INTERFACE TEST ADAPTER
FOR DATA SET 303-TYPE
DESCRIPTION, APPLICATION, AND CONSTRUCTION

1. GENERAL

1.01 This section describes an Interface Test Adapter for Data Set 303-type, hereafter referred to as the test adapter, and how it is to be constructed and utilized. The test adapter will not be factory-supplied, therefore detailed information is given in this section so that it may be constructed locally as required. A prototype model is shown in Fig. 1.

1.02 Testing of Data Set 303-type during installation and maintenance often necessitates monitoring the customer interface signals at the data set. To facilitate this procedure, the test adapter described in this section may be inserted in series with the customer interface. Access to each of the coaxial leads is achieved in a bridging fashion. This procedure eliminates the need for removal of the data set cover plates.

1.03 A test adapter suitable for use with Data Set 301B, when used with DAS 806B5 only, may be constructed in a similar manner as described in this section. Since the lead designations given in this section apply only to Data Set 303-type, refer to Section 593-011-ZZZ on Data Set 301B for interface lead designations.

2. PHYSICAL DESCRIPTION

2.01 Physical dimensions are dependent upon the individual construction of the test adapter. The recommended size for a test adapter is 5-1/4

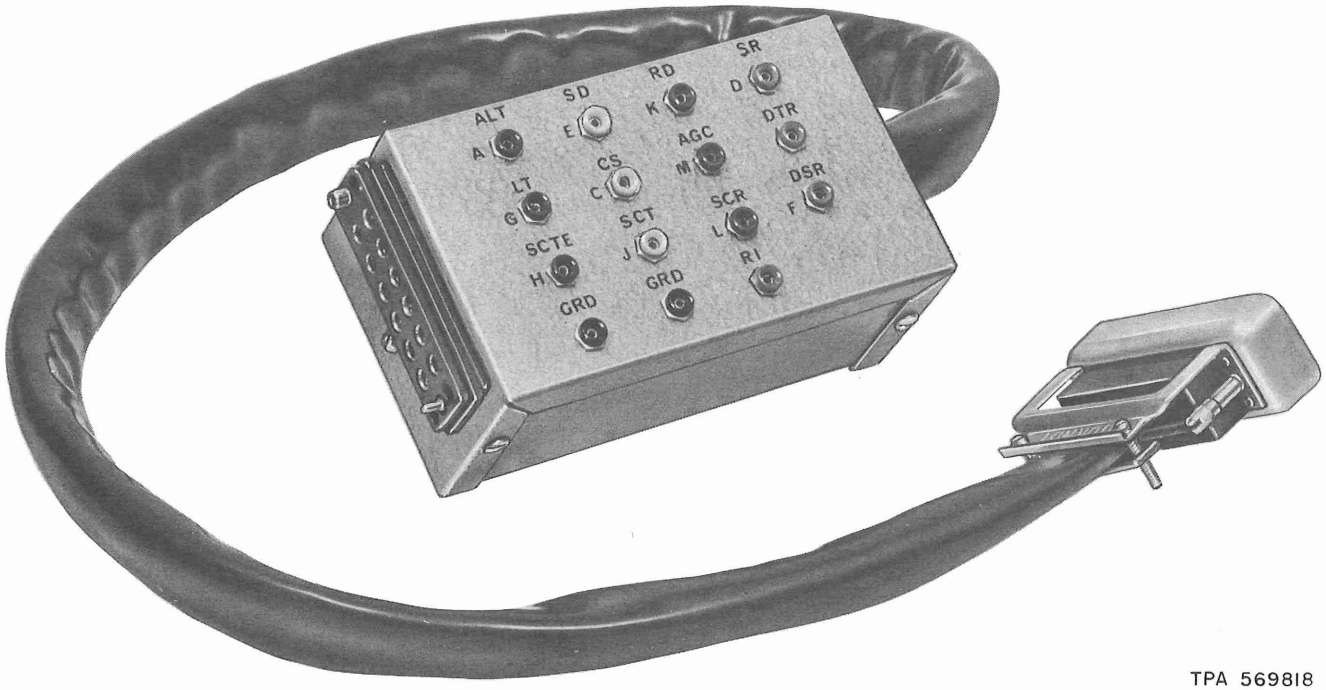

Fig. 1—Interface Test Adapter For Data Set 303-Type

by 3 by 2-1/2 inches with a 3-foot cable assembly extending from one end.

