907A DATA TEST SET

IDENTIFICATION AND OPERATION

1. INTRODUCTION

1.01 This section contains information on the identification and operation of the 907A data test set, Fig. 1. Listed below are the J, CD, and SD numbers for the data test set.

- 907A Data Test Set per J79907A, List 1
- 907A Data Test Set per CD- and SD-71083-01

1.02 The 907A data test set is designed to test data sets 101A, B, and C, and data set 105A.

1.03 Fig. 1 shows the 907A data test set. Illustrations of its associated connecting cords and test cards are not available but will be included in future issues of this section.

1.04 The 907A data test set is approximately 6 inches wide, 10 inches long, and 7 1/2 inches high and weighs less than 10 pounds.

2. GENERAL

2.01 The 907A data test set is a portable set used to make out-of-service, installation, and routine trouble tests.

2.02 The 907A data test set is arranged to connect all essential test points in a data set to the test set by means of its associated test card and connecting cords.

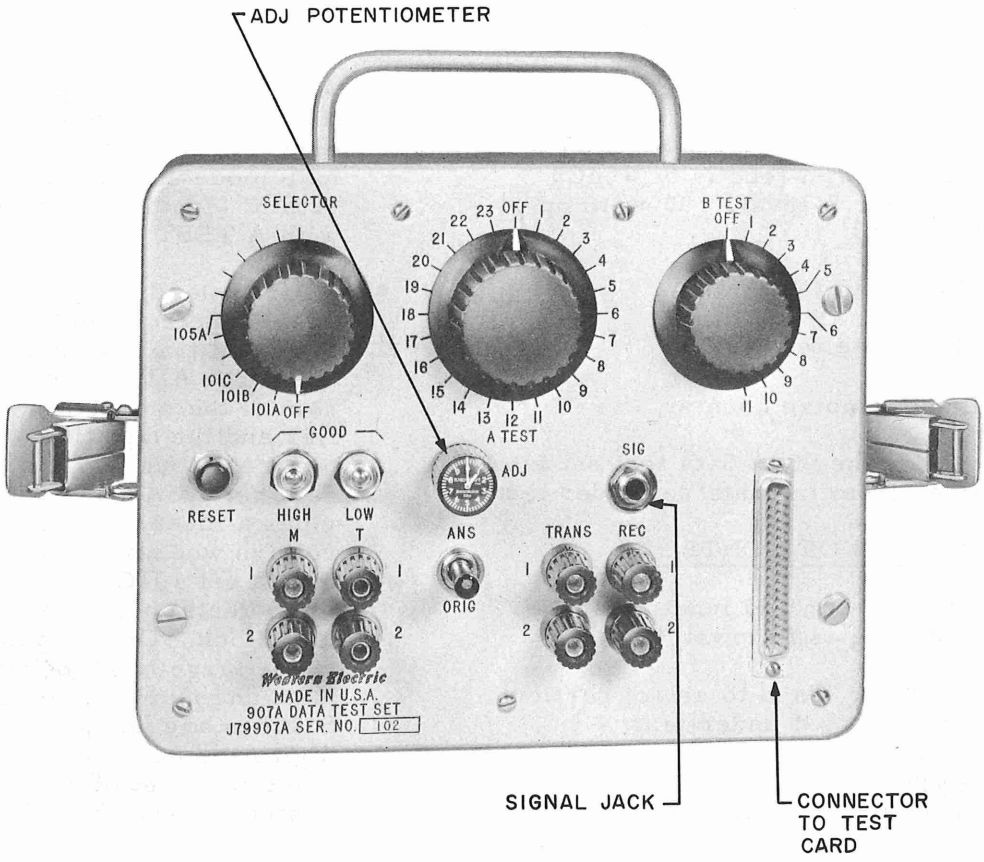

Fig. 1 - 907A Data Test Set

The cords are supplied with the 907A data test set. Required test cards are:

- J79907A, List 5, for data sets 101A, B, and C
- J79907A, List 4, for data set 105A

2.03 Connector cord identification and replacement ordering information are as follows:

- (Quantity) J9907A, List 2 connector cord: equipped with 37-pin connector at each end for connecting test set to test card.
- (Quantity) J9907A, List 3 connector cord: a 2-conductor cord, the ends of which are equipped with banana plugs and pin jacks for connecting binding posts of data set to test points of data set cards.

