

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. 11-5895-856-34-24
TECHNICAL MANUAL
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TECHNICAL ORDER
TO 31W2-2T-122-24

DEPARTMENTS OF THE ARMY
THE NAVY, AND
THE AIR FORCE

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 24 TM 11 -5895-856-34-24

Panel Assembly, Interface, Peripheral Equipment, Wire List, String -ADP/CS (149404-800)

Panel Assembly, Interface, Peripheral Equipment, Wire List, String - ADP/MS (149405-800)

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 string wire list for the peripheral equipment interface panel assembly, drawing numbers 149404-800 and 149405-8Q0. Refer to volume 1 of this series (TM 11 -5895-856-341) 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.

**PANEL ASSEMBLY, INTERFACE, ELECTRICAL
- CIRCUIT SWITCH
STRING WIRE LIST
149404-800**

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 FOR WIRE CODE DEFINITIONS.
4. REFERENCE TO SHEET 6 FOR WIRE PARTS LIST.
5. ALL ABBREVIATIONS PER MIL-STD-12.
6. THROUGHOUT THE BODY OF THIS DOCUMENT THE UNIT NAME IS REFERRED TO AS: PANEL, PERIPHERAL INTERF.

H78 STRING AND DOUBLE ENTRY 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 termination point of the respective connector. Designations are unique:
 - A. SHXXXX indicates the junction of 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 term used when describing the line that defines the identification of a shielded wire.
5. **Sh. Fig** - References a graphic representation showing how a shielded wire or coax is to be terminated. A number in these fields indicates the level of automatic wire wrapping.
6. **Multi Group** - Associates wire 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 buss 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. **Sleeve** - A code which indicates that the wire be specifically identified as follows:
 - A. Identification at each end of wire.
 - B. Stamp sleeving with "FROM" connector and pin.
 - C. Stamp sleeving with "TO" connector and pin.
 - D. Identification at intervals along wire.

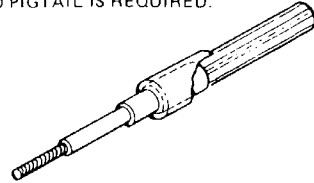
Drawing No.
1 49404-800
Rev. A, sheet 2

H78 STRING AND DOUBLE ENTRY LIST, DEFINITION OF FIELDS - Continued

11. **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 buss reference point.
 - K. Blank out "TO" connector and pin.
 - L. Will cause a single 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 identification in the harness string and double entry list.
 - P. Will cause the equation to be used as the signal name only for sorting purposes in the string list.
 - 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 list.
 - S. Do not move record number to the identification 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.
12. **Signal** - An alphanumeric signal name, mnemonic where feasible, which identifies one specific function from another.
13. **String Seq. No.** - A number which, in conjunction with SIGNAL, allows a signal string to be consistently printed in a given order.
14. **Signal Description** - A written description or name of a signal or voltage.
15. **ECO No.** - A letter number combination to show the Engineering Change Order level of that particular wire list record.

