

P.O.W.
PROGRAMMED ORDER WRITING CIRCUIT
PSD-70045-01
PERFORMANCE TESTS

Contents	Page
1. GENERAL	1
2. PREPARATION	1
3. TESTS AND TABLES	1

1. GENERAL

- 1.01 This section provides a procedure for testing the programmed order writing teletypewriter arrangement per PSD-70045-01.
- 1.02 Detailed circuit description is covered in PCD-70045.
- 1.03 This performance test provides a complete test of the various functions of the circuit. Though all individual tests must be met, an interchange of any or all of them may be made at any time. This allows for variation in clearing reported troubles.
- 1.04 In making these performance tests, the 8-level program tape used to prepare a form is required.
- 1.05 Perforations in the program tape are numbered 0, 1, 2, 3, 4, 5, 6, and 7. Perforations 1 to 5 are for standard 5-level teletype information. Levels 0, 6, and 7 are used for control functions.
- 1.06 Function control perforations:

<u>Perforation</u>	<u>Function Abbr.</u>	<u>Function</u>
0, 6, 7	SOM	Start of Message
0, 6	OLC	Optional Line Count
0, 7	SOL	Start of Line
6, 7	ENT	Entry
0	ST	Start
6	ENTS	Entry Space

2. PREPARATION

- 2.01 Check that all connectors are connected.
- 2.02 Turn on all power switches.
- 2.03 Check that all motors are operating and the 28KSR and 28ROTR line circuit is closed.
- 2.04 Align the form and form feed parts.

3. TESTS

- 3.01 If when performing any individual test, the results obtained do not agree with the results specified, examine the circuitry associated with the particular test. Make corrections if necessary, and repeat the test.
- 3.02 The performance tests are arranged in table form to test three modes of operation.
- (1) Table 1 tests the "keyboard mode". In this condition, the unit acts as a simple KSR room circuit.
- (2) Table 2 tests the "edit mode". In this mode, the attendant may edit any 5-level tape by adding, removing, or changing characters as a new tape is produced.
- (3) Table 3 tests the "program mode". In the program mode, the attendant may enter information by keyboard but under control of the program tape.
- 3.03 When testing the program mode of operation (Table 3), position the program tape for each function test. In all tests, the tape shall be positioned with the character preceding the function to be tested over the sensing pins. Example: To position the program tape for the start of message test, operate the program transmitter START-STOP switch to the STOP position. Find the SOM perforations (0, 6, 7) in the tape. Usually, this function is found added to a LTRS code for an all-level perforation and with a LTRS preceding it. Place the program tape in the transmitter with the LTRS perforation over the sensing pins.
- 3.04 Explanation of symbols used in the tables:

- ↓ - Letters Shift
- ↑ - Figures Shift
- < - Carriage Return
- > - Space
- ≡ - Linefeed

TABLE 1
KEYBOARD MODE TESTS
 Both Transmitter-Distributor (START-STOP) switches in STOP position

<u>Feature Tested and Procedure</u>	<u>Signal Source</u>	<u>Monitoring Copy</u>	<u>Circuit Action</u>	<u>Alarms</u>
1. KEYBOARD SENDING				
(a) Type RYRYRY	KBD	RYRYRY		
2. SEQUENCE ALARM				
(a) Type ≡	KBD	≡	Keyboard Blinds	Lamp and Buz
(1) Type ↓	KBD	No Copy	No Action	
(2) Depress ARL Key			Keyboard Unblinds	Lamp and Buz Release
(b) Type <↓	KBD	<↓	Keyboard Blinds	Lamp and Buz
(1) Depress ARL Key			Keyboard Unblinds	Lamp and Buz Release
(c) Type <≡↑	KBD	<≡↑	Keyboard Blinds	Lamp and Buz
(1) Depress ARL Key			Keyboard Unblinds	Lamp and Buz Release
(d) Type <≡≡↓	KBD	<≡≡↓	No Action	
3. FORM FEED				
(a) Type the End of Message Sequence (↑H or ↑Z)	KBD	End of Message Sequence	Form Feeds to New Form Position	

