

ARMY
NAVY
AIR FORCE

TM 11-5895-856-34-23
EE640-CA-MMI-230/E154 CPU
TO 31W2-2T-122-23

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL
FOR
CENTRAL, MESSAGE SWITCHING, AUTOMATIC
AN/TYC-39(V)1
AND
CENTRAL OFFICE, TELEPHONE, AUTOMATIC
AN/TTC-39(V)2

AUTOMATIC DATA PROCESSING
ASSEMBLIES

DEPARTMENTS OF THE ARMY, NAVY, AND AIR FORCE

22 SEPTEMBER 1983

TECHNICAL MANUAL
NO. 11-5895-856-34-23
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DEPARTMENTS OF THE ARMY
THE NAVY, AND
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Washington, DC, 22 September 1983

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703.

For Air Force, submit AFTO Form 22 (Technical Order System Publication Improvement Report and Reply) in accordance with paragraph 6-5, Section VI, T.O. 00-5-1. Forward direct to prime ALC/MST.

For Navy, mail comments to the Commander, Naval Electronics Systems Command, ATTN: ELEX 8122, Washington, DC 20360.

In either case, a reply will be furnished direct to you.

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VOLUME 23 TM 11-5895-856-34-23

Card Cage, Wired - Mass Core Memory Unit, Wire List, Connector (149304-880)

Frame Assembly - Mass Core Memory Unit, Wire List, String (SM-A-837681)

This volume is part of a 24-volume set covering the direct support and general support maintenance of the automatic data processing assemblies. This volume contains the connector wire list for the wired card cage of the mass core memory unit, drawing number 149304-880 and the string wire list for the mass core unit frame assembly, drawing number SM-A-837681. Refer to volume 1 of this series (TM 11-5895-856-34-1) for an explanation of how to use this wire list as well as other lists contained in the set.

NOTE

The pages in volumes 2 through 24 of TM 11-5895-856-34 have been numbered in a special manner. Pages within these volumes are found by keying to two page identifiers: the drawing number and the page number. To find the page that you desire within the volume, follow the steps listed below:

1. Find the applicable wire run list in the table of contents and note the applicable drawing number.
2. Look through the pages of the volume until you find the particular drawing number of the wire run list that you seek. This will insure that you are in the correct wire run section.
3. Go through these pages until you find the page number you are looking for within this particular wire run list.

Remember, pages in the volumes cited above are found by keying to the drawing number applicable to a particular wire run list, as well as, a page number. Make sure you are on the correct page by checking both page identifiers.

**CARD CAGE, WIRED
- MASS CORE MEMORY UNIT
CONNECTOR WIRE LIST
149304-880**

NOTES: UNLESS OTHERWISE SPECIFIED

1. REFERENCE TO SHEET 3 FOR DEFINITION OF FIELDS.
2. REFERENCE TO SHEET 4 FOR CONFIGURATIONS OF SHIELD AND WIRE TERMINATIONS.
3. REFERENCE TO SHEET 5 OF STRING LIST FOR WIRE CODE DEFINITIONS.
4. REFERENCE TO SHEET 6 OF STRING LIST FOR WIRE SUMMARY LIST.
5. ALL ABBREVIATIONS PER MIL-STD-12.

