\*INSTRUCTIONS FOR CONVERTING A MODEL 28 PRINTER SET (TYPING UNIT LP6, LP9, FROM BELL SYSTEM 28B, 28C, 28D TO 28E, 28G; AND CABINETS LAC203\*\*, LAC204\*\*; BELL SYSTEM 28B, 28C) FROM NON-SELECTIVE CALLING TO SELECTIVE CALLING USING THE 153941 OR 154758 MODIFICATION KIT

## GENERAL

- \*a. The 153941 or 154758 Modification Kit converts a non-selective calling printer set (Typing Unit LP6, LP9; from Bell System 28B, 28C, 28D to 28E, 28F, 28G and Cabinets LAC203\*\*, LAC204\*\*; Bell System 28B, 28C) to a selective calling printer set and provides the group call directing character "U". When using the 154758 Modification Kit the typing unit must be equipped with the 152337 and 153945 Modification Kits.
- b. The 153918 Modification Kit and a desired function bar in addition to the 153941 Modification Kit must be installed for applications requiring an individual call directing character.
- c. The 153915 and 153918 Modification Kit, the 157164 Slide (used in place of the 154639 Slide) and the desired function bars must be installed in addition to the 153941 Modification Kit for applications requiring sequential call directing character operation.
  - \*d。 The 153941 Modification Kit consists of:

| 4 | 3599     | Nut 4-40 Hex.            | 4   | 153644  | Stud                        |
|---|----------|--------------------------|-----|---------|-----------------------------|
| 9 | 4703     | Spring                   | 4   | *155933 | Plate, Guide                |
| 9 | 72522    | Wick                     | 8   | *103863 | Spacer                      |
| 9 | 90517    | Spring                   | 2   | *155934 | Plate                       |
| 4 | 110743   | Washer, Lock             | 1   | *155938 | Slide                       |
| 2 | 119649   | Ring, Retainer           | 1   | 153919  | Modification Kit (Listed in |
| 1 | 121243   | Clamp, Cable             |     |         | Specification 5820S)        |
| 4 | 125011   | Washer, Flat             | 1   | 153920  | Modification Kit (Listed in |
| 1 | 151739AN | Screw 6-40 x 3/16 Hex.   |     |         | Specification 5827S)        |
| 3 | 152089   | Latch                    | 1   | 153945  | Modification Kit (Listed in |
| 2 | 152121   | Lever                    |     |         | Specification 5788S)        |
| 3 | 152298   | Lever                    | 3   | 154613  | Latch                       |
| 1 | 152337   | Modification Kit (Listed | 1   | *155941 | Slide                       |
|   |          | in Specification 5823S   | ) 1 | 154646  | Lever                       |
| 2 | 152642   | Lever                    | 2   | 154647  | Lever                       |
| 9 | 152653   | Pawl                     | - 1 | 154669  | Shaft                       |
| 3 | 152660   | Plate Spring             | 1   | 155120  | Bar, Function (U)           |
| 1 | 152665   | Bar, Function - LTR      | 1   | 155126  | Bar, Function (-)           |
| 2 | 152666   | Bar, Function - FIG      | 1   | 155129  | Bar, Function (SP)          |
| 1 | 152667   | Bar, Function - CR       | 1   | 155130  | Bar, Function (LF)          |
| 1 | 152668   | Bar, Function - LF       | *1  | 172503  | Switch Assembly             |
| 1 | 152673   | Bar, Function - UCH      | 1   | 157104  | Cable Assembly              |
| 2 | 155935   | Fork                     | 9   | 157240  | Spring                      |
| 2 | 153609   | Roller                   | *1  | 2904WD  | Diagram, Wiring             |
|   |          |                          |     |         | 0 ,                         |

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e. The 154758 Modification Kit consists of:

| 1 | 152810  | Stunt Box Assembly - Arrangement "AN" |
|---|---------|---------------------------------------|
|   | 1.52010 | 14 1000 11 1000 1100 1100 1100        |

- 1 153919 Modification Kit (Listed in Specification 5820S)
- 1 153920 Modification Kit (Listed in Specification 5827S)
- f. The 153915 or 153918 Modification Kit consists of:

|     |        |                      | 153915 | 153918 |
|-----|--------|----------------------|--------|--------|
| 1 . | 4703   | Spring               | ×      | ×      |
| 1   | 72522  | Wick                 | ×      | ×      |
| 1   | 90517  | Spring               | ×      | ×      |
| 1   | 152089 | Function Lever Latch |        | ×      |
| 1   | 152121 | Lever                | ×      |        |
| 1   | 152298 | Lever                |        | ×      |
| 1   | 152653 | Pawl                 | ×      | ×      |
| 1   | 154613 | Function Lever Latch | ×      |        |
| 1   | 157240 | Pawl Spring          | ×      | ×      |

g. For part numbers referred to in the following text and for parts ordering information see Teletype Model 28 Printer Parts Bulletin.

