INTEGRATED SYNCHRONOUS "DATASPEED*" 40 RECEIVE-ONLY PRINTER STATION

GENERAL DESCRIPTION

1. GENERAL

1.01   This section contains a brief description of Integrated Synchronous DATASPEED 40 Receive-Only Printer (ROP) Stations in switched network, point-to-point and multipoint private line service.

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

1.03   Integrated synchronous ROP station configurations are shown in Figs. 1, 2 and 3.

1.04   The Integrated Synchronous DATASPEED 40 Controller is used in Receive-Only Printer (ROP) arrangements utilizing binary synchronous communications procedures on point-to-point private line networks, switched point-to-point networks and multipoint private line networks.

1.05   The stations provide batch data communications with one or more remote stations and a Data Communications Processor (DCP) under direct control of a central Line Control Unit (LCU). All transmission is to or from the DCP; no provision is made for terminals to communicate with each other.

1.06   These arrangements are capable of being used for (1) operation on switched networks using Data Set 201C, 209A or Bell System equivalent (with appropriate data auxiliary set or telephone set as required) for 2400 bps. Data Set 208B, 209A or Bell System equivalent (with appropriate telephone set as required) for 4800 bps, or 209A (with appropriate telephone set as required) for 7200 bps, (2) operation on multipoint private lines using Data Set 201C for 2400 bps, 208A for 4800 bps or 209A for 2400, 4800, or 7200 bps or Bell System equivalent. In addition, these arrangements may be used in two-point nonselective private-line applications using Data Set 201C for 2400 bps, 208A for 4800 bps, or 209A for 2400, 4800 or 7200 bps or Bell System equivalent.

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1.07 The interface to the data set is compatible with EIA RS-232C. See below.

Pin No.	Lead Designations
1	Protective Ground (AA)
2	Transmit Data (BA)
3	Receive Data (BB)
4	Request to Send (CA)
5	Clear to Send (CB)
6	Data Set Ready (CC)
7	Signal Ground (AB)
8	Received Line Signal Detector (CF)
9	No connection
10	No connection
11	Secondary Transmitted Data (SBA)
12	Secondary Received Data (SCF)
13	No connection
14	No connection
15	Serial Clock Transmit (DB)
16	No connection
17	Serial Clock Receive (DD)
18	No connection
19	No connection
20	Data Terminal Ready (CD)
21	No connection
22	Ring Indicator (CE)
23	Alarm †
24	No connection
25	No connection

† Non-EIA Signal

Cinch or Cannon Plug — DB-19604-432

Data and Control Circuits in accordance with EIA-RS-232C

Voltage	Control	Line Signal	Binary State
-3 V to -25 V	Off	Mark	1
+3 V to +25 V	On	Space	0

Physical Characteristics

1.08 The Receive-Only Printer terminal is a table-top, self-contained set incorporating a DATASPEED 40 printer. The printer is mounted on a cradle in the printer cabinet. The cradle tilts upward to provide for ribbon changing and also to facilitate removal of the printer and to gain access to the printer control logic card that is in the base of the printer. The cabinet top contains a cover that opens upward to gain access to the printer. Form or fanfold paper is supplied externally to the printer and fed through a slot in the base of the cabinet. A slot is provided in the cover for paper to exit the cabinet.
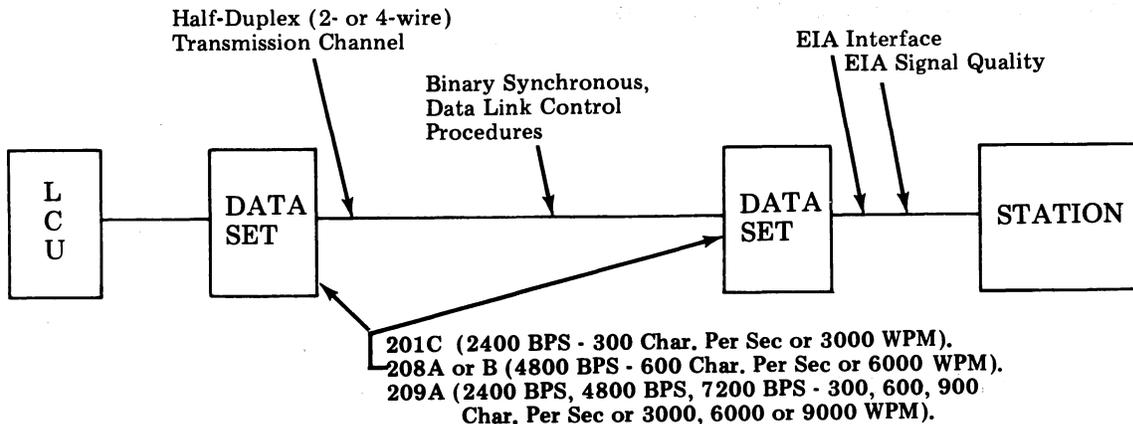
1.09 Pedestals equipped with ac power facilities are available for mounting the set. Pedestals are available in a variety of top widths. Pedestals for tractor feed sets provide convenient paper routing. When a tractor feed set is to be used with customer provided furniture, a paper routing slot, or equivalent, must be provided to route the paper through the bottom slot in the printer cabinet.

