PERFORMANCE REPORTING OPTION (PRO) 150
PREINSTALLATION INFORMATION
CALL MANAGEMENT SYSTEM (CMS)

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1. GENERAL

1.01 This section provides installation planning information for the Performance Reporting Option (PRO) 150. The PRO 150 provides management information for users of a DIMENSION* PBX with Automatic Call Distribution (ACD) Service for up to 143 consoles.

1.02 Whenever this section is reissued, the reason(s) for reissue will be listed in this paragraph.

*Registered trademark of AT&T.

1.03 Related documents containing descriptive, identification, installation, test, and maintenance information are referenced in Part 8.

1.04 The following is a checklist of typical requirements that should be considered prior to ordering or installing PRO 150 equipment:

(a) Floor plan

- Floor space
- Wall space
- Environmental requirements

(b) Cabling distances

( ) Power source

(d) Grounding scheme

(e) Accurate recordkeeping

(f) Type and quantity of peripheral devices

(g) Location of PBX Peripheral Interface Circuit (PIC)

(h) Location of PDP† 11V03 minicomputer

(i) Terminal equipment location.

1.05 To minimize installation time, all of the following items should be available at the customer location for the actual installation:

(a) Approved PRO 150 installation floor plan

(b) Working data link to PBX

(c) Applicable terminal devices (three maximum) and appropriate connecting cords

(d) Printer and appropriate connecting cords

(e) Data set(s) and appropriate connecting cords

(f) Commercial power and lighting

(g) Approved grounding facilities

(h) Working data link to maintenance center

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(i) Preinstallation worksheets completed

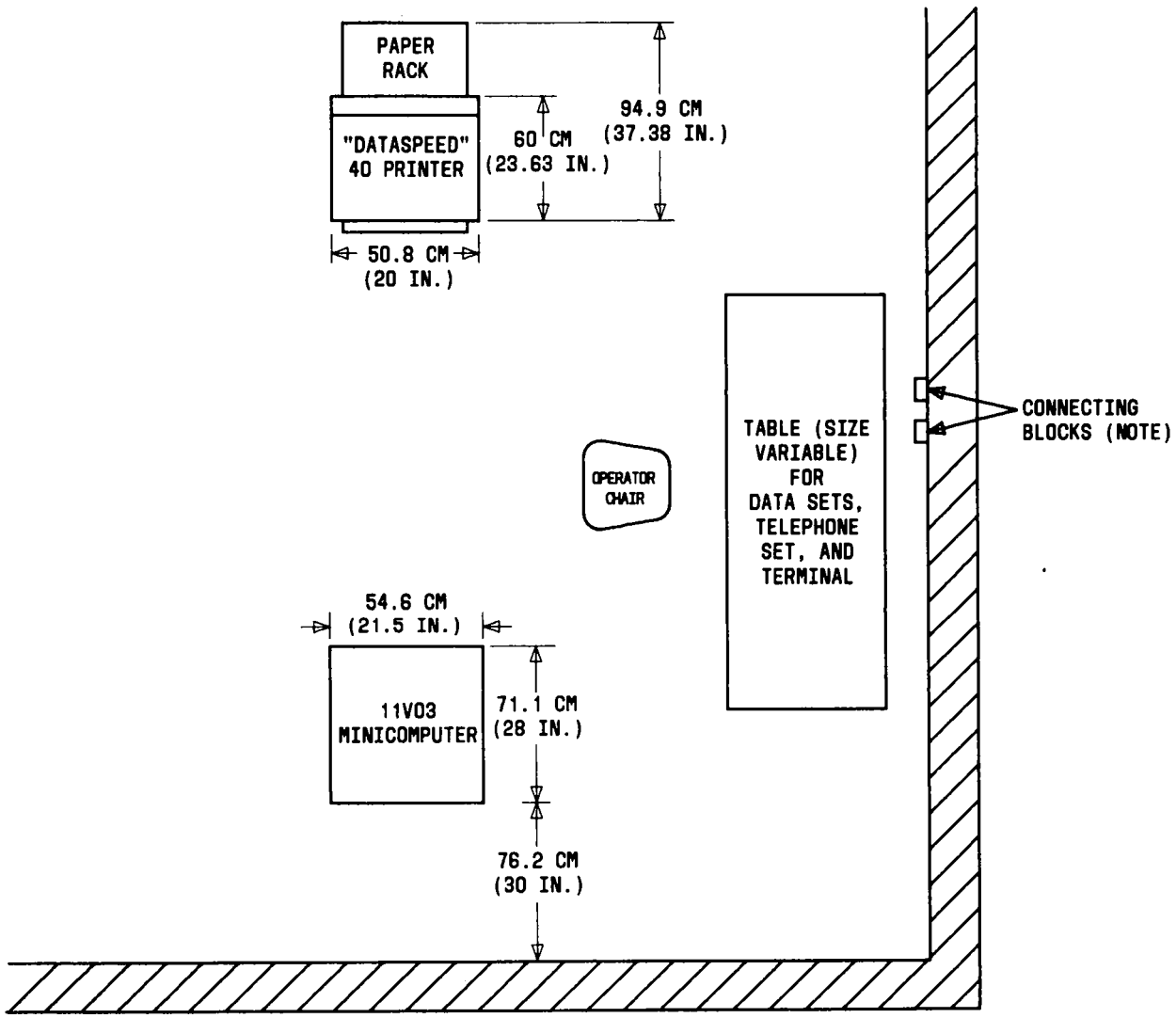
(j) Tools and test equipment

(k) Connecting block(s).

2. FLOOR PLAN

2.01 A typical floor plan for the PRO 150 is shown in Fig. 1. The connecting block(s) should be located as indicated to simplify testing and maintenance.