H78 STRING AND CONNECTOR LIST, DEFINITION OF FIELDS

1. **Record Number** - A unique Data Processing number which associates all information pertaining to a wire "FROM" Connector. "TO" Connector, Wire Code, etc. This number is the wire ID when that field is blank.
2. **Prefix** - An assembly alphanumeric to be used when a wire terminates in two assemblies. This number will be the reference designation as required by USAS Y32.16-1968.
3. **Connector** - Any type of terminating point, plug, receptacle, etc. Designations are in accordance with USAS Y32.16-1968.
4. **Pin** - Exact terminating point of the respective connector. Designations are unique:
 - A. SHXXXX indicates the junction of a shield and a pigtail, the four digits to the right are the wire identity of the shielded wire.
 - B. JCT indicates a common point of two or more shield pigtails.
 - C. Jacket: the terminology used when describing the line that defines the identification of a shielded wire.
5. **Sh Fg** - References a graphic representation showing how a shielded wire or coax is to be terminated. A number in this field indicates the level of automatic wire wrapping.
6. **Multi Group**- Associates wires of a group such as "twisted wire" or "shielded wire". Jacket, pigtails and center conductors will be shown as a common group.
7. **Wire Code** - A three-digit code for wire type and gage or bus bar.
8. **Wire Color** - Standard RETMA color code.
 - A. Base Stripe Tracer.
 - B. Stripe, Tracer 1 and Tracer 2 if the digit to the left is other than 9 and the two positions to the right are not blank and not equal. The Base Color is understood to be white.
9. **Wire Ident** - A number used for reference to differentiate one wire from another. This number will be used to identify the wire when specified in the wire list sleeve code field.
10. **Spc Inst** - A code which indicates that a wire must be given special attention as follows:
 - A. Direct routing, no service loops, no harnessing.
 - B. See general notes or instruction pages.
 - C. See general notes or instruction pages.
 - D. See general notes or instruction pages.
 - E. See general notes or instruction pages.
 - F. See signal description.
 - G. This connection does not go directly to the "TO" connector, but intersects a line going to the "TO" connector.
 - H. See special routing page.
 - I. Junction point for multilayer laminated board (MLB) connection.
 - J. Denotes a bus reference point.
 - K. Blank out "TO" connector and pin.
 - L. Will cause a signal name of three characters or less to be entered in the string list.
 - M. Will cause a record to be omitted from the string list. (This record will print in the connector list.)
 - N. Will suppress printing the wire identity in the harness string and double entry list.
 - P. Will cause the equation to be used as the signal name for sorting purposes only in the string list.

Drawing No.
149304-880
Rev. G, sheet 2

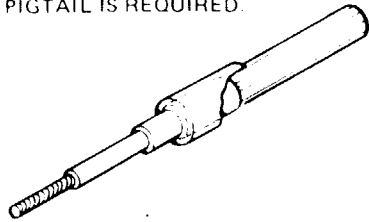
H78 STRING AND CONNECTOR LIST, DEFINITION OF FIELDS - Continued

- Q. Will cause an equation record to be omitted from logic listing.
 - R. Will suppress printing the "FROM TO" pin number in the string and connector lists.
 - S. Do not move record number to the ident field for an ADD transaction in the harness string and double entry only. (Use only when adding a file.)
 - T. Twist wire code.
 - U. Not available.
 - V. See general notes or instruction pages
 - W. Fixed wire length submitted.
 - X. Sequence of string is to be left as is.
 - Y. See general notes or instruction pages.
 - Z. Will suppress printing of the 'FROM" pin.
10. **Misc** - Unless otherwise noted the number 1 indicates a pre-wired connector.
 11. **Signal** - An alphanumeric signal name, mnemonic where feasible, which identifies one specific function from another.
 - SPP - Denotes an available termination.
 - SPF - Denotes an unwired termination which has an assigned function.
 - SPW - Denotes a non-functional wire which is terminated at one or both ends.
 - SPO - Denotes a spare output of a circuit.
 - DNW - Indicates that a termination may not be wired.
 - SPA - Denotes an unassigned circuit, as one of a group on a printed circuit board.
 - SPI -- Denotes a spare input of a circuit.
 - SPG - Denotes an unassigned logic gate, as one of a group on a printed circuit board.
 - SPR - Denotes a spare resistor
 - SPD - Denotes an unassigned input diode of an assigned logic gate.
 12. **Seq No.** - A number which in conjunction with SIGNAL, allows a signal string to be consistently printed in a given order.
 13. **Equation** - A mnemonic name assigned to each gate of an element.
 14. **Term** - An "OR" function composed of one or more factors.
 15. **Factor** - A specific input to a logical gate or active element.
 16. **Ckt or Chip Type** - Denotes a specific circuit board type.
 17. **Group** - Denotes a specific circuit on a printed circuit board.
 18. **Load or Power Plane** - Denotes the current draw in milliamps by a specific circuit or voltage.
 19. **AND Test Point** - Denotes the input test point for a specific circuit on a printed circuit board.
 20. **OR Test Point** - Denotes the output test point for a specific circuit on a circuit board.
 21. **Signal Description** - A written description or name of a signal or voltage.
 22. **ECO No.** - A letter number combination to show the Engineering Change Order level of that particular wire list record.

