silent 700
electronic data terminals

MAINTENANCE MANUAL

Model 703/707 Data Terminals

TI Part No. 2310453-0001
February 1984

TEXAS INSTRUMENTS

INSERT LATEST CHANGED PAGES, DESTROY SUPERSEDED PAGES

LIST OF EFFECTIVE PAGES

Model 703/707 Data Terminals Maintenance Manual
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Total number of pages in this publication is 75 consisting of the following:

Page No.	Change No.	Page No.	Change No.	Page No.	Change No.
Title Page	0	A-1 — A-2	0		
Effective Pages	0	Index-1 — Index-3	0		
iii — iv	0	User's Response	0		
1-1 — 1-6	0	Business Reply	0		
2-1 — 2-12	0	Back Cover	0		
3-1 — 3-10	0				
4-1 — 4-6	0				
5-1 — 5-12	0				
6-1 — 6-21	0				
7-1 — 7-20	0				
8-1 — 8-96	0				

CHANGE NOTICES

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Preface

This manual guides technical personnel in operating, maintaining, and troubleshooting the Texas Instruments Silent 700* Model 703 and Model 707 Data Terminals.

The Model 703/707 is designed to permit quick and easy replacement of major subassemblies in the field. This manual assists the technician to accomplish that subassembly replacement, and to diagnose systems problems. This manual is not intended to provide detailed information for the repair of subassemblies.

This manual is divided into eight sections and one appendix.

Section 1 provides a physical description of the Model 703/707, contains technical specifications, and identifies available options.

Section 2 provides information about the terminal's operating environment, power and communication equipment requirements, cable connections, paper loading, and option installation.

Section 3 provides information about the terminal's controls, modes of operation, configurations, and status indications.

Section 4 describes the standard communication interface for each terminal.

Section 5 describes the basic operation and configuration of each of the Model 703/707 Data Terminal subsystems.

Section 6 contains preventive and corrective maintenance procedures, adjustment procedures, and removal and replacement instructions for all replaceable subassemblies.

Section 7 contains schematic drawings for the Model 703 and Model 707 Data Terminals.

Section 8 contains assembly drawings and lists of materials for the terminals.

The appendix contains a list of field replaceable assemblies and part numbers.

*Silent 700 is a registered trademark of Texas Instruments Incorporated.

Table of Contents

LIST OF ILLUSTRATIONS

LIST OF TABLES

Section 1

Equipment Description

1.1 INTRODUCTION

The Model 703 and Model 707 Data Terminals are lightweight, thermal-printing terminals. Either terminal can be powered from a standard 120-Vac (domestic) or 230-Vac (international) power source, via a step-down wall transformer. As an option, the Model 707 can be powered by two rechargeable battery packs that fit inside the terminal.

The Model 703 has an RS-232-C standard communication interface. It does not have an internal modem but can be connected to an external modem with the optional EIA interface cable. The Model 707 is a portable terminal with an internal modem that can be directly connected or acoustically coupled to the telephone line. The Model 707 does not have an EIA interface.

The terminal electronics consist primarily of a TMS7041 microcomputer and interface circuits that drive the keyboard, printer mechanism, and communication port. The Model 707 power supply incorporates a recharge circuit for the optional battery packs. An interface for an optional user interface module (UIM) is provided for both models. This interface accommodates personality modules, such as the Auto-Access Cartridge, that enhance the terminal's performance.

1.2 GENERAL DESCRIPTION

The following is a brief general description of each terminal.

1.2.1 The Model 703 Data Terminal

The Model 703 is a lightweight, tabletop, thermal-printing terminal that operates in the full-duplex mode at a 300 baud rate.

The standard EIA communication interface for the Model 703 conforms to standards set by the Electronic Industries Association (EIA RS-232-C) and is compatible with international standards set by the Comite Consultatif Internationale Telegraphie et Telephonie (CCITT V.24). The terminal can generate all 128 character codes of the USASCII coded character set as defined by American National Standards Institute (ANSI) Standards.

1.2.2 The Model 707 Data Terminal

The Model 707 is a lightweight, thermal-printing, KSR terminal that operates in the full-duplex mode at a 300 baud rate.

The standard interface between the Model 707 terminal and the communication line is through an approved Federal Communications Commission (FCC) originate/auto-answer, full-duplex, direct-connect internal modem. This interface is compatible with Bell 103/113 or CCITT V.21 data sets. The terminal can generate all 128 character codes of the USASCII coded character set as defined by ANSI standards.

A specially designed acoustic coupler is available as an option for the portable Model 707 terminal. The acoustic coupler interfaces with the terminal through a connector located on the rear of the terminal.

1.2.3 Last Character Visibility

This feature, available on the Model 703 and Model 707, moves the printhead one space to the right, to uncover the last printed character, when characters are not received for one second. When the printer begins to receive characters again, the printhead moves one space to the left and begins printing.

1.3 THERMAL PRINTER

Each Model 703/707 terminal has a thermal printer that is operator-configurable for 80 characters per line (cpl) (normal printing) or 132 cpl (compressed-printing), with an automatic carriage return on the 81st or 133rd character. The printer prints at a rate of 45 characters per second (cps). Six lines per inch (lpi) are printed in either the normal or compressed print mode.

The user-replaceable thermal printhead uses nine resistive elements arranged in a single column on a glass rod. Characters are printed one column at a time in either direction, under the control of the printer controller. The printed character conforms to a 5 by 7 character font with descenders. Print contrast is operator-adjustable through the use of a thumbwheel on the rear of the terminal.

The printer holds a 30 m (100 ft) roll of 215.9 mm (8.5 in)-wide thermal paper. The maximum allowable diameter of the roll is 50.8 mm (2 in). The paper compartment door is equipped with a paper cutting edge so that printed copy can be removed without disturbing the paper supply.

1.4 MODEL 703/707 OPTIONS

Four major options available on the Model 703/707 Data Terminals are described below.

1.4.1 Model 707 Battery Pack Option

The Model 707 terminal can be powered by a battery pack that fits inside the terminal case, beneath the keyboard. The recharge of this battery pack is supported by the terminal's power supply when the terminal is connected to a 120- or 230-Vac power source (through the approved ac adapter). The terminal's **POWER** switch does not have to be in the on position to accomplish recharging. The battery pack provides the terminal with a power source in a remote location, as well as an automatic backup, in the event of an ac power failure.

1.4.2 Model 707 Acoustic Coupler Option

The portable Model 707 terminal accommodates an acoustic coupler. The acoustic coupler interfaces with the terminal through a six-pin jack located on the rear of the terminal.

1.4.3 Model 703/707 User Interface Module Option

Both the Model 703 and Model 707 accommodate a plug-in UIM. The UIM interface allows specialized software to be used to enhance and extend the standard features of the terminal; one such software package is the optional Auto-Access Cartridge. The 44-pin (22-dual position) interface connector is located below the paper door, near the left center of the terminal.

1.4.4 Model 703/707 Protected Answerback Memory Option

The protected Answerback Memory (ABM) option for the Model 703/707 terminals provides a customer-specified identification (1 to 32 characters) that serves as a unique station identification. This identification string, implemented on programmable read-only memory (PROM) at the factory, is transmitted to the communication line when the terminal receives an enquiry (ENQ) control character from the line, or when the HERE IS control function is entered. With the protected ABM option, the station identification is not displayed on the printer.

On Model 703/707 terminals that have the Auto-Access Cartridge option, the protected ABM can be programmed by the user. This feature allows the user to change the identification code without sacrificing the security of the protected feature.

1.5 MODEL 703/707 SPECIFICATIONS

Specifications for the Model 703/707 are contained in Table 1-1.

Table 1-1. Model 703/707 Data Terminal Specifications

Characteristics	Specifications	
Printer		
Method	Nonimpact, thermal paper printing	
Printhead	Thermal, with nine elements arranged in a column, electronically heated	
Paper	Recommended: Thermographic printing paper, TI Part No. 972603 (white); 215.9 mm (8.5 in) x 30.48 m (100 ft); last 3.0 m (10 ft) is color-coded	
Printing rate	45 cps	
Printing direction	Keyboard entries, left to right. Received data, bidirectional. At the end of each line the printhead moves to the closest of the first or last characters on the next line. If no characters or line terminators are received within 60 milliseconds (ms) the line is printed left to right.	
Line length	Configurable, by the operator, as 80 cpl (10.2 cpi) or 132 cpl (17 cpi). Can also be configured over the line via escape sequences.	
Horizontal character spacing (Center to center)		
Normal print	2.49 mm (0.098 in) ±0.18 mm (0.007 in)	
Compressed print	1.49 mm (0.059 in) ±0.18 mm (0.007 in)	
Lines per inch	6 lpi	
Vertical line spacing (Center to center)	4.24 mm ±0.38 mm (0.167 in ±0.15 in)	
Carriage return	Automatic at column 81 or column 133	
Character size	5 x 7 matrix with descenders	
Acoustic noise	Not to exceed 50 dBa	
Physical		
Size	Width	298 mm (11.73 in)
	Depth	215 mm (8.46 in)
	Height	70 mm (2.71 in)
Weight includes 30.48 m (100 ft) roll of paper	Model 703	2.04 kg (4.5 lb)
	Model 707	2.04 kg (4.5 lb)
	Wall transformer	0.64 kg (1.4 lb)
	Batteries	1.59 kg (3.5 lb)
	Maximum total weight	4.26 kg (9.4 lb)

Table 1-1. Model 703/707 Data Terminal Specifications (Continued)

Characteristics		Specifications
Transformer input power requirements		
Nominal voltage	Domestic International	120 (90-134) Vac 230 (187-264) Vac
Input frequency	Domestic International	57-63 Hz, single-phase 47-53 Hz, single-phase
Power consumption	Domestic International	35 W maximum at 90 Vac 35 W maximum at 187 Vac
Transient response		
Short-term transients		±2000 Vdc pulse of 100 ns or less rise time and a duration of 1 μs maximum applied at any point on the input sine wave
Long-term transients		±500 Vdc pulse of 1 μs or less rise time and a duration of 10 μs maximum applied at any point on the input sine wave
Electrostatic discharge		The terminal should continue normal operation, after being subjected to an electric discharge arc applied through a test probe. The arc is generated by charging a 150 pf capacitor to 15 KV and then discharging it through a 150 ohm resistor, to the terminal, via the test probe. The terminal and the capacitor are referenced to earth ground for the test. During the test the terminal is energized and performs normal functions.
Operating environment		
Temperature		10°C to 40°C (50°F to 104°F)
Relative humidity		10 to 95% without condensation
Maximum altitude		3000 m (10 000 ft)
Vibration		0.5 G peak-to-peak at 10 to 60 Hz
Shock		0 G
Temperature shock		Operates at 25°C (77°F), 50% relative humidity within 30 minutes after being stored for 2 hours at −30°C (−22°F), 50% relative humidity
Storage environment		The terminal, exclusive of the thermal paper, meets the physical and functional requirements of this specification.
With shipping container		
Temperature		−30°C to 70°C (−22°F to 158°F)
Relative humidity		10 to 95% without condensation

Table 1-1. Model 703/707 Data Terminal Specifications (Continued)

Characteristics	Specifications
Maximum altitude	15 000 m (50 000 ft)
Cargo bounce	Per Mil-Std-810B
Without shipping container	
Temperature	−30°C to 70°C (−22°F to 158°F)
Relative humidity	10 to 95% without condensation
Shock	40 G peak for 18 ms duration
Interface signal levels	
Specification	EIA/RS-232-C (Model 703 only)
Control lines	ON = +3 V to +25 V OFF = −3 V to −25 V
Data lines	Logic ONE (Mark) = −3 V to −25 V Logic ZERO (Space) = +3 V to +25 V
Data transmission code	
Code specification	ASCII
Standard	ANSI Standard X3.4-1977
Character structure	
ANSI Standard	X3.16-1976 for Character Structure and Parity Sense; X3.15-1976 for Bit Sequency of the USASCII Code
Transmitted characters	One start bit, always 0 or spacing; seven data bits; one parity bit; two stop bits, always 1 or marking
Received characters	One start bit, always 0 or spacing; seven data bits; one parity bit, one or two stop bits
Parity structure	
Transmitted parity	Selectable for even, odd, or no parity. With no parity, the parity bit is always mark or always space
Received parity	Not checked

Table 1-1. Model 703/707 Data Terminal Specifications (Concluded)

Characteristics	Specifications
Regulatory code compliance	The terminals meet the requirements of the specifications that apply at the point of sale. Following is a list of the specifications that may apply. • UL Standard 478 (safety) • IEC 380 (safety) • CSA Bulletin 154 (safety) and DOC (communications) • VDE Specifications 871/B (EMI) and 800/804 (communications) • British Post Office — Datel Services Guide, Technical Guide 2 • FCC Part 15, subpart J, docket 20780 (EMI level B), and FCC Part 68 (communications)

Section 2

Site Requirements and Setup

2.1 INTRODUCTION

This section discusses unpacking, site power requirements, site communication requirements, basic terminal setup, and option installation.

2.2 PACK CONTENTS

The shipping container includes the terminal, the user's manual, and a power cord with a calculator-type transformer for connection to an ac power outlet. If the terminal is a Model 707, the direct-connect cable (TI Part No. 2211801-0002) is also included in the container. The direct-connect cable allows the terminal to be connected to a standard telephone wall jack. An unpacking procedure is printed on the shipping carton.

Options are packed separately.

2.3 SITE REQUIREMENTS

The following paragraphs discuss the physical, electrical, and communication requirements for the Model 703/707.

2.3.1 Locating the Terminal

Generally speaking, this data terminal can operate in any room where the temperature and humidity are comfortable enough for the operator to work. The specifications for the operating environment are listed in Section 1.

CAUTION

Locate the terminal out of direct sunlight. Thermal paper should not be exposed to direct sunlight for prolonged periods, particularly if the printout is to be retained for any length of time.

The terminal should sit on a flat surface (a desk or table). The desk or table should be large enough to accommodate the terminal plus any work material used while operating the terminal. The terminal's dimensions are given in Figure 2-1.

If the terminal is located farther than 1.82 m (6 ft) of a proper power outlet (see Section 1), a three-wire extension power cord is required.

The Model 703 Data Terminal has to be close enough to the computer (or other device) to allow the data interface cable to reach from the EIA interface on the terminal to the EIA interface connector on the device.

When using a Model 707, or Model 703 with an external modem, it must be located close enough to the wall jack (or modem) to allow the cord to reach.

When the optional acoustic coupler is in use on the Model 707, the terminal must be within reach of the telephone being used.