2.02 A sketch similar to Fig. 1 should be drawn of the proposed installation to show the placement of cabinets, termination field, and location of customer-provided power outlets for the minicomputer and vendor-supplied equipment.



NOTE: ONE REQUIRED FOR MAINTENANCE DIAL-UP PORT.
A SECOND MAY BE REQUIRED FOR A REMOTE TERMINAL.

Fig. 1—Typical Floor Plan

3. ENVIRONMENTAL REQUIREMENTS

A. Atmosphere and Temperature

3.01 Extreme conditions of temperature and humidity may have damaging effects on the PRO 150 equipment not only at the time of exposure but also after a normal environment is restored. These environmental requirements must be met and operating before installation begins.

3.02 Air conditioning equipment is required to maintain the computer room temperature in the range of 18° to 24°C (65° to 75°F) with relative humidity of 20 to 55 percent. A temperature sensor and alarm are recommended to ensure that the computer room temperature does not exceed 18° to 27° C (65° to 80°F). The alarm would indicate a possible air conditioner problem before damage occurs.

3.03 For the PRO 150 storage and transportation environments, the permissible extremes are 52°C (125°F) with 15 percent RH and −34°C (−30°F) humidity uncontrolled.

3.04 The following environmental conditions apply to an operating PRO 150:

(a) Temperature range 18° to 24°C (65° to 75°F) with 21°C (70°F) optimum.

(b) Maximum temperature change of 8.3°C/hour (15°F/hour).

(c) Maximum humidity range of 20 to 80 percent with 50 percent optimum.

(d) Maximum humidity change of 2 percent/hour.

(e) Altitude 1981.2m (6500 ft) maximum.

(f) Air circulation and acoustic materials:

- Minimum of 2.4m (8 ft) in height for ceilings (to permit efficient cooling air circulation)
- No fiberglass, softwood fiber, straw cork, or expanded polyethylene (painted) acoustic materials.

(g) Static electricity protection shall conform to IEEE Standard 142-1972 which recommends that floor resistance should be more than 250,000 ohms and less than 1 million megohms, measured by two electrodes placed .9m (3 ft) apart anywhere on the floor. It is recommended that an antistatic mat or antistatic carpet be used in front of the color terminal equivalent to MISCO No. 8235, 91 by 152 cm (3 by 5 ft), available from MISCO, INC, 963 Holmdel-Keyport Road, Holmdel, N.J.

(h) Lighting:

- No dimmer switches, 650 lumens/m² (60 footcandles) minimum at 76.2 cm (30 in.) above the floor
- In display terminal areas, 433 lumens/m² (40 footcandles).

(i) The PRO 150 dissipates the following:

- Computer room, 1058 kg cal/hr (4200 BTU/hour) (maximum).
- Display terminals, 525 kg cal/hr (2085 BTU/hour) (maximum).

3.05 The PRO 150 should be installed in an air-conditioned space. Environments which should be avoided for installation of cabinets because of potential temperature problems include:

(a) Rooms located nearby that contain a major heat source (ie, boiler room, furnace room, manufacturing areas using hot processes) can affect the room temperature.

(b) Areas where the ambient room temperature can exceed 38°C (100°F) are:

(1) Nonventilated rooms with less than 4.6 m² (50 ft²) of floor space

(2) Nonventilated rooms with two or more exterior walls that are frequently exposed to high ambient temperatures.

3.06 It is recommended that the PRO 150 equipment be located away from equipment, such as copy machines, which produce contaminants. Gold fingers and connector interfaces could chemically deteriorate through the corrosive effects of gases. Environments containing high concentrations of corrosive gases, such as sulfur or chlorine, should not be used as installation sites.

B. Transportation

In Transit

3.07 During transit the control unit should remain packaged in the original shipping carton until delivered to the installation site. Without exception the control unit should always be transported in an upright (normal use) position.

3.08 The preferred modes of transportation are in order of preference; ie, truck, rail, and air. Air transportation subjects equipment to severe handling shocks. Rail transportation is less severe, but railroad car coupling shocks can be severely stressing on the equipment. If air freight is used, a plane must be used with a cargo hold big enough to ship the system upright.

Handling on Site

3.09 The control unit should be kept packaged in its carton until it is in the room in which it is to be installed.

3.10 Care should be taken to avoid dropping the cabinet (either packaged or unpackaged) from any height.

> ***Note:*** The 11V03 minicomputer will be unpacked and installed by the vendor. Any handling by other than vendor personnel will void the warranty and service contract.

C. Structural

Floor Loading

3.11 The vendor-supplied 11V03 minicomputer cabinet weighs approximately 112.5 kg (205 lb). A floor capable of supporting 244.6 kg/m^2 (50 lb/ft^2) must be considered for the minicomputer.

3.12 Some surfaces, such as soft tile or linoleum, may incur indentations over a period of time from the casters of the 11V03. If this is of concern to the customer, the tolerable pressure rating of the floor surface should be compared to the appropriate 244.6 kg/m^2 (50 lb/ft^2) loading. If it is less, a floorplate should be used. In most cases, this will not be necessary since the cabinet will probably occupy the same position throughout its service, and such indentations will not be any more severe than those of a large desk.

Stability and Movement

3.13 In order to prevent tipping, care should be taken when moving the 11V03 cabinet across deep pile carpets. The casters are placed to allow an adequate force [about 45 kg (100 lb)] to get the cabinet moving on thick carpeting. Also, the placement of the casters allows a moderately rapid movement of the cabinet [about .6 m/s (2 ft/s)] without risk of tipping when a bump or irregularity in the floor is encountered. Movement faster than .6 m/s (2 ft/s), however, should be considered dangerous with regard to cabinet tipping.

