TM 11-5805-637-12

TECHNICAL MANUAL

OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL

BUFFER, DATA TD-1065/G
(NSN 5805-01-028-8364)

This copy is a reprint which includes current pages from Changes 1 through 3.

HEADQUARTERS, DEPARTMENT OF THE ARMY

17 JANUARY 1980

WARNINGS

DANGEROUS VOLTAGES EXIST IN THIS EQUIPMENT.

Be careful when working on the 115-volt ac line connections. SERIOUS INJURY or DEATH may result from contact with these connections.

Adequate ventilation should be provided while using trichlorotrifluoroethane. Prolonged breathing of vapor should be avoided. The solvent should not be used near heat or open flame; the products of decomposition are toxic and irritating. Since trichlorotrifluoroethane dissolves natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

Buffer, Data TD-1065 weighs 39 pounds. Use two men to carry or lift this unit to prevent injury. Due to lack of carrying handles, personnel must ensure a positive grip on the item before lifting to avoid dropping the unit.

CAUTIONS

To prevent damage to circuit card assemblies do not make resistance measurements on circuit card assemblies or on the data buffer unit while circuit card assemblies are installed.

Handle circuit card assemblies by edges only to prevent component damage by static discharges. When installing replacement card, carefully remove conductive film from connector pins.

Place POWER switch to OFF before removing or inserting circuit card assemblies.

Do not adjust variable controls on any circuit card assembly.

TM 11-5805-637-12
EE169-JC-OMI-010/TD 1065B/G
TO 31S5-2G-241
C4

CHANGE
No. 4

DEPARTMENTS OF THE ARMY
NAVY AND THE AIR FORCE
Washington, DC, 15 June 1988

OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL
BUFFER DATA
TD-1065/G (NSN 5805-01-028-8364)
AND
TD-1065A/G (NSN 5805-01-182-3937)
AND
TD-1065B/G (NSN 5805-01-185-4194)

TM 11-5805-637-12/TO 31S5-2G-241, 17 January 1980, is changed as follows:

1. Title of manual is changed as shown above. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration identification number.

2. The Navy technical manual identification number (TMIN) has been added to this publication.

Remove pages	*Insert pages*
i and ii	i and ii
1-1 through 1-4	1-1 through 1-4
3-1 through 3-4	3-1 through 3-4
5-1 through 5-4	5-1 through 5-4
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D-3 through D-6	D-3 through D-6

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No. 3

DEPARTMENTS OF THE ARMY
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OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL
BUFFER DATA
TD-1065/G (NSN 5805-01-028-8364)
AND
TD-1065A/G (NSN 5805-01-182-3937)

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i and ii	i and ii
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4-1 and 4-2	4-1 and 4-2
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NO. 2

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OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL

BUFFER, DATA TD-1065/G
(NSN 5805-01-028-8364)

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Operator and Organizational Maintenance Manual
BUFFER, DATA TD-1065/G
(NSN 5805-01-028-8364)

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29-207 (2)
29-610 (2)

USAR: NONE
ARNG: NONE
For explanation of abbreviations used, see AR 310-50.

TECHNICAL MANUAL
No. 11-5805-637-12
TMIN
EE169-JC-OMI-010/TD 1065B/G
TECHNICAL ORDER
TO 31S5-2G-241

TM 11-5805-637-12
EE169-JC-OMI-010/TD 1065B/G
TO 31S5-2G-241
DEPARTMENTS OF THE ARMY
NAVY AND THE AIR FORCE
Washington, DC, 17 January 1980

OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL
BUFFER DATA
TD-1065/G (NSN 5805-01-028-8364)
AND
TD-1065A/G (NSN 5805-01-182-3937)
AND
TD-1065B/G (NSN 5805-01-185-4194)

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: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5000.

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.

Table of Contents

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

(fig. 1-1)

This manual describes Buffer, Data TD-1065/G TD-1065A/G and TD-1065B/G and it provides instructions for installation, operation, and operator/crew and organizational categories of maintenance. The Buffer, Data is referred to as data buffer in this manual.

1-2. Consolidated Index Of Army Publications And Blank Forms

Refer to the latest issue of DA Pam 25-30 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

1-3. Maintenance Forms, Records, and Reports

a. Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750 as contained in Maintenance Management Update. Air Force personnel will use AFR 66-1 for maintenance reporting and TO O-35D54 for unsatisfactory equipment reporting. Navy personnel will report maintenance performed utilizing the Maintenance Data Collection Subsystem (MDCS) IAW OPNAVINST 4790.2, Vol 3 and unsatisfactory material/conditions (UR submissions) IAW OPNAVINST 4790.2, Vol 2, chapter 17.

b. Report of Packaging and Handling Deficiencies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/ NAVMATINST 4355.73B/AFR 400-54/MCO 4430.3H.

c. Discrepancy in Shipment Report (DISREP) (SF361). 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.

1-4. Reporting Equipment Improvement Recommendations (EIR)

a. Army. 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 the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL, PA-MA-D, Fort Monmouth, New Jersey 07703-5000. We'll send you a reply.

b. Air Force. Air Force personnel are encouraged to submit EIR's in accordance with AFR 900-4.

c. Navy. Navy personnel are encouraged to submit EIR's through their local Beneficial Suggestion Program.

1-5. 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. Disassembly and repacking of equipment for shipment or limited storage are covered in Chapter 2 and TM 740-90-1.

1-6. Destruction of Army Electronics Materiel

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

Section II. DESCRIPTION AND DATA

1-7. Purpose and Use

The purpose of the data buffer is to provide a means for transmitting high speed data and voice traffic over existing Army Tactical Area Communications System (ATACS) equipment. The data buffer provides a 6 or 12-channel digital transmission capability and is used with Multiplexers such as the TD-660A/G and TD-660B/G. Multiplexer TD-660/G cannot be used with the data buffer.

NOTE

Data buffer serial numbers 001 through 018 (first article units) have only 12-channel capability as initially delivered. These units will be modified for 6/12-channel capability when the ECP is incorporated for production units.

