PASS / FAIL

4B TTY OBSERVE: HH:MM:SS OK 001 TK IA TG

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Enable Memory Readout

5 1Z ACTION: ENTER M < F7 > R

5A 1Z OBSERVE: KEYBOARD ENTRY IS ACCEPTED

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Readout message counters

6 1Z ACTION: ENTER 640003 0

6A 1Z OBSERVE: In the SDA
640003 = 0000000000 (CTS Messages)
640004 = 0000000000 (Thread Drop Messages)
640005 = 0000000000 (Track Drop Messages)
640006 = 0000000000 (Keyboard Entry Messages)
640007 = 0000000000 (TROUT Demarcation Messages SS0)
640010 = 0000000000 (TROUT Demarcation Messages SS1)
640011 = 0000000000 (Interfacility Messages)
640012 = 0000000000 (Leader Change Messages)
640013 = 0000000000 (Offset Change Messages)
640014 = 0000000000 (TYP1 Messages)

SCORE: PASS / FAIL

Comments: ______________________________

= =

• Valid ARTS IIIA Keyboard Entries

7 1Z ACTION: ENTER < F7 > SHHMMSS (current time)

7A TTY OBSERVE: HH:MM:SS TIME 1Z Current time

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

8 IZ ACTION: ENTER <F7>S/MMDDYY (current date)

8A TTY OBSERVE: HH:MM:SS DATE IZ Current date

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid ARTS IIIA Keyboard Entries

9 IZ ACTION: ENTER <F7>I10SCR

9A TTY OBSERVE: HH:MM:SS CKEY IZ I0SCR

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Valid DWS Keyboard Entries to enable the TIU program

Using the mouse move the arrow to the keyboard window

10 DWS ACTION: SELECT RUN and CLICK

10A DWS OBSERVE: In the keyboard window the TIU is in RUN state

SCORE: PASS / FAIL

Comments: ______________________________

= =

* Enable FAST for operational mode

11 IZ ACTION: ENTER <F12>E

11A TTY OBSERVE: HH:MM:SS FAST IZ ENABLE !! OPNL

SCORE: PASS / FAIL

Comments: ______________________________

• Enable FAST for training mode

12 IN ACTION: ENTER <F12>E

12A TTY OBSERVE: HH:MM:SS FAST IN ON (TRNG)

SCORE: PASS / FAIL

Comments: ____

Manual keyboard entries can be made up to 1559 EST. All entries are permitted except for the following entries.

1. Time Changes
2. Date Changes
3. Disable Fast completely (either training or operational mode must remain enabled)
4. Disable CDR

DAY ONE 1559 hours execute the following entry

• Valid ARTS IIIA Keyboard Entries

13 IN ACTION: ENTER <F15>XIT

13A IN OBSERVE: In the preview area "SCENARIO ACTIVE"

SCORE: PASS / FAIL

The run time for this scenario is 16 hours and will provide ETG targets on the training display. See APPENDIX "D" for a listing of the scenario.

Comments: ____

DAY TWO

At 0800 hours "SCENARIO OFF" will be displayed in the preview area. Manual keyboard entries now can be made up to 1559 EST. All entries are permitted except for the following entries.

1. Time Changes
2. Date Changes
3. Disable Fast completely (either training or operational mode must remain enabled)
4. Disable CDR

DAY TWO 1559 hours execute the following entry

* Valid ARTS IIIA Keyboard Entries

14	1N	ACTION: ENTER <F15>XIT
14A	1N	OBSERVE: In the preview area "SCENARIO ACTIVE"
		SCORE: PASS / FAIL

The run time for this scenario is 16 hours and will provide ETG targets on the training display. See APPENDIX "D" for a listing of the scenario.

Comments: ____

= =

DAY THREE

When "SCENARIO OFF" is displayed in the SDA 0800 hours execute the following Keyboard entries.

* Valid ARTS IIIA/FAST Keyboard Entry

16   1N   ACTION: ENTER <F12>1

16A   TTY   OBSERVE: HH:MM:SS FAST 1N OFF (TRNG)

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid ARTS IIIA/FAST Keyboard Entry

17   1Z   ACTION: ENTER <F12>1

17A   TTY   OBSERVE: HH:MM:SS FAST 1Z DISABLED **

SCORE: PASS / FAIL

17B   DWS   OBSERVE: Disabled message received...

SCORE: PASS / FAIL

17C   1Z   OBSERVE: In the SDA All MSG. counters have stopped incrementing

SCORE: PASS / FAIL

Comments: ______________________________

---

* Valid ARTS IIIA/FAST Keyboard Entry

18   1Z   ACTION: ENTER <F7>R640003 P10

18A   TTY   OBSERVE: Message counters are printed on the MSP

SCORE: PASS / FAIL

18B   MSP   ACTION: Fetch the hard copy print out of the message counters, they will be used in step 18

SCORE: PASS / FAIL

18C   1Z   OBSERVE: In the SDA All MSG. counters have stopped incrementing

SCORE: PASS / FAIL

Comments: ______________________________

• Valid DWS Keyboard Entries to obtain the TIU message counters

Using the mouse move the arrow to the keyboard window

19 DWS ACTION: SELECT COUNT and CLICK

19A DWS OBSERVE: In the DADS window the TIU message counter values

SCORE: PASS / FAIL

Comments: ____

= =

• DWS entries to obtain a hard copy of message counters

20 DWS ACTION: SELECT Console window

20A DWS OBSERVE: Console window opened and tatca9% prompt

20B DWS ACTION: ENTER screendump scrn.dmp

20C DWS OBSERVE: At the prompt

20D DWS ACTION: ENTER lpr -Plp scrn.dmp

Pick up the hard copy of message counters in the TATCA lab.

SCORE: PASS / FAIL

Comments: ____

= =

• Compare ARTS message counters to the FAST message counters

21 DWS ACTION: Select the Calculator

21A DWS ACTION: Convert the DADS decimal counters to OCTAL and compare to the ARTS message counters

SCORE: PASS / FAIL

21B DWS ACTION: Insure that the DADS message counters for the following message types are in agreement

Initialization message MC20 = 1
Disable FAST message MC25 = 1

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to close console window

Using the mouse move the arrow to the left corner of console window

22 DWS ACTION: Depress and hold down right button

22A DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select close

22B DWS ACTION: Release right button

22C DWS OBSERVE: Console window closed

SCORE: PASS / FAIL

Comments: ____

= =

* Valid DWS Keyboard Entries to close TIU window

Using the mouse move the arrow to the desk top (blue) area

23 DWS ACTION: Depress and hold down right button

23A DWS OBSERVE: Menu appears

SCORE: PASS FAIL

Move the mouse and select utilities

23B DWS ACTION: continue to hold right button down

23C DWS OBSERVE: Menu appears

SCORE: PASS / FAIL

Move the mouse and select lock screen

23D DWS ACTION: Release the right button

23E DWS OBSERVE: TIU window locked

SCORE: PASS / FAIL

Comments: ____

= =

5.0 APPENDICES

5.1 Appendix "A"

This scenario will be executed in the Keyboard entry test, Section 4.4, and will generate a large volume of data transfers to FAST.

```
11          .72M.J
11          .7S155800.J
11 *        .7FC001049.J                                155820
12 *        .7FC001049.J                                155822
13 *        .7FC001049.J                                155824
21 *        .7FC001049.J                                155826
22 *        .7FC001049.J                                155828
31 *        .7FC001049.J                                155830
41 *        .7FC001049.J                                155833
51 *        .7FC001049.J                                155834
61 *        .7FC001049.J                                155836
62 *        .7FC001049.J                                155840
63 *        .7FC001049.J                                155842
71 *        .7FC001049.J                                155844
72 *        .7FC001049.J                                155846
73 *        .7FC001049.J                                155848
81 *        .7FC001049.J                                155850
82 *        .7FC001049.J                                155852
83 *        .7FC001049.J                                155854
91 *        .7FC001049.J                                155856
A1 *        .7FC001049.J                                155858
A2 *        .7FC001049.J                                155900
B1 *        .7FC001049.J                                155902
B2 *        .7FC001049.J                                155904
C1 *        .7FC001049.J                                155906
C2 *        .7FC001049.J                                155908
D1 *        .7FC001049.J                                155910
D2 *        .7FC001049.J                                155912
E1 *        .7FC001049.J                                155914
E2 *        .7FC001049.J                                155916
F1 *        .7FC001049.J                                155918
F2 *        .7FC001049.J                                155920
G1 *        .7FC001049.J                                155922
G2 *        .7FC001049.J                                155924
H1 *        .7FC001049.J                                155926
H2 *        .7FC001049.J                                155928
I1 *        .7FC001049.J                                155930
I2 *        .7FC001049.J                                155932
J1 *        .7FC001049.J                                155934
J2 *        .7FC001049.J                                155936
K1 *        .7FC001049.J                                155938
K2 *        .7FC001049.J                                155940
L1 *        .7FC001049.J                                155942
M1 *        .7FC001049.J                                155944
N1 *        .7FC001049.J                                155946
O1 *        .7FC001049.J                                155948
P1 *        .7FC001049.J                                155950
11 *P45000.F00B0101H180V000A020.K                       160001
```

5.1 Appendix "A" (Cont.)

```
11 *       .6LSLK701 0101.J                          160002
11 *       .6LSLK702 0102.J                          160003
11 *       .6LSLK703 0103.J                          160005
11 *       .6LSLK704 0104.J                          160007
11 *       .6LSLK705 0105.J                          160008
11 *       .6LSLK706 0106.J                          160010
11 *       .6LSLK707 0107.J                          160011
11 *       .F00D6.J                                  160013
31 *P22010.F01B1101H010V000A030.K                    160014
31 *       .6JSK111 1101.J                           160016
31 *       .6JSK112 1102.J                           160017
31 *       .6JSK113 1103.J                           160019
31 *       .6JSK114 1104.J                           160020
31 *       .6JSK115 1105.J                           160022
31 *       .6JSK116 1106.J                           160023
31 *       .6JSK117 1107.J                           160025
31 *       .F01D6.J                                  160026
21 *P45020.F02B0201H200V000A040.K                    160029
21 *       .6BDT21 0201.J                            160030
21 *       .6BDT22 0202.J                            160032
21 *       .6BDT23 0203.J                            160033
21 *       .6BDT24 0204.J                            160035
21 *       .6BDT25 0205.J                            160036
21 *       .6BDT26 0206.J                            160038
21 *       .6BDT27 0207.J                            160039
21 *       .F02D6.J                                  160040
21 *P22030.F03B1201H030V000A050.K                    160041
21 *       .6QMK121 1201.J                           160043
21 *       .6QMK122 1202.J                           160044
21 *       .6QMK123 1203.J                           160046
21 *       .6QMK124 1204.J                           160047
21 *       .6QMK125 1205.J                           160049
21 *       .6QMK126 1206.J                           160050
21 *       .6QMK127 1207.J                           160051
21 *       .F03D6.J                                  160052
11 *P45040.F04B0301H220V000A060.K                    160055
11 *       .6PPLK708 0301.J                          160056
11 *       .6PPLK709 0302.J                          160058
11 *       .6PPLK710 0303.J                          160059
11 *       .6PPLK711 0304.J                          160100
11 *       .6PPLK712 0305.J                          160102
11 *       .6PPLK713 0306.J                          160103
11 *       .6PPLK714 0307.J                          160105
11 *       .F04D6.J                                  160106
31 *P22050.F05B1301H050V000A070.K                    160108
31 *       .6LES131 1301.J                           160109
31 *       .6LES132 1302.J                           160111
31 *       .6LES133 1303.J                           160112
31 *       .6LES134 1304.J                           160114
31 *       .6LES135 1305.J                           160115
31 *       .6LES136 1306.J                           160116
```