D. Electrical Fields

> ***Note:*** In order to help prevent the introduction of noise in the system, dedicated power lines should be used. Separate branch circuits are sufficient to serve this purpose. The feeders should not be used to power other equipment.

3.14 Electromagnetic fields may cause noise to be introduced into the PRO 150. Avoid placing the system close to powerful radio or television transmitters. Generally, AM stations interfere more than FM stations (such as television). A building may provide a shielding effect, reducing the interference from the radiating station. Other possible interfering radiators include industrial RF heating equipment and welders. Field strength can be measured using a standard field strength meter, such as the electric field sensor Model EFS-1 (manufactured by Instruments for Industry, Inc) or Model WX31D (manufactured by the RCA Corporation). If the field strength from a broadcast station cannot be measured, it can be established by dividing the square root of the emitted power (kW) by the distance from the antenna (km). This approximation yields field strength in volts per meter (V/m). If this number is greater than unity, interference into the system is likely. If the field strength is less than 0.5 V/m, a problem is not likely. Between 0.5 and 1 V/m, corrective measures, such as filters on incoming trunk facilities or station pairs, may be necessary.

3.15 The PRO 150 equipment may be subject to noise interference from commutator-equipped motors that are rated at more than 1/4 horsepower if situated in the same or an adjacent room. Small tools with universal motors are generally not a problem. Motors without commutators, whether synchronous or asynchronous, generally do not cause interference.

E. Acoustics

3.16 The system should be located in an acoustic environment which allows maintenance personnel to hear tones through a standard headset while performing tests.

3.17 The noise levels which do not permit sound to be heard over the standard headset are about the same or greater than those specified by the Occupational Safety and Health Administration (OSHA). This is normally 55 dBa on a sound level meter. Therefore, OSHA requirements for sound satisfy the enviornmental requirements for the system; these must be met wherever the machine is placed. Refer to current OSHA requirements for further information regarding acceptable levels.

F. Lighting

3.18 The light intensity level around the control unit should be at least 650 lumens/m^2 (60 footcandles) to provide sufficient light for maintenance personnel. To obtain accurate footcandle measurement, measure the level in center aisle, 1.5m (5 ft) above the floor, aiming the meter upward. Light measurements can be made with a Weston footcandle meter, Model 614 or equivalent (manufactured by Weston Instruments, Inc, Newark, New Jersey, 07114).

3.19 The light intensity level around the system should be at least 650 lumens/m^2 (60 footcandles) from any direction; ie, from the front or back of the cabinet.

G. General Fire Protection

3.20 The following items should be considered as basic fire protection requirements.

(a) Combustibles necessary for the work operation in an equipment area shall be stored in metal containers when not in use.

(b) Automatic shutdown of ventilation and/or air-conditioning equipment serving the equipment area should be provided by fire detection devices which also energize audible alarms when activated. The system should be powered down if the room temperature exceeds 32°C (90°F).

(c) Power and communication cables should be separated when possible and in a manner which will reduce the combustibility in each grouping.

(d) HALON* 1301 gaseous fire extinguishing systems are acceptable to the Bell System if the owner desires to install this equipment.

4. POWER AND GROUNDING

A. Power Requirements

4.01 Arrangements should be made to provide the installation and wiring of a locally approved load center equipped with thermal magnetic circuit breakers and wall-mounted receptacles. The complete cost of providing the electrical service for the terminal devices and cabinets must be borne by the customer. In all cases, ac wiring and equipment must comply with local codes.

4.02 The power requirements for the equipment are listed in Table A.

4.03 Power interruptions greater than 9 ms can adversely affect the 11V03 operation. It is recommended that the 11V03 be powered by an uninterruptible power supply to protect against these outages.

B. Grounding Requirements

4.04 The PRO 150 equipment is grounded by the power source ground which is connected to ground at the point electrical service enters the building.

4.05 Conduit or other metallic enclosures shall not be used to replace the wire ground.

5. CONNECTIONS

5.01 The PRO 150 data channel connects to the PBX through the PIC. When the cable distance from the minicomputer to the PIC is 22.9m (75 ft) or less, then an M25A cord (or equivalent) is used. When the cable distance is greater than 22.9m (75 ft), two Asynchronous Line Drivers (ALDs) are used, one on the minicomputer end and one on the PIC end. (See Fig. 2.)

5.02 A 625S connecting block (or equivalent) should be used for maintenance dial-up port connections (Fig. 3).

* Registered trademark of Systrom-Donner Corporation.

TABLE A

PRO 150 EQUIPMENT POWER REQUIREMENTS

DEVICE	POWER-DESCRIPTION (WATTS)	WALL PLUG RECEPTACLE (NEMA NO.) (NOTE 1)	CIRCUIT (NOTE 2)
11V03 Mincomputer (Includes RX02)	940 watts at 115-Vac ±10 percent, 60-Hz ±1 percent, single-phase, 2-wire plus ground	5-15R	15A
DATASPEED 40 Printer	230 watts at 115-Vac, ±10 percent, 60-Hz, ±0.5 percent, surge current 10A for 50 ms, single-phase, 2-wire plus ground	5-15R	15A
VT100 Display Terminal	95 watts at 90-128 Vac, 47- to 63-Hz, single-phase, 2-wire plus ground	5-15R	15A
INTECOLOR 8001G Display Terminal	250 watts at 115-Vac, ±10 percent, 60-Hz, ±1 percent, single-phase, 2-wire plus ground	5-15R	15A
DATASPEED 40/2 Terminal Set	260 watts at 115-Vac, ±10 percent, 60-Hz, ±0.5 percent single-phase, 2-wire plus ground	5-15R	15A
212AR Data Set	9 watts at 115-Vac, ±10 percent, 60-Hz, ±5 percent, single-phase, 2-wire plus ground	5-15R	15A
202T Data Set	7 watts at 115-Vac, ±10 percent, 60-Hz, ±5 percent single-phase, 2-wire plus ground	5-15R	15A

Note 1: Or equivalent, customer provided.