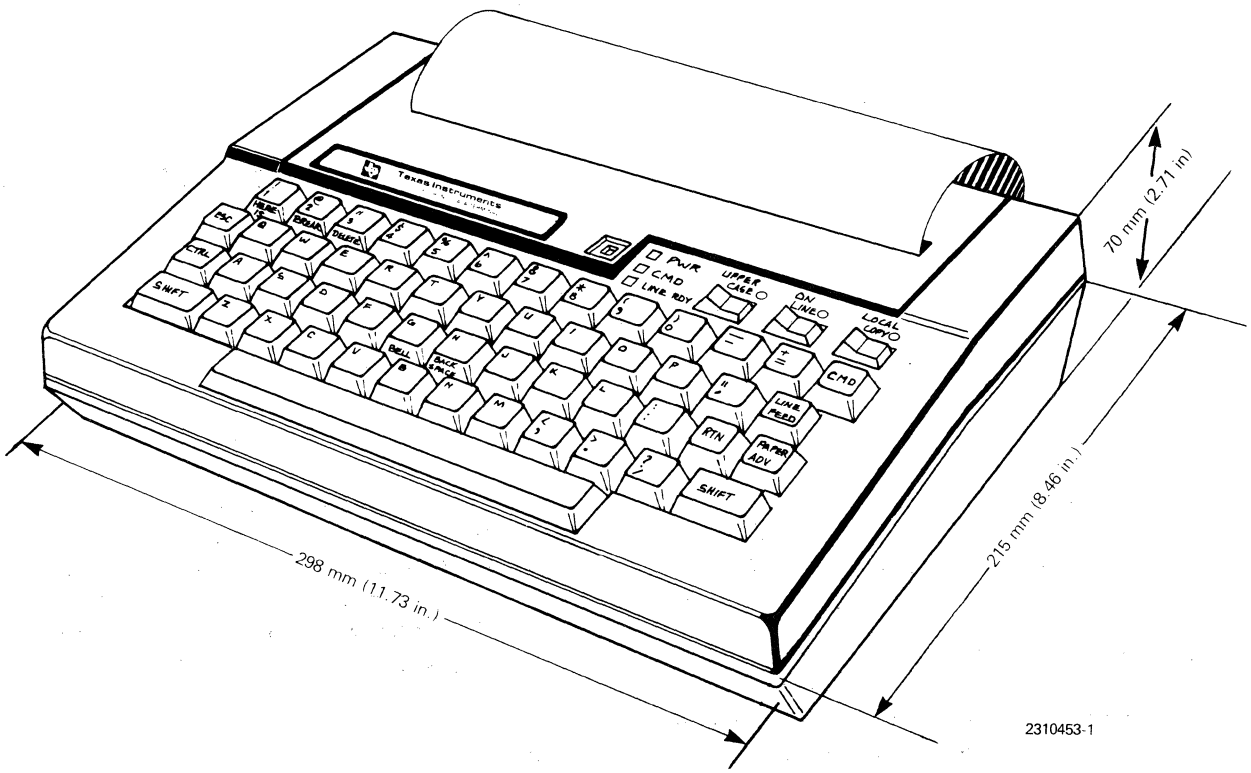

Figure 2-1. Dimensions of the Model 703/707

2.3.2 Power Requirements

The Model 703/707 that is marketed in the US is supplied with a power cord/transformer that operates from a 110-Vac (90-134 Vac) power source. The international versions of the terminals (Model 703 and Model 709) are supplied with a power cord/transformer that operates from a 220-Vac (187-264-Vac) power source.

NOTE

If the primary power source for the Model 707 terminal is the optional battery pack, remember that the battery pack is recharged while the terminal is connected to an ac power source. That power source must meet the requirements specified here and in Section 1.

Refer to Section 1 for voltage and power specifications.

CAUTION

Check the label on the power cord/transformer to determine the correct voltage required (Figure 2-2). Ensure that the voltage at the wall outlet matches the transformer input voltage listed on the label.

2.3.3 Telephone Equipment (Model 707 only)

The following paragraphs discuss the telephone equipment requirements for the Model 707.

2.3.3.1 The Telephone. The telephone used should be a single-line phone. Multiline telephones work, but while the terminal is online, they cannot be put on hold. Multiline telephones must be modified to provide a modular telephone jack outlet for one of the incoming telephone lines and require slight changes to the normal operating procedures. (If, for example, another handset is switched onto the active line while the terminal is online, data errors and/or disconnect can occur.) This should not be considered a terminal equipment malfunction.

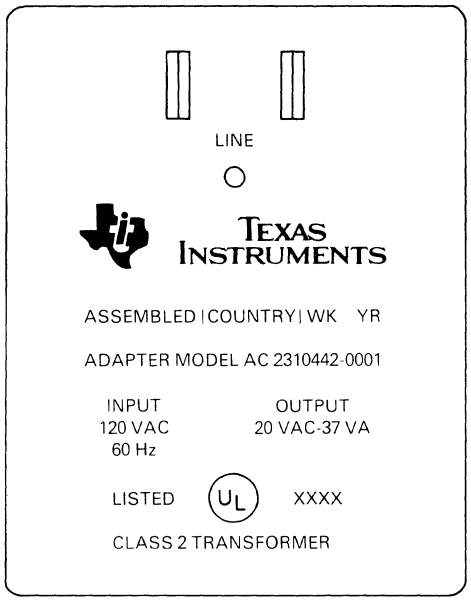

Figure 2-2. Domestic Power Cord/Transformer Label

2.3.3.2 The Phone Jack. The Model 707 Data Terminal requires an RJ-11C (standard) modular telephone jack for both connections (Figure 2-3).

If the site does not have a modular connector, it can be ordered from the telephone company, or purchased at a hardware or phone supply store.

NOTE

The phone company does not guarantee data communication over voice grade phone lines (those using an RJ11C voice grade jack). In some rare cases it may be necessary to order a data line with an RJ45S programmable data jack, or an RJ41S switched to programmable. This ensures data integrity and/or telephone company support.

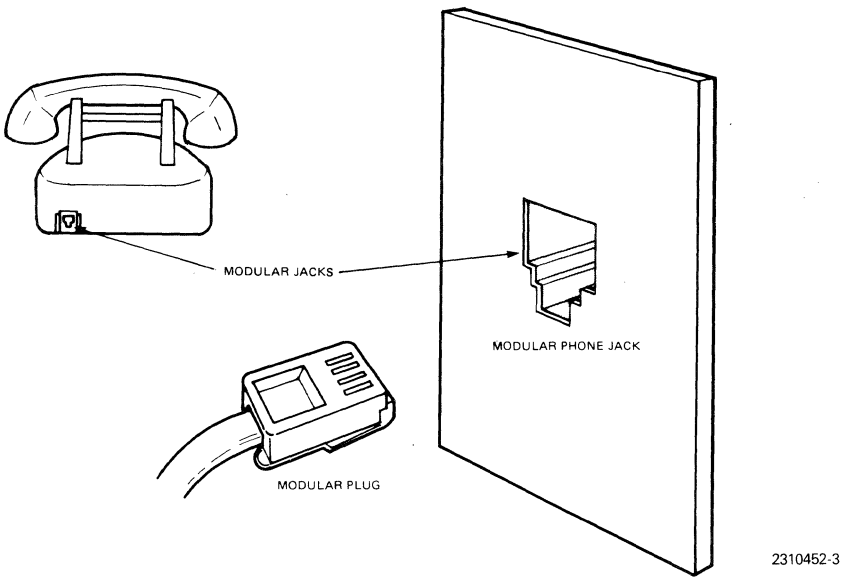

Figure 2-3. Modular Plug/Jacks

2.3.4 Notifying the Telephone Company

The telephone company must be notified before connecting any nontelephone company equipment to the telephone.*

Call the local business office and notify them of the installation of an FCC-registered device on the telephone line.

Supply the following information to the telephone company.

- The telephone number where the terminal is being installed.

  If the terminal is used on different telephones (at different locations in the site), give the telephone company each telephone number. You do not have to notify them each time the equipment is moved to one of these numbers. The telephone company has to know if the terminal is permanently removed from service.

- The FCC registration number. This number is on the FCC Part 68 label on the bottom of the terminal.

- The ringer equivalence number. This number is on the FCC Part 68 label on the bottom of the terminal.

If necessary, order USOC-RJ-11C modular telephone jacks at this time.

2.4 FCC REQUIREMENTS

The FCC has established rules that permit the Model 707 internal modem to be directly connected to the telephone network.

- This terminal cannot be connected to a party line, or to a coin-operated telephone unless the optional acoustic coupler (TI Part No. 2310518-0001) is used.

- The telephone company must be notified that an FCC-registered device is being installed.

- Any corrective service that is performed on this terminal's modem must be performed by Texas Instruments or an authorized agent of Texas Instruments. If this is not done the terminal's FCC registration will be invalidated and the telephone company can temporarily disconnect service.

- If the modem is malfunctioning, it may also cause harm to the telephone network. The terminal should be disconnected until the source of the problem can be determined and repair has been made.

- The telephone company can make changes in its technical operations and procedures. If such changes affect the compatibility or use of the modem, the telephone company is required to give adequate notice of the changes.

2.5 TERMINAL SETUP

Preparing the Model 703/707 for operation is discussed in the following paragraphs.

2.5.1 Data Interface Connectors

See Figure 2-4 to locate the data interface connectors on the rear of the data terminals.

NOTE

If the terminal **POWER** switch is on, turn the power off before connecting the data interface.

*This does not apply to acoustic connections (the optional acoustic coupler).

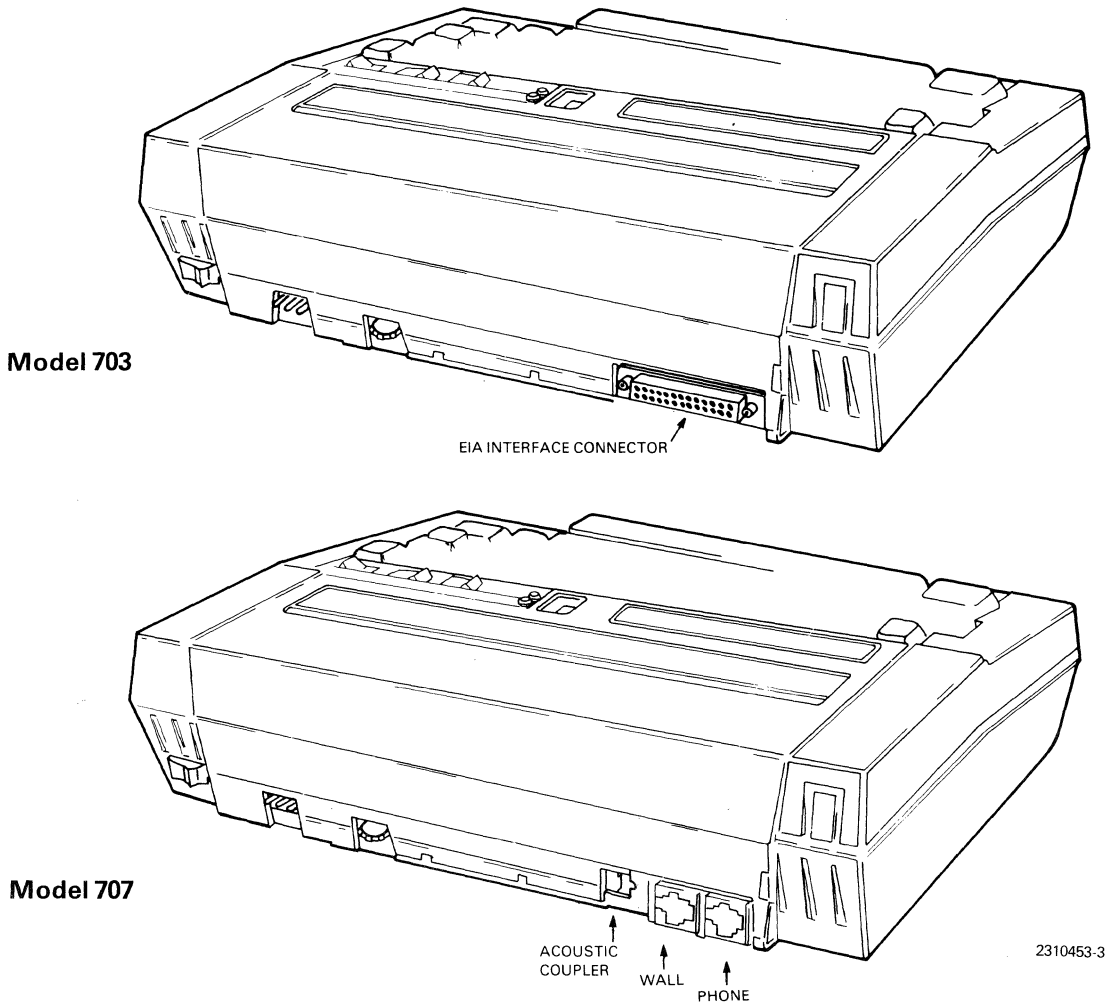

Figure 2-4. Model 703/707 Data Interface Connectors

2.5.2 Model 703 Data Interface

The Model 703 can be set up to interface directly with a local device or with a remote device through an external modem.

2.5.2.1 Interfacing the Model 703 with a local device.

1. Connect the optional EIA interface cable (refer to Section 4) to the EIA interface connector on the rear of the terminal.

2. Connect the other end of the data interface cable to the EIA interface connector on the other device.

2.5.2.2 Interfacing the Model 703 with an external modem.

1. Determine that the external modem is Bell 103-compatible. The Model 703 can interface with an originate/auto-answer modem, an originate-only modem, or an answer-only modem.

2. Connect one end of the optional EIA interface cable (refer to Section 4) to the EIA interface connector on the rear of the terminal.

3. Connect the other end of the optional mating cable to the external modem.

Figure 2-5 shows an example of a Texas Instruments Model 451, full-duplex modem, interfaced with a Model 703 Data Terminal.

2.5.3 Model 707 Data Interface

The Model 707 can be set up to interface directly with the telephone network (direct connect), or through an optional acoustic coupler. Refer to Figure 2-6.

2.5.3.1 Model 707 Direct-Connect Interface.

1. Remove the modular plug from the telephone.
2. Connect the modular plug, removed from the telephone, to the jack labeled **WALL** on the rear of the terminal.
3. If desired, a telephone can be connected directly into the modular telephone jack on the back of the terminal.

   a. Connect the direct-connect cable (supplied with the terminal) to the jack labeled **PHONE** on the rear of the terminal.

   b. Connect the other end of the direct-connect cable to the telephone.