1.10 The controller assembly mounts in the base of the printer cabinet, below the printer.

Half-Duplex (2- or 4-wire) Transmission Channel

Binary Synchronous, Data Link Control Procedures

EIA Interface
EIA Signal Quality

LCU — DATA SET — DATA SET — STATION

201C (2400 BPS - 300 Char. Per Sec or 3000 WPM).
208A or B (4800 BPS - 600 Char. Per Sec or 6000 WPM).
209A (2400 BPS, 4800 BPS, 7200 BPS - 300, 600, 900 Char. Per Sec or 3000, 6000 or 9000 WPM).

ANSI COMMUNICATIONS NETWORK

1.11 An ac power ON/OFF switch is located at the left rear of the printer cabinet. All interconnections to the unit are made at the rear of the cabinet.

1.12 Options in the integrated synchronous ROP are installed by means of miniature slide, toggle or rocker switches or by cutting diodes on the 410734 diode matrix card (Fig. 4). Option implementation is given in Section 582-202-200.

1.13 When ordering replaceable components, unless otherwise specified, prefix each part number with letters "TP" (ie, TP410734).

2. SUPPLEMENTAL INFORMATION

BSP Sections

582-202-110	Detailed Description
582-202-200	Installation
582-202-400	Wiring Diagrams
582-202-500	Testing and Troubleshooting
582-202-700	Disassembly/Reassembly and Parts
582-202-750	Routine Maintenance
582-210-500	Printer
999-301-121	HTO Manual (Printer)

3. ABBREVIATIONS

ACK	Acknowledge
ASCII	American National Standard Code for Information Interchange
BCC	Block Check Character
CRC	Cyclic Redundancy Check
DLE	Data Link Escape
DSR	Data Set Ready
EBCDIC	Extended Binary Coded Decimal Interchange Code
EIA	Electronic Industries Association
ENQ	Enquire
EOT	End of Transmission
ESC	Escape
ETB	End of Transmission Block
ETX	End of Text
FF	Form Feed
HEX	Hexadecimal
ITB	Intermediate Transmission Block
LF	Line Feed
LCU	Line Control Unit
LRC	Longitudinal Redundancy Check
NACK	Negative Acknowledge
NL	New Line
OPCON	Operator Console
ROP	Receive-Only Printer
RTS	Request to Send
SID	Station Identity
SOH	Start of Heading
STX	Start of Text
SYN	Synchronous
USOC	Uniform Service Order Code
TTD	Temporary Text Delay
WACK	Wait Acknowledge

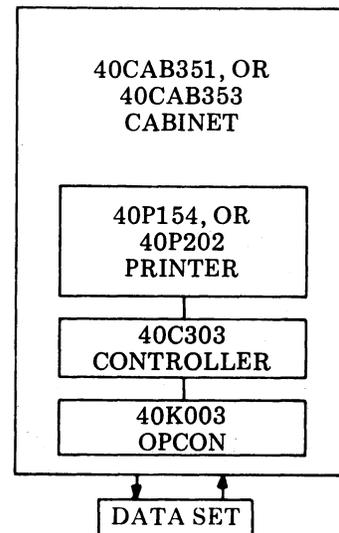## 4. INTEGRATED SYNCHRONOUS DATA-SPEED 40 ROP ARRANGEMENTS
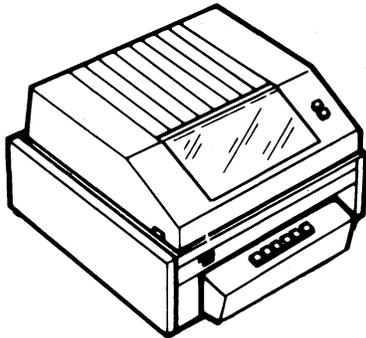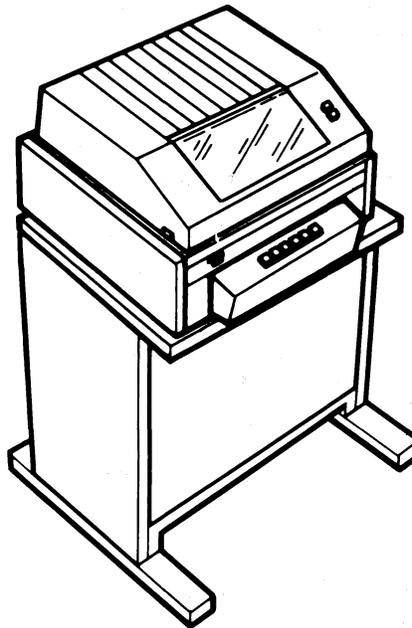

Fig. 1—Integrated Synchronous DATASPEED ROP Station

Table Top Tractor Feed RO Printer

Integrated Synchronous Controller
Located Inside Cabinet — (USOC XX1X+)

Note: Pedestal is empty except for convenience strip and cable rack.