Note 2: Three terminals and the data sets may be operated from the same 15A fused ac supply.

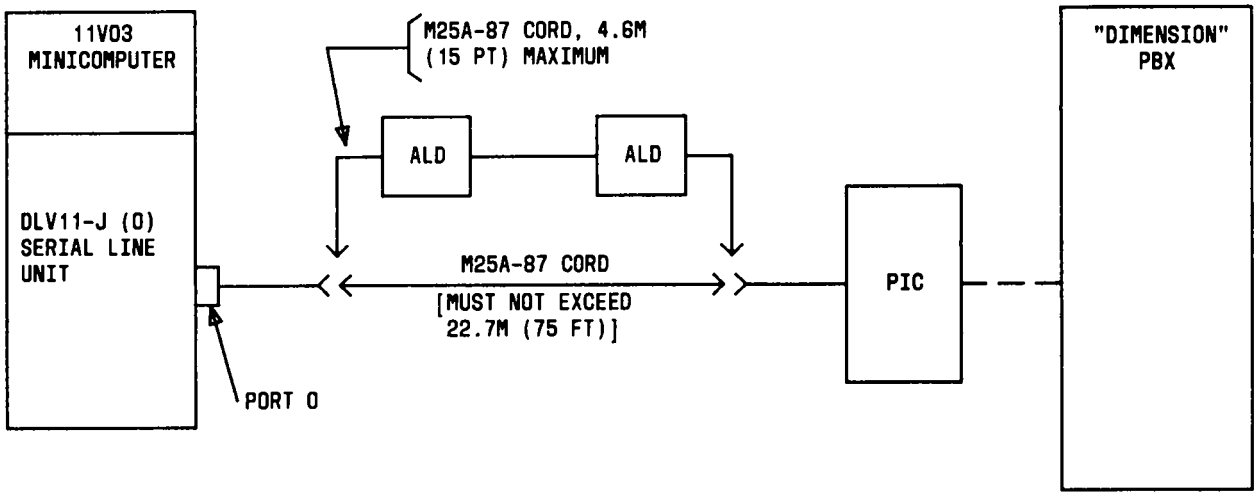


Fig. 2—Minicomputer Connection to Communication System

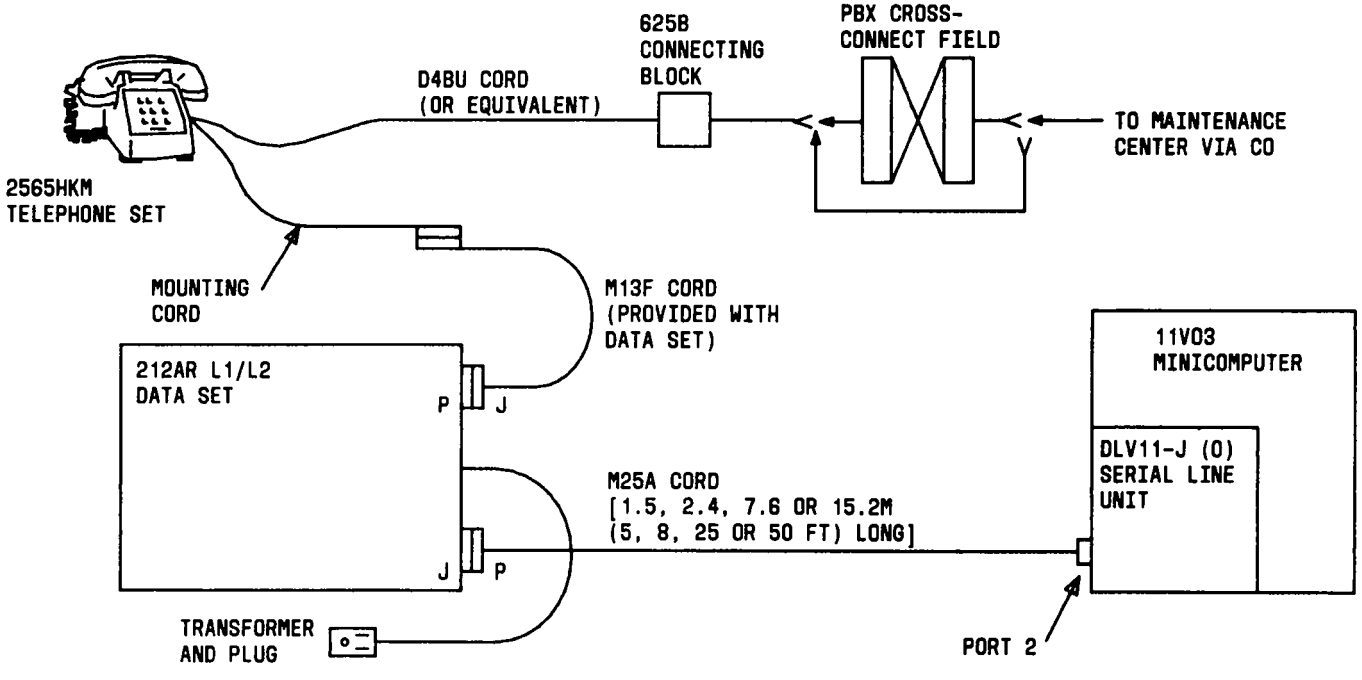


Fig. 3—Typical Maintenance Dial-up Port

6. CABLING

A. Maintenance Dial-up Port

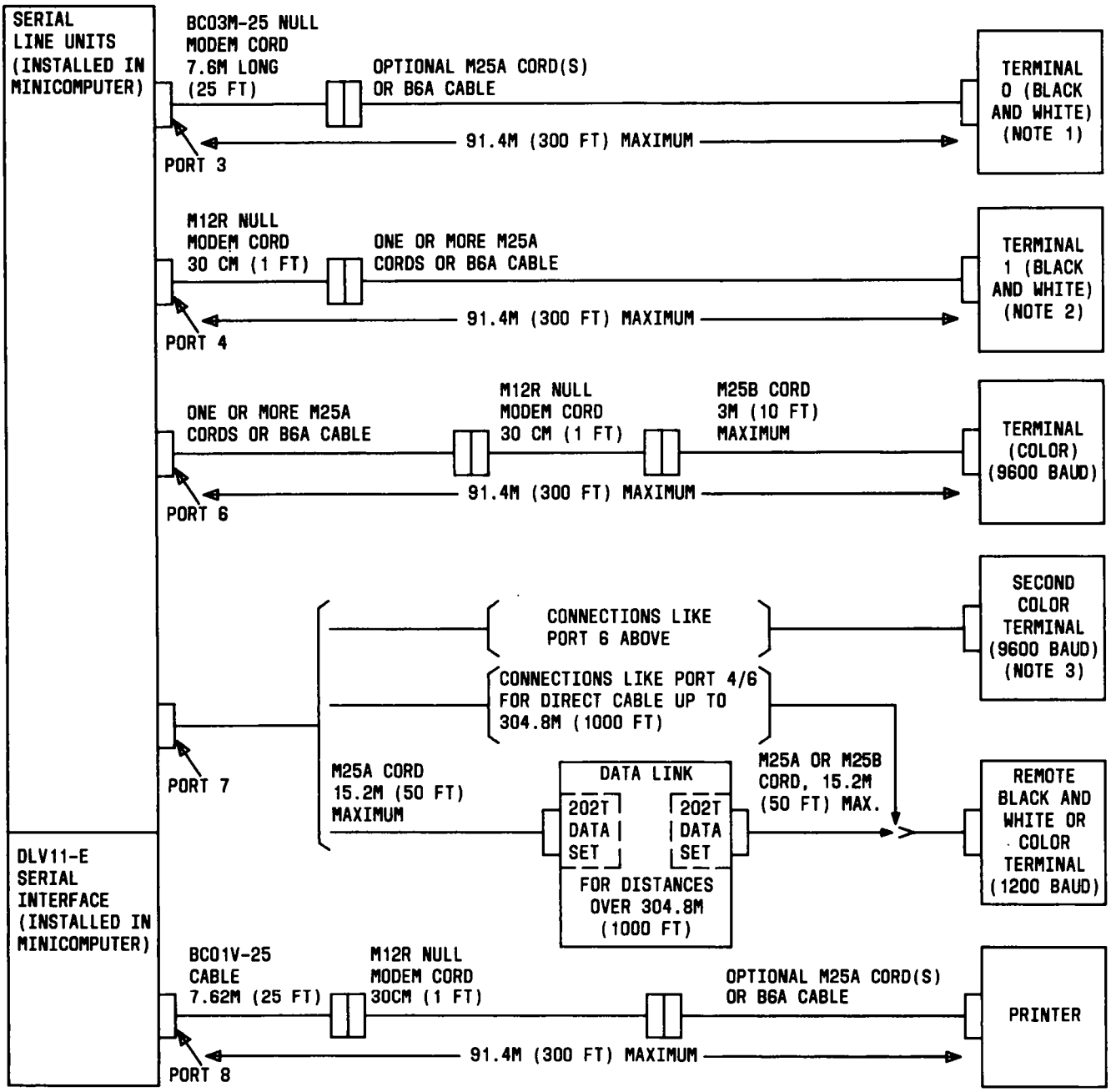
6.01 The cabling for a 2565HKM telephone set and a 212AR L1/2 data set when used for a maintenance dial-up port are shown in Fig. 3.

B. Terminal(s)

6.02 Terminal cabling to the 11V03 minicomputer is shown in Fig. 4. This arrangement applies to each terminal device. Table B shows the baud rate versus the distance in meters (feet) between the peripheral devices and the minicomputer. Port assignments are also shown.

C. DATASPEED 40 Printer

6.03 The connections in Fig. 4 show the signal cable and cord options from the printer to the 11V03 minicomputer.



NOTES:
1. TERMINAL 0 SERVES AS COMPUTER FRONT PANEL. DURING MAINTENANCE, IT MUST BE CLOSE TO MINICOMPUTER.