2.02 The adapter is a feed-through device for a Data Set 303-type customer interface. The adapter consists of a wideband interface cable with a Burndy plug on one end, and is terminated in a miniature chassis box containing a jack field and a Burndy connector. Access to the interface leads is possible through the 15 jacks located on the test adapter.

3. APPLICATION

3.01 When testing a Data Set 303-type, the adapter is connected between the data set and the customer interface. The Burndy plug is connected to the Data Set 303-type interface while the customer interface cable is plugged into the test adapter. The data set may now be operated normally. The jack field located on the test adapter allows the individual leads to be monitored with an oscilloscope, voltmeter, or other test equipment that may be required. The 914B Data Test Set meter circuitry and interval timer may be used for monitoring a 303 interface; however, the interface lamps and switches cannot be used in this application.

4. CONSTRUCTION

4.01 Components needed for construction of the test adapter are available either as standard commercial or WECo-coded components. A recommended parts list is given in Table A. Additional items such as mounting hardware, sleeving, lettering decals, and a crimping tool (M8ND with N22RVMT-1 die set) for Burndy connectors are also required. Care should be taken to route each cable correctly before crimping into the Burndy connector, as a special tool is required to disassemble the Burndy connector if a mistake is made. Except for the Burndy connectors, substitution of all components may be made as necessary.

4.02 Mounting holes are drilled into the mini-box as shown in the mechanical layout (Fig. 2). Both interface lead functions and pin designations may be marked next to their respective jacks, as indicated in Fig. 2. After applying the letters, a coating of clear protective spray may be applied to protect the designations. Locate and mount the pin jacks. Pin B, not presently used in Data Set 303-type, is wired through from the plug to the connector, as illustrated in Fig. 3. With two exceptions, all shield grounds are tied to a common ground bus inside the chassis as shown in Fig. 4. The shields of pin F (RI) and pin M (DTR) are brought out to pin jacks and must not be grounded. Caution should be taken in lead routing to prevent accidental grounding of the pin jacks. Sleeving should be utilized to protect any exposed conductors.

TABLE A

COMPONENT LIST

QUANTITY	COMPONENT
1	Mini-box, 5-1/4″ by 3″ by 2-1/8″
13	Pin jacks, red, KS-14523-L2
2	Pin jacks, black, KS-14523-L3
1	Plug, coaxial, KS-19402-L1 (Burndy)
1	Connector, coaxial, KS-19401-L1 (Burndy)
4	Rubber feet, 1/2-inch diameter, and mounting hardware
40 ft.	Coaxial cable, 75-ohm, sub-miniature
3 ft.	PVC sleeving, 3/4-inch ID
1	Cable clamp, 5/8-inch

Note: Equivalent components may be substituted for the recommendations listed above.

4.03 Rubber feet are attached to prevent marring any surface upon which the adapter may be placed and to reduce the possibility of grounding to the other metal cases.