Note: Center printer cabinet so that wide paper slot is not visible.

Tractor Feed RO Printer With Pedestal
and 24-1/2" Slotted Top (USOC XX1X+ +
USOC 4TMAB) Private Line Applications
(See Part 5 for Additional Pedestal Arrangements)

Fig. 2—80-Column Tractor Feed Receive-Only Printer
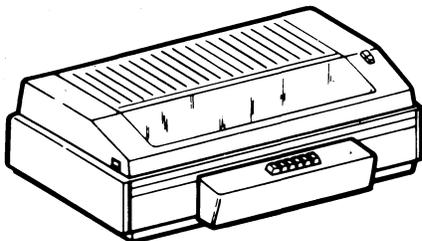Pedestal and Cabinet Arrangements

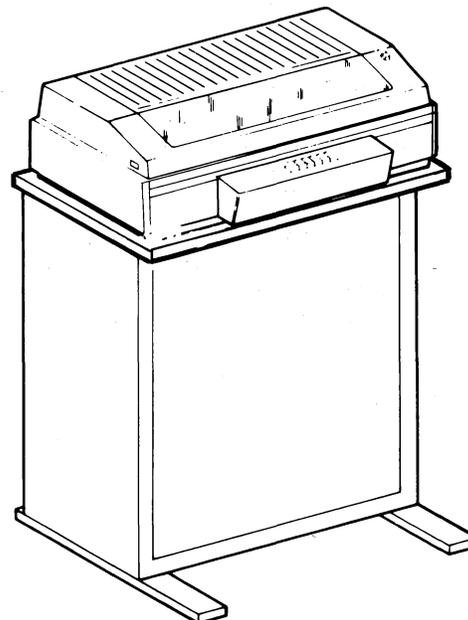Table Top Tractor Feed RO Printer

Integrated Synchronous Controller
Located Inside Cabinet — (USOC XX2X+)

Note: Pedestal is empty except for convenience strip and cable rack.

Tractor Feed RO Printer With Pedestal
and 27-5/8" Slotted Top (USOC XX2X+ + 4TMEC)
(See Part 5 for Additional Pedestal Arrangements)

Fig. 3—132-Column Tractor Feed Receive-Only Printer
Pedestal and Cabinet Arrangements

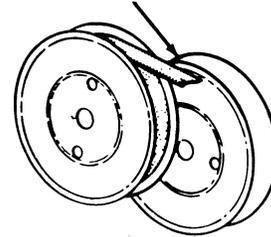## 5. INTEGRATED SYNCHRONOUS DATASPEED 40 ROP ACCESSORIES

ADDITIONAL CABLE LENGTHS

USOC	LENGTH	PART NUMBER
WES7J	12 Foot	408066
WES7K	25 Foot	408067
WES7L	50 Foot	408068

407060 (80-Column)
or 407061 (132-Column) GUIDE
(Part of Printer Cabinet)
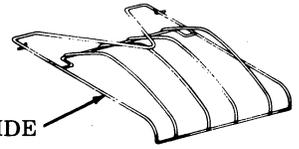
402444
W/2 SPOOLS
(5 mil, 33 yards)

FORM-OUT BELT SELECTION (USOC WES62)

Form Selector Setting				TP Part No.	Color of Belt
4	3	2	1		
Length of Form, Inches					
3-1/3	2-1/2	5	10	402571	Amber
3-2/3	2-5/6‡	5-1/2	11	402572§	Blue
4	3	6	12	402573	Yellow
4-1/3	3-1/3‡	6-1/2	13	402574	Brown
4-2/3	3-1/2	7	14	402575	Red
5	3-5/6‡	7-1/2	15	402576	Pink
5-1/3	4	8	16	402577	Lt Green
5-2/3	4-1/3‡	8-1/2	17	402578	Green
6	4-1/2	9	18	402579	Lt Blue
7-1/3	5-1/2	11	22	402580	White

‡ These lengths are not used in the Bell System

§ 402572 is part of the printer and not part of USOC WES62. It must be removed when applying USOC WES62.
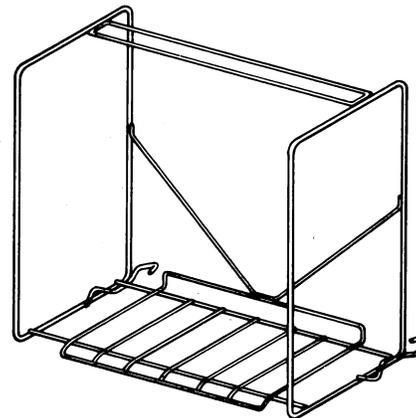
Tractor Feed Paper Guard Modification Kit For Use With a 40CAB901 Pedestal (USOC WES8A)

Pedestal With Door Arrangements

See chart for available tops (order seperately).

