

MF SIGNALING RECEIVING CIRCUIT SD-95087-01

ADJUSTMENT PROCEDURES

1. GENERAL

1.01 This section describes a method of adjusting the volume limiter circuit of the signaling receiving circuit SD-95087-01.

1.02 This section is reissued to add Test D using sender test frame SD-68491-01. This reissue does affect the Equipment Test List.

1.03 The adjustments covered are:

A. MF Receiver Adjustment—1000-Hz Tone: This procedure adjusts the volume limiter circuit of MF receivers using 1000-Hz 1MW supply. **2**

B. MF Receiver Adjustment—Crossbar Tandem Offices—Using Sender Test Frame SD-25364-01 or SD-25963-01: This procedure adjusts the volume limiter circuit of MF receivers associated with senders. **3**

C. MF Receiver Adjustment—4A and 4M Toll Switching Systems—Using Sender Test Frame SD-68226-01: This procedure adjusts the volume limiter circuit of MF receivers associated with senders. **4**

D. MF Receiver Adjustment 4A and 4M Toll Switching System—Using Sender Test Frame SD-68491-01: This procedure adjusts the volume limiter circuit of MF receivers associated with senders. **5**

1.04 The limiter gain P Potentiometer is used in adjusting the volume limiter circuit.

1.05 The adjustment of P Potentiometer should be made when either or both tubes L1 and L2 are replaced or when the volume limiter circuit indicates the need for readjustment.

1.06 Tests B, C and D require actions at the sender test frame.

1.07 Lettered Steps: A letter a, b, c, etc, added to a step number in Parts 3 and 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.

2. APPARATUS

All Tests

2.01 KS-14510 Volt-Ohm-Milliammeter.

2.02 89A (0.0 dB) Resistor.

2.03 Testing cord, P2CH cord, 6 feet long, equipped with one 310 plug and two KS-14530 connectors.

Test A

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

2.05 Testing cord, W2W cord, 6 feet long, equipped with one 310 plug and two 360-type tools (2W17A cord) and two KS-6278 connecting clips.

2.06 Testing cord, W1AP, 1 foot 1/2 inch long, equipped with two 30 Mueller Mini-Gator clips and two 32 Mueller insulators, one red and one black.

Test B

2.07 Sender Test Frame SD-25364-01 or SD-25963-01.

Tests B, C, and D

2.08 89R (3.5 dB) Resistor.

SECTION 179-610-701

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

Test C

2.11 Sender Test Frame SD-68226-01.

Tests C and D

Test D

2.10 32A Test Set.

2.12 Sender test frame SD-68491-01.

3. PREPARATION

STEP	ACTION	VERIFICATION
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All Tests

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| 1 | Make busy the circuit associated with MF receiver requiring adjustment. | |
| 2a | If power supply has been disconnected or if tube L1 or L2 has been replaced—
Allow MF receiver to warm up for at least one hour. | |
| 3 | At MF receiver—
Remove 89-type resistor from IN pad socket and insert 89A (0.0 dB) resistor. | |
| 4 | Connect LEV jack of MF receiver to volt-ohm-milliammeter jacks, using P2CH cord. | |
| 5 | On volt-ohm-milliammeter—
Set range switch to 12 VOLTS AC. | |

4. METHOD

STEP	ACTION	VERIFICATION
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A. MF Receiver Adjustment—1000-Hz Tone

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| 6b | If MF receiver is equipped with an IN jack—
Connect IN jack of MF receiver to 1000-Hz supply, using 3P6E cord. | |
| 7c | If MF receiver is not equipped with an IN jack—
At upper terminal block—
Using 2W17A cord, connect terminals 1 and 2 to 1000-Hz supply. | |
| 8c | At upper terminal block—
Using W1AP cord, connect terminals 3 and 4 together. | |
| 9 | Adjust P potentiometer until meter indicates 3.5 volts. | |

