

“DATASPEED*” MAGNETIC TAPE TERMINAL
INSTALLATION

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1. GENERAL

1.01 This section provides the installation procedures for the Dataspeed Magnetic Tape Terminals. It is reissued to include information on DATASPEED 40 serial EIA (Electronic Industries Association) interface, and to include information presented in the following TCNs: 1855, 1893, and 1937. Changes and additions are indicated by marginal arrows. This section was formerly 578-300-200.

1.02 Two basic versions of the magnetic tape set are available. They differ in cabinet styling, control panel arrangement, and electronic circuitry. Figure 1 shows the tape set designed for stand-alone operation, or for use as an adjunct to 33, 35, 37, or 40 teletypewriters. The cabinet is styled to match the 33, 35, 37, or 40 cabinetry, and the control panel includes all controls required for use with the related teletypewriter or for on-line operation. The electronic circuitry and cabling interfaces the tape set with 33, 35, 37, or 40 teletypewriters, or permits stand-alone operation. Space is included for a data set where high speed on-line operation is desired.

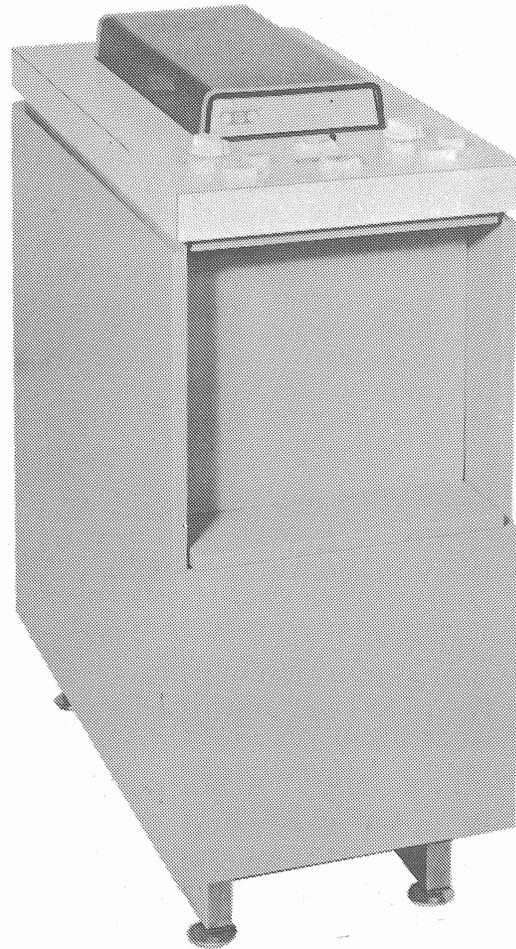


Figure 1 - Magnetic Tape Set Used for Stand-Alone Operation or Adjunct to 33, 35, 37, or 40 Teletypewriters

1.03 Figure 2 shows the tape set designed for use with the CDT or other parallel devices. The cabinet style matches the CDT cabinetry. The control panel provides the operating controls required in this type of service, and

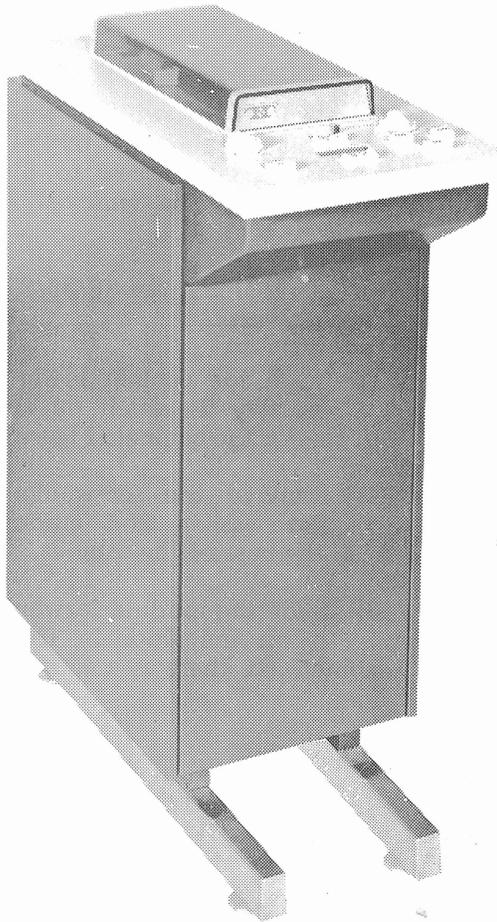


Figure 2 - Magnetic Tape Set Used With CDT or Other Parallel Device

the electronic circuitry and cabling provides an interface to the adjunct terminal. Since the tape set is under control of the related terminal in this application, no provisions are made for a data set in the cabinet.

1.04 Many of the installation procedures are the same for both versions of the magnetic tape set. However, procedures that apply to only the stand-alone or 33/35/37/40 adjunct, or the parallel device adjunct are so indicated in the following paragraphs.

1.05 References made to left, right, top or bottom, front or rear, apply to the set in its normal operating position as viewed by the operator.

1.06 For the tools used in installation, refer to Section 570-005-800.

CAUTION: TO AVOID INJURY, DISCONNECT ALL POWER FROM THE TAPE SET AND RELATED UNITS BEFORE ATTEMPTING ANY WORK ON THE SET.

1.07 Cable connections and electrical circuitry of all components of the tape set are provided in wiring diagram package WDP0247. Cabling and circuitry for the special interface accessory used in CDT or other parallel installations are provided in wiring diagram package WDP0304. Similar information for M40 interface is in WDP0420.

1.08 Tape sets are usually delivered to the operating site as completely assembled units containing all variable components and features ordered by the customer. The craftsman is required only to unpack the set, connect it to its related equipment, perform any necessary adjustments and strapping options, and check the operation of the complete installation. The instructions in Parts 2, 3, and 4 of this section are directed specifically to this type of installation. Where components are shipped separately (for example, to a service center), they must be assembled and interconnected to form a complete unit. Set assembly for this special situation is described in Part 5 of this section.

2. UNPACKING

2.01 To unpack a complete tape set, proceed as follows:

- (1) Remove the identification tag from the outside of the carton.
- (2) Cut the perimeter of the carton about an inch from the bottom and carefully raise the carton off the magnetic tape set.
- (3) Remove the cardboard folder from the top of the tape set and cut the tape along the center seam of the folder. Be careful not to cut too deeply, as the wiring diagrams and other accessory materials are packed in this folder. Remove the contents of the folder and place them aside.
- (4) Remove the corrugated cardboard tray from the top of the tape set.
- (5) Lift the tape set off the bottom tray and set it on the floor. Remove the plastic bag from the tape set.
- (6) Remove any tape, tissue, and other packing material from the tape transport cover and front door of the cabinet.

(7) Raise the plastic tape transport cover and remove the tape and tissue from the recording head.

(8) Remove the tape cartridge taped to the cartridge holder. Close the plastic tape transport cover.

3. OPTIONS AND ELECTRICAL CONNECTIONS

3.01 The magnetic tape set is usually assembled at the service center to the customer's order. Variable components, such as circuit cards, timing elements, and connecting cables are installed to provide the type of operation specified in the initial order. Where possible, optional features are preprogrammed before shipment. However, the craftsman may be required to program some options.

PROGRAMMING THE ELECTRONICS MODULE

3.02 The electronics module is mounted in the lower compartment of the cabinet. If it is necessary to gain access to the circuit cards, the module must be removed from the cabinet as follows:

- (a) For stand-alone or 33/35/37/40 adjunct tape sets
 - (1) Open the cabinet lower door by pressing the latch button on the left side of the cabinet (Figure 3).
 - (2) Remove the screw, lockwasher, flat washer, and module clamp from the base of the cabinet.
 - (3) Slide the module forward and rest it on the floor in front of the cabinet. (If there is a retaining clamp

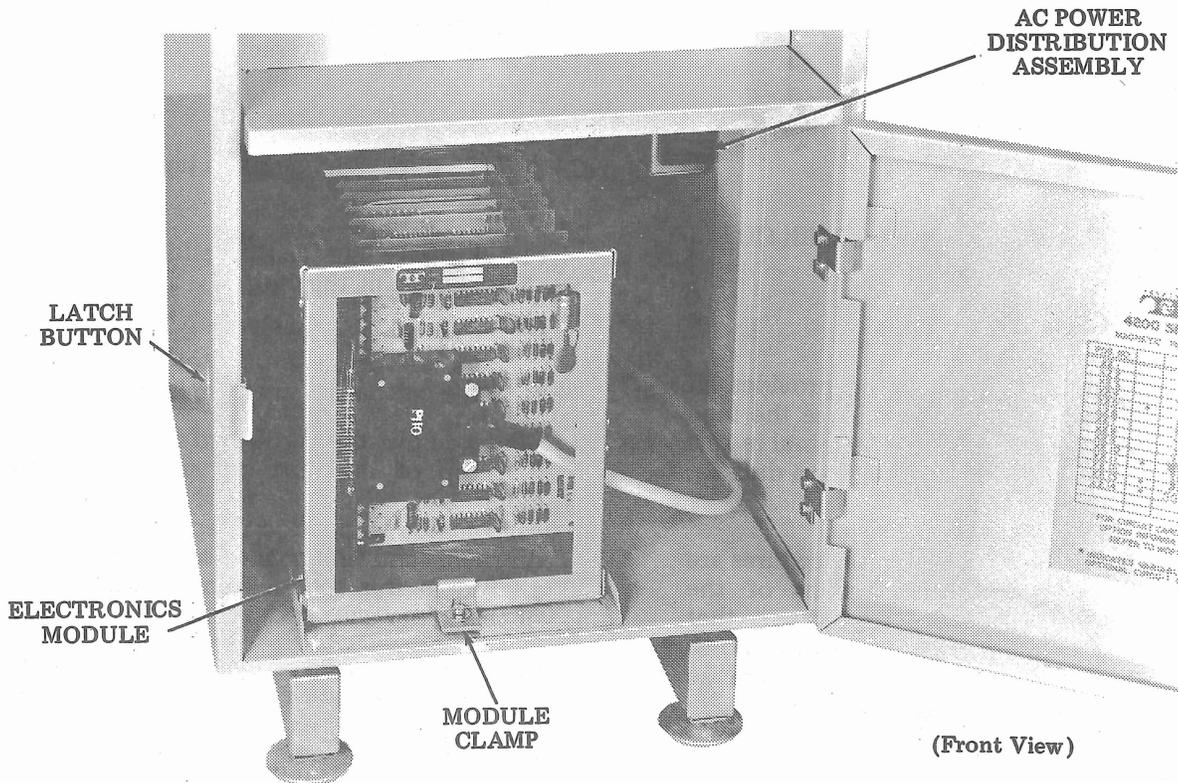


Figure 3 - Module Compartment of Cabinet Used in Stand-Alone Service or With 33, 35, 37, or 40 Teletypewriters

on the right, it can be used to hold the module while extended.

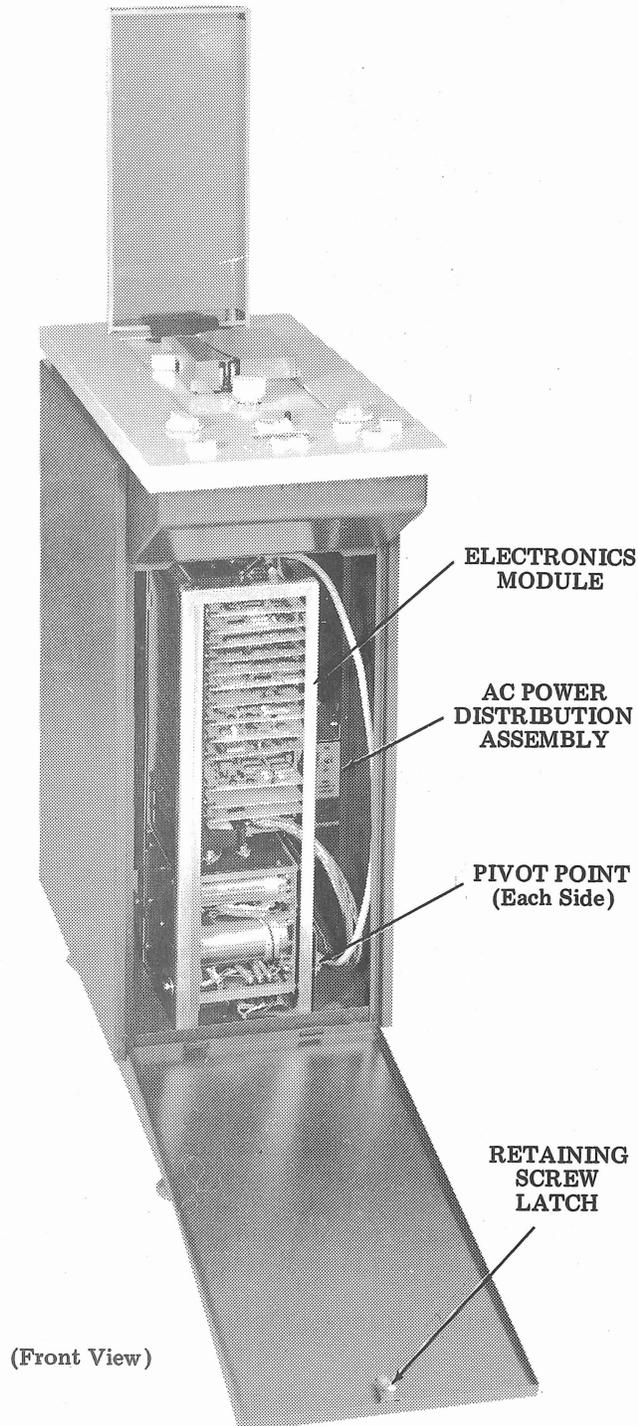


Figure 4 - Module Compartment of Cabinet Used With CDT or Other Parallel Device

(b) For CDT or other parallel device adjunct tape sets

(1) Turn the retaining screw at the top of the front panel until it releases from the cabinet. Pivot the panel forward (Figure 4). Lift the panel from the cabinet.

(2) Carefully tip the cabinet and remove the module retaining screw, lockwasher, and flat washer from the underside of the cabinet. (These are only required for shipment, and may be discarded when the tape set is installed.)

(3) Raise the cabinet upright and loosen the two screws that hold the module in the slots of the two side brackets.

(4) Pivot the module forward so the circuit cards and other parts are accessible.