TABLE 2
EDIT MODE TESTS
 Program transmitter START-STOP switch in STOP position

<u>Feature Tested and Procedure</u>	<u>Signal Source</u>	<u>Monitoring Copy</u>	<u>Circuit Action</u>
1. PREPARATION			
(a) Prepare a test tape consisting of several lines of RY characters each terminated with $\leq\equiv\downarrow$			
(b) Depress STOP key			
2. TRANSMITTER STEP			
(a) Place test tape in transmitter			
(b) Operate START-STOP switch to RUN			
(c) Depress STEP key (Repeat several times)	XMTR	Sensed Character	XMTR steps one character per operation
3. CHARACTER SUBSTITUTION			
(a) Type X (Repeat several times)	KBD	X	XMTR steps one character per operation
4. TRANSMITTER START AND STOP			
(a) Depress START key	XMTR	Sensed Characters	XMTR runs
(b) Depress STOP key (Repeat (a) and (b) several times)			XMTR stops
(c) Remove tape from XMTR			
(d) Type end of message sequence (\uparrow H or \uparrow Z)	KBD	End of Message Sequence	Form feeds to new form position

TABLE 3
PROGRAM MODE TESTS
Entry transmitter START-STOP switch in STOP position

<u>Function Tested and Procedure</u>	<u>Tape Position</u>	<u>Signal Source</u>	<u>Monitoring Copy</u>	<u>Circuit Action</u>
1. PREPARATION				
(a) Align form and form feed parts				
(b) Insert program tape in program XMTR				
(c) Operate program XMTR START-STOP switch to the RUN position				
2. START OF MESSAGE				
(a) Depress START key	SOM	XMTR	↓↓	XMTR rolls, senses SOM and stops
(b) Type >		KBD	>	XMTR steps one character
3. TRANSMITTER START				
(a) Type XX	ST	KBD XMTR	XX and characters in program tape after ST sensed	When XMTR senses the ST code the XMTR-DISTR becomes free running until a stopping code is sensed
4. ENTRY				
(a) Depress START key	ENT	XMTR	Character preceding and associated with the ENT code	XMTR rolls, senses ENT and stops
(b) Type >		KBD XMTR	> and characters in program tape after > is typed	Typing space causes the same condition as if a ST code was sensed
5. ENTRY SPACE				
(a) Depress START key	ENTS	XMTR	Characters preceding and associated with the ENTS code	XMTR rolls, senses ENTS and stops
(b) Type >		KBD	>	XMTR steps one character
(c) Depress START key		XMTR	Characters in program tape	XMTR-DISTR is free running until a stopping code is sensed

TABLE 3 (Continued)
PROGRAM MODE TESTS

<u>Function Tested and Procedure</u>	<u>Tape Position</u>	<u>Signal Source</u>	<u>Monitoring Copy</u>	<u>Circuit Action</u>
6. OPTIONAL LINE COUNT				
(a) Depress START key	OLC	XMTR	Characters preceding and associated with the OLC code	XMTR rolls, senses OLC code and stops
(b) Type X>X		KBD	X>X	No Action
(c) Type <		KBD	<	No Action
(d) Type ≡		KBD	≡	XMTR rolls, searching for another OLC or SOL line
(e) Type ↓ (Sequence clearing)		KBD	↓	No Action
7. START OF LINE				
(a) Type <≡	SOL	KBD XMTR	<≡ and characters in program tape after SOL sensed	XMTR rolls, senses SOL. XMTR-DISTR then free running until a stopping code is sensed
(b) Type ↓ (Sequence clearing)		KBD	↓	No Action
8. RE-CYCLE TO START OF MESSAGE				
(a) Depress START key	SOM	XMTR	↓↓	XMTR rolls, senses SOM and stops
(b) Type end of message sequence (↑H or ↑Z)		KBD	End of message sequence	After typing unit feeds to new form, XMTR discards tape until next SOM is sensed, then stops