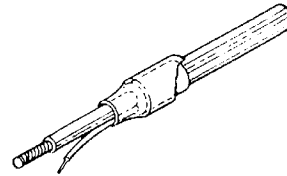
SHIELD FIGURE A

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



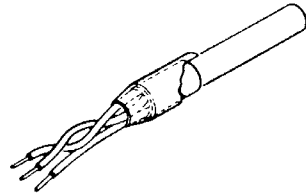
SHIELD FIGURE B

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



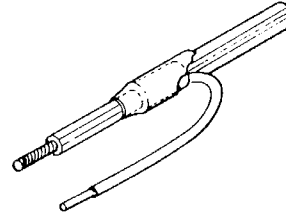
SHIELD FIGURE G

SHIELDED CABLE TERMINATION WITH DRAIN WIRE



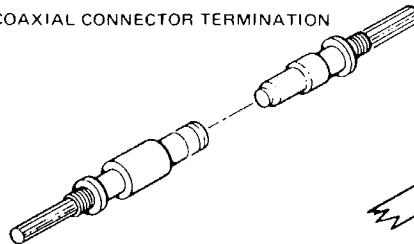
SHIELD FIGURE C

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



SHIELD FIGURE Z

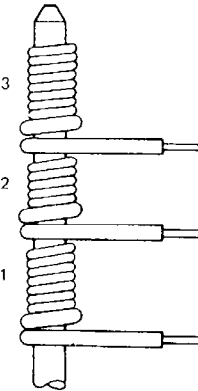
COAXIAL CONNECTOR TERMINATION



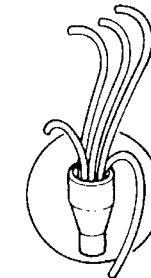
SHIELD FIGURE NO. 3

SHIELD FIGURE NO. 2

SHIELD FIGURE NO. 1



SHIELD FIGURE NUMBER
INDICATES LEVEL OF WIRE WRAP

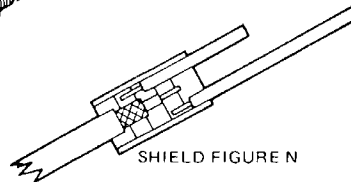


SHIELD FIGURE X

SHIELDED WIRE
PIGTAILS-HYBRID

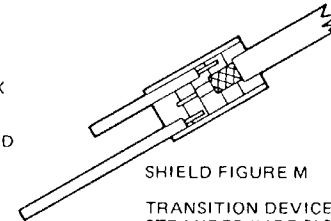
SHIELD FIGURE N

TRANSITION DEVICE WITH
SOLID WIRE PIGTAILS



SHIELD FIGURE M

TRANSITION DEVICE WITH
STRANDED WIRE PIGTAILS



Drawing No.
149404-800
Rev. A, sheet 4

WIRE CODE DEFINITION			WIRE CODE DEFINITION		
Type	Description	AWG	Type	Description	AWG
1 = Polyvinylidene Fluoride (PVF) (Kynar)	1 = Buss Wire	A = 32	*F = MIL-C-17/94 (formerly MIL-C-17/68)	F = Tw Pr, Shielded	R = 2
2 = Teflon ET	2 = High Voltage	B = 30	*G = 898008-2	G = Tw Tpl, Stranded	S = 1
3 = Teflon E	3 =	C = 28	*H = 898008-1	H = Tw Tpl, Solid	T = 0
4 = Teflon EE	4 =	D = 26	*J = MIL-C-17/29	J = Tw Tpl, Shielded	U = 00
5 = Fluorinated Ethylene Propylene (FEP), Type K	5 = Integral Lead	E = 24	*K = MIL-C-17/30	K = Tw Quadr, Stranded	V = 000
6 = FEP, Type KT	6 = Auto Wire Wrap	F = 22	*L = MIL-C-17/79	L = Tw Quadr, Solid	W = 0000
7 = Special Condition	7 =	G = 20	*M = MIL-C-17/74	M = Tw Quadr, Shielded	X = Coax
8 = Polyvinyl Chloride (PVC) with Nylon Jacket, Type D	8 =	H = 18	*N = MIL-C-17/86	N = Tw Six Conductor, Stranded	Y =
9 = MIL-W-81044/12	9 =	I = 16	*P = MIL-C-17/28	P =	Z =
0 = Buss or Integral	0 = Special	J = 14	*R = 898008-4	R =	1 =
A = PVC without Jacket, Type B	A = Single Stranded	K = 12	*S = MIL-C-17/6	S =	2 =
B = PVC with Jacket	B = Single Solid	L = 10	*T = 898059-0001	T =	3 =
C = MIL-W-22759/1	C = Single Shielded	M = 8	U = 898017-1	U =	4 =
D = MIL-W-5086/1	D = TW Pr, Stranded	N = 6	V = 898017-2	V =	5 =
E = MIL-W-5086/2	E = Tw Pr, Solid	P = 4	W = 898007-1 thru -4	W = 70 Ohm Coax	6 =
			X = 898004, Type B	X = 50 Ohm Coax	7 =
			Y = 898004, Type D	Y = 75 Ohm Coax	8 =
			*Z = MIL-C-17/94	Z = 95 Ohm Coax	9 = Spcl
			*I = MIL-C-17/118		0 = Int Lead

NOTES: *1. Coax.

2. The word "BAR" in the Code Field indicates an electromechanical connection made possible by buss strips. Printed circuitry or power/ground planes will be coded "BUS" in the Code Field if required.