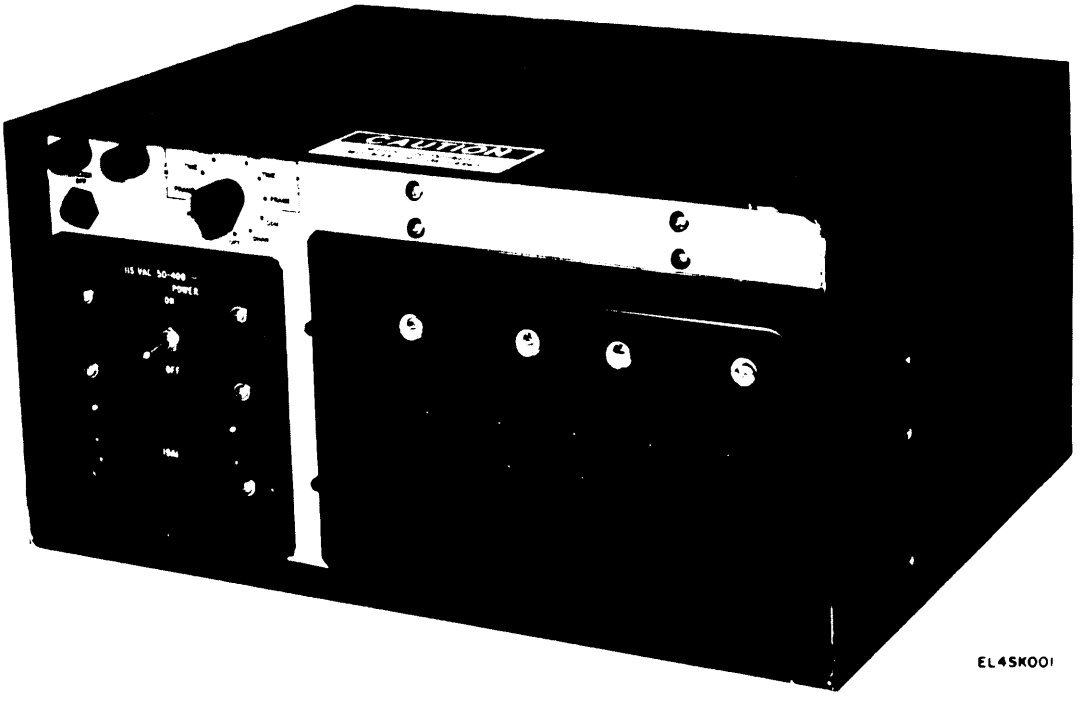


Figure 1-1. Buffer, Data TD-1065/G

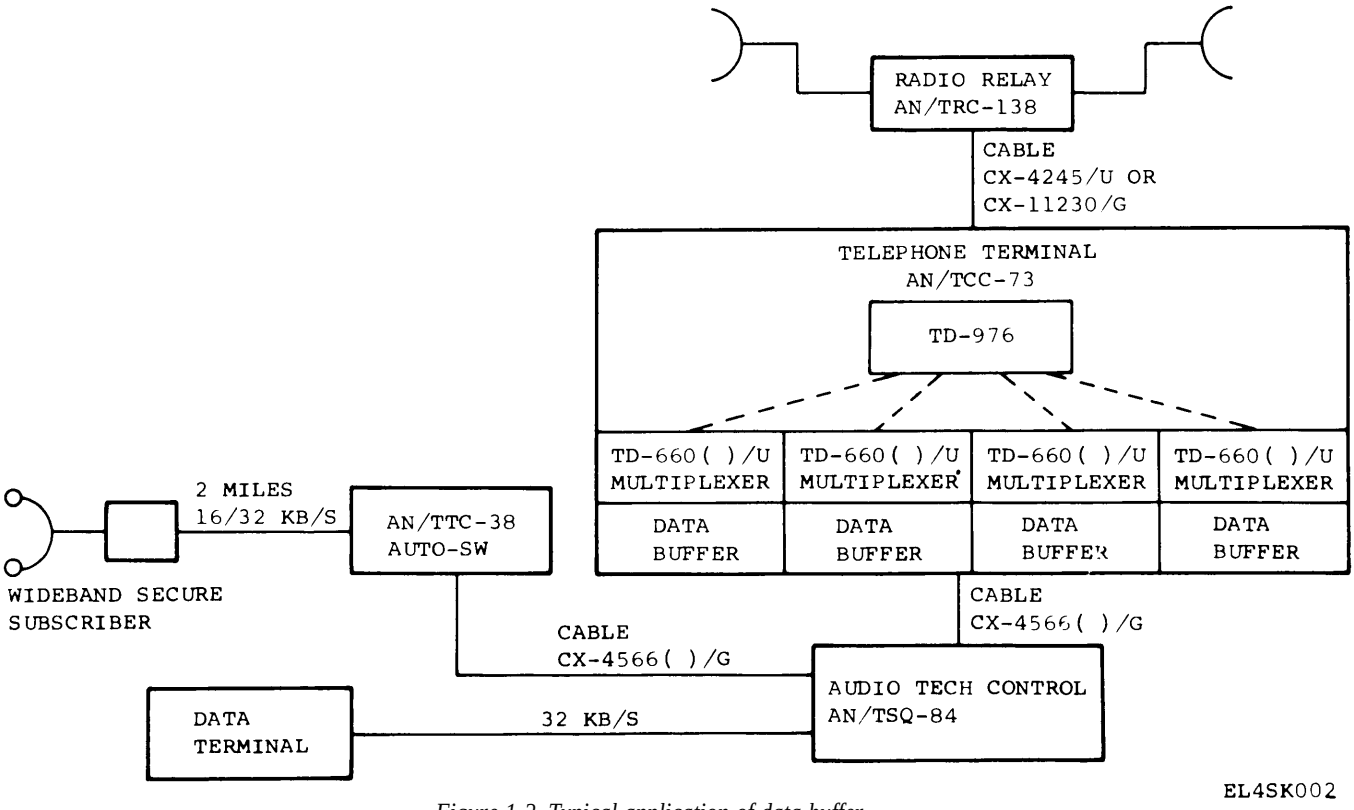


Figure 1-2. Typical application of data buffer.

1-8. Description

a. The data buffer is a self-contained unit housed in a metal case which measures 19 inches wide, 12 inches deep, and 8½ inches high and weighs approximately 39 pounds.

b. The data buffer contains 15 replaceable circuit card assemblies (CCAs), a replaceable power supply assembly, and two replaceable interface (filter) assemblies. The CCAs consist of 12 identical channel cards, a transmit common card, a receive common card, and a fault locater card. All 15 CCAs are accessible when the protective front cover assembly is removed. The two replaceable filter assemblies - the high speed filter assembly and the audio filter assembly - are accessible from the rear of the data buffer.

c. All operating controls and indicators are mounted on the front panel and on the CCAs behind the front inner cover assembly, Connectors for data input, data output, and ac power are located on the rear of the data buffer. Two mounting brackets may be attached on the sides of the case to rack mount the unit in a standard 19 inch equipment rack.

1-9. Differences Between Models

NOTE

Except where indicated Buffer, Data TD-1065/G information referenced in this manual relates to the Buffer, Data TD-1065A/G and the TD-1065B/G as well.

a. Only the TD-1065A/G containing circuit card assembly channel unit, CCA819A6A, or the TD-1065B/G with circuit card assembly channel unit CCA819A6B can be used in conjunction with central office telephone automatic AN/TTC-39.

b. Functional characteristics are as follows:

(1) TD-1065/G with CCA19A6 provides full duplex operation for 16KB and 32KB data (4W) or half duplex operation for 16KB data and full duplex operation for 32KB data (2W).

(2) TD-1065A/G with CCA19A6A provides full duplex operation for 32KB data (4W) or half duplex operation for 16KB data (2W).

(3) TD-1065B/G with CCA19A6B provides TD-1065/G operation (Mode A) or TD-1065A/G operation (Mode B), paragraph b(1) above, paragraph b(2) above.

NOTE

Except where indicated CCA19A6 information referenced in this manual relates to the CCA19A6A and CCA19A6B as well.

1-10. Items Comprising an Operable Equipment

(fig. 1-1)

The data buffer is self-contained in a single enclosure. No ancillary items are furnished with the data buffer.

1-11. System Application

(fig. 1-2)

The data buffer provides digital access to high speed data ardor wideband secure voice data at 16K bits and 32K bits per second into the ATACS trunking system. It is used at ATACS as part of the AN/TCC-73 Telephone Terminal and elsewhere in the field Army at PCM communication link terminals. The data buffer provides a 6- or 12-channel digital transmission capability when used in conjunction with the following.

a. Multiplexer TD-660( )/G
b. Multiplexer TD-352
c. Multiplexer TD-754
d. Multiplexer TD-204
e. Multiplexer TD-976( )/G
f. Cable, Telephone WF-16 ( )/G
g. Cable, Telephone WM-130( )/G
h. Central Office, Telephone, Automatic AN/TTC-38( ) (V)
i. Telephone Set TA-341( )/TT
j. Key Generator KG-27
k. Wideband security devices (Vinson with wire line driver) and associated tactical communication equipment operating in conjunction with AN/TSQ-84.

1-12. Tabulated Data

Power input:
- Voltage . . . . . 115 Volts ac
- Phase . . . . . Single
- Frequency . . . . . 50 to 400 Hz
- Power . . . . . 30 Watts

Input data rates:
- 16 kbps ±0.0045%
- 32 kbps ±0.0045%

Frame length:
- 1152 bits (2 ms repetition interval)

Duty cycle:
- Continuous operation

CHAPTER 2

SERVICE UPON RECEIPT AND INSTALLATION

Section I. SERVICE UPON RECEIPT OF MATERIAL

2-1. Unpacking

(fig. 2-1)

The data buffer is packaged for domestic shipment according to the best commercial practice. No special unpacking instructions are required.

NOTE

The original packing cases are reusable modular boxes, They should be retained for reshipmentor limited storage.

2-2. Checking Unpacked Equipment

a. Inspect the equipment for any damage incurred during shipment. If the equipment has been damaged, report the damage in accordance with paragraph 1-3.

b. See that the equipment is complete as listed on the packing slip. Report all discrepancies in accordance with paragraph 1-3.

c. If the equipment has been used or reconditioned, see whether it has been changed by a modification work order (MWO). If the equipment has been modified, the MWO number will appear on the front panel near the nomenclature plate. Be sure that any changes in operation instructions resulting from the modification have been entered into the equipment manual.

NOTE

Current MWOs applicable to the equipment are listed in DA Pam 310-1

Section II. INSTALLATION

2-3. Siting and Shelter Requirements

WARNING

The data buffer weighs 39 pounds. Use two men to carry or lift this unit to prevent injury. Due to lack of carrying handles, personnel must ensure a positive grip on the item before lifting to avoid dropping the unit.

a. Place the data buffer in the selected location.

b. If vehicle mounted, the data buffer should be secured by attaching the mounting brackets on the sides of the date buffer to a rack or frame that is securely attached to the vehicle.

2-4. Interunit Connections

(fig. 2-2 and FO-1)

a. Be sure the POWER ON/OFF switch is set to OFF.

b. Install cables between data buffer, multiplexer, and other units according to the interunit connection diagrams shown on figures 2-2 and FO-1.

NOTE

In the event a remote alarm is to be used, a connector meeting the following specifications must be obtained, wired to the remote alarm, and connected to REMOTE ALARM connector on the rear of the data buffer:

Connector plug	*Shell size*	*Insert polarization*	*Insert arrangement*	*Contact style*
MS3126	8	Normal	MS33708-33	F

c. All unused coaxial and triaxial cable connections on the data buffer must be terminated in 91 ohms. Obtain required terminations from a direct support facility. All terminations are BNC type except those used on RCV PCM and XMT PCM connectors on the data buffer. These terminations are triaxial types.

