

E-TYPE SINGLE FREQUENCY SIGNALING

TEST EXTENDER SD-99384-01

DESCRIPTION

1. GENERAL

1.01 This section describes the test extender that provides splitting jack access to the transmission and signaling ports of 2400- or 2600-Hz, E-type single frequency (SF) signaling units.

1.02 The extender (Fig. 1) is used at the SF units bay location. It should be placed on a stable support that is at a convenient working level. The SF unit to be tested is removed from the bay and placed in the extenders receptacle for the SF unit. The extender has a cord that connects to the SF units bay mounting.

1.03 The extender can be utilized for locating SF unit trouble as well as providing access for maintenance testing. It provides for a terminated measurement, which is more accurate than a bridged measurement made without its use.

2. EQUIPMENT DESCRIPTION

2.01 There are seven pairs of 218- or 240-type jacks that provide for the splitting of the transmission and signaling leads. These jacks are located on the top panel of the extender. When a 310 plug is inserted into one of these jacks, it terminates the 310 plug in the direction that is designated on the jack, and either opens or terminates the circuit in the opposite direction. One additional jack is provided for monitoring 20-Hz ringing.

2.02 Adjacent to the extender test jacks are three keys designated 20 Hz, TERM, and S-BSY. They are provided to control 20-Hz ringing, apply a 900-ohm termination, and ground the sleeve on those SF units that have the sleeve lead wired. A detailed explanation of the extenders jacks and keys is provided in Tables A and B.

2.03 The extender has a storage area built into one of its ends. This area provides storage for two test cords. One of these cords (shown in Fig. 2), is permanently attached to the extender and connects to the bay mounting (J-1 jack) of the SF unit under test. It is 10 feet long, and can easily reach the top SF units in the bay. The other cord, which must be ordered separately, is used when testing special service SF units in the ground start mode. This cord permits one SF unit to be tested in the test extender while its associated auxiliary SF unit remains in its in service position.

3. CIRCUIT DESCRIPTION

3.01 A schematic drawing of the extender is shown in Fig. 3. The cord designated P1 is connected to the SF units bay mounting J1 jack, and the SF unit is inserted into the jack designated P2. All of the signaling and transmission leads are wired to the extender jacks. When all keys and jacks are at normal, the SF unit is merely extended from its bay location to an accessible location. Battery, ground and SF tone, are wired around the extender jacks.

TABLE A
JACK FUNCTIONS

JACK	FUNCTION	JACK	FUNCTION
20 Hz*	Provides access to the 20-Hz ringing signal applied to the SF unit.	M DROP	Provides access to the output of the SF units associated equipments M lead.
SF LT	Provides access to the output of the SF units transmitter.	S A/B EQPT	Provides access to the SF units associated equipments A and B leads.
SF LR	Provides access to the input of the SF units receiver.		
SF ER	Provides access to the output of the SF units receiver.		
SF ET/2W	Provides access to the input of the SF units transmitter and also the output of the SF units receiver for 2-wire SF units.		
E LINE	Provides access to the output of the SF units E lead.		
M LINE	Provides access to the input to the SF units M lead.		
S A/B SF	Provides access to the SF units A and B leads.		
L IN	Provides access in the input of the line facility in the transmit direction.		
L-OUT	Provides access to the output from the line facility in the receive direction.		
EQPT IN	Provides access to the input of the SF units associated equipment in the receive direction.		
EQPT OUT/2W	Provides access to the output of the SF units associated equipment in the transmit direction and also the input to the equipment in the receive direction for 2-wire SF units.		
E DROP	Provides access to the input of the SF units associated equipments E lead.		

**Note:* The 20-Hz key must be operated to extend the 20-Hz ringing signal to the 20-Hz jack.

TABLE B
KEY FUNCTIONS

KEY	FUNCTION
20 Hz	Operation of this key switches the 20-Hz ringing voltage from the SF unit to the 20-Hz jack.
S-BSY*	Operation of this key provides a ground on the sleeve lead towards the SF units associated equipment.
TERM	Operation of this key provides the EQPT OUT/2W and SF ET/2W jacks with a 900-ohm and 2MF termination. This key is utilized when testing 2-wire SF units.

***Note:** This key is only functional when testing SF units that are wired for sleeve lead control. When testing SF units that have the A and B leads wired in, operation of this key grounds the B lead towards the SF units associated equipment.