5.1 Appendix "A" (Cont.)

```
31 *       .6LES137 1307.J                          160117
31 *       .F05D6.J                                 160119
81 *P45060.F06B0401H240V000A080.K                   160121
81 *       .6UAL41 0401.J                           160122
81 *       .6UAL42 0402.J                           160123
81 *       .6UAL43 0403.J                           160125
81 *       .6UAL44 0404.J                           160126
81 *       .6UAL45 0405.J                           160128
81 *       .6UAL46 0406.J                           160129
81 *       .6UAL47 0407.J                           160129
81 *       .F07D6.J                                 160131
31 *P22070.F07B1401H070V000A090.K                   160135
31 *       .6ASP141 1401.J                          160137
31 *       .6ASP142 1402.J                          160138
31 *       .6ASP143 1403.J                          160140
31 *       .6ASP144 1404.J                          160141
31 *       .6ASP145 1405.J                          160143
31 *       .6ASP146 1406.J                          160144
31 *       .6ASP147 1407.J                          160145
31 *       .F07D6.J                                 160147
11 *P45080.F08B0501H260V000A100.K                   160149
11 *       .6ZSLK722 0501.J                         160151
11 *       .6ZSLK723 0502.J                         160152
11 *       .6ZSLK724 0503.J                         160154
11 *       .6ZSLK725 0504.J                         160155
11 *       .6ZSLK726 0505.J                         160156
11 *       .6ZSLK727 0506.J                         160157
11 *       .6ZSLK728 0507.J                         160159
11 *       .F08D6.J                                 160201
21 *P22090.F09B1501H090V000A110.K                   160202
21 *       .6SST151 1501.J                          160204
21 *       .6SST152 1502.J                          160205
21 *       .6SST153 1503.J                          160207
21 *       .6SST154 1504.J                          160208
21 *       .6SST155 1505.J                          160209
21 *       .6SST156 1506.J                          160211
21 *       .6SST157 1507.J                          160212
21 *       .F09D6.J                                 160214
81 *P45100.F10B0601H280V000A120.K                   160215
81 *       .6LUF61 0601.J                           160217
81 *       .6LUF62 0602.J                           160218
81 *       .6LUF63 0603.J                           160219
81 *       .6LUF64 0604.J                           160221
81 *       .6LUF65 0605.J                           160222
81 *       .6LUF66 0606.J                           160224
81 *       .6LUF67 0607.J                           160225
81 *       .F10D6.J                                 160226
31 *P22110.F11B1601H110V000A020.K                   160228
31 *       .6JJR161 1601.J                          160229
31 *       .6JJR162 1602.J                          160231
31 *       .6JJR163 1603.J                          160232
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5.1 Appendix "A" (Cont.)

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31 *       .6JJR165 1605.J                          160235
31 *       .6JJR166 1606.J                          160237
31 *       .6JJR167 1607.J                          160238
31 *       .F11D6.J                                 160240
11 *P45120.F12B0701H300V000A030.K                   160241
11 *       .6NSLK729 0701.J                         160243
11 *       .6NSLK730 0702.J                         160244
11 *       .6NSLK731 0703.J                         160246
11 *       .6NSLK732 0704.J                         160247
11 *       .6NSLK733 0705.J                         160249
11 *       .6NSLK734 0706.J                         160250
11 *       .6NSLK735 0707.J                         160251
11 *       .F12D6.J                                 160253
31 *P22130.F13B1701H130V000A040.K                   160254
31 *       .6JCK171 1701.J                          160255
31 *       .6JCK172 1702.J                          160257
31 *       .6JCK173 1703.J                          160258
31 *       .6JCK174 1704.J                          160300
31 *       .6JCK175 1705.J                          160301
31 *       .6JCK176 1706.J                          160302
31 *       .6JCK177 1707.J                          160303
31 *       .F13D6.J                                 160306
A1 *P45140.F14B1001H320V000A050.K                   160307
A1 *       .6JEP101 1001.J                          160309
A1 *       .6JEP102 1002.J                          160310
A1 *       .6JEP103 1003.J                          160312
A1 *       .6JEP104 1004.J                          160313
A1 *       .6JEP105 1005.J                          160315
A1 *       .6JEP106 1006.J                          160316
A1 *       .6JEP107 1007.J                          160318
A1 *       .F14D6.J                                 160319
A2 *P22150.F15B2001H150V000A060.K                   160321
A2 *       .6RST201 2001.J                          160322
A2 *       .6RST202 2002.J                          160324
A2 *       .6RST203 2003.J                          160325
A2 *       .6RST204 2004.J                          160326
A2 *       .6RST205 2005.J                          160328
A2 *       .6RST206 2006.J                          160329
A2 *       .6RST207 2007.J                          160330
A2 *       .F15D6.J                                 160332
B1 *P45160.F16B3101H340V000A070.K                   160334
B1 *       .6NSLK736 3101.J                         160335
B1 *       .6NSLK737 3102.J                         160337
B1 *       .6NSLK738 3103.J                         160338
B1 *       .6NSLK739 3104.J                         160340
B1 *       .6NSLK740 3105.J                         160341
B1 *       .6NSLK741 3106.J                         160342
B1 *       .6NSLK742 3107.J                         160344
B1 *       .F16D6.J                                 160346
D1 *P22170.F17B4101H170V000A080.K                   160347
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5.1 Appendix "A" (Cont.)

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D1 *       .6JSK412 4102.J                          160350
D1 *       .6JSK413 4103.J                          160351
D1 *       .6JSK414 4104.J                          160353
D1 *       .6JSK415 4105.J                          160354
D1 *       .6JSK416 4106.J                          160355
D1 *       .6JSK417 4107.J                          160357
D1 *       .F17D6.J                                 160358
H1 *P45180.F18B3201H360V000A090.K                   160400
H1 *       .6BDT321 3201.J                          160401
H1 *       .6BDT322 3202.J                          160403
H1 *       .6BDT323 3203.J                          160404
H1 *       .6BDT324 3204.J                          160406
H1 *       .6BDT325 3205.J                          160407
H1 *       .6BDT326 3206.J                          160408
H1 *       .6BDT327 3207.J                          160409
H1 *       .F18D6.J                                 160411
61 *P22190.F19B4201H190V000A100.K                   160412
61 *       .6CMK421 4201.J                          160414
61 *       .6CMK422 4202.J                          160415
61 *       .6CMK423 4203.J                          160417
61 *       .6CMK424 4204.J                          160418
61 *       .6CMK425 4205.J                          160420
61 *       .6CMK426 4206.J                          160421
61 *       .6CMK427 4207.J                          160422
61 *       .F19D6.J                                 160423
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H1 *       .6NSLK716 3302.J                         160430
H1 *       .6NSLK717 3303.J                         160432
H1 *       .6NSLK718 3304.J                         160433
H1 *       .6NSLK719 3305.J                         160435
H1 *       .6NSLK720 3306.J                         160436
H1 *       .6NSLK721 3307.J                         160438
H1 *       .F20D6.J                                 160439
41 *P22210.F21B4301H210V000A120.K                   160441
41 *       .6LES431 4301.J                          160442
41 *       .6LES432 4302.J                          160444
41 *       .6LES433 4303.J                          160445
41 *       .6LES434 4304.J                          160447
41 *       .6LES435 4305.J                          160448
41 *       .6LES436 4306.J                          160450
41 *       .6LES437 4307.J                          160451
41 *       .F21D6.J                                 160452
41 *P45220.F22B3401H040V000A020.K                   160454
41 *       .6UAL341 3401.J                          160455
41 *       .6UAL342 3402.J                          160457
41 *       .6UAL343 3403.J                          160458
41 *       .6UAL344 3404.J                          160500
41 *       .6UAL345 3405.J                          160501
41 *       .6UAL346 3406.J                          160503
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41 *       .F22D6.J                                 160506
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E1 *       .6ASP442 4402.J                          160510
E1 *       .6ASP443 4403.J                          160512
E1 *       .6ASP444 4404.J                          160513
E1 *       .6ASP445 4405.J                          160515
E1 *       .6ASP446 4406.J                          160516
E1 *       .6ASP447 4407.J                          160517
E1 *       .F23D6.J                                 160519
G1 *P45240.F24B3501H060V000A040.K                   160521
G1 *       .6USA351 3501.J                          160522
G1 *       .6USA352 3502.J                          160524
G1 *       .6USA353 3503.J                          160525
G1 *       .6USA354 3504.J                          160526
G1 *       .6USA355 3505.J                          160527
G1 *       .6USA356 3506.J                          160529
G1 *       .6USA357 3507.J                          160530
G1 *       .F24D6.J                                 160532
41 *P22250.F25B4501H250V000A050.K                   160533
41 *       .6SST451 4501.J                          160535
41 *       .6SST452 4502.J                          160536
41 *       .6SST453 4503.J                          160538
41 *       .6SST454 4504.J                          160539
41 *       .6SST455 4505.J                          160541
41 *       .6SST456 4506.J                          160542
41 *       .6SST457 4507.J                          160543
41 *       .F25D6.J                                 160545
82 *P45260.F26B3601H080V000A060.K                   160547
82 *       .6LUF361 3601.J                          160548
82 *       .6LUF362 3602.J                          160550
82 *       .6LUF363 3603.J                          160551
82 *       .6LUF364 3604.J                          160553
82 *       .6LUF365 3605.J                          160554
82 *       .6LUF366 3606.J                          160556
82 *       .6LUF367 3607.J                          160557
82 *       .F26D6.J                                 160559
H1 *P22270.F27B4601H270V000A070.K                   160601
H1 *       .6NSLK765 4601.J                         160602
H1 *       .6NSLK766 4602.J                         160604
H1 *       .6NSLK767 4603.J                         160605
H1 *       .6NSLK768 4604.J                         160607
H1 *       .6NSLK769 4605.J                         160608
H1 *       .6NSLK770 4606.J                         160610
H1 *       .6NSLK771 4607.J                         160611
62 *       .F27D6.J                                 160613
41 *P45280.F28B3701H100V000A080.K                   160614
41 *       .6JJH371 3701.J                          160616
41 *       .6JJH372 3702.J                          160617
41 *       .6JJH373 3703.J                          160619
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5.1 Appendix "A" (Cont.)

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41 *       .6JJH374 3704.J                          160620
41 *       .6JJH375 3705.J                          160621
41 *       .6JJH376 3706.J                          160623
41 *       .6JJH377 3707.J                          160624
41 *       .F28D6.J                                 160625
71 *P22290.F29B4701H290V000A090.K                   160627
71 *       .6JCK471 4701.J                          160628
71 *       .6JCK472 4702.J                          160630
71 *       .6JCK473 4703.J                          160631
71 *       .6JCK474 4704.J                          160633
71 *       .6JCK475 4705.J                          160634
71 *       .6JCK476 4706.J                          160636
71 *       .6JCK477 4707.J                          160637
71 *       .F29D6.J                                 160639
71 *P45300.F30B3011H120V000A100.K                   160640
71 *       .6JEP311 3011.J                          160642
71 *       .6JEP312 3012.J                          160643
71 *       .6JEP313 3013.J                          160645
71 *       .6JEP314 3014.J                          160646
71 *       .6JEP315 3015.J                          160648
71 *       .6JEP316 3016.J                          160649
71 *       .6JEP317 3017.J                          160651
71 *       .F30D6.J                                 160652
H1 *P22310.F31B4011H310V000A110.K                   160654
H1 *       .6RST411 4011.J                          160655
H1 *       .6RST412 4012.J                          160657
H1 *       .6RST413 4013.J                          160658
H1 *       .6RST414 4014.J                          160659
H1 *       .6RST415 4015.J                          160700
H1 *       .6RST416 4016.J                          160702
H1 *       .6RST417 4017.J                          160703
H1 *       .F31D6.J                                 160704
H1 *P45320.F32B5101H140V000A120.K                   160707
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H1 *       .6NSLK744 5102.J                         160710
H1 *       .6NSLK745 5103.J                         160712
H1 *       .6NSLK746 5104.J                         160713
H1 *       .6NSLK747 5105.J                         160715
H1 *       .6NSLK748 5106.J                         160716
H1 *       .6NSLK749 5107.J                         160718
H1 *       .F32D6.J                                 160719
41 *P22330.F33B6101H330V000A020.K                   160721
41 *       .6JSK611 6101.J                          160722
41 *       .6JSK612 6102.J                          160724
41 *       .6JSK613 6103.J                          160725
41 *       .6JSK614 6104.J                          160727
41 *       .6JSK615 6105.J                          160728
41 *       .6JSK616 6106.J                          160730
41 *       .6JSK617 6107.J                          160731
41 *       .F33D6.J                                 160733
81 *P45340.F34B5201H160V000A030.K                   160734
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5.1 Appendix "A" (Cont.)

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81 *       .6SWA521 5201.J                          160736
81 *       .6SWA522 5202.J                          160737
81 *       .6SWA523 5203.J                          160739
81 *       .6SWA524 5204.J                          160740
81 *       .6SWA525 5205.J                          160742
81 *       .6SWA526 5206.J                          160743
81 *       .6SWA527 5207.J                          160745
81 *       .F34D6.J                                 160746
C1 *P22350.F35B6201H350V000A040.K                   160748
C1 *       .6CMK621 6201.J                          160749
C1 *       .6CMK622 6202.J                          160751
C1 *       .6CMK623 6203.J                          160752
C1 *       .6CMK624 6204.J                          160754
C1 *       .6CMK625 6205.J                          160755
C1 *       .6CMK626 6206.J                          160757
C1 *       .6CMK627 6207.J                          160758
C1 *       .F35D6.J                                 160800
H1 *P27355.F36B5301H355V000A050.K                   160801
H1 *       .6NSLK751 5301.J                         160803
H1 *       .6NSLK752 5302.J                         160804
H1 *       .6NSLK753 5303.J                         160806
H1 *       .6NSLK754 5304.J                         160807
H1 *       .6NSLK755 5305.J                         160809
H1 *       .6NSLK756 5306.J                         160811
H1 *       .6NSLK757 5307.J                         160812
H1 *       .F36D5.J                                 160814
41 *P40025.F37B6301H215V000A060.K                   160815
41 *       .6LES631 6301.J                          160817
41 *       .6LES632 6302.J                          160818
41 *       .6LES633 6303.J                          160820
41 *       .6LES634 6304.J                          160821
41 *       .6LES635 6305.J                          160823
41 *       .6LES636 6306.J                          160824
41 *       .6LES637 6307.J                          160826
41 *       .F37D6.J                                 160827
C1 *P27055.F38B5401H065V000A070.K                   160829
C1 *       .6UPS541 5401.J                          160830
C1 *       .6UPS542 5402.J                          160832
C1 *       .6UPS543 5403.J                          160833
C1 *       .6UPS554 5404.J                          160835
C1 *       .6UPS545 5405.J                          160836
C1 *       .6UPS546 5406.J                          160838
C1 *       .6UPS547 5407.J                          160839
C1 *       .F38D5.J                                 160841
61 *P40085.F39B6401H275V000A080.K                   160842
61 *       .6ASP641 6401.J                          160844
61 *       .6ASP642 6402.J                          160845
61 *       .6ASP643 6403.J                          160847
61 *       .6ASP644 6404.J                          160848
61 *       .6ASP645 6405.J                          160850
61 *       .6ASP656 6406.J                          160851
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5.1 Appendix "A" (Cont.)

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61 *       .6ASP647 6407.J                          160853
61 *       .F39D5.J                                 160854
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H1 *       .6USA552 5502.J                          160859
H1 *       .6USA553 5503.J                          160901
H1 *       .6USA554 5504.J                          160902
H1 *       .6USA555 5505.J                          160904
H1 *       .6USA556 5506.J                          160905
H1 *       .6USA557 5507.J                          160907
H1 *       .F40D6.J                                 160908
41 *P40175.F41B6501H005V000A100.K                   160910
41 *       .6SST651 6501.J                          160911
41 *       .6SST652 6502.J                          160913
41 *       .6SST653 6503.J                          160914
41 *       .6SST654 6504.J                          160916
41 *       .6SST655 6505.J                          160917
41 *       .6SST656 6506.J                          160919
41 *       .6SST657 6507.J                          160920
41 *       .F41D6.J                                 160922
82 *P27205.F42B5601H215V000A110.K                   160923
82 *       .6LUF561 5601.J                          160925
82 *       .6LUF562 5602.J                          160926
82 *       .6LUF563 5603.J                          160928
82 *       .6LUF564 5604.J                          160929
82 *       .6LUF565 5605.J                          160931
82 *       .6LUF566 5606.J                          160932
82 *       .6LUF567 5607.J                          160934
82 *       .F42D5.J                                 160935
62 *P40235.F43B6601H065V000A120.K                   160937
62 *       .6JJR661 6601.J                          160938
62 *       .6JJR662 6602.J                          160940
62 *       .6JJR663 6603.J                          160941
62 *       .6JJR664 6604.J                          160943
62 *       .6JJR665 6605.J                          160944
62 *       .6JJR666 6606.J                          160946
62 *       .6JJR667 6607.J                          160947
62 *       .F43D5.J                                 160949
41 *P27265.F44B5701H275V000A020.K                   160950
41 *       .6JJH571 5701.J                          160952
41 *       .6JJH572 5702.J                          160953
41 *       .6JJH573 5703.J                          160955
41 *       .6JJH574 5704.J                          160956
41 *       .6JJH575 5705.J                          160958
41 *       .6JJH576 5706.J                          160959
41 *       .6JJH577 5707.J                          161000
41 *       .F44D5.J                                 161001
41 *P40295.F45B6701H305V000A030.K                   161005
41 *       .6JCK671 6701.J                          161007
41 *       .6JCK672 6702.J                          161008
41 *       .6JCK673 6703.J                          161010
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5.1 Appendix "A" (Cont.)

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41 *        .6JCK675 6705.J                          161013
41 *        .6JCK676 6706.J                          161014
41 *        .6JCK677 6707.J                          161016
41 *        .F45D5.J                                 161017
82 *P27325.F46B6611H165V000A040.K                    161019
82 *        .6JEP611 6611.J                          161021
82 *        .6JEP612 6612.J                          161022
82 *        .6JEP613 6613.J                          161023
82 *        .6JEP614 6614.J                          161025
82 *        .6JEP615 6615.J                          161026
82 *        .6JEP616 6616.J                          161028
82 *        .6JEP617 6617.J                          161029
82 *        .F46D6.J                                 161033
62 *        .6RST611 6031.J                          161034
62 *        .6RST612 6032.J                          161035
62 *        .6RST613 6033.J                          161037
62 *        .6RST614 6034.J                          161039
62 *        .6RST615 6035.J                          161041
62 *        .6RST616 6036.J                          161042
H1 *        .6NSLK759 5022.J                         161043
H1 *        .6NSLK758 5021.J                         161047
H1 *        .6NSLK760 5023.J                         161050
H1 *        .6NSLK761 5024.J                         161051
H1 *        .6NSLK762 5025.J                         161052
H1 *        .6NSLK763 5026.J                         161053
11 *        .6RAT621 6021.J                          161054
11 *        .6RAT622 6022.J                          161055
11 *        .6RAT623 6023.J                          161056
11 *        .6RAT624 6024.J                          161057
11 *        .6RAT625 6025.J                          161058
11 *        .6RAT626 6026.J                          161059
11 *        .6RAT627 6027.J                          161100
12 *        .6BAT631 6041.J                          161101
12 *        .6BAT632 6032.J                          161102
12 *        .6BAT633 6033.J                          161103
12 *        .6BAT634 6034.J                          161104
12 *        .6BAT635 6035.J                          161105
12 *        .6BAT636 6036.J                          161106
12 *        .6BAT637 6037.J                          161107
12 *        .F00.J                                   161110
12 *        .F01.J                                   161111
12 *        .F02.J                                   161112
12 *        .F03.J                                   161113
12 *        .F04.J                                   161114
12 *        .F05.J                                   161115
12 *        .F06.J                                   161116
12 *        .F07.J                                   161117
12 *        .F08.J                                   161118
12 *        .F09.J                                   161119
12 *        .F10.J                                   161120
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5.1 Appendix "A" (Cont.)

12	*	.F11.J	161121
12	*	.F12.J	161122
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12	*	.F16.J	161126
12	*	.F17.J	161127
12	*	.F18.J	161128
12	*	.F19.J	161129
12	*	.F20.J	161130
12	*	.F21.J	161131
12	*	.F22.J	161132
12	*	.F23.J	161133
12	*	.F24.J	161134
12	*	.F25.J	161135
12	*	.F26.J	161136
12	*	.F27.J	161137
12	*	.F28.J	161138
12	*	.F29.J	161139
12	*	.F30.J	161140
12	*	.F31.J	161141
12	*	.F32.J	161142
12	*	.F33.J	161143
12	*	.F34.J	161144
12	*	.F35.J	161145
12	*	.F36.J	161146
12	*	.F37.J	161147
12	*	.F38.J	161148
12	*	.F39.J	161149
12	*	.F40.J	161150
12	*	.F41.J	161151
12	*	.F42.J	161152
12	*	.F43.J	161153
12	*	.F44.J	161154
12	*	.F45.J	161155
12	*	.F46.J	161156
62	*	.4RST611.J	161203
62	*	.4RST612.J	161204
62	*	.4RST613.J	161205
62	*	.4RST614.J	161206
62	*	.4RST615.J	161207
62	*	.4RST616.J	161208
H1	*	.4NSLK758.J	161209
H1	*	.4NSLK759.J	161210
H1	*	.4NSLK760.J	161211
H1	*	.4NSLK761.J	161212
H1	*	.4NSLK762.J	161213
H1	*	.4NSLK763.J	161214
11	*	.4RAT621.J	161215
11	*	.4RAT622.J	161216
11	*	.4RAT623.J	161217

5.1 Appendix "A" (Cont.)

