TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL AND DIRECT SUPPORT MAINTENANCE MANUAL

TELECOMMUNICATIONS LINE CONTROLLER ANALYTICS MODEL TLC 100-6035(T) SD1013

H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y

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OPERATOR'S, ORGANIZATIONAL AND

DIRECT SUPPORT MAINTENANCE MANUAL

TELECOMMUNICATION LINE CONTROLLER

Analytics Model TLC 100-6035(T) SD1013

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 the back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AM- SEL-ME-MP, Fort Monmouth, NJ 07703-5007.

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

Copies of this manual may be procured from Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ME-PEW, Fort Monmouth, NJ 07703-5007.

1. Scope

a. This manual, together with the manufacturer' publication titled: Telecommunication Line Controller, Model TLC 100-6035(T) SD 1013, which ha been authenticated as TM 11-7440-319-13-2, pr(vides for complete operator's organizational and direct support maintenance coverage of Telecommunication Line Controller.

b. This manual includes:

(1) References (appx A).

(2) Components of End Item List (COEIL) (app: B).

(3) Maintenance Allocation Chart (MAC) (app: D).

c. Repair parts and special tools list are included i: TM 11-7440-319-24P.

2. Consolidated Index of Army Publications and Blank Forms

Refer to the latest issue of DA Pam 310-1 to deter mine whether there are new editions, changes or additional publications pertaining to the equipment.

3. Maintenance Forms, Records, and Reports

a. Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and pro cedures used for equipment maintenance will b those prescribed by DA Pam 738-750, as contained in Maintenance Management Update.

b. Report of Packaging and Handling Deficien cies. Fill out and forward SF 364 (Report of Discrep ancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-54/ MCO 4430.3F.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

4. Reporting Equipment Improvement

Recommendations (EIR) If your equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AM- SEL-ME-MP, Fort Monmouth, New Jersey 07703-5007. We'll send you a reply.

5. Administrative Storage

Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the PMCS charts before storing. When removing the equipment from administrative storage the PMCS should be performed to assure operational readiness.

6. Destruction of Army Electronics Materiel

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2

APPENDIX A

REFERENCES

DA Pam 310-1	Consolidated Index of Army Publications and Blank Forms.
DA Pam 738-750	The Army Maintenance Management System (TAMMS).
*TM 11-7440-319-13-2	Operator's Organizational and Direct Support Maintenance Manual for Telecommunication Line Controller, TLC 100-6035(T) SD 1013.
*TM 11-7440-319-24P	Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools Lists for Telecommunication Line Controller, TLC 100-6035(T) SD 1013.
TM 740-90-1	Administrative Storage of Equipment.
TM 750-244-2	Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

*Not stocked by the Army Publications Center. Copies may be obtained from Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ME-PEW, Fort Monmouth, New Jersey 07703-5007.

APPENDIX B

COMPONENTS OF END ITEM LIST

Section I. INTRODUCTION

B-1. Scope

This appendix lists integral components of and basic issue items for the Telecommunication Line Controller, TLC 100-6035(T) SD 1013 to help you inventory items required for safe and efficient operation.

B-2. General

This Components of End Item List is divided into the following sections:

a. Section II. Integral Components of the End Item. Not applicable. These items, when assembled, comprise Line Controller TLC 100-6035(T) SD1013 and must accompany it whenever it is transferred or turned in. The illustrations will help you identify these items.

b. Section III. Basic Issue Items. Not applicable.

B-3. Explanation of Columns

a. Illustration. This column is divided as follows: (1) Figure number. Indicates the figure number of the illustration on which the item is shown.
(2) Item number. The number used to identify item called out in the illustration.

b. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

c. Part Number. Indicates the primary number used by the manufacturer, which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items. Following the part number, the Federal Sup ply Code for Manufacturers (FSCM) is shown in parentheses.

d. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

e. Location. The physical location of each item listed is given in this column. The lists are designed to inventory all items in one area of the major item before moving on to an adjacent area.
f Usable on Code. Not applicable.

g. Quantity Required (Qty Reqd). This column lists the quantity of each item required for a complete major item.

h. Quantity. This column is left blank for use during an inventory. Under the Rcvd column, list the quantity you actually receive on your major item. The Date columns are for your use when you inventory the major item at a later date; such as for shipment to another site.

