

**BELL SYSTEM PRACTICES**  
Teletypewriter and data  
Stations

**SECTION P65.910**  
**APPENDIX 1**  
Issue C, April, 1960  
TPT&TCO

**TELETYPEWRITER SELECTOR UNIT**  
**P92.901.04 - TADS**  
**CODE SELECTION WITHOUT AUTOMATIC START**

## 1. GENERAL

1.01 This Appendix supplements Section P65.910. It gives the circuit description and testing procedure for the station selector modified per Appendix 1 of P92.901.04 for use with No. 15 and 19 S & R teletypewriters for keyboard and tape sending as an equivalent P92.901.03 station selector without automatic start.

1.02 The circuit description information is limited to those features that are different from the standard features of a P92.901.04, or P92.901.03, station selector.

1.03 The testing procedure details only the tests that are different from the standard test procedure of a P92.901.04 or P92.901.03 system. Where standard tests apply reference is made to the respective section.

1.04 This section is reissued to correct paragraph 7.09. ←

## 2. LIMITATIONS

2.01 This (modified) station selector is limited for use on a manual operated system using the following options:

- A Without priority
- D Manual station turn-on
- H Open and close activate

V Single digit  
Y Outlying station  
ZY FIGS H End of Message Code  
ZW For use with Figs 1A and 1C of P92.901.04

2.02 The following options may be applied:

I Omit own CDC  
M With Monitor Key  
N Without Monitor Key  
Q Answer-Back  
R Tabulation

### 3. FUNCTIONS

3.01 This (modified) station selector provides for operation equivalent to a P92.901.03 station selector when used on a manual operated system without automatic start. It therefore provides functions not normally associated with a P92.901.04 station selector. These functions are:

Keyboard sending  
Answer back  
Approximate 15 second time-out for  
unselected stations

### 4. CIRCUIT DESCRIPTION

4.01 For the purpose of this appendix the circuit description is limited to those functions that have been added to or modified in the P92.901.04 station selector.

#### A - Figs H Disconnect

4.02 At the selected stations, operation of the H relay connects ground to terminal 1 of the ET electron tube and shunts resistor R10B which results in an approximate 800 millisecond delay, after transmission on the line ceases, prior to firing the ET electron tube.

4.03 At the non-selected stations the previously operated M relay connects ground to terminal 1 of the ET electron tube. Upon cessation of line signals an approximate 15 second delay is introduced prior to firing of the ET electron tube. This delay is produced by resistors R10 and R10B in the charging path of capacitor A.

## **B - Answer Back**

4.04 The Answer Back feature, when provided, produces a discreet answer back signal from the selected station. Receipt of the proper CDC at the selected station connects negative battery to terminal 37 of TS A to operate relay CA and to momentarily operate the Answer Back relay. Operation of the Answer Back relay mechanically depresses the proper keyboard lever to send the desired answer back character to the line. Keyboard transmission to the line is accomplished in a normal manner.

## **C - Omission Of Own CDC (I Option)**

4.05 Operation of the Control key to the ON position, in addition to causing an open (start) signal being sent to the line via the D option, completes a path for operation of the CA relay when the M relay releases. The path being from negative battery at 2-3b of M relay, 10-9-11-12-6-7 of control key, varistor S1 and I option to the winding of relay CA.

## **5. INSTALLATION**

5.01 Installation of this equipment shall be in accordance with the procedure outlined in BSP Section P65.910 for the P92.901.04 station selector.

## **6. LOCAL TEST PREPARATION**

6.01 Local test preparation shall be in accordance with the procedure outlined in BSP Section P65.910 for the P92.901.04 station selector.

## 7. TESTING PROCEDURE

7.01 These tests assume that the station is arranged for single digit calling and are in accordance with the option limitations outlined in a preceding paragraph. All relays released, BUSY lamp OFF.

7.02 Operate M and D relays manually. M and D relays hold operated M1 and MD relays operate.  
Motor OFF  
BUSY lamp OFF.

7.03 Open line circuit for two seconds. M and M1 relays release BUSY lamp ON  
Motor ON

7.04 Close line circuit. D and MD relays release.

7.05 Shift platen to LTRS position.

7.06 Close CDC contacts manually CA relay half steps  
BZ relay operates  
BUZZER sounds  
Answer Back relay operates (If provided)

7.07 Release CDC contacts CA relay full steps  
Answer Back relay releases

NOTE: Operation of Answer Back relay causes selected character to be sent on line from the keyboard.

7.08 Send CAR. RET. from keyboard. No action takes place.

7.09 Send FIGS H from keyboard. M, M1, D, and MD relays operate  
BZ relay releases and BUZZER silences.  
CA relay released.

- |  |   |
|--|---|
| 7.10 Operate control to up position (ON)                                 | Line opens momentarily<br>M, M1, D and MD relays release<br>CA relay operates<br>(If I option provided)<br>Motor ON<br>BUSY lamp ON |
| NOTE: If I option not provided, operate CA relay manually.               |   |
| 7.11 Send CAR. RET. from keyboard  | No action in selector   |
| 7.12 If station is equipped with a No. 19 type TTY, prepare a test tape. | 10 LTRS, text, carriage return, line feed, FIGS H, 10 LTRS.   |
| 7.13 Insert tape in TD   | No action   |
| 7.14 Operate control key to down position (Start)                        | S relay half steps<br>(Thermistor time delay)   |
| 7.15 Release control key to normal                                       | S relay full steps<br>Transmitter starts and sends tape   |
| 7.16 FIGS H sent on line.  | H relay operates and ET tube fires momentarily<br>M, M1, D, MD relays operate<br>CA relay releases<br>BUSY lamp OFF<br>Motor OFF    |
| 7.17 If station is equipped with a No. 15 TTY, send FIGS H from keyboard | Same action as in 7.16 above.   |

## 8. REFERENCE

8.01 An Appendix to BSP Section P65.920 is also issued to give a cross reference to this section, as the modified P92.901.04 station selector is similar in its operation to a P92.901.03 station selector.

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