```
11 *      .4RAT624.J                    161218
11 *      .4RAT625.J                    161219
11 *      .4RAT626.J                    161220
11 *      .4RAT627.J                    161221
12 *      .4BAT631.J                    161222
12 *      .4BAT632.J                    161223
12 *      .4BAT633.J                    161224
12 *      .4BAT634.J                    161225
12 *      .4BAT635.J                    161226
12 *      .4BAT636.J                    161227
12 *      .4BAT637.J                    161228
11 *      .4LSLK701.J                   161229
11 *      .4LSLK702.J                   161230
11 *      .4LSLK703.J                   161231
11 *      .4LSLK704.J                   161232
11 *      .4LSLK705.J                   161233
11 *      .4LSLK706.J                   161234
11 *      .4LSLK707.J                   161235
31 *      .4JSK111.J                    161236
31 *      .4JSK112.J                    161237
31 *      .4JSK113.J                    161238
31 *      .4JSK114.J                    161239
31 *      .4JSK115.J                    161240
31 *      .4JSK116.J                    161241
31 *      .4JSK117.J                    161242
21 *      .4BDT21.J                     161243
21 *      .4BDT22.J                     161244
21 *      .4BDT23.J                     161245
21 *      .4BDT24.J                     161246
21 *      .4BDT25.J                     161247
21 *      .4BDT26.J                     161248
21 *      .4BDT27.J                     161249
21 *      .4QMK121.J                    161250
21 *      .4QMK122.J                    161251
21 *      .4QMK123.J                    161252
21 *      .4QMK124.J                    161253
21 *      .4QMK125.J                    161254
21 *      .4QMK126.J                    161255
21 *      .4QMK127.J                    161256
11 *      .4PPLK708.J                   161257
11 *      .4PPLK709.J                   161258
11 *      .4PPLK710.J                   161259
11 *      .4PPLK711.J                   161300
11 *      .4PPLK712.J                   161301
11 *      .4PPLK713.J                   161302
11 *      .4PPLK714.J                   161303
31 *      .4LES131.J                    161304
31 *      .4LES132.J                    161305
31 *      .4LES133.J                    161306
31 *      .4LES134.J                    161307
31 *      .4LES135.J                    161308
```

5.1 Appendix "A" (Cont.)

31	*	.4LES136.J	161309
31	*	.4LES137.J	161310
81	*	.4UAL41.J	161312
81	*	.4UAL42.J	161313
81	*	.4UAL43.J	161314
81	*	.4UAL44.J	161315
81	*	.4UAL45.J	161316
81	*	.4UAL46.J	161317
81	*	.4UAL47.J	161319
31	*	.4ASP141.J	161320
31	*	.4ASP142.J	161321
31	*	.4ASP143.J	161322
31	*	.4ASP144.J	161323
31	*	.4ASP145.J	161324
31	*	.4ASP146.J	161325
31	*	.4ASP147.J	161326
11	*	.4ZSLK722.J	161327
11	*	.4ZSLK723.J	161328
11	*	.4ZSLK724.J	161329
11	*	.4ZSLK725.J	161330
11	*	.4ZSLK726.J	161331
11	*	.4ZSLK727.J	161332
11	*	.4ZSLK728.J	161333
21	*	.4SST151.J	161334
21	*	.4SST152.J	161335
21	*	.4SST153.J	161336
21	*	.4SST154.J	161337
21	*	.4SST155.J	161338
21	*	.4SST156.J	161339
21	*	.4SST157.J	161340
81	*	.4LUF61.J	161341
81	*	.4LUF62.J	161342
81	*	.4LUF63.J	161343
81	*	.4LUF64.J	161344
81	*	.4LUF65.J	161345
81	*	.4LUF66.J	161346
81	*	.4LUF67.J	161347
31	*	.4JJR161.J	161348
31	*	.4JJR162.J	161349
31	*	.4JJR163.J	161350
31	*	.4JJR164.J	161351
31	*	.4JJR165.J	161352
31	*	.4JJR166.J	161353
31	*	.4JJR167.J	161354
11	*	.4NSLK729.J	161355
11	*	.4NSLK730.J	161356
11	*	.4NSLK731.J	161357
11	*	.4NSLK732.J	161358
11	*	.4NSLK733.J	161359
11	*	.4NSLK734.J	161400
11	*	.4NSLK735.J	161401

5.1 Appendix "A" (Cont.)

31	*	.4JCK171.J	161402
31	*	.4JCK172.J	161403
31	*	.4JCK173.J	161405
31	*	.4JCK174.J	161406
31	*	.4JCK175.J	161407
31	*	.4JCK176.J	161408
31	*	.4JCK177.J	161409
A1	*	.4JEP101.J	161410
A1	*	.4JEP102.J	161411
A1	*	.4JEP103.J	161412
A1	*	.4JEP104.J	161413
A1	*	.4JEP105.J	161414
A1	*	.4JEP106.J	161415
A1	*	.4JEP107.J	161416
A2	*	.4RST201.J	161417
A2	*	.4RST202.J	161418
A2	*	.4RST203.J	161419
A2	*	.4RST204.J	161420
A2	*	.4RST205.J	161421
A2	*	.4RST206.J	161422
A2	*	.4RST207.J	161423
B1	*	.4NSLK736.J	161424
B1	*	.4NSLK737.J	161425
B1	*	.4NSLK738.J	161426
B1	*	.4NSLK739.J	161427
B1	*	.4NSLK740.J	161428
B1	*	.4NSLK741.J	161429
B1	*	.4NSLK742.J	161430
D1	*	.4JSK411.J	161431
D1	*	.4JSK412.J	161432
D1	*	.4JSK413.J	161433
D1	*	.4JSK414.J	161434
D1	*	.4JSK415.J	161435
D1	*	.4JSK416.J	161436
D1	*	.4JSK417.J	161437
H1	*	.4BDT321.J	161438
H1	*	.4BDT322.J	161439
H1	*	.4BDT323.J	161440
H1	*	.4BDT324.J	161441
H1	*	.4BDT325.J	161442
H1	*	.4BDT326.J	161443
H1	*	.4BDT327.J	161444
61	*	.4CMK421.J	161445
61	*	.4CMK422.J	161416
61	*	.4CMK423.J	161417
61	*	.4CMK424.J	161418
61	*	.4CMK425.J	161419
61	*	.4CMK426.J	161420
61	*	.4CMK427.J	161421
H1	*	.4NSLK715.J	161422
H1	*	.4NSLK716.J	161423

5.1 Appendix "A" (Cont.)