40CAB901/AJ PEDESTAL
(With power facilities plus top and legs)
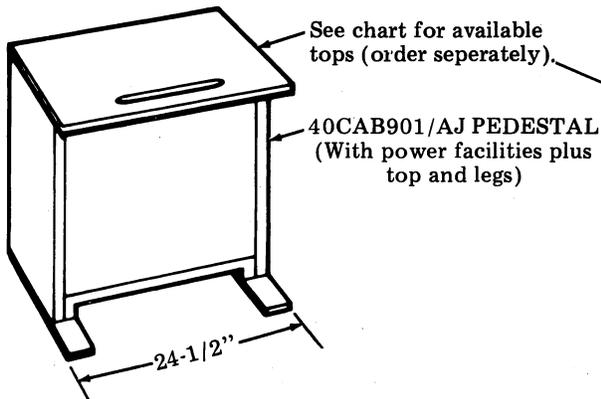
24-1/2"

TP Part No.	Top Width	Slot Width	USOC
401914	24 1/2"	11"	4TMAB
401912	31 1/2"	11"	4TMCB
401913	27 5/8"	17"	4TMEC
401915	39 1/8"	17"	4TMFC

Pedestal Without Door Arrangements
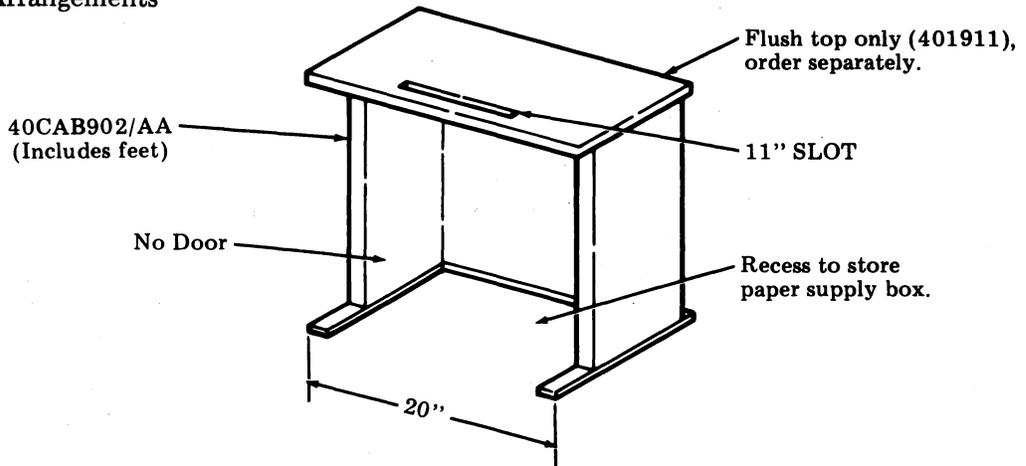
20 Inch Wide Pedestal USOC 4TMKB
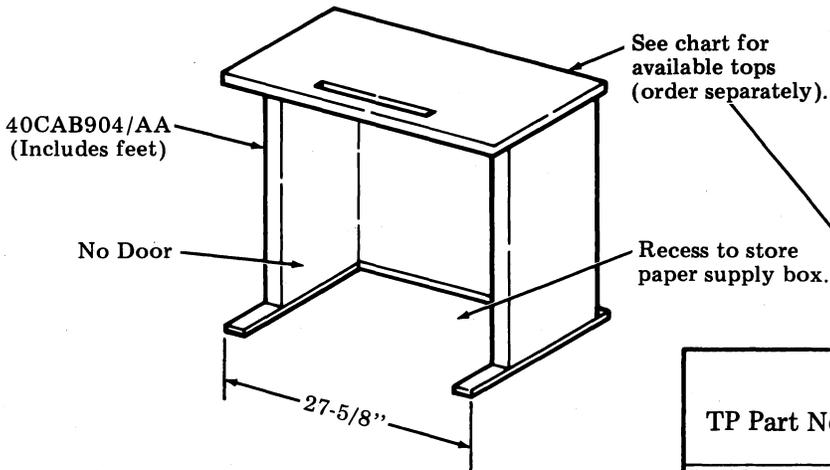
27-5/8 Inch Wide Pedestal USOC 4TM++

TP Part No.	Top Width	Slot Width	USOC
401912	31 1/2"	11"	4TMGB
401913	27 5/8"	17"	4TMHC
401915	39 1/8"	17"	4TMJC

PART NO.	LINE CODE	TYPE	COLUMNS	FONT ID SYMBOL	5TH USOC CHARACTER ¶
400629	ASCII	Up-Low	80		F
400645	ASCII	Monocase	80		A
400777	ASCII	Up-Low	132		F
400780	ASCII	Monocase	132		A
400783	EBCDIC	Up-Low	132		H
400784	EBCDIC	Up-Low	80		H
400785	EBCDIC	Monocase	80		G
400887	EBCDIC	Monocase	132		G
403846	ASCII/EBCDIC	48 Character	80		
408271	ASCII/EBCDIC	48 Character	132		

¶ 5TH Character of station USOC denotes type arrangement.