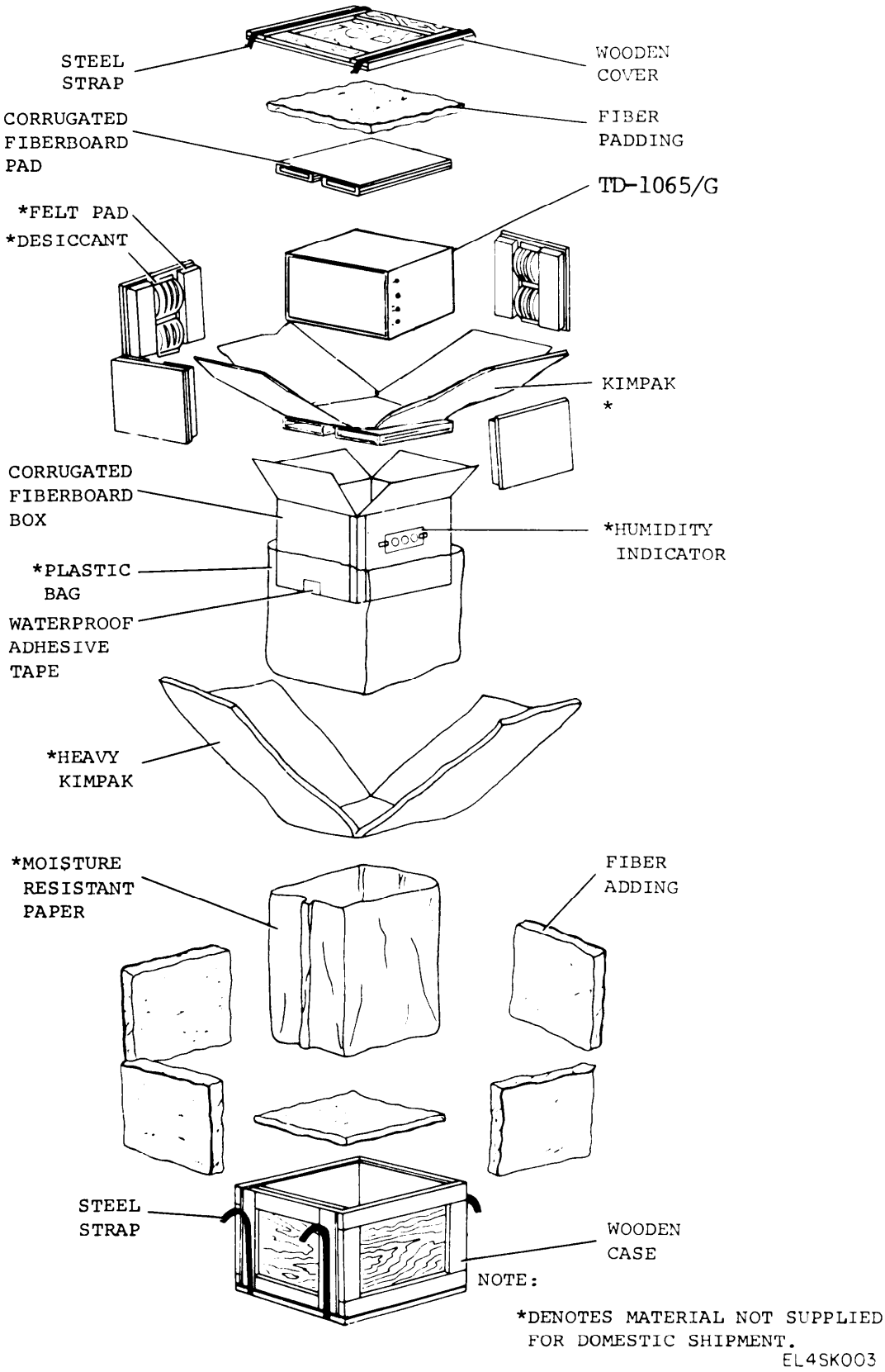


Figure 2-1. Typical packaging diagram.

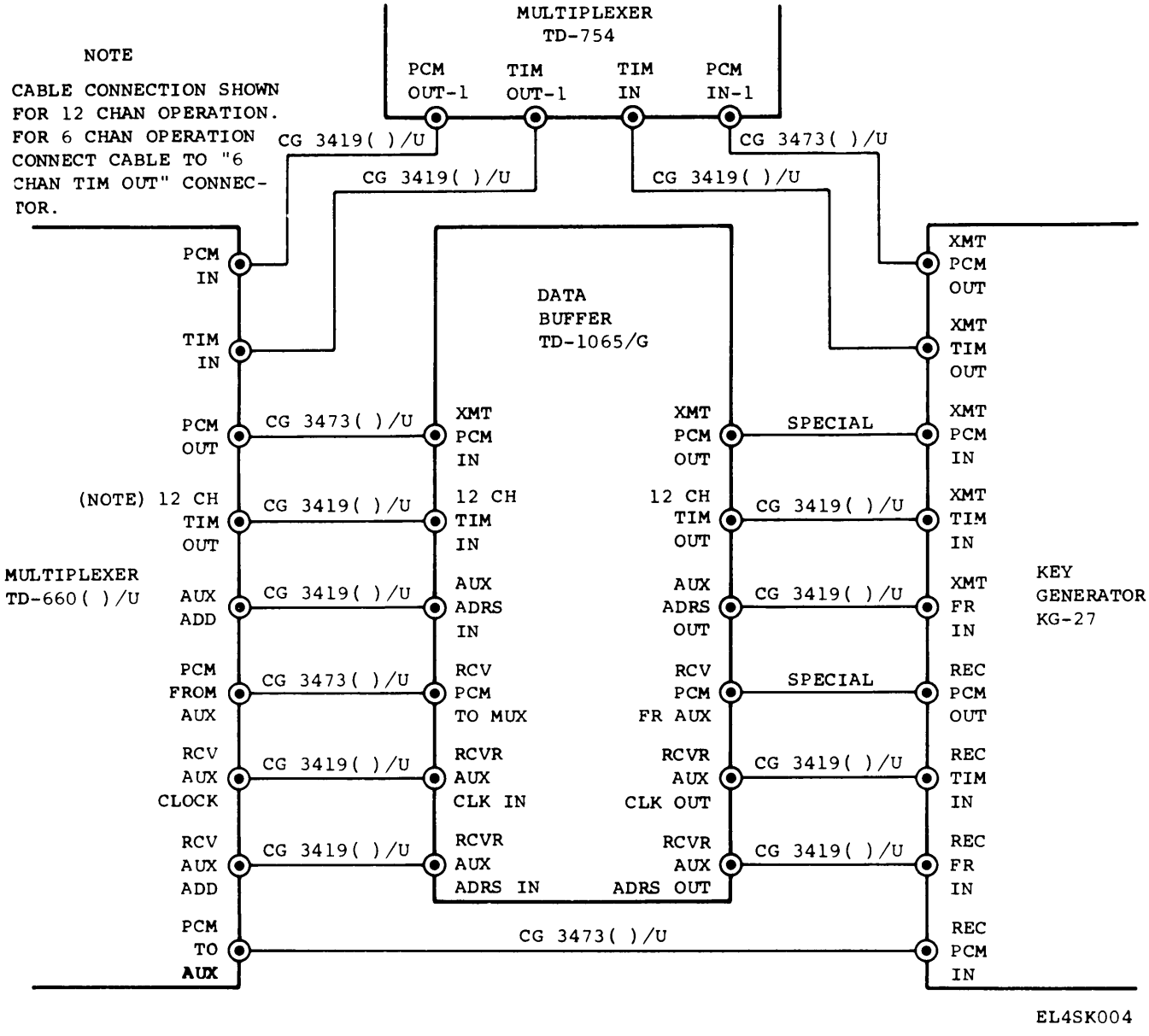


Figure 2-2. Interunit connection diagram, secure operation.

CHAPTER 3

OPERATING INSTRUCTIONS

Section I. Controls, Indicators and Connectors

3-1. Front Panel Operating Controls and Indicators

(fig. 3-1)

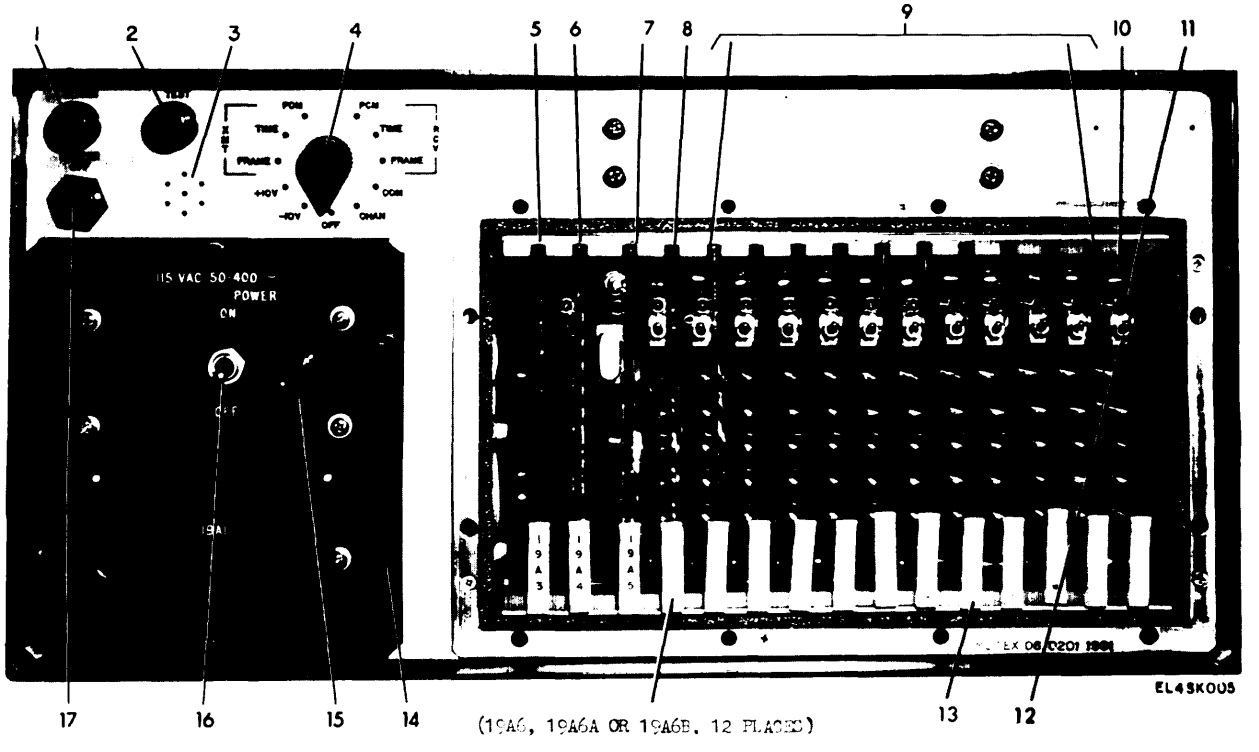
Control or Indicator	*Function*
BUZZER OFF pushbutton switch	When depressed, turns off audible alarm signal which was produced as a result of a fault.
ALARM indicator light	Illuminates simultaneously with audible alarm to alert operator of a fault within the data buffer.
TEST indicator light	Used in conjunction with adjacent lo-position rotary switch. Normal operation is indicated when TEST indicator light is illuminated. Extinguished TEST indicator light indicates a fault in the particular circuit monitored.
Rotary switch (10 position)	*Switch position* / *Action*
	- 10V — Selects – 10V power supply output for application to TEST indicator light. Illuminated TEST indicator light indicates that – 10V is within tolerance.
	+ 10V — Selects + 10V power supply output for application to TEST indicator light. Illuminated TEST indicator light indicates that + 10V is within tolerance.
	XMT FRAME — Selects signal TXFRMM (detected output of interunit signal BAUXAD) for application to TEST indicator light. Illuminated TEST indicator light indicates presence of BAUXAD.
	XMT TIME — Selects signal. TXTIMM (detected output of interunit signal BTXTIM) for application to TEST indicator light. Illuminated TEST indicator light indicates presence of BTXTIM.
	XMT PCM — Selects signal TXPCMM (detected output of interunit signal BTXPCM) for application to TEST indicator light. Illuminated TEST indicator light indicates presence of BTXPCM.
	RCV PCM — Selects signal RXPCMM (detected output of interunit signal BRXPCM) for application to TEST indicator light. Illuminated TEST indicator light indicates presence of BRXPCM.
	RCV TIME — Selects signal RXTIMM (detected output of interunit signal BRXTIM) for application to TEST indicator light. Illuminated TEST indicator light indicates presence of BRXTIM.
	RCV FRAME — Selects signal RXFRMM (detected output of interunit signal BRXAD) for application to TEST indicator light. Illuminated TEST indicator light indicates presence of BRXAD.
	COM — Selects signal CCMTR for application to TEST indicator light. Extinguished TEST indicator light indicates a fault exists in either transmit common or receive common circuit card assemblies.
	CHAN — Selects signal CCHMTR for application to TEST indicator light. Extinguished TEST indicator light indicates a fault exists in one of the 12 channel unit cards.
Loudspeaker	Provides an audible tone to alert operator of a fault in the data buffer.
POWER ON/OFF circuit breaker	When switched to ON, applies 115V ac power to the power supply which produces + 10V and - 10V outputs. When switched to OFF, removes 115V ac power and deener-