```
H1 *      .4NSLK717.J                    161424
H1 *      .4NSLK718.J                    161425
H1 *      .4NSLK719.J                    161426
H1 *      .4NSLK720.J                    161427
H1 *      .4NSLK721.J                    161428
41 *      .4LES431.J                     161429
41 *      .4LES432.J                     161430
41 *      .4LES433.J                     161431
41 *      .4LES434.J                     161432
41 *      .4LES435.J                     161433
41 *      .4LES436.J                     161434
41 *      .4LES437.J                     161435
41 *      .4UAL341.J                     161436
41 *      .4UAL342.J                     161437
41 *      .4UAL343.J                     161438
41 *      .4UAL344.J                     161439
41 *      .4UAL345.J                     161440
41 *      .4UAL346.J                     161441
41 *      .4UAL347.J                     161442
E1 *      .4ASP441.J                     161443
E1 *      .4ASP442.J                     161444
E1 *      .4ASP443.J                     161445
E1 *      .4ASP444.J                     161446
E1 *      .4ASP445.J                     161447
E1 *      .4ASP446.J                     161448
E1 *      .4ASP447.J                     161449
G1 *      .4USA351.J                     161450
G1 *      .4USA352.J                     161451
G1 *      .4USA353.J                     161452
G1 *      .4USA354.J                     161453
G1 *      .4USA355.J                     161454
G1 *      .4USA356.J                     161455
G1 *      .4USA357.J                     161456
41 *      .4SST451.J                     161457
41 *      .4SST452.J                     161458
41 *      .4SST453.J                     161459
41 *      .4SST454.J                     161500
41 *      .4SST455.J                     161501
41 *      .4SST456.J                     161502
41 *      .4SST457.J                     161503
82 *      .4LUF361.J                     161504
82 *      .4LUF362.J                     161505
82 *      .4LUF363.J                     161506
82 *      .4LUF364.J                     161507
82 *      .4LUF365.J                     161508
32 *      .4LUF366.J                     161509
82 *      .4LUF367.J                     161510
H1 *      .4NSLK765.J                    161511
H1 *      .4NSLK766.J                    161512
H1 *      .4ALL.J                        161513
41 *      .4ALL.J                        161515
```

5.1 Appendix "A" (Cont.)

```
71 *      .4ALL.J                                    161517
81 *      .4ALL.J                                    161519
C1 *      .4ALL.J                                    161521
61 *      .4ALL.J                                    161523
82 *      .4ALL.J                                    161525
62 *      .4ALL.J                                    161527
82 *      .4JEP611.J                                 161557
82 *      .4JEP612.J                                 161558
82 *      .4JEP613.J                                 161559
82 *      .4JEP614.J                                 161600
82 *      .4JEP615.J                                 161601
82 *      .4JEP616.J                                 161602
82 *      .4JEP617.J                                 161603
```

5.2 Appendix "B"

KEYBOARD DATA PACKET, MESSAGE CODE 011

NUMBER OF WORDS									011
S			FN	I	B	E	T	ERROR NO.	011
ZULU TIME (LSB = 1/1024 SECOND)									
ACID 1	ACID 2	ACID 3			ACID 4				ACID 5
ACID 6	ACID 7								
P1	P2	P3			P4				P5
P6	P7	P8			P9				P10
P11	P12	P13			P14				P15
P16	P17	P18			P19				P20
P21	P22	P23			P24				P25
P26	P27	P28			P29				P30
P31	P32	P33			P34				P35
P36	P37	P38			P39				P40
P41	P42						KS		CONTR.
	TBALL YCOR. LSB=1/16				TBALL XCOR. LSB=1/16				

5.2 Appendix "B" (Cont.)

CTS DATA PACKET, MESSAGE CODE 012

	29 — 15	14 — 0
MSG HDR	NUMBER OF WORDS	012
WORD 1	CONTENTS OF CTST	
WORD 2	CONTENTS OF RGAZT	
WORD 3	CONTENTS OF XCORT	
WORD 4	CONTENTS OF YCORT	
WORD 5	CONTENTS OF XYDOT	
WORD 6	CONTENTS OF TIMET	
WORD 7	CONTENTS OF ASOCT	
WORD 8	CONTENTS OF ABEAT	
WORD 9	CONTENTS OF CFLGT	
WORD 10	CONTENTS OF RBEAT	
WORD 11	CONTENTS OF SLIDT	
WORD 12	CONTENTS OF TNT	
WORD 13	CONTENTS OF LGCT	
WORD 14	CONTENTS OF FILT	
WORD 15	CONTENTS OF CTSST	
WORD 16	CONTENTS OF RECRT	
WORD 17	CONTENTS OF TNPT	
WORD 18	CONTENTS OF LNKT	
WORD 19	CONTENTS OF ALT	

5.2 Appendix "B" (Cont.)

CTS DATA PACKET, MESSAGE CODE 012

	29 ... 0
WORD 20	CONTENTS OF PALT
WORD 21	CONTENTS OF SALT
WORD 22	CONTENTS OF DALT
WORD 23	CONTENTS OF ACTYPT
WORD 24	CONTENTS OF CATB
WORD 25	CONTENTS OF CATC1
WORD 26	CONTENTS OF CATC2

5.2 Appendix "B" (Cont.)

INTERFACILITY DATA PACKET, MESSAGE CODE 013

NUMBER OF WORDS		013	
NUMBER OF WORDS	1	013	
ZULU TIME (LSB = 1/1024 SECOND)			
	CHAR 1	CHAR 2	CHAR 3
	CHAR N-2	CHAR N-1	CHAR N

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

MSG HDR	NUMBER OF WORDS	020
1	LENGTH OF NUMKQ	LENGTH OF NUMDQ
2	LENGTH OF FIXCNTQ	CURRENT CONFIGURATION
3		
4	1	
5	PAIRT word for keyboard # 1	
6	PAIRT word for keyboard # 2	
. . VAR . .		. . VAR . .
	PAIRT word for last keyboard	
	QUIKT word for keyboard # 1	
	QUIKT word for keyboard # 2	
. . VAR . .		. . VAR . .
	QUIKT word for last keyboard	

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

SYMT	word for keyboard # 1
SYMT	word for keyboard # 2

. . . . . .
V V
A A
R R
. . . . . .

SYMT	word for last keyboard
PREVT	word for keyboard # 1
PREVT	word for keyboard # 2

. . . . . .
V V
A A
R R
. . . . . .

PREVT	word for last keyboard
PULST	word for keyboard # 1
PULST	word for keyboard # 1

. . . . . .
V V
A A
R R
. . . . . .

PULST	word for last keyboard
1	

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

DCONT word for display # 1
DCONT word for display # 2

. . V A R . . . . V A R . .

DCONT word for last display
DFLAGT word for display # 1
DFLAGT word for display # 2

. . V A R . . . . V A R . .

DFLAGT word for last display

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

	TYP1T word for display # 1
	TYP1T word for display # 2
. . . VARIABLE . . .	. . . VARIABLE . . .
	TYP1T word for last display
1	
	AQLRNGT WORD FOR SENSOR ONE
	AQLRNGT WORD FOR SENSOR TWO*
1	

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

FIRST ITEM IN THE AIRPORT TABLE (APT)	
. . . VARIABLE . . .	. . . VARIABLE . . .
LAST ITEM IN THE AIRPORT TABLE (APT)	
1	
FIRST ITEM IN THE FIX TABLE (FIXCVT)	
. . . VARIABLE . . .	. . . VARIABLE . . .
LAST ITEM IN THE FIX TABLE (FIXCVT)	

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

FIRST ITEM IN THE NON STANDARD CFG TABLE (CFGN1T)
. . . VARIABLE . . .
LAST ITEM IN THE NON STANDARD CFG TABLE (CFGN1T)
FIRST ITEM IN THE STANDARD CFG TABLE (CFGS1T
. . . VARIABLE . . .
LAST ITEM IN THE STANDARD CFG TABLE (CFGS1T)
ALL ZEROS

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

FIRST ITEM IN THE NON STANDARD CFG TABLE (CFGN2T)	
. . . VARIABLE . . .	. . . VARIABLE . . .
LAST ITEM IN THE NON STANDARD CFG TABLE (CFGN2T)	
FIRST ITEM IN THE STANDARD CFG TABLE (CFGS2T)	
. . . VARIABLE . . .	. . . VARIABLE . . .
LAST ITEM IN THE STANDARD CFG TABLE (CFGS2T)	
1	

5.2 Appendix "B" (Cont.)

INITIALIZATION DATA PACKET, MESSAGE CODE 020

CONTROLLER TABLE PART 1, CFG 2 AND 3. (NCNT)

. . . VARIABLE . . . VARIABLE . . .

LAST ITEM FOR PART 1, CFG 2 AND 3. (NCNT)
ALL ZEROS
CONTROLLER TABLE PART 2, CFG 4 AND 5 (NCNAT)

. . . VARIABLE . . . VARIABLE . . .

LAST ITEM FOR PART 2, CFG 4 AND 5 (NCNAT)

5.2 Appendix "B" (Cont.)

THREAD DROP DATA PACKET, MESSAGE CODE 021

	29 ... 15	14 ... 0
MSG HDR	NUMBER OF WORDS	021
WORD 1	CONTENTS OF CATC1	
WORD 2	CONTENTS OF CATC2	

5.2 Appendix "B" (Cont.)

TRACK DROP DATA PACKET, MESSAGE CODE 022

	29 — 1514	0
MSG HDR	NUMBER OF WORDS	022
WORD 1	CONTENTS OF CATC1	
WORD 2	CONTENTS OF CATC2	

5.2 Appendix "B" (Cont.)

DISPLAYS TYP1T DATA PACKET, MESSAGE CODE 024

	29 ... 15	14 ... 0
MSG HDR	NUMBER OF WORDS	024
WORD 1	CONTENTS OF TYP1T	
WORD 2		DISPLAY NUMBER

5.2 Appendix "B" (Cont.)

DISABLE FAST DATA PACKET, MESSAGE CODE 025

29 — 1514	0 — 15
NUMBER OF WORDS	025

5.2 Appendix "B" (Cont.)

TEST PATTERN ONE, MESSAGE CODE 026

29															1514																0
NUMBER OF WORDS																026															
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

5.2 Appendix "B" (Cont.)

TEST PATTERN TWO, MESSAGE CODE 027

29														1514																	0
NUMBER OF WORDS																027															
1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

5.2 Appendix "B" (Cont.)

TEST PATTERN THREE, MESSAGE CODE 030

29															1514															0
NUMBER OF WORDS															030															
1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	1	1	1	1	1	1	

5.2 Appendix "B" (Cont.)

TEST PATTERN FOUR, MESSAGE CODE 031

29															1514																	0
NUMBER OF WORDS																031																
1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

After the initial 10 words there shall be a break in data transmissions followed by 10 words containing the following.

29															1514																	0
0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0

5.2 Appendix "B" (Cont.)

TROUT DEMARCARTION DATA PACKET, MESSAGE CODE 040

Subsystem Zero

29	1514	0
NUMBER OF WORDS		040

5.2 Appendix "B" (Cont.)

TROUT DEMARCARTION DATA PACKET, MESSAGE CODE 041

Subsystem One

29 — 1514	0 — 15
NUMBER OF WORDS	041

5.2 Appendix "B" (Cont.)

AUTOMATIC OFF SET DATA PACKET, MESSAGE CODE 050

	29	1514	0
MSG HDR	NUMBER OF WORDS		050
WORD 1	CONTENTS OF CATC1		
WORD 2	CONTENTS OF CATC2		
WORD 3	CONTENTS OF CFLGT		
WORD 4	CONTENTS OF CTST		
WORD 5	CONTENTS OF RECRT		

5.2 Appendix "B" (Cont.)

LEADER DIRECTION CHANGE DATA PACKET, MESSAGE CODE 051

	29 — 15	14 — 0
MSG HDR	NUMBER OF WORDS	051
WORD 1	CONTENTS OF CATC1	
WORD 2	CONTENTS OF CATC2	
WORD 3	CONTENTS OF CFLGT	
WORD 4	CONTENTS OF CTST	
WORD 5	CONTENTS OF RECRT	

5.3 Appendix "C"

This scenario will be executed by the Central Track STore (CTS(Tracking) test, Section 4.6 and the Fault Detection test, Section 4.7. It will generate the maximum number of associated tracks.