2. ANOTHER BLACK AND WHITE TERMINAL MAY BE CONNECTED TO PORT 5 IF COLOR OR REMOTE TERMINALS ARE NOT USED.
3. PORT 7 MUST BE REWIRED FOR 9600 BAUD OPTION IF SECOND 9600 BAUD COLOR TERMINAL IS USED.

Fig. 4—Typical Terminal and Printer Connections

TABLE B

CABLE DISTANCES, APPLICABLE BAUD RATES, AND PORT ASSIGNMENTS

PERIPHERAL EQUIPMENT	DISTANCE FROM MINICOMPUTER (IN METERS AND FEET)	BAUD RATE	DATA SET	PORT ASSIGNMENT
Required black and white terminal 0*	0-91.4m (0-300 ft)	4800	—	3
1 or 2 optional black and white terminals†	0-91.4m (0-300 ft)	4800	—	4 and 5
	91.4-304.8m (300-1000 ft)	1200	—	7
	Over 304.8m (Over 1000 ft)	1200	202T	
1 or 2 optional color terminals	0-91.4m (0-300 ft)	9600‡	—	6 and 7
	91.4-304.8m (300-1000 ft)	1200	—	7
	Over 304.8m (Over 1000 ft)	1200	202T	
Printer	0.91.4m (0-300 ft)	4800	—	8
PIC/ALD (Channel to PBX)	0-22.7m (0-75 ft)	1200	—	0
Data Set (maintenance channel)	0-15.2m (0-50 ft)	1200	—	2

* Terminal 0 must be capable of being moved close to the 11V03 minicomputer cabinet for maintenance.