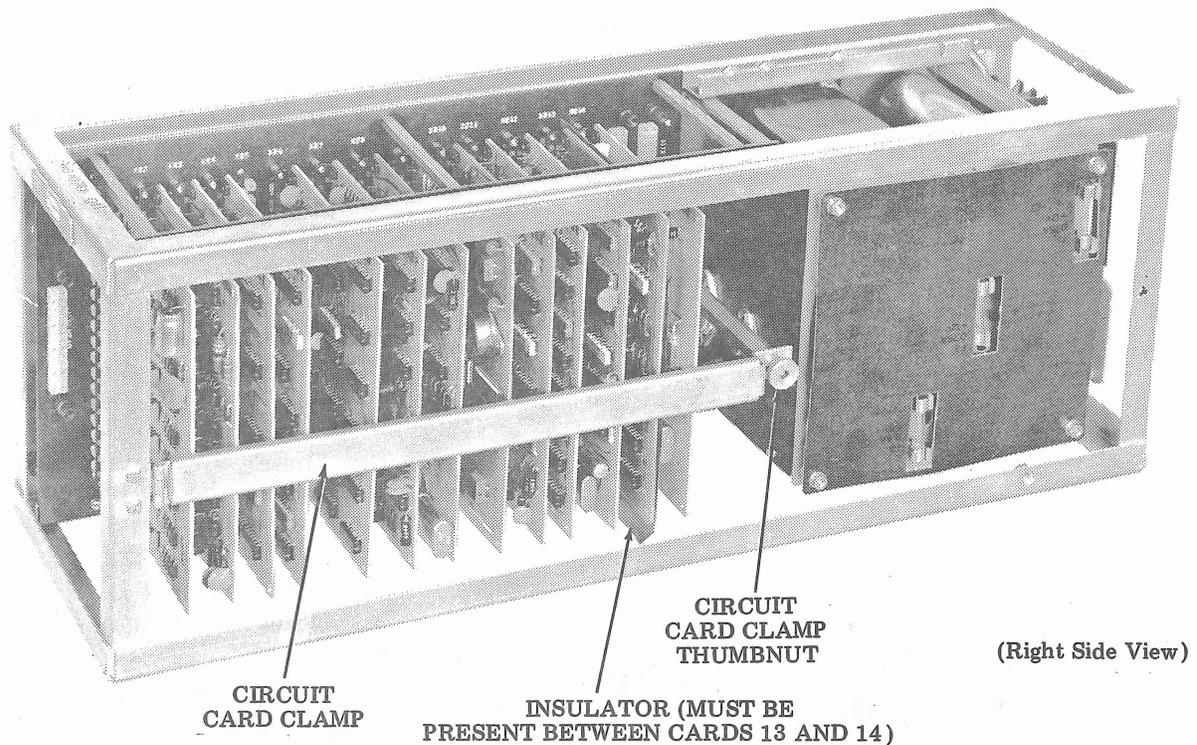
3.03 If the module has a hinged circuit card clamp (Figure 5), remove the circuit card clamp thumbnut and open the circuit card clamp. If the module has a removable circuit card clamp, remove the thumbscrew and disengage the clamp from the module frame. Circuit cards can now be unplugged from their connectors, if necessary, for programming.

3.04 Table A lists the cards by connector, card number, and function. Cards indicated by a (B) are basic to all sets, whereas those indicated by a (V) vary with the type of installation. Cards indicated by asterisks (*) in Table A, if present in the module, are programmable to match the characteristics of related equipment or to provide special features.

3.05 Options are provided by wire straps or shunt screws. To change a strap option, a wire must be clipped out or soldered into the printed circuit. Screw-type options are changed by moving the screw from the front of the card to the back or vice versa, or by loosening the screw, shifting the position of a half-circle shaped insulator between the copper washer and circuit card, and tightening the screw to hold the insulator in its new position.

Note: Shunt screws with the half-circle insulator should be tightened 1/8 to 1/4 turn beyond snug. Overtightening may damage the copper washer.

The options available for the tape set are described in the following paragraphs. For convenience these options are summarized in Table B.



Note: Hinged circuit card clamp shown. Late design modules have removable clamp secured by thumbscrew.

Figure 5 - Electronics Module (Cables Not Shown)

A. Low Tape/End of Tape Reverse Channel Disable (Basic Function)

3.06 If the TP322468 card in connector XZ8 is issue 10 or above, it provides the option of turning off reverse channel in either the low tape or end of tape condition. (Cards with issue 9 or less turn off reverse channel at end of tape only.) The option is indicated in Table B.

Note 1: If this option is to be exercised, there must be a wire between XZ8-A25 and XZ13-A23 of the electronics module. If not present, add a piece of 24 gauge solid insulated wire between the connecting points.

Note 2: Another basic feature of the tape set is to inhibit local receive operation when the low tape alarm is on. To permit the tape set to go into the local receive mode in the low tape condition, a wire must be present between XZ8-B24 and XZ5-A29. If this feature is desired, and the wire is not

present, add a piece of 24 gauge solid insulated wire between the two points.

B. 10-Unit/11-Unit Code Option (37 EIA Teletypewriter Adjunct)

3.07 If the magnetic tape set is connected to the EIA interface of a 37 teletypewriter, teletypewriter interface card TP322475 in connector XZ14 must be programmed to match the unit code of the teletypewriter. Some 37 teletypewriters operate on 10-unit code and others on 11-unit code. A shunt screw on the TP322475 card permits selection of the appropriate unit code as indicated in Table B.

C. Reverse Channel Option (On-Line Operation)

3.08 If the tape set is to be connected to a high speed data set for on-line operation, the data set interface card (TP322473) must be programmed to match the reverse channel characteristic of the data set. This option is programmed by means of wire straps as shown in Table B.

TABLE A
CIRCUIT CARDS USED IN ELECTRONICS MODULE

CONNECTOR	CARD NUMBER	CARD FUNCTION
XZ1	TP322461 (B)	Read Amplifiers
XZ2	TP322462 (B)	Write Amplifiers
XZ3	TP322463 (B)	Buffer
XZ4	TP322464* (B)	Character Recognition
XZ5	TP322465* (V)	Character Recognition Expander
	TP322485* (V)	Auto Rewind for Local Print-Out
XZ6	TP322466* (B)	Basic Control
XZ7	TP322467† (B)	Device Control
XZ8	TP322468* (B)	Alarms and Photosense
XZ9	TP303869 (B)	Clutch/Brake Drive
XZ10	TP322470 (B)	Terminal Control
XZ11	TP322471* (V)	Receiving/Transmitting Distributor
XZ12	TP322472 (B)	Terminal Timing
XZ13	TP322473* (V)	Data Set Interface
	TP322478 (V)	Parallel Interface
XZ14	TP322474* (V)	M33/35 Interface (101 Data Set)
	TP322475* (V)	M37 EIA Interface (Off-Line Operation)
	TP322476 (V)	M37 KSR Interface (for ASR Operation)
	TP322477 (V)	Parallel Interface
	TP322479 (V)	Stand-Alone Interface
	TP322480* (V)	M33/35 Interface (UCC29 Call Control Unit)
	TP322484 (V)	DATASPEED 40 EIA Interface (Local Serial Operation)

*These cards are programmable to provide circuit options.

†If TP322468 card is issue 6 or less and TP337220 photosensor is used, or if TP322468 card is issue 7 or greater and TP337472 photosensor is used, a wire (strap 7A1) must be connected across R25 of TP322467 card. If TP322468 card is issue 7 or greater and TP337220 photosensor is used, this wire must be omitted from TP322467 card.

TABLE B
SUMMARY OF OPTIONS ON CIRCUIT CARDS

CIRCUIT CARD	OPTION	DESCRIPTION
TP322468 (Connector XZ8)	Low Tape/End of Tape Reverse Channel Disable (Wire strap) <u>Note:</u> This option available only on TP322468 cards with issue number 10 or higher. A wire must be present between XZ8-A25 and XZ13-A23 of electronics module to implement the option.	Strap 8A intact: Reverse channel turns off when low tape condition exists. Strap 8A cut: Reverse channel turns off when end of tape condition exists, but remains on when low tape condition exists.
TP322475 (Connector XZ14)	10-Unit/11-Unit Code (Shunt screw)	Insulator covers foil strip, or screw is on rear side of card: 10-unit code Insulator away from foil strip: 11-unit code
TP322473 (Connector XZ13)	Reverse Channel (Wire straps)	13A intact; 13B and 13C cut: Data set provides standard reverse channel, and reverse channel is used. 13A and 13B intact; 13C cut: Data set does not provide reverse channel, or reverse channel is not used. 13A, 13B, and 13C intact: Data set wired for full duplex and provides reverse channel on its secondary channel.
TP322471 (Connector XZ11)	Internal/External Clocking (Wire strap 11A provided locally) <u>Note:</u> This option available only on TP322471 cards with issue number 5 or higher.	11A strap omitted: Data set does not provide clocking signal (ie, 202 data set or equivalent). 11A strap installed: Data set provides clocking signal (ie, 201 data set or equivalent). <u>Note:</u> A wire must be present between XZ4-A13 and XZ11-A6 of electronic module.
TP322480 (Connector XZ14)	Special Character Hold (Shunt screw farthest from connector pin edge of card)	Insulator away from connector pin edge of card (N.C. position): Special character hold contacts in teletypewriter are normally open (provide closure to ground when actuated).

TABLE B

SUMMARY OF OPTIONS ON CIRCUIT CARDS (Continued)

CIRCUIT CARD	OPTION	DESCRIPTION
TP322480 (Connector XZ14) (contd)		Insulator toward connector pin edge of card (N.O. position): Special character hold contacts in teletypewriter are normally closed (provide open to ground when actuated). <u>Note:</u> If special character hold function is not used, insulator should be away from connector pin edge of card (N.C. position).
	Break Detect (Shunt screw nearest connector pin edge of card)	Insulator away from connector pin edge of card (N.C. position): Break detect contacts in teletypewriter are normally open (provide closure to ground when actuated). Insulator toward connector pin edge of card (N.O. position): Break detect contacts in teletypewriter are normally closed (provide open to ground when actuated). <u>Note:</u> If break detect function is not used, insulator should be away from connector pin edge of card (N.C. position).
TP322474 (Connector XZ14)	Special Character Hold (Shunt screw)	Insulator away from connector pin edge of card (N.C. position): Special character hold contacts in teletypewriter are normally open (provide closure to ground when actuated). Insulator toward connector pin edge of card (N.O. position): Special character hold contacts in teletypewriter are normally closed (provide open to ground when actuated). <u>Note:</u> If special character hold function is not used, insulator should be away from connector pin edge of card (N.C. position).
TP322464 (Connector XZ4) <u>Note:</u> Applies only if tape set includes Character Recognition Expander card TP322465.	Stop on EOT (Wire strap) <u>Note:</u> This option available only on TP322464 cards with issue number 2 or higher.	4A1 intact: Tape set stops on EOT in send mode regardless of function switch setting; stops on EOT in search mode only if function switch is set to EOT. 4A1 cut: Tape set stops on EOT in send and search modes only if function switch is set to EOT.

TABLE B

SUMMARY OF OPTIONS ON CIRCUIT CARDS (Continued)

CIRCUIT CARD	OPTION	DESCRIPTION
TP322465 (Connector XZ5)	Search Character Selection (Three sets of eight shunt screws)	Insulator in M position: Marking bit Insulator in S position: Spacing bit
	Action Upon Recognition of Character A (Shunt screw 5A)	Insulator in SO position: In search mode with function selector set to character A, tape set stops and drops out of search mode. Insulator in SS position: In search mode with function selector set to character A, or in send mode regardless of function switch setting, tape set stops and drops out of search or send mode. <u>Note:</u> To disable character A, 5A screw is placed on rear side of circuit card.
	Action Upon Recognition of Character B (Shunt screw 5B)	Insulator in SO position: In search mode with function selector set to character B, tape set stops and drops out of search mode. Insulator in SS position: In search or send mode with function selector set to character B, tape set stops and drops out of search or send mode. <u>Note:</u> To disable character B, 5B screw is placed on rear side of circuit card. This character should be disabled if error option is used.
	Action Upon Recognition of Character C (Shunt screw 5C)	Insulator in SO position: In search mode with function selector set to character C, tape set stops and drops out of search mode. Insulator in CCD position: In send mode with function selector set to character C, transmission stops but tape set remains in send mode. For local operation, transmission resumes when prearranged character actuates function box contacts of

TABLE B

SUMMARY OF OPTIONS ON CIRCUIT CARDS (Continued)

CIRCUIT CARD	OPTION	DESCRIPTION
TP322465 (Connector XZ5) (contd)		<p>adjunct teletypewriter or when SEND button of tape set is depressed. For on-line operation, transmission resumes when remote receiver turns off and then turns back on its reverse channel carrier or when SEND button of tape set is depressed.</p> <p><u>Note:</u> To disable character C, 5C screw is placed on rear side of circuit card.</p>
	<p>Local/On-Line Data Blocking (Wire straps)</p> <p><u>Note:</u> This option available only on TP322465 cards with issue number 3 or lower. On cards with issue number 4 or higher, 5D2 is a permanent connection and 5D1 is omitted.</p>	<p>5D1 intact; 5D2 cut: CCD operation for character C available in local mode only.</p> <p>5D1 cut; 5D2 intact: CCD operation for character C available in both local and on-line modes.</p> <p><u>Note:</u> If CCD option is not used for character C (shunt screw 5C disabled or programmed for SO), strap 5D1 must be cut.</p>
	<p>Action Upon Recognition of Parity Error (Shunt screw ERR)</p>	<p>Insulator in SO position: In local search mode with function selector set to character B, detection of a parity error causes error lamp to light and tape set to stop and drop out of search mode.</p> <p>Insulator in SS position (option available only on TP322465 cards with issue number 5 or higher): In local search or send mode with function selector set to character B, detection of a parity error causes error lamp to light and tape set to stop and drop out of search or send mode.</p> <p>Insulator in CCD position (option available only on TP322465 cards with issue number 4 or lower): In local search or send mode with function selector set to character B, detection of a parity error lights the error lamp and inhibits further transmission, but tape set remains in search or send mode. Transmission continues when ERROR button is depressed.</p>

TABLE B

SUMMARY OF OPTIONS ON CIRCUIT CARDS (Continued)

CIRCUIT CARD	OPTION	DESCRIPTION
TP322485 (Connector XZ5)	Rewind Upon Premature Channel Disconnect (Shunt screw 5A)	Screw on back of card: With function selector in position A or B, tape set automatically rewinds to FS at beginning of message if channel disconnect occurs during on-line transmission. After rewind, tape set switches back to on-line send mode to await new call. Screw on front of card: Feature disabled.
	Rewind Over Data Received and Printed Out Locally (Wire strap 5B)	Strap cut: With function selector in position A or B, upon recognition of EOT at end of message received and printed out locally, tape set automatically rewinds to FS at beginning of message and awaits next message. Strap intact: Feature disabled.
	Rewind Over Data Transmitted On-Line (Wire strap 5C)	Strap cut: With function selector in position A or B, upon recognition of EOT at end of transmitted message, tape set automatically rewinds to FS at beginning of message and awaits data. Strap intact: Feature disabled.
	On-Line Data Blocking in Conjunction with Auto Rewind (Wire strap 5D)	Strap intact: With function selector in position A or B, tape set sends message in predetermined blocks during on-line send portion of transmission. Strap cut: Feature disabled.
	Stop Code Selection (Shunt screw RS/ \wedge)	Insulator in RS position: RS selected as stop code. Insulator in \wedge position: \wedge selected as stop code.

TABLE B

SUMMARY OF OPTIONS ON CIRCUIT CARDS (Continued)

CIRCUIT CARD	OPTION	DESCRIPTION
TP322466 (Connector XZ6)	Serial/Parallel Operation (Wire strap 6A1) <u>Note:</u> This option available only on TP322466 cards with issue number 7 or higher.	Strap intact: If terminal is equipped for serial operation with TP322471 card in position XZ11. Strap cut: If terminal is equipped for parallel operation with TP322478 card in position XZ13 and TP322477 card in position XZ14.

D. Internal/External Clocking Option (On-Line Operation)

3.09 If the tape set is to be connected to a high speed data set for on-line operation, the receiving transmitting distributor card (TP322471) must be programmed to match the clocking characteristics of the data set. For TP322471 card, issue 4 or lower, two 11A straps are omitted when data set does not provide clocking signal (eg, 202 data set or equivalent). When data set does provide clocking signal (eg, 201 data set or equivalent), two 11A straps are installed. For TP322471 card, issue 5 or higher, the clocking characteristics are selected as indicated in Table B.

E. Special Character Hold Option (33 or 35 Teletypewriter Adjunct)

3.10 If the tape set is to be connected to a 33 or 35 teletypewriter which provides contact operation during printer functions such as horizontal tab, vertical tab, form feed, and shift out, the teletypewriter interface card (TP322474 or TP322480, depending on the type of installation) must be programmed to match the contact action of the teletypewriter. When properly programmed, the tape set will stop sending during the aforementioned printer functions. The method of programming this shunt screw option on either the TP322474 or TP322480 card is indicated in Table B.

F. Break Detect Option (33 or 35 Teletypewriter Adjunct)

3.11 If the tape set is an adjunct to a 33 or 35 teletypewriter equipped to detect transmission breaks from a remote terminal, the

break detect circuits must be programmed to match the contact arrangement of the teletypewriter. If the tape set is an adjunct to a 33 or 35 with a UCC29 call control unit, programming is provided by a shunt screw on the TP322480 card as indicated in Table B. For an adjunct to a 33 or 35 with a 101 data set, break detect is a strap option in the interface cable connector as described in paragraph 3.44 and does not require any programming on the TP322474 card.