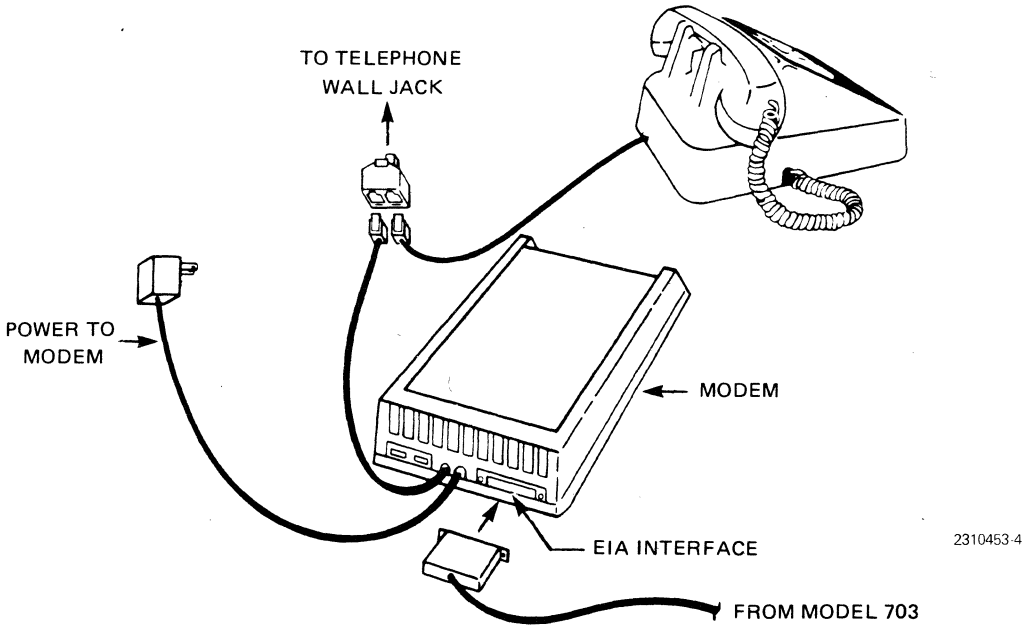

Figure 2-5. Model 703 External Modem Interface

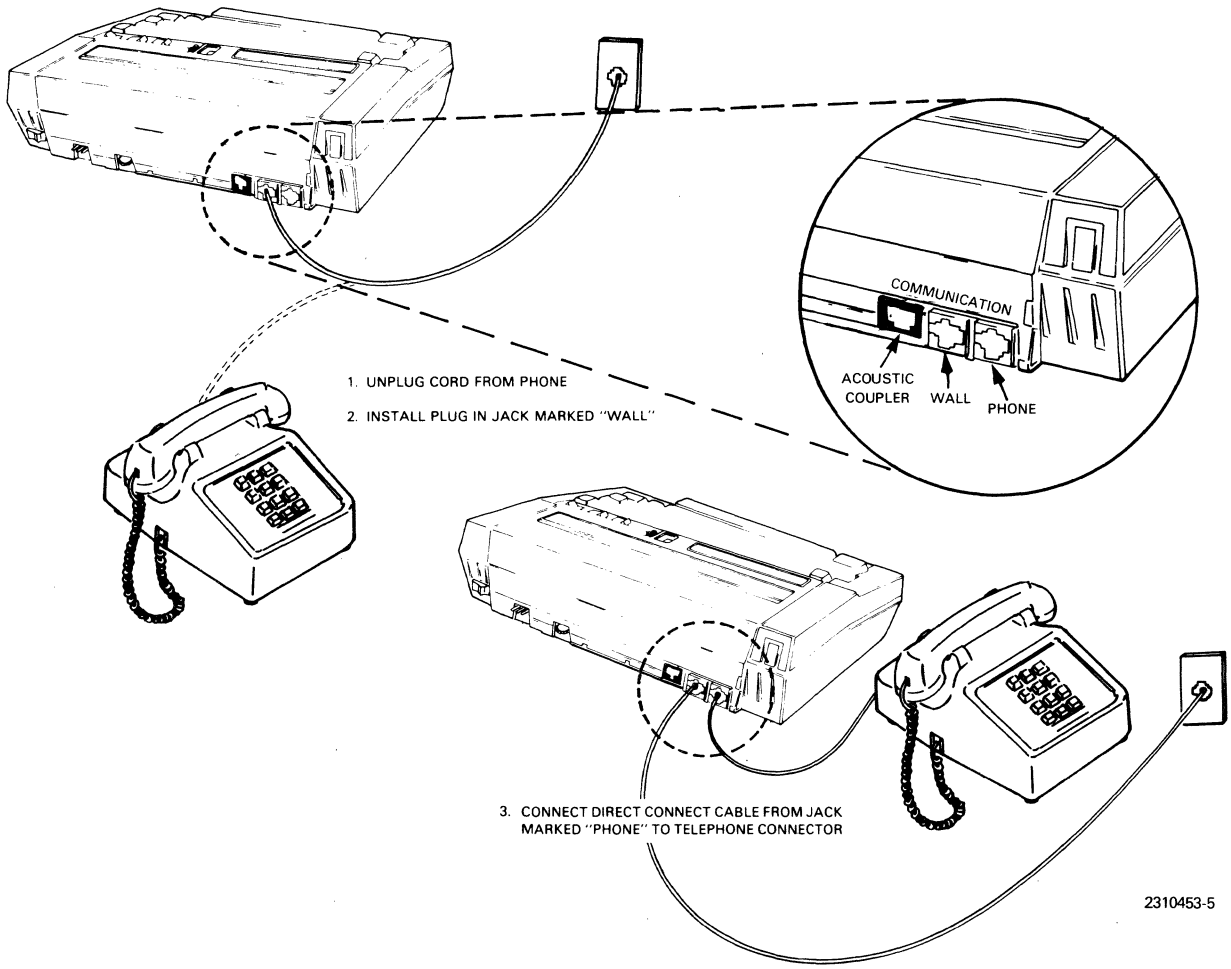

Figure 2-6. Direct-Connect Configuration

2.5.3.2 Model 707 Acoustic Coupler Interface. The procedure for setting up the Model 707 with an acoustic coupler is found under "Option Installation" in this section.

2.5.4 Terminal Power

Both models have identical provisions for ac-powered operation. Each terminal connects to an ac power source through a wall transformer on the supplied power cord. The Model 707 also uses an optional rechargeable battery pack.

2.5.4.1 The POWER Switch. The **POWER** switch is a two-position rocker switch located at the right rear of both the Model 703/707 terminals. Refer to Figure 2-7.

The **POWER** switch controls the ac power from the wall transformer and, on the Model 707 only, the dc power from the battery.

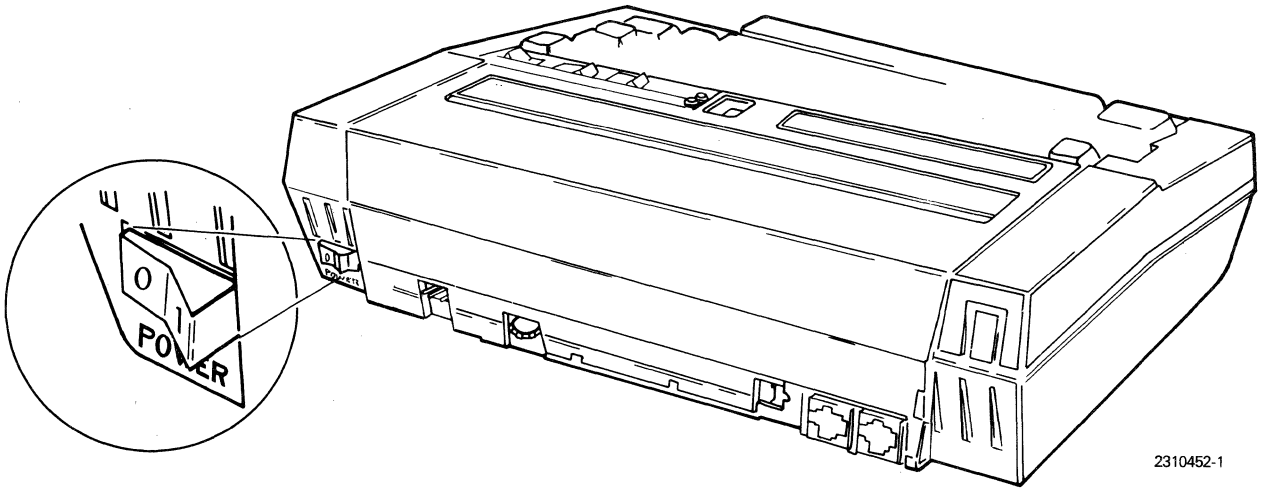

Figure 2-7. The Power Switch (Model 707)

2.5.4.2 Model 707 Power System Operation. With the power cord/transformer plugged into a 110-Vac source, and the **POWER** switch in the on position, the Model 707 operates, through its power cord/transformer, from the 110-Vac source. If the optional battery pack is installed while the terminal is connected to the 110-Vac source, the batteries will be kept fully charged by the built-in recharge circuit. The recharge circuit operates with the **POWER** switch on or off, as long as the power cord/transformer is plugged into a live source of ac power.

When the terminal is operating from an ac power source with the optional battery pack installed, the terminal will automatically switch to battery power in the event of a power failure.

When the Model 707 has the battery pack installed, and it is not connected to an ac power source, the battery pack provides the terminal power.

2.5.4.3 Power Cord Installation. If the terminal is operated from an ac power source, make sure that the voltage available at your location is the proper voltage for the power cord/transformer. Refer to "Power Requirements" at the beginning of this section.

1. Plug the power cord/transformer into the connector at the rear of the terminal (refer to Figure 2-8).

2. Plug the transformer into a properly wired wall plug.

2.5.5 Loading Paper

The Models 703/707 Data Terminals can use any commercially available 216 mm (8.5 in) wide thermographic printing paper.

For optimal print quality, use Texas Instruments Incorporated thermal printing paper (meets TI Specification 972603). This paper is available from Texas Instruments in single 30 m (100 ft) rolls, case or pallet lots, as TI Part No. 972603-0001.

Load paper as follows.

1. Place the **POWER** switch in the on position.

2. Unlatch and open the paper compartment cover. If there is no paper in the terminal go to Step 4.

3. To unload paper remaining in the terminal, lift the used roll from the paper compartment and pull it evenly toward the rear of the terminal.

4. Rest the new paper roll on the inside of the paper door. *Be sure that the paper feeds from the bottom of the roll toward the front of the terminal.*

5. Place the leading edge of the paper under the plastic guide pins and into the nip of the O-rings on the paper feed roller (Figure 2-9).

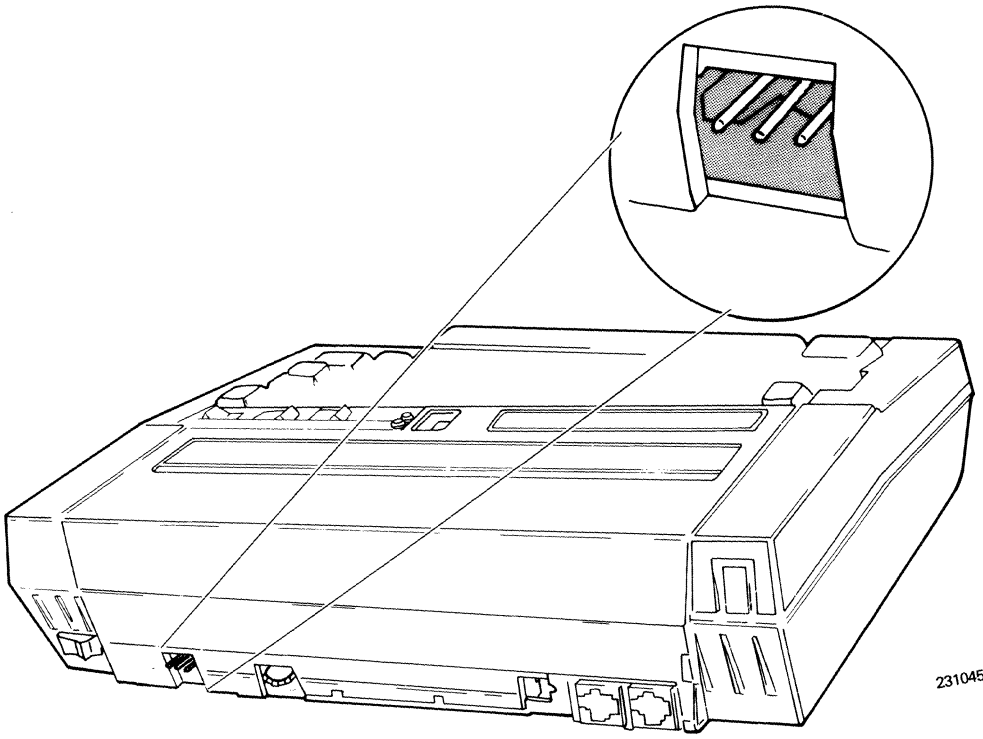

Figure 2-8. Power Cord Connection

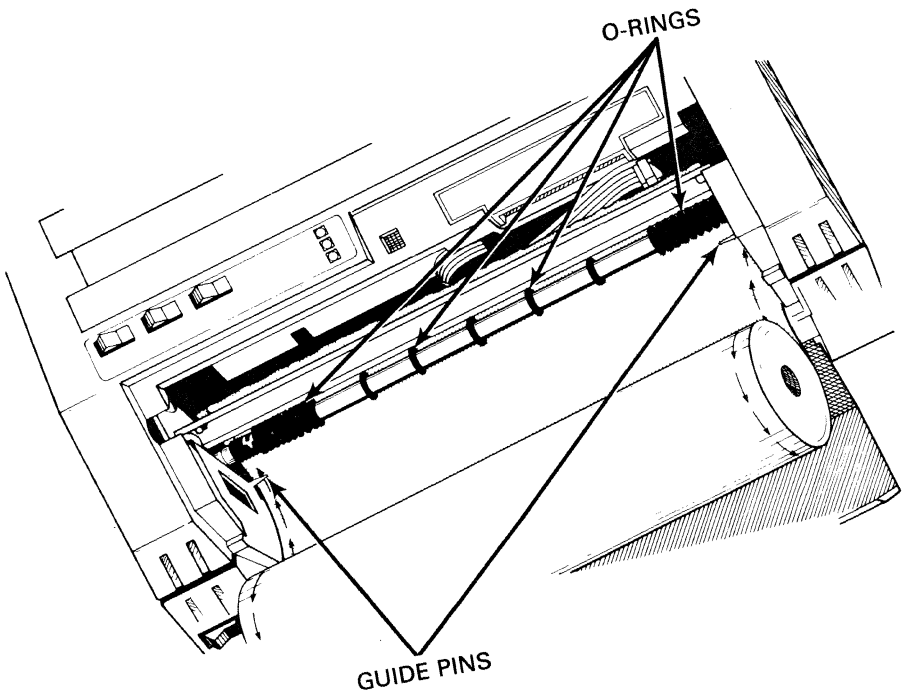

Figure 2-9. Paper Loading

6. Press the **PAPER ADV** key until the paper is even with the top of the printhead.

7. Place the paper roll in the paper compartment. Remove any slack between the paper roll and the paper feed roller.

8. Close and latch the paper compartment cover.

2.5.6 Option Installation

The following paragraphs describe the installation and removal of the battery pack, and the installation of a UIM and the Model 707 acoustic coupler.

2.5.6.1 Battery Pack Installation (Model 707 Only). The battery pack consists of eight lead-acid cells, each the approximate size of a D-cell flashlight battery. The eight cells are configured as two batteries of four cells each. A two-wire cable with a connector is attached to each battery.

NOTE

When installing the battery packs it is desirable that you plug the terminal into an ac voltage source; DO NOT, however, move the **POWER** switch to the on position.

Install the battery pack as follows.