† Total of 3 terminals maximum.

‡ A second 9600 baud channel will require rewiring of port 7 options in minicomputer.

7. PERIPHERAL OPTIONS

A. Printer Options

7.01 The DATASPEED 40 printer should be ordered with all the nonfactory options listed in Table C. The Universal Service Order Code (USOC) is 40PXF.

Logic Card 410071

7.02 The 410071 card switches are factory set for even parity and paper feedout on data set ready (DSR). The last character is printed in column 80. See Fig. 5 for switch location and Table D for switch settings of the required options.

Diode Matrix Circuit Card 410734

7.03 The 410734 card is optioned by cutting and removing the proper diodes. Table E specifies the diodes that should have been removed, and Fig. 6 shows the location of these diodes.

Controller Circuit Card 410737

7.04 The 410737 card is optioned by setting miniature rocker/toggle switches. Table F shows the proper switch positions, and Fig. 7 shows the location of the switches.

B. Display Terminal Options

7.05 The display terminals must be optioned for one start bit, eight data bits, one stop bit, and no parity. The black and white terminal(s) operate at 4800 baud for distances up to 91.4m (300 ft) from the 11V03. The color terminal(s) operate at 9600 baud for distances up to 91.4m (300 ft) from the 11V03. For distances over 91.4m (300 ft), the terminal must operate at 1200 baud. However, operation at 1200 baud is not recommended since it slows down system response time.

VT 100 Display Terminal

7.06 One terminal is supplied with the system. All options are available through terminal software.

DATASPEED 40/2 Terminal Set

7.07 This terminal should be ordered with the nonfactory options listed in Table G. Operation with the PRO 150 requires options specified in Tables H and I.

INTECOLOR 8001 Display Terminal

7.08 The required options are graphic features, 03LC and 47. The terminal must be factory optioned. The baud rate is also set at the factory for 1200 or 9600 baud. (If two color terminals are used at 9600 baud, the minicomputer port 7 must be optioned to match.)

Data Set Options

7.09 The 212AR data set requires options E, ZF, YK, YF, YC, YG, YJ, XM, S, V, A, T, ZH, W, YO, YR, XO, and Q all of which are factory-installed standard options except YO.

TABLE C

OPTIONS — "DATASPEED" 40 PRINTER

OPTION CODES (NOTE)	OPTION DESCRIPTION
18A	No printer paper feed out
19C	Parity error character symbol not printed
19D	Printer with 96-character set
101L	4800 baud operation
143B	Reverse channel used
146B	Paper alarm caused immediate disconnect
151B	Private line
156D	8 character bits, no parity
157A	1 stop bit
192B	16X baud rate factor
—	Tractor feed (80-column)
—	Pedestal 62.2 (24.5 in.) wide with a 29.2 cm (11.5 in.) paper slot (80-column)
—	Paper accumulation wire rack

Note: The order should specify the following nonfactory options.

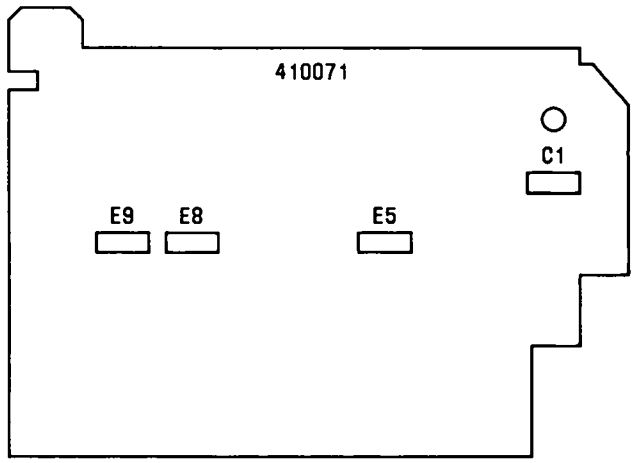


Fig. 5—Printer Logic Card 410071

TABLE D

LOGIC CARD SWITCH SETTINGS

POSITION	SWITCH			
	SWE5	SWE8	SWE9	SWC1
1	ON	OFF	OFF	OFF
2	ON	OFF	ON	OFF
3	ON	ON	OFF	OFF
4	ON	ON	ON	OFF
5	ON	ON	OFF	ON
6	ON	OFF	ON	OFF
7	ON	ON	ON	OFF
8	ON	ON	OFF	OFF
9*	—	—	ON	—

* Position 9 only on SWE9.