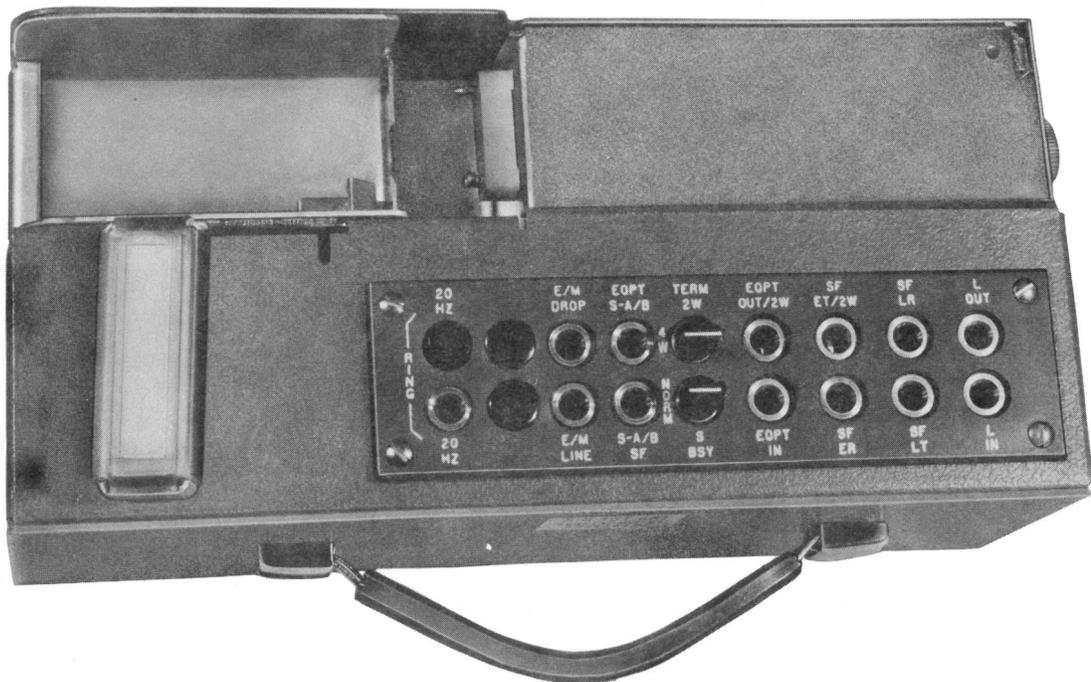


Fig. 1—Test Extender—Jacks and Keys

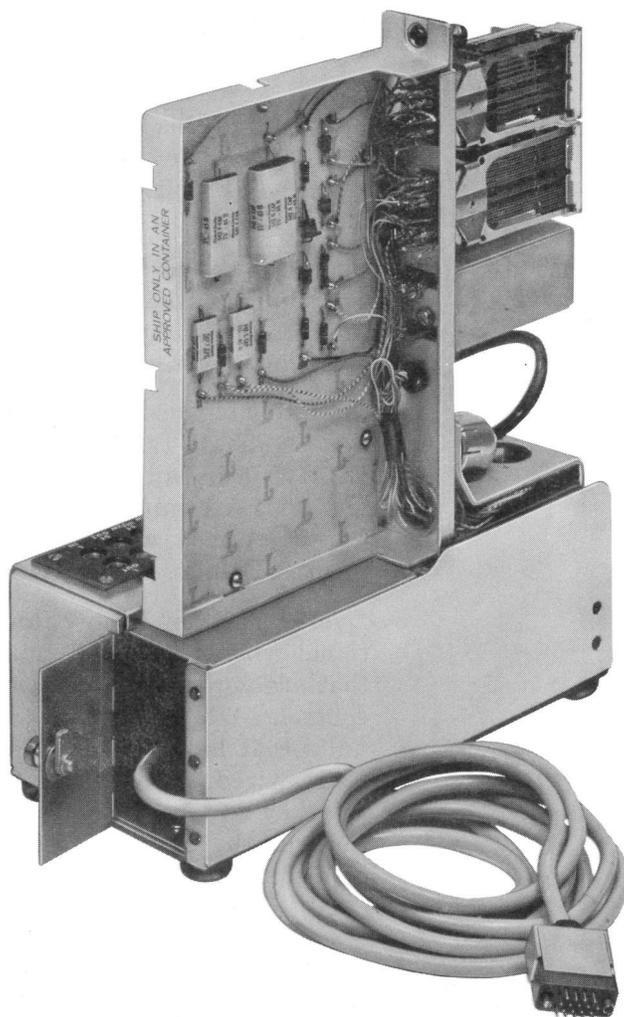