6. DATASPEED 40 INTEGRATED SYNCHRONOUS CONTROLLER

403892
AC DISTRIBUTION
CABLE ASSEMBLY

406189
CAPACITOR
ASSEMBLY **

P113
P114
J115

406173 SSI
CABLE
ASSEMBLY **

406169
CONNECTOR
ASSEMBLY **

J30
P30

410734
DIODE MATRIX
CIRCUIT CARD

406171 CABLE
ASSEMBLY

P5

P6

406175
POWER
CABLE
ASSEMBLY

P3

J5

J3

J6

406185

406177

P21

J21

406177

410733
CONTROLLER
CIRCUIT
CARD

406192
CABLE ASSEMBLY **

P40
TO OPCON

406172 EIA
CABLE
ASSEMBLY **

406170
CABLE
ASSEMBLY

410735 POWER
SUPPLY CIRCUIT
CARD

**Part of 406190 Modification
Kit.

Fig. 4—40C303AC/003 Integrated Synchronous Controller
and Associated Cables (Cover Not Shown)

7. TECHNICAL DATA

7.01   Power Source Requirements: 104 - 127 V ac at 60 Hz ±0.5 Hz or 50 Hz ±0.5 Hz from an unswitched standard 3-wire grounding type receptacle located within eight feet of the ROP set location. One additional receptacle is required for data set except when terminal includes pedestal equipped with 7-receptacle convenience strip.

7.02   Maximum inrush current 20 amps not exceeding three cycles.

7.03   Operating Power Consumption and Heat Generation:

Component	Current	Power	Heat
Integrated Synchronous ROP Set (motor OFF)	1.0 Amp	115 VA	392 BTU
Integrated Synchronous ROP Set (motor ON)	2.0 Amps	230 VA	784 BTU

7.04   Environmental Restrictions (operating):

Ambient Temperature . . . . +40° to +110° F
Relative Humidity . . . . 5% to 95% (noncondensing)
Altitude . . . . Sea level to 10,000 feet

7.05   Weight (approximate) Unpacked:

80-Column Tractor Feed Printer Unit . . . . 41 lbs
80-Column Tractor Feed Printer Cabinet . . . . 43 lbs
132-Column Tractor Feed Printer Unit . . . . 56 lbs
132-Column Tractor Feed Printer Cabinet . . . . 52.5 lbs
Pedestal (with door) . . . . 56 lbs

8. TERMINAL DESCRIPTION

8.01   Summary of features:

FEATURE	DESCRIPTION
Speed of Operation	2400, 4800, or 7200 baud synchronously with data set clock control.
Code	8 unit ASCII or EBCDIC.
Interface	EIA RS232C.
Station Selection	A number of the available selection sequences include a one- or two-character sequence that identifies the station for which the transmitter intends the message. The ROP terminal will give an ACK∅ response only if this sequence corresponds to that selected for the controller.
Storage Buffer	Built-in buffer standard. Approximately 3900 character capacity. Terminal will initiate a disconnect and indicate an alarm condition on overflow of buffer capacity.
Block Format †† (Option 154)	All messages may be transmitted in block format of 512 characters (optionally 256 or 128).
Error Detection and Retransmission	The ROP terminal verifies the odd vertical parity of each received character (ASCII only) and computes a longitudinal redundancy/block parity check (LCR) for ASCII or a cyclic

†† Refer to Section 582-202-200 for Option description and implementation.

FEATURE	DESCRIPTION
	redundancy check (CRC) for EBCDIC. Blocks for which an error reply results may be retransmitted at the option of the LCU.
Immediate WACK †† (Option 178)	With the immediate WACK Option enabled (Option 178b), the ROP terminal will respond with a WACK instead of ACKN to every second block of text. The CPU will respond to the WACK either with EOT or ENQ (the ROP terminal will respond with ACK if buffer space is available).
Type of Printer Used Option	80- or 132-column tractor feed printer can be selected.
Transmission	Transmissions between the LCU and the ROP terminal are on a two-way alternate (half-duplex) basis.
Alternating Acknowledgments	After the first block is received by the ROP, an ACK1 response is sent. After the second block is received by the ROP, an ACK∅ response is sent. Subsequent blocks are responded to with alternating ACK∅ ACK1 (referred to as correct ACK or ACKN) to insure that no blocks are missed. LCU response to the incorrect ACK (ACK$\overline{N}$) is optional.
Horizontal Tabulation Option ††	Up to 132 column positions. The sequence ESC HT indicates the beginning of a block of data that will cause the setting of horizontal tab stops. The tab setting sequence is terminated by ETX or optionally ITB (refer to Option 175) LF (EBCDIC)/ NL (refer to Option 176) or ETB (refer to Option 173). The ESC HT sequence also causes erasure of any existing horizontal tab stops (either preset or on-line set).
Vertical Tabulation Option ††	Up to 12 preset line positions. Receipt of a vertical tab (VT) code will immediately position the paper to the next stop below the present position or if no stops remain, to the end of the form. It will then cause a form feed operation to be performed. Receipt of one of the assigned ESC α vertical tabulation sequences (see below) will be recorded and upon reception of one of the following optioned characters; LF (EBCDIC)/NL (Option 176a), ETB (Option 173b), ETX (Option 174b), or IRS (EBCDIC)/RS (Option 177a) enough NL characters will be delivered to the printer to cause the next text character to be printed at the first printing position of the designated vertical tab position.

