

**TESTING DATA SET 113B-L1**  
**FROM FIELD LOCATIONS**  
**USING J1P005 AUTOMATIC DATA TEST SYSTEM (ADTS)**

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**1. GENERAL**

**1.01** This section provides field test information for data set (DS) 113B-L1. A loopback test is provided using the J1P005 ADTS. These procedures are to be used when testing DS 113B-L1 on an initial installation or during a maintenance visit.

**1.02** When this section is reissued, the reason for reissue will be presented in this paragraph.

**1.03** This section contains information for testing DS 113B-L1 by means of DIVA (Digital Inquiry Voice Answer). DIVA requires a TOUCH-TONE® dial telephone, or a rotary dial telephone used with a KS-21799-L1 (or equivalent) portable TOUCH-TONE pad.

**1.04** In this section, the term "user" refers to telephone company (telco) personnel at the data

set responsible for interfacing the data set with the ADTS.

**1.05** General ADTS test information is presented in paragraphs 2.01 through 2.25. Detailed ADTS test procedures are presented in paragraphs 2.26 through 2.42.

**1.06** Troubleshooting is performed by the ADTS using the loopback test. If the trouble is isolated to the data set, replace the data set and repeat the test.

**1.07** If the trouble persists after the tests have been completed, proceed as follows:

- (a) Check that options installed in data set agree with those specified on service order.
- (b) Verify that customer-provided equipment (CPE) has been tested and is operating properly.
- (c) Check for physical damage to data station equipment.
- (d) Verify that all cords and connectors are properly connected.
- (e) Check for intermittent trouble in station wiring.
- (f) Verify that data set and CPE are connected to a common ground.
- (g) If trouble persists, request help from immediate supervisor, who may then obtain technical support from DATEC (Data Technical Support) per Section 010-521-100.

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## 2. ADTS TEST PROCEDURES

### A. General

**2.01** This part provides instructions necessary for the proper operation of ADTS from field data sets. Included are instructions for entering and leaving the system.

**2.02** Operations involving ADTS require man/machine interaction. With DIVA, the information is entered into ADTS by tones from a TOUCH-TONE dial. The system outputs a message by a voice response unit, and the user receives the message via the telephone handset.



**Every entry from a TOUCH-TONE dial must be followed by a TOUCH-TONE star (\*) except when calling the DIVA port number. To avoid repetition, the star entry has not been included in the text but should be understood as included whenever an entry is mentioned.**

**2.03** The ADTS must be on-line and DIVA must be up to accept DIVA tests.

#### Functions Available Via DIVA (Table B)

**2.04** The test functions available via DIVA initiate a static or dynamic test of a data set. When 3 is used as a prefix with a test function, a fast test is performed on the data set without review of the line card information and without receiving test instructions.

**2.05 Test Function List:** With an entry of 8, DIVA will respond with a message of all test functions that can be performed on DS 113B-L1.

**2.06 Loopback Test:** This function provides a loopback test of DS 113B-L1 by the ADTS. The loopback test is initiated by entering 52; the fast loopback test by entering 352.

**2.07 Results:** This function provides results of the most recent test of the data set. The results function is initiated by entering 7. In response to the results function entry, the ADTS gives the audible query WHAT IS THE TELEPHONE OR SPECIAL SERVICE CIRCUIT NUMBER? After

receiving a number, the ADTS outputs the results in a format similar to the following:

THE TEST RESULTS ARE:

THE DATA SET CODE IS (data set code)

THE RECEIVED SIGNAL LEVEL IS OUT OF LIMITS

WHAT IS THE FUNCTION YOU WISH TO PERFORM?

**2.08 Stop:** This function stops the present function and requests a new function. The stop function is initiated by entering #73.

**2.09 Off:** This function stops the present function and disconnects the DIVA port. The off function is initiated by entering #63.

#### Accessing ADTS

**2.10** Access to ADTS by DIVA is obtained by placing a call to a DIVA port number. Depending on the mode of ADTS and the mode of DIVA, one of four actions will occur:

(a) Busy signal; all DIVA ports are busy. Try again later.

(b) Call not answered; either ADTS or DIVA is in the down mode.

(c) Call answered; the user will hear a 1-second burst of answer tone. Following the answer tone will be the audible statement: THIS IS THE AUTOMATIC DATA TEST SYSTEM. PLEASE ENTER THE PASSWORD. Once the password has been entered, the system responds with PLEASE ENTER THE FUNCTION YOU WISH TO PERFORM.