Fig. 2—Test Extender With SF Unit in Place

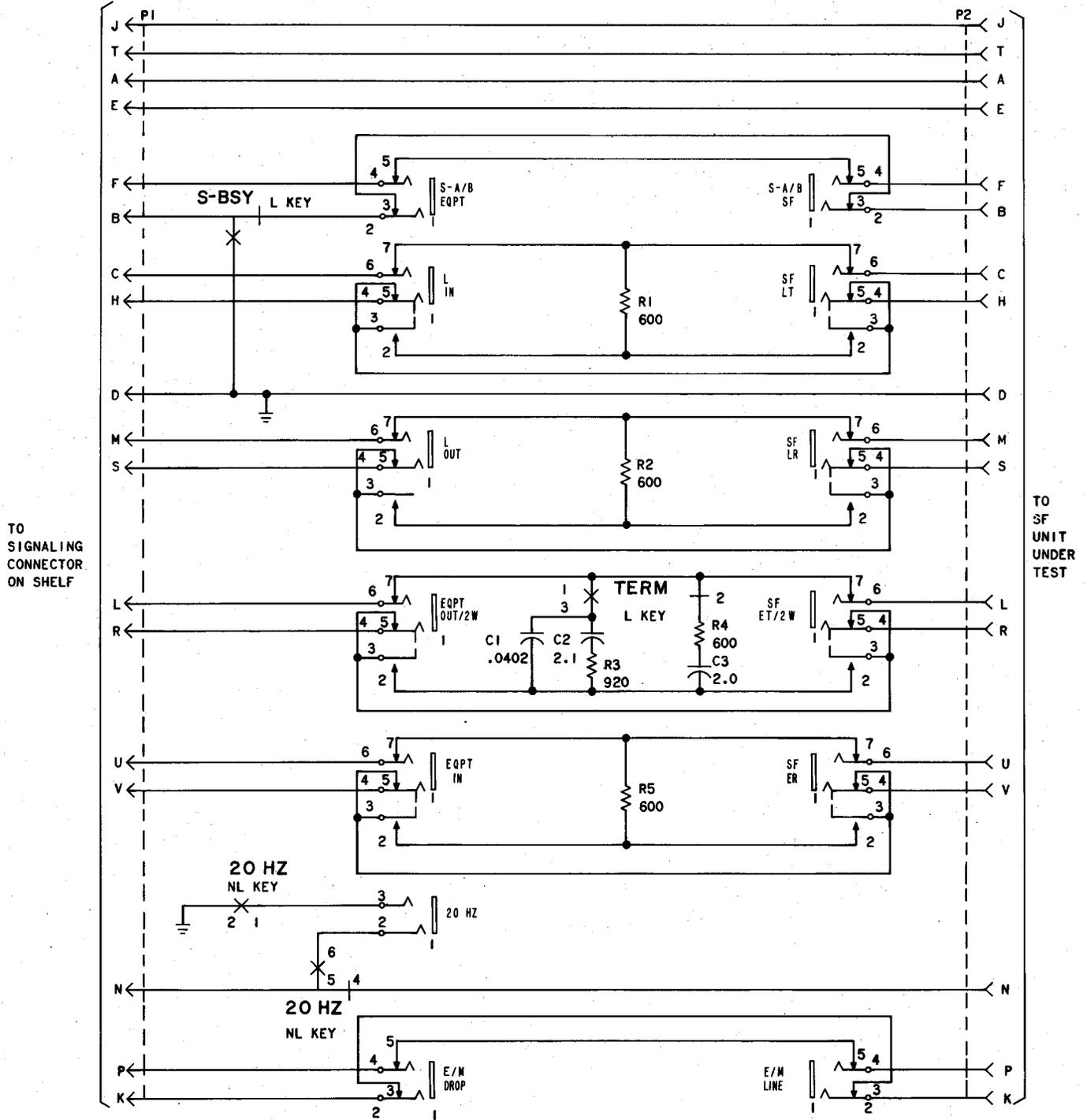


Fig. 3—Schematic Drawing of Test Extender