1. Remove the thermal paper.

2. Place the terminal upside down, with the front edge of the terminal facing you.

3. Remove the two battery doors by sliding them toward the front edge of the terminal (refer to Figure 2-10).

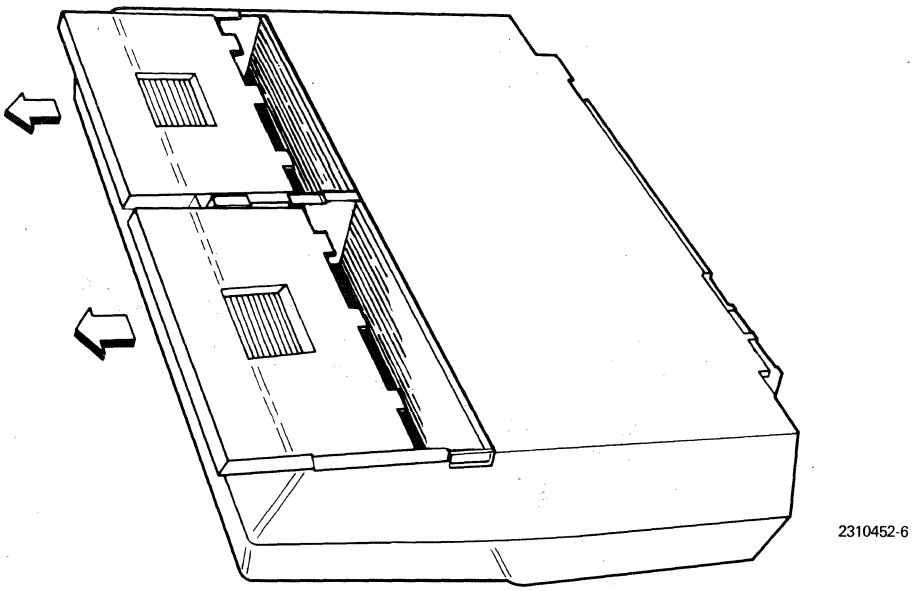

Figure 2-10. Battery Doors, Removal

4. Connect the cable of each battery unit to a battery compartment connector.

5. Tip the terminal on its front edge (refer to Figure 2-11) and set each battery pack into the bottom of its battery compartment. Pivot each battery pack into its compartment.

6. Lay the terminal down and replace the battery doors.

7. Restore the terminal to its normal operating position.

8. Reinstall the thermal paper.

2.5.6.2 Battery Pack Removal. The procedure for removing the battery packs is essentially the reverse of the installation procedure. It is desirable, however, to have the power cord/transformer unplugged from the wall when removing the battery packs.

2.5.6.3 User Interface Module Installation. The interface for a UIM is located beneath the paper compartment door, near the left center of the terminal.

CAUTION

Turn the terminal POWER switch off before installing or removing a UIM cartridge. If you fail to do this, damage to the cartridge could result.

Insert the cartridge in the slot (refer to Figure 2-12) until the cartridge is flush with the top of the slot.

2.5.6.4 Acoustic Coupler Installation. The acoustic coupler is only used on the Model 707 Data Terminal. To install it, plug the acoustic coupler into the jack labeled **ACST CPLR** on the rear of the terminal (refer to Figure 2-13).

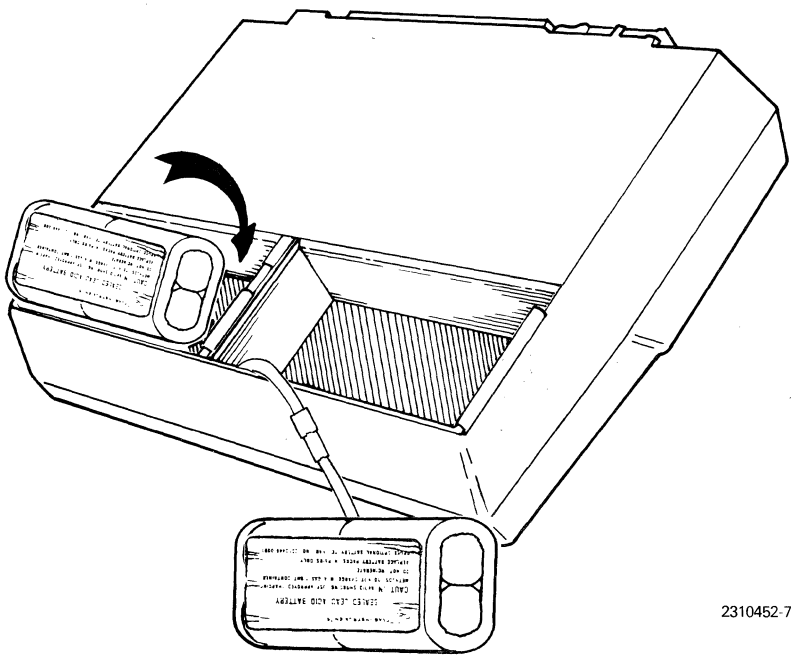

Figure 2-11. Battery Installation

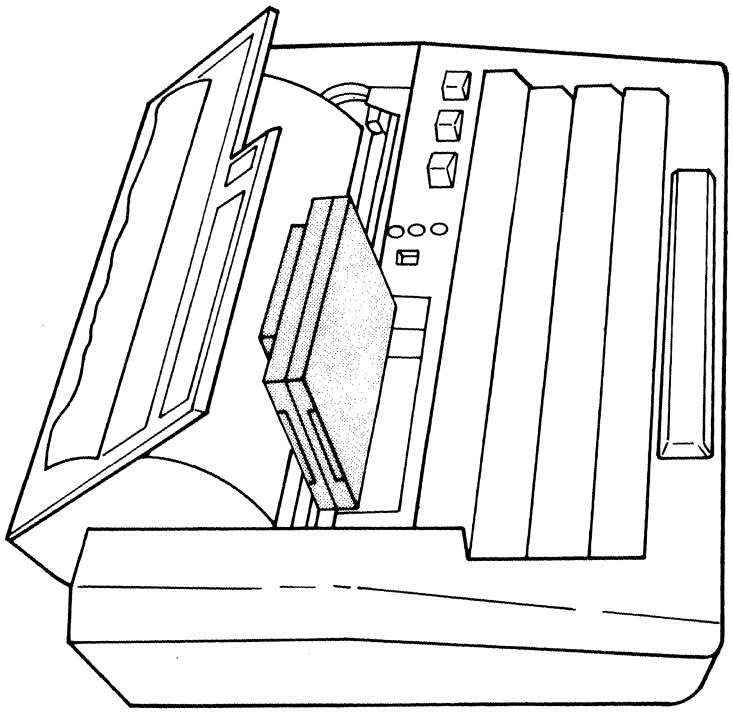

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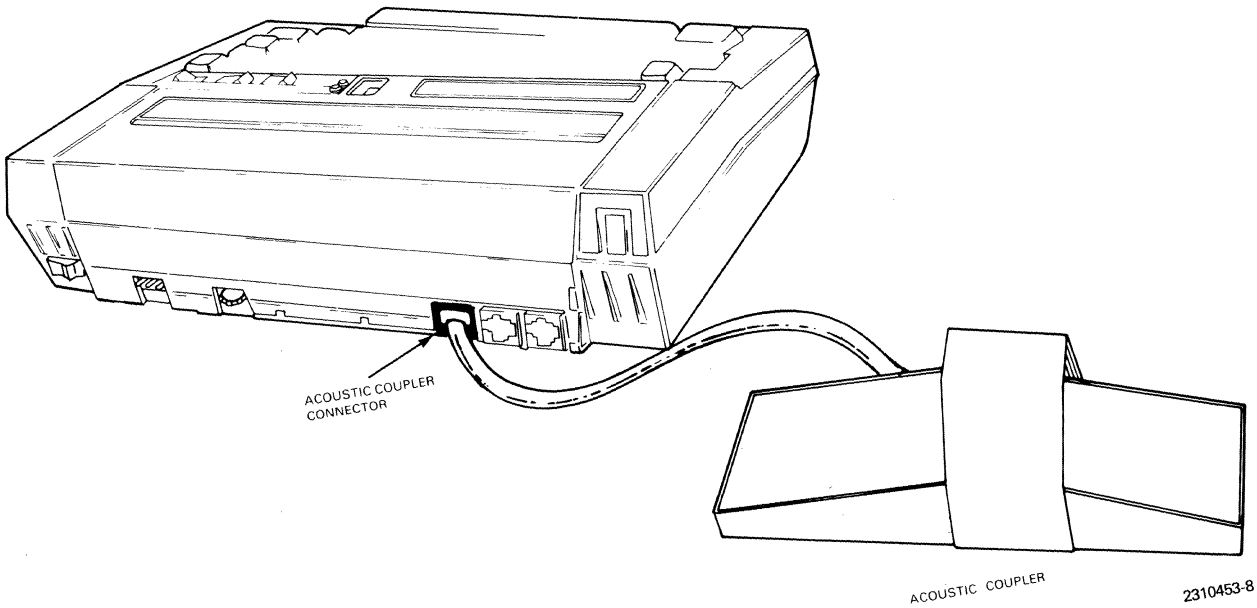
Figure 2-12. User Interface Module Installation



2310453-8

Figure 2-13. Acoustic Coupler Interface

Section 3

Operation

3.1 OPERATING MODES

Model 703/707 Data Terminals have three operator-selectable modes:

- Online
- Offline
- Command

These are described in the following paragraphs.

3.1.1 Online Mode

When the **ONLINE** switch is positioned toward the raised dot the terminal is in the online mode. In this mode external device communication, and all keyboard and printer data, are channeled through the communication interface. The keyboard is used to enter commands or data, and the printer prints received data.

3.1.2 Offline Mode

When the **ONLINE** switch is positioned away from the raised dot, the terminal is in the offline mode. In this mode the operation of the Model 703/707 is similar to that of a typewriter. The keyboard is used to enter commands or data to be printed, and the printer is active. No outside communication is allowed in the offline mode, and voice communication over the telephone lines is not controlled.

3.1.3 Command Mode

The command mode can be entered from either the online or offline mode by pressing the keyboard switch labeled **CMD**. This mode allows the operator to perform basic functions related to originating or answering a data call. A test of the terminal mechanism and printhead (barberpole test) can also be performed in this mode.

3.2 OPERATOR INTERFACE

The standard Model 703/707 operator's panel is shown in Figure 3-1. The panel has a 52-key keyboard, 3-dual position switches, and 3 LED indicators. Four other operator switches are not shown in Figure 3-1; a dual-position **POWER** switch located on the rear of the terminal, and three pencil switches located inside the paper door (a fourth pencil switch, in the same location, is not currently in use). The pencil switches set up the terminal's parity configuration, and select between compressed and normal printing as the default mode of operation.

3.2.1 Keyboard Control

The full-ASCII keyboard contains 47 code-generating keys that generate all 128 ASCII codes when operated in conjunction with 4 keyboard control keys. The code-generating keys include the alphabet, numerals, symbols, space, **ESC** (escape), **LINE FEED**, and **RTN** (return) keys.The keyboard control keys are the two **SHIFT** keys and the **CTRL** (control) key. The **UPPER CASE** switch, located above the keyboard, functions as the fourth keyboard control key.

3.2.2 Keyboard Configuration

The operator can access any one of four keyboard configurations through the use of the keyboard control keys. Figures 3-2 through 3-5 show the placement of each group of characters on the keyboard for each of the configurations. The five keyboard configurations are described as follows.

3.2.2.1 Unshifted Keyboard Characters.

With none of the keyboard control keys pressed, lowercase letters, symbols, and numerals are encoded through use of the code-generating keys (Figure 3-2).

3.2.2.2 Uppercase Keyboard Characters.

With the **UPPER CASE** rocker switch in the uppercase position, the alpha keys (a through z) are encoded as uppercase characters (Figure 3-3).

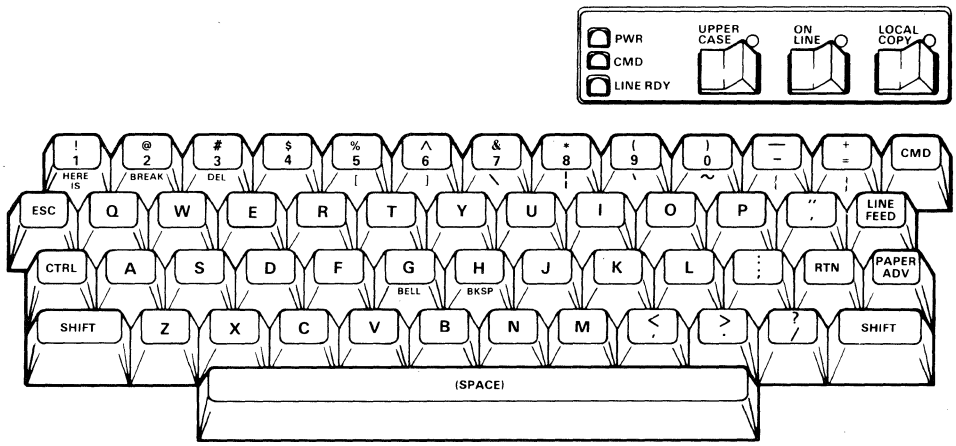


Figure 3-1. Model 703/707 Operator's Panel

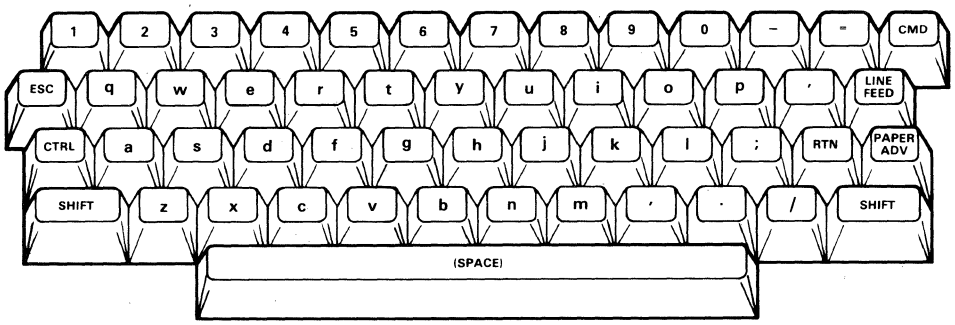


Figure 3-2. Unshifted Keyboard Characters

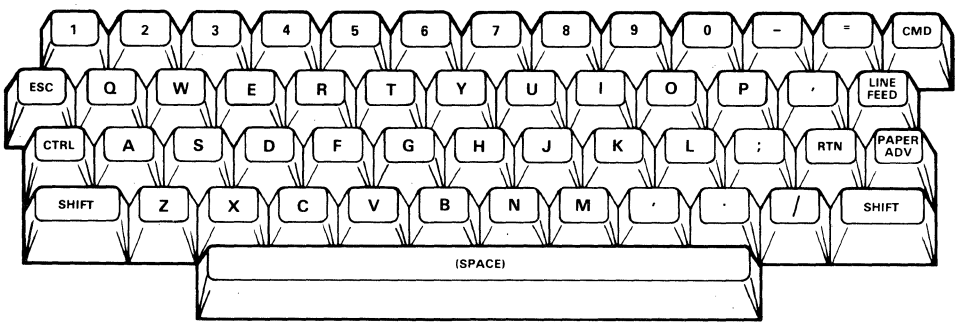


Figure 3-3. Uppercase Keyboard Characters

3.2.2.3 Shifted Keyboard Characters. With the **UPPER CASE** rocker switch away from the uppercase position (away from the dot), one or both **SHIFT** keys can be pressed to encode uppercase letters and symbols (Figure 3-4).

3.2.2.4 Control Keyboard Characters. With the **CTRL** key pressed, ASCII control characters and these eight symbols:

[ ] ¦ ` ~ \ { }

plus HERE IS, BREAK, and DEL (Delete) are encoded by pressing the designated key (Figure 3-5).