(d) Call answered; the user will hear the password statement and then the following: THE ADTS IS OFF-LINE. PLEASE ENTER THE FUNCTION YOU WISH TO PERFORM. This is only a temporary situation. Retry the access in a minute or two.

**2.11** The user may shorten the password-function request formalities by inputting both the password and the desired function in one entry (no

intervening \*). If both the password and function are valid, ADTS begins executing the function immediately. To shorten the time required to set up a test, answers to familiar questions asked by DIVA may be given while the question is in progress.

**2.12** Information is entered into ADTS by letters or numbers on the TOUCH-TONE dial. Numbers are entered into ADTS by depressing the desired digits on the TOUCH-TONE dial. Letters are entered into ADTS by using the following format:

- (a) Depress #.
- (b) Depress button with desired letter on it.
- (c) Depress a number (1, 2, or 3) corresponding to the letter's position on the button [depressed in (b)].

**2.13** In response to a YES or NO question, the following format is used:

- (a) YES, enter one (1).
- (b) NO, enter zero (0).

**2.14** The user can again listen to the last spoken message, by entering #\* (Table A).

#### Performing Tests

**2.15** To start a test, the user enters the desired number code from Table B. The ADTS response is WHAT IS THE TELEPHONE OR SPECIAL SERVICE CIRCUIT NUMBER? After the number has been entered, the ADTS response is YOU HAVE ENTERED (telephone or special service circuit number). IS THAT CORRECT? The user enters 1 for YES or 0 for NO. If the response is incorrect, ADTS repeats the original query.

**2.16** If the response is correct, ADTS will attempt to find a line card file (LCF). If an LCF is found, ADTS will use the data set code to find the test program. If there is a test program for the data set code and test function entered, ADTS will continue. If no test program is found, ADTS will abort the test with the following message: THE ADTS CANNOT RUN SELECTED TEST ON THIS DATA SET. (Since there is a test program available for DS 113B — 52—this response indicates that the wrong test code was entered.)

**2.17** If both an LCF and test program are found, the LCF information is given to the user. The

user is then given a chance to make any necessary changes.

**2.18** If no LCF is found, the ADTS response is THE DATA SET IS NOT ON FILE. ENTER THE DATA SET CODE. The user must then answer this question and others to create an LCF. In this case the entry would be 113#22 \*. After entry of the data set code, ADTS checks for the test program.

**2.19** After the LCF information has been given or after new line card information has been entered ADTS instructs the user TO CORRECT ERRORS ENTER ONE. IF NO ERRORS, ENTER ZERO. If a 1 is entered, ADTS repeats the line card information query.

**2.20** If no corrections are made to the LCF, ADTS asks ARE YOU CALLING FROM THE DATA SET? If the user is calling from a data set, the user must hang up. ADTS will then call the data set for testing. After the test has been completed, ADTS must be called to obtain the results of the test. The test instructions direct the user on this procedure.

**2.21** The ADTS asks the user DO YOU WANT INSTRUCTIONS? If requested, ADTS will supply test instructions. These instructions are to prompt the user, not to replace the data set BSP instructions.

**2.22** After the instructions, ADTS gives the following message: WHEN READY, ENTER ONE. Upon receipt of a 1, ADTS responds THANK YOU. A pause will follow the thank you message as ADTS attempts to seize the hardware needed for the test. If the test hardware is busy performing another test or a self test, ADTS gives the following message: The ADTS TEST EQUIPMENT IS BUSY, PLEASE WAIT. When the test hardware becomes available, ADTS outputs THE TEST IS READY TO START.

**2.23** At completion of the test, the user receives a short message describing the test results. When the data set fails, the system gives the reason(s) for failure. After giving the results of the data set test, the system returns to the function query.