Sequence	Resulting Position
ESC A	Vertical Tab No. 1
ESC B	Vertical Tab No. 2
ESC C	Vertical Tab No. 3
ESC D	Vertical Tab No. 4
ESC E	Vertical Tab No. 5
ESC F	Vertical Tab No. 6
ESC G	Vertical Tab No. 7
ESC H	Vertical Tab No. 8
ESC I	Vertical Tab No. 9
ESC J	Vertical Tab No. 10
ESC K	Vertical Tab No. 11
ESC L	Vertical Tab No. 12

†† Refer to Section 582-202-200 for option description and implementation.

FEATURE	DESCRIPTION
Adjustable Left Margin	Left margin may be electrically selected up to any column position.
Alarm	Tone-generated on receipt of BELL character and on paper out, etc.
Delayed Motor Turnoff Option †† (Option 148)	Motor turnoff delayed approximately 30 seconds or approximately 3 minutes after end of transmission from sender. There is no option to turn off the motor immediately upon end of transmission (except for recognition of a disconnect condition DLE EOT sequence, loss of carrier (Option 166), loss of DSR (Data Set Ready) or following an internal alarm condition. A FF (form feed) character will be delivered to the printer (either a NL or a FF will take place depending on the forms mode option being used) and the printer's motor will be turned off following the FF action.
Disconnect ††	DLE EOT/EOT.
	Loss of Carrier (Option 166). Syn Character Time Out Loss of CTS or no detection of CTS after RTS is turned ON in Send mode. Idle Line Time Out Loss of DSR.
	Internal terminal trouble (loss of signals at printer controller interface).
	Paper alarm.
Form Feed on Disconnect ††	An additional paper advance on disconnect is available. All ROP terminals have an option (part of the printer) to enable an automatic paper feedout of 16 lines on recognition of disconnect or, optionally, on recognition of the character ETX (or not at all). With tractor feed printers forms mode on should be enabled to provide a form-out on disconnect if the form is out of register, since the 16-line feedout will be erratic (form-out overrides it). In place of this option, a form feed character is sent to the printer on disconnect in Integrated Synchronous ROP terminals. This provides uniform paper registration for each new message. Since form feed is nonrepeating until the new form has advanced at least one line, only one form feed will occur even if a FF character appeared at the end of the message.
Deselection Code Options	The station may be deselected (ROP blinded) on a fully programmable End of Transmission character.
Out of Paper	The printer monitors the paper supply condition and provides an indication to the controller whenever an out of paper condition (the last line of the last complete form has been fed through the printing position) has occured in a tractor feed printer.

††Refer to Section 582-202-200 for option description and implementation.

FEATURE	DESCRIPTION
	The ROP terminal, upon detecting the out of paper condition, will stop delivery of characters to the printer, light the alarm lamp, and for 3-second interval allow the terminal to send an EOT as the next reply. Following this, the alarm lamp and audible alarm will be activated for 8 seconds. A disconnect sequence will then be initiated and any remaining data in the buffer will be cleared.
Carriage Return ††	Upon receipt of CR (or ESC M) the controller will cause the next character to be printed at the left margin of the present printing line. Action due to ESC M does not take place until the next LF (EBCDIC)/ NL (Option 176a), ETB (Option 173b), IRS (EBCDIC)/ RS (ASCII) (Option 177a) or ETX (Option 174b).
Space Extension (Option 170) ††	The printer will print three spaces for each space character received. Enabling of this option will result in multiplying by three the number of spaces produced by the space compression/ expansion function but not the spaces produced by HT. If the LCU does not take this into account, it is possible for a line of text to exceed the right-hand margin of the printer. The controller will then cause the next character on the line to be operated on or printed at the start of the next lower line.
Space Compression/Expansion	When the ROP terminal receives a GS α (ASCII) or IGS α (EBCDIC) sequence it will cause the printer to insert into the printed text a number of spaces (maximum 63) corresponding to the α character. The number of spaces is determined by the HEX count of the six low order bits of the character. For ASCII, 2 spaces is represented by a "B," 15 by "O," 26 by "Z," etc. For EBCDIC, most of the resulting characters fall into an area of the code that has no graphic assignments. However, 10 spaces would result from " ¢, " 27 from "$, " etc. If the number of spaces exceeds the right-hand margin position, the printer will continue to space on the next line starting at the left-hand position.
Paper Advance ††	The ROP terminal optionally will perform a paper advance as a result of receiving ITB (refer to Option 175), LF (EBCDIC)/ NL (refer to Option 176), ETB (refer to Option 173), ETX (refer to Option 174) or IRS (EBCDIC)/RS (refer to Option 177). Automatic New Line will be performed when the right hand margin is exceeded.
Line Feed/New Line ††	Receipt of LF (EBCDIC) or NL will optionally cause a line to be printed and any outstanding vertical tabulation ESC sequence to be executed (or NL function to occur if no vertical tabulation ESC sequence is outstanding), terminate a horizontal tabulation sequence or cause the ROP terminal to space (refer to Option 176).