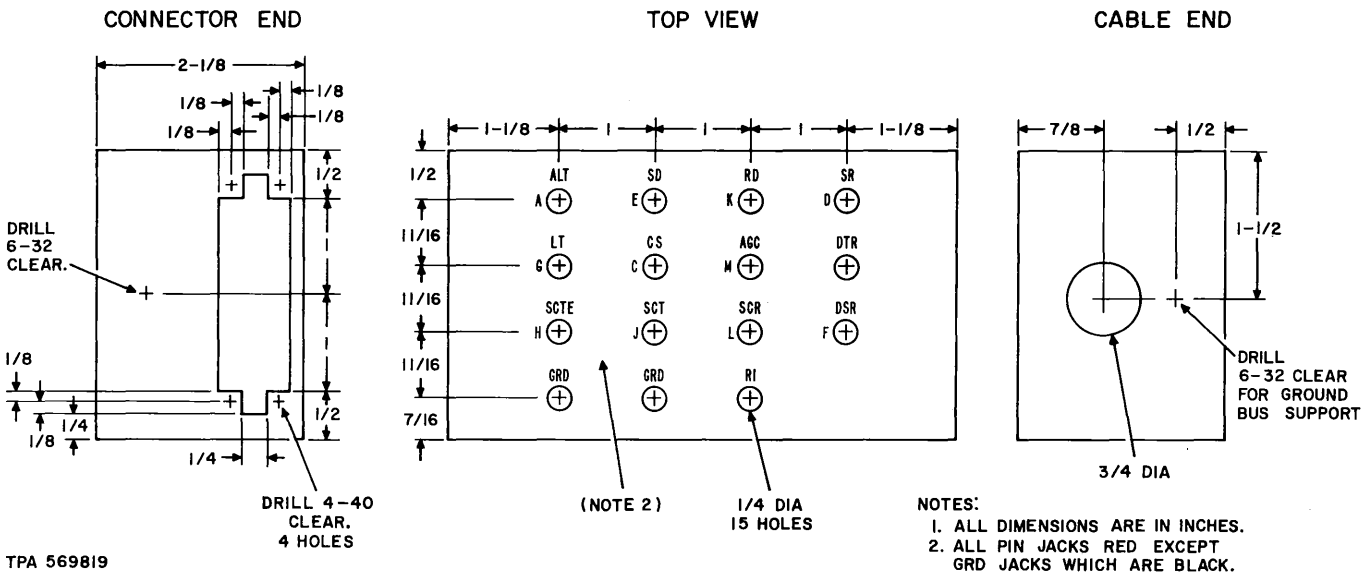

Fig. 2—Mechanical Layout

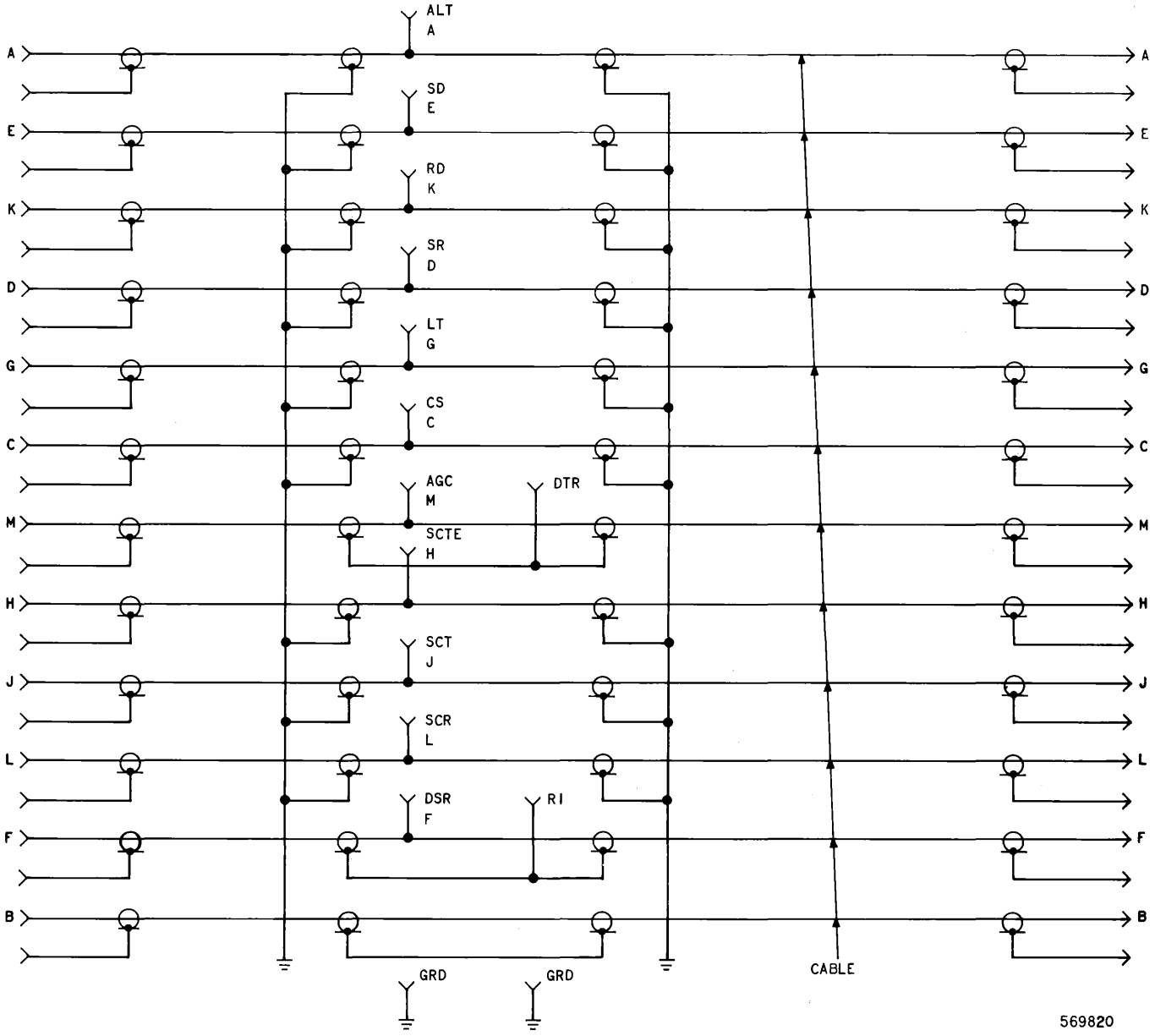

Fig. 3—Wiring Diagram