G. Character Recognition Expander

3.12 The basic magnetic tape set allows character search for four control characters (FS, GS, LF, and EOT). A character recognition expander card (TP322465) may be ordered to provide up to three additional search characters. These characters are programmed by positioning the insulators under the shunt screws in the CHAR A, B, and C columns of the card. In addition, shunt screws 5A, 5B, 5C, and ERR provide options as to how the tape set will respond when the selected characters are recognized, or in the case of the ERR option, when a parity error is detected.

3.13 The characters are programmed by positioning the insulators under the shunt screws according to the marking and spacing bits of the desired characters. When the card is shipped from the factory, all levels are marking in all three characters (the insulators are in the M position). With the card removed from connector XZ5 of the module, the desired characters are programmed as follows:

- (1) Determine the marking and spacing bits for the character to be used.

(2) Loosen the shunt screws corresponding to the spacing bits in the character, and rotate the insulators for these screws so they are in the S position, toward the connector edge of the card. Example: Suppose ETX is selected as character A. ASCII (American National Standard Code for Information Interchange) for ETX is bits 1 and 2 marking; all others spacing. To program the character, loosen shunt screws 3 through 8 in the CHAR A column and rotate the insulators to the S position. Leave the insulators on screws 1 and 2 in the M position.

(3) Tighten the shunt screws 1/8 to 1/4 turn beyond snug.

(4) Repeat the procedure for characters B and C, if used.

Note: In addition to search characters, the card provides an error function, whereby transmission will be inhibited if a parity error is detected or the set will search to a parity error. This option may be selected in place of the character B search function, if it is desirable to the user. In this case, character B is not available and its shunt screws need not be programmed.

3.14 Shunt screws 5A, 5B, 5C, and ERR determine how the tape set will respond when the selected characters are recognized (or when an error is detected if the error option is used in place of character B). When the card is shipped from the factory, these four screws and their half-circle shaped insulators are on the reverse side of the card. These are the "disabled" positions for these shunt screws. With the screws in these positions, the three search characters and the error function have no effect on the operation of the tape set.

3.15 To program the character functions (or the error function) the shunt screw and insulator for that function must be removed from the reverse side of the card and placed into the corresponding position on the front side. Before the screw is tightened, the insulator is moved to the position that will provide the desired type of operation. If the tape set is to stop on the programmed code in the search mode only, the insulator is placed in the SO position. If it is to stop in both the search and send modes (character

A or B only), the insulator is placed in the SS position. If the programmed code is to inhibit transmission but the tape set is to remain in the operating mode (character C), the insulator is placed in the CCD position. The shunt screw options are summarized in Table B.

Note: Send functions in Table B do not apply to the tape sets used as adjuncts to a CDT or other parallel device. The tape set is effectively a slave to the related terminal in this application, and has no provisions for initiating or terminating the send mode. Thus the character recognition expander feature must be programmed for local search operation only.

3.16 The CCD option of character C is used to provide "data blocking" in stand-alone or 33/35/37/40 adjunct sets. Late design TP322465 cards (issue number 4 or higher) provide blocking in the local or on-line send modes. On early design cards, issue number 3 or lower, a wire strap option (5D1 or 5D2) provides blocking in the local send mode only or in both the local and on-line send modes as shown in Table B.

3.17 The data blocking feature is intended primarily for installations in which a receiving unit has limited data handling capacity and the data stored on the tape must be sent in blocks that will not exceed this capacity. The stop code (character C) is inserted into the message at predetermined intervals, and the tape set stops sending (but remains in the send mode) each time this character appears. In an on-line application, the receiver turns off its reverse channel upon receipt of character C and processes the data received up to that point. When the receiver is ready for the next block of data, it turns on reverse channel and the tape set resumes transmission. In local applications, the transmission is resumed by operation of a set of contacts in the adjunct teletypewriter. In either case, the operator can resume transmission by depressing the SEND button on the tape set.

3.18 For data blocking applications, the character C shunt screws are usually programmed for a stop code such as ETB (End of Transmission Block). The operator who keyboards the data for storage in the magnetic tape set includes the stop character at appropriate intervals determined by the data handling capacity of the remote receiver.

3.19 When all of the desired characters and operating options are programmed, place the TP322465 card in connector XZ5 of the module. Label the function selector switch settings on the control panel to correspond to the selected characters (see Figure 6).

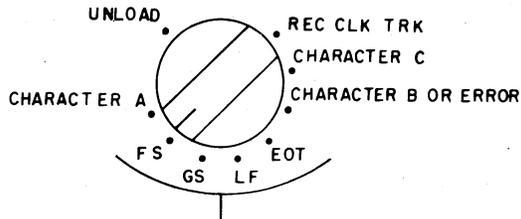


Figure 6 - Settings of Function Selector Switch to Select the Additional Search Characters or Error Function

H. Stop on EOT Option

3.20 A basic feature of the tape set is to stop on EOT in the send mode regardless of the function selector switch setting. In some installations the user may want to disable this feature. (For example, if the tape set includes character recognition expander card TP322465 with the SS option selected for character A.) This option is controlled by a wire strap on character recognition card TP322464 with issue number 2 or higher as shown in Table B.

I. Auto Rewind

3.21 An auto rewind for local print-out (TP322485) circuit card may be ordered to provide automatic rewind upon recognition of a given character in a message. The accessed data is processed according to the options programmed on the card. The operator selects the desired operation by setting the function selector switch to the A, B, or C position.

Note: The auto rewind feature cannot be used in installations where the tape set is an adjunct to a 37 KSR to provide ASR operation (MTTAG or MTTBG) or in parallel device adjuncts.

3.22 With the tape set in the on-line auto mode and the function selector set to character A, the tape set will provide the auto rewind operation upon recognition of a received

EOT. The EOT causes the set to reverse search to an FS, switch to the local send mode, and print out the accessed message on the adjunct teletypewriter. At the end of the message, the set reverts to the on-line receive mode to await further messages. This basic operation can be modified, or features added, by selecting the options that follow:

Option Screw 5A — When the function selector is in position A and the tape set is sending on-line, a premature channel disconnect will cause the tape set to rewind to the beginning of the message being sent, switch back to the on-line send mode, and await a call. To implement this option, option screw 5A must be on the rear of the card. To disable this option, screw 5A is moved to the front of the card and tightened 1/8 to 1/4 turn beyond the just snug condition.

Note: When this feature is used, it is recommended (but not required) that the TP322473 data set interface card (connector XZ13) should be issue number 5 or greater. These later design cards have a shorter time-out in the event of a channel disconnect.

Option Strap 5B — When the function selector is in position A, this strap prevents the tape set from rewinding to the beginning of a message that has been received and printed out locally. Upon completion of each received message, the tape remains at the end of the message and the set reverts to the receive mode to await the next message (the previous message is preserved on the tape). If strap 5B is cut, the tape rewinds to the beginning of the message upon recognition of EOT, and the set reverts to the receive mode to await the next message. The next message will then record over the previous one, erasing it in the process. This effectively increases the storage capacity of the tape.

Option Strap 5C — When the function selector is in position A, this strap provides the same action for messages that have been sent out on-line as strap 5B does for received messages. The feature is enabled by cutting strap 5C.

Option Strap 5D — When the function selector is in position A, this strap provides data blocking during the on-line send part of the message routine. Each time the prearranged stop code (RS or ^) appears in the message

being sent on-line, the tape set stops but remains in the send mode. The remote receiver detects the stop code and turns off its reverse channel. When reverse channel turns back on, indicating that the remote receiver is ready for another block of data, the tape set resumes transmission. The operator can also resume transmission by depressing the SEND button. To disable the blocking function in the A function selector setting, strap 5D is cut.

Option Screw RS/Λ — This option screw permits selection of either the RS or Λ character as the stop code for data blocking or an added search character. To select the RS character, the screw is loosened and the half-circle shaped insulator is moved to the RS position. To select the Λ character the insulator is moved to the Λ position. The screw is then tightened 1/8 to 1/4 turn beyond the just snug condition.

3.23 The B position of the function selector switch permits testing of the rewind feature. The tape set receives a test message (with appropriate FS and EOT characters) and, upon recognition of the EOT, rewinds to the beginning of the message and transmits it back to the remote terminal. At the end of the message, the tape set switches back to the receive mode. The received message can be compared to the transmitted message and checked for accuracy at the testing terminal. Options implemented for the A setting of the function selector also affect the B setting.

3.24 With the function selector in the C position, the tape set provides data blocking in the on-line send mode. Upon recognition of a prearranged stop code (RS or Λ, depending on the programming of the RS/Λ option screw) the tape set stops transmitting but remains in the on-line send mode. The remote terminal also recognizes the stop character and turns off its reverse channel. When the reverse channel turns back on, indicating that the remote terminal is ready for the next block of data, the tape set resumes transmission. This procedure is repeated for each stop code in the message. The operator can also resume transmission by depressing the SEND button. The C position also provides an additional search character (RS or Λ) in the search mode.

3.25 When all of the desired operating options are programmed, place the TP322485 card in connector XZ5 of the electronics module.

J. Securing the Module

3.26 When all necessary options have been programmed, check to make sure the circuit cards are in the correct positions (see Table A for card locations). With all cards firmly seated in their connectors, fasten the circuit card hold-down clamp on the module frame. For stand-alone or 33/35/37/40 adjunct tape sets, return the module to the cabinet. For CDT or other parallel device adjunct sets, leave the module out of the cabinet until the tape transport adjustments are completed.

REMOVING THE TAPE TRANSPORT

3.27 The tape set is adjusted and tested at the factory before shipment. However, the tape transport is immobilized and the motor pinion gear is disassembled (packed in muslin bag) to protect the gear in shipment. Before continuing with the installation, the transport must be removed from its support brackets and placed in operating condition. The procedure is as follows:

→ (1) For stand-alone or 33/35/37/40 adjunct tape sets, remove the locking screw from the grip nut in the top front rail of the cabinet (Figure 7). For CDT or other parallel device adjunct sets, remove the screw, lock-washer, and flat washer (underside of flange at top of cabinet) that hold the cabinet top closed.

(2) Raise and latch the cabinet top.

Note: To prevent the plastic transport cover from swinging open when the cabinet top is raised, tape it to the cabinet top. Use tissue or other material between the tape and plastic cover to prevent the adhesive from marring the cover.

→ (3) Reach in through the data set compartment (stand-alone or 33/35/37/40 adjunct) or module compartment (CDT or other parallel device adjunct) and remove the four immobilization screws and lockwashers from the undersides of the transport mounting rails. As shown in Figure 8, these screws extend through the support brackets, and in early design units through the immobilization tabs, into the transport baseplate when the tape set is shipped.

(4) Remove the retaining ring, flat washer, and upper shock mount from the post at each corner of the tape transport base (Figure 7).

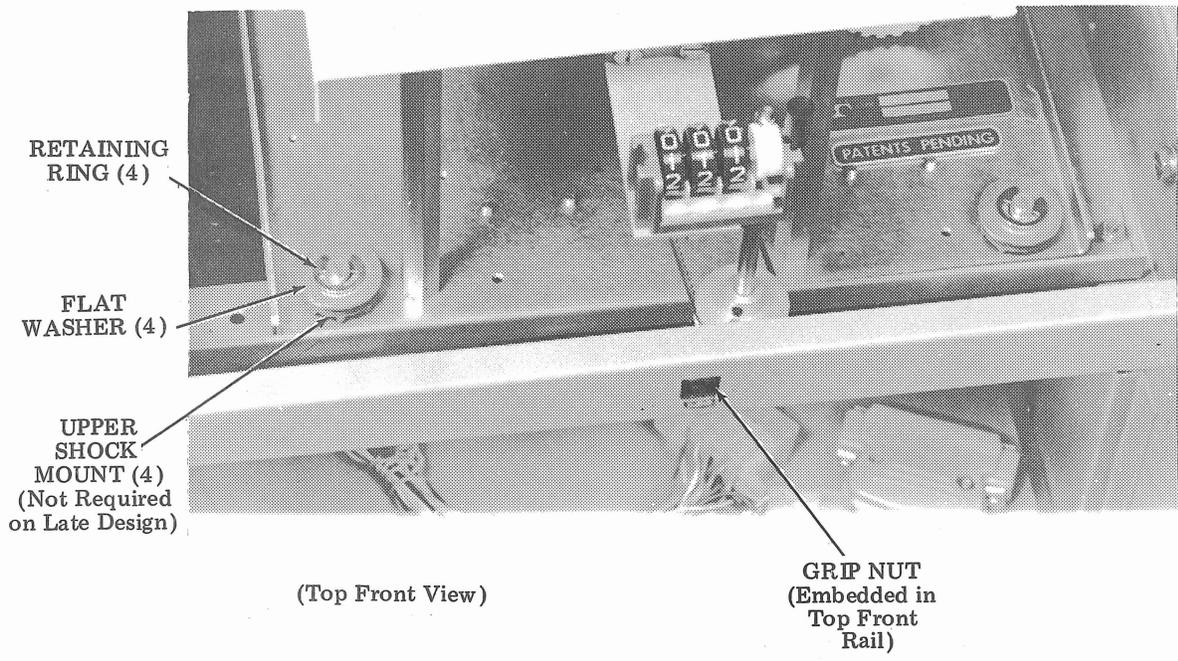


Figure 7 - Tape Transport Mounting Assembly; Top Cover Raised to Provide Access to Transport

Note: Stand-alone or 33/35/37/40 adjunct shown in Figure 7, but CDT adjunct uses identical shock mounts.

(5) Lift the tape transport so it clears the top of the cabinet, then rotate the transport and rest it crosswise on the sides of the cabinet.

(6) In early design units that include immobilization tabs, loosen the immobilization tab pivot screw at each corner of the underside of the transport baseplate and pivot the four immobilization tabs 90 degrees to the dashed line positions of Figure 8. (The tabs should now be parallel to the short side of the baseplate.) Place the tab mounting screws, with lockwashers, through the holes in the tabs into the baseplate, and tighten the tab pivot screws.

Note 1: With the tabs in their present positions, the transport will be free to "float" on its shock mounts. If it ever becomes necessary to ship the tape set, restore the tabs to the immobilizing positions to prevent excessive bouncing of the transport in shipment.

Note 2: In late design units without immobilization tabs, the removal of the immobilizing screws permits the transport to float. If there is a possibility that the tape set will be shipped, the screws and lockwashers should be saved for future use.

