

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
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TO 31W2-2T-122-14

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, ATTIC 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 ALCJMST.

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 14 TM 11 -5895-856-34-14

Card Cage Assembly "A", Interface Control Unit- R.H., Wire List, Connector (149016-880)

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 right-hand card cage assembly "A" of the interface control unit, drawing number 149016-880. Refer to volume 1 of this series (TM 11-5895-85634-1) 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 crowing 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 ore 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 ASSEMBLY "A", INTERFACE CONTROL UNIT
- RIGHT HAND
CONNECTOR WIRE LIST
149016-880**

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 PARTS LIST.
5. ALL ABBREVIATIONS PER MIL-STD-12.
6. THROUGHOUT THE BODY OF THIS DOCUMENT THE UNIT NAME IS REFERRED TO AS: CARD CAGE ASSY, A, IFCU.

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. SHXXX 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.
149016-880
Rev. E, sheet 2

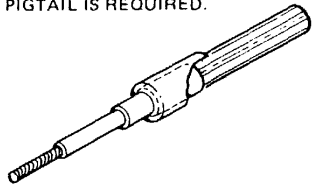
H78 STRING AND CONNECTOR LIST, DEFINITION OF FIELDS- Continued

- Q. Will cause an equation record to be omitted from logic listing.
- R. Will suppress printing the "FROM" 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.
 149016-880
 Rev. E, sheet 3

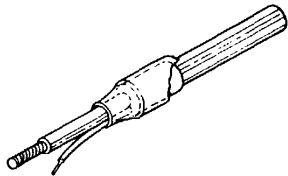
SHIELD FIGURE A

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



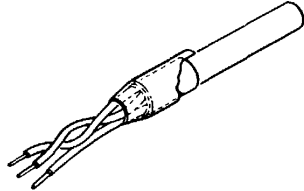
SHIELD FIGURE B

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



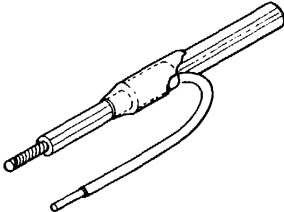
SHIELD FIGURE G

SHIELDED CABLE TERMINATION WITH DRAIN WIRE



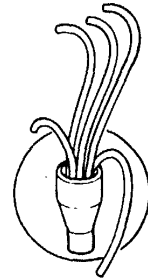
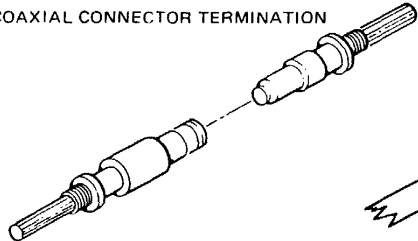
SHIELD FIGURE C