†† Refer to Section 582-202-200 for option description and implementation.

| FEATURE	DESCRIPTION
Single Line Feed ‡‡	Receipt of ESC Q (ASCII) or ESC / (EBCDIC) will be recorded and reception of one of the following optioned characters will cause the next character to be printed at the left-hand margin of the next line below the present print line: LF (EBCDIC)/ NL (Option 176a), ETB (Option 173b), ETX (Option 174b), or IRS (EBCDIC)/RS (Option 177a).
Double Line Feed ‡‡	Receipt of ESC R (ASCII) or ESC S (EBCDIC) will be recorded and reception of one of the following optioned characters will cause the next character to be printed at the left-hand margin of the second line below the present print line: LF (EBCDIC)/NL (Option 176a), ETB (Option 173b), ETX (Option 174b) or IRS (EBCDIC)/RS (Option 177a).
Triple Line Feed ‡‡	Receipt of ESC S (ASCII) or ESC T (EBCDIC) will be recorded and reception of one of the following optioned characters will cause the next character to be printed at the left-hand margin of the third line below the present print line: LF (EBCDIC)/NL (Option 176a) ETB (Option 173b), ETX (Option 174b) or IRS (EBCDIC)/RS (Option 177a).
Form Feed	Receipt of the FF character will result in a tractor feed printer (with Forms mode on) advancing the paper until the next form is in registration. Tractor feed printers without the Forms mode selected will perform the new line function upon receipt of FF.

‡‡ The single line feed option of the printer is assumed. Use of the double line feed option will double the described movements. Refer to Section 582-202-200 for option description and implementation.

8.02   Terminal interface to the station data set meets EIA standards. Leads used in Integrated Synchronous DATASPEED 40 ROP are indicated in paragraph 1.07.

8.03   The terminal optionally responds to ASCII, EBCIDIC or an optimized form of ASCII/ EBCDIC codes.

8.04   The terminal utilizes an 80-Column tractor feed printer (40P154/ZZ), or 132-Column tractor feed printer (40P202/ZZ). Type carriers are not part of the printers and must be provided separately. See Part 5 for available type carriers. Printers are equipped to handle form lengths of 11", 5-1/2" and 3-2/3"; see Part 5 for additional form lengths. 80-Column printers can handle widths between 4.125 inches and 9.5 inches, 132-Column printers can handle paper widths of 4.125 inches to 15 inches. See Section 582-202-200 for complete list of printer options.

8.05   Operator controls are provided by the 40K003/AAB Operator Console (Opcon).
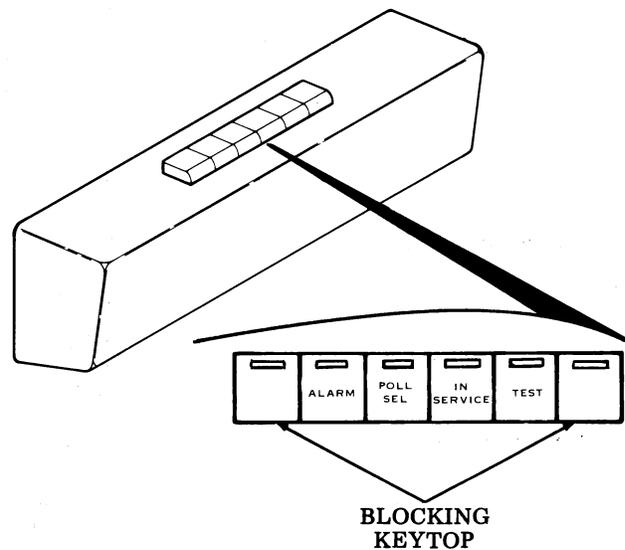
RECEIVE-ONLY PRINTER
OPERATOR CONSOLE (OPCON)
40K003/AAB

ALARM — Red Indicator. The Alarm lamp is lighted to indicate the detection of various trouble conditions. Some trouble conditions are indicated by the Alarm lamp only while others are indicated by a combination of the Alarm lamp and the other lamps on the operator console. The lamp may be flashing or steady. The flashing lights will turn on and off for approximately one second intervals repeated four times. Following this indication, the controller will turn on the audible alarm (for the last 8 seconds) and a steady Alarm light for approximately 8 to 18 seconds. The audible tone may be halted by depressing the ALARM key.