Drawing No.
149304-880
Rev. G, sheet 3

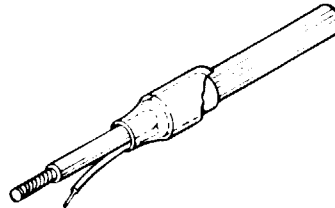
SHIELD FIGURE A

SHIELD TERMINATION FOR SHIELDED,
SINGLE AND MULTIPLE CONDUCTORS,
NO PIGTAIL IS REQUIRED.



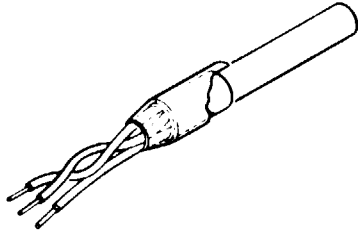
SHIELD FIGURE B

SHIELD TERMINATION FOR SHIELDED,
SINGLE AND MULTIPLE CONDUCTORS,
FRONT PIGTAIL IS REQUIRED.



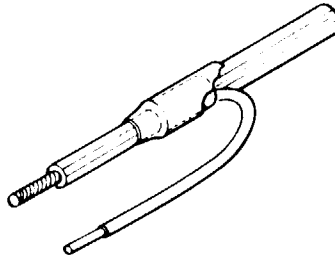
SHIELD FIGURE G

SHIELDED CABLE TERMINATION WITH DRAIN WIRE



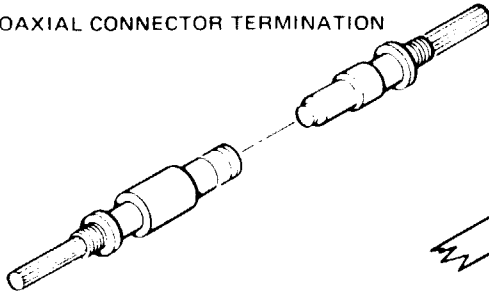
SHIELD FIGURE C

SHIELD TERMINATION FOR SHIELDED,
SINGLE AND MULTIPLE CONDUCTORS,
A REAR PIGTAIL IS REQUIRED.

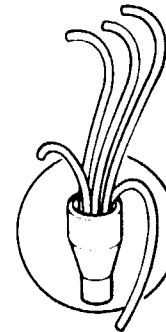


SHIELD FIGURE Z

COAXIAL CONNECTOR TERMINATION

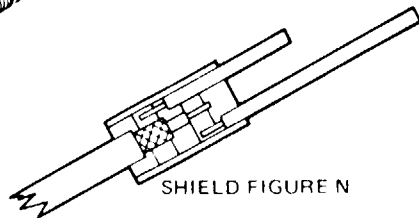


SHIELD FIGURE X
SHIELDED WIRE
PIGTAILS—HYBRID



SHIELD FIGURE N

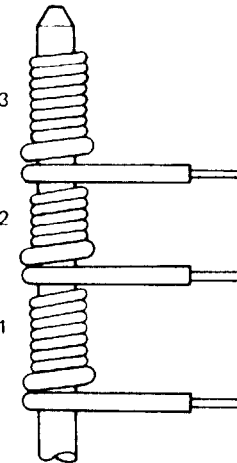
TRANSITION DEVICE WITH
SOLID WIRE PIGTAILS