(Next printed page is B-2)

Section II. INTEGRAL COMPONETS OF END ITEM

(1) ILLUSTRATION (A) FIG.	(1) ILLUSTRATION (B) ITEM	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION PART NUMBER	(3) DESCRIPTION CAGE	(4) LOCATION	(5) USUABLE ON CODE	(6) QTY REQD	(7) QUANTITY RCVD	(7) QUANTITY DATE
			TELEC"MIUNICATION LINE CONTROLLER ANALYTICS MODEL TLC 100-6035(T) SD01013						

APPENDIX D

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

D-1. General

This appendix provides a summary of the maintenance operations for Telecommunication Line Controller. It authorizes categories of maintenance specific maintenance functions on repairable item and components and the tools and equipment required to perform each function. This appendix m be used as an aid in planning maintenance operations.

D-2. Maintenance Function

Maintenance functions will be limited to and define as follows:

a. Inspect. To determine the serviceability of item by comparing its physical, mechanical, and electrical characteristics with established standard through examination.

b. Test. To verify serviceability and to detect incident failure by measuring the mechanical or electric characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically keep an item in proper operating condition, i.e., clean (decontaminate), to preserve, to drain, to pail or to replenish fuel, lubricants, hydraulic fluids, compressed air supplies.

d. Adjust. To maintain, within prescribed limits by bringing into proper or exact position, or by s ting the operating characteristics to the specific parameters.

e. Align. To adjust specified variable elements an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections be made or to be adjusted on instruments or the measuring and diagnostic equipments used in pre cision measurement. Consists of comparisons of t~ instruments, one of which is a certified standard known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being co pared.

g. Install The act of emplacing, seating, or fixing into position an item, part, module (component assembly) in a manner to allow the proper functioning of the equipment or system.

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, re- place) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. overhaul That maintenance effort (service/ action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with origi- nal manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipments/components.

D-3. Column Entries

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a "work time" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in

column 3. This figure represents the active time required to perform that maintenance function at indicated category of maintenance. If the number complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate "work time" figures will be shown for each category. The number of task-hours specified by the "work time" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item or system) serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to form the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. Subcolumns of column 4 are as follows:

C-Operator/Crew
O-Organizational
F-Direct Support
H-General Support
D-Depot

e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets (not individual tools) and special tools, test, and support equipment required to perform the designated function.

f. Column 6, Remarks. Column 6 contains an alphabetic code which leads to the remark in sect IV, Remarks, which is pertinent to the item opposite the particular code.

D-4. Tool and Test Equipment Requirements (Sect. III)

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool or test equipment for the maintenance functions.

b. Maintenance Category. The codes in this column indicate the maintenance category allocated the tool or test equipment.

c. Nomenclature. This column lists the noun name and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for manufacturers (5-digit) in parentheses.

D-5. Remarks (Sect. IV)

a. Reference Code. This code refers to the appropriate item in section II, column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in section II.

(Next printed page is D-3)

Section II. MAINTENANCE ALLOCATION CHART

FOR

TELECOMMUNICATION LINE CONTROLLER TLC-100-6035(T)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
00	TELECOMFUNICATIONS	Inspect		0.1					
	LINE CONTROLLER	Test		1.0					A
	CP-xxx(V1)/TYQ &	Test					1.0		
	CP-xxx(V2)/TYQ	Service		0.5					
		Replace		0.5					
		Repair		0.5				1, 2	B, C
		Adjust		0.3				2	D
		Repair					2.0		E
		Overhaul					10.0		
01	PANEL ASSY, FRONT	Test		0.5				1	F
	AlA2 (P/N 5132)	Replace							
		Repair		1.0				2	B
0101	PCB ASSY, DIAGNOSTIC DISPLAY	Test		0.5				1	F
	A1A2A4O (P/N 443)	Replace							
		Repair		0.5				2	B
02	PANEL ASSY, REAR AIA5 (P/N 5133)	Test		0.5				1	F
		Replace							
		Repair1.02G							
0201	POWER FILTER ENCLOSURE	Test		0.5				1	F
	(P/N 599)	Replace							
		Repair		1.0				1	B
03	POWER SUPPLY ASSY	Test		0.5				1	F
	AlA4 (P/N 5137)	Replace							
		Adjust		0.5				1	D

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

FOR

TELECOMMUNICATION LINE CONTROLLER TLC-100-6035(T)

(1) TOOL OR TEST EQUIPMENT REF CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
1	0	MULTIMETER, DIGITALAN/PSM-45	6625-01-139-2512	
2	0	TOOL KIT, ELECTRONIC EQUIPMENT	TK-101/G	5810-00-064-5178
		NOTE EQUIVALENT TOOLS ORFT EQUIPMENT MAY BE SUBSTITUTED FOR THE ABOVE.		