TABLE E

DIODE MATRIX CIRCUIT CARD 410734 OPTION SETTINGS

OPTION	DESCRIPTION	DIODES REMOVED	
		ROW	BIT(S)
101l	4800 baud	R47	1,3,4,5,7
		R48	0,1,2,3,4
143b	Reverse channel used	R45	3
146b	Tractor feed printer	R45	6
151b	Character starts motor	R46	3
156d	8 bits per character	R33	6,7
157a	1 stop bit	R48	6
192b	16X baud rate factor	R33	5

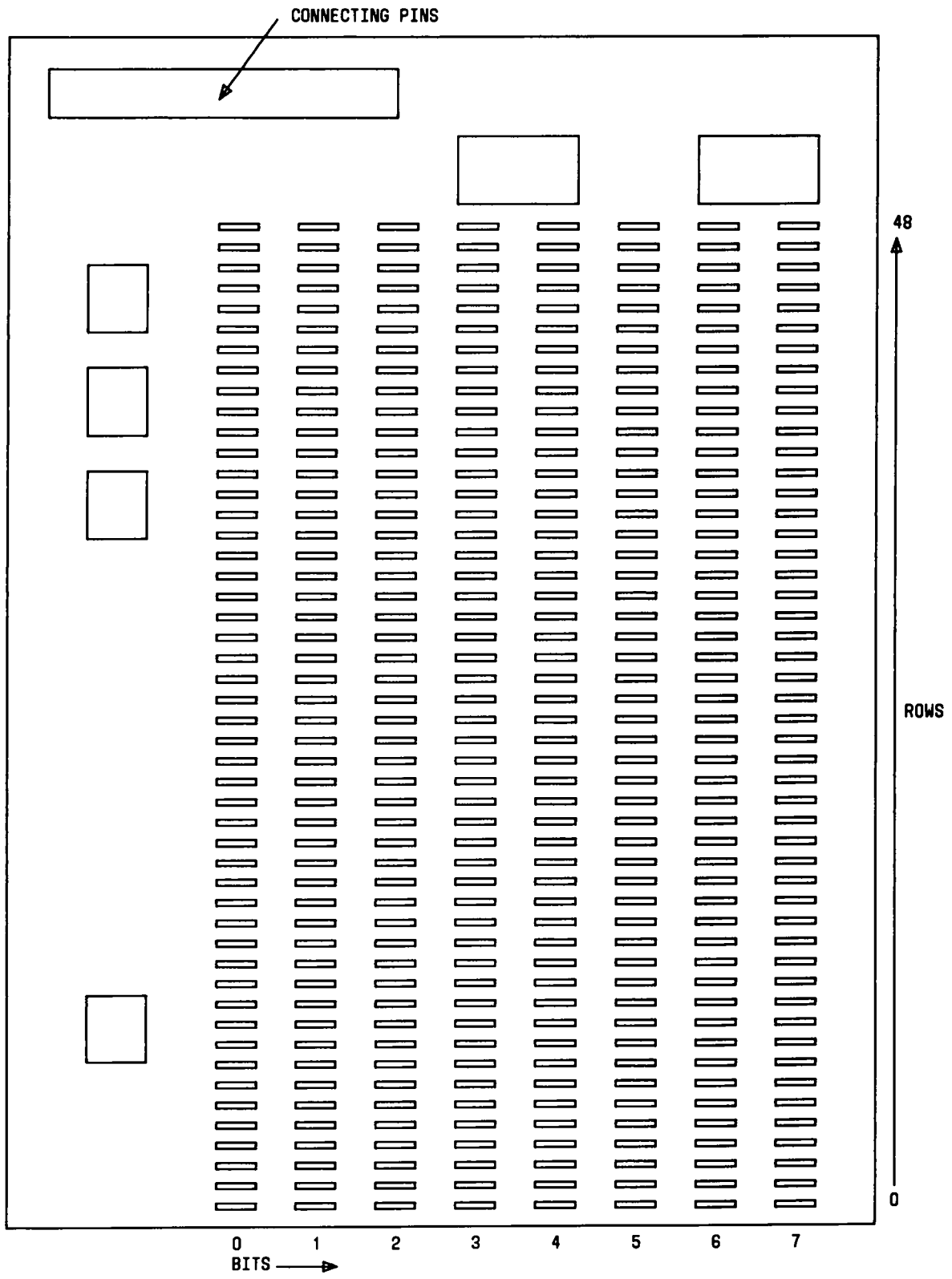


Fig. 6—Diode Matrix Circuit Card 410734

TABLE F

CONTROLLER CIRCUIT CARD 410737 SWITCH SETTINGS

OPTION	DESCRIPTION	SWITCH	1	2	3	4
140a	EIA Interface	SW3	O	O	O	O
189b	Internal Clock	SW1	•	O	•	O

• Dot end of switch depressed

O Blank end of switch depressed

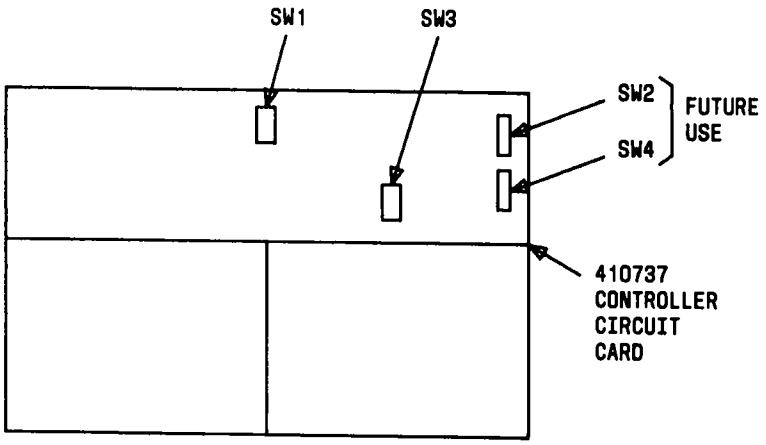


Fig. 7—Controller Circuit Card 410737

TABLE G

OPTIONS — "DATASPEED" 40/2 TERMINAL SET

OPTION (NOTE)	OPTION DESCRIPTION
3f	4800-baud operation [in distances greater than 91.4m (300 ft), use 1200-baud operation which is the standard factory option (3b)]
10c	Line-ending sequence LF
42d	Send 8th bit as space
—	40/2 terminal with 61 cm (24-in.) pedestal
—	Editing features for 24 lines (or editing features for 72 lines and additional character storage)
—	Continuous scrolling
—	TP-402307 modification kit per specification 50855S (control character blanking)

Note: The order should specify the following nonfactory options.