Control or indicator	*Action*
	gizes the power supply. Also provides ¾ amp overload protection for ac input power. To reset circuit breaker after it has tripped, first set to OFF, then back to ON again.
POWER indicator light	Illuminates when POWER ON/OFF circuit breaker is set to ON and 115V ac power is applied to the power supply.

3-2. Rear Panel Connectors

(fig. 3-2)

Connector	*Function*
BUFFER CH 1-4	Provides data buffer input and output connection for low speed data for channels 1 through 4.
MUX CH 1-4	Provides interface between data buffer and TD-660 transmit and receive channels 1 through 4.
BUFFER CH 5-8	Provides data buffer input and output connections for low speed data for channels 5 through 8.
MUX CH 5-8	Provides interface between data buffer and TD-660 transmit and receive channels 5 through 8.
BUFFER CH 9-12	Provides data buffer input and output connections for low speed data for channels 9 through 12.



1 ALARM Indicator Light
2 TEST Indicator Light
3 Loudspeaker
4 Rotary Switch
5 Fault Locator CCA A3
6 Transmit Common CCA A4
7 Receive Common CCA A5
8 Channel CCA A6 or CCA A6A or CCA A6B - No. 1
9 Channel CCA A6 or CCA A6A or CCA A6B - No. 2-11
10 Channel CCA A6 or CCA A6A or CCA A6B - No. 12
11 Light Emitting Diode (1 of 12)
12 2W/4W Switch (1 of 12)
13 Card Ejector (1 of 12)
14 Power Supply Assembly A1
15 POWER Indicator Light
16 POWER ON/OFF Circuit Breaker
17 BUZZER OFF Switch

Figure 3-1. Data buffer front panel assemblies, controls, and indicators.

Connector	*Function*
MUX CH 9-12	Provides interface between data buffer and TD-660 transmit and receive channels 9 through 12.
REMOTE ALARM	Provides connection for a remote alarm.
AC PWR 115V 50-400 HZ	Provides connection for primary input power.
GND	Provides connection for chassis ground.
AUX ADRS IN	Provides connection for auxiliary address input.
AUX ADRS OUT	Provides connection for auxiliary address output.
XMT PCM IN	Provides connection for transmit PCM input.
XMT PCM OUT	Provides connection for transmit PCM output.
RCVR AUX ADRS IN	Provides connection for receiver auxiliary address input.
RCVR AUX ADRS OUT	Provides connection for receiver auxiliary address output.
RCV PCM TO MUX	Provides connection for received PCM to multiplexer.
RCV PCM FR AUX	Provides connection for received PCM from auxiliary equipment
12 CH TIM IN	Provides connection for 12 channel timing input.
12 CH TIM OUT	Provides connection for 12 channel timing output.
RCVR AUX CLK IN	Provides connection for receiver auxiliary clock input.
RCVR AUX CLK OUT	Provides connection for receiver auxiliary clock output.

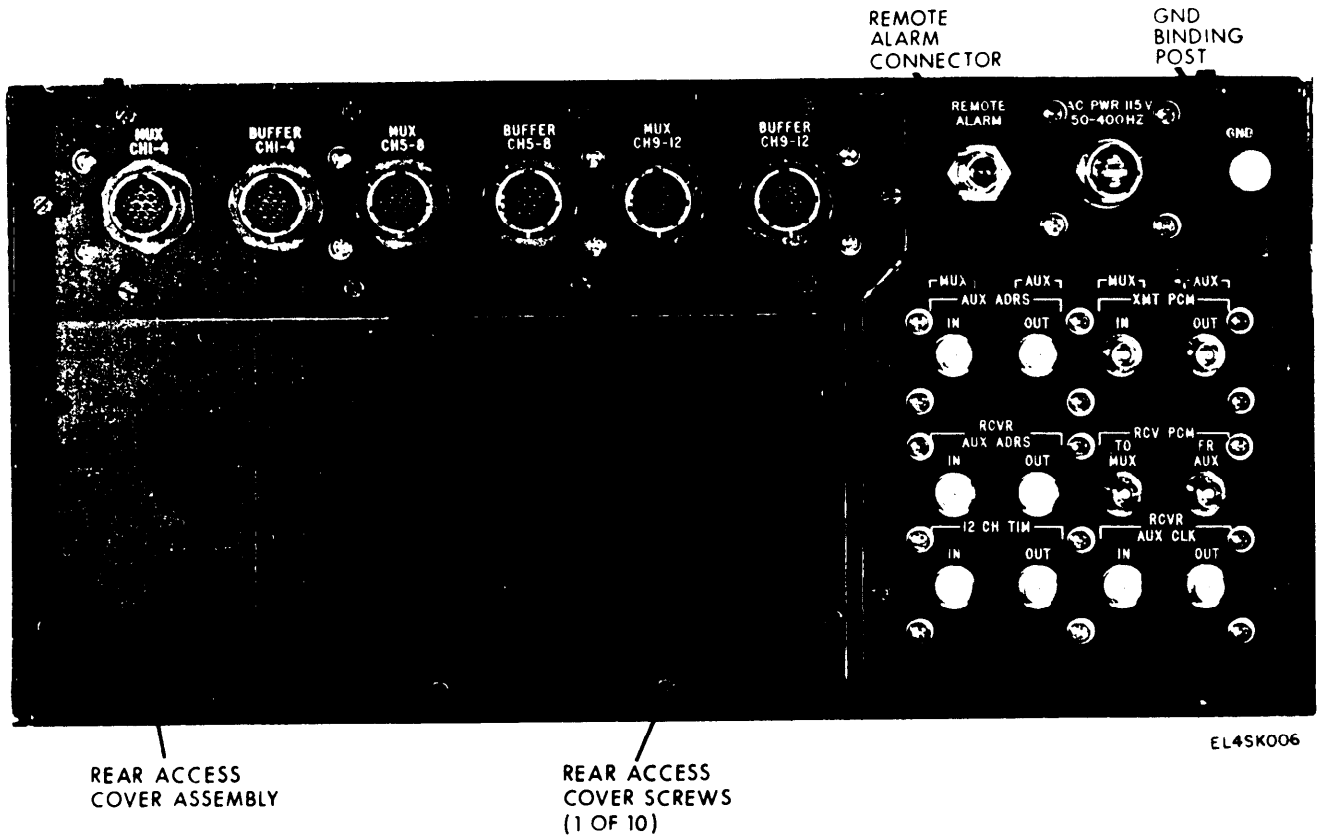


Figure 3-2. Data buffer rear panel connectors.

3-3. Circuit Card Assemblies Switch and Indicator

(fig. 3-1)

Switch or indicator	*Function*
2W/4W switch	Used to select either 16 kilobit (2W position) or 32 kilobit (4W position) operating mode.
MODE selector switch S2 (C19A6B only)	Used to select either MODE A (up) same as CC19A6, or MODE B (down) same as CC19A6A.
Light emitting diode	Lights to indicate loss of data or malfunctioning card.

3-4. Assembly Locations

(fig. 3-1)

Data buffer assembly locations are shown in figure 3-1. Although all channel CCAs are identical, channel number assignments depend upon the slot in which each CCA is installed. Channel number assignments also depend upon whether the data buffer is operating in the 6- or 12-channel mode. Channel number assignments are as follows:

Channel CCA No.	*Channel number assignment*	
	12-channel operation	*6-channel operation*
1	1	1
2	2	2
3	3	
4	4	
5	5	3
6	6	
7	7	4
8	8	
9	9	5
10	10	
11	11	6
12	12	

Section II. OPERATION

3-5. Operation Under Usual Conditions

a. Before you energize the data buffer, determine the line input requirements.