#### Leaving ADTS

**2.24 Manual Abort:** Whenever the system is expecting user input, the user can abort the operation by entering #73 (the letter S) or #63 (the

TABLE A

TOUCH-TONE CODES FOR DIVA

FUNCTION	DEPRESS BUTTON(S)	DESCRIPTION
1, 2, 3, . . .etc.	Appropriate button(s)	Digits
#	#	Prefix character.
*	*	TOUCH-TONE star. Used at end of all entries as EOL character.
A,B,C, . . .etc.	Depress number sign, button on which character appears, and digit corresponding to the relative position of the letter (1,2, or 3). Example: For the letter A #21	Alphabetic characters.
Yes	1*	Answer yes to a question.
No	0*	Answer no to a question.
Repeat	#*	Repeats last message spoken by the system.
Telephone Number	Example: 3115552368*	Enter telephone number in sequence followed by EOL.
Data Set Code	Example: 202#23* Example: 202#235* Example: 401#515*	202C 202C5 401J5
Data Set Transmit Level	Example: 12*	-12 dBm. Eliminate sign and units designation. Enter numerical value.

letter O). The letter S, for STOP, causes ADTS to abort the operation and return to the function query. The letter O, for OFF, causes ADTS to abort the operation and the DIVA port to hang up.

**2.25 Automatic Abort:** The ADTS automatically performs the equivalent of a user OFF if the user does not respond to a system request. Thirty seconds without a user entry after the original function query, ADTS will repeat the query. Thirty seconds after the second query without a user entry, ADTS will repeat the query for the third time. Thirty seconds after the third query without a user entry,

ADTS will abort the task and hang up. If incorrect or illogical entries are made three successive times, ADTS will perform the equivalent of an OFF. After each invalid entry, an appropriate error message such as THE NUMBER IS INVALID, PLEASE RE-ENTER will be spoken. After a third invalid entry, ADTS will abort the task and hang up.

**B. Loopback Test**

**2.26** Call the DIVA port number of the serving ADTS, using a TOUCH-TONE (TT) dial or pad. A 1-second answer tone will be heard in the

TABLE B  
FUNCTIONS AVAILABLE FROM DIVA

FUNCTION	DESCRIPTION	NORMAL	FAST
Test List	Lists valid test functions.	8 *	
Loopback Test	Static test of a data set.	52 *	352 *
Error Run Test	Tests a data set with data test set connected.	37 *	337 *
Results	Outputs results of most recent test of a data set.	7 *	
STOP	Stops present function and requests new function.	#73 *	
OFF	Stops present function and disconnects.	#63 *	

handset. After the answer tone will be the following:  
THIS IS THE AUTOMATIC DATA TEST SYSTEM.  
PLEASE ENTER THE PASSWORD.

**Note 1:** If the above message is not heard, refer to paragraph 2.10.

**Note 2:** TOUCH-TONE stars are shown hereafter as required.

**2.27** Enter the 4-character password, followed by \*, on the TT dial. ADTS will respond with PLEASE ENTER THE FUNCTION YOU WISH TO PERFORM.

**2.28** Enter 52\* on the TT dial. (The fast test, which omits line card review and test instructions, may be requested by entering 352\*.) ADTS will respond with LOOPBACK TEST. WHAT IS THE TELEPHONE OR SPECIAL SERVICE CIRCUIT NUMBER?

**2.29** Enter the data set telephone number, followed by \*, on the TT dial. ADTS will respond with YOU HAVE ENTERED (telephone number). IS THAT CORRECT?

**2.30** If the number is correct, enter 1\* on the TT dial. If the number is incorrect, enter 0\* on the TT dial.

**2.31** If 0\* was entered, the query in paragraph 2.28 will be repeated. If 1\* was entered, ADTS will respond with THE DATA SET CODE IS 113B. TO CORRECT ERRORS ENTER ONE. IF NO ERRORS ENTER ZERO. Enter 1\* to change the data set code. Follow this with an entry of 113#22 to select DS 113B.

**2.32** ADTS continues: ARE YOU CALLING FROM THE DATA SET? To respond "yes" enter 1\*; to respond "no" enter 0\*.

**2.33** This question follows: DO YOU WANT INSTRUCTIONS? A 1\* reply requests instructions, which are as follows:

(1) When ADTS is called from a telephone other than at the data set: REPLACE THE CUSTOMER INTERFACE CONNECTOR WITH THE TM CONNECTOR. CONNECT THE SERVICE LINE TWIN PLUG FROM THE DATA MOUNTING TO THE TWIN JACK ON THE FACEPLATE OF THE DATA SET. THE ADTS WILL CALL TO TEST THE DATA SET. IF THE DATA SET IS EQUIPPED WITH THE Z OPTION, OPERATE THE TALK/CLEAR KEY AT END OF TEST.