2.04 The test set is arranged to operate by itself or in conjunction with the following test equipment:

- TTS-28, portable station test set.
- 164-type telegraph transmission measuring set. (164C4 or 164C3 modified for 8-level, 100-wpm operation.)
- 902-type data test set
- 903-type data test set
- 6A impulse noise counter

2.05 Power for the 907A data test set is obtained from the data set under test.

3. DESCRIPTION OF CONTROLS

3.01 The description and function of the controls are as follows:

- SELECTOR: Used to select particular type data set under test.
- A TEST: A 23-position switch, see Table A. This switch provides various levels of marking and spacing frequency, a dot signal output at approximately 100 bps, and 45 bps, restraint signals, and call progress tone signals. It also enables time interval measurements. The timing is started by either positive or negative going pulses or operation of RESET button. With a 164-type TMS it is possible to measure distortion of 20-ma send and receive and 60-ma receive signals. This switch also enables the data set to receive and transmit signals complying with EIA standard.
- B TEST: An 11-position switch, see Table B. Positions 1 through 5 provide an increase in output levels of marking and spacing frequencies and the dot output signals of A TEST switch. These levels may be changed from 0 to 8 db in 2 db steps. This switch also enables test set to be used as a ±10 per cent and ±20 per cent bracket timer or an end timer; from a nominal time setting, either the positive or negative voltage step acts as an input or trigger.
- ANS - ORIG: A 2-position switch that allows the data set under test to connect in either the answer or originate mode and enables a proper restraint signal to be sent in conjunction with A TEST switch.
- ADJ: The adjust (ADJ) control is a 10-turn potentiometer which is used to set all timing functions of the data set. The ADJ control also sets the gain of the modulator sending amplifier and the duration of the call progress tone signals when testing a data set 105A. In addition, it provides a means of adjusting a reference voltage when measuring distortion on a data set 101C. The two hands of the potentiometer resemble the hands of a clock. One complete revolution of the large hand moves the small hand one number, or five divisions. Settings are designated by a three-digit number. The small hand designates the first digit. The large hand designates the second and third

TABLE A

"A TEST" SWITCH FUNCTIONS

DATA TEST SET 907A

Position	Function
1	X
2	SPACE -48 DB
3	SPACE -20 DB
4	DOT -58 DB
5	MARK -20 DB
6	MARK -48 DB
7	MARK -51 DB
8	DOT -38 DB*
9	DOT -38 DB†
10	RESTRAINT -20 DB
11	RESTRAINT -48 DB
12	+ START (TIMER)
13	- START (TIMER)
14	RESET CONTROL TIMER
15	CALL PROGRESS TONE
16	X
17	X
18	20MA SEND
19	20MA RECEIVE
20	60MA RECEIVE
21	X
22	X
23	EIA

* 50 cps, 100 bps
† 22.5 cps, 45 bps

digits, the second digit being the closest counterclockwise number the large hand is pointing to, and the third digit being the sum of the divisions the hand points to between numbers (each division is two). See Fig. 2 for typical settings.

- HIGH, LOW, GOOD LAMPS: These lamps are used for timer tests only. In the bracket timer test, if the data set timer operates out of limits and too early, the LOW lamp will light; if too late, the HIGH lamp will light. However, if the data set timer operates within limits, both lamps will light and give a GOOD indication.
- RESET: A nonlocking pushbutton that, when depressed, enables the timer to be started by either a positive or negative going pulse.
- SIG: A jack for establishing a cord connection to a 164-type telegraph transmission measuring set.

Fig. 2 - Typical Settings for ADJ Potentiometer

- TRANS and REC BINDING POSTS: Used for EIA input and output signals.
- M BINDING POSTS: Used to monitor the various output levels of the test set.
- T BINDING POSTS: Used to connect timer card of the data set to the data test set during timing tests.

4. OPERATION

4.01 Standard installation and test practices for each type data set will specify switch setting, connections, operating instructions, and other test equipment required.

5. MAINTENANCE

5.01 No field maintenance is to be attempted on the 907A data test set. It shall be be returned to distribution house for repairs.

TABLE B

"B TEST" SWITCH FUNCTIONS
DATA TEST SET 907A

Position	Function
1	0 DB
2	+2 DB
3	+4 DB
4	+6 DB
5	+8 DB
6	(+) INPUT 10%
7	(-) INPUT 10%
8	(+) INPUT 20%
9	(-) INPUT 20%
10	(+) INPUT
11	(-) INPUT