Note: Only the audible alarm is terminated, the alarm timeout interval of 8 seconds is not.

Indicator Lamp

Alarm	Poll./ Sel.	In Service	Test	Trouble Condition
X			X	SSI line from printer not active or is disconnected.
X		X		Printer returns a negative Receiver Ready bit after it is sent Receive Message.
X		X	X	Printer not sending status information after several requests (24).
X	X	X		Printer fails to Request Next Char. approximately two seconds with a character in buffer.
X	X			Invalid format of SSI responses from the printer or printer sending data SSI characters.
X				A received message block has caused available buffer space to be exceeded, an out of paper condition exists within the printer, on-line horizontal tab setting attempts to set a tab beyond the right hand margin or a flashing

lights routine has occurred and the flashing lights have gone off indicating one of the above trouble conditions.

Following the duration of the alarm lamp, the controller will initiate a data set disconnect and perform a power on reset operation. The LCU or master terminal should follow prescribed recovery procedures following the ROP terminal's disconnection.

POLL/SEL — Green Indicator. Upon completion of a selection sequence (including any device selection if applicable), the lamp will glow steadily. The key has no present function.

TEST — Red Indicator. This key performs no on-line function. Depressing the IN SERVICE key, to take the terminal out of service, permits the depression of the TEST key to initiate generation of a 63 character plus NL (new line) test message that will be printed on each line by the printer:

ASCII Type Carrier
!" # $%& '()*+,-./0123456789:; < = > ?@
ABCDEFGHIJKLMNOPQRSTUVWXYZ[\ ]^_

EBCDIC Type Carrier
!" # $%& /()*+,-./0123456789:; < = > ?@
ABCDEFGHIJKLMNOPQRSTUVWXYZ⌐\¦¢_

48 Character Optimized (ASCII/EBCDIC) Type Carrier
≡≡#$%&≡≡≡*⌐ ,-./0123456789≡≡⋈≡ ≡ ≡@
ABCDEFGHIJKLMNOPQRSTUVWXYZ≡≡≡ ≡≡

≡ represents type carrier symbols AX or AZ.

During this time the terminal will not respond positively to traffic from the LCU.

IN SERVICE — Green Indicator. The In Service lamp when lit indicates that the ROP terminal is capable of receiving messages. When the lamp is off, it indicates that the controller has detected a failure to properly complete the Power On Routine (POR), an alarm condition exists, a paper supply problem exists or it has been turned off by depression of the IN SERVICE key. The key is depressed to prevent positive replies to incoming calls, or selection sequences, while the operator is performing local maintenance (ribbon, paper, etc). or to enter the Test mode. Upon completion of such activities, depression of the key will return

the terminal to the In Service condition. A disconnection sequence will also attempt to return the ROP terminal to the In Service condition. If the ROP terminal is in a selected condition, depression of the In Service key will be ignored.

Audible Alarm — In addition to the switches and indicators the operator console (opcon) contains an audible alarm with operator adjustable volume level. The alarm is sounded on received BELL characters or terminal alarm conditions. BELL characters must be received at least one second apart for more than one continuous tone to be heard.

Cabinets

8.06 The cabinets used to house the printers and the integrated synchronous controller are the same as those used for the asynchronous tractor feed controller arrangements except that the connector opening at the rear is larger.

8.07 The cabinets are designated as shown below:

Cabinet Code	+	Modification Kit	Application
40CAB351/ZZ		TP406190	80-Col Tractor Feed
40CAB353/ZZ		TP406190	132-Col Tractor Feed

8.08 Located at the left front is a PRINTER INTERLOCK switch. With the printer cabinet cover closed, the printer can be activated if a paper out condition does not exist. When the cabinet cover is opened, the motor start control is disabled and the terminal enters an Out-of-Service mode. This circuitry is enabled for maintenance activity by lifting the INTERLOCK switch lever.

Integrated Controller

8.09 The integrated synchronous controller is designated 40C303AC/003. It is composed of the following components:

410733 Controller Card
410734 Diode Matrix Card
410735 Power Supply Card
Associated cables and hardware

8.10 A diode matrix card (see Fig. 4), cable connected to the controller card, provides the system operating options. Removing a diode will activate or deactivate the feature as indicated in Section 582-202-200.

8.11 Low voltage ac power for the controller is supplied by the printer power transformer. Filter capacitors are mounted in the cabinet. Rectification and regulation are provided on the power supply card (see Fig. 4), which is cable connected to the controller card. Refer to paragraph 8.01 of this section for the controller features.

8.12 Connections between the ROP terminal and the associated data set should be made using a shielded cable of appropriate length. The cables are not part of the 40C303AC/003 controller. A 7 foot cable is incorporated into USOCs XX1X+ and XX2X+ (See Part 4 of this section).

Additional length cables are available under USOCs WES7J (12 foot - 408066), WES7K (25 foot - 408067) and WES7L (50 feet - 408068).