

BELL SYSTEM PRACTICES
Teletypewriter and Manual
Telegraph Station and P.B.X.
Installation and Maintenance

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AT&T Co. Standard

15 TYPE APPARATUS

IMPROVEMENTS AND CHANGES

I. GENERAL

1.01 This section lists improvements and changes in 15 type teletypewriter apparatus which have recently become available. The points involved are listed below and also discussed individually.

1.02 **For 15 Type Teletypewriter Apparatus:**

Friction Feed of Multiple Copy Roll Paper.
Set of Parts for Installing 80420(M) Cover Paper Guide.

Improved Power Switch.

Change in Carriage Return Lock Bar Stud.

New Universal Function Lever Spring.

Change in Covers and Cover Front Plates.

Elimination of Vibration in 15 Type Covers.

Change in Copyholders.

Set of Parts for Motor Control on "Figures, Blank, H."

1.03 **For 15 Type Perforator-Transmitters:**

Improved Locking for Detent Star Wheel.

Improvement in 78732(M) Feed Pawl Bracket.

89069(M) Parts for Depressing Universal Bar.

2. 15 TYPE TELETYPEWRITER APPARATUS

2.01 **Friction Feed of Multiple Copy Roll Paper** is facilitated by the provision of two discs which may be slipped over the end of the paper spindle and are held flush against the ends of the paper roll by retaining springs on the discs which engage grooves in the spindle. The catalogue No. "86822(M) Paper Spindle Discs" covers a set of two discs. Their installation requires modification of the paper spindle to provide grooves of the proper width to receive the disc retain-

ing springs. Detailed dimensional requirements for cutting grooves in the standard spindle will be furnished with each set of discs.

2.02 **A Set of Parts for Installing 80420(M) Cover Paper Guide** is covered by designation "87154(M) Set of Parts."

2.03 **An Improved Power Switch** is available under the present catalogue number which incorporates modifications expected to give better performance.

2.04 **Change in Carriage Return Lock Bar Stud:** The designation "88856(M) Carriage Return Lock Bar Stud" has been assigned to a new stud replacing the 80515(M) stud. The base of the new stud is made somewhat longer so that the lock washer which has been used between the stud and the casting may be omitted so that the stud is given a better bearing on the main frame casting. In order to prevent sidewise slap of the carriage return lock bar a spring washer 88857(M) should be used between the plain washer and the cotter pin to hold the bar against the shoulder. This can be used only with the 88856(M) Lock Bar Stud.

In order to reduce wear on the top of the stud due to the downward pressure caused by the lock bar latch spring, a new spring 80945(M) with considerably less tension will be used in new apparatus.

2.05 **A New Universal Function Lever Spring 86873(M)** will be employed on machines manufactured in the future in order to provide sufficient tension to meet the present requirements in all cases.

2.06 **Change in Covers and Cover Front Plates:** Because of manufacturing variations in covers and cover front plates it has been found that the upper front surfaces of the cover front plates sometimes provide a poor fit against the cover surface even when all the mounting nuts have been securely tightened. Two extra mounting screws are, therefore, being provided at the upper edge of new front plates to prevent bulging of the plates when mounted in place. New covers will be provided with the necessary slots for accommodating these screws. When new cover plates are to be used on old covers, the required slots must be filed in the cover. This can be done in the field by using a cover front plate as a template to indicate the positions where slots should be cut in the cover. The code designations for the front plates will not be changed.

2.07 Elimination of Vibration in 15 Type Covers: To prevent vibration of the hinged doors in 15 type teletypewriter covers, a lacing of cotton sleeving will be provided on new covers near the lower edge of the door which covers the line test key and the door which covers the range finder. These doors will be made somewhat thinner to allow for the lacing at the bottom and the filler blocks will be made slightly thicker so that the doors will be flush with the outside surface of the cover at the top.

The addition of the lacing may be incorporated in covers in the field where desired. It is not necessary, however, on old covers to replace the present doors with doors of the thinner material. Brown lacing for walnut or mahogany covers or black lacing for black covers has been assigned the designations shown below. In either case an 18" length sufficient for both doors will be furnished.

88876(M) Lacing (Brown)

88877(M) Lacing (Black)

2.08 Change in Copyholders: The two sheet metal portions of 15-A, 15-B and 15-C copyholders have in the past been fastened together by rivets. In order to facilitate manufacture these rivets will shortly be replaced by screws welded to the copyholder proper and extending through the plate which fastens to the teletypewriter cover. Lock washers 2191(M) and nuts 34-55(M) will be used on the screws. This two-piece arrangement permits dismantling the copyholder for shipment so that it may be packed in a smaller container.

2.09 Set of Parts for Motor Control on "Figures, Blank, H": A set of parts is available under the catalogue number "87403(M) Set of Parts" which arranges a 15 type typing unit equipped with the motor control mechanism so that the motor will stop only on the "Figures, Blank, H" combination. Any typing between the "Blank" and the "H" signals will cause the motor control mechanism to remain inoperative.

3. 15 TYPE PERFORATOR-TRANSMITTER

3.01 Improved Locking for Detent Star Wheel: As a result of loosening of the Detent Star Wheel 122-60(M) a lock plate is now being employed on new apparatus to hold the nut more securely. A new Detent Star Wheel is required provided with two grooves into which the lock plate fits. After the nut is tightened over the lock plate, one finger of this plate is bent over the nut to hold it from turning and one finger is bent into the slot in the star wheel. Where it is desired to incorporate

this improvement on units in the field, the following parts are required:

- 86919(M) Lock Plate
- 86920(M) Detent Star Wheel.

3.02 Improvement in 78732(M) Feed Pawl Bracket: Since breakage of the 78732(M) feed pawl bracket has been noted, the specifications for this bracket have been changed to call for a stronger material in order to reduce difficulty in the field. The catalogue number of this bracket will remain unchanged. Since this part is also used in the electrical end-of-line indicator for the No. 14 teletypewriter, the same improvement will be noted on any replacement of feed pawl brackets for these indicators.

3.03 89069(M) Parts for Depressing Universal Bar: Improvement to lighten the key touch when perforating tape has been authorized for incorporation in 15 type perforator-transmitters manufactured in the future. It consists principally of an auxiliary lever whereby on throwing the tape-keyboard key lever to the tape (or perforate) position, the universal bar is depressed and held as long as the lever remains in the tape position. This relieves the keys of the work required to depress the universal bar with the depression of each character when perforating tape. This improvement may be incorporated in 15 type perforator-transmitters already in the field by ordering "89069(M) Parts for Depressing Universal Bar."