Note that the character-generating keys **ESC**, **LINE FEED**, **RTN**, and the space bar generate the same codes for all keyboard modes.

3.2.2.5 Command Keyboard Characters. With the **CMD** key pressed the keyboard is active for the input of command data. The Model 707 responds to four commands: Originate, Answer, Dial, and Test. The Model 703 responds only to the Test command. Refer to paragraph 3.5 for a more detailed description of the command mode.

3.2.2.6 Keyboard Configuration Priorities. If more than one keyboard control key is pressed, the following priority is maintained:

- The **CMD** key has precedence over **CTRL**, **SHIFT** and **UPPER CASE**.
- The **CTRL** key has precedence over **SHIFT** and **UPPER CASE**.
- The **SHIFT** key has precedence over **UPPER CASE**.

3.2.2.7 Automatic Character Repeat and Paper Advance. Each code-generating key initiates an automatic character repeat, at ten cps, when held down for more than one-half second. The **PAPER ADV** key advances paper at approximately 30 lps after an initial single line and a one-half second delay.

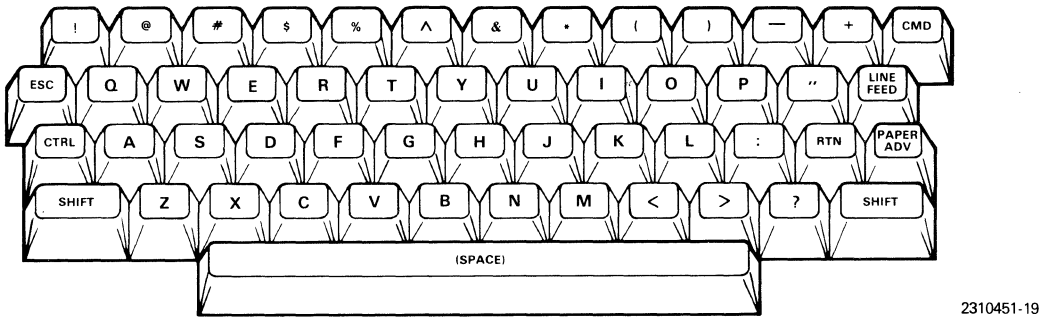


Figure 3-4. Shifted Keyboard Characters

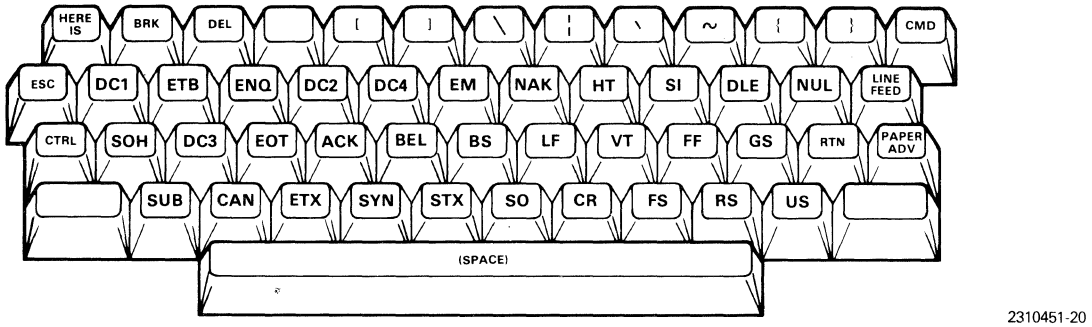


Figure 3-5. Control Keyboard Characters

3.2.3 Switches and Special Keys

Four dual-position switches (**POWER**, **ONLINE**, **LOCAL COPY**, and **UPPER CASE**), three special function keys (**CMD**, **CTRL**, and **PAPER ADV**), and three pencil switches (parity and compressed or normal print selection) control the operation of the Model 703/707. All these switches, with the exception of the **POWER** switch and the pencil switches, are located on the operator's panel and keyboard. The **POWER** switch is located at the right rear of the terminal and the pencil switches are located inside the paper door. The following paragraphs explain the operation of these switches.

3.2.3.1 POWER Switch. The **POWER** switch controls the power to the terminal from the wall transformer. In the Model 707 the **POWER** switch can optionally control the terminal's power from the internal battery pack. When the **POWER** switch is set to the **1** position, power is supplied to the terminal. When the wall transformer is in use on the Model 707, power is also available to recharge the optional battery pack.

When the **POWER** switch is set to the **0** position, the terminal circuits are not powered, with the exception of the battery pack's recharge circuit on the Model 707. This circuit has power any time the wall transformer is plugged into a live ac voltage source, with the **POWER** switch on or off.

3.2.3.2 ONLINE Switch. The **ONLINE** switch controls two modes of operation, online and offline. With the **ONLINE** switch in the online position (moved toward the dot), line communication is enabled. In the offline mode, line communication is disabled. The command mode can be entered from either the online or offline mode.

3.2.3.3 LOCAL COPY Switch. The **LOCAL COPY** switch enables or disables the printing of transmitted data. When the terminal is online and the **LOCAL COPY** switch is in the local copy position (toward the dot), data is printed as it is transmitted. Simultaneous communications result in transmitted and received data being interleaved on the printed page.

3.2.3.4 UPPER CASE Switch. With the **UPPER CASE** switch in the uppercase position, all alphabetic characters (a through z) are encoded as uppercase ASCII characters (A through Z).

3.2.3.5 CMD Key. When the **CMD** key is pressed the terminal enters the command mode. A detailed description of the command mode is provided later in this section.

3.2.3.6 CTRL Key. The **CTRL** key is used in conjunction with other keys to initiate a terminal control function.

NOTE

The **CTRL** key is always pressed first, and held pressed, while pressing the other key.

Refer to "Control Functions" at the end of this section. Five control function keys labeled on the keyboard are as follows.

- **HERE IS (CTRL 1).** If the ABM has been programmed through the Auto-Access Cartridge option, the cartridge is installed, and the terminal is online, the contents of the ABM are transmitted over the communication line when the **HERE IS** key is pressed while the **CTRL** key is being pressed. In the offline mode CTRL 1 has no effect.

- **BREAK (CTRL 2).** When the Model 703/707 is online and the **2** key is pressed while the **CTRL** key is being pressed, the terminal's transmitter circuits are disabled for a minimum of 256 ms.

- **DEL (CTRL 3).** When the terminal is online and the **3** key is pressed while the **CTRL** key is being pressed, a DEL control character is sent out on the communication line.

- **BELL (CTRL G).** When the terminal is online and the **G** key is pressed while the **CTRL** key is being pressed, the BEL control character is sent out on the communication line to create an audible signal.

- **BKSP (CTRL H).** When the **H** key is pressed while the **CTRL** key is being pressed, the backspace control character is sent out on the communication line. If local copy is selected, or the terminal is offline, the backspace control character is also sent to the printer.

3.2.3.7 PAPER ADV Key. When the **PAPER ADV** key is pressed for less than one-half second the thermal paper is advanced one line. When held down for more than one-half second, the paper advances at a rate of 30 lines for each additional second until released.

3.2.3.8 Parity. The parity of the terminal's transmitted data can be set for even, odd, mark, or space parity. Parity is set with two of the four pencil switches (labeled **1** and **2**) located beneath the paper door latch. Table 3-1 shows these switch settings.

Table 3-1. Model 703/707 Parity Configurations

Parity Selected	Switch 1	Switch 2
Even	Off	Off
Odd	On	Off
Space	Off	On
Mark	On	On

3.2.3.9 Compressed Print. The Model 703/707 terminal prints 10.2 cpi (80 cpl) in the normal configuration, and 17.0 cpi (132 cpl) in the compressed print configuration. Compressed or normal print is selectable before power-up; the selection can be changed locally by the operator, or remotely over the communication lines, after the terminal is powered-up.

- **Selecting compressed print before power-up.** When the terminal is powered-up the number of printed characters-per-inch defaults to the selection made on switch three of the group of four pencil switches. The pencil switches are located beneath the paper door latch. If switch 3 is turned on, at the time of power up, compressed print (17.0 cpi) is selected; if switch 3 is off, at the time of power-up, normal print (10.2 cpi) is selected.

- **Local selection of compressed/normal print.** After power-up the operator can change from compressed print to normal print, or from normal print to compressed print by simultaneously pressing:

  CTRL, SHIFT, and **RTN**

  This change can be initiated locally while the terminal is online or offline.

- **Remote selection of compressed/normal print.** The print configuration of the Model 703/707 can be switched between compressed and normal over communication lines with the following escape sequences:

  To select 10.2 cpi: [ESC] [P] [C] [ESC] [\] or [ESC] [P] [C] [\]

  To select 17.0 cpi: [ESC] [P] [D] [ESC] [\] or [ESC] [P] [D] [\]

NOTE

The brackets ([ ]) are not part of the sequence. They are used to separate the characters. The second ESC character is optional.

3.3 STATUS INDICATORS

Three LEDs and two audible tones indicate terminal status.

3.3.1 LED Indicators

The three LED indicators located above the keyboard indicate the status of power to the terminal, the command mode, and the communication line signals.

3.3.1.1 PWR (Power) LED. The **PWR** LED indicates the status of power to the terminal as follows:

On: When the **PWR** LED is on the terminal has either ac power applied from the plug-in transformer, or on the Model 707, dc power from the optional battery pack.

Off: If the ac transformer is plugged into a live wall outlet and the **PWR** LED

is off, it indicates that the **POWER** switch is in the off position. The only power applied to the Model 707 is to the battery recharging circuit. No power is applied to the Model 703.

When the optional battery pack is in use on the Model 707, if the **POWER** switch is on and the **PWR** LED is off, it indicates that the minimum battery operating voltage has been reached. In this condition there is a battery current draw of approximately 2.5 ma. The **POWER** switch should be turned off as soon as possible after the terminal performs an automatic power-down.

Flashing: A flashing **PWR** LED indicates the battery pack output voltage is nearing the minimum Model 707 operating voltage. When the **PWR** LED begins to flash the user has at least four minutes in which to log off before the power supply shuts down.

3.3.1.2 CMD (Command) LED. The **CMD** LED indicates the status of the command mode as follows:

On: The **CMD** LED is on after the **CMD** key is pressed and the terminal goes into the command mode. The LED stays on until the command mode is terminated by completion of the command, the command set, or the action that was directed. The command mode is also terminated by pressing the **ESC** key.

Off: The **CMD** LED is off when the terminal is not in the command mode and there is no command request pending.

Flashing: If the **CMD** LED is flashing, it indicates that the request to enter the command mode is pending. The LED continues flashing until the terminal enters the command mode.

3.3.1.3 LINE RDY LED. The **LINE RDY** LED indicates the condition of the data interface.

On: In the Model 703, when the **LINE RDY** LED is on, it indicates that the following signals are also on:

Signal Name	EIA Interface Mnemonic
DATA SET READY	CC
DATA CARRIER DETECT	CF
DATA TERMINAL READY	CD
REQUEST TO SEND	CA
CLEAR TO SEND	CB

In the Model 707, when the **LINE RDY** LED is on, it indicates that the terminal is online and a carrier signal is detected (signal CF is on).

Off: In the Model 703 terminal, when the **LINE RDY** LED is off, it indicates that the signals CC and CF are off. In the Model 707, when the **LINE RDY** LED is off, it indicates that a carrier signal is not being detected.

Flashing: In the Model 703, when the **CMD** LED is on and the **LINE RDY** LED is flashing, it indicates that signals CC and CF are on and the terminal is in the command mode. When the terminal is not in the command mode, and the **LINE RDY** LED is flashing, it indicates that signals CC, CD, and CA are on, and either signal CB or CF is off.

In the Model 707, a flashing **LINE RDY** LED indicates that signal CD to the internal modem is on, and a call is in the process of being either originated or answered.

3.3.2 Audible Status Indicators

Two audible tones indicate terminal status, as follows.

Short tone: A tone of 80 to 100 ms indicates the normal termination of an operation.

Long tone: A tone of one-second in duration indicates that an error or an abnormal operating condition has been detected.

Table 3-2 describes the operating conditions that cause an audible tone to occur.

3.3.3 Error Definitions

The errors that result in a long audible tone are defined here.

3.3.3.1 Receiver buffer overflow. Normally, as the terminal receives data, it is removed from the receiver buffer and printed. If anything happens to prevent the printer from operating, or if the buffer is being filled faster than the printer can empty it, a receiver buffer overflow occurs.

3.3.3.2 Keyboard buffer overflow. The keyboard buffer is a storage area for data that is being transmitted. If the terminal is prevented from transmitting data while the operator is entering data via the keyboard, a keyboard buffer overflow occurs.

3.3.3.3 Invalid keyboard entry. Four commands recognized by the Model 707 terminal are Dial, Originate, Answer, and Test. Only the Test command is valid for the Model 703. If these commands are not entered properly the terminal indicates an error.

3.4 POWER-UP SELF-TEST DESCRIPTION

When the **POWER** switch is turned on, the Model 703/707 performs a memory test. The visual and audible indications that accompany this self-test are as follows:

1. All three LED indicators come on.
2. At the successful completion of the memory test the terminal emits a short audible tone.
3. The printhead moves to the left.
4. The paper advances one line.
5. The **CMD** and **LINE RDY** LEDs go out.

NOTE

On a Model 703, if it is online and a valid connection exists, the **LINE RDY** light does *not* go out.

6. The **PWR** LED remains lit.
7. The terminal prints its model number.
8. The printer executes a carriage return and line feed.

Table 3-2. Model 703/707 Audible Tones

Signal	Cause
Short tone	1. ASCII BEL character has been received. 2. Command mode has been entered. 3. Power-up test has been completed successfully.
Long tone	1. One of the following errors has been detected: a) Receiver buffer overflow error b) Keyboard buffer overflow error 2. An invalid keyboard entry has been detected in the command mode.

3.5 MODEL 703/707 COMMAND MODE DESCRIPTION

The command mode is entered when the **CMD** key is pressed and the terminal is either online or offline.

If the terminal is online when the command mode is entered, all control signals pending are held at the same level as when the command mode was entered. Any characters received while the terminal is in the command mode are ignored; however, any characters that remain in the receiver buffer are analyzed and printed. If the printer is busy the **CMD** LED flashes to inform the operator that the command mode cannot be entered, but the request is pending. If the printer is not busy the command mode is initiated as follows:

1. If the Model 703/707 is online and communication is established, the **LINE RDY** LED flashes while the terminal is in the command mode.

2. After the **CMD** key is pressed, the prompt is issued as follows:

   a. A carriage return and line feed are executed.

   b. A question mark (?) is printed.

   c. The carriage moves one space beyond the "?".

   d. A short bell tone is heard.

3. The terminal waits for the appropriate command mnemonic. A valid command mnemonic causes the command to execute. An invalid command causes an audible error indication (long bell tone), and causes the prompt for a command (?) to be reissued.

3.5.1 Model 703/707 Commands

Table 3-3 lists the valid commands available to the Model 703/707 terminal operator.

The terminal can be placed online when the command prompt is displayed. If the Dial, Originate, or Answer commands are attempted while the terminal is in the offline mode, an audible error indication (long bell tone) is heard and the command prompt (?) is reissued.