NOTE

The following six steps must be performed by organizational maintenance personnel.

b. Loosen four captive screws and lower flap on front cover assembly (fig. 1-1).

c. Set 12 2W/4W switches (fig. 3-1) on channel cards to required position.

NOTE

On CC19A6B set the MODE selector switch S2 to the required position.

d. Raise flap on front cover assembly and secure with four captive screws.

e. Place POWER ON/OFF circuit breaker in the ON position and note that POWER indicator light is illuminated.

f. Starting with front panel rotary switch in the OFF position, rotate rotary switch clockwise through all positions to determine that TEST indicator remains illuminated, indicating normal operation. Leave rotary switch in the OFF position.

3-6. Operation Under Unusual Conditions

a. In the event that one or more channel cards become inoperative, the data buffer may still be operated on the remaining channels. Depress BUZZER OFF switch to silence audible alarm.

NOTE

An inoperative channel can be identified by rotating the rotary switch to the CHAN position and checking for an illuminated light emitting diode (LED) on the channel CCAs. Any inoperative channel will show on illuminated LED.

b. If the data buffer is required to be bypassed from the system, place POWER ON/OFF circuit breaker to the OFF position. This causes signals from the TD-660( )/G to bypass the data buffer.

CHAPTER 4

OPERATOR/CREW MAINTENANCE INSTRUCTIONS

4-1. Scope of Maintenance

The maintenance duties assigned to the operator/crew of the data buffer are listed below together with a reference to the paragraphs covering the specific maintenance functions.

a. Operator's daily preventive maintenance checks and service (para 4-3).

b. Cleaning (para 4-4).

c. Replacement of indicator lamps (para 4-7).

Any trouble that is beyond the scope of operator/crew will be referred to organizational maintenance.

4-2. Preventive Maintenance

To ensure that the data buffer is always ready for operation, inspect it systematically to discover and correct defects. The necessary preventive maintenance checks and services to be performed are listed in paragraph 4-3. Defects discovered during operation of the unit will be noted for future correction to be made as soon as operation has ceased. Stop operation immediately if deficiency is noted during operation which would damage the equipment. Records and reports of these checks and services must be made in accordance with the requirements set forth in DA Pam 738-750.

4-3. Operator's Preventive Maintenance Checks and Services Chart

NOTE

The checks in the "Interval" column are to be performed in the order listed.

B — Before operation

Item No.	*Interval B*	*Item to be inspected Procedure*	*Equipment is not ready/available if:*
1	*	Data buffer performance check. Perform operational checks as described in Chapter 3.	Equipment fails to support assigned mission.

*Do this check before each deployment to a mission location. This will permit any existing problems to be corrected before the mission starts. The check does not need to be done again until redeployment.

4-4. Cleaning

Inspect the exterior of the equipment. The exterior surfaces should be free of dust, dirt, grease, and fungus.

a. Remove dust and loose dirt with a clean, soft cloth.

WARNING

Adequate ventilation should be provided while using trichlorotrifluoreothane. Prolonged breathing of vapor should be avoided. The solvent should not be used near heat or open flame; the products of decomposition are toxic and irritating. Since trichlorotrifluoroethane dissolves natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

b. Remove grease, fungus, and ground-in dirt from the case; use a cloth dampened (not wet) with trichlorotrifluoroethane.

c. Remove dust and dirt from external surfaces of rear panel connectors with a brush.

d. Clean the front panel and components; use a soft clean cloth. If necessary, dampen the cloth with water; mild soap may be used for more effective cleaning.

4-5. Operator/Crew General Troubleshooting Information

Troubleshooting the data buffer at the operator/crew category is accomplished by noting any abnormal indication during operation and checking the following troubleshooting chart for a similar symptom. Symptoms and remedies not covered in the troubleshooting chart should be referred to a higher maintenance-category for repair.

4-6. Operator/Crew Troubleshooting Chart

Item No.	*Symptom*	*Probable cause*	*Remedy*
1	POWER indicator lamp on power supply assembly does not illuminate when POWER circuit breaker is set to ON.	a. Defective input prover cable or cable connector. b. Defective indicator lamp. c. Defective power supply assembly.	a. Higher maintenance category repair is required. b. Replace indicator lamp. c. Higher maintenance category repair is required.
2	ALARM indicator does not illuminate when audible alarm sounds.	Defective indicator lamp.	Depress ALARM indicator. If indicator remains extinguished, replace defective indicator lamp (para 4-7). If indicator illuminates, higher maintenance category repair is required.

4-7. Replacement of Indicator Lamps

Remove the indicator lens by turning counterclockwise. Pull out the defective bulb. Insert replacement bulb and install indicator lens.

CHAPTER 5

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

5-1. Tools and Accessories

Tools and test equipment that are required for organizational maintenance of Buffer, Data TD-1065/G are listed in Maintenance Allocation, Appendix D.

5-2. Repair Parts

Repair parts issued with, or authorized for use by the organizational technician for Buffer, Data TD-1065/G are listed in the Repair Parts and Special Tools List, TM 11-5805-637-20P.

Section II. REPAINTING AND REFINISHING INSTRUCTIONS

5-3. General

Under normal conditions, the paint will remain permanently on the surfaces of the data buffer and require no retouching or repainting. However, the paint may become chipped or worn away from accidental causes, such as being struck by a sharp object, or subjected to abrasive damage of various types. If such damage occurs, the damaged area should be retouched or repainted both for appearance and to protect the case from corrosion.

5-4. Touchup Painting Instructions

Remove rust and corrosion from metal surfaces by lightly sanding with fine sandpaper. Brush two thin coats of paint (color green X24087 per Federal Standard 595) on the bare metal to protect it from further corrosion. Refer to applicable cleaning and refinishing practices specified in TB 43-0118.

Section III. PREVENTIVE MAINTENANCE

5-5. General

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to ensure that the equipment is serviceable.

5-6. Preventive Maintenance Checks and Services

The preventive maintenance checks and services chart (para 5-7) outlines functions to be performed. These checks and services are to maintain Army electronic equipment in a combat serviceable condition; that is, in good general (physical) condition and in good operating condition. If a defect cannot be remedied by performing the corrective actions listed, higher category of maintenance or repair is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in DA Pam 738-750.

5-7. Organization Preventive Maintenance Checks and Services Chart

NOTE

The checks in the "interval" column are to be performed in the order listed.

M — Monthly

Item No.	*Interval M*	*Item to be inspected*	*Procedure*
1	a	Data buffer unit	Ensure that equipment functions properly as explained in Chapter 3. If problems occur, perform troubleshooting procedures in Section IV of Chapter 5.
2	a	External cable assemblies	Ensure that cable assemblies are not loose or damaged.

a. As required

Paragraph 5-8 deleted.

Paragraph 5-9 deleted.

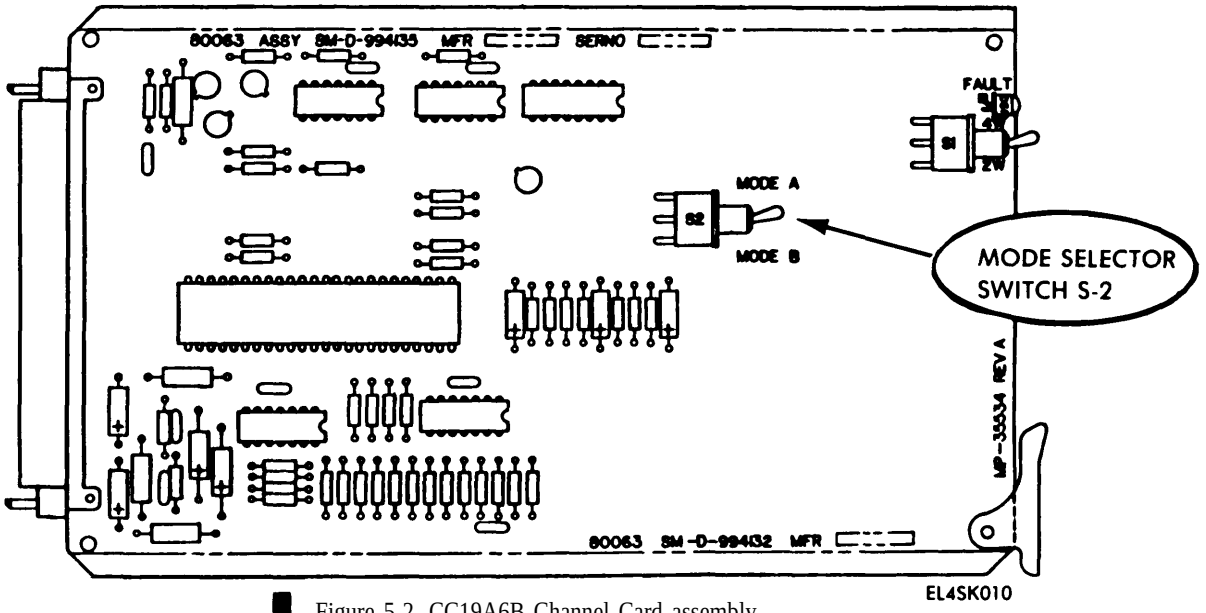


Figure 5-2. CC19A6B Channel Card assembly.

SECTION IV. TROUBLESHOOTING

5-10. Organizational General Troubleshooting Information

Troubleshooting the data buffer at the organizational category is accomplished by means of built-in test equipment (BITE) circuits. Malfunctions within the data buffer are indicated by means of audible and visual alarms. By utilization of the front panel ten position rotary switch and the TEST indicator light, the organizational repairman can isolate the cause of the malfunction to replaceable assemblies or circuit card assemblies. When one of the common circuit card assemblies is indicated as malfunctioning, leave the rotary switch in the COM Position. Remove the front cover and replace the common circuit card assembly which has an illuminated LED. When one of the channel circuit card assemblies is indicated as malfunctioning, leave the rotary switch in the CHAN position. Remove the front cover and replace the channel circuit card assembly which has an illuminated LED.