# 2. INSTALLATION (Figure 1)

- a. 153941 Modification Kit
  - (1) Remove the typing unit from the base.
  - (2) Remove the stunt box in accordance with standard paractice.
- (3) Modify the 154944 Stunt Box arrangement "AR" to 152810 arrangement "AN" as follows:
- (a) Remove and retain the 153581 Handle, 151692 Screw and two 2191 Lock Washers, discrad the identification screw stamped "AR".
- \*(b) Remove and discard 155067 Cable Assembly, the 152143 Contact Assembly or 157070 Switch Assembly (which is attached to the cable) and the 151689 Screws and 110743 Washers.
  - (c) Remove and discard the 152127 clips from slots 28 and 35. Replace screws.
- (d) Remove the 152889 Retainer (from left side of stunt box) and the center 150547 Shaft so that function levers can be removed and installed.
- (e) Loosen the three 5740 Screws in the 150689 Guide Blocks so that the spring plates can be snapped in or out.

(f) Remove the following parts from slot 28 and install in slot 10 with a 152666 Function Bar, 152653 Function Pawl and 157240 Spring with 72522 Wick:

|               |       | ,   | o rononon rann  | arra        | 0, 2             | 10 5                                 | ring           | ******        | , 25        | £2 11       | ICK:   |             |      |
|---------------|-------|---|---|-------------|------------------|--------------------------------------|----------------|---------------|-------------|-------------|--------|-------------|------|
|               |       | 90517<br>154613<br>152121                                       | Spring<br>Latch<br>Function Lever                                 | -           |                  | 4703<br>2693                         | -              | pring         |             | ar (D       | ) isca | rd)         |      |
|               | (g)   | Remove the following parts from slot 22 and install in slot 15: |   |             |                  |                                      |                |               |             |             |        |             |      |
|               |       | 90517<br>152660<br>152641<br>4703                               | Spring<br>Spring Plate<br>Function Lever<br>Spring                |             | 157<br>72        | 2669<br>7240<br>2522<br>2653         | S <sub>I</sub> | pring<br>/ick | on B        |             |        |             |      |
| 152653 Funct  |       |   | ne following parts<br>157240 Spring w                             |             |                  |                                      |                | nstal         | l in        | slot 2      | 25 wi  | th a        |      |
|               |       | 153437<br>90517<br>152660                                       | Function Bar<br>Spring<br>Spring Plate                            |             |                  | 2641<br>4703                         |                | uncti         | on L        | ever        |        |             |      |
|               | (i)   | Remove th   | e following parts   | fron        | n slo            | 1 38                                 | and i          | nstal         | l in :      | slot 1      | 16:    |             |      |
|               |       | 90517<br>152660<br>152641<br>4703                               | Spring<br>Spring Plate<br>Function Lever<br>Spring                |             | 157<br>72        | 2668<br>7240<br>252 <b>2</b><br>2653 | S <sub>F</sub> | oring<br>'ick | on B        |             |        |             |      |
|               | (j)   | Remove th   | e following parts   | fron        |                  |                                      |                |               |             |             | 31 wi  | th a        |      |
| 154647 Funct  | ion l | ever:   |   |             |                  |                                      |                |               |             |             |        |             |      |
|               |       | 90517<br>152660<br>4703<br>152673                               | Spring<br>Spring Plate<br>Spring<br>Function Bar                  |             | 72<br>152        | 7240<br>2522<br>2653<br>2641         | W<br>Fu        |               | on Po       |             | (Disc  | ard)        |      |
|               | (k)   | Install the   | following parts   | in slo      | ot inc           | dicat                                | ed; n          | umb           | ers re      | efer t      | o sec  | uenc        | e of |
| installation: |       |   |   |             |                  |                                      |                | SL            | ОТ          |             |        |             |      |
|               |       |   |   | 27          | 30               | 26                                   | 13             | 6             | 11          | 14          | 28     | 37          |      |
|               |       | 152653<br>72522<br>157240<br>155129                             | Function Pawl<br>Wick<br>Spring<br>Function Bar                   | 1<br>2<br>3 |                  | 1<br>2<br>3                          | 1<br>2<br>3    | 1<br>2<br>3   | 1<br>2<br>3 | 1<br>2<br>3 |        | 1<br>2<br>3 |      |
|               |       | 4703<br>152642  | Spring<br>Function Lever  | 4<br>2<br>6 | .2               | 5                                    | 5              | 5             | 5           | 5           | 2      | 5           |      |
|               |       | 152660<br>90517<br>152666<br>152121<br>154613                   | Spring Plate<br>Spring<br>Function Bar<br>Function Lever<br>Latch | 7           | 5<br>1<br>3<br>4 | 8                                    | 8<br>6<br>7    | 8             | 7 8         | 8           | 5      | 7           |      |
|               |       | 152665<br>154646<br>152667                                      | Function Bar<br>Function Lever<br>Function Bar                    |             |                  | 6                                    | 4              |               |             |             |        |             |      |