(2) When ADTS is called from the data set telephone: REPLACE THE CUSTOMER INTERFACE CONNECTOR WITH THE TM CONNECTOR. CONNECT THE SERVICE LINE TWIN PLUG FROM THE DATA MOUNTING TO THE TWIN JACK ON THE FACEPLATE OF THE DATA SET. ON THE TONE, HANG UP THE DATA SET. THE ADTS WILL CALL TO TEST THE DATA SET. PLEASE WAIT 2 MINUTES. GO TO TALK MODE. CALL THE ADTS AND REQUEST TEST RESULTS.

The ADTS then gives the message WHEN READY ENTER ONE.

**2.34** ADTS continues: DO YOU WANT THESE INSTRUCTIONS REPEATED? To respond "yes" enter 1\*; to respond "no" enter 0\*.

**2.35** When the user is satisfied that the instructions are understood, enter one, to which the

ADTS responds THANK YOU. THE TEST IS READY TO START.

2.36 On satisfactory conclusion of the test the ADTS gives the results as follows:

THE TEST RESULTS ARE:  
THE DATA SET TESTS OK.  
PLEASE ENTER THE FUNCTION YOU WISH TO PERFORM.

If another test will not be performed at this time, enter #63\* to disconnect.

2.37 If the data set failed the test, one or more of the following messages is given:

- BUSY TONE DETECTED. TEST ABORTED.
- REORDER TONE DETECTED. TEST ABORTED.
- THE ANSWER TONE WAS NOT RECEIVED. TEST ABORTED.
- THE F2 MARK FREQUENCY IS OUT OF LIMITS.
- THE F2 SPACE FREQUENCY DID NOT COME ON.
- THE F1 SLICE FREQUENCY IS OUT OF LIMITS.
- THE F2 SLICE FREQUENCY IS OUT OF LIMITS.
- THE DATA SET DID NOT RELEASE FROM THE TEST MODE.
- DATA SET SENSITIVITY FAILED.

DO YOU WANT DETAILED RESULTS? To respond "yes" enter 1\*; to respond "no" enter 0\*.

2.38 In response to 0\* the ADTS responds with PLEASE ENTER THE FUNCTION YOU WISH TO PERFORM. In response to 1\* the ADTS responds with one or more of the error messages in paragraph 2.37, then PLEASE ENTER THE FUNCTION YOU WISH TO PERFORM. If another test is not to be performed at this time, enter #63\* to terminate the test and disconnect.

2.39 Call the ADTS at the end of test (about 1 minute). The ADTS responds with THIS IS THE AUTOMATIC DATA TEST SYSTEM. PLEASE ENTER THE PASSWORD. Enter the 4-character password followed by \*.

2.40 The ADTS continues: PLEASE ENTER THE FUNCTION YOU WISH TO PERFORM. Enter 7\* to request test results. Next, ADTS queries WHAT IS THE TELEPHONE OR SPECIAL SERVICE CIRCUIT NUMBER?

2.41 Enter the data set telephone number. The ADTS responds YOU HAVE ENTERED (telephone number). IS THAT CORRECT? Enter 1\* for "yes" or 0\* for "no".

2.42 A "no" answer causes the ADTS to repeat the query in paragraph 2.40. The ADTS responds to a "yes" as follows:

THE TEST RESULTS ARE:

THE DATA SET IS 113B.

THE DATA SET TESTS OK.

WHAT IS THE FUNCTION YOU WISH TO PERFORM?

If no further tests are to be made at this time, enter #63\* to terminate the test and disconnect.

### 3. REFERENCES

3.01 Additional information concerning DS 113B-L1 and use of the ADTS is contained in the following publications:

SECTION	TITLE
314-205-501	Data Systems—DATAPHONE® Service and Data Access Arrangements on Direct Distance Dialing Network—Test Requirements for Subscriber, Foreign Exchange, and Remote Exchange Lines
590-010-500	J1P005 Automatic Data Test System (ADTS)—Operation From Field Locations
591-033-100	Data Set 113A-Type Transmitter-Receiver—Description and Operation

SECTION	TITLE	SECTION	TITLE
591-033-200	Data Set 113A-Type Transmitter-Receiver—Installation and Connections	591-033-500	Data Set 113A-Type Transmitter-Receiver—Test Procedures
		591-814-501	113-Type Data Station—Test Procedures Using 921A Data Test Set