NOTE

If a malfunction occurs, the audible alarm sounds. Depress BUZZER OFF switch to silence audible alarm.

5-11. Organizational Troubleshooting Chart

Item No.	*Symptom*	*Probable Cause*	*Remedy*
1	POWER indicator lamp on power supply assembly does not illuminate when POWER switch is set to ON and neither alarm operates.	a. Defective input power cable or cable connector.	a. Check cable and connector; replace or repair as required.
		b. Defective power supply assembly.	b. Replace defective power supply assembly (para 5-13).
2	Data buffer does not operate or indicates a malfunction.	a. Defective power supply assembly.	a. Rotate rotary switch to - 10V and + 10V position. If TEST indicator light is extinguished in either position, replace power supply assembly (para 5-13).

Item No.	Symptom	Probable cause	Remedy
3	Data buffer indicates malfunction with TD-660A/G not in frame.	a. Defective high speed filter assembly.	a. Rotate rotary switch to XMT FRAME, XMT TIME, XMT PCM, RCV PCM, RCV TIME, and RCV FRAME positions. If TEST indicator light is extinguished in any of these positions: turn TD-1065/G off if TD 660A/G frames up. Replace high speed filter assembly (para 5-15). If TD660A/G does not frame up take the following steps. (1) Check cabling between TD1065/G and TD660A/G (2) Replace TD660A/G (3) Replace high speed filter assembly
		b. Defective transmit common or receive common circuit card assembly.	b. Rotate rotary switch to COM position. If TEST indicator light is extinguished, check for circuit card having an illuminated LED (6 or 7, fig. 3-1). Replace circuit card (para. 5-14).
		c. Defective channel circuit card assembly.	c. Rotate rotary switch to CHAN position. If TEST indicator light is extinguished, check for circuit card having an illuminated LED (8, 9, or 10, fig. 3-1). Replace circuit card (para. 5-14).
		NOTE On circuit card assembly CC19A6B the MODE selector switch S2 must be set for operational requirements. MODE A (up) same as CC19A6 MODE B (down) same as CC19A6A	
		d. Defective audio filter assembly.	d. Replace audio filter assembly (para 5-16).
		e. Defective fault locator circuit card assembly.	e. If data buffer appears to be operating normally, even though one or more rotary switch position shows an extinguished TEST indicator light, replace fault locator circuit card assembly (para 5-14).
		f. Defective circuit card assembly at distant end.	f. Notify distant end to replace transmit common circuit card assembly.
		g. Defective data buffer.	g. High maintenance category is required. Replace defective data buffer (para 5-17).

Section V. MAINTENANCE OF DATA BUFFER

5-12. Maintenance Procedures

Maintenance of the data buffer consists of removing and replacing those items found to be defective during troubleshooting. These procedures include removal and replacement of the 15 circuit card assemblies, power supply, high speed filter assembly, audio filter assembly and the complete data buffer assembly.

CAUTION

Prior to performing maintenance on the data buffer, make certain that the POWER switch is set to OFF and the source of 115 Vac is disconnected from the data buffer.

5-13. Replacement of Power Supply Assembly

a. Loosen six captive screws securing power supply assembly in data buffer (14, fig. 3-1).

b. Pull power supply out of data buffer.

c. Install replacement power supply assembly into data buffer and tighten captive screws. (Do not overtighten.)

5-14. Replacement of Circuit Card Assembly

a. Loosen 12 captive screws securing front cover assembly to front of data buffer.

b. Remove front cover assembly to expose circuit card assemblies.

c. Pull card ejector (13, fig. 3-1) on applicable circuit card assembly to free circuit card assembly from rear connector.

d. Pull circuit card assembly straight out of data buffer.

CAUTION

Handle circuit card assemblies by edges only to prevent component damage by static discharges.

NOTE

Before installing CCA19A6B make sure the MODE selector switch S2 is in the same position as the one being replaced.

e. Install replacement circuit card assembly in data buffer and press securely into connector.

f. Reinstall front cover assembly and secure 12 captive screws. (Do not overtighten).

5-15. Replacement of High-Speed Filter Assembly

(fig. 5-1)

a. Check that all cables from rear of high-speed falter assembly are identified for reconnection (refer to paragraph 2-4 for interconnection instructions).

b. Disconnect all cables from rear of high-speed filter assembly.

c. Remove all terminations from unused connectors.

d. Loosen the eight captive screws securing the high-speed filter assembly to rear of data buffer.

e. Pull out high-speed filter assembly.

f. Install replacement high-speed filter assembly into data buffer and tighten captive screws (do not overtighten).

g. Connect previously removed cables to applicable connectors.

h. Replace terminations on applicable connectors. All terminations are BNC type except those used on RCV PCM and XMT PCM connectors. These terminations are triaxial types.

5-16. Replacement of Audio Filter Assembly

(fig. 5-1)

a. Check that all cables connected to rear of audio filter assembly are identified for reconnection (refer to paragraph 2-4 for interconnection instructions).

b. Disconnect all cables from rear of audio filter assembly.

c. Loosen the 10 captive screws that secure the audio filter assembly to rear of data buffer.

d. Pullout audio filter assembly.

e. Install replacement audio filter assembly into data buffer and tighten captive screws (Do not overtighten.)

f. Connect all previously removed cables to applicable connectors.

5-17. Replacement of Data Buffer

a. Check that all cables connected to rear of data buffer are identified for reconnection.

b. Refer to paragraph 2-4 for interconnections.

c. Disconnect all cables from the rear of the data buffer.

e. Install replacement data buffer in rack or frame and secure using eight screws.

f. Connect rear cables to applicable connectors on data buffer.

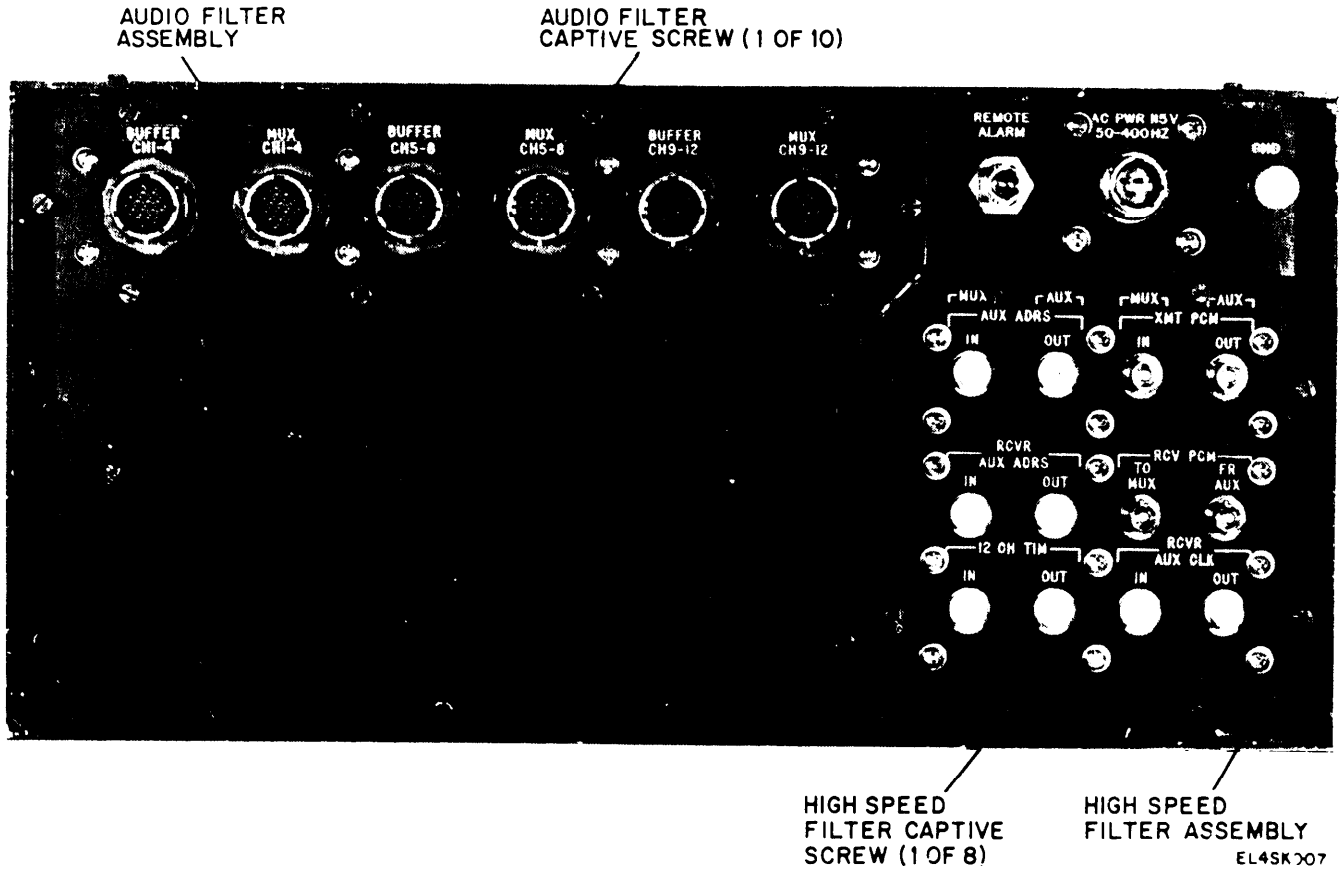


Figure 5-1. Replacement of high-speed filter and audio filter assemblies.