```
11          .7S155800.J
81 *P20043.F63B7401H223V000A020.K                    155802
11 *        .6CTS1 7401.J                            155803
61 *P20138.F62B7402H318V000A020.K                    155804
11 *        .6CTS2 7402.J                            155805
11 *        .F63HLHA.J                               155815
12 *        .F62HRHB.J                               155816
11 *        .7FC001072.J                             155820
12 *        .7FC001072.J                             155822
13 *        .7FC001072.J                             155824
21 *        .7FC001072.J                             155826
22 *        .7FC001072.J                             155828
31 *        .7FC001072.J                             155830
41 *        .7FC001072.J                             155832
51 *        .7FC001072.J                             155834
61 *        .7FC001072.J                             155836
62 *        .7FC001072.J                             155840
63 *        .7FC001072.J                             155842
71 *        .7FC001072.J                             155844
72 *        .7FC001072.J                             155846
73 *        .7FC001072.J                             155848
81 *        .7FC001072.J                             155850
82 *        .7FC001072.J                             155852
83 *        .7FC001072.J                             155854
91 *        .7FC001072.J                             155856
A1 *        .7FC001072.J                             155858
A2 *        .7FC001072.J                             155900
B1 *        .7FC001072.J                             155902
B2 *        .7FC001072.J                             155904
C1 *        .7FC001072.J                             155906
C2 *        .7FC001072.J                             155908
D1 *        .7FC001072.J                             155910
D2 *        .7FC001072.J                             155912
E1 *        .7FC001072.J                             155914
E2 *        .7FC001072.J                             155916
F1 *        .7FC001072.J                             155918
F2 *        .7FC001072.J                             155920
G1 *        .7FC001072.J                             155922
G2 *        .7FC001072.J                             155924
H1 *        .7FC001072.J                             155926
H2 *        .7FC001072.J                             155928
I1 *        .7FC001072.J                             155930
I2 *        .7FC001072.J                             155932
J1 *        .7FC001072.J                             155934
J2 *        .7FC001072.J                             155936
K1 *        .7FC001072.J                             155938
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5.3 Appendix "C" (Cont.)

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K2 *       .7FC001072.J                                155940
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M1 *       .7FC001072.J                                155944
N1 *       .7FC001072.J                                155946
O1 *       .7FC001072.J                                155948
P1 *       .7FC001072.J                                155950
A1 *P45001.F01B0101H180V000A080.K                      160000
A1 *       .6NSLK701 0101.J                            160002
A1 *       .6NSLK702 0102.J                            160003
A1 *       .6NSLK703 0103.J                            160005
A1 *       .6NSLK704 0104.J                            160007
A1 *       .6NSLK705 0105.J                            160008
A1 *       .6NSLK706 0106.J                            160010
A1 *       .6NSLK707 0107.J                            160011
A1 *       .F01D6.J                                    160012
31 *P21006.F02B1101H225V000A090.K                      160014
31 *       .6JSK111 1101.J                             160016
31 *       .6JSK112 1102.J                             160017
31 *       .6JSK113 1103.J                             160019
31 *       .6JSK114 1104.J                             160020
31 *       .6JSK115 1105.J                             160022
31 *       .6JSK116 1106.J                             160023
31 *       .6JSK117 1107.J                             160025
31 *       .F02D6.J                                    160026
21 *P45015.F03B0201H090V000A040.K                      160029
21 *       .6BDT21 0201.J                              160030
21 *       .6BDT22 0202.J                              160032
21 *       .6BDT23 0203.J                              160033
21 *       .6BDT24 0204.J                              160035
21 *       .6BDT25 0205.J                              160036
21 *       .6BDT26 0206.J                              160038
21 *       .6BDT27 0207.J                              160039
21 *       .F03D6.J                                    160040
21 *P45022.F04B1201H225V000A090.K                      160041
21 *       .6CMK121 1201.J                             160043
21 *       .6CMK122 1202.J                             160044
21 *       .6CMK123 1203.J                             160046
21 *       .6CMK124 1204.J                             160047
21 *       .6CMK125 1205.J                             160049
21 *       .6CMK126 1206.J                             160050
21 *       .6CMK127 1207.J                             160052
21 *       .F04D6.J                                    160053
21 *P45030.F05B0301H160V000A050.K                      160054
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A1 *       .6NSLK709 0302.J                            160058
A1 *       .6NSLK710 0303.J                            160059
A1 *       .6NSLK711 0304.J                            160100
A1 *       .6NSLK712 0305.J                            160102
A1 *       .6NSLK713 0306.J                            160103
A1 *       .6NSLK714 0307.J                            160105
A1 *       .F05D6.J                                    160106
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5.3 Appendix "C" (Cont.)

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31 *       .6LES134 1304.J                           160114
31 *       .6LES135 1305.J                           160115
31 *       .6LES136 1306.J                           160116
31 *       .6LES137 1307.J                           160118
31 *       .F06D6.J                                  160119
81 *P45043.F07B0401H270V000A040.K                    160121
81 *       .6UAL41 0401.J                            160122
81 *       .6UAL42 0402.J                            160123
81 *       .6UAL43 0403.J                            160125
81 *       .6UAL44 0404.J                            160126
81 *       .6UAL45 0405.J                            160128
81 *       .6UAL46 0406.J                            160129
81 *       .F07D5.J                                  160131
51 *P45051.F08B1401H315V000A090.K                    160135
51 *       .6ASP141 1401.J                           160137
51 *       .6ASP142 1402.J                           160138
51 *       .6ASP143 1403.J                           160140
51 *       .6ASP144 1404.J                           160141
51 *       .6ASP145 1405.J                           160143
51 *       .6ASP146 1406.J                           160144
51 *       .6ASP147 1407.J                           160146
51 *       .F08D6.J                                  160147
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A1 *       .6NSLK726 0505.J                          160156
A1 *       .6NSLK727 0506.J                          160157
A1 *       .6NSLK728 0507.J                          160159
11 *       .F09D6.J                                  160201
41 *P45066.F10B1501H045V000A090.K                    160202
41 *       .6SST151 1501.J                           160204
41 *       .6SST152 1502.J                           160205
41 *       .6SST153 1503.J                           160207
41 *       .6SST154 1504.J                           160208
41 *       .6SST155 1505.J                           160209
41 *       .6SST156 1506.J                           160211
41 *       .6SST157 1507.J                           160212
41 *       .F10D6.J                                  160214
81 *P45072.F11B0601H090V000A080.K                    160215
81 *       .6LUF61 0601.J                            160217
81 *       .6LUF62 0602.J                            160218
81 *       .6LUF63 0603.J                            160219
81 *       .6LUF64 0604.J                            160221
81 *       .6LUF65 0605.J                            160222
81 *       .6LUF66 0606.J                            160224
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5.3 Appendix "C" (Cont.)

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51 *       .6JJR162 1602.J                         160231
51 *       .6JJR163 1603.J                         160232
51 *       .6JJR164 1604.J                         160234
51 *       .6JJR165 1605.J                         160235
51 *       .6JJR166 1606.J                         160237
51 *       .6JJR167 1607.J                         160238
51 *       .F12D6.J                                160240
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A1 *       .6NSLK732 0704.J                        160247
A1 *       .6NSLK733 0705.J                        160249
A1 *       .6NSLK734 0706.J                        160250
A1 *       .6NSLK735 0707.J                        160251
A1 *       .F13D6.J                                160253
31 *P45091.F14B1701H135V000A090.K                  160254
31 *       .6JCK171 1701.J                         160255
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31 *       .6JCK174 1704.J                         160300
31 *       .6JCK175 1705.J                         160301
31 *       .6JCK176 1706.J                         160303
31 *       .6JCK177 1707.J                         160304
31 *       .F14D6.J                                160306
71 *P45102.F15B1001H090V000A080.K                  160307
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71 *       .6JEP102 1002.J                         160310
71 *       .6JEP103 1003.J                         160312
71 *       .6JEP104 1004.J                         160313
71 *       .6JEP105 1005.J                         160315
71 *       .6JEP106 1006.J                         160316
71 *       .6JEP107 1007.J                         160318
71 *       .F15D6.J                                160319
62 *P45111.F16B2001H135V000A100.K                  160321
62 *       .6RST201 2001.J                         160322
62 *       .6RST202 2002.J                         160324
62 *       .6RST203 2003.J                         160325
62 *       .6RST204 2004.J                         160326
62 *       .6RST205 2005.J                         160328
62 *       .6RST206 2006.J                         160329
62 *       .6RST207 2007.J                         160331
62 *       .F16D6.J                                160332
A1 *P45115.F17B3101H180V000A090.K                  160334
A1 *       .6NSLK736 3101.J                        160335
A1 *       .6NSLK737 3102.J                        160337
A1 *       .6NSLK738 3103.J                        160338
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5.3 Appendix "C" (Cont.)

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A1 *       .6NSLK741 3106.J                          160343
A1 *       .6NSLK742 3107.J                          160344
A1 *       .F17D6.J                                  160346
41 *P45123.F18B4101H225V000A090.K                    160347
41 *       .6JSK411 4101.J                           160348
41 *       .6JSK412 4102.J                           160350
41 *       .6JSK413 4103.J                           160351
41 *       .6JSK414 4104.J                           160353
41 *       .6JSK415 4105.J                           160354
41 *       .6JSK416 4106.J                           160355
41 *       .6JSK417 4107.J                           160357
41 *       .F18D6.J                                  160358
81 *P45130.F19B3201H090V000A040.K                    160400
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81 *       .6BDT322 3202.J                           160403
81 *       .6BDT323 3203.J                           160404
81 *       .6BDT324 3204.J                           160406
81 *       .6BDT325 3205.J                           160407
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81 *       .6BDT327 3207.J                           160409
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61 *       .6CMK426 4206.J                           160421
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11 *       .6NSLK716 3302.J                          160430
11 *       .6NSLK717 3303.J                          160432
11 *       .6NSLK718 3304.J                          160433
11 *       .6NSLK717 3303.J                          160434
11 *       .6NSLK719 3305.J                          160435
11 *       .6NSLK720 3306.J                          160436
11 *       .6NSLK721 3307.J                          160438
11 *       .F21D6.J                                  160439
41 *P45151.F22B4301H315V000A090.K                    160441
41 *       .6LES431 4301.J                           160442
41 *       .6LES432 4302.J                           160444
41 *       .6LES433 4303.J                           160445
41 *       .6LES434 4304.J                           160447
41 *       .6LES435 4305.J                           160448
41 *       .6LES436 4306.J                           160450
41 *       .6LES437 4307.J                           160451
41 *       .F22D6.J                                  160452
81 *P45159.F23B3401H270V000A060.K                    160454
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5.3 Appendix "C" (Cont.)

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81 *       .6UAL343 3403.J                          160458
81 *       .6UAL344 3404.J                          160500
81 *       .6UAL345 3405.J                          160501
81 *       .6UAL346 3406.J                          160503
81 *       .6UAL347 3407.J                          160504
81 *       .F23D6.J                                 160506
61 *P45166.F24B4401H315V000A090.K                   160507
61 *       .6ASP441 4401.J                          160509
61 *       .6ASP442 4402.J                          160510
61 *       .6ASP443 4403.J                          160512
61 *       .6ASP444 4404.J                          160513
61 *       .6ASP445 4405.J                          160515
61 *       .6ASP446 4406.J                          160516
61 *       .6ASP447 4407.J                          160518
61 *       .F24D6.J                                 160519
12 *P45174.F25B3501H180V000A070.K                   160521
11 *       .6USA351 3501.J                          160522
11 *       .6USA352 3502.J                          160524
11 *       .6USA353 3503.J                          160525
11 *       .6USA354 3504.J                          160526
11 *       .6USA355 3505.J                          160527
11 *       .6USA356 3506.J                          160529
11 *       .6USA357 3507.J                          160530
11 *       .F25D6.J                                 160532
41 *P45180.F26B4501H045V000A090.K                   160533
41 *       .6SST451 4501.J                          160535
41 *       .6SST452 4502.J                          160536
41 *       .6SST453 4503.J                          160538
41 *       .6SST454 4504.J                          160539
41 *       .6SST455 4505.J                          160541
41 *       .6SST456 4506.J                          160542
41 *       .6SST457 4507.J                          160544
41 *       .F26D6.J                                 160545
82 *P45187.F27B3601H090V000A080.K                   160547
82 *       .6LUF361 3601.J                          160548
82 *       .6LUF362 3602.J                          160550
82 *       .6LUF363 3603.J                          160551
82 *       .6LUF364 3604.J                          160553
82 *       .6LUF365 3605.J                          160554
82 *       .6LUF366 3606.J                          160556
82 *       .6LUF367 3607.J                          160557
82 *       .F27D6.J                                 160559
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11 *       .6NSLK765 4601.J                         160602
11 *       .6NSLK766 4602.J                         160604
11 *       .6NSLK767 4603.J                         160605
11 *       .6NSLK768 4604.J                         160607
11 *       .6NSLK769 4605.J                         160608
11 *       .6NSLK770 4606.J                         160610
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5.3 Appendix "C" (Cont.)

