MF SIGNALING-RECEIVING CIRCUIT SD-95536-01
ADJUSTING PROCEDURE
USING ADJUSTING CIRCUIT SD-95664-01

1. GENERAL

1.01 This section describes the method of adjusting the limiter, variable bias, and signal-present circuits of the signaling-receiving circuit SD-95536-01 when using the adjusting circuit SD-95664-01 which is normally provided for adjusting these circuits. Tests are also made to verify that the pulse corrector circuit is functioning properly.

1.02 This section is reissued to:

(a) Add Tests D, E, and F for the pulse corrector circuit.

(b) Change to Step, Action, Verification format.

This reissue affects the Equipment Test Lists.

1.03 The tests covered are:

1.04 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 4 of this section, indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

1.05 If SD-95664-01, Issue 11B (Fig. C) was installed, then Issues 13AC and 15A must be installed before making this test.

2. APPARATUS

2.01 Adjusting circuit SD-95664-01 which is normally associated with the signaling receiving circuit when the office has an MF current supply circuit, either SD-95086-01 or SD-95391-01.

2.02 Two P3J cords, 3 feet long, equipped with two 241A plugs (3P13A cord).

2.03 One P3E cord, 8 feet long, equipped with two 310 plugs (3P6E cord).

2.04 KS-14510 L1 meter with a pair of KS-14510 L2 test leads and a pair of KS-14510 L3 leads.

2.05 Blocking and insulating tools as required. Use tools and apply as covered in Section 069-020-801.

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2.06 One 32A test set if there is an SP RLS jack in the signaling receiver bay.

2.07 ▶Testing cord, 893 cord, 6 feet long, equipped with two 360 tools (1W13B cord).

2.08 One 141 cord tip.

2.09 Two KS-6278 connecting clips.

2.10 Testing cord, W3M cord, 6 feet long, equipped with one 310 plug and three 360 tools (3W4A cord).◀

3. PREPARATION

STEP	ACTION	VERIFICATION
All Tests		
1	Make-busy the circuit associated with signaling-receiving circuit requiring adjustment.	
2	Verify that no patching or testing cords are connected to the receiving circuit.	
3a	If power supply has been disconnected or if the L1, L2, or BR tube has been replaced— Allow receiver to warm up for at least 10 minutes.	
Tests A, B, C, and F		
4	At MF supply bay— Using P3J cord, patch LEVEL PAD jack to aisle where signaling receiver is located.	
5	Using P3J cord, patch SP PAD jack to aisle where signaling receiver is located.	

4. METHOD

STEP	ACTION	VERIFICATION
A. Adjustment of Limiter		
	Note: Adjustment of the volume limiter can only be made when there is no shunt path on the input. Examine the drawing of the associated circuit (such as a sender register or test circuit) to determine if there is a shunt path on or across the T and R leads. Remove the shunt by blocking apparatus, insulating contacts, or by operating appropriate test circuit keys.	
6	Block nonoperated KP1, KP2, and LK relays.	

STEP	ACTION	VERIFICATION
7	Using a P3E cord, patch the LEV CAL jack to the IN jack of the signaling receiver under test.	
8	Select the 12V scale on the KS-14510 L1 meter.	
9	Connect + and − test leads to T and R respectively of LEV test points.	
10	Adjust P potentiometer.	Meter indicates 11.0 volts.
11	Disconnect meter leads.	
12	Remove blocking tools from KP1, KP2, and LK relays.	
13b	If no further tests are to be made.— Remove patch from LEV CAL jack to IN jack.	
14b	Remove patch from level pad jack and SP pad jack at MF supply bay to aisle where test was made.	
B. Adjustment of Variable Bias		
6	Using a P3E cord, patch the LEV CAL jack to the IN jack of the signaling receiver under test.	
7	Select the 60V dc scale on the KS-14510 L1 meter.	
8	Connect the + and − meter leads to the T and GND jacks, respectively, of the LEV test points.	Meter indicates 31 volts. ***Note:*** Adjust BIAS potentiometer to adjust voltage if necessary.
9	Disconnect meter leads.	
10b	If no further tests are to be made— Remove patch between LEV CAL and IN jack.	
11b	Remove patch from level pad jack and SP pad jack at MF supply bay to aisle where test was made.	
C. Adjustment for Signal-Present Sensitivity		
6	Using a P3E cord, patch the SP CAL jack to the IN jack of the signaling receiver under test.	