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	FAULT ISOLATE TO PCB USING BUILT-IN TEST FACILITES.
B	REPAIR BY REPLACEMENT OF ITEMS IN SITE REPAIR PARTS PACKAGE (ALL ITEMS 1 EACH, EXCEPT LED, 2 EACH):

1. TLC-V1 PKG.

ITEM	P/N
CPU PC ASSY (A6)	4011
PROM PC ASSY, 8K (A8)	4010
RAM PC ASSY (A10)	4004
SYNCHRONOUS PC ASSY (A16)	4003
ASYNCHRONOUS PC ASSY (A17, A19)	4002
DIAGNOSTIC PC ASSY (A30)	4014
POWER SUPPLY (A4PS1)	HCBB-75W or HCBB-75W-A
VENTILATING FAN	WR2-A1
PUSH BUTTON SWITCH	PB126
TOGGLE SWITCH	NTA106-D
LIGHT EMITTING DIODE (LED)	HV5023
AUDIBLE ALARM (SONALERT)	SC-62B
CIRCUIT BREAKER	W-67X201-2-3
WAVE SHAPE, INTFC PCB ASSY (A31)	434-1
WAVE SHP, INTFC PCB ASSY (A32, 34)	434-2
POWER LINE FILTER	2JX44 or FA5539

2. TLC-V2 PKG.

CPU PC ASSY (A6)	4011
MEN, PCB ASSY (A8)	4018
SYNCHRONOUS PC ASSY (A16)	4003
ASYNCHRONOUS PC ASSY (A17, A19)	4002
DIAGNOSTIC PC ASSY (A30)	4014-3
POWER SUPPLY (A4PS1)	HCBB-75W-A
VENTILATING FAN	WR2-Al
PUSH BUTTON SWITCH	PB126
TOGGLE SWITCH	NTA1O6-D
LIGHT EMITTING DIODE (LED)	MV5023
AUDIBLE ALARM (SOLALERT)	SC-628
CIRCUIT BREAKER	W-67X2Q1-2-3
PCB ASSY, WAVE SHAPE, INTFC (A31)	434-1
PCB ASSY, WAVE SHAPE, INTFC (A32, A34)	434-2
POWERLINE FILTER	FA5539

Section IV. REMARKS - CONTINUED

REFERENCE CODE	REMARKS
C	THE TLC CONTAINS, IN CARD CAGE ASSY A3, THE FOLLOWING PCBS, WHICH ARE NOTE REPAIRABLE BY ORGANIZATIONAL MAINTENANCF. O PCB ASSY, CPU A1A6 O PCB ASSY, MEM (16K) A1AB (TLC-V2 ONLY) O PCB ASSY, PROM A1A8 (TLC-V1 ONLY) O PCB ASSY, SYN AIA16 O PCB ASSY, RAM (A10) (TLC-V1) O PCB ASSY, ASYN A1A17, AIA19 O DIAGNOSTIC BD ASSY A1A3O NOTE: RIBBON CABLES ARE NON-REPAIRABLE.
D	ADJUST DC VOLTAGE OUTPUTS.
E	RETURN TO MANUFACTURER FOR DEPOT REPAIR/OVERHAUL.
F	FAULT ISOLATE eY CONTINUITY CHECKS TO ASSEMBLY, AND/OR PIECE PARTS.
G	PANEL ASSY, REAR AIA5 CONTAINS PCB ASSY, WAVE SHAPE INTERFACE AlA5A31, AND PCB ASSY, WAVE SHAPE, INTERFACE P1A5A32, AND A34, WHICH ARE NON-REPAIRABLE ITEMS. THE AlA5 ALSO CONTAINS THE RFI POWER FILTER FURNISHED IN THE SITE REPAIR PARTS PACKAGE.
H	POWER SUPPLY ASSY A1A4 CONTAINS POWER SUPPLY A1A4PSI WHICH IS A NON-REPAIRABLE ITEM.

By Order of the Secretary of the Army:

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General United States Army
Chief of Staff

Official:

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