3.28 Perform the following adjustments as described in Part 4 of this section:

(a) For stand-alone or 33/35/37/40 adjunct tape sets

- (1) Motor Pinion Gear Backlash (4.01)
- (2) Support Bracket Position (4.02)
- (3) Cable Guard Seating (4.02)
- (4) Module Rear Clamp (4.06)

(b) For CDT or other parallel device adjunct tape sets

- (1) Motor Pinion Gear Backlash (4.01)
- (2) Cable Guard Seating (4.07)

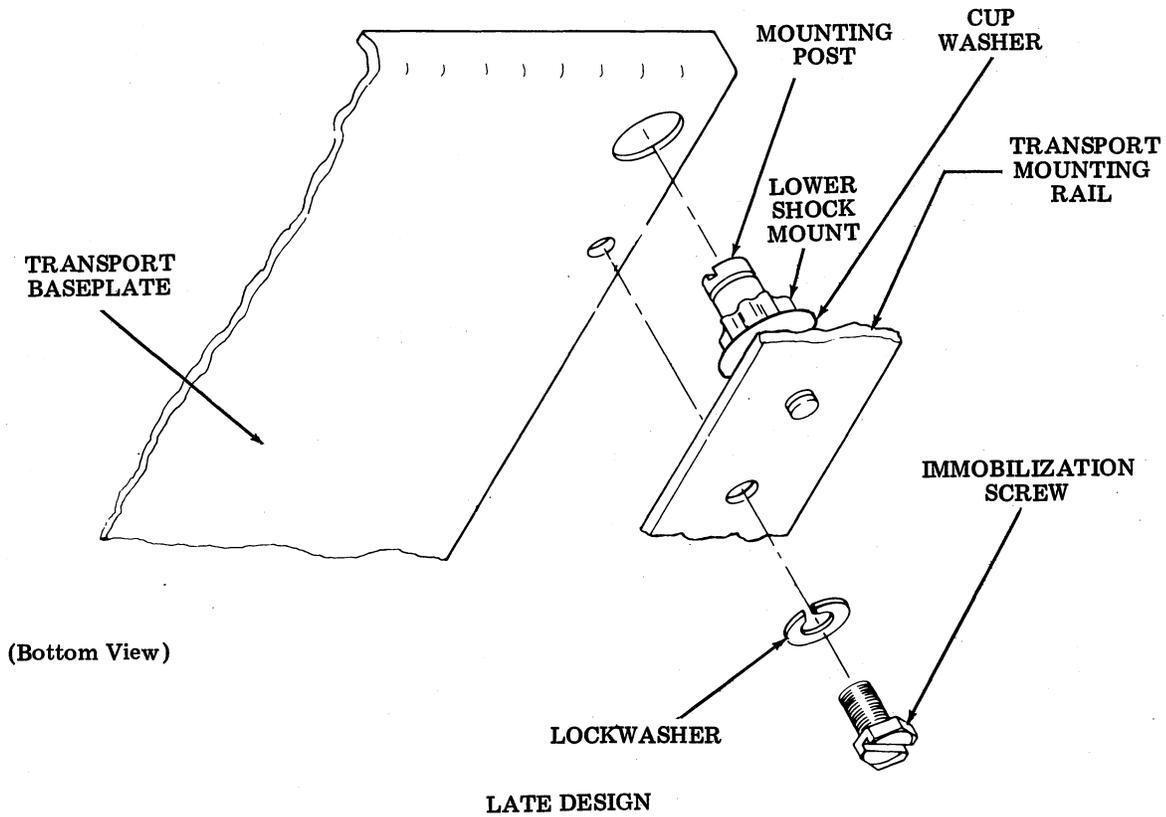
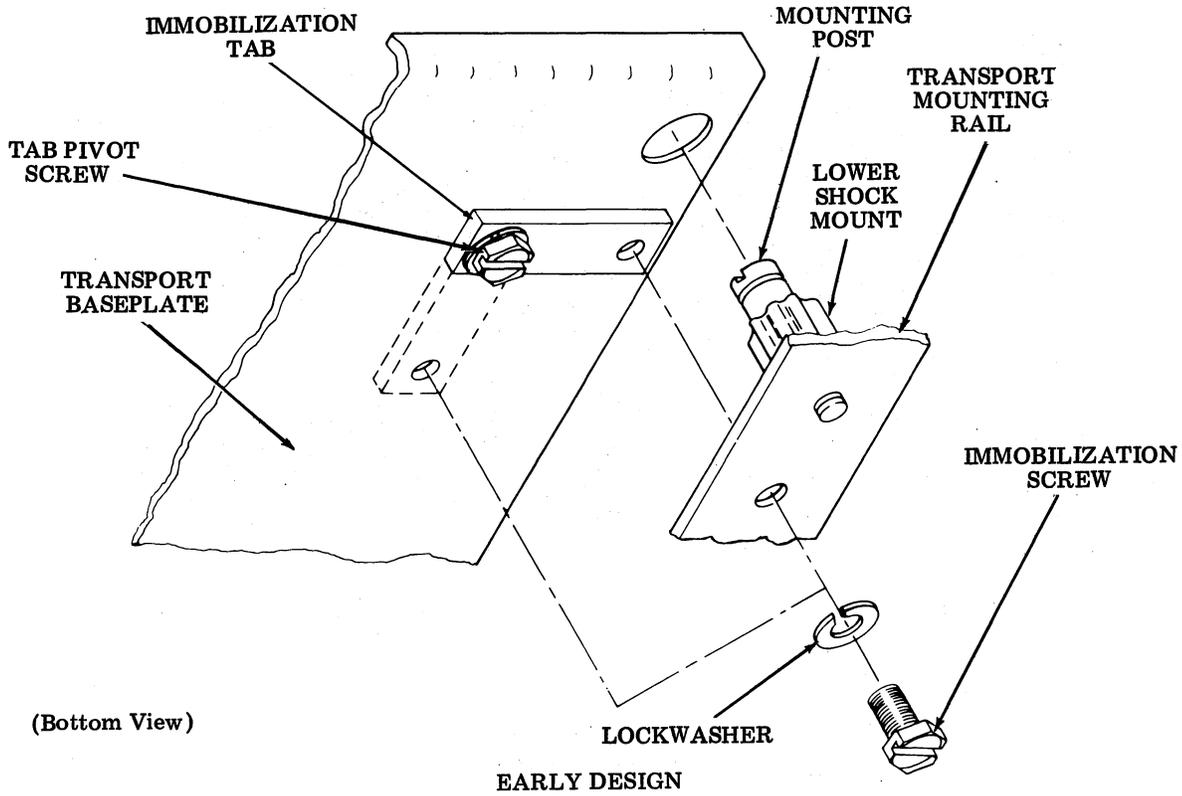


Figure 8 - Transport Shock Mount and Immobilization Assembly

3.29 If a stand-alone or 33/35/37/40 adjunct ← requires a high speed data set for on-line operation, refer to the appropriate instructions on Installing a High Speed Data Set (3.34 through 3.38) before remounting the tape transport on its support brackets. If a data set is not required, proceed to 3.30.

3.30 Rotate the tape transport so that the motor is to the right rear, and lower the transport into position on the mounting rails. Make sure the lower shock mounts are properly seated in the four mounting posts, and the posts are centered in the holes at the corners of the transport baseplate.

3.31 Place the upper shock mounts and flat washers on the four mounting posts, and secure the transport to the support brackets with the four retaining rings.

3.32 Check the following adjustments as described in Part 4 of this section:

(a) For stand-alone or 33/35/37/40 ad- ← junct tape sets.

- (1) Transport Horizontal Position (4.03)
- (2) Counter Horizontal Position (4.03)
- (3) Counter Vertical Position (4.05)

(b) For CDT or other parallel device adjunct tape sets

- (1) Transport Horizontal Position (4.04)
- (2) Counter Horizontal Position (4.04)
- (3) Counter Vertical Position (4.05)

3.33 For CDT or other parallel device adjunct tape sets, return the electronics module to the cabinet. Place the front panel on the cabinet and secure it with the retaining screw. Unlatch and close the top cover and secure it by inserting the screw, lockwasher, and flat washer from the underside of the flange at the top of the cabinet.

INSTALLING A HIGH SPEED DATA SET (STAND-ALONE OR 33/35/37/40 ADJUNCT ← ONLY)

3.34 If the magnetic tape set is used for high speed, on-line service, it requires a 200 series data set or equivalent. The cabinet will

accept a 202C Data Set, a 202D Data Set and 804A Data Auxiliary Set, or equivalents of these units. If a 201 or equivalent data set with larger physical dimensions is used, it must be mounted outside the cabinet.

3.35 To install a 202C Data Set or equivalent, proceed as follows:

(1) Place the data set on the center shelf of the cabinet, with the connectors toward the rear, and position the data set so the front aligns with the front of the cabinet shelf.

(2) Connect the data set interface cable (TP337380) to the connector at the rear of the data set. (The other end of this cable is connected to connector J112 of the electronics module.) Make sure the cable is routed behind the cable clamp at the rear of the cabinet.

(3) Route the data set power cord down behind the cable clamp at the rear of the cabinet, and plug it into receptacle J100 at the front of the ac power distribution assembly (right side wall of lower cabinet compartment).

(4) Route the data set line connector down behind the cable clamp and out the port at the rear of the cabinet.

3.36 To install a 202D Data Set with an 804A Data Auxiliary Set (or equivalents), proceed as follows:

(1) Place the data set toward the rear of the center shelf of the cabinet, with its connectors toward the rear.

(2) Place the data auxiliary set in front of the data set so that the handset and dialing facilities face the front of the cabinet.

(3) Interconnect the data set and data auxiliary set according to the instruction manuals provided with these units.

(4) Connect the data set interface cable (TP337380) to the connector at the rear of the data set. (The other end of this cable is connected to connector J112 of the electronics module.) Make sure the cable is routed behind the cable clamp at the rear of the cabinet.

- (5) Route the power cord from the data set down behind the cable clamp at the rear of the cabinet, and plug it into receptacle J100 at the front of the ac power distribution assembly (right side wall of lower cabinet compartment).
- (6) Route the data set line connector down behind the cable clamp and out the port at the rear of the cabinet.

3.37 To install a 201 data set with an 804A Data Auxiliary Set (or equivalents), proceed as follows:

- (1) Place the data auxiliary set on the center shelf of the cabinet, with the connectors toward the rear and the handset and dialing facilities toward the front.
- (2) Mount the data set at an appropriate point outside the cabinet.

Note: The cable provided will allow the data set to be located up to about 3 feet from the magnetic tape set. If an extension cable is added, the data set should not be installed more than 15 feet from the tape set.

- (3) Interconnect the data set and data auxiliary set according to the instruction manuals provided with these units. Dress the connecting cables behind the cable clamp and through the port at the rear of the cabinet.
- (4) Connect the data set interface cable (TP337380) to the connector on the data set. (The other end of this cable is connected to connector J112 of the electronics module.) The cable should be routed behind the cable clamp and through the port at the rear of the cabinet.
- (5) Route the power cord from the data set into the port at the rear of the cabinet, and plug it into receptacle J100 at the front of the ac power distribution assembly (right side wall of lower cabinet compartment).

3.38 With the data set installed, return the tape transport to its support brackets and complete the adjustments as described in paragraphs 3.30, 3.31, and 3.32.

INSTALLING THE FRONT PANEL (STAND-ALONE OR 33/35/37/40 ADJUNCT ONLY)

3.39 To accommodate a variety of data sets, three front panels are shipped with tape sets designed for stand-alone or 33/35/37/40 adjunct use. Select and install the panel as follows:

- (a) For a 202C Data Set or equivalent, use the TP337238 panel. Fasten the top of the panel to the underside of the cabinet top with two screws.
- (b) For an 804A Data Auxiliary Set or equivalent, use the TP337237 panel. Place the panel around the data auxiliary set by inserting the two tabs on the panel into the slots on the data set shelf. Push the data auxiliary set snug into the opening of the panel. The panel will be secured to the cabinet when the top cover is closed.
- (c) For externally mounted data sets, for data sets without dial-up facilities, or for installations that require no data sets, use the TP337236 panel. Place the panel in position by inserting the two tabs at the bottom of the panel into the slots on the data set shelf. The panel will be secured to the cabinet when the top cover is closed.
- (d) If the data set is not physically equivalent to those indicated, use the front panel that most nearly matches the physical shape of the data set, or omit the front panel if necessary.

3.40 Unlatch and close the cabinet top. Secure the cabinet top and the front panel by inserting the locking screw into the top rail of the cabinet.

CONNECTING THE LOCAL INTERFACE CABLE

3.41 Place the magnetic tape set in its operating location. For adjunct service, rotate the adjustable feet so that the height of the cabinet matches that of the related equipment. Refine the adjustment so that the cabinet does not rock from corner to corner.

3.42 In installations where the magnetic tape set is used as an adjunct to a local teletypewriter unit, or to a CDT or other parallel device, the interface cable must be connected to the related equipment. This cable should be routed out of the cable port at the rear of the

cabinet. Connect the cable to the related unit according to the instructions that follow:

A. 33 or 35 Teletypewriter With UCC29 Call Control Unit

3.43 This interconnection is achieved by removing the 1 and 2 connectors from the call control unit, and connecting the four connectors at the end of the TP337376 cable to the teletypewriter cable and call control unit as shown in Figure 9. A lead is also available for special character hold functions. The connection procedure is as follows:

- (1) Open the upper compartment of the teletypewriter cabinet to gain access to the rear of the call control unit.
- (2) Disconnect the 1 and 2 connectors from the call control unit.
- (3) Open the lower door of the teletypewriter cabinet (rear opening on 33; front opening on 35) to gain access to the lower compartment.
- (4) Route the TP337376 cable from the tape set around the back of the teletypewriter unit, through the cable port in the bottom of the cabinet, and up along the existing cable route to the rear of the call control unit.

(5) Connect the P1A and P2A connectors of the TP337376 cable to the 1 and 2 connectors, respectively, of the call control unit.

(6) Connect the P1B and P2B connectors of the TP337376 cable to the 1 and 2 connectors, respectively, of the cable disconnected in Step 2.

(7) The green wire of the TP337376 cable is for use with teletypewriters that provide the special character hold feature. Connect (or disable) this wire in one of the following arrangements:

(a) If the special character hold feature is not provided in the teletypewriter, tape and tie the green wire back to the cable.

(b) When interfacing to a 33 teletypewriter with a sprocket feed printer, splice the green wire to terminal 8 of connector 3 on the back of the UCC29 call control unit. Make sure the half-circle shaped insulator of the special character hold shunt screw on circuit card TP322480 (position XZ14) is in the N.O. position (toward the connector pin edge of the card).

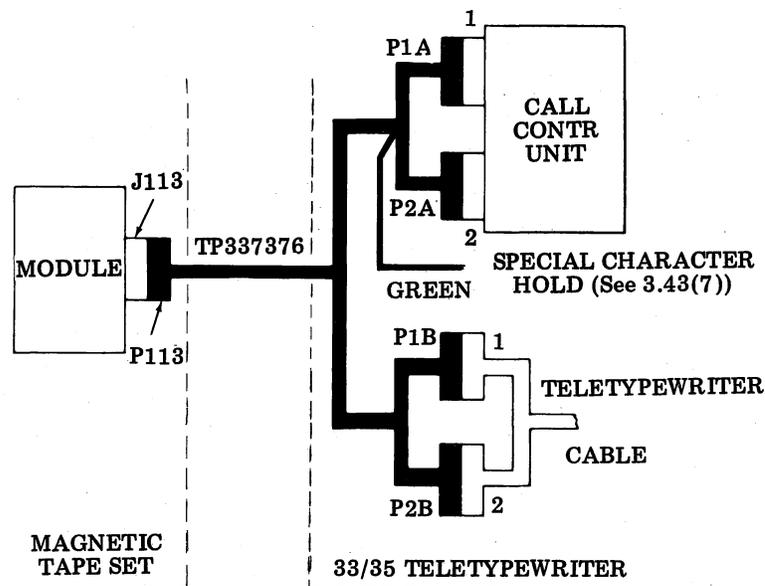


Figure 9 - Magnetic Tape Set Interfaced to 33/35 Teletypewriter With UCC29 Call Control Unit

(c) When interfacing to a 35 KSR, remove the white/black/red and green/slate wires from terminal J7 of the C wiring field of the 35 KSR, and connect them to terminal H7 of this wiring field. Connect the TP328366 diode (supplied with tape set) between terminals H7 and J7 of the C wiring field (banded end of diode to H7). Splice a length of wire to the green lead of the TP337376 cable, and connect the lengthened wire to terminal H7 of the C wiring field. Make sure the half-circle shaped insulator of the special character hold shunt screw on circuit card TP322480 (position XZ14) is in the N.C. position (away from the connector pin edge of the card).

(d) When interfacing to a 35 ASR, splice an additional length of wire onto the green lead and splice the lengthened wire onto the orange/green wire on terminal M3 of the C wiring field. Make sure the half-circle shaped insulator of the special character hold shunt screw on circuit card TP322480 (position XZ14) is in the N.C. position (away from the connector pin edge of the card).