TABLE H

CIRCUIT CARD SETTING FOR DATASPEED 40/2 TERMINAL SET

CIRCUIT CARD	OPTION NUMBER	OPTION DESCRIPTION	SWITCH LOCATION	SWITCH NUMBER								SWITCH LOCATION	SWITCH NUMBER							
				1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
410676	13b	Send Variations	A-4	•	○	•	•	•	•	•	•	–	⊘	⊘	⊘	⊘	⊘	⊘	⊘	⊘
410675	10c	Line End – LF	A-3	–	–	–	–	•	–	⊘	⊘	B-15	•	•	○	○	○	⊘	⊘	⊘
	11a	Local After Send		–	○	•	•	–	–	⊘	⊘		–	–	–	–	–	⊘	⊘	⊘
	12b	Enable Form Enter		○	–	–	–	–	–	⊘	⊘		–	–	–	–	–	⊘	⊘	⊘
	27b	Send From Cursor		–	–	–	–	–	○	⊘	⊘		–	–	–	–	–	⊘	⊘	⊘
410674	5a	Reject Null	A-10	•	–	–	–	–	⊘	⊘	⊘	C-12	–	–	–	–	–	–	–	–
	5c	Reject CR		–	•	–	–	–	⊘	⊘	⊘		–	–	–	–	–	–	–	–
	5e	Reject Delete		–	–	•	–	–	⊘	⊘	⊘		–	–	–	–	–	–	–	–
	5g	Reject DC1		–	–	–	–	–	⊘	⊘	⊘		–	–	–	–	–	•	–	–
	5i	Reject DC3		–	–	–	–	–	⊘	⊘	⊘		–	–	–	–	–	–	•	–
	6b	Esc Seq Not Displayed		–	–	–	•	–	⊘	⊘	⊘		–	–	–	–	–	–	–	–
	7a	No Error Characters		–	–	–	–	•	⊘	⊘	⊘		–	–	–	–	–	–	–	–
	8b	No End On FF		–	–	–	–	–	⊘	⊘	⊘		–	–	○	–	–	–	–	–
	8c	End On ETX		–	–	–	–	–	⊘	⊘	⊘		•	–	–	–	–	–	–	–
	8e	End On EOT		–	–	–	–	–	⊘	⊘	⊘		–	•	–	–	–	–	–	–
	8g	End On GS		–	–	–	–	–	⊘	⊘	⊘		–	–	–	•	–	–	–	–
	9b	Delimiters Sent		–	–	–	–	–	⊘	⊘			–	–	–	–	○	–	–	–
	40b	Do Not Go Receive On CR		–	–	–	–	–	⊘				–	–	–	–	–	–	–	○

• Indicates dot end of rocker switch depressed
○ Indicates blank end of rocker switch depressed
– Position of rocker switch does not affect option
⊘ Indicates no switch present

TABLE I

410679 CIRCUIT CARD OPTION SETTINGS

OPTION	OPTION DESCRIPTION	SWITCH LOCATION																							
		A5								C17								A17							
		SWITCH NUMBER								SWITCH NUMBER								SWITCH NUMBER							
		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
4b	Ignore Reverse Channel	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	○	–	–	–	–	–	–	–
41b	Full Duplex Operation	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	○	–	–	–	–	–	–
42d	8th Bit Space	–	–	○	○	–	•	–	–	–	–	–	–	–	–	–	–	–	–	○	•	–	○	–	–
43a	1 Stop Bit	–	–	–	–	•	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	•	–	–	–
44a	Enable EIA	–	–	–	–	–	–	•	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	•	–
45b	Disable Current Loop	–	–	–	–	–	–	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	○
46b	202-Type Modem	–	–	–	–	–	–	–	–	○	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
47b	Disable Printer Interface	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	•	–	–	–	–	–	–
3f* or 3b	4800 Baud Rate	–	–	–	–	–	–	–	–	–	•	○	○	○	○	○	○	–	–	•	–	–	–	–	–
	1200 Baud Rate	–	–	–	–	–	–	–	–	–	•	•	•	○	○	○	○	–	–	•	–	–	–	–	–

• Indicates dot end of rocker switch depressed
○ Indicates blank end of rocker switch depressed
– Position of rocker switch does not affect option
* For distances greater than 91.4m (300 ft), use option 3b (1200 baud); otherwise, use option 3f (4800 baud)

8. REFERENCES

8.01 This issue is based on the following drawings:

DRAWING	TITLE
SD-66959-01	PBX Systems—12A and 13A Customer Information Systems—Computer and Terminal Equipment
J59224A	Management Information System—Performance Reporting Option—Minicomputer Equipment Specification
J59224B	Management Information System—Performance Reporting Option—Software Equipment Specification

8.02 Other related PRO 150 documents are as follows:

DOCUMENT	TITLE
554-010-147	Performance Reporting Option (PRO) 150—Descriptive Information—Call Management (CMS)
554-010-148	Performance Reporting Option (PRO) 150—Identification Information—Call Management System (CMS)
554-010-150	Performance Reporting Option (PRO) 150—Call Management System (CMS)—Installation, Test, and Maintenance (TOP)
999-500-141	Performance Reporting Option (PRO) 150—Operations Manual
809-160-155	Management Information System—Performance Reporting Option (PRO) 150—Equipment Design Requirements—PBX Systems
TLM-65200-01	12A Customer Information System (CIS) Error Messages