3.5.1.1 Dial Command (Model 707 Only).

When the Model 707 is using its direct-connect interface and is online, the Dial command allows the operator to initiate dialing from the keyboard. To initiate the Dial command:

Press **CMD** and then press **D**.

Table 3-3. Model 703/707 Commands

Command Name	Syntax*	Mode		Model	
		Online	Offline	707	703
Dial	D	X		X	
Originate	O	X		X	
Answer	A	X		X	
Test	T		X	X	X

*The command syntax can be entered in either uppercase or lowercase.

When a valid Dial command is entered, the word DIAL is printed, the terminal goes off-hook, and a dial tone is heard in the aural monitor. At this point the terminal accepts the telephone number from the keyboard.

The method for dialing in the Model 707 is pulse-dialing. As you enter each digit, by pressing the corresponding numeric key, the number is simultaneously printed and dialed. The Dial command accepts a phone number of any length, but can buffer only 16 digits at a time. To enter a phone number with more than 16 digits:

- Enter the first 16 digits.
- Wait until the first digit is printed before entering the seventeenth digit.
- Wait until the second digit is printed before entering the eighteenth digit, and so on.

In most cases the numbers are printed (dialed) as fast as you can enter them on the keyboard, so no wait is necessary.

Terminate the Dial command in one of four ways.

- Connecting with a host modem.
- Pressing the **RTN** key.
- Pressing the **ESC** key prior to connection with a host modem. After connection to the host it is necessary to go offline to terminate the call.
- Moving the **ONLINE** switch to the offline position.

3.5.1.2 Originate Command (Model 707 Only). The Originate command is used when a call is dialed manually (not with the Dial command). A call is initiated manually as follows:

1. Place the terminal online.
2. Lift the telephone handset and dial the desired network number.
3. Wait for the answer tone.
4. Press the **CMD** key.
5. Press the **O** key.
6. Hang up the handset.

At this point the modem/terminal controls the completion of the connection.

3.5.1.3 Answer Command (Model 707 Only). The Answer command causes the modem to go off-hook and send the answer tone. When data communication is desired, the operator initiates the manual answer function as follows:

Press **CMD** and press **A**.

3.5.1.4 Test Command. The Test command is used in the offline mode to test the terminal mechanism and printhead. The operator initiates the Test command as follows:

Press **CMD** and press **T**.

The test initiated by the Test command is a continuously-printed barberpole. Terminate the test and the command mode by pressing the **ESC** key. Return to the command mode by pressing the **CMD** key.

NOTE

It is normal for one or two lines of barberpole to be printed after the **CMD** or **ESC** key is pressed.

3.6 CONTROL FUNCTIONS

The Model 703/707 transmits all 33 USASCII control characters over communication lines; six of these are recognized by the Model 703/707 when received.

3.6.1 Backspace (BS)

Backspace moves the printhead one space to the left; if the printhead is at the left margin, backspace has no effect. A backspace does not modify any character that is stored in the receive buffer.

3.6.2 Carriage Return (CR)

Carriage return moves the printhead to the left margin when printing incrementally, or initiates the printing of the next line in the bidirectional mode.

3.6.3 Line Feed (LF)

Line feed advances the paper one line space without affecting the printhead position.

3.6.4 Bell (BEL)

Bell sounds the audible tone.

3.6.5 Enquiry (ENQ)

Enquiry triggers the transmission of the contents of the ABM. If no ABM is installed, enquiry has no effect.

3.6.6 Escape (ESC)

Escape, when received from the line, identifies the character or sequence of characters that follow it, as a terminal command. If an invalid command sequence is received after the escape character, the terminal emits a long audible tone indicating an invalid command.

Section 4

Communication Interface Description

4.1 MODEL 703 COMMUNICATION INTERFACE

The standard communication interface for the Model 703 terminal is an asynchronous interface that conforms to standards set by the Electronic Industries Association (EIA RS-232-C) and is compatible with international standards (CCITT V.24).

4.1.1 EIA and CCITT Interface Signals

The signals listed in Table 4-1 are the EIA RS-232-C (CCITT-compatible) interface signals used by the Model 703 terminal. They are defined in the paragraphs that follow.

- Protective Ground (AA) — This lead is connected to the earth-ground conductor of the terminal ac power connector, and is internally connected to Signal Ground (AB). When an optional wall transformer is used, which has an earth-ground lead incorporated into the power line to the terminal, Protective Ground and Signal Ground are both connected to earth ground. A wall transformer of this type is provided with terminals that are for sale in countries where the governing regulatory agency requires this feature.

- Transmitted Data (BA) — This line conveys signals from the terminal data transmitter output to the data set transmitter circuit. It is held to a MARK condition unless data or break signals are transmitted.

- Received Data (BB) — This line conveys signals from the external data set receiver to the terminal data receiver input.

Table 4-1. EIA RS-232-C Interface Signals

703 Pin No.	Circuit EIA	Circuit CCITT	EIA Signal Name	Source
1	AA	101	PROTECTIVE GROUND	—
2	BA	103	TRANSMITTED DATA	703
3	BB	104	RECEIVED DATA	EXTERNAL
4	CA	105	REQUEST TO SEND	703
5	CB	106	CLEAR TO SEND	EXTERNAL
6	CC	107	DATA SET READY	EXTERNAL
7	AB	102	SIGNAL GROUND	—
8	CF	109	RECEIVED LINE SIGNAL DETECTOR	EXTERNAL
20	CD	108.2	DATA TERMINAL READY	703
23	CH	111	DATA SIGNAL RATE SELECTOR	703

- Request To Send (CA) — This line is held on continuously while circuits CD and CC are on.

- Clear To Send (CB) — When circuit CB is on, it indicates to the terminal that the external data set is ready to transmit. The terminal does not transmit data across the interface when circuit CB is off. This line is regarded as on when it is open (floating).

- Data Set Ready (CC) — The data set controls this signal line. The terminal does not attempt to transmit or receive data across the interface unless this circuit is held on by the data set.

- Signal Ground (AB) — This lead is connected to the dc ground of the terminal for all interface signals and is connected to Protective Ground (AA).

- Received Line Signal Detector (CF) — When this line is switched on by the data set it indicates that it is receiving a valid carrier signal from the remote data set. The terminal does not accept data from the interface if this signal is off. This line is regarded as on when it is open (floating) to provide successful operation with data sets that do not provide circuit CF (for example, the Bell 113 data set).

- Data Terminal Ready (CD) — This signal line is turned on by the terminal to indicate that the terminal is online and ready to initiate or answer a data call.

- Data Signal Rate Selector (CH) — This signal indicates the transmit and receive data rates. The terminal holds this circuit off at all times to indicate its 300 baud data rate.

4.1.1.1 Interface Signal Levels. The interface signal levels conform to EIA specification RS-232-C. For simplicity, the condition of an interface control signal is discussed in on and off terms, as defined below.

For control lines, a signal is on when it carries a positive voltage between +3 and +25 V. When the line potential changes to a negative voltage between -3 and -25 V, the line is considered to be off.

For data lines, a logic ONE, called a MARK, is indicated by a negative voltage between -3 and -25 V. A logic ZERO, called a SPACE, is indicated by a positive voltage between +3 and +25 V.

In summary, a positive voltage on a control line is an on condition, but a positive voltage on a data line represents a SPACE or logic ZERO. A negative voltage on a control line is an off condition, but a negative voltage on a data line represents a MARK or logic ONE.

4.1.1.2 Transmission Rates and Distortion. The Model 703/707 terminals transmit and receive data at a rate of 300 bps. The maximum allowable receive distortion is 47.7 percent per character. The maximum transmitted distortion is 1.3 percent per character.

4.1.1.3 Transmission Code. The Model 703/707 terminals generate all 128 character codes of the USASCII-coded character set defined in ANSI Standard X3.4-1977.

4.1.1.4 Character Structure. Codes for transmitted and received data are in accordance with ANSI Standard for Character Structure and Parity Sense, X3.16-1976, and ANSI Standard for Bit Sequency of the USASCII code, X3.15-1976.

Transmitted characters consist of a start bit (always 0 or spacing), seven data bits, a parity bit, and two stop bits (always 1 or marking).

Received characters consist of a start bit (always 0 or spacing), seven data bits, a parity bit, and at least one stop bit (always 1 or marking), dependent upon the network.

Transmitted parity is selectable for odd, even, mark, or space parity. Transmitted parity is operator-configured with pencil switches located beneath the paper door.

The terminal does not check the parity of received data.

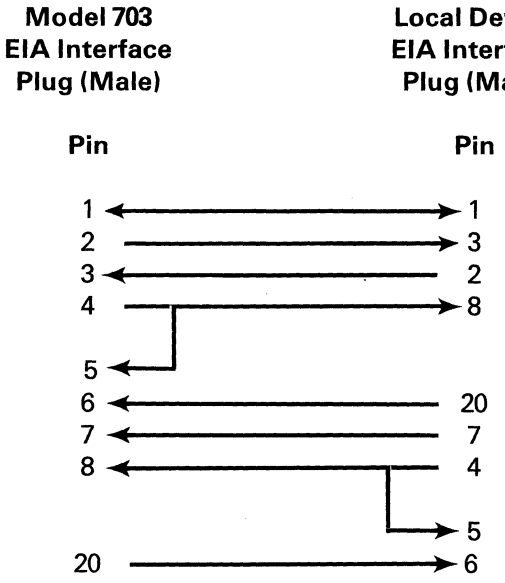
4.1.1.5 External Data Set Capability. The Model 703 terminal interfaces with an external modem to enable data transmission over telephone lines. A 1.82 m (6 ft) EIA interface cable (TI Part No. 2207634-0001), suitable for connection to Bell 103/212 data sets, is an option available for this purpose.

4.1.2 EIA Interface Cables

The two types of EIA interface cables are the data terminal cable and the data set cable. These are described in the following paragraphs.

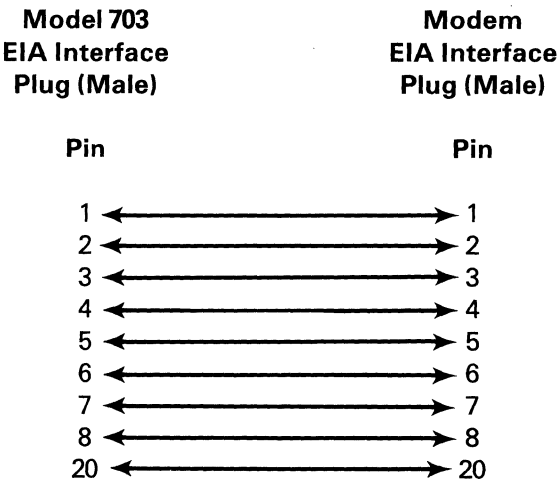
4.1.2.1 Data Terminal Cable. The pin connections for the optional EIA interface cable that connects the Model 703 to a local device are shown in the following diagram.

Data Terminal Cable
(TI Part No. 993239-0001)

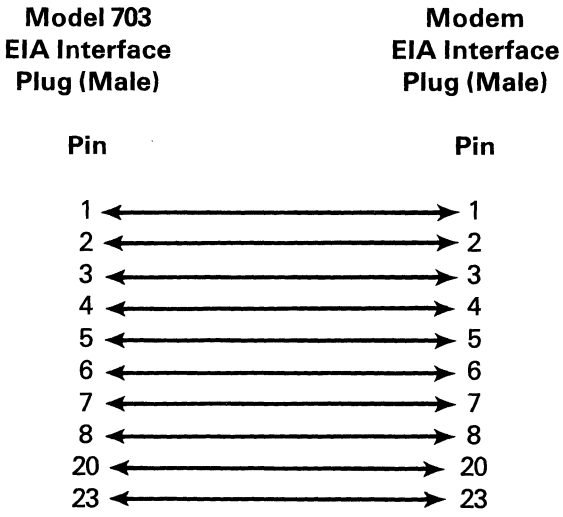


4.1.2.2 Data Set Cables. The pin connections, for optional EIA interface cables that are used to connect the Model 703 to two types of external modems, are shown in the following diagrams.

Data Set Cable
for 300 baud modems
(TI Part No. 993205-0001)



Data Set Cable
for high speed modems
with Speed Control option
(TI Part No. 2207634-0001)



4.2 MODEL 707 COMMUNICATION INTERFACE

The standard interface for communication between the Model 707 terminal and the line is through an approved FCC originate/auto-answer, full-duplex, direct-connect internal modem. This interface is compatible with Bell 103/113 or CCITT V.21 data sets.

4.2.1 Direct Connect

A direct connect interface in the Model 707 terminal provides the data communication path between the direct-connect internal modem and the switched public telephone network. Connection to the network is made through approved FCC standard plugs and telephone company-provided jack arrangements. The electrical characteristics of these interface circuits are in strict conformance with FCC Rules and Regulations, Part 68.

The Model 707 terminal is registered to use the following six-pin phone jacks:

- RJ11 (Standard household jack, TIP and RING)
- RJ12 (TIP and RING, A and A1)

NOTE

The Model 707 supports only TIP and RING on the two center conductors. The remaining four conductors are open circuits. When using the terminal with the RJ12 jack, A and A1 are passed through to the phone jack to allow normal phone operation.

In the direct-connect mode the internal modem is able to receive data in echo-plex format with an error rate of less than 1 bit in error for every 100,000 bits, under the following conditions:

Received signal strength:	> or = −36dBm
Received signal SNR*:	> or = 15dB with white or pink noise
Line characteristics:	Back-to-back, C notch filter, and average long haul filter
Transmitter level:	−10 dBm

4.2.2 Acoustic Coupler

An acoustic coupler is available as an option to the Model 707 terminal. This acoustic coupler interfaces with the terminal through a jack labeled **A.C.** located on the rear of the terminal.

When using the optional acoustic coupler the internal modem receives data in echo-plex format, with a Texas Instruments Data Mike Kit (TI Part No. 2266038-0001), at an error rate of less than 1 bit in error for every 100,000 bits, under the following conditions:

Received signal strength:	> or = −38 dBm @ TIP and RING
Received signal SNR:	> or = 15 dB with white or pink noise
Line characteristics:	Back-to-back, C notch filter, and average long haul filter
Transmitter level:	−18 dBm min. @ TIP and RING

The Data Mike offers two key advantages over the carbon microphone in a typical telephone.

- The output level of the transmitted signal is more consistent over time.
- The superior linearity of the Data Mike reduces distortion, and therefore reduces overall system noise.

4.3 COMMUNICATION MODE

The Model 703/707 Data Terminals operate in the full-duplex mode. The transmit and receive circuits are independent, permitting simultaneous, bidirectional communication.

*SNR = signal-to-noise ratio

The operator may enable or disable local copy of transmitted data when the terminal is online with a host computer. When enabled, all keyboard data is printed as well as transmitted to the host. Local copy is not needed if the host uses "echoplex"- that is, the host echos each character it receives back to the terminal. Echoplex ensures the sender that the host received the data correctly.

NOTE

The term half duplex is often used to mean local copy.

4.3.1 Model 703 Communications

The following signals are used by the Model 703 during communications.