(e) If the tape set is equipped with the auto rewind feature, connect one end of the spare white/yellow wire of the TP337376 cable to terminal B7 of connector P113. Splice an additional length of wire to the other end of the white/yellow wire and connect it to either terminal 5 of the local switch or terminal 11 of connector P1 of the TP186627 teletypewriter logic assembly.

Note: These connections may be present on late design cables.

- (8) Close the compartment doors on the teletypewriter cabinet.

B. 33 or 35 Teletypewriter With 101 Data Set

3.44 This interconnection is achieved by disconnecting one of the cables between the teletypewriter unit and data set, and connecting these connectors to the two connectors at the end of the TP337368 cable as shown in Figure 10. The procedure is as follows:

- (1) Open the lower door of the teletypewriter cabinet (rear opening on 33; front opening on 35).

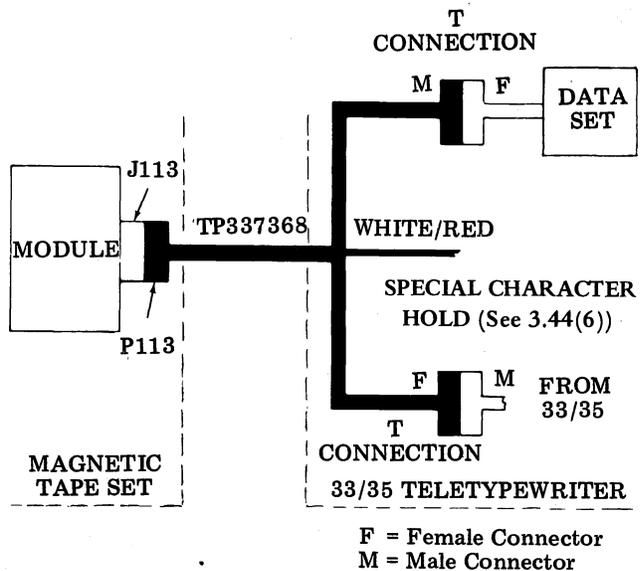


Figure 10 - Magnetic Tape Set Interfaced to 33/35 Teletypewriter With 101 Data Set

- (2) Disconnect the T connector on the cable between the teletypewriter unit and the data set.

Note: There are two cables between the teletypewriter and data set. The one to disconnect in this step has a male connector on the cable from the teletypewriter unit, and a female connector on the cable from the data set.

- (3) Route the TP337368 cable from the tape set around the back of the teletypewriter unit and through the cable port at the bottom of the cabinet.

- (4) Connect the female connector of the TP337368 cable to the male connector of the teletypewriter cable.

- (5) Connect the male connector of the TP337368 cable to the female connector of the data set cable.

- (6) The remaining white/red wire of the TP337368 cable is for use with teletypewriters that provide the special character hold feature. This wire is used to detect normally open or normally closed stunt box contacts. The shunt screw on circuit card TP322474 (position XZ14) must be programmed to match the operation of the function contacts (see 3.10).

Note: No voltage is required on the function contact, but an open circuit voltage not exceeding +48 v dc is permissible. If higher dc voltage or negative dc voltage or ac voltage is present on the function contacts of the teletypewriter set, a small relay may be used to provide isolation and contact closure (or opening) to ground. The relay coil would be wired to energize from the function contacts, and the white/red wire of the TP337368 cable would then be connected to the appropriate relay contacts. The shunt screw option on card TP322474 should then match the normally closed or normally open relay contacts.

Connect (or disable) the white/red wire of the TP337368 cable in one of the following arrangements:

- (a) If the special character hold feature is not provided by the teletypewriter, tape and tie the white/red wire back to the cable.
- (b) When interfacing to a 33 KSR, the special character hold feature cannot be used directly. Tape and tie the white/red wire back to the cable to disable this feature, or install relay and connect the wire to the relay contacts.
- (c) When interfacing to a 33 ASR with a manual reader, the special character hold feature cannot be used directly. Tape and tie the white/red wire to the cable to disable this feature, or install relay and connect the wire to the relay contacts.

Note: The break detect feature must also be disabled in this arrangement: Remove strap 14A3 between pins A13 and B13 of connector P113; remove the white/brown/green and white/brown/orange wires from pin A12 of P113; maintain the connection between the white/brown/green and white/brown/orange wires, and tape them to the cable; connect pins A12 and B13 of P113 together.

(d) When interfacing to a 33 ASR with an automatic reader, the special character hold feature cannot be used directly. Tape and tie the white/red wire to the cable to disable this feature, or install relay and connect the wire to the relay contacts. Remove strap 14A3 between pins A13 and B13 of connector P113 to implement the break detect feature.

(e) When interfacing to a 35 KSR, remove the white/black/red and green/slate wires from terminal J7 of the C wiring field of the 35 KSR, and connect them to terminal H7 of this wiring field. Connect the TP328366 diode (supplied with tape set) between terminals H7 and J7 of the C wiring field (banded end of diode to H7). Connect the white/red wire of the TP337368 cable to terminal H7 of the C wiring field to provide the special character hold feature. Remove strap 14A3 between pins A13 and B13 of connector P113 to implement the break detect feature.

(f) When interfacing to a 35 ASR, remove the terminal at the end of the white/red wire and splice the wire into the terminal on the end of the orange/green wire on terminal M3 of the C wiring field. Remove strap 14A3 between pins A13 and B13 of connector P113 to implement the break detect feature.

(g) If a tape set equipped with the auto rewind feature is interfaced to a 35 teletypewriter, connect one end of the spare white/red/green wire in the TP337368 cable to terminal B7 of connector P113. Splice an additional length of wire to the other end of the white/red/green wire and connect it to either terminal 27 of the local key switch or terminal P19 of the P connector in the teletypewriter.

(7) Close the door of the teletypewriter cabinet.

C. 37 Teletypewriter for Local, Off-Line Operation

3.45 This interconnection is achieved through the unused EIA interface connector on the teletypewriter, as shown in Figure 11. The procedure is as follows:

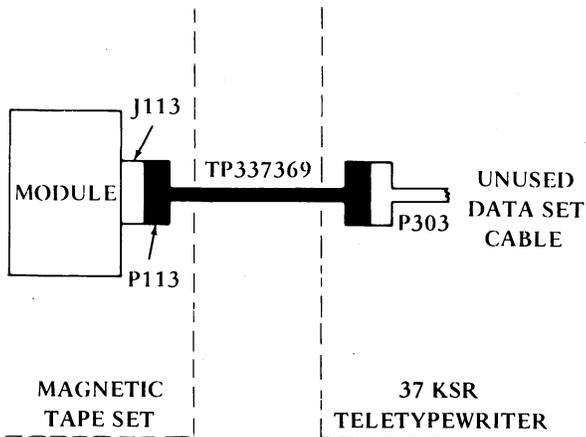


Figure 11 - Magnetic Tape Set Interfaced to 37 Teletypewriter for Local, Off-Line Applications

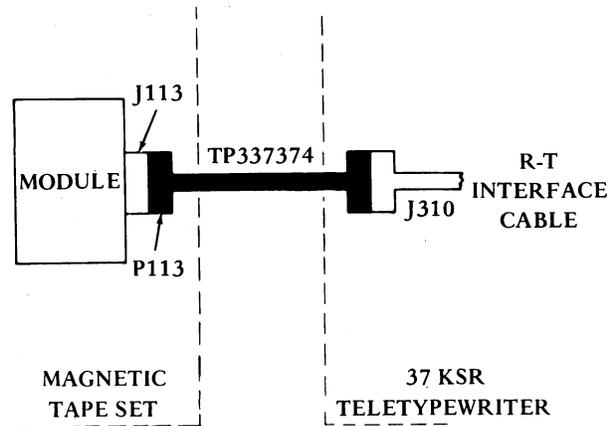


Figure 12 - Magnetic Tape Set Interfaced to 37 KSR to Provide ASR Operation

- (1) Open the lower door of the teletypewriter cabinet.
- (2) Route the TP337369 cable from the tape set around the back of the teletypewriter unit and through the cable port in the bottom of the cabinet.
- (3) Connect the connector on the TP337369 cable to connector P303 on the data set cable in the lower compartment of the teletypewriter cabinet.
- (4) Remove the electronics module from the lower portion of the teletypewriter cabinet.
- (5) For sprocket feed units, strap pin H20 of the wiring field to pin B31 of XZ107 on the teletypewriter module.
- (6) Replace the electronics module in the teletypewriter cabinet and close the cabinet door.

D. 37 KSR to Provide ASR Operation

3.46 This interconnection is achieved through the R-T connector of the teletypewriter unit, as shown in Figure 12. The procedure is as follows:

- (1) Open the lower door of the teletypewriter cabinet.
- (2) Route the TP337374 cable from the magnetic tape set around the back of the teletypewriter unit and through the cable port at the bottom of the cabinet.

- (3) Connect the connector on the TP337374 cable to connector J310 on the R-T interface cable in the lower compartment of the teletypewriter cabinet.
- (4) Close the door on the teletypewriter cabinet.

E. Parallel Device Other Than CDT or Cluster Controller

3.47 This connection is achieved as shown in Figure 13. The procedure is as follows:

- (1) Route the TP337373 cable from the rear of the tape set to the adjunct terminal.

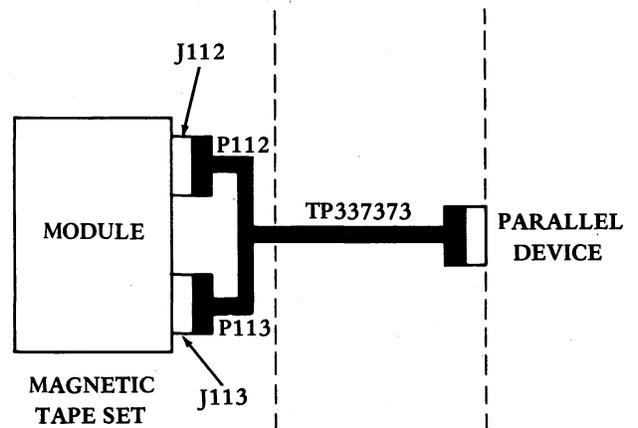


Figure 13 - Magnetic Tape Set Interfaced to Parallel Device (other than CDT or Cluster Controller)

(2) Plug the cable connector into the corresponding tape set connector on the adjunct terminal.

3.49 This connection is achieved as shown in Figure 15. The procedure is as follows:

F. CDT to Provide Local Data Storage

3.48 This connection is achieved as shown in Figure 14. The procedure is as follows:

(1) Route the TP337448 cable from the rear of the tape set to the rear of the CDT.

(2) Connect the PTI connector of the tape set to the corresponding connector on the cable from the CDT.

(1) Route the two legs of the TP337447 cable from the rear of the tape set to the CDT and cluster controller as shown in the diagram. The leg containing the RCV connector goes to the cluster controller, and the leg containing the SEND connector goes to the supervisory CDT of the system, or to a CDIF interface for a DATASPEED 40 KSR.

G. CDT in Cluster Controller Installation for Emergency Storage, or CDIF Interface to DATASPEED 40

(2) Connect the RCV connector to the corresponding connector on the cable from the standby port of the cluster controller.

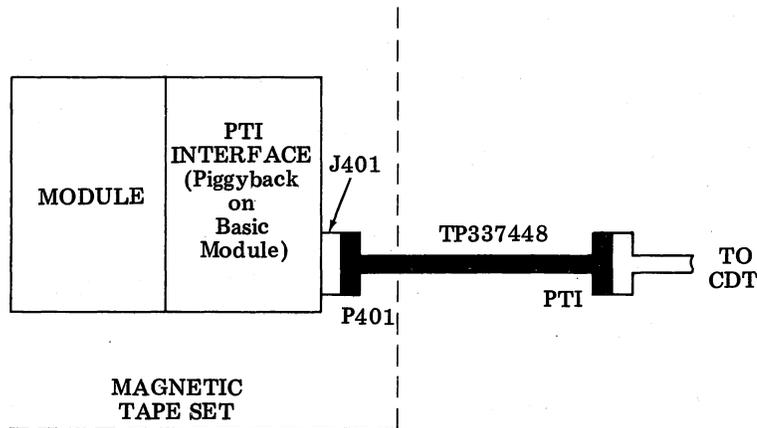


Figure 14 - Magnetic Tape Set Interfaced to CDT

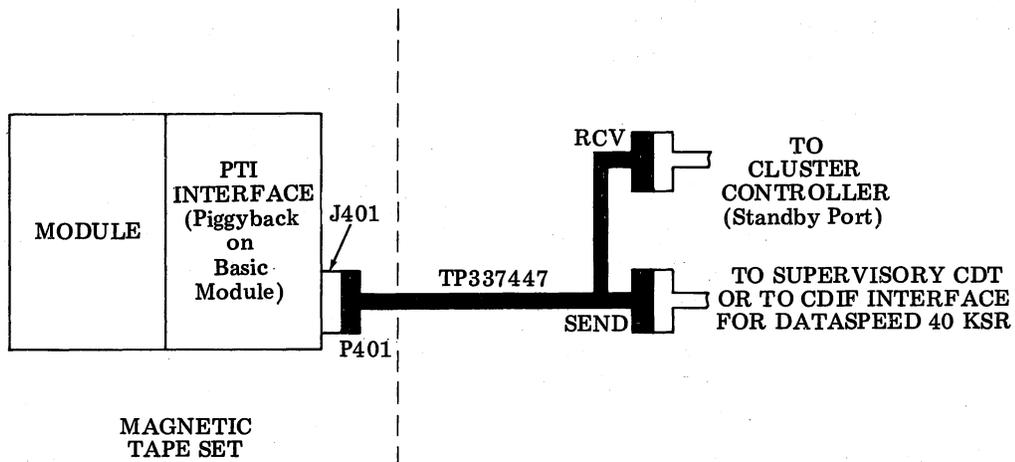


Figure 15 - Magnetic Tape Set Interfaced to Cluster Controller and Supervisory CDT

(3) Connect the SEND connector to the corresponding connector on the cable from the CDIF810 module of the CDT, or to DATASPEED 40. See 575-100-352 for details.

H. DATASPEED 40 for Local Operation

3.50 The interconnection (Figure 16) is achieved by the installation of the TP344374 modification kit consisting of a TP344375 cable, a TP322484 circuit card, a TP197464 diode, and seven TP344373 straps. Install as follows:

- (1) Remove existing card, if any, from position XZ14 of electronics module.
- (2) Remove cable, if any, from position J113 of electronics module.
- (3) Plug TP344375 cable into position J113 of the electronics module.
- (4) Install TP322484 circuit card into position XZ14 of electronics module.
- (5) Turn module over and remove protective cover from wiring field.
- (6) Install seven TP344373 straps (six if there is no M40 printer) as follows:
 - XZ11, pin B32 to XZ14, pin A28 (do not install this strap if station arrangement does not include a DATASPEED 40 printer)
 - XZ12, pin A27 to XZ12, pin A15
 - XZ12, pin B26 to XZ14, pin B11
 - XZ12, pin B22 to XZ14, pin B8
 - XZ13, pin A25 to XZ14, pin B6
 - XZ13, pin B20 to XZ14, pin B5
 - XZ14, pin A6 to J111, pin C4

- (7) Replace the wiring field cover.
- (8) If DATASPEED 40 printer is SSI (Standard Serial Interface) and TP322471 circuit card (position XZ11 in electronics module) is issue 4 or below, add TP197464 diode or equivalent to TP322471 card; anode (striped end) to pin 11 of MLA2, and cathode to connector pin B32.
- (9) If the magnetic tape terminal does not have an auto-rewind option card (TP322485) in position XZ5, cut the 4A1 option strap on TP322464 card in position XZ4.

