

**BELL SYSTEM PRACTICES**  
**Teletypewriter Stations**

**SECTION P39.610**  
**Issue 3, May, 1955**  
**AT&TCo Standard**

## **20 TYPING UNIT**

### **REQUIREMENTS AND PROCEDURES**

<b>Contents</b>	<b>Page</b>
1. General .....	1 ↵
2. Typing Unit, Requirements and Procedures .....	3
3. BSP References .....	4

#### **1. GENERAL**

1.01 This section is limited to information peculiar to the 20 typing unit and to modifications of Section P36.610 to make that section applicable to the 20 typing unit.

1.02 This section is reissued to:

(a) Change paragraph numbers to coordinate with Section P36.610, Issue 6.

(b) Refer to Section P36.615 and remove information on the Two-Color Printing Mechanism from P39.610 herewith.

Changes are marked with marginal arrows. ↵

1.03 Table 1 shows the relationships of the selecting cam, levers, vanes, etc., for the 20 typing unit, as viewed from the front of the unit in its normal position.

TABLE I

←

Sequence of Code Selection	Cam Peaks	Selector Levers	Swords	T Levers	Vanes	Bell Cranks	Code Bars
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
0	0	0	0	0	6	6	6
	(Second from left)	(Second from left)	(Second from left)	(Second from left)	(Top)	(Short-est)	(Front)
	(Extreme right)	(Extreme right)	(Extreme right)	(Extreme right)	(Bottom)	(Longest)	(Rear)
	(Extreme left—first in pile-up)	(Extreme left—first in pile-up)	(Extreme left—first in pile-up)	(Extreme left—first in pile-up)			

- 1.04 Where LTRS and FIGS are mentioned in P36.610 they should be read as UNSHIFT and SHIFT, respectively.
- 1.05 Wherever the letters R or RY are referred to, 4 or 4y (y-lower case), respectively, should be used.

## 2. TYPING UNIT, REQUIREMENTS AND PROCEDURES←

**Note:** The following paragraphs, numbered to fit into the outline of P36.610, Issue 6, give additions and changes← for P36.610 which are required to make the Requirements and Procedures of that section applicable to the 20 typing unit.

**\* Used hereafter, refers to paragraphs in BSP Section P36.610.**

\*2.30 (Replaces) **Right and Left Pullbar Spring-Bracket:** With the pullbar bail in its extreme rear position the end pullbar and the eighth pullbar should have a slight amount of play, not more than .004", between the typebar and the bracket when the typebar is in the guide. **Fig. 17**

(a) To adjust:

(1) Position the right and left pullbar spring-brackets.

**Note:** If the second, third, fourth, fifth, sixth or seventh pullbar binds against the bracket when its respective typebar is moved to the typebar guide by hand, readjust the bracket so that all eight pullbars are free and so that the end pullbar and at least one of the other seven pullbars have not more than .004" of play between the typebars and the bracket when their respective typebars are in the typebar guide.

\*2.44 (Omit) Sixth-vane extension spring.

\*2.46 (Omit) Sixth-vane.

\*2.55 (Replaces) **Printing and Spacing Cut-out Function-Lever Spring:** Rotate the mainshaft until the printing bail is in its extreme rear position. Then unhook the function-lever spring from the spring-plate. Hook the scale in the spring eye. It should require Min 22 oz, Max 30 oz to stretch the spring to its position length.

**Note:** The above spring tension applies to all function levers, regardless of their location in the typing unit, which block printing and spacing but perform no other function.

\*2.57 (Omit) Unshift-on-space cut-out lever.

\*2.62 (Omit) Sixth-vane extension.

20 TYPING  
UNIT  
REQUIRE-

**P39.610**

MENTS AND  
PROCEDURES

\*2.70 (Replaces) **Line-feed Detent-lever Spring:** With the typing unit resting in its normal upright position, hook the scale over the end of the detent-lever and pull in line with the spring. It should require Min 2-1/2 lb, Max 3-1/2 lb to start the detent-lever moving.

\*2.72 (Replaces) **Line-feed check-screw head** should enter the 15th notch ahead of the one in which the detent-roller rests and the top of the screw-head should clear the face of the tooth by not more than .020", when the check screw is held in the bottom of the notch. Check the adjustment on at least four ratchet teeth located 90° apart. **Fig. 32**

(a) To adjust, reposition line-feed check-screw. On old-style line-feed check-screws with a slotted head and flat sides the flat sides should be vertical and the adjustment made by turning the screw in or out 1/2 turn at a time. If necessary, the line-feed check-post stop-screw may be backed off when making this adjustment.

\*2.116 (Omit) Sixth-vane-detent spring.

\*2.133 (Replaces last two lines in Paragraph [a]) last character desired on the line is partially over-printed by the next character.

\*2.134 (Omit) Ribbon-Oscillator Lever.

\*2.138 (Replaces) **Margin Bell:** Loosen the margin-bell-cam thumb-screw and adjust the cam so that it is approximately 1/16" from the right side-frame. Tighten the thumb-screw. **Fig. 39**

### 3. BSP REFERENCES

<u>Apparatus Item</u>	<u>Section</u>	<u>Notes</u>
Typing Unit	P36.610	As modified herein
Keyboard	P39.620	
Base	P36.630	
Selector Mechanism	P32.001	
Cleaning	P30.010	↙
Lubrication	P36.601 P36.601.1	
Two-Color Printing Description, Requirements and Procedures	P36.615	↙