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#### SLOT

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|        | •              |   |   |   |   |   |
|--------|----------------|---|---|---|---|---|
| 155120 | Function Bar   | 4 |   |   |   |   |
| 152298 | Function Lever | 6 |   |   |   |   |
| 152089 | Latch          | 7 |   | 7 | 4 |   |
| 152673 | Function Bar   |   | 4 | • |   |   |
| 154647 | Function Lever |   | 6 |   |   |   |
| 152668 | Function Bar   |   |   | 4 |   |   |
| 152298 | Function Lever |   |   | 6 | 3 |   |
| 155126 | Function Bar   |   |   |   | 1 |   |
| 155130 | Function Bar   |   |   |   | - | 4 |
| 152642 | Function Lever |   |   |   |   | 6 |
|        |                |   |   |   |   |   |

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- (I) Tighten the three 5740 Screws loosened in paragraph 2.e.
- (m) Replace the center 150547 Shaft and 152889 Retainer previously removed in paragraph 2.d.
- (n) Place the 154669 Shaft through the holes in the function lever extensions of slots 11 and 31 so that the retainer grooves are located on each side of the extension in slot 31, then insert the 119649 Retainer Rings.
- (o) Install the slide mechanism parts as follows: (The slide nearest slot 8 will be operated by levers in slots 6, 7, 8 and 9; the slide nearest slot 14 will be operated by the lever in slot 14.)
- (1) Thread the two 153644 Studs into the top plate of the stunt box, one behind the other, at the two mounting holes nearest slot 8 and slot 14.
- (2) Place the 155933 Plate over the studs so that the ear is towards the front of the typing unit and extends upward.
  - (3) Place one 103863 Spacer over each stud.
- (4) Place the 155941 Slide nearest slot 8 (with the top of the function lever in slot 6 through the hole in the slide) and the 155938 Slide nearest slot 14 (with the top of the function lever in slot 14 through the hole in the slide) on the 155933 Plates, to the right of the studs (typing unit viewed from the rear) and with the angle projections extending to the left.
- (5) Place the 155934 Plate over the studs with the two projections extending towards the rear of the typing unit.
  - (6) Place one 103863 Spacer over each stud.

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- (7) Place the 153609 Roller on the under side of the 155935 Fork Pin. (The shoulder of the pin faces downward.)
- (8) Place the 155935 Fork over the studs so that the tines extend toward the front of the typing unit.
- (9) Place the 155933 Plate over the studs so that the ear is towards the front of the typing unit, and extends downward.
- (10) Secure each assembly with the 125011 Flat Washer, 110743 Lock Washers and 3599 Nuts.
- \*(p) Discard the two 151880 Nuts of the 172503 Switch Assembly which are for handling purposes only. Use the 151689 Screws and 110743 Lock Washers furnished to mount the 172503 Switch Assembly on top of the stunt box. Check to see that the contact arm insulators are in alignment with the function levers in slots 25, 26, 27, and 28. If necessary, loosen the screws and position the switch to meet the requirements. Check to see that there is some clearance between the contact arm and vertical face of the clip when the play in the arm is taken up to make the clearance minimum.
- (4) Remove the 154650 Clip from the code bar detent bracket which blocks suppression code bar.
- (5) Install the 152337 Modification Kit following procedure in specification 5823S supplied.
  - (6) Install the 153945 Modification Kit following procedure in specification 5788S.
- (7) Replace the 153581 Bar using the 151692 Screw and 2191 Lock Washers which were retained and the 151739 AN Identification Screw stamped "AN". Reinstall the stunt box.
- (8) Install the 153919 Modification Kit, the 157104 Cable Assembly, and the 121243 Cable Clamp following procedure in specification 5820S supplied.
- \*(9) Solder the 157104 Cable Assembly to the 172503 Switch Assembly as shown in wiring diagram 2904WD. Tie the 157104 Cable to the 150544 Tie Bar with lacing twine.