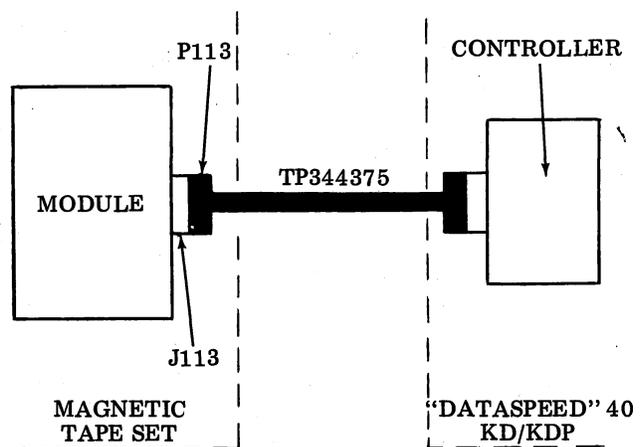


Figure 16 - Magnetic Tape Set Interfaced to DATASPEED 40 for Local Operation

- (10) Route other end of TP344375 cable through cable port at rear of cabinet and plug into the data set connector at the rear of the DATASPEED 40.
- (11) Program the DATASPEED 40 controller for reverse channel and 1200 baud options. Refer to Section 579-505-350.

LINE CONNECTIONS (STAND-ALONE OR 33/35/37/40 ADJUNCT ONLY)

3.51 In installations that provide on-line operation through a data set, the data set must be connected to the signal line. Installation procedures and requirements for the data set are described in the technical reference manual for the data set used.

OPERATIONAL TESTS

3.52 Connect all power cords from the magnetic tape set and associated units to an appropriate source of ac power (115 v, 60 Hz). Turn on the ac power switch of the ac distribution assembly in the lower compartment of the cabinet, and close the cabinet door. Turn on the associated units.

3.53 Load a new, unused tape cartridge onto the tape set as follows:

- (1) Remove the instruction label from the open end of the cartridge.
- (2) Check to make sure the record interlock plug is on the index label side of the cartridge.

- (3) Disengage the mylar leader from the slot in the cartridge.
 - (4) Raise the plastic transport cover.
 - (5) Move the pinch roller engagement lever to the RELEASE position (Figure 17).
 - (6) Place the cartridge, index label side up, into the cartridge receptacle at the rear of the transport. The mylar leader should be to the left of the supply guide post (Figure 18, left).
 - (7) Hold the cartridge and pull the mylar leader through the slot between the left and right head covers.
 - (8) Push the leader down into the slot in the take-up reel with about 1 to 2 inches of the leading edge extending beyond the take-up reel (Figure 18, center).
 - (9) Make sure the function selector switch on the control panel is not in the UNLOAD position. If it is, set it to another position such as FS.
 - (10) Move the pinch roller engagement lever to the ENGAGE position (Figure 18, right).
 - (11) Close the plastic transport cover.
- 3.54 Refer to Section 582-900-300 for the recommended checkout procedure. Also check the operation of any related units to make sure their functions have not been adversely affected by the installation procedure. If the tape set fails to respond to the operational tests, refer to the troubleshooting information in Section 582-900-300.

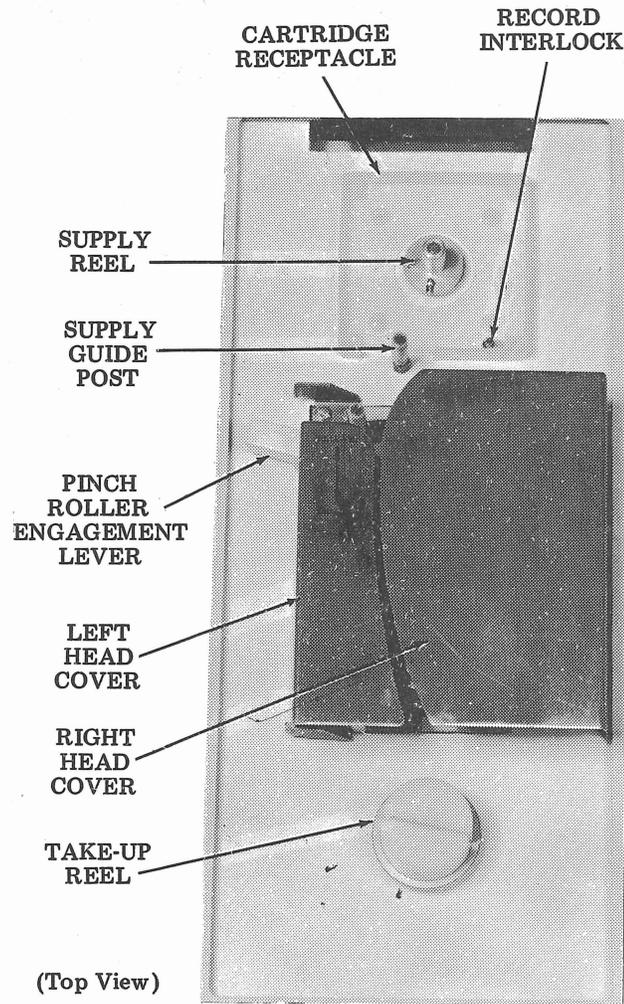
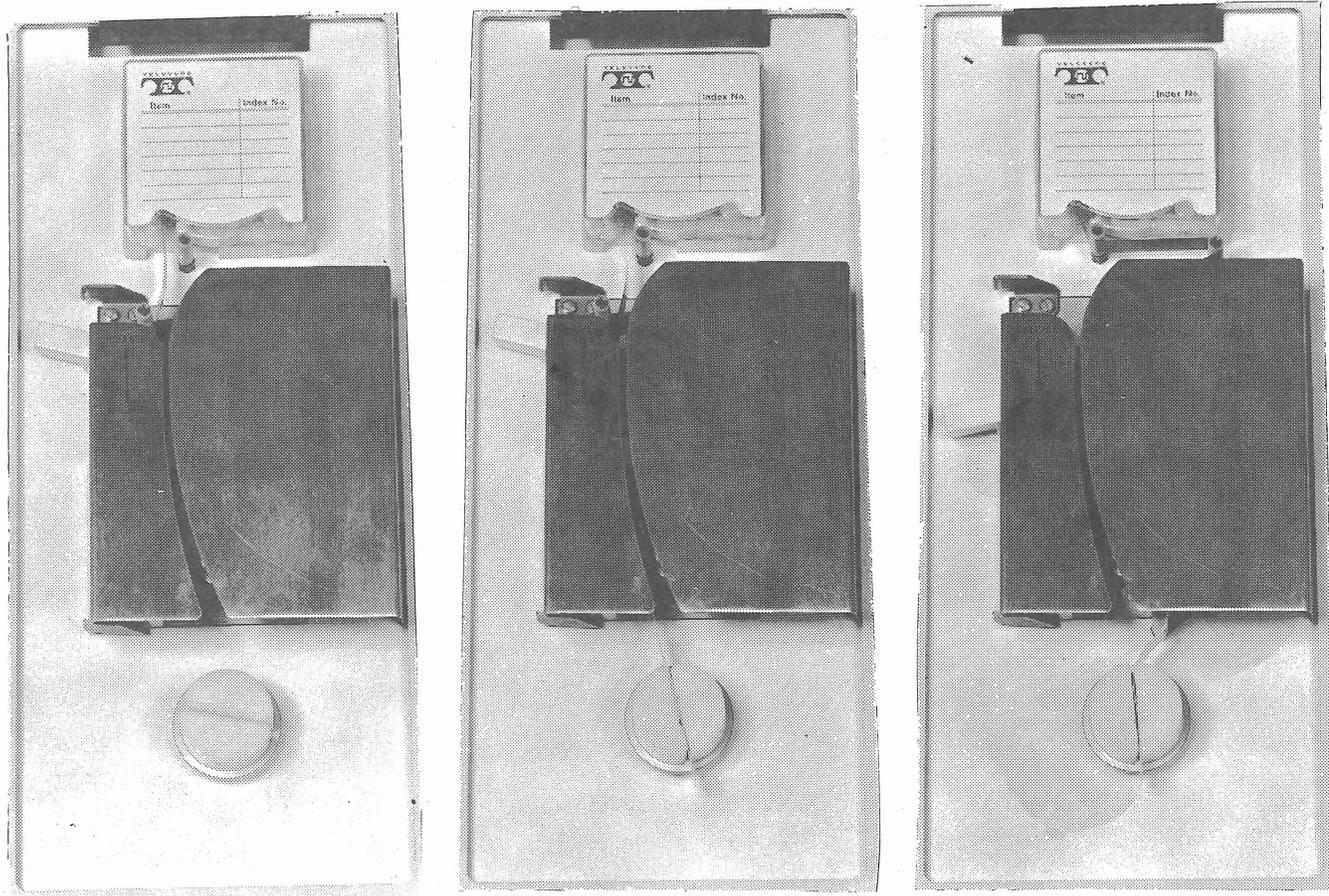


Figure 17 - Tape Transport With Cover Raised



(Top Views)

Figure 18 - Loading a Tape Cartridge Onto the Tape Transport

4. ADJUSTMENTS

4.01 Tape Transport

MOTOR PINION GEAR BACKLASH

Requirement

Backlash between motor pinion gear and input gear of gear shift, as measured at the motor fan rim, should be

Min some --- Max $1/16$ inch

To Adjust

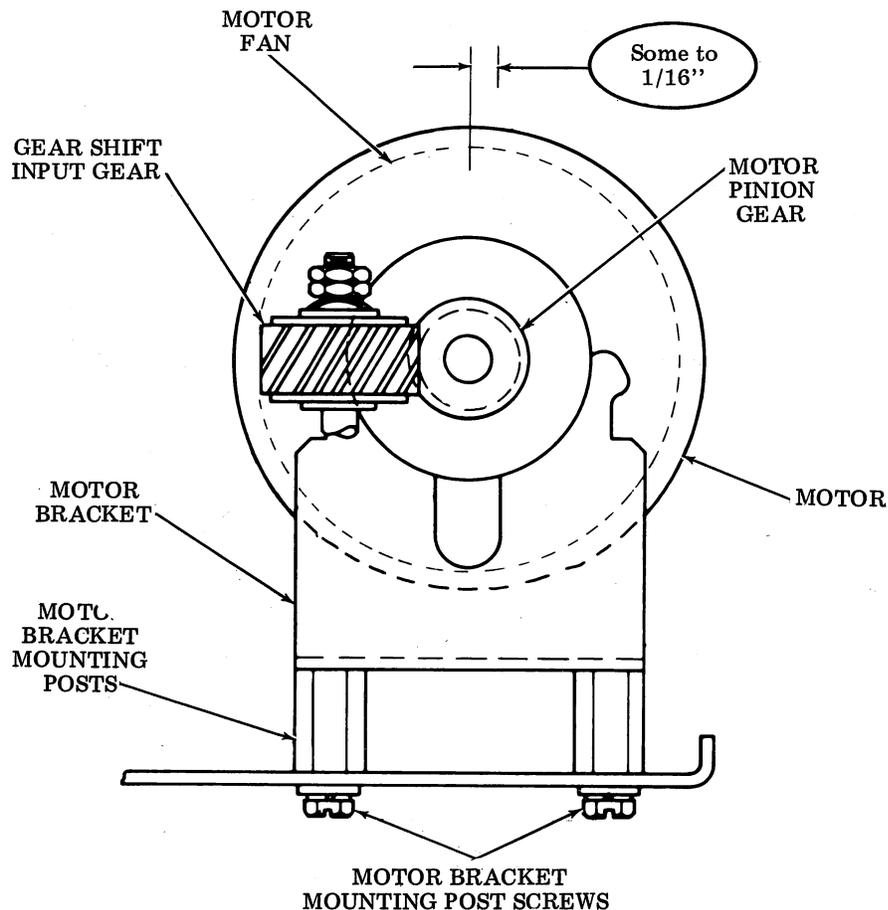
Loosen motor bracket mounting post screws under baseplate and move motor in slotted holes in baseplate left or right to meet requirement. Tighten mounting screws and recheck requirement.

Note 1: Tape set is shipped with motor pinion gear disassembled in muslin bag. To install, remove two front and one right rear motor

bracket mounting post screws, loosen left rear screw, and pivot motor to right. Slide pinion gear on shaft, with setscrew end toward motor, and tighten setscrew. Pivot motor back into position and reinstall three mounting post screws.

Note 3: If tape set is to be shipped, and there is a possibility of rough handling in shipment, gear should be removed, then reinstalled upon installation at the receiving point.

Note 2: Check backlash requirement four places, 90 degrees apart about circumference of gear shift input gear, and make sure requirement is met at point of minimum clearance.



→ 4.02 Cabinet (Stand-Alone or 33/35/37/40 Styling)

SUPPORT BRACKET POSITION

Requirement

Clearance between tape transport mounting rail and bottom surface of cabinet top should be

Min 5-9/32 inch --- Max 5-11/32 inch

To Adjust

With cable guard mounting nut and both left and right support bracket mounting screws loosened, position brackets to meet requirement. Tighten only support bracket mounting screws.

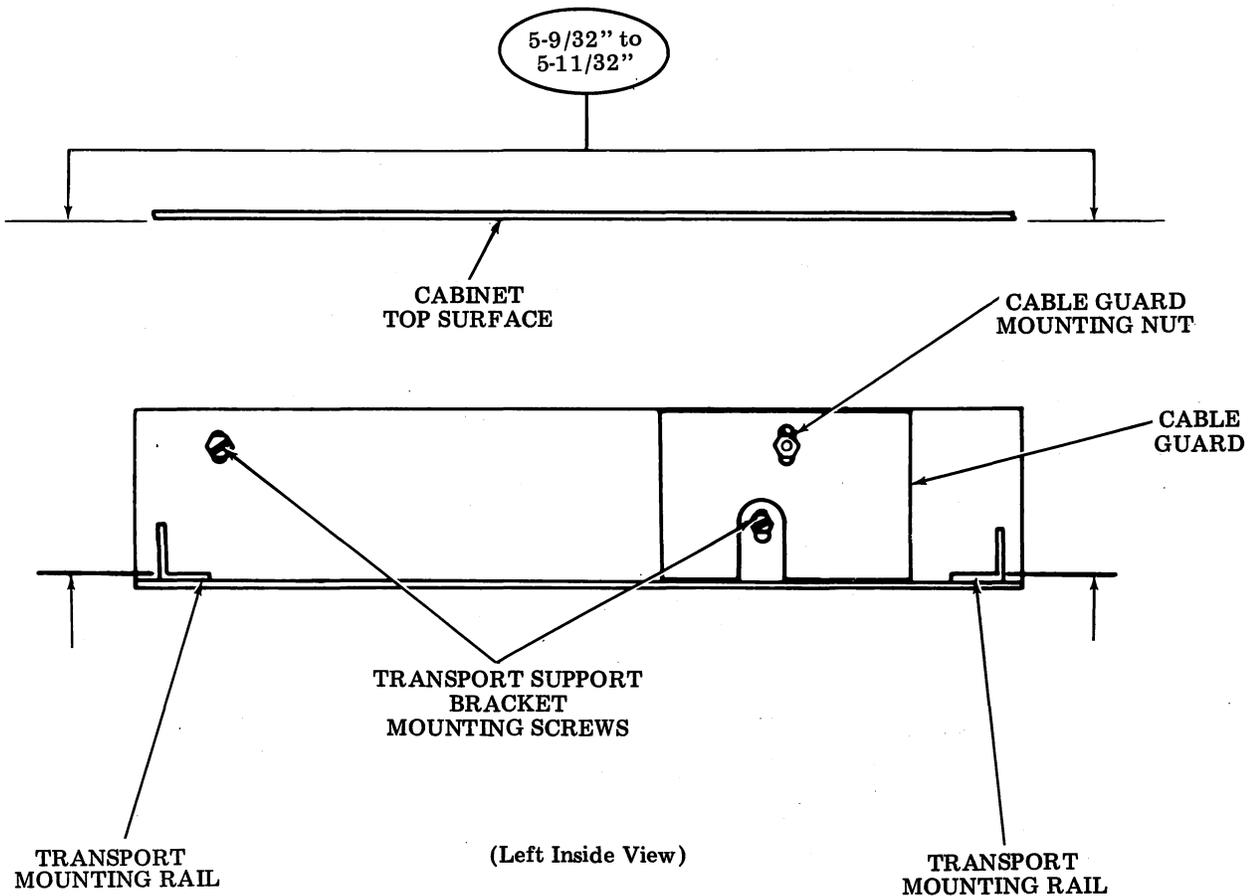
CABLE GUARD SEATING

Requirement

Cable guard should seat firmly down onto left transport support bracket.