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21 *       .6JJH372 3702.J                           160617
21 *       .6JJH373 3703.J                           160619
21 *       .6JJH374 3704.J                           160620
21 *       .6JJH375 3705.J                           160621
21 *       .6JJH376 3706.J                           160623
21 *       .6JJH377 3707.J                           160624
21 *       .F29D6.J                                  160625
71 *P45210.F30B4701H135V000A090.K                    160627
71 *       .6JCK471 4701.J                           160628
71 *       .6JCK472 4702.J                           160630
71 *       .6JCK473 4703.J                           160631
71 *       .6JCK474 4704.J                           160633
71 *       .6JCK475 4705.J                           160634
71 *       .6JCK476 4706.J                           160636
71 *       .6JCK477 4707.J                           160637
71 *       .F30D6.J                                  160639
71 *P45216.F31B3011H090V000A080.K                    160640
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71 *       .6JEP312 3012.J                           160643
71 *       .6JEP313 3013.J                           160645
71 *       .6JEP314 3014.J                           160646
71 *       .6JEP315 3015.J                           160648
71 *       .6JEP316 3016.J                           160649
71 *       .6JEP317 3017.J                           160651
71 *       .F31D6.J                                  160652
71 *P45223.F32B4011H135V000A090.K                    160654
71 *       .6RST411 4011.J                           160655
71 *       .6RST412 4012.J                           160657
71 *       .6RST413 4013.J                           160658
71 *       .6RST414 4014.J                           160659
71 *       .6RST415 4015.J                           160700
71 *       .6RST416 4016.J                           160702
71 *       .F32D5.J                                  160703
11 *P27223.F61B7403H043V000A110.K                    160704
11 *       .6NSLK774 7403.J                          160706
11 *P45231.F33B5101H052V000A080.K                    160707
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11 *       .6NSLK744 5102.J                          160710
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11 *       .6NSLK746 5104.J                          160713
11 *       .6NSLK747 5105.J                          160715
11 *       .6NSLK748 5106.J                          160716
11 *       .6NSLK749 5107.J                          160718
11 *       .F33D6.J                                  160719
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41 *       .6JSK612 6102.J                           160724
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5.3 Appendix "C" (Cont.)

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41 *        .6JSK615 6105.J                          160728
41 *        .6JSK616 6106.J                          160730
41 *        .6JSK617 6107.J                          160731
41 *        .F34D6.J                                 160733
81 *P45246.F35B5201H090V000A040.K                    160734
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81 *        .6SWA522 5202.J                          160737
81 *        .6SWA523 5203.J                          160739
81 *        .6SWA524 5204.J                          160740
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81 *        .6SWA526 5206.J                          160743
81 *        .6SWA527 5207.J                          160745
81 *        .F35D6.J                                 160746
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11 *P45259.F37B5301H360V000A050.K                    160801
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11 *        .6NSLK752 5302.J                         160804
11 *        .6NSLK753 5303.J                         160806
11 *        .6NSLK754 5304.J                         160807
11 *        .6NSLK755 5305.J                         160809
11 *        .6NSLK756 5306.J                         160811
11 *        .6NSLK757 5307.J                         160812
11 *        .F37D6.J                                 160814
41 *P45267.F38B6301H315V000A090.K                    160815
41 *        .6LES631 6301.J                          160817
41 *        .6LES632 6302.J                          160818
41 *        .6LES633 6303.J                          160820
41 *        .6LES634 6304.J                          160821
41 *        .6LES635 6305.J                          160823
41 *        .6LES636 6306.J                          160824
41 *        .6LES637 6307.J                          160826
41 *        .F38D6.J                                 160827
81 *P45274.F39B5401H270V000A060.K                    160829
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81 *        .6UPS545 5405.J                          160836
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81 *        .6UPS547 5407.J                          160839
81 *        .F39D6.J                                 160841
61 *P21107.F40B6401H315V000A090.K                    160842
61 *        .6ASP641 6401.J                          160844
61 *        .6ASP642 6402.J                          160845
61 *        .6ASP643 6403.J                          160847
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5.3 Appendix "C" (Cont.)

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11 *       .6USA554 5504.J                          160902
11 *       .6USA555 5505.J                          160904
11 *       .6USA556 5506.J                          160905
11 *       .6USA557 5507.J                          160907
12 *       .F41D6.J                                 160908
41 *P45295.F42B6501H045V000A090.K                   160910
41 *       .6SST651 6501.J                          160911
41 *       .6SST652 6502.J                          160913
41 *       .6SST653 6503.J                          160914
41 *       .6SST654 6504.J                          160916
41 *       .6SST655 6505.J                          160917
41 *       .6SST656 6506.J                          160919
41 *       .6SST657 6507.J                          160920
41 *       .F42D6.J                                 160922
82 *P45303.F43B5601H090V000A080.K                   160923
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82 *       .6LUF562 5602.J                          160926
82 *       .6LUF563 5603.J                          160928
82 *       .6LUF564 5604.J                          160929
82 *       .6LUF565 5605.J                          160931
82 *       .6LUF566 5606.J                          160932
82 *       .6LUF567 5607.J                          160934
82 *       .F43D6.J                                 160935
62 *P45310.F44B6601H045V000A090.K                   160937
62 *       .6JJR661 6601.J                          160938
62 *       .6JJR662 6602.J                          160940
62 *       .6JJR663 6603.J                          160941
62 *       .6JJR664 6604.J                          160943
62 *       .6JJR665 6605.J                          160944
62 *       .6JJR666 6606.J                          160946
62 *       .6JJR667 6607.J                          160947
62 *       .F44D6.J                                 160949
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11 *       .6JJH574 5704.J                          160956
11 *       .6JJH575 5705.J                          160958
11 *       .6JJH575 5706.J                          160959
11 *       .F45D5.J                                 161001
41 *P27318.F60B7404H138V000A120.K                   161002
11 *       .6NSLK775 7404.J                         161004
31 *P45324.F46B6701H135V000A090.K                   161005
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31 *       .6JCK672 6702.J                          161008
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5.3 Appendix "C" (Cont.)

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31 *       .6JCK677 6707.J                          161016
31 *       .F46D6.J                                 161017
82 *P45331.F47B5011H090V000A080.K                   161019
82 *       .6JEP511 5011.J                          161020
82 *       .6JEP512 5012.J                          161022
82 *       .6JEP513 5013.J                          161023
82 *       .6JEP514 5014.J                          161025
82 *       .6JEP515 5015.J                          161026
82 *       .6JEP516 5016.J                          161028
82 *       .6JEP517 5017.J                          161029
82 *       .F47D6.J                                 161031
62 *P45339.F48B6011H135V000A090.K                   161032
62 *       .6RST611 6011.J                          161034
62 *       .6RST612 6012.J                          161035
62 *       .6RST613 6013.J                          161037
62 *       .6RST614 6014.J                          161039
62 *       .6RST615 6015.J                          161041
62 *       .6RST616 6016.J                          161042
62 *       .6RST617 6017.J                          161043
62 *       .F48D6.J                                 161044
11 *P45010.F49B5021H090V000A080.K                   161046
11 *       .6NSLK758 5021.J                         161047
11 *       .6NSLK759 5022.J                         161049
11 *       .6NSLK760 5023.J                         161050
11 *       .6NSLK761 5024.J                         161052
11 *       .6NSLK762 5025.J                         161053
11 *       .6NSLK763 5026.J                         161055
11 *       .6NSLK764 5027.J                         161056
11 *       .F49D6.J                                 161100
82 *P45354.F50B6021H135V000A090.K                   161102
82 *       .6RAT621 6021.J                          161104
82 *       .F50D4.J                                 161116
11 *       .F63V130F.J                              161200
11 *       .F62V130F.J                              161202
11 *       .F61V180F.J                              161204
11 *       .F60V180F.J                              161206
82 *       .6RAT622 6022.J                          161208
82 *       .6RAT623 6023.J                          161210
A1 *       .7O.J                                    161215
31 *       .7O.J                                    161220
21 *       .7O.J                                    161225
81 *       .7O.J                                    161230
51 *       .7O.J                                    161235
41 *       .7O.J                                    161240
71 *       .7O.J                                    161245
61 *       .7O.J                                    161250
11 *       .7O.J                                    161255
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5.3 Appendix "C" (Cont.)

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A1 *      .7O.J                                    161300
31 *      .7O.J                                    161305
21 *      .7O.J                                    161310
81 *      .7O.J                                    161315
51 *      .7O.J                                    161320
41 *      .7O.J                                    161325
71 *      .7O.J                                    161330
61 *      .7O.J                                    161335
11 *      .7O.J                                    161340
A1 *      .7L3.J                                   161342
31 *      .7L3.J                                   161344
21 *      .7L3.J                                   161346
81 *      .7L3.J                                   161348
51 *      .7L3.J                                   161350
41 *      .7L3.J                                   161352
71 *      .7L3.J                                   161354
61 *      .7L3.J                                   161356
11 *      .7L3.J                                   161358
A1 *      .F63HR1900.J                             161400
A1 *      .F62HL3401.J                             161402
A1 *      .F61HR0302.J                             161404
A1 *      .F60HL1583.J                             161406
82 *      .6RAT624 6024.J                          161408
82 *      .6RAT625 6025.J                          161410
82 *      .F50D5.J                                 161416
11 *      .F60HL1383.J                             161426
11 *      .F63HR2230.J                             161430
11 *      .F62HL3181.J                             161432
11 *      .F61HR0432.J                             161434
82 *      .F51D6.J                                 161440
82 *      .6RAT626 6026.J                          161512
82 *      .6RAT627 6027.J                          161514
82 *      .F50D6.J                                 161516
A1 *      .7O.J                                    161517
31 *      .7O.J                                    161520
21 *      .7O.J                                    161525
81 *      .7O.J                                    161530
51 *      .7O.J                                    161535
41 *      .7O.J                                    161540
71 *      .7O.J                                    161545
61 *      .7O.J                                    161550
11 *      .7O.J                                    161555
A1 *      .7O.J                                    161600
31 *      .7O.J                                    161605
21 *      .7O.J                                    161610
81 *      .7O.J                                    161615
51 *      .7O.J                                    161620
41 *      .7O.J                                    161625
71 *      .7O.J                                    161630
61 *      .7O.J                                    161635
11 *      .7O.J                                    161640
```

5.3 Appendix "C" (Cont.)

```
A1 *      .7L3.J                                    161642
31 *      .7L3.J                                    161644
21 *      .7L3.J                                    161646
81 *      .7L3.J                                    161648
51 *      .7L3.J                                    161650
41 *      .7L3.J                                    161652
71 *      .7L3.J                                    161654
61 *      .7L3.J                                    161656
11 *      .7L3.J                                    161658
A1 *      .7L1.J                                    161700
31 *      .7L1.J                                    161702
21 *      .7L1.J                                    161704
81 *      .7L1.J                                    161706
51 *      .7L1.J                                    161708
41 *      .7L1.J                                    161710
71 *      .7L1.J                                    161712
61 *      .7L1.J                                    161714
11 *      .7L1.J                                    161716
A1 *      .7L7.J                                    161718
31 *      .7L7.J                                    161720
21 *      .7L7.J                                    161722
81 *      .7L7.J                                    161724
51 *      .7L7.J                                    161726
41 *      .7L7.J                                    161728
71 *      .7L7.J                                    161730
61 *      .7L7.J                                    161732
11 *      .7L7.J                                    161734
A1 *      .7L3.J                                    161736
31 *      .7L3.J                                    161738
21 *      .7L3.J                                    161740
81 *      .7L3.J                                    161742
51 *      .7L3.J                                    161744
41 *      .7L3.J                                    161746
71 *      .7L3.J                                    161748
61 *      .7L3.J                                    161750
11 *      .7L3.J                                    161752
A1 *      .7L1.J                                    161800
31 *      .7L1.J                                    161802
21 *      .7L1.J                                    161804
81 *      .7L1.J                                    161806
51 *      .7L1.J                                    161808
41 *      .7L1.J                                    161810
71 *      .7L1.J                                    161812
61 *      .7L1.J                                    161814
11 *      .7L1.J                                    161816
A1 *      .7L7.J                                    161818
31 *      .7L7.J                                    161820
21 *      .7L7.J                                    161822
81 *      .7L7.J                                    161824
51 *      .7L7.J                                    161826
41 *      .7L7.J                                    161828
```

5.3 Appendix "C" (Cont.)