Drawing No.
149404-800
Rev. A, sheet 5

PARTS LIST					CODE IDENT 13973	PL 149404-800	REVISION A		
TITLE PANEL ASSY, INTERFACE, ELECTRICAL - CIRCUIT SWITCH, WIRE LIST						CONTRACT NUMBER	SHEET 6		
ITEM NO.	FEET OF WIRE REQD	CODE IDENT	PART OR IDENTIFYING NUMBER	DRAWING OR DOCUMENT NUMBER	NOMENCLATURE OR DESCRIPTION	REF SYM	TIMES USED	WIRE CODE	LINE REV
1.	40		MS1044/12-26-0	MIL-W-81044/12	WIRE, ELEC, CROSSLINKED POLYALKENE INSUL 150C 26 GAGE (BLACK)		9	9AD	
2.	40		M81044/12-26-2	MIL-W-81044/12	WIRE, ELEC, CROSSLINKED POLYALKENE INSUL 150C 26 GAGE (RED)		8	9AD	
3.	100	18876	MIS-19652-2262		WIRE, ELEC, TWISTED TWO CNDCT 26 GAGE (BLACK, RED)		18	9DD	
4.	1300	18876	MIS-19652-2260		WIRE, ELEC, TWISTED TWO CNDCT 26 GAGE (BLACK, WHITE)		246	9DD	
5.	15	18876	MIS-19652-2269		WIRE, ELEC, TWISTED TWO CNDCT 26 GAGE (WHITE, WHITE)		3	9DD	
6.	80		898042-0003		WIRE, ELEC, 250V, PVF INSUL 26 GAGE (BLACK)		156	1BD	
7.	34		898042-0004		WIRE, ELEC, 250V, PVF INSUL 26 GAGE (RED)		34	1BD	
8.	20		898042-0002		WIRE, ELEC, 250V, PVF INSUL 26 GAGE (WHITE)		20	1BD	
9.	1		M81044/12-26-9	MIL-W-81044/12	WIRE, ELEC, CROSSLINKED POLYALKENE INSUL 150C 26 GAGE (WHITE)		1	9AD	
10.	2		M81044/12-24-2	MIL-W-81044/12	WIRE, ELEC, CROSSLINKED POLYALKENE INSUL 150C 24 GAGE (RED)		2	9AE	
11.	12		M81044/12-24-9	MIL-W-81044/12	WIRE, ELEC, CROSSLINKED POLYALKENE INSUL 150C 24 GAGE (WHITE)		12	9AE	



H78-15 1

STRING

DRAWING NUMBER 149404-800

UNIT NAME PANEL, PERIPHERAL INTERF. REV. A

FILE IDENT T39ACSP

DATE 09-02-82

RECORD NUMBER	FROM				TO				WIRE			SLEEVE	SPEC. INST.	SIGNAL	STRING SEQ. NO.	SIGNAL DESCRIPTION	ECO NO.
	PREFIX	CONNECTOR	PIN	SH. FIG	PREFIX	CONNECTOR	PIN	SH. FIG	MULTI GROUP	CODE	COLOR	IDENT					
1 01462		J24	25			J31	25			1BD	2			+5AXMU1		AUX +5V MCMU 1A	A08
2 01463		J30	25			J33	25			1BD	2			+5AXMU2		AUX +5V MCMU 2A	A08
3 01464		J25	25			J44	07			9AE	2			+5AXMU3		AUX +5V MCMU 1B	A08
4 01465		J34	25			J44	08			9AE	2			+5AXMU4		AUX +5V MCMU 2B	A08
5 00057		J11	CC			J19	64			AV	9DD	0	0057	+5IOE01G			
6 00058		J11	BB			J19	63			AV	9DD	2	0058	+5IOE01T		IOE +5 REF TERMNR	
7 00059		J11	EE			J19	66			AW	9DD	0	0059	+5IOE02G			
8 00060		J11	DD			J19	65			AW	9DD	2	0060	+5IOE02T		IOE +5 REF TERMNR	
9 00513		J07	CC			J23	70			HV	9DD	0	0513	+5IOE07G			
10 00515		J07	EE			J23	74			HW	9DD	0	0515	+5IOE07G			
11 00001		J23	70			J23	72			9AD	0	0001		+5IOE07G			
12 00002		J23	72			J23	74			9AD	0	0002		+5IOE07G			
13 00514		J07	BB			J23	69			HV	9DD	2	0514	+5IOE07T			
14 00516		J07	DD			J23	73			HW	9DD	2	0516	+5IOE07T			
15 00003		J23	69			J23	71			9AD	2	0003		+5IOE07T			
16 00004		J23	71			J23	73			9AD	2	0004		+5IOE07T			
17 00545		J09	CC			J23	76			IV	9DD	0	0545	+5IOE08G			
18 00559		J09	EE			J23	80			IW	9DD	0	0559	+5IOE08G			
19 00005		J23	76			J23	78			9AD	0	0005		+5IOE08G			
20 00006		J23	78			J23	80			9AD	0	0006		+5IOE08G			
21 00558		J09	BB			J23	75			IV	9DD	2	0558	+5IOE08T		POWER TO TERMNS	
22 00560		J09	DD			J23	79			IW	9DD	2	0560	+5IOE08T		POWER TO TERMNS	
23 00007		J23	75			J23	77			9AD	2	0007		+5IOE08T			
24 00008		J23	77			J23	79			9AD	2	0008		+5IOE08T			

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