To Adjust

With guard mounting nut loosened, seat guard onto support bracket. Tighten nut.



4.03 Cabinet (Stand-Alone or 33/35/37/40 Styling) (continued)

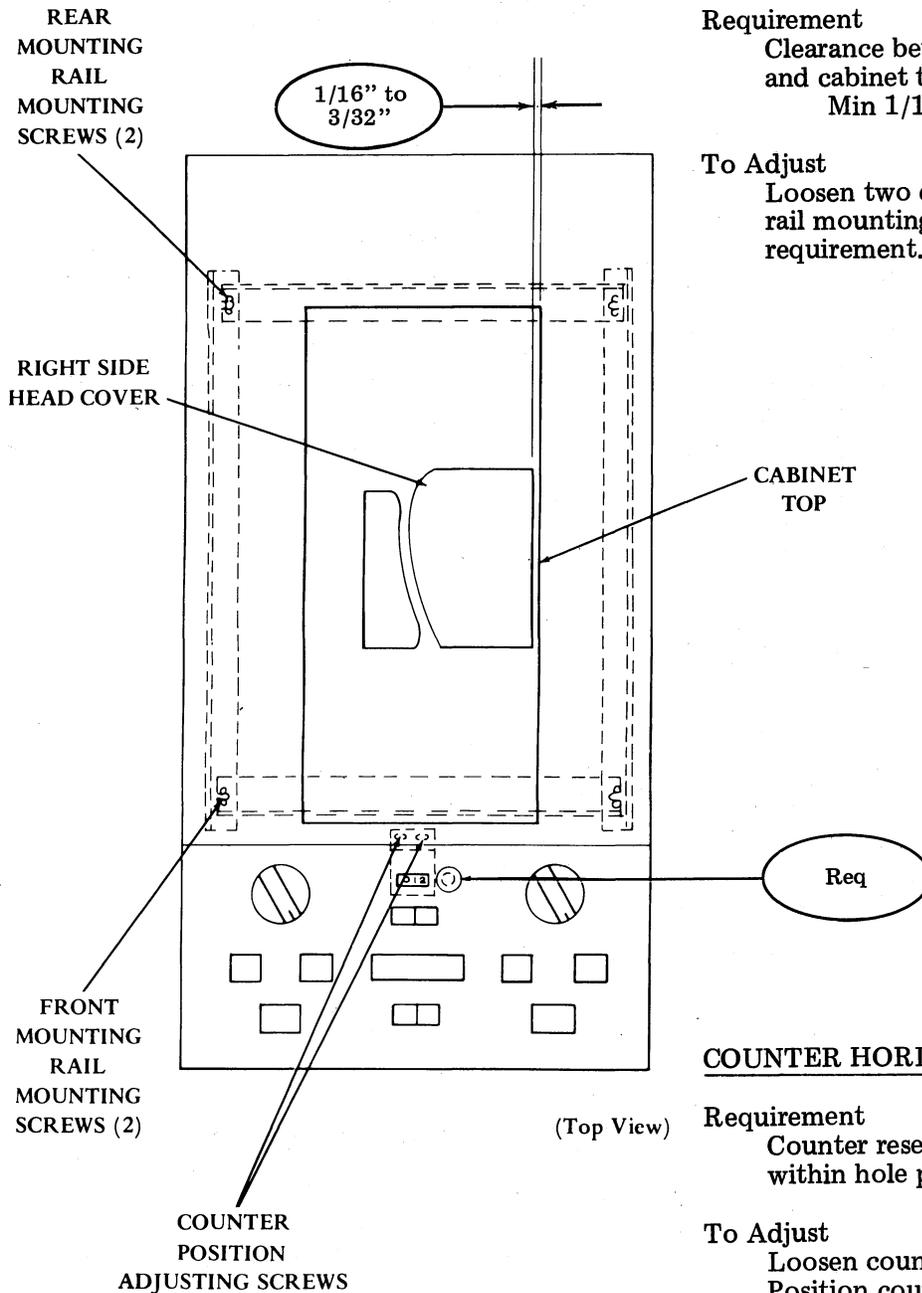
TRANSPORT HORIZONTAL POSITION

Requirement

Clearance between right side head cover and cabinet top cutout should be
Min 1/16 inch -- Max 3/32 inch

To Adjust

Loosen two each front and rear mounting rail mounting screws. Position rails to meet requirement. Tighten screws.



COUNTER HORIZONTAL POSITION

Requirement

Counter reset button should be centered within hole provided in control panel.

To Adjust

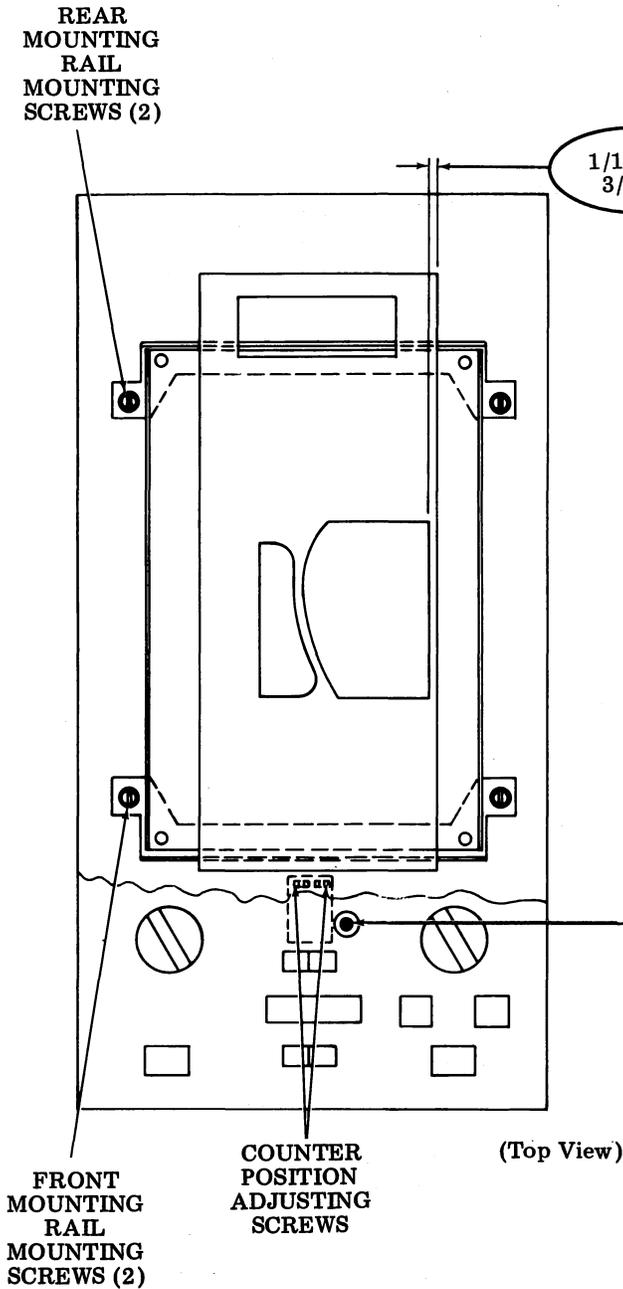
Loosen counter position adjusting screws. Position counter to meet requirement. Tighten screws.

4.04 Cabinet (CDT Styling)

TRANSPORT HORIZONTAL POSITION

- (1) Requirement
Clearance between right side head cover and cabinet to cutout should be
Min 1/16 inch -- Max 3/32 inch
- (2) Requirement
Counter reset button should be centered (front to rear) within hole provided on control panel.

To Adjust
Loosen two each front and rear mounting rail mounting screws. Position rails to meet requirement. Tighten screws.

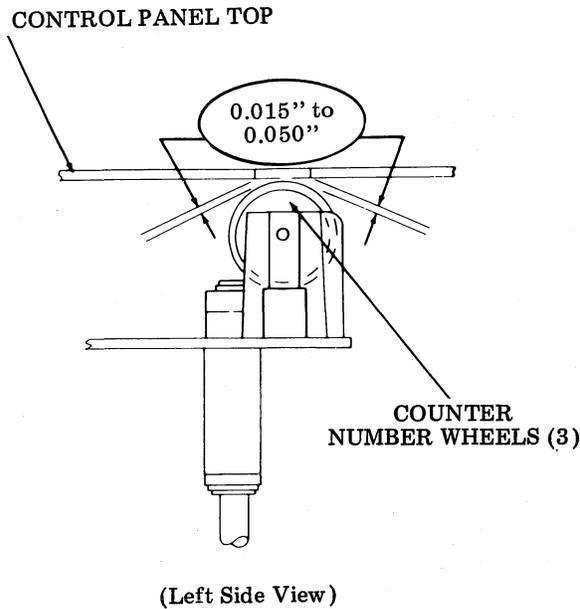


COUNTER HORIZONTAL POSITION

- Requirement
Counter reset button should be centered within hole provided on control panel.

To Adjust
Loosen counter position adjusting screws. Position counter to meet requirement. Tighten screws.

4.05 Tape Transport (continued)



COUNTER VERTICAL POSITION

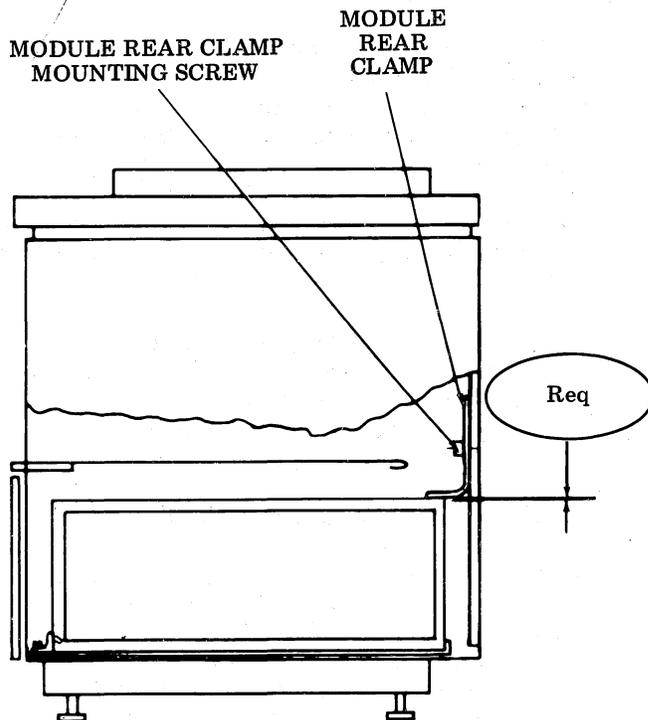
Requirement

Clearance between counter number wheels and edges of the opening in control panel top should be
 Min 0.015 inch -- Max 0.050 inch

To Adjust

Loosen counter position adjusting screws.
 Position counter to meet requirement.
 Tighten screws.

4.06 Cabinet (Stand-Alone or 33/35/37/40 Styling) (continued)



MODULE REAR CLAMP

Requirement

Module rear clamp should be positioned flush with the top surface of module frame.

To Adjust

Loosen module rear clamp mounting screw.
 Position clamp to meet requirement.
 Tighten screw.

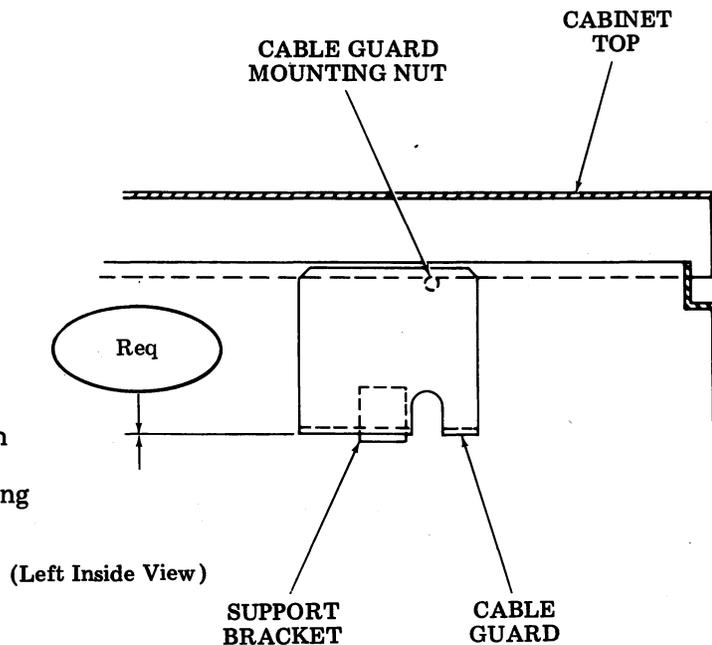
4.07 Cabinet (CDT Styling) (continued)

CABLE GUARD SEATING**Requirement**

Bottom flange of cable guard should rest flush on surface of support bracket.

To Adjust

Loosen cable guard mounting nut friction tight and position cable guard to meet requirement. Tighten cable guard mounting nut.



5. TAPE SET ASSEMBLY

5.01 If a tape set is shipped in component form (disassembled), the components must be assembled and interconnected by appropriate cables.

UNPACKING

5.02 Components are shipped in separate cartons. Smaller elements, such as the control panel assembly, circuit cards, etc are packed in single cartons which should be carefully opened, and the contents checked, before beginning the assembly. Observe all caution and instruction labels on the cartons before breaking the seals.

5.03 The tape transport, electronics module, and cabinet are packed in specially designed cartons. Remove the identification tag from the outside of each of these cartons and keep it handy. Cut the tape down the center and along the end seams and open each carton.

A. Tape Transport (DMT800)

5.04 Remove four corner details that hold inner carton in place, then remove wiring diagrams from between inner and outer cartons. Check the contents stenciled on top of inner carton against the identification tag.

5.05 Remove inner carton from outer carton and cut the tape down the center and along end seams and open inner carton. Remove liner from around the tape transport. Lift the tape transport out of the carton and place it on the bench. Transport is mounted on a pallet.

5.06 Remove four nuts, lockwashers, and flat washers from the screws that secure the tape transport to the pallet. Remove four screws and flat washers from the underside of the pallet and lift the transport out of the cleats on the pallet. Remove the tape cartridge secured to the top of the transport. Visually check the transport for any signs of damage, then place it aside.

Note: The transport is shipped with the motor pinion gear removed from the motor shaft and packed in a muslin bag. Instructions for mounting this gear are provided in a subsequent paragraph of this section.

B. Electronics Module (DME800)

5.07 Unpack the electronics module as described in 5.04, and remove wiring diagram package WDP0247. Remove the inner carton from the outer carton and cut the tape down the center and along the end seams. Open the inner carton. Remove all packing materials from the packing detail along the side of the

module. Cable assemblies are wrapped in tissue and placed within this detail. Remove and unwrap the cables.

5.08 Remove the packing detail from alongside the module and remove the module from the inner carton. Remove cardboard sleeve. Visually check to see if any circuit cards are touching each other or if any part of the module is damaged.

Note 1: When shipped, the module contains all basic circuit cards (indicated by the letter B in Table A). Variable circuit cards (indicated by the letter V in Table A) are shipped separately, as are the crystals required for the timing circuits.

Note 2: If the tape set is an adjunct to a CDT (includes a DMAM800 accessory module), there must be a wire connection between J111-D3 and J113-B11 of the DME800 module wiring panel. If this wire is not present, add a 24 gauge solid insulated wire between these two points.