- DATA TERMINAL READY — When the **ONLINE** switch is in the online position, the Model 703 terminal holds circuit CD (Data Terminal Ready) on.
- DATA SET READY — Interface signal CC (Data Set Ready) must be switched on by the data set before any data communication can take place.
- REQUEST TO SEND — Circuit CA (Request To Send) is switched on by the Model 703 as soon as circuit CC is on.
- Carrier established — When a valid carrier has been established, the data set switches on circuits CF (Received Line Signal Detector) and CB (Clear To Send).
- RECEIVE DATA ENABLE — An on status for circuits CC and CF enables the terminal to accept data.
- TRANSMIT DATA ENABLE — An on status for circuits CC and CB enables the terminal to transmit data to the line.
- TRANSMIT DATA BUFFER — If circuit CB switches off, any character being transmitted is completed but a new character can not be transmitted until circuit CB switches on. Up to 16 characters can be entered from the keyboard while circuit CB is off. These are buffered in a FIFO memory and transmitted when circuit CB switches back on. If local copy is enabled, these buffered characters are printed as they are transmitted, not as they are entered. If more than 16 characters are entered while circuit CB is off, the long audible tone (one-second in duration) sounds as an error indication. Every character entered, in excess of the FIFO's capacity, is discarded. If circuit CC switches off at any time during this process to indicate a data set disconnect, all characters in the transmit buffer are discarded.

In order for the terminal to transmit and/or receive data, the following signals must be present:

- To transmit data: CD, CC, CA, CB, and a transmit character
- To receive data: CD, CC, CF, and a receive character

4.3.2 Model 707 Communications

The Offhook (O.H.) signal is the Model 707 terminal's equivalent of lifting the telephone handset "off the hook." In a direct-connect configuration, when the O.H. signal is low, the TIP and RING signals are switched through the terminal from the telephone wall jack to the telephone handset. This allows the telephone to operate normally. When the O.H. signal goes high, TIP and RING are switched to the communications circuitry inside the terminal and the telephone is effectively disconnected from the wall jack.

The O.H. signal goes high when one of the following situations occur.

- The operator uses the Dial command.
- The terminal is online (in the direct-connect configuration) and the telephone rings.
- The operator manually dials the telephone and then uses the Originate command.
- The operator uses the Answer command.

4.4 COMMUNICATION FEATURES

This section provides a brief description of the protected ABM option, the Model 707 auto-answer feature, and the communication line break feature.

4.4.1 Protected ABM

The protected ABM option for the Model 703/707 terminals provides a customer-specified, 1-to-32 character identification that serves as a unique station identification. This identification string, implemented on PROM memory at the factory, is transmitted to the communication line when the terminal receives an ENQ code from the line, or when the **HERE IS** key (CTRL 1) is pressed while the **CTRL** key is being held pressed. With the protected ABM, the station identification is not displayed on the printer.

On Model 703/707 terminals that have the Auto-Access Cartridge option, the protected ABM can be programmed by the user. This feature allows the user to change the identification code without sacrificing the security of the protected feature.

4.4.2 Automatic Operation Control

The Model 707 provides automatic answer of the telephone any time the terminal is online and a connection is not currently in effect. When the phone is automatically answered by the terminal, you may not hear the phone ring before it is answered. If you do not want the terminal to answer the phone it must be kept offline.

With the optional Auto-Access Cartridge installed, the terminal answers the phone after a specified (by the operator) number of rings.

4.4.3 Communication Line Break

When the **CTRL** key and **BRK** keys (CTRL 2) are pressed while the Model 703/707 is transmitting data, circuit BA is held to a space condition for a minimum of 256 milliseconds. If the key is held down for longer than 256 milliseconds, the circuit is held to a space until the key is released.

Section 5

Theory of Operation

5.1 INTRODUCTION

This section describes the basic operation and configuration of each of the Model 703/707 Data Terminal subsystems.

The Model 703 and Model 707 have the following common subsystems.

- TMS 7041 microcomputer
- Address and data decode
- PROM and RAM memory
- Full-ASCII keyboard
- Terminal control panel
- Printhead and step motor
- Paper advance motor
- Power supply
- Optional User Interface Module, interface
- System clock and bell circuit

The Model 703, in addition to the basic subsystems, includes an EIA type RS-232-C communication interface.

The Model 707, in addition to the basic subsystems, contains the following:

- Internal modem
- Acoustic coupler interface
- Direct-connect interface
- Modular telephone jack
- Aural monitor
- Optional battery pack and recharge circuit

Figure 5-1 is a simplified block diagram of the Model 703/707. Note that the components and signals within the dashed lines apply only to the Model 707 terminal. Also note that −12 V (unregulated) output from the power subsystem applies only to the Model 703.

The information in this section is intended as a supplement to the schematic drawings for each model and to the Model 703/707 specifications presented in Section 1 of this manual. The full schematic for each terminal is presented in Section 7.

5.2 TMS 7041 MICROCOMPUTER

The TMS 7041 is a member of the TMS 7000 family. It contains a microprogrammed CPU, RAM, on-chip I/O, 4K bytes of on-chip ROM, and an on-board Universal Asynchronous Receiver/Transmitter (UART). All members of the TMS 7000 family are capable, through memory expansion modes, of accessing up to 64K bytes of address space.

5.2.1 External Interrupts and Reset

The TMS 7041 implements five hardware interrupt levels. One of these, level 1, is reserved for the system clock circuit. The highest priority interrupt, level 0, is always reserved for the reset function.

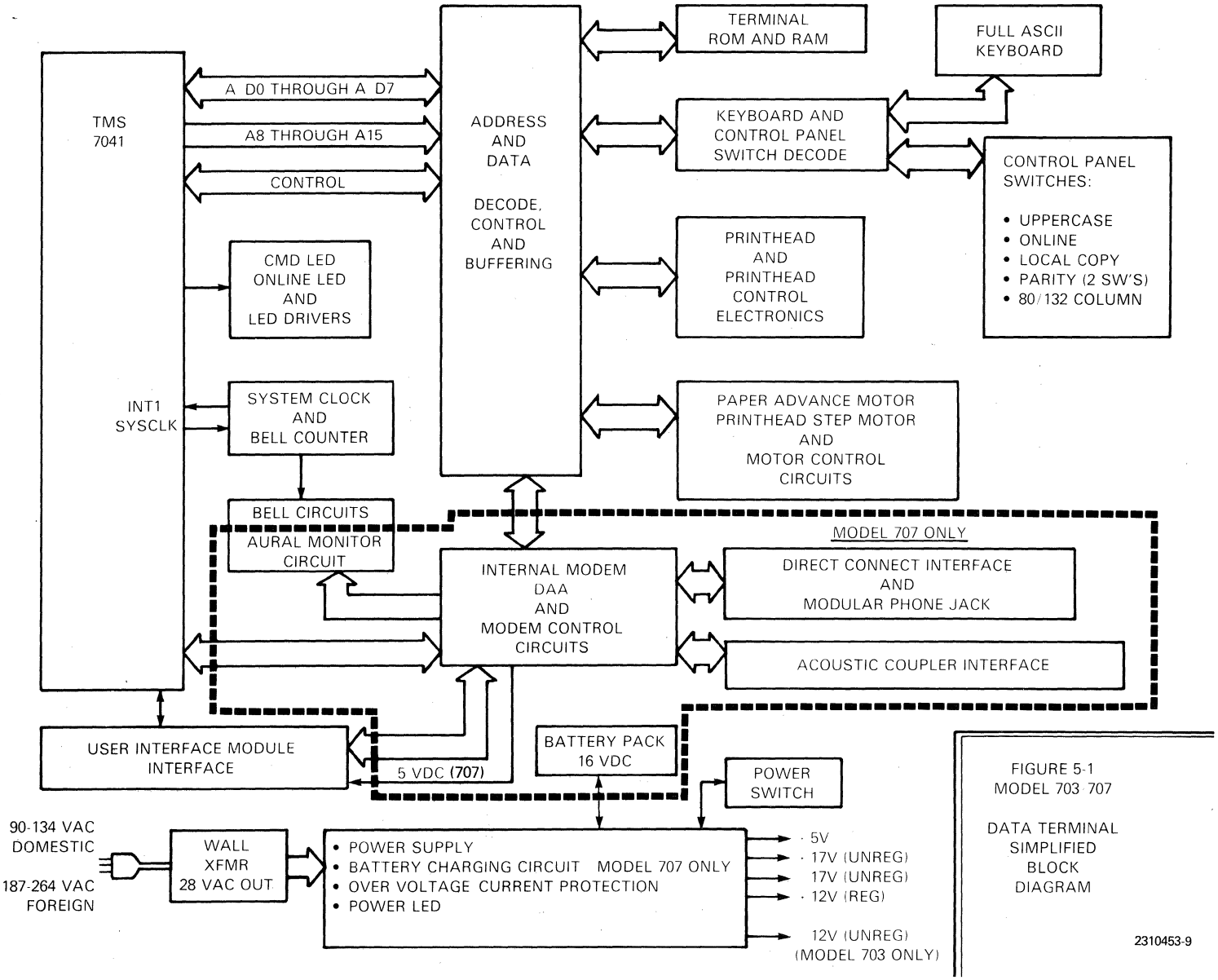


Figure 5-1. Model 703/707 Simplified Block Diagram

5.2.2 UART

The TMS 7041 UART is programmed by software. It is initialized at power-on by a set of control words that set the terminal's communications format. These control words determine the baud rate, character length, character format, and parity format.

The parity format in the Model 703/707 is operator-configurable through the use of two pencil switches. Parity can be set for even, odd, mark, or space parity. The parity configuration is dependent upon the requirements of the host system.

5.2.3 TMS 7041 Memory Expansion Modes

The TMS 7041 has four memory expansion modes: single-chip mode, peripheral-expansion mode, full-expansion mode, and microprocessor mode.

In the Model 703/707, the TMS 7041 is operated in the full-expansion mode giving it full addressing capability. The terminal's operating system is stored in the on-chip ROM. I/O lines C0 through C7, D0 through D7, and B4 through B7 are used for external memory interface. I/O lines D0 through D7 pass the most significant byte of the address. I/O lines C0 through C7 pass multiplexed address/data. The TMS 7041 full-expansion mode is illustrated in Figure 5-2.

5.3 ADDRESS AND DATA DECODE

The least significant byte of address (A0 through A7) and the eight data lines (D0 through D7) share a TMS 7041 bidirectional I/O port. An octal address latch is enabled when the TMS 7041 output is the least significant byte of the 16 address lines. When receiving or passing data, a bidirectional bus transceiver is enabled. The TMS 7041 establishes the direction of the data with a directional (read/write) input to the transceiver. The most significant byte of address (A8 through A15) is output from a separate, dedicated TMS 7041 I/O port. Lines A8 through A12 are output through bus driver circuits. Lines A13 through A15 are output as select lines to demultiplexing circuits.

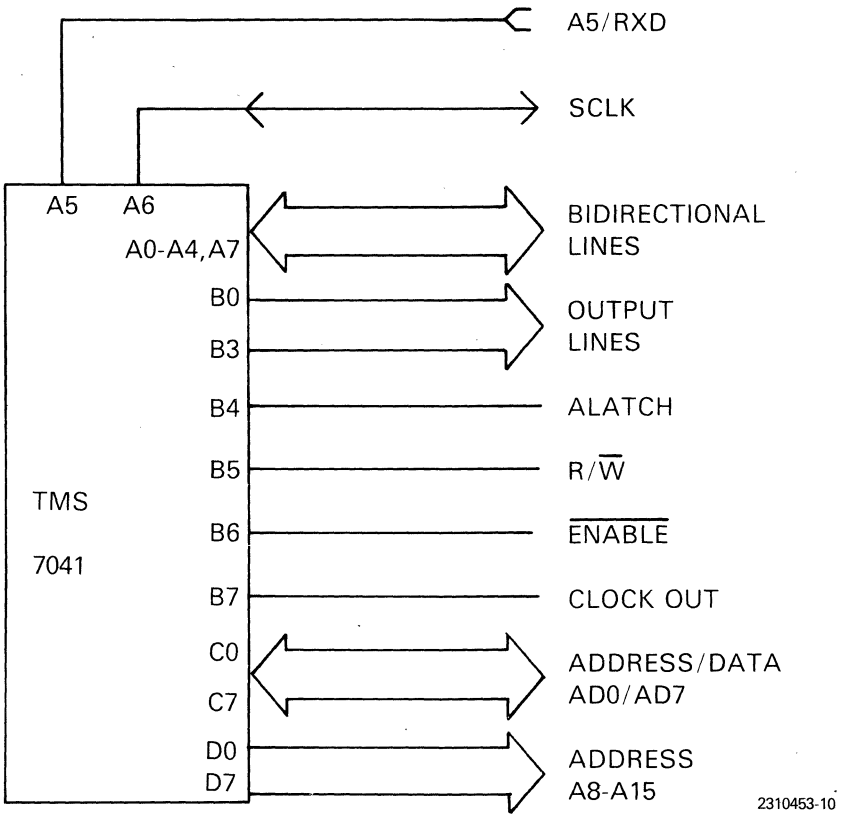


Figure 5-2. I/O Ports—Full Expansion Mode

5.4 PROM AND RAM MEMORY

Address lines A11 through A15 select PROM read operations or RAM operations through demultiplexing circuits. RAM read or write enabling is a direct function of the TMS 7041 through a READ signal. Model 703/707 terminals have two 1024 by 4 RAM memory chips implemented as 1024 bytes of RAM memory. The PROM has 512 available bytes of memory. The RAM and PROM memories are addressed by address lines A0 through A9.

5.5 FULL-ASCII KEYBOARD

The 52-key full-ASCII keyboard is logically arranged in a matrix that is seven rows deep and eight columns wide. Three address lines (A0 through A2) strobe the keyboard by rows. The depression of a key in the row being strobed makes a logic connection between that row input and that key's column output. The eight column outputs are multiplexed to the data bus along with the selections made on eight special function switches. The special function switches are:

- Keyboard **CTRL** key
- Keyboard **SHIFT** key
- Control panel **UPPER CASE** switch
- Control panel **ONLINE** switch
- Control panel **LOCAL COPY** switch
- Parity pencil switches (2)
- Compressed print (80/132 column) pencil switch

Figure 5-3 shows the key-switch layout with each key numbered. Table 5-1 shows the Model 703/707 keyboard matrix. The numbers in the matrix of Table 5-1 correspond to the key-switch numbers in Figure 5-3 with the exceptions of the two keyboard special function keys.

5.6 TERMINAL CONTROL PANEL

Six operator switches and three LEDS are mounted on the control panel circuit board. The switches are accessible from the surface of the Model 703/707 operator's panel.