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



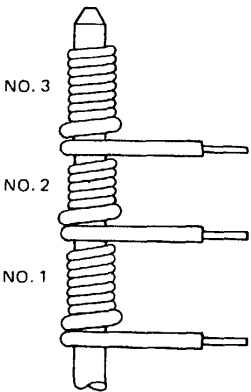
SHIELD FIGURE Z

COAXIAL CONNECTOR TERMINATION



SHIELD FIGURE X

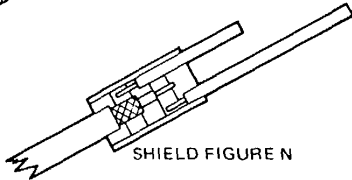
SHIELDED WIRE PIGTAILS--HYBRID



SHIELD FIGURE NUMBER INDICATES LEVEL OF WIRE WRAP

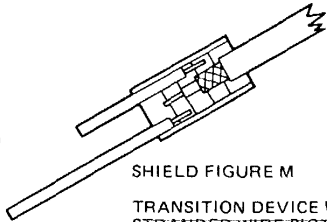
SHIELD FIGURE N

TRANSITION DEVICE WITH SOLID WIRE PIGTAILS



SHIELD FIGURE M

TRANSITION DEVICE WITH STRANDED WIRE PIGTAILS



H78-14 1449

DATA SYSTEMS DIVISION
LITTON SYSTEMS INC.
LITTON INDUSTRIES

DRAWING NUMBER 149016-880

UNIT ASSEMBLY NO. 149016
CONNECTOR

REV. E

INDEX

UNIT ASSEMBLY NAME CARD CAGE ASSY A, IFCU

FILE IDENT T39C1FC6

DATE 09-03-82

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RECORD NUMBER	FROM			TYPE	TO			SPEC	WIRE				SIGNAL	SEQ NO	EQUATION	TERM	FACTOR	CKT OR CHIP TYPE	GROUP	LOAD OR POWER PLANE	TEST POINTS		SIGNAL DESCRIPTION	ECO NO
	PREFIX	CONNECTOR	PIN		PREFIX	CONNECTOR	PIN		MULTI GROUP	CODE	COLOR	IDENT									AND	OR		
64595		J01	A1										SPP	01				EX9						
64596		J01	A2										SPP	01				EX9						
64597		J01	A3										SPP	01				EX9						
64923		J01	A4			XA148	79			180	9		WIFCON	01				EX9						
64598		J01	A5										SPP	01				EX9						
64599		J01	A6										SPP	01				EX9						
63950		J01	B1										+5V	01				EX9						
63971		J01	B1			J01	D1			180	2		+5VL01	01				EX9						
64004		J01	B2										GND	01				EX9						
63951		J01	B3										+5V	01				EX9						
63973		J01	B3			J01	F3			180	2		+5VL02	01				EX9						
64005		J01	B4										GND	01				EX9						
63952		J01	B5										+5V	01				EX9						
64006		J01	B6										GND	01				EX9						
64007		J01	C1										GND	01				EX9						
63953		J01	C2										+5V	01				EX9						
63975		J01	C2			J01	F1			180	2		+5VL04	01				EX9						
64008		J01	C3										GND	01				EX9						
63954		J01	C4										+5V	01				EX9						
63977		J01	C4			J01	E4			180	2		+5VL05	01				EX9						
64009		J01	C5										GND	01				EX9						
63955		J01	C6										+5V	01				EX9						
63979		J01	C6			J01	E6			180	2		+5VL06	01				EX9						
63972		J01	D1										+5VL01	02				EX9						
64010		J01	D2										GND	01				EX9						
63956		J01	D3										+5V	01				EX9						
63981		J01	D3			J01	N2			180	2		+5VL08	01				EX9						
64011		J01	D4										GND	01				EX9						
63957		J01	D5										+5V	01				EX9						
63983		J01	D5			J01	F5			180	2		+5VL09	01				EX9						
65525		J01	D6										GND					EX9					A02	
64171		J01	E2			XA148	65			168	9		KC1FLT	01				EX9						
64012		J01	E3										GND	01				EX9						
63978		J01	E4										+5VL05	02				EX9						
64013		J01	E5										GND	01				EX9						
63980		J01	E6										+5VL06	02				EX9						
63976		J01	F1										+5VL04	02				EX9						
64014		J01	F2										GND	01				EX9						
63974		J01	F3										+5VL02	02				EX9						
64015		J01	F4										GND	01				EX9						
63984		J01	F5										+5VL09	02				EX9						
64016		J01	F6										GND	01				EX9						
64600		J01	H1										SPP	01				EX9						
64601		J01	H2										SPP	01				EX9						
64602		J01	H5										GND	01				EX9					A02	
64603		J01	H6										SPP	01				EX9						
64604		J01	J1										SPP	01				EX9						
64605		J01	K1										SPP	01				EX9						
64606		J01	K2										GND	01				EX9					A02	
64607		J01	K5										SPP	01				EX9						
CONNECTOR (J01) CONTINUED ON THE NEXT PAGE ****																								