Note 3: If the character recognition expander feature (variable circuit and TP322465) is used in the tape set, there must be wire connections between the following points on the DME800 module wiring panel:

J111-D10 to XZ14-A19
 J113-B7 to XZ5-B4
 J113-B8 to XZ14-A9
 XZ4-A7 to XZ5-B30
 XZ4-A11 to XZ5-B18
 XZ4-A13 to XZ5-A29
 XZ4-B14 to XZ5-B32
 XZ5-A5 to XZ5-A31
 XZ5-A27 to XZ13-B24
 XZ5-B28 to XZ10-A15
 XZ6-A17 to XZ14-A8

If these wires are not present, add 24 gauge solid insulated wires between the connecting points.

Note 4: If the auto rewind feature (variable circuit card TP322485) is used in the tape set, the section of buss strip from XZ4-A3 to XZ5-A3, XZ5-A3 to XZ6-A3, and XZ6-A3 to XZ7-A3 should be omitted from the DME800 module wiring panel. Also, the following connections should be present in the wiring panel:

J111-D10 to XZ14-A19
 J113-B7 to XZ5-B4
 J113-B8 to XZ14-A9
 XZ2-A13 to XZ5-A23
 XZ4-A7 to XZ5-B30
 XZ4-A11 to XZ5-B18
 XZ4-A13 to XZ5-A29
 XZ4-A13 to XZ8-B24
 XZ4-B14 to XZ5-B32
 XZ5-A3 to XZ13-A4
 XZ5-A5 to XZ5-A31
 XZ5-A15 to XZ13-A25
 XZ5-A19 to XZ10-A13
 XZ5-A21 to XZ10-B8
 XZ5-A25 to XZ10-A17
 XZ5-A27 to XZ13-B24
 XZ5-B22 to XZ10-B20
 XZ5-B28 to XZ10-A15
 XZ6-A17 to XZ14-A8

If these wires are not present, add 24 gauge solid insulated wires between the connecting points.

Note 5: If the TP322468 card in connector XZ8 is issue number 10 or above, and the end of tape option is selected for the reverse channel disable feature (strap 8A cut), a wire must be present from XZ8-A25 to XZ13-A23 of the electronics module. If not present, add a 24 gauge solid insulated wire between these points. (This wire not required if option is not to be exercised.)

C. Accessory Module (DMAM800) (CDT Adjunct Only)

5.09 If the tape set is used as an adjunct to a CDT (including service in a cluster controller installation), it requires an accessory interface module. This module is shipped as an accessory kit with the necessary mounting hardware and connecting cables. Unpack the module, inspect it visually for any signs of damage, and set it aside. Be sure to remove all cables, hardware, wiring diagrams, and instructions from the carton.

D. Cabinet (DMAC800 for Stand-Alone or 33/35/37/40 Adjunct; DMAC801 for CDT or Other Parallel Device Adjunct)

5.10 Unpack cabinet as described in 5.04, then remove the folder from the top of the corrugated top tray. Cut tape on folder taking care not to cut too deeply as cables and wiring diagrams are contained in the folder. Remove diagrams and cables. Remove the formed tray from the top of the cabinet. Cut the carton down two corners, being careful not to scratch the painted finish. Slide the cabinet out of the carton.

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5.11 With the cabinet out of the carton, lift the cabinet out of the bottom tray and remove the plastic bag. Remove tissue from the tape transport cover and tape from the front door of the cabinet.

CONTROL PANEL ASSEMBLY (STAND-ALONE OR 33/35/37/40 ADJUNCT)

5.12 Remove the locking screw from the grip nut in the top front rail of the cabinet (Figure 7). Raise and latch the cabinet top.

5.13 If the control panel and subpanel are shipped as a complete assembly, proceed to 5.14. If the control panel and subpanel are separate units, mount the subpanel on the control panel as follows:

(1) Loosen the setscrews on the two rotary switch knobs, and remove the knobs from the control subpanel.

(2) Align the cutouts in the control panel with the switch shafts on the subpanel and fasten four lockwashers and nuts to the posts that project through the subpanel. Replace the switch knobs and tighten the setscrews.

5.14 Place the control panel on the cabinet top by aligning the four weld studs with the holes in the cabinet top. Secure the control panel with four nuts. Route the cable along the left side of the cabinet top and secure it behind the cable bracket at the left rear of the top.

CONTROL PANEL ASSEMBLY (ADJUNCT TO CDT OR OTHER PARALLEL DEVICE)

5.15 Loosen the setscrews on the two rotary switch knobs, and remove the knobs from the switch shafts. Align the switch shafts with the cutouts on the tape set cover and fasten four lockwashers and nuts on the threaded posts which engage the subpanel. Replace the rotary switch knobs and tighten the setscrews. Route the cable through the two cable brackets along the left side of the cabinet cover to the rear of the cabinet.

CRYSTAL INSTALLATION

5.16 A crystal is required to establish the baud rate on the terminal timing circuit card (TP322472) in position XZ12 of the elec-

tronics module. For 33, 35, 37, or 40 adjunct use, a crystal must also be installed on the interface circuit card for position XZ14.

Note: The crystals are nonpolar devices with two symmetrical input leads. It does not matter which crystal connector pins engage with the receptacles in the crystal mounting socket on the circuit card.

5.17 Unfasten the circuit card hold-down clamp on the module, and remove the TP322472 card from connector XZ12. Install the appropriate crystal (TP335503 for 1050 baud; TP335504 for 1200 baud) by placing its connector pins into the receptacle, then pushing the crystal body into the clamp provided so that the crystal body is flat against the circuit card. Replace the card in connector XZ12 of the module.

5.18 If the tape set is an adjunct to a 33 or 35 teletypewriter, install a TP335500 crystal (110 baud) in the socket on the TP322474, TP322480, or TP322781 circuit card. If the set is an adjunct to a 37 teletypewriter, install a TP335501 crystal (150 baud) in the socket on the TP322475 or TP322476 card. Check the circuit card options (5.19) before installing the card in the module.

CIRCUIT CARD OPTIONS

5.19 Some circuit cards must be programmed to match the operation of the related equipment. Refer to paragraphs 3.03 through 3.25 for the procedures.

5.20 When all required options have been programmed, and the circuit cards are in the connectors as indicated in Table A, fasten the circuit card hold-down clamp on the module frame.

INSTALLING THE DMAM800 ACCESSORY MODULE (CDT OR OTHER PARALLEL ADJUNCT)

5.21 If the tape set is used as an adjunct to a single CDT, or to a CDT in a cluster controller installation, a DMAM800 accessory interface module must be mounted on and connected to the basic DME800 module. The procedure is as follows:

(1) Place the accessory module on top of the basic electronics module with the card connectors to the left. Position the accessory module, front to back, so that the screw hole on the bottom right side frame of

the accessory module is above the screw hole on the top right side frame of the basic module.

- (2) Use one frame clip (TP337434) and two panhead screws (TP198670) to fasten the front right side of the accessory module to the basic module.
- (3) Use one frame clip and panhead screw to fasten the rear left side of the accessory module to the left side frame of the basic module.
- (4) Connect the P112 and P113 connectors of the TP337446 cable assembly to the J112 and J113 connectors, respectively, of the basic module. Secure the connectors with their captive screws.
- (5) Connect the P400 connector at the other end of this cable to the J400 connector on the DMAM800 accessory module. Secure the connector with its captive screws.

CABLE INSTALLATION

5.22 The components of the tape set are interconnected by a set of cables. These cables are routed and connected as described in the following paragraphs.

A. AC Power Distribution Cables

5.23 Three cables exit from the ac power distribution assembly on the lower right wall of the cabinet. These cables should be routed as follows:

- (a) Route the power input cable (rear, terminated in a three-prong ac line plug) out of the cable duct at the rear of the cabinet (rear wall of stand-alone or 33/35/37/40 cabinet; bottom of CDT cabinet).
- (b) Route the transport power cable (center, terminated in twist-lock plug) to the top shelf where the tape transport will be mounted.
- (c) Route the power supply cable (front, terminated in three spade lugs) out of the front door of the cabinet.

5.24 Place the electronics module in front of the cabinet so that the power supply is toward the cabinet and the connector board is in a vertical plane with the wired side to the left.

Early Design — Connect the three leads of the power supply cable to TB101 of the module as follows: black lead to terminal 1, white lead to terminal 2, and green lead to terminal 3. Late Design — Connect P102 connector on power supply cable to J102 connector on power supply.

B. Cabinet Service Cable

5.25 Install the cabinet service cable (TP337365) as follows:

- (1) Connect the P311 connector of the cabinet service cable to the J311 connector of the control panel cable installed previously.
- (2) Route the short leg of the cable (connectors P211, P212, P213, and P214) to the top shelf of the cabinet.
- (3) Route the P111 connector of the cable out of the front of the cabinet and connect it to connector J111 of the electronics module. Secure it with its captive screws.

5.26 Route the cable behind the cable clamp at the rear of the cabinet.

C. Head Service Cable

5.27 Install the head service cable (TP337366) as follows:

- (1) Route the P210 connector to the top shelf of the cabinet.
- (2) Route the P110 connector to the bottom of the cabinet and out of the front door, and connect it to connector J110 of the electronics module. Secure the connector with its captive screws.

5.28 Route the cable behind the cable clamp at the rear of the cabinet.

D. Data Set Interface Cable (On-Line Operation — Stand-Alone or 33/35/37/40 Adjunct Only)

5.29 If a stand-alone or 33/35/37/40 adjunct tape set is to be operated on-line, a data set interface cable (TP337380) must be installed. The procedure is as follows:

- (1) Connect the P112 connector of the cable to the J112 connector on the electronics module and secure the connector by means of its captive screws.

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(2) Route the cable to the data set shelf (202C or 202D Data Set) or out of the duct at the rear of the cabinet (201 Data Set).

→ E. Teletypewriter Interface Cable (33/35/37/40 Adjunct)

5.30 If the tape set is used as an adjunct to a 33, 35, 37, or 40 teletypewriter, one of the following local interface cables must be installed:

TP337368 — 33 or 35 teletypewriter with 101C Data Set

TP337369 — 37 teletypewriter off-line

TP337374 — 37 KSR for ASR operation

TP337376 — 33 or 35 teletypewriter with UCC29 call control unit

→ TP344375 — DATASPEED 40 KD or KDP for local and on-line operation

The procedure for installing the cable is as follows:

(1) Connect the P113 connector of the cable to the J113 connector on the electronics module and secure the connector with its captive screws.

(2) Route the other end of the cable out through the duct at the rear of the cabinet.

F. Parallel Device Interface Cable (Other Than CDT)

5.31 If the tape set is used as an adjunct to a parallel interface device other than a CDT (or cluster controller), a TP337373 interface cable is connected and routed as follows:

(1) Connect the P112 and P113 connector of the cable to the J112 and J113 connectors of the module and secure the connectors with their captive screws.

(2) Route the other end of the cable out through the rear of the bottom of the cabinet.

→ G. CDT or Cluster Controller Interface Cable

5.32 If the tape set is used as an adjunct to a single CDT, or to a cluster controller installation, the DMAM800 accessory module is connected to the external equipment by a

TP337448 cable (CDT only) or TP337447 cable (cluster controller). The procedure is as follows:

(1) Connect the P401 connector of the TP337447 or TP337448 cable to the J401 connector on the accessory module and secure the connector with its captive screws.

(2) Route the other end of the cable (single PTI connector on TP337448 cable; RCV and SEND connectors on TP337447 cable) through the duct at the rear of the bottom of the cabinet.

PRELIMINARY ADJUSTMENTS

5.33 Perform the following adjustments as directed in Part 4 of this section:

→ (a) For stand-alone or 33/35/37/40 adjunct tape sets

Support Bracket Position (4.02)

Cable Guard Seating (4.02)

(b) For CDT and other parallel device adjunct tape sets

Cable Guard Seating (4.07)

RUNNING TIME METER (OPTIONAL FEATURE)

5.34 A running time meter is available as an optional feature of the tape set. If this meter is ordered, it may be installed on the tape transport as follows:

(1) From the underside of the transport base, insert two screws and lockwashers (supplied with meter) through the holes in the left front corner of the base.

(2) Place a cylindrical spacer over each screw and align the threaded mounting holes on the meter with the exposed ends of the screws. The meter should be positioned so the numbers are readable from the front.

(3) Tighten the screws to hold the meter firmly in place.

(4) Connect the meter leads to terminals 4 and 5 of the solid state switch of the tape transport service module. Polarity of the leads is unimportant.

INSTALLING THE TAPE TRANSPORT

5.35 The tape transport is shipped from the factory with the motor pinion gear removed from the motor shaft (contained in muslin bag). This gear must be installed and adjusted as explained in 4.01 to check the operation of the tape set. If it is reasonably certain that the tape set will not be jarred in moving it to the operating side (for example, if it will be hand-carried), the gear may be left in its operating position after it is installed. However, it is recommended that the gear be removed before shipment as stated in 4.01.

5.36 When installed for operation, the tape transport "floats" on rubber shock mounts on the mounting rails of the upper cabinet compartment. Immobilization screws provide a rigid mounting if the tape set is shipped. This prevents excessive bouncing which could result in damage.

5.37 The immobilizing action is provided by cup washers on late design units (Figure 8). With the immobilizing screws installed through the mounting rail and tightened into the transport baseplate, the lower shock mount is compressed until the cup washer presses against the baseplate to form a rigid mounting.

Note: If the tape set is being assembled at the operating site, or if it will be hand-moved to the operating site after assembly so there is no possibility of excessive jarring, the immobilization screws and lockwashers may be omitted.

5.38 On early design units, the transport is locked by pivoting the four immobilization tabs so they are parallel to the long dimension of the baseplate as shown by the solid line tab in Figure 8. With the transport seated on the shock mounts, the immobilizing screws with lockwashers are inserted through the mounting rails and tightened into the tabs as shown. This locks the baseplate, via the tabs, to the mounting rails.

Note: If the tape set is being assembled at the operating site, or if it will be hand-moved to the operating site after assembly so there is no possibility of excessive jarring, the tabs may be pivoted to the dashed line position of Figure 8 and secured in this position by inserting the screws with lockwashers through the tabs into the baseplate.

5.39 With the transport baseplate seated on the mounting posts of the support rails, place four upper shock mounts, flat washers, and retaining rings on the mounting posts as shown in Figure 7 (Early Design).

5.40 Connect the P210, P212, P213, P214, and P215 connectors, previously routed to the upper compartment, to the corresponding connectors on the tape transport service module.

5.41 Perform the following adjustments as directed in Part 4 of this section:

(a) For stand-alone or 33/35/37/40 adjunct tape sets.

(1) Transport Horizontal Position (4.03)

(2) Counter Horizontal Position (4.03)

(3) Counter Vertical Position (4.05)

(b) For CDT or other parallel device adjunct tape sets

(1) Transport Horizontal Position (4.04)

(2) Counter Horizontal Position (4.04)

(3) Counter Vertical Position (4.05)

INSTALLING THE ELECTRONICS MODULE (STAND-ALONE OR 33/35/37/40 ADJUNCT)

5.42 Route the cables along the cabinet side and carefully slide the module into the tray in the cabinet lower compartment.

Note: If there is a module retaining clamp at the right of the tray, tip the module so the clamp engages the lower right side frame of the module.

5.43 Secure the electronics module at the front with the clamp and mounting screw provided with the cabinet (Figure 3).

5.44 Perform the Module Rear Clamp adjustment as described in 4.06.

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INSTALLING THE ELECTRONICS MODULE (ADJUNCT TO CDT OR OTHER PARALLEL DEVICE)

5.45 Place the electronics module vertically in the cabinet, between the two side brackets, with the power supply at the bottom (Figure 4). Route all cables along the right side of the cabinet, behind the cable clamp, so they are not kinked.

5.46 Install two screws and lockwashers through the slots in the side brackets into the holes on the module frame. If the tape

set is being assembled for shipment, install a screw and lockwasher through the underside of the cabinet into the module end frame to lock the module in position and prevent it from pivoting forward.

CHECKOUT AND INSTALLATION

5.47 The tape set is now assembled and ready for checkout or field installation. Refer to the appropriate information in Part 3 of this section.