STEP	ACTION	VERIFICATION
7	Block operated the KP1 and KP2 relays.	
8	Remove cover from SP relay.	
9b	If adjusting circuit is equipped with SP RLS jack— Connect 32A test set to it.	SP relay operated.
10b	Lock operated white button on 32A test set.	SP relay released. ***Note:*** Adjust SP potentiometer so the SP relay is released when white button on 32A test set is operated and SP relay is operated when white button on 32A test set is released.
11c	If SP CAL key is provided— Operate SP CAL key.	SP relay released. ***Note:*** Adjust SP potentiometer so the SP relay is released when the SP CAL key is operated and SP relay is operated when SP CAL key is released.
12c	Restore SP CAL key.	
13	Disconnect P3E cord from SP CAL and IN jacks.	
14	Remove blocking tools from KP1 and KP2 relays.	
15b	If adjusting circuit is equipped with a SP RLS jack— Disconnect 32A test set from it.	
16	Replace cover on SP relay.	
17d	If no further tests are to be made— Remove patch from LEVEL pad jack and SP pad jack at MF supply bay to aisle where test was made.	

D. Test of Pulse Corrector A Lead

4	▶Select 60V dc scale on KS-14510 L1 meter.	
5	Connect + meter lead to GND.	
6	Connect − meter lead to 4 of KP relay. ***Note:*** Contacts 4 and 7 of KP relay must be made.	If meter indicates over 1.1 volts— Clear trouble before proceeding.

STEP	ACTION	VERIFICATION
7	Select 3V dc scale on meter.	Meter indicates 0.7 $\pm$.4V dc.
8	Select 60V dc scale on meter.	
9	Connect 310 plug of 3W4A cord to SP jack of signaling receiver under test.	
10	Connect sleeve (red conductor) of 3W4A cord to 48V battery.	
11	Connect ring (black conductor) to GND.	
12	Disconnect meter leads.	
13	Remove plug of 3W4A cord from SP jack.	
14b	If no further tests are to be made— Disconnect 3W4A cord from 48V battery and GND.	

E. Test of Pulse Corrector B, D, and E Leads

4	Block operated the KP1 relay.	
5	Select 12V dc scale on KS-14510 L1 meter.	
6	Connect + lead of meter to GND.	
7	Connect – lead of meter to 4B of KP2 relay.	Meter indicates between 9.9 and 7.0 volts.
8	Connect 310 plug of 3W4A cord to SP jack of signaling receiver under test.	
9	Connect sleeve (red conductor) of 3W4A cord to 48V battery.	
10	While carefully observing the meter, touch the ring (black conductor) to GND.	Meter shows momentarily 0.7V deflection. ***Note:*** Step 10 may be repeated to verify deflection.
11	Connect cord used in Step 10 to GND.	SP relay held operated.
12	Remove blocking tool from KP1 relay.	
13	While carefully observing the meter, manually operate the KP1 relay.	Meter shows 0.7V deflection. ***Note:*** Step 13 may be repeated to verify deflection.
14	Disconnect meter leads.	

STEP	ACTION	VERIFICATION
15	Remove cord from SP jack.	
16	Disconnect 3W4A cord from 48V battery and GND.	
F. Test of Pulse Corrector C Lead		
6	Block operated KP1 and KP2 relays.	
7	Select 12V dc scale on KS-14510 L1 meter.	
8	Connect + meter lead to pin 6 of SP BIAS CONT. socket.	
9	Patch LEV CAL jack at test circuit to IN jack of signaling receiver under test.	
10	Touch − meter lead to GND.	Meter indicates 3 to 4 volts.
11	Disconnect − meter lead.	
	Caution: Complete Step 11 before starting Step 12.	
12	Remove patch between LEV CAL jack and IN jack.	
13	Remove + meter lead from pin 6 of SP BIAS CONT. socket.	
14	Remove blocking tools from KP1 and KP2 relays.	
15b	If no further test are to be made— Remove P3J patching cords at MF supply bay.◀	