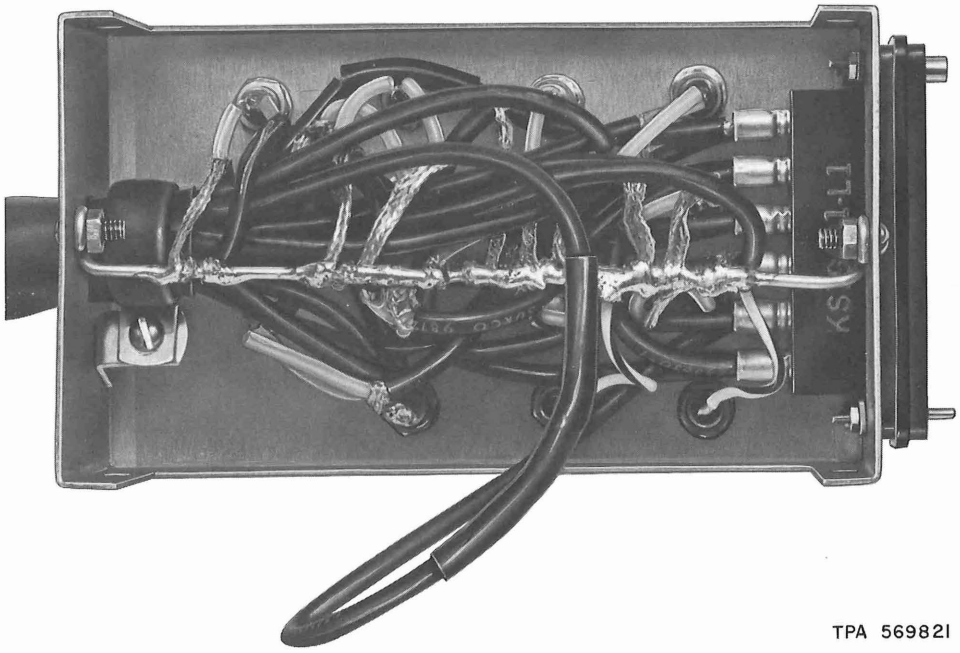

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Fig. 4—Test Adapter Cable Routing