SHIELD FIGURE NO. 3

SHIELD FIGURE NO. 2

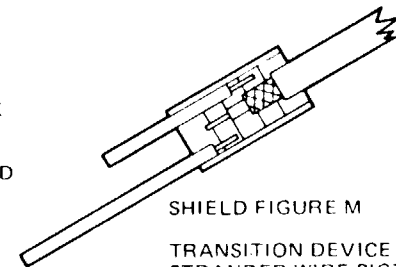
SHIELD FIGURE NO. 1



SHIELD FIGURE NUMBER
INDICATES LEVEL OF WIRE WRAP

SHIELD FIGURE M

TRANSITION DEVICE WITH
STRANDED WIRE PIGTAILS



Litton
DATA SYSTEMS

DRAWING NUMBER 149304-880
UNIT ASSEMBLY CARD CAGE WIRED, MCU CONNECTOR

UNIT ASSEMBLY NO. 149304
FILE IDENT T39AMCMU

REV G
DATE 09-02-82

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RECORD NUMBER	FROM			WIRE	TO			MULTI GROUP	CODE	COLOR	IDENT	SIGNAL	PCL NO	EQUATION	TERM	FACTOR	CAT CHIP TYPE	PROT	LOAD ON POWER PLANE	THRU POINTS	SIGNAL DESCRIPTION	LOC NO
	PREFIX	CONNECTOR	PIN		PREFIX	CONNECTOR	PIN															
00034		J01	A1									SPP	01				EX9					
00035		J01	A2									SPP	01				EX9					
00036		J01	A3									SPP	01				EX9					
00037		J01	A4			XA301	17			1B0	9	MAONOA	01				EX9				MAN ON/OFF	
00038		J01	A5									SPP	01				EX9					
00039		J01	A6									SPP	01				EX9					
00040		J01	B1									+5V	01				EX9					
00041		J01	B2									GND	01				EX9					
00042		J01	B3									+5V	01				EX9					
00043		J01	B4									GND	01				EX9					
00044		J01	B5									+5V	01				EX9					
00045		J01	B6									GND	01				EX9					
00046		J01	C1									GND	01				EX9					
00047		J01	C2									+5V	01				EX9					
00048		J01	C3									GND	01				EX9					
00049		J01	C4									+5V	01				EX9					
00050		J01	C5									GND	01				EX9					
00051		J01	C6									+5V	01				EX9					
00052		J01	D1									+05RES1	02				EX9					
00053		J01	D2									GND	01				EX9					
00054		J01	D3									+5V	01				EX9					
00055		J01	D4									GND	01				EX9					
00056		J01	D5									+5V	01				EX9					
00057		J01	D6									GND	01				EX9					
00058		J01	E2			XA301	13			1B0	9	EXFLTL	01				EX9					
00059		J01	E3									GND	01				EX9					
00060		J01	E4			XA351	11			1B0	2	+5VSAM	37				EX9					
00061		J01	E5									GND	01				EX9					
00062		J01	E6			XA443	11			1B0	2	+5VSAM	01				EX9					
00063		J01	F1									SPP	01				EX9					
00064		J01	F2									GND	01				EX9					
00065		J01	F3			J01	E4			1B0	2	+5VSAM	36				EX9					
00066		J01	F4									GND	01				EX9					
00067		J01	F5			XA243	11			1B0	2	+5VSAM	39				EX9					
00068		J01	F6									GND	01				EX9					
00069		J01	H1			XA104	03			1B0	9	SSRT1A	02				EX9					
00070		J01	H2			XA529	60			1B0	7	-5VOLT	01				EX9					
00071		J01	H5									GND	01				EX9					
00072		J01	H6									-5VOLT	68				EX9					
00073		J01	H6			J01	H2			1B0	7	-5VOLT	005				EX9					
00074		J01	J1			XA104	09			1B0	9	SSRT4B	03				EX9					
00075		J01	K1			XA117	47			1B0	2	+12VOLT	107				EX9					
00076		J01	K1			XA207	47			1B0	2	+12VOLT	109				EX9					
00077		J01	K2									GND	01				EX9					
00078		J01	K5			J01	L5			1B0	0	GND1105	01				EX9					
00079		J01	K6			XA117	14			1B0	2	+12VOLT	153				EX9					
00080		J01	K6			XA207	14			1B0	2	+12VOLT	155				EX9					
00081		J01	L1			J01	L3			1B0	0	GND1107	01				EX9					
00082		J01	L2			XA106	13			1B0	9	MDDINA	01				EX9				DEV DR INHIBIT*	
00083		J01	L3									GND1107	02				EX9					
CONNECTOR J01) CONTINUED ON THE NEXT PAGE ****																						

Litton
DATA SYSTEMS

DRAWING NUMBER 149304-880
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UNIT ASSEMBLY NO. 149304
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REV H
DATE 09-02-82