- **PWR** LED
- **CMD** LED
- **LINE RDY** LED
- **UPPER CASE** switch
- **ONLINE** switch
- **LOCAL COPY** switch

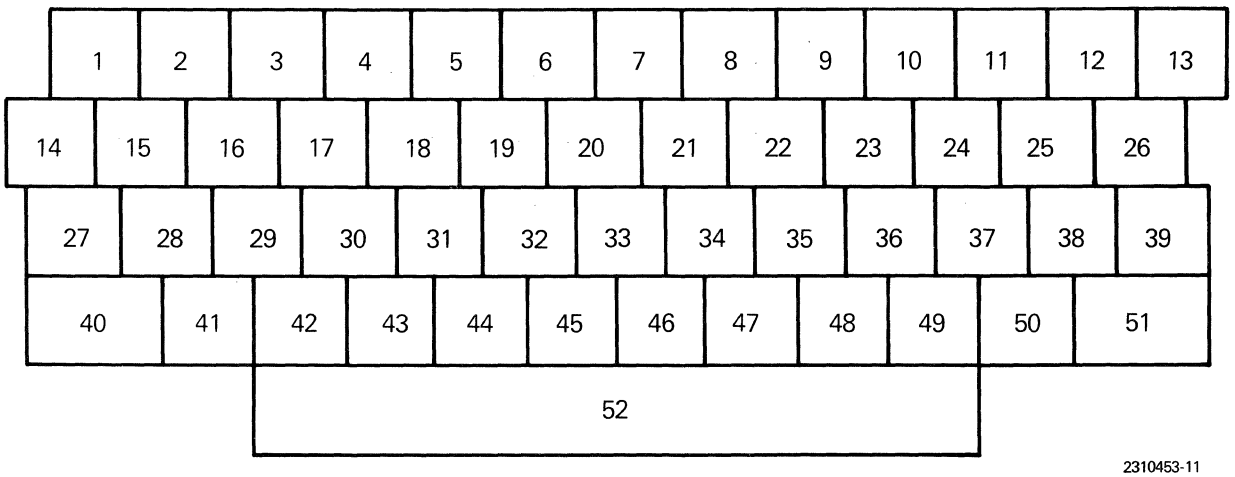


Figure 5-3. Key-Switch Layout

Table 5-1. Model 703/707 Keyboard Matrix

	Column 0	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Row 0	25	37	12		52	26	38	14
Row 1	48	11	49	50	10	01	02	03
Row 2	04	05	06	07	08	09		
Row 3	28	45	43	30	17	31	32	33
Row 4	22	34	35	36	47	46	23	24
Row 5	15	18	29	19	21	44	16	42
Row 6	20	41					13	39

- Parity select pencil switches (2)
- Compressed print (80/132 column) pencil switch

The functions of these keys are described in Section 3 of this manual.

A portion of the terminal's power circuit and the driver for the paper advance motor are located on the control panel circuit board. The remaining electronic circuitry is located on the main circuit board inside the terminal. A cable from the control panel circuit board connects to a jack on the main circuit board.

5.7 PRINTHEAD AND PRINTHEAD STEP MOTOR

The operator-replacable thermal printhead consists of nine resistive elements arranged in a single column. The nine elements are plasma-deposited on a glass rod. Characters are printed one column at a time in either direction. The required elements for the portion of the character being printed are turned on for a maximum of two milliseconds. The final printed character conforms to a 5 by 7 character font with descenders. The top seven elements are used for characters without descenders; the bottom seven elements are used for characters with descenders.

The printing direction is determined by a firmware line analyzer. At the end of each line, the line analyzer commands the printhead to move to either the first or last character of the next line, whichever is closer. If no characters are received for 60 milliseconds and no line terminator (carriage return, 81st, or 133rd character) is received, the line is printed left to right. The printhead step motor drives the printhead through a lead screw.

5.8 PAPER ADVANCE MOTOR

The paper advance function in the Model 703/707 is initiated by a single depression of the **LINE FEED** or **PAPER ADV** key on the terminal, or by the receipt of the line feed control character from another device. The paper advance motor is controlled through an octal flip-flop and line driver/inverter circuit. The driver/inverter for the paper advance motor is physically located on the control panel circuit board. For each increment of the paper advance motor, the paper in the carriage is advanced 4.24 mm $\pm$0.38 mm (0.167 in $\pm$0.15 in). A continued depression of the **LINE FEED** key causes a repeat line feed at a rate of 10 lps. A continued depression of the **PAPER ADV** key causes the paper advance motor to run continuously (as opposed to incrementally) until the **PAPER ADV** key is released.

5.9 POWER SUPPLY SUBSYSTEM

The terminal power supply is a flyback converter which operates from an ac line voltage after it is stepped down to 20 Vac by a wall transformer. The terminal operates from either domestic (90 Vac to 134 Vac) or foreign (187 Vac to 264 Vac) power distribution systems with the proper wall transformer in use. Other power and voltage specifications are listed in Section 1 of this manual. The power supply also incorporates over voltage/current protection. The standard power supply provides the following voltages to the terminal electronics:

- + 5 Vdc (regulated)
- + 17 Vdc (unregulated)
- − 17 Vdc (unregulated)
- + 12 Vdc (regulated)
- − 12 Vdc (regulated — used only in the Model 703)
- − 5 Vdc (regulated — used only in the Model 707)

5.10 USER INTERFACE MODULE (UIM) INTERFACE

An interface for an optional UIM is provided on Model 703/707 terminals. A UIM, for example the Auto-Access Cartridge, is a plug-in module designed to enhance and extend the standard features of the Model 703/707 terminal. The 44-pin (SULLINS EZA 22 DRXN) connector is physically located on the main circuit board and is accessible by the operator beneath the paper compartment door.

5.10.1 Interface Signals

The signals provided at the interface connector include address, data, memory timing, and system control signals. There are also some special signals for the Model 707 tone dialer control. The signals at this interface, with the exception of power signals and the ANAOUT signal, are TTL logic signals. The UIM interface signals are described as follows.

5.10.1.1 ADDRESS A0 through A12. Address lines A0 (LSB) through A12 (MSB) are from the terminal address bus. These address lines provide up to 8K bytes of address space in each decoded memory block at the interface.

5.10.1.2 DATA D0 through D7. Data lines D0 through D7 are from the terminal data bus. These data lines provide the data exchange path between a UIM and the terminal processor.

5.10.1.3 READ. This signal is the read/write signal from the terminal processor. It indicates whether a memory read or write operation is in progress.

- MCNTRL — This is the mode control pin to the terminal microcomputer. When held active (TTL high), it disables the internal system ROM on the terminal microcomputer. It is then necessary to access all system memory through the UIM connector using the signal EXTSYS and the other signals (D0-D7, A0-A11, and READ) provided for memory access.

WARNING

It is necessary to use care when disabling the terminal system ROM using MCNTRL. All reset, interrupt, and trap vectors must be defined, and any system functions which are necessary (such as printing, communications, keyboard scan) have to be programmed.

- NXTDIG — This signal is available on the Model 707 when the Auto-Access Cartridge, incorporating a Texas Instruments tone dialer chip, is used. This signal indicates that the tone dialer is ready to accept another digit for dialing. The signal is read by the terminal processor at general purpose I/O port A, bit 1.
- DP — This signal is used in the Model 707 only, with an optional Auto-Access Cartridge incorporating a Texas Instruments tone dialer. This signal is the inverted UIMCS2— signal. DP is an indication to the tone dialer that a digit is present to be dialed.

- ANAOUT — This signal is used on the Model 707 when an Auto-Access Cartridge, incorporating a Texas Instruments tone dialer, is used. This signal is the analog output from the tone dialer and is connected to modem circuits for tone dialing.

- MDMCLK — This signal is a 4.032 MHz clock. It is used to drive the modem I.C. in the Model 707 only. It is also brought out of the UIM interface connector as a general usage clock signal.

5.10.1.4 CHIP SELECTS. There are eight chip select lines available at the UIM interface. They are provided to enable blocks of memory where user defined memory mapped devices can be accessed. The signals are TTL logic signals, and are active when low. Table 5-2 contains the information necessary to use these lines.

Table 5-2. UIM Chip Select Address Space, and Read/Write Timing

Parameter	Low Address (Hex)	High Address (Hex)	Block Size
SIGNAL			
UIMRAM1— (NOTE 1)	6000	67FF	2K
UIMRAM2— (NOTE 1)	6800	6FFF	2K
UIMRAM3—	7000	7FFF	4K
UIMROM2— (NOTE 2,3)	A000	BFFF	8K
UIMROM1— (NOTE 3)	8000	9FFF	8K
UIMCS1—	C000	DFFF	8K
UIMCS2—	E000	EFFF	4K
EXTSYS— (NOTE 4)	F000	FFFF	4K

Legend

READ TIMING
Ta(A) = 485 ns min.
635 ns typ.
Ta(CS) = 385 ns min.
595 ns typ.

WRITE TIMING:
Tsu = 210 ns min.
370 ns typ.
Th = 65 ns min.
= 100 ns typ.

Ta — DATA ACCESS TIME
A — ADDR. VALID
CS — CHIP SELECT VALID
Tsu — DATA SETUP TIME
Th — DATA HOLD TIME

Usable devices include:
TMS 2114
TMS 4732
TMS 2532 (350 nS)
TMS 2564
TMS 4764
TMS 4016
MB 8416

NOTES

1. Open-collector output. Must be pulled-up on UIM PCB.

2. The terminal processor looks at location 8000(H) to determine if a module is installed. Location 8000(H) must contain 55(H) to indicate a module is installed.

3. These signals are write protected (active only when reading in the specified address range).

4. The address space from F000(H) through FFF(H) is available only if the signal MCNTRL is held (high) active.

5.10.1.5 Power Signals. Refer to the paragraph on Signal Loading for current limits on power signals.

- +5 is +5 volts (±5 percent) from the terminal power supply
- +12 is +12 volts (±5 percent) from the terminal power supply
- −5 is −5 volts (±10 percent) from the modem circuits (available on the Model 707 only)
- −12 is −12 volts (±5 percent) from the terminal power supply (available on the Model 703 only)
- GND is signal ground from the terminal power supply

5.10.2 Signal Loading

The signals at the interface are all TTL level signals, with the exception of the power signals. Their loading/sourcing characteristics are as follows:

Signal	Source	Maximum Current
+5 volts	Power source	250 mA to module circuits
+12 volts	Power source	20 mA to module circuits
−12 volts	Power source (Model 703)	20 mA to module circuits
−5 volts	Power source (Model 707)	5 mA to module circuits

Terminal I/O circuit capabilities are as follows:

Circuit	Capabilities
All ADDR and DATA lines sink	4 mA (0.4 V maximum)
All ADDR and DATA lines source	1 mA (2.4 V minimum)
All other output lines sink	0.8 mA (0.4 V maximum)
All other output lines source	0.7 mA (2.4 V minimum)

UIM input/output circuit requirements are as follows:

Circuit	Requirements
All DATA lines must source	0.25 mA (2.4 V minimum)
All DATA lines must sink	2 mA (0.4 V maximum)

5.10.3 Connector Pinout

The UIM interface connector sits horizontally on the surface of the main circuit board, below the paper door. The connector as viewed from the front of the terminal is organized as in Table 5-3.

5.11 SYSTEM CLOCK AND BELL CIRCUIT

The system clock in the Model 703/707 is an 8 MHz clock signal generated by a custom logic array (CLA). Through a counter circuit, the system clock signal goes low for 420 usec every 12.7 msec to provide timing for the keyboard scan and task scheduler routines. On the Model 707 the CLA also provides a 4 MHz signal to the modem circuitry.

The Bell circuit is operated by a reduced system clock frequency from the clock counter circuit, and is software controlled in the CLA.

5.12 MODEL 703 RS-232-C INTERFACE

Communication between the line and the Model 703 terminal are implemented by an ASCII asynchronous serial interface that conforms to the electrical standards set by the EIA (RS-232-C) and the CCITT (V.24). Table 5-4 lists the EIA signals that are provided at the EIA interface connector on the rear of the terminal.

These signals are listed and defined in Section 4 of this manual.

5.13 MODEL 707 INTERNAL MODEM

The Model 707 modem is a TMS 99532 serial, asynchronous, modem chip that uses frequency shift keying as its method of modulation. The modem is capable of connecting directly to the telephone system through the direct-connect port or through the acoustic coupler to the telephone system with an optional acoustic coupler. A 4-MHz clock input is provided to the modem from the special function IC that supplies the system clock signal.

Table 5-3. UIM Connector Pinout

Rear of terminal

A	B	C	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

Front of terminal

Signature	Pin	Signature	Pin	Signature	Pin	Signature	Pin
A0	E	D0	R	UIMROM1—	21	+5 V	L
A1	F	D1	14	UIMROM2—	18	+5 V	10
A2	H	D2	S	UIMCS1—	22	−5 V (707)	T
A3	5	D3	15	UIMCS2—	U	−12 V (703)	9
A4	4	D4	K	UIMRAM1—	W	+12 V	1
A5	3	D5	6	UIMRAM2—	19	GND	11
A6	2	D6	7	UIMRAM3—	X	GND	M
A7	B	D7	8	MCNTRL	16	ANAOUT (707)	A
A8	C			EXTSYS—	17	NXTDIG (707)	V
A9	D	A11	P	READ	J	DP (707)	Y
A10	N	A12	13			MDMCLK	Z

Table 5-4. EIA RS-232-C Interface Signals

Data Set Connector Pin Number	Circuit EIA	Circuit CCITT	EIA Signal Name	Signature
1	AA	101	PROTECTIVE GROUND	GND
2	BA	103	TRANSMITTED DATA	XMTD
3	BB	104	RECEIVED DATA	RCVD
4	CA	105	REQUEST TO SEND	RTS—
5	CB	106	CLEAR TO SEND	CTS—
6	CC	107	DATA SET READY	DSR—
7	AB	102	SIGNAL GROUND	GND
20	CD	108.2	DATA TERMINAL READY	DTR—
23	CH	111	DATA SIGNAL RATE SELECTOR	—

The key features of the TMS 99532 modem include:

- Originate and answer modes
- Full-duplex capability
- Bell 103 compatibility
- 300 bps data rate
- CCITT V.25-compatible answer tone
- On-chip filtering, modulation, and demodulation
- TTL-compatible digital interface

The TMS 99532 uses the following standard carrier frequencies:

Originate mark:	1270 Hz
Originate space:	1070 Hz
Answer mark:	2225 Hz
Answer space:	2025 Hz

5.14 MODEL 707 ACOUSTIC COUPLER INTERFACE

The Model 707 terminal contains an interface which accommodates the connection of a specially designed acoustic coupler. The interface is located at the rear of the terminal near the direct-connect modular phone jack. The interface is implemented as a six pin connector, designated J3, and is labeled **A.C.** on the rear of the terminal. This interface is intended for use only with the Model 703/707 optional acoustic coupler.

5.14.1 Interface Signals

There are five signals available at the acoustic coupler interface. The signals and connector pins are described below:

- A.C. ENABLE — This signal is currently used on the international (Model 709) version of the Model 707. This signal enables the acoustic coupler circuits, and disables the direct connect circuits when the acoustic coupler is connected.
- XMT DATA — This signal carries transmitted data from the internal modem of the Model 707 to the acoustic coupler for transmission over the telephone communications line.
- RCV DATA — Data received by the acoustic coupler from the telephone communications line is carried over this line to the Model 707 internal modem.
- + 17 V UNREG — This pin supplies power to drive the circuits in the acoustic coupler.
- − 17 V UNREG — This pin supplies power to drive the circuits in the acoustic coupler.
- GND — This pin provides signal and power ground for the circuits in the acoustic coupler.

5.14.2 Connector Pinout

The pin assignments for the acoustic coupler interface connector are shown in Table 5-5.