```
11 *      .7L7.J                                    161834
71 *      .7L7.J                                    161830
61 *      .7L7.J                                    161832
A1 *      .7L3.J                                    161836
31 *      .7L3.J                                    161838
21 *      .7L3.J                                    161840
81 *      .7L3.J                                    161842
51 *      .7L3.J                                    161844
41 *      .7L3.J                                    161846
71 *      .7L3.J                                    161848
61 *      .7L3.J                                    161850
11 *      .7L3.J                                    161852
11 *      .F63HR1903.J                              161900
11 *      .F62HL3402.J                              161988
11 *      .F61HR0301.J                              161904
11 *      .F60HL1580.J                              161906
11 *      .F63HR2233.J                              161936
11 *      .F60HL1380.J                              161930
11 *      .F62HL3182.J                              161932
11 *      .F61HR0431.J                              161934
A1 *      .7O.J                                     162017
31 *      .7O.J                                     162020
21 *      .7O.J                                     162025
81 *      .7O.J                                     162030
51 *      .7O.J                                     162035
41 *      .7O.J                                     162040
71 *      .7O.J                                     162045
61 *      .7O.J                                     162050
11 *      .7O.J                                     162055
A1 *      .7O.J                                     162100
31 *      .7O.J                                     162105
21 *      .7O.J                                     162110
81 *      .7O.J                                     162115
51 *      .7O.J                                     162120
41 *      .7O.J                                     162125
71 *      .7O.J                                     162130
61 *      .7O.J                                     162135
11 *      .7O.J                                     162140
A1 *      .7L3.J                                    162142
31 *      .7L3.J                                    162144
21 *      .7L3.J                                    162146
81 *      .7L3.J                                    162148
51 *      .7L3.J                                    162150
41 *      .7L3.J                                    162152
71 *      .7L3.J                                    162154
61 *      .7L3.J                                    162156
11 *      .7L3.J                                    162158
A1 *      .7L1.J                                    162200
31 *      .7L1.J                                    162202
21 *      .7L1.J                                    162204
81 *      .7L1.J                                    162206
```

5.3 Appendix "C" (Cont.)

```
51 *      .7L1.J                                    162208
41 *      .7L1.J                                    162210
71 *      .7L1.J                                    162212
61 *      .7L1.J                                    162214
11 *      .7L1.J                                    162216
A1 *      .7L7.J                                    162218
31 *      .7L7.J                                    162220
21 *      .7L7.J                                    162222
81 *      .7L7.J                                    162224
51 *      .7L7.J                                    162226
41 *      .7L7.J                                    162228
71 *      .7L7.J                                    162230
61 *      .7L7.J                                    162232
11 *      .7L7.J                                    162234
A1 *      .7L3.J                                    162236
31 *      .7L3.J                                    162238
21 *      .7L3.J                                    162240
81 *      .7L3.J                                    162242
51 *      .7L3.J                                    162244
41 *      .7L3.J                                    162246
71 *      .7L3.J                                    162248
61 *      .7L3.J                                    162250
11 *      .7L3.J                                    162252
A1 *      .7L1.J                                    162300
31 *      .7L1.J                                    162302
21 *      .7L1.J                                    162304
81 *      .7L1.J                                    162306
51 *      .7L1.J                                    162308
41 *      .7L1.J                                    162310
71 *      .7L1.J                                    162312
61 *      .7L1.J                                    162314
11 *      .7L1.J                                    162316
A1 *      .7L7.J                                    162318
31 *      .7L7.J                                    162320
21 *      .7L7.J                                    162322
81 *      .7L7.J                                    162324
51 *      .7L7.J                                    162326
41 *      .7L7.J                                    162328
71 *      .7L7.J                                    162330
61 *      .7L7.J                                    162332
11 *      .7L7.J                                    162334
A1 *      .7L3.J                                    162336
31 *      .7L3.J                                    162338
21 *      .7L3.J                                    162340
81 *      .7L3.J                                    162342
51 *      .7L3.J                                    162344
41 *      .7L3.J                                    162346
71 *      .7L3.J                                    162348
61 *      .7L3.J                                    162350
11 *      .7L3.J                                    162352
11 *      .F01.J                                    162355
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5.3 Appendix "C" (Cont.)

```
31 *        .F02.J                                162358
21 *        .F03.J                                162400
21 *        .F04.J                                162404
01 *        .F05.J                                162406
31 *        .F06.J                                162408
81 *        .F07.J                                162410
61 *        .F08.J                                162412
A1 *        .F09.J                                162414
41 *        .F10.J                                162416
11 *        .F11.J                                162418
31 *        .F12.J                                162420
21 *        .F13.J                                162422
21 *        .F14.J                                162424
01 *        .F15.J                                162426
31 *        .F16.J                                162428
81 *        .F17.J                                162430
61 *        .F18.J                                162432
A1 *        .F19.J                                162434
41 *        .F20.J                                162436
A1 *        .4NSLK701.J                           162502
A1 *        .4NSLK702.J                           162503
A1 *        .4NSLK703.J                           162505
A1 *        .4NSLK704.J                           162507
A1 *        .4NSLK705.J                           162508
A1 *        .4NSLK706.J                           162510
A1 *        .4NSLK707.J                           162511
31 *        .4JSK111.J                            162516
31 *        .4JSK112.J                            162517
31 *        .4JSK113.J                            162519
31 *        .4JSK114.J                            162520
31 *        .4JSK115.J                            162522
31 *        .4JSK116.J                            162523
31 *        .4JSK117.J                            162525
21 *        .4BDT21.J                             162530
21 *        .4BDT22.J                             162532
21 *        .4BDT23.J                             162533
21 *        .4BDT24.J                             162535
21 *        .4BDT25.J                             162536
21 *        .4BDT26.J                             162538
21 *        .4BDT27.J                             162539
21 *        .41201.J                              162543
21 *        .41202.J                              162544
21 *        .41203.J                              162546
21 *        .41204.J                              162547
21 *        .41205.J                              162549
21 *        .41206.J                              162550
21 *        .41207.J                              162552
A1 *        .40301.J                              162556
A1 *        .40302.J                              162558
A1 *        .40303.J                              162559
A1 *        .40304.J                              162600
```

5.3 Appendix "C" (Cont.)

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A1 *      .40305.J                    162602
A1 *      .40306.J                    162603
A1 *      .40307.J                    162604
31 *      .41301.J                    162609
31 *      .41302.J                    162611
31 *      .41303.J                    162612
31 *      .41304.J                    162614
31 *      .41305.J                    162615
31 *      .41306.J                    162616
31 *      .41307.J                    162618
81 *      .40401.J                    162622
81 *      .40402.J                    162623
81 *      .40403.J                    162625
81 *      .40404.J                    162626
81 *      .40405.J                    162628
81 *      .40406.J                    162629
O1 *      .4NSLK772.J                 162634
61 *      .4ASP141.J                  162637
61 *      .4ASP142.J                  162638
61 *      .4ASP143.J                  162640
61 *      .4ASP144.J                  162641
61 *      .4ASP145.J                  162643
61 *      .4ASP146.J                  162644
61 *      .4ASP147.J                  162646
A1 *      .4NSLK722.J                 162651
A1 *      .4NSLK723.J                 162652
A1 *      .4NSLK724.J                 162654
A1 *      .4NSLK725.J                 162655
A1 *      .4NSLK726.J                 162656
A1 *      .4NSLK727.J                 162657
A1 *      .4NSLK728.J                 162659
41 *      .4SST151.J                  162704
41 *      .4SST152.J                  162705
41 *      .4SST153.J                  162707
41 *      .4SST154.J                  162708
41 *      .4SST155.J                  162709
41 *      .4SST156.J                  162711
41 *      .4SST157.J                  162712
81 *      .40601.J                    162717
81 *      .40602.J                    162718
81 *      .40603.J                    162719
81 *      .40604.J                    162721
81 *      .40605.J                    162722
81 *      .40606.J                    162724
81 *      .40607.J                    162725
61 *      .41601.J                    162729
61 *      .41602.J                    162731
61 *      .41603.J                    162732
61 *      .41604.J                    162734
61 *      .41605.J                    162735
61 *      .41606.J                    162737
```

5.3 Appendix "C" (Cont.)

61 *	.41607.J	162738
A1 *	.4NSLK729.J	162743
A1 *	.4NSLK730.J	162744
A1 *	.4NSLK731.J	162746
A1 *	.4NSLK732.J	162747
A1 *	.4NSLK733.J	162749
A1 *	.4NSLK734.J	162750
A1 *	.4NSLK735.J	162751
31 *	.4JCK171.J	162755
31 *	.4JCK172.J	162757
31 *	.4JCK173.J	162758
31 *	.4JCK174.J	162800
31 *	.4JCK175.J	162801
31 *	.4JCK176.J	162803
31 *	.4JCK177.J	162804
11 *	.F21.J	162807
71 *	.4JEP101.J	162809
71 *	.4JEP102.J	162810
71 *	.4JEP103.J	162812
71 *	.4JEP104.J	162813
71 *	.4JEP105.J	162815
71 *	.4JEP106.J	162816
71 *	.4JEP107.J	162818
62 *	.4RST201.J	162822
62 *	.4RST202.J	162824
62 *	.4RST203.J	162825
62 *	.4RST204.J	162826
62 *	.4RST205.J	162828
62 *	.4RST206.J	162829
62 *	.4RST207.J	162831
41 *	.F22.J	162833
A1 *	.4NSLK736.J	162835
A1 *	.4NSLK737.J	162837
A1 *	.4NSLK738.J	162838
A1 *	.4NSLK739.J	162840
A1 *	.4NSLK740.J	162841
A1 *	.4NSLK741.J	162843
A1 *	.4NSLK742.J	162844
81 *	.F23.J	162846
41 *	.44101.J	162848
41 *	.44102.J	162850
41 *	.44103.J	162851
41 *	.44104.J	162853
41 *	.44105.J	162854
41 *	.44106.J	162855
41 *	.44107.J	162857
61 *	.F24.J	162859
81 *	.4BDT321.J	162901
81 *	.4BDT322.J	162903
81 *	.4BDT323.J	162904
81 *	.4BDT324.J	162906

5.3 Appendix "C" (Cont.)

81	*	.4BDT325.J	162907
81	*	.4BDT326.J	162908
81	*	.4BDT327.J	162909
12	*	.F25.J	162911
61	*	.4CMK421.J	162914
61	*	.4CMK422.J	162915
61	*	.4CMK423.J	162917
61	*	.4CMK424.J	162918
61	*	.4CMK425.J	162920
61	*	.4CMK426.J	162921
41	*	.F26.J	162923
11	*	.4NSLK773.J	162926
11	*	.4NSLK715.J	162929
11	*	.4NSLK716.J	162930
11	*	.4NSLK717.J	162932
11	*	.4NSLK718.J	162933
11	*	.4NSLK719.J	162935
11	*	.4NSLK720.J	162936
11	*	.4NSLK721.J	162938
82	*	.F27.J	162940
41	*	.44301.J	162942
41	*	.44302.J	162944
41	*	.44303.J	162945
41	*	.44304.J	162947
41	*	.44305.J	162948
41	*	.44306.J	162950
41	*	.44307.J	162951
62	*	.F28.J	162953
81	*	.43401.J	162955
81	*	.43402.J	162957
81	*	.43403.J	162958
81	*	.43404.J	163000
81	*	.43405.J	163001
81	*	.43406.J	163003
81	*	.43407.J	163004
71	*	.F29.J	163006
61	*	.4ASP441.J	163009
61	*	.4ASP442.J	163010
61	*	.4ASP443.J	163012
61	*	.4ASP444.J	163013
61	*	.4ASP445.J	163015
61	*	.4ASP446.J	163016
61	*	.4ASP447.J	163018
71	*	.F30.J	163020
12	*	.4USA351.J	163022
12	*	.4USA352.J	163024
12	*	.4USA353.J	163025
12	*	.4USA354.J	163026
12	*	.4USA355.J	163027
12	*	.4USA356.J	163029
12	*	.4USA357.J	163030

5.3 Appendix "C" (Cont.)

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71 *      .F31.J                                163032
41 *      .4SST451.J                            163035
41 *      .4SST452.J                            163036
41 *      .4SST453.J                            163038
41 *      .4SST454.J                            163039
41 *      .4SST455.J                            163041
41 *      .4SST456.J                            163042
41 *      .4SST457.J                            163044
71 *      .F32.J                                163046
82 *      .43601.J                              163048
82 *      .43602.J                              163050
82 *      .43603.J                              163051
82 *      .43604.J                              163053
82 *      .43605.J                              163054
82 *      .43606.J                              163056
82 *      .43607.J                              163057
11 *      .F33.J                                163059
11 *      .44601.J                              163102
11 *      .44602.J                              163104
11 *      .44603.J                              163105
11 *      .44604.J                              163107
11 *      .44605.J                              163108
11 *      .44606.J                              163110
11 *      .44607.J                              163111
41 *      .F34.J                                163113
21 *      .43701.J                              163116
21 *      .43702.J                              163117
21 *      .43703.J                              163119
21 *      .43704.J                              163120
21 *      .43705.J                              163121
21 *      .43706.J                              163123
21 *      .43707.J                              163124
81 *      .F35.J                                163126
71 *      .4JCK471.J                            163128
71 *      .4JCK472.J                            163130
71 *      .4JCK473.J                            163131
71 *      .4JCK474.J                            163133
71 *      .4JCK475.J                            163134
71 *      .4JCK476.J                            163136
71 *      .4JCK477.J                            163137
61 *      .F36.J                                163139
71 *      .4JEP311.J                            163142
71 *      .4JEP312.J                            163143
71 *      .4JEP313.J                            163145
71 *      .4JEP314.J                            163146
71 *      .4JEP315.J                            163148
71 *      .4JEP316.J                            163149
71 *      .4JEP317.J                            163151
11 *      .F37.J                                163153
71 *      .4RST411.J                            163155
71 *      .4RST412.J                            163157
```

