

BELL SYSTEM PRACTICES

SECTION P35.476

**Teletypewriter and Manual
Telegraph Station and P.B.X.
Installation and Maintenance**

**Issue 1, April, 1942
AT&T Co. Standard**

**101389M AND 101481M SETS OF PARTS
FOR HANDLING CHADLESS TAPE
NO. 14 TRANSMITTER-DISTRIBUTOR
INSTALLATION**

1. GENERAL

1.01 This section gives information for the installation of the 101389M and 101481M sets of parts on a 14 Type Transmitter-Distributor.

1.02 The 101389M set of parts equips the transmitter-distributor to handle chadless tape as well as fully perforated tape.

1.03 The 101481M set of parts provides for the closing of a contact when tape is inserted in the transmitter and which opens when the end of the tape passes through the transmitter. The 101481M set of parts can be installed only on transmitter-distributors equipped with the 101389M set of parts.

2. PIECE PARTS

2.02 The 101389M and 101481M sets of parts are composed of the following:

1 101389M Set of Parts

5 101715M Terminal (Assembly) each as follows:

1 101713M Terminal

1 101714M Spring

1 20-217A 2400-1110

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1 101703M Spring (Assembly) each as follows:

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1 101393M Tape Retaining Lid (Assembly) each as follows:

- 1 99230M Lid Plate
- 1 35-137M Spring
- 1 36-51M Shaft
- 1 95954M Screw Plate
- 12 95953M Shims
- 1 300-322M Latch
- 1 1164M Screw
- 1 97445M Retainer Lid
- 1 300-320M Shaft
- 1 300-319M Lid Holder
- 2 36-153M Dowel
- 1 97468M Tape Guide Plate
- 1 101441M Cam
- 1 101439M Feed Lever Stop
- 1 2191M Lock Washer
- 1 3649M Washer

101481M Set of Parts

- 2 1168M Screw
- 2 3640M Lock Washer
- 2 103-27M Washer
- 1 97448M Contact Pin Guide
- 1 97447M Contact Pin
- 1 97467M Contact Spring (Assembly)
- 2 80342M Screw
- 2 2191M Lock Washer
- 1 97449M Cable

3. INSTALLATION OF 101389M SET OF PARTS

- 3.01 Remove and discard retaining lid assembly by removing the two 1159M screws which fasten the lid assembly to the top plate of the transmitter.
- 3.02 Replace the tape guide plate by the new 97468M tape guide plate which has a scribed line and a hole for the tape-out contact pin.
- 3.03 Install the new retaining lid assembly 101393M with the set of parts using the two screws removed in 3.01.

3.04 Remove the transmitter cover, the top plate assembly (held by four 1160M screws), the base plate, the left bracket, and the upper spacing contact assembly held by two 1303M screws.

3.05 Loosen the five spring anchor screws.

3.06 Unhook the 4708M feed lever spring from the spring anchor.

3.07 Remove the two 1169M screws which mount the bracket and remove the contact lever assembly by carefully raising the contact end while lowering the sensing pins out of the guide slots in the lever guide.

3.08 Remove the five contact tongues, keeping them in order so that they may be reassembled in their original relative positions.

Note: This operation is necessary to avoid injury to the insulation by heat in soldering.

3.09 Then proceed as follows:

(a) Unsolder the spring from the contact tongue and discard the spring and anchor assembly.

(b) Clamp edges of tongue, between jaws of a vise, if one is available, with the soldering lug projecting horizontally, free of the vise.

(c) Hook the free loop of the spring of the 101715M terminal assembly over the soldering lug of the tongue.

(d) Solder the new 101715M terminal assembly to the contact tongue, taking care to align the spring to be vertical, and at right angles to the soldering lug of the tongue and to have the curved portion of the anchor facing toward the contact end of the tongue. Apply heat sparingly to avoid annealing the spring. Apply solder sparingly so that no accumulation of it will interfere with the assembly of the pileup.

(e) Remount the five contact tongue assemblies.

3.10 Reassemble the contact lever assembly to the transmitter, carefully passing the tape pins under the lever guide, making sure that each lever is properly positioned in its guide slot. Also, each spring anchor should be inserted carefully behind its wire terminal and the contact end of the lever properly in line with its contact screw.

3.11 Remove the 33-158M screw that clamps the lever guide to the rear transmitter bracket. Mount the new 101439M feed lever up-stop bracket to the lever guide with the projecting

portion of the bracket at the top and toward the front, using the 35-158 screw just removed with a 200-2212M washer under the head of the screw.

- 3.12 Replace the 77074M cam with the new 101441M cam with the surface marked "X" facing downward.
- 3.13 Replace the upper spacing contact assembly, the left bracket, the base plate, the top plate assembly and the transmitter cover.
- 3.14 Check to see that the contacts on the tongues line up properly with the contact screws.

4. INSTALLATION OF 101481M SET OF PARTS

- 4.01 Remove the snap panel, transmitter cover, and top plate assembly.
- 4.02 Holding the top plate assembly so that the bottom side is facing upward, remove and discard the two 1162M screws that clamp the front feed roll bearing. Mount the 97448M contact pin guide on top of the front feed roll bearing with the bent-over portion toward the feed wheel, using the two 1168M screws, 3640M lock washers and 103-27M washers.
- 4.03 Mount the 97467M contact spring assembly with the springs extending horizontally toward the rear to the 77004M bracket, using the two tapped holes at the front of the casting and clamping it in place with the two 80342M screws and 2191M lock washers.
- 4.04 Reinstall the top plate assembly after inserting the 97447M contact pin in its guide with the large end down, holding the pin in place until it rests on the insulator of the contact spring.
- 4.05 Solder the two leads at one end of the 97449M cable to the soldering lugs of the tape-out contact springs, the red lead to the upper spring, the white to the lower.
- 4.06 Run the 97449M cable along the existing cable from the tape stop switch to the slip connector terminal block, tying where necessary.
- 4.07 Connect the two leads at the other end of the 97449M cable to terminals at the slip connector terminal to provide the type of service desired. Where the tape-out contacts are used to stop the transmitter, connect the leads as follows:
 - (a) Transfer the black lead from slip connector Terminal 8 to Terminal 4.
 - (b) Connect the white lead of the 97449M cable to slip connector Terminal 8 and the red lead to Terminal 4.

4.08 Where spark protection is required, for example, when the tape-out contacts are used to stop the transmitter, install an 82378M set of parts normally used for d-c governor spark protection (not furnished with the 101481M set of parts). Where a synchronous motor is used mount the 82378M set of parts to the left of the motor unit, using the two tapped holes provided in the base casting. (Where a series a-c or d-c motor is used some other location for the 82378M set of parts will have to be used.) Connect the two outside terminals of the 82391M condenser (1 mf) to the two terminals of the start magnet using No. 18 or No. 20 Deltabeston wire, taking care to run the wire so as not to interfere with any moving parts.

4.09 Replace the transmitter cover and the snap panel.

5. ADJUSTMENTS

5.01 The adjustments for a transmitter-distributor equipped with the 101389M and 101481M sets of parts are covered in the section on requirements and procedures for the 14 Type Transmitter-Distributor.