APPENDIX A

REFERENCES

DA Pam 25-30	Consolidated Index of Army Publications and Blank Forms.
DA Pam 738-750	The Army Maintenance Management System (TAMMS).
TB 43-0118	Field Instructions For Painting and Preserving Communications-Electronics Equipment.
TM 11-5805-637-20P	Organizational Maintenance Repair Parts and Special Tools List for Buffer, Data TD-1065/G (NSN 5805-01-028-8364) (To be published).
TM 11-5805-637-34	Direct Support and General Support Maintenance Manual for Buffer, Data TD-1065/G (NSN 5805-01-028-8364).
TM 11-5805-637-34P	Direct Support and General Support Maintenance Repair Parts and Special Tools Lists (including Depot Maintenance Repair Parts and Special Tools) for Buffer, Data TD-1065/G (NSN 5805-01-028-8364).
TM 740-90-1	Administrative Storage of Equipment.
TM 750-244-2	Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

APPENDIX D

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

D-1. General

This appendix provides a summary of the maintenance operations for Buffer, Data TD-1065/G, It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

D-2. Maintenance Function

Maintenance functions will be limited to and defined as follows:

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

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

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

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

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

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, module (component or 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) or an unserviceable counterpart.

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) 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 and 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 original 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 (Section II)

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. Column 2, 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 the 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 "worktime" 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 the indicated category of maintenance. If the number of complexity of the tasks within the listed maintenance function

vary at different maintenance categories, approximate "worktime" figures will be shown for each category. The number of task-hours specified by the "worktime" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item or system) to a 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 perform 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 Section IV, Remarks, which is pertinent to the item opposite the partitular code.

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

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with 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. 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 (Section 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.

SECTION II MAINTENANCE ALLOCATION CHART
FOR

BUFFER, DATA TD-1065/G, TD-1065A/G AND TD-1065B/G

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQP'T.	(6) REMARKS
00	DATA BUFFER TD-1065/G SM-D-938542	Install		0.2				1	
		Service		0.2				1	
		Inspect		0.1				1	A
	OR	Repair		0.1				1	B
		Test		0.1				1	D
	DATA BUFFER TD-1065A/G SM-D-994127	Inspect			0.2			1	A
		Repair			0.6			1	C
		Test			1.7			1,3,4,8,10, 14,16,17	E
	OR								
	DATA BUFFER TD-1065B/G SM-D-994140	Repair					2.0	1,2	E
		Test					1.7	1,8,16,17	
01	POWER SUPPLY ASSEMBLY SM-D-938552	Inspect		0.2				1	A
		Service		0.2				1	
		Replace		0.3				1	D
		Repair			0.7			1	
		Test			0.3			14	
0101	CIRCUIT CARD ASSEMBLY FILTER BOARD SM-D-938555	Test			0.2			1,3,4,8,11, 14	
		Repair			0.7			1	
0102	CIRCUIT CARD ASSEMBLY DIODE BRIDGE SM-D-958557	Test			0.3			1,3,4,8,11, 14	
		Repair			1.8			1	
02	CIRCUIT CARD ASSEMBLY, CHANNEL UNIT SM-D-938545 (TWELVE PER END ITEM) TD-1065/G ONLY	Test		0.1					D
		Replace		0.1				1	
		Repair					0.7	1,2	
		Test					0.5	3 thru 6	
	OR CIRCUIT CARD ASSEMBLY, CHANNEL UNIT SM-D-994126 (TWELVE PER END ITEM) TD-1065A/G ONLY								
	OR CIRCUIT CARD ASSEMBLY, CHANNEL UNIT SM-D-994135 (TWELVE PER END ITEM) TD-1065B/G ONLY								
03	CIRCUIT CARD ASSEMBLY, RECEIVE COMMON SM-D-938547	Test		0.1					D
		Replace		0.1				1	
		Repair					0.7	1,2	
		Test					0.5	3 thru 6	
04	CIRCUIT CARD ASSEMBLY, TRANSMIT COMMON SM-D-938546	Test		0.1					D
		Replace		0.1				1	
		Repair					0.7	1,2	
		Test					1.5	3 thru 6	
05	CIRCUIT CARD ASSEMBLY, FAULT LOCATOR SM-D-938548	Test		0.1					D
		Replace		0.1				1	
		Repair					0.7	1,2	
		Test					0.5	3 thru 6	
06	FILTER ASSEMBLY, ELECTRICAL, AUDIO SM-D-938534	Test		0.1					D
		Replace		0.1				1	
		Repair					0.7	1,2	
		Test					0.5	3,4,5,7,14	
0601	CIRCUIT CARD ASSEMBLY, LINE MODULE, AUDIO FILTER SM-D-938558	Repair					1.2	1,2	
		Test					0.1	3,4,9 thru 12,14	

SECTION II MAINTENANCE ALLOCATION CHART
FOR
BUFFER, DATA TD-1065/G, TD-1065/AG AND TD-1065B/G

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT.	(6) REMARKS
			C	O	F	H	D		
07	HIGH SPEED FILTER ASSEMBLY, ELECTRICAL SM-D-938543	Test		0.1					D
		Replace		0.2				1	
		Repair					1.5	1,2	
		Test					0.7	3,4,5,7,12, 15	
0701	FILTER ASSEMBLY, ELECTRICAL (RECEIVE CLOCK TIMING) SM-D-938544	Repair					1.3	1,2	
		Test					0.5	3,4,10,11, 12,15	
		Replace					0.5	1	
070101	CIRCUIT CARD ASSEMBLY, TIMING SM-D-938559 (THREE PER END ITEM)	Repair					1.0	1,2	
		Test					0.5	3,4,10,11, 12,15	
070102	CIRCUIT CARD ASSEMBLY FILTER (AUX PCM) SM-D-938560	Repair					1.0	1,2	
		Test					0.5	3,4,10,11, 12,15	
0702	FILTER ASSEMBLY, ELECTICAL (RECEIVE ADDRESS/PCM) SM-D-938532	Repair					1.3	1,2	
		Test					0.5	3,4,10,11, 14	
		Replace					0.5	1	
070201	CIRCUIT CARD ASSEMBLY, FILTER SM-D-338561 (TWO PER END ITEM)	Repair					1.0	1,2	
		Test					0.5	3,4,14	
070202	CIRCUIT CARD ASSEMBLY, RELAY SM-D-938562	Repair					0.8	1,2	
		Test					0.7	3,11,14	
070203	CIRCUIT CARD ASSEMBLY, RELAY SM-D-938563	Repair					0.8	1,2	
		Test					0.7	3,11,14	
08	CASE ASSEMBLY (CASE MOUNTED PIECE PARTS, TEST SWITCH, ETC.) SM-D-938549	Inspect		0.1				1	A
		Service		0.1				1	
		Repair			0.5			1,15	
		Test			0.5			3,9,11,14	
0801	PCB CONNECTOR ASSEMBLY	Inspect		0.1				1	A
		Service		0.1				1	
		Repair					0.5	1,14,16	
		Test					0.5	3,14	

SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS
FOR
BUFFER, DATA TD-1065/G, TD-1065A/G AND TD-1065B/G

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL, NATO STOCK NUMBER	TOOL NUMBER
1	O,F,D	TOOL KIT TK-105/G*	5180-00-610-8177	
		*ADDITIONAL HAND TOOLS REQUIRED - NOT SUPPLIED WITH TK-105/G:		
		SPINNER SOCKET WRENCH SET, 3/16" THRU 9/16"	5120-00-089-3663	
		ALLEN WRENCH SET (SOCKET)	5120-00-529-1475	
2	D	CCA BENCH-TOP REPAIR FACILITY, PACE INC., PRC-350C	4940-01-139-2197	
3	F,D	MULTIMETER, DIGITAL AN/USM-486	6625-01-145-2430	
4	F,D	OSCILLOSCOPE AN/USM-281C (TEK 7603N OPT. 115)	6625-00-106-9622	
5	D	TRENDAR, LOGICTESTER, FLUKE 3010A	6625-01-056-9777	
6	D	RAYTHEON-TRENDAR TEST ADAPTER FOR TD-1065/G CCA's, RAYTHEON P/N (TBS)		
7	D	RAYTHEON-TRENDAR TEST ADAPTER FOR TD-1065/G HIGH SPEED AND AUDIO FILTER ASSEMBLIES, RAYTHEON P/N (TBS)		
8	F,D	TD-660A/G, MULTIPLEXER OR MUX SIMULATOR	5805-00-928-3382	
9	F,D	SIGNAL GENERATOR AN/URM-127 (20 HZ - 200 KHZ)	6625-00-783-5965	
10	F,D	COUNTER, ELECTRONIC, DIGITAL READOUT AN/USM-459	6625-01-061-8928	
11	F,D	DC POWER SUPPLY, PP-4838/U OR EQUIVALENT, 2 REQUIRED	6625-00-931-6793	
12	D	VOLTMETER, ELECTRONIC ME-459/U (HP 400 EL)	6625-00-229-0457	
13		DELETED		
14	F,D	CABLES REQUIRED FOR OPERATIONAL CHECK:		
		QTY TYPE		
		(7) CG-3419( )/U		
		(2) CG-3473( )/U		
		(3) CX-7870( )/TTC	5995-00-261-9901	
		(4) CX-9088( )/TTC	5995-00-035-2705	
		(A.R.) TWO PAIR, TWISTED, WIRE		
	F,D	TERMINATIONS REQUIRED FOR UNUSED PORTS:		
		(1) 91 Ω TRIAXIAL -		
		MAKE FROM PL-76 TRIAXIAL CONNECTOR, TROMPETER ELECTRONICS COMPANY AND 91 Ω 1/4W RESISTOR RLR07C9100GM.	5935-00-201-9182 5905-01-092-1550	
		(3) 91 Ω BNC -		
		MAKE FROM UG-U-88 BNC CONNECTOR AND 91 Ω 1/4W RESISTOR RLR07C9100GM.	5935-00-083-0101 5905-01-092-1550	
15	D	PCB CONNECTOR ALIGNMENT FIXTURE RAYTHEON P/N 10428006		
16	D	DATA BUFFER TD-1065/G OR	5805-01-028-8364	
		DATA BUFFER TD-1065A/G OR	5805-01-182-3937	
		DATA BUFFER TD-1065B/G	5805-01-185-4194	

SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS
FOR
BUFFER, DATA TD-1065/G, TD-1065A/G AND TD-1065B/G

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
17	F,D	DIGITAL DATA GENERATOR SG-1139( )/G OR TEST SET ERROR DETECTOR TS-3981/P NOTE THE NSN'S THAT ARE MISSING FROM THIS (LIST) HAVE BEEN REQUESTED AND WILL BE ADDED BY CHANGES UPON REQUEST.	6625-01-136-2046 6625-01-126-4016	

DRSEL-MA Form 1 Oct 77 6013

(Edition of 1 Oct 74 may be used until exhausted)

MISA-FM 2132-77

SECTION IV. REMARKS

REFERENCE CODE	REMARKS
A	VISUAL INSPECTION.
B	REPAIR LIMITED TO REPLACING INDICATOR LAMPS; INSPECT FOR BITE INDICATORS, REMOVE/REPLACE CCA'S, PS.
C	REPAIR LIMITED TO CONTINUITY AND RESISTANCE MEASUREMENTS AND REMOVE/REPLACE ASSEMBLIES.
D	BUILT-IN TEST EQUIPMENT (BITE).
E	PERFORM UNIT TEST (OPERATIONAL CHECK) IF REMOVAL/REPLACEMENT OF ASSEMBLIES DOES NOT CLEAR FAULT.

	CABLE CONNECTIONS TO DESIGNATED CONNECTORS ON THE EQUIPMENT EMPLOYED			
TD-754( )/G	TIM IN	PCM IN-1	PCM OUT-1	TIM OUT-1
TD-204( )/U	TIM IN	PCM IN-1	PCM OUT-1	TIM OUT-1
TD-202( )/U	TIM IN	PCM IN-1	PCM OUT-1	TIM OUT-1
TD-976( )/G	(NOT REQUIRED)	PCM IN	PCM OUT	TIM OUT
AN/GRC-103	(NOT REQUIRED)	VIDEO TR	PCM	TMG

NOTE

CABLE CONNECTION SHOWN FOR 12 CHANNEL OPERATION. FOR 6 CHANNEL OPERATION CONNECT CABLE TO "6 CHAN TIM OUT" CONNECTOR.

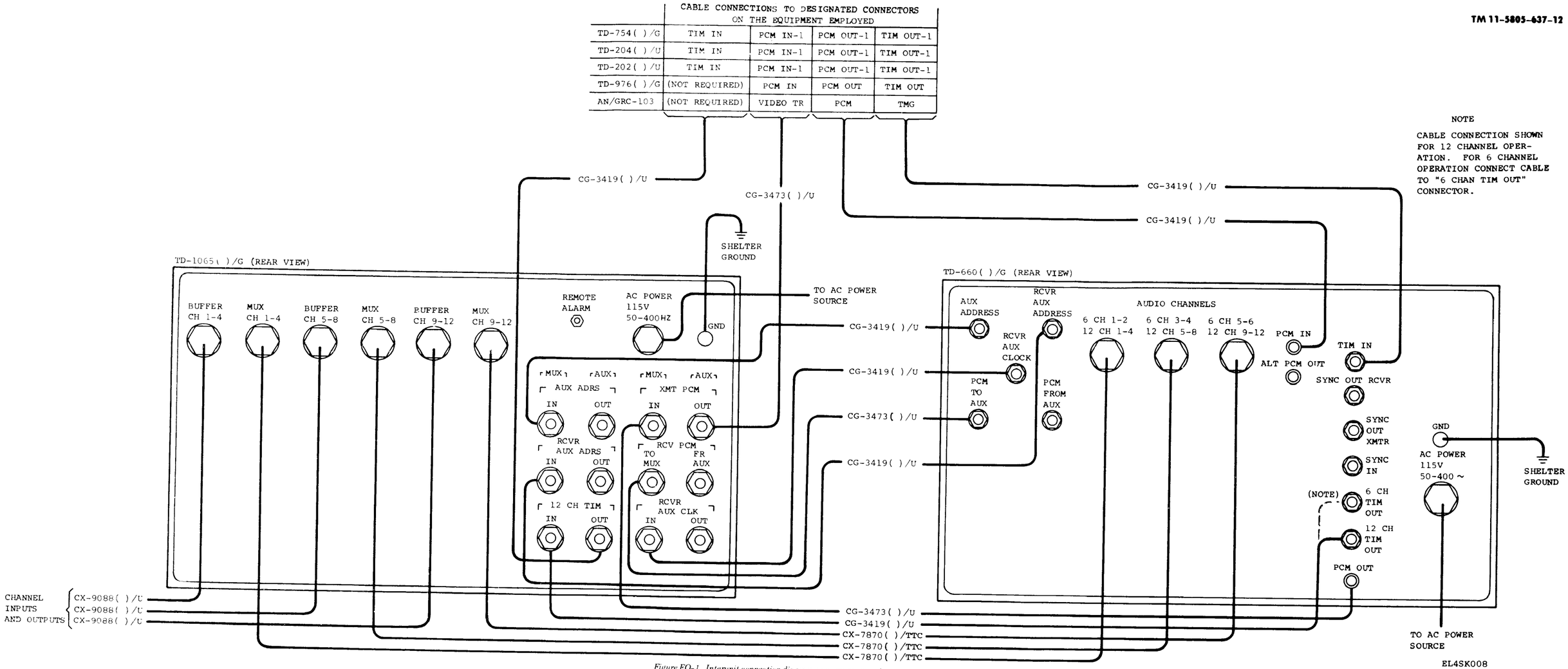


Figure FO-1. Interunit connection diagram, non-secure operation.

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

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MAAG (1)
USARMIS (1)
USAERDAA (1)
USAERDAW (1)
Ft Gordon (10)
Ft Carson (5)
Army Dep (1) except
LBAD (14)
SAAD (30)
TOAD (14)
SHAD (3)
Ft Gillem (10)
USA Dep(1)
Sig Sec USA Dep (1)
Ft Richardson (CERCOM Ofc) (2)
Units org under fol TOE:
29-207 (2)
29-610(2)

NG: NONE
USAR: NONE

For explanation of abbreviations used see AR 310-50.

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL MANUALS

SOMETHING WRONG WITH THIS MANUAL?

THEN. . .JOT DOWN THE DOPE ABOUT IT ON THIS FORM, TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

FROM: (YOUR UNIT'S COMPLETE ADDRESS)
Commander
Stateside Army Depot
ATTN: AMSTA-US
Stateside, N.J. 07703

DATE 10 July 1975

PUBLICATION NUMBER	DATE	TITLE
TM 11-5840-340-12	23 Jan 74	Radar Set AN/MPQ-76

BE EXACT. . .PIN-POINT WHERE IT IS				IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
PAGE NO.	PARAGRAPH	FIGURE NO.	TABLE NO.	
2-25	2-28			Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°. REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.
3-10	3-3		3-1	Item 5, Function column. Change "2 db" to "3db." REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.
5-6	5-8			Add new step f.1 to read, "Replace cover plate removed in step e.1, above." REASON: To replace the cover plate.
		F03		Zone C 3. On J1-2, change "+24 VDC to "+5 VDC." REASON: This is the output line of the 5 VDC power supply. + 24 VDC is the input voltage.

TYPED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER	SIGN HERE:
SSG I. M. DeSpiritof 999-1776	SSG I.M. DeSpiritof

DA FORM 1 AUG 74 2028-2

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR MANUAL "FIND," MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

TEAR ALONG DOTTED LINE

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL MANUALS

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FROM: (YOUR UNIT'S COMPLETE ADDRESS)

DATE

PUBLICATION NUMBER	DATE	TITLE
TM 11-5805-637-12	17 JAN 80	BUFFER, DATA TD-1065/G

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO.	PARAGRAPH	FIGURE NO.	TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

TYPED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

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REVERSE OF DA FORM 2028-2

THE METRIC SYSTEM AND EQUIVALENTS

'NEAR MEASURE

. Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

'VEIGHTS

Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 lb.
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

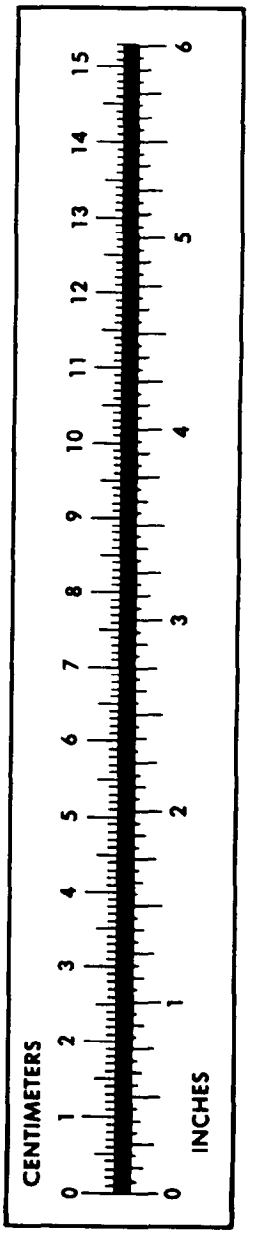
TEMPERATURE

5/9(°F - 32) = °C
212° Fahrenheit is evuivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5C° + 32 =°F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
ıts	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
lometers per Liter	Miles per Gallon	2.354
meters per Hour	Miles per Hour	0.621



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