5.3 Appendix "C" (Cont.)

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71 *      .4RST413.J                    163158
71 *      .4RST414.J                    163159
71 *      .4RST415.J                    163200
71 *      .4RST416.J                    163202
41 *      .F38.J                        163204
11 *      .4NSLK774.J                   163206
11 *      .4NSLK775.J                   163208
11 *      .4NSLK743.J                   163209
11 *      .4NSLK744.J                   163210
11 *      .4NSLK745.J                   163212
11 *      .4NSLK746.J                   163213
11 *      .4NSLK747.J                   163215
11 *      .4NSLK748.J                   163216
11 *      .4NSLK749.J                   163218
81 *      .F39.J                        163220
41 *      .4JSK611.J                    163222
41 *      .4JSK612.J                    163224
41 *      .4JSK613.J                    163225
41 *      .4JSK614.J                    163227
41 *      .4JSK615.J                    163228
41 *      .4JSK616.J                    163230
41 *      .4JSK617.J                    163231
61 *      .F40.J                        163233
81 *      .45201.J                      163236
81 *      .45202.J                      163237
81 *      .45203.J                      163239
81 *      .45204.J                      163240
81 *      .45205.J                      163242
81 *      .45206.J                      163243
81 *      .45207.J                      163245
12 *      .F41.J                        163247
61 *      .46201.J                      163249
61 *      .46202.J                      163251
61 *      .46203.J                      163252
61 *      .46204.J                      163254
61 *      .46205.J                      163255
61 *      .46206.J                      163257
61 *      .46207.J                      163258
41 *      .F42.J                        163300
11 *      .45301.J                      163303
11 *      .45302.J                      163304
11 *      .45303.J                      163306
11 *      .45304.J                      163307
11 *      .45305.J                      163309
11 *      .45306.J                      163311
82 *      .F43.J                        163313
11 *      .4NSLK757.J                   163315
41 *      .4LES631.J                    163317
41 *      .4LES632.J                    163318
41 *      .4LES633.J                    163320
41 *      .4LES634.J                    163321
```

5.3 Appendix "C" (Cont.)

41	*	.4LES635.J	163323
41	*	.4LES636.J	163324
41	*	.4LES637.J	163326
62	*	.F44.J	163328
81	*	.4UPS541.J	163330
81	*	.4UPS542.J	163332
81	*	.4UPS543.J	163333
81	*	.4UPS544.J	163335
81	*	.4UPS545.J	163336
81	*	.4UPS546.J	163338
81	*	.4UPS547.J	163339
12	*	.F45.J	163341
61	*	.46401.J	163344
61	*	.46402.J	163345
61	*	.46403.J	163347
61	*	.46404.J	163348
61	*	.46405.J	163350
61	*	.46406.J	163351
61	*	.46407.J	163353
31	*	.F46.J	163355
12	*	.45501.J	163357
12	*	.45502.J	163359
12	*	.45503.J	163401
12	*	.45504.J	163402
12	*	.45505.J	163404
12	*	.45506.J	163405
12	*	.45507.J	163407
82	*	.F47.J	163409
41	*	.4SST651.J	163411
41	*	.4SST652.J	163413
41	*	.4SST653.J	163414
41	*	.4SST654.J	163416
41	*	.4SST655.J	163417
41	*	.4SST656.J	163419
41	*	.4SST657.J	163420
62	*	.F48.J	163422
82	*	.4LUF561.J	163425
82	*	.4LUF562.J	163426
82	*	.4LUF563.J	163428
82	*	.4LUF564.J	163429
82	*	.4LUF565.J	163431
82	*	.4LUF566.J	163432
82	*	.4LUF567.J	163434
11	*	.F49.J	163436
62	*	.4JJR661.J	163438
62	*	.4JJR662.J	163440
62	*	.4JJR663.J	163441
62	*	.4JJR664.J	163443
62	*	.4JJR665.J	163444
62	*	.4JJR666.J	163446
62	*	.4JJR667.J	163447

5.3 Appendix "C" (Cont.)

82	*	.F50.J	163449
12	*	.45701.J	163452
12	*	.45702.J	163453
12	*	.45703.J	163455
12	*	.45704.J	163456
11	*	.4CTS1.J	163457
12	*	.45705.J	163458
11	*	.45706.J	163459
01	*	.47401.J	163504
31	*	.46701.J	163507
31	*	.46702.J	163508
11	*	.4CTS2.J	163509
31	*	.46703.J	163510
31	*	.46704.J	163511
31	*	.46705.J	163513
31	*	.46706.J	163514
31	*	.46707.J	163516
82	*	.45011.J	163520
82	*	.45012.J	163522
82	*	.45013.J	163523
82	*	.45014.J	163525
82	*	.45015.J	163526
82	*	.45016.J	163528
82	*	.4JEP517.J	163529
62	*	.4RST611.J	163534
62	*	.4RST612.J	163535
62	*	.4RST613.J	163537
62	*	.4RST614.J	163539
62	*	.4RST615.J	163541
62	*	.4RST616.J	163542
62	*	.4RST617.J	163543
11	*	.4NSLK758.J	163547
11	*	.4NSLK759.J	163549
11	*	.4NSLK760.J	163550
11	*	.4NSLK761.J	163552
11	*	.4NSLK762.J	163553
11	*	.4NSLK763.J	163555
11	*	.4NSLK764.J	163556
82	*	.46021.J	163604
82	*	.46022.J	163606
11	*	.4CTS1.J	163607
82	*	.46023.J	163608
11	*	.4CTS2.J	163609
82	*	.46024.J	163610
82	*	.46025.J	163611
82	*	.46026.J	163612
82	*	.46027.J	163614
82	*	.F51.J	163617
01	*	.F63.J	163618
01	*	.F62.J	163620
01	*	.F61.J	163622

5.3 Appendix "C" (Cont.)

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01 *        .F60.J                                    163624
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5.4 Appendix "D"

This scenario will be executed by the Confidence and Stability test, Section 4.8. It will generate eight associated tracks each scan for a sixteen hour period.

```
31          .7S160000.J
31 *        .6CONF101 0101.J                          160002
31 *        .6CONF102 0102.J                          160004
31 *        .6CONF103 0103.J                          160006
31 *        .6CONF104 0104.J                          160008
31 *        .6CONF105 0105.J                          160010
31 *        .6CONF106 0106.J                          160012
31 *        .6CONF107 0107.J                          160014
31 *        .6CONF108 0110.J                          160016
31 *P20000.F01B0101H180V150A020.K                     160018
31 *P25045.F02B0102H225V150A030.K                     160020
31 *P20090.F03B0103H090V150A040.K                     160022
31 *P25135.F04B0104H225V150A050.K                     160024
31 *P20180.F05B0105H160V150A060.K                     160026
31 *P25235.F06B0106H315V150A070.K                     160028
31 *P20270.F07B0107H270V150A080.K                     160030
31 *P25315.F08B0110H315V150A090.K                     160032
31 *        .F01HLHA.J                                160034
31 *        .F02HLHB.J                                160036
31 *        .F03HLHC.J                                160038
31 *        .F04HLHD.J                                160040
31 *        .F05HLHE.J                                160042
31 *        .F06HLHF.J                                160044
31 *        .F07HLHG.J                                160046
31 *        .F08HLHH.J                                160048
31 *        .F01.J                                    195944
31 *        .F02.J                                    195946
31 *        .F03.J                                    195948
31 *        .F04.J                                    195950
31 *        .F05.J                                    195952
31 *        .F06.J                                    195954
31 *        .F07.J                                    195956
31 *        .F08.J                                    195958
31 *        .6CONF201 0201.J                          200002
31 *        .6CONF202 0202.J                          200004
31 *        .6CONF203 0203.J                          200006
31 *        .6CONF204 0204.J                          200008
31 *        .6CONF205 0205.J                          200010
31 *        .6CONF206 0206.J                          200012
31 *        .6CONF207 0207.J                          200014
31 *        .6CONF208 0210.J                          200016
31 *P20000.F11B0201H180V150A020.K                     200018
31 *P25045.F12B0202H225V150A030.K                     200020
31 *P20090.F13B0203H090V150A040.K                     200022
31 *P25135.F14B0204H225V150A050.K                     200024
```

5.4 Appendix "D" (Cont.)

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31 *P20180.F15B0205H180V150A060.K                    200026
31 *P25235.F16B0206H315V150A070.K                    200028
31 *P20270.F17B0207H270V150A080.K                    200030
31 *P25315.F18B0210H315V150A090.K                    200032
31 *       .F11HRHA.J                                200034
31 *       .F12HRHB.J                                200036
31 *       .F13HRHC.J                                200038
31 *       .F14HRHD.J                                200040
31 *       .F15HRHE.J                                200042
31 *       .F16HRHF.J                                200044
31 *       .F17HRHG.J                                200046
31 *       .F18HRHH.J                                200048
31 *       .F11.J                                    235944
31 *       .F12.J                                    235946
31 *       .F13.J                                    235948
31 *       .F14.J                                    235950
31 *       .F15.J                                    235952
31 *       .F16.J                                    235954
31 *       .F17.J                                    235956
31 *       .F18.J                                    235958
31 *       .6CONF301 0301.J                          000002
31 *       .6CONF302 0302.J                          000004
31 *       .6CONF303 0303.J                          000006
31 *       .6CONF304 0304.J                          000008
31 *       .6CONF305 0305.J                          000010
31 *       .6CONF306 0306.J                          000012
31 *       .6CONF307 0307.J                          000014
31 *       .6CONF308 0310.J                          000016
31 *P20000.F21B0301H180V150A020.K                    000018
31 *P25045.F22B0302H225V150A030.K                    000020
31 *P20090.F23B0303H090V150A040.K                    000022
31 *P25135.F24B0304H225V150A050.K                    000024
31 *P20180.F25B0305H180V150A060.K                    000026
31 *P25235.F26B0306H315V150A070.K                    000028
31 *P20270.F27B0307H270V150A080.K                    000030
31 *P25315.F28B0310H315V150A090.K                    000032
31 *       .F21HLHA.J                                000034
31 *       .F22HLHB.J                                000036
31 *       .F23HLHC.J                                000038
31 *       .F24HLHD.J                                000040
31 *       .F25HLHE.J                                000042
31 *       .F26HLHF.J                                000044
31 *       .F27HLHG.J                                000046
31 *       .F28HLHH.J                                000048
31 *       .F21.J                                    035944
31 *       .F22.J                                    035946
31 *       .F23.J                                    035948
31 *       .F24.J                                    035950
31 *       .F25.J                                    035952
31 *       .F26.J                                    035954
31 *       .F27.J                                    035956
```

6.0 Acronym List

A/C	Aircraft
ADB	Altitude Data Block
ACP	Azimuth Change Pulse
ADU	Azimuth Distribution Unit
BUP	Builder Utility Program
CA	Conflict Alert
CCD	Configuration Control Decision
CDR	Continuous Data Recording
CPU	Computer Processor Utilization
CR	Card Reader
CMA	Central Memory Access Unit
CTAS	Center Terminal Automation System
CTS	Central Track Store
DA	Descent Advisor
DADS	Data Aquisition and Display System
DCU	Disc Control Unit
DDU	Disc Drive Unit
DEDS	Data Entry and Display System
DNP	Do Not Process
DPL	Terminate Control Operational Function
DPS	Data Processing Subsystem
DWS	DADS Work Station
ETG	Enhanced Target Generator
FAST	Final Approach Spacing Tool

FDB	Full Data Block
FDE	Flight Data Entry
FNCT	Function
GS	Ground Speed
HJI	Heavy Jet Indicator
IFR	Instrument Flight Rules
ILL	Illegal
IMC	Instrument Meteorological Conditions
IOPB	Input/Output Processor "B"
ISL	Inter Sensor Linker
ITL	Information Tabular List
MM	Memory Module
MODL	Modify Multifunction
MPE	Multiprocessor Executive
MSAW	Minimum Safe Altitude Warning
MSP	Medium Speed Printer
MTU	Magnetic Tape Unit
OP	Operational Program
POS	Position
PTR	Program Technical Report
RFDU	Reconfiguration Fault Detection Unit
SED	Slew Entry Device
SRAP	Sensor Receiver and Processor
TATCA	Terminal Air Traffic Control Automation
TAP	TIU ARTS Processor
TFP	TIU FDAD Processor
TIU	TATCA Interface Unit
TMA	Traffic Management Advisor
TOP	TIU Oerational lans Processor
TSP	TIU Support Processor

TTMA	Terminal Traffic Management Advisor
TTY	Teletype
TWS	TIU Work Station
VFR	Visual Flight Rules
VMC	Visual Meteorological Conditions