STEP	ACTION	VERIFICATION
10	Remove all testing and patching cords.	
11	Remove 89A resistor from IN pad socket and reinsert original 89-type resistor.	
12	Restore circuit associated with MF receiver to service.	
<p>B. MF Receiver Adjustment—Crossbar Tandem Offices—Using Sender Test Frame SD-25364-01 or SD-25963-01</p>		
<p><i>Note:</i> The MF supply distributing resistors to the test frame should be 619 ohms.</p>		
6	At sender test frame— Remove 89-type resistor from B pad socket and insert 89R (3.5 dB) resistor.	
7b	If using test circuit SD-25364-01— Operate G ₁ key, PCS or PCR key to select particular sender associated with MF receiver under test.	
8b	Block KA relay operated.	
9b	Block PP1 relay nonoperated.	
10b	Operate KSS, LL, ST, and SF keys.	
11c	If using test circuit SD-25963-01— Operate sender select switches to select particular sender associated with MF receiver under test.	
12c	Block FKA and SF relays operated.	
13c	Operate KSS, LL, and ST keys.	
14	At MF receiver— Adjust P Potentiometer until meter indicates 3.5 volts.	
15	Remove testing cord from LEV jack and volt-ohm-milliammeter.	
16	Remove 89A resistor from IN pad socket and reinsert original 89-type resistor.	
17	At sender test frame— Restore all keys.	

SECTION 179-610-701

STEP	ACTION	VERIFICATION
18b	Remove blocking tools from JA and PP1 relays.	
19c	Remove blocking tools from FKA and SF relays.	
20	Remove 89R resistor from B pad socket and reinsert original 89-type resistor.	
21	Restore circuit associated with MF receiver to service.	
C. MF Receiver Adjustment—4A and 4M Toll Switching System—Using Sender Test Frame SD-68226-01		
	<i>Note:</i> The MF supply distributing resistors to the test frame should be 619 ohms.	
6	At sender test frame— Remove 89-type resistor from C pad socket and insert 89R (3.5 dB) resistor.	
7	Operate PC key, PCS or PCR key to select particular sender associated with MF receiver under test.	
8	Insert 310 plug of 32A test set into RC jack.	
9	Operate 3FKP, TA, LL, CSTO, and REP keys.	
10	Operate any unit key in the ACA key strip.	
11	Block relay KP nonoperated.	
12	Operate ST key.	Test circuit starts.
13	When SP lamp lights— Operate and lock white button of 32A test set.	PSF lamp lighted. KP lamp extinguished.
14	At MF receiver— Adjust potentiometer P until meter indicates 3.5 volts.	
15	Remove testing cord from LEV jack and volt-ohm-milliammeter.	
16	Remove 89A resistor from IN pad socket and reinsert original 89-type resistor.	
17	At sender test frame— Restore all keys.	

STEP	ACTION	VERIFICATION
18	Remove blocking tool from relay KP.	
19	Remove 32A test set from RC jack.	
20	Remove 89R resistor from C pad socket and reinsert original 89-type resistor.	
21	Operate RN key.	All lamps extinguished.
22	Restore circuit associated with MF receiver to service.	

D. MF Receiver Adjustment—4A and 4M Toll Switching Systems—Using Sender Test Frame SD-68491-01

◆ **Note:** The MF supply distributing resistors to the test frame should be 619 ohms.

6	At sender test frame— Remove 89-type resistor from C pad socket and insert 89R (3.5 dB) resistor.	
7	Operate PSFT, PCST, PFU, and PC keys to select particular sender associated with MF receiver under test.	
8	Insert 310 plug of 32A test set into RC jack.	
9	Operate 3FKP, TA, LL, CSTO, DSS, and REP keys.	
10	Set SF switch to 1.	
11	Block relay KP nonoperated.	
12	Operate ST key.	Test circuit starts.
13	When PS lamp lights— Operate and lock white button of 32A test set.	TKP lamp lighted.
14	At MF receiver— Adjust potentiometer P until meter indicates 3.5 volts.	
15	Remove testing cord from LEV jack and volt-ohm-milliammeter.	
16	Remove 89A resistor from IN pad socket and reinsert original 89-type resistor.	

SECTION 179-610-701

STEP	ACTION	VERIFICATION
17	At sender test frame— Restore all keys.	
18	Remove blocking tool from relay KP.	
19	Remove 32A test set from RC jack.	
20	Remove 89R resistor from C pad socket and reinsert original 89-type resistor.	
21	Set SF switch to 0	
22	Operate RN key.	All lamps extinguished.
23	Restore circuit associated with MF receiver to service. ⬇	