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RECORD NUMBER	FROM			TO			WIRE			SIGNAL	SEQ NO	EQUATION	TERM	FACTOR	CKT OR CHIP TYPE	WIRE	LOAD OR POWER PLANE	TEST POINTS AND OR	SIGNAL DESCRIPTION	S/C NO
	PREFIX	CONNECTOR	PIN	PREFIX	CONNECTOR	PIN	WIRE	CODE	COLOR	IDENT										
00084		J01	L3								GND	01			EX9					
00085		J01	L4		XA106	50		18D	9		MDD01A	01			EX9				DELAYED INHIBIT*	
00086		J01	L5								GND1105	02			EX9					
00087		J01	L5								GND	01			EX9					
00088		J01	L6		XA301	25		18D	2		+5AUX	00			EX9					
00089		J01	M2		XA106	40		18D	9		ML01A	01			EX9				LOGIC OVERRIDE	
00090		J01	M3		XA108	10		18D	2		VARDCD1	01			EX9					
00091		J01	M4								GND1101	02			EX9					
00092		J01	M4								GND	01			EX9					
00093		J01	M5		XA204	10		18D	2		VARDCD2	01			EX9					
00094		J01	M6		J01	M4		18D	0		GND1101	01			EX9					
00095		J01	N1								SPP	01			EX9					
00096		J01	N2								SPP				EX9					
00097		J01	N3								GND1103	02			EX9					
00098		J01	N3								GND	01			EX9					
00099		J01	N4		XA305	10		18D	2		VARDCD3	01			EX9					
00100		J01	N5		J01	N3		18D	0		GND1103	01			EX9					
00101		J01	N6		XA406	10		18D	2		VARDCD4	01			EX9					
00102		J01	P1								SPP	01			EX9					
00103		J01	P2								SPP	01			EX9					
00104		J01	P3		J01	S5		18D	2		VARDCD5	005			EX9			+10V VAR 5		
00105		J01	P3		XA501	09		18D	2		VARDCD5	04			EX9					
00106		J01	P4								GND1104	02			EX9			+10V VAR 4		
00107		J01	P4								GND	01			EX9					
00108		J01	P5		J01	N6		18D	2		VARDCD4	005			EX9			10V VAR 4		
00109		J01	P5		XA406	09		18D	2		VARDCD4	03			EX9					
00110		J01	P5		XA406	09		18D	2		VARDCD4	05			EX9					
00111		J01	P6		J01	P4		18D	0		GND1104	01			EX9					
00112		J01	R1		J01	S2		18D	0		GND1106	01			EX9					
00113		J01	R2		XA106	05		18D	2		+23VDC	01			EX9					
00114		J01	R3		J01	R5		18D	0		GND1102	01			EX9					
00115		J01	R4		J01	N4		18D	2		VARDCD3	005			EX9			10V VAR 3		
00116		J01	R4		XA305	09		18D	2		VARDCD3	03			EX9			+10V VAR 3		
00117		J01	R4		XA305	09		18D	2		VARDCD3	05			EX9					
00118		J01	R5								GND1102	02			EX9					
00119		J01	R5								GND	01			EX9					
00120		J01	R6		J01	M5		18D	2		VARDCD2	005			EX9			+10V VAR 2		
00121		J01	R6		XA204	09		18D	2		VARDCD2	03			EX9					
00122		J01	R6		XA204	09		18D	2		VARDCD2	05			EX9					
00123		J01	S1		XA527	26		18D	2		+32VLT	01			EX9					
00124		J01	S2								GND1106	02			EX9					
00125		J01	S2								GND	01			EX9					
00126		J01	S3		J01	M3		18D	2		VARDCD1	005			EX9			+10V VAR 1		
00127		J01	S3		XA108	09		18D	2		VARDCD1	03			EX9					
00128		J01	S3		XA108	09		18D	2		VARDCD1	05			EX9					
00129		J01	S4		J01	S6		18D	0		GND1100	01			EX9					
00130		J01	S5		XA501	10		18D	2		VARDCD5	01			EX9					
00131		J01	S6								GND1100	02			EX9					
00132		J01	S6								GND	01			EX9					

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Change 1