#### NOTE

Care should be exercised when soldering, lacing or routing the cables so as not to tug or pull unnecessarily on the contact spring to prevent distortion or damage to the spring.

## \*b. 154758 Modification Kit

- (1) Follow procedure in paragraphs 2.a.(1) and (2).
- (2) Remove and retain the 86835 Spring, 152462 and 153463 Latch from the 152461 Connector Bracket.

- (3) Remove and retain the two 151658 Screws, and the two 2191 Lock Washers which mount the 152467 Connector.
- (4) Remove both of the 152464 Insulators from the 152461 Connector Bracket and retain one of the insulators.
- (5) Remove the 152467 Connector from the 152461 Connector Bracket and unsolder the stunt box cable from the 152467 Connector.
- (6) Remove the 151692 Screw, 2191 Lock Washer, 150040 Screw and 2191 Lock Washer which mount the 152461 Connector Bracket to the right side frame. Discard the 152461 Connector Bracket.
  - (7) 152810 "AN" Stunt Box arrangement.
- \*(a) Make certain that the 172503 Switch Assembly has the contact arms in the right slots (157887, 157899, 157899, 157887 in slots 1, 2, 3 and 4 respectively).
- (b) Install the "AN" Stunt Box into the typing unit accordance with standard practice.
  - (8) Follow procedure in paragraphs 2.a. (8) and (10).

## ADJUSTMENTS

For adjustments procedure refer to standardized adjustment information.

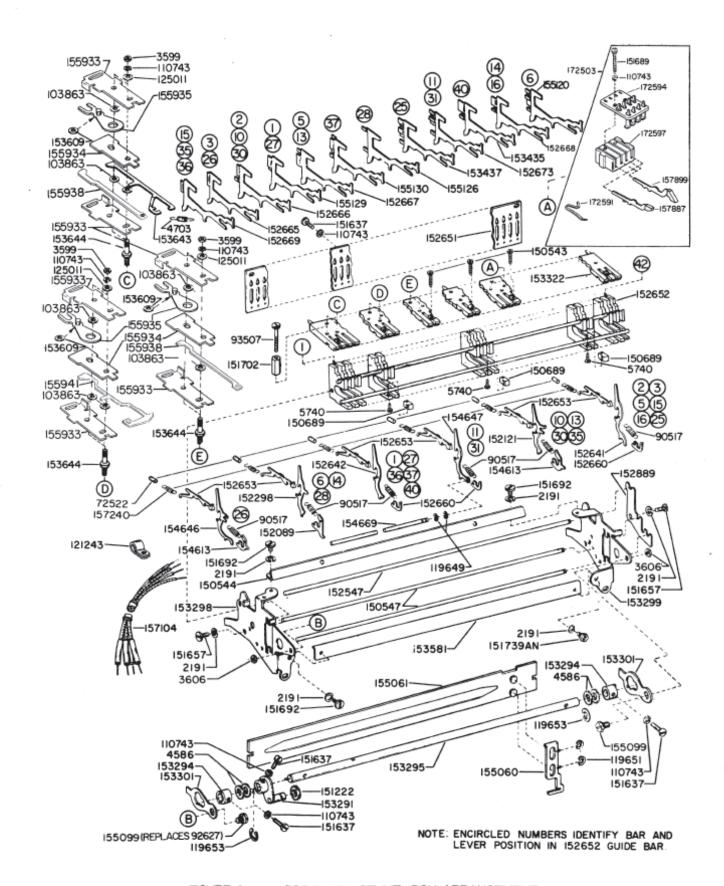


FIGURE I 152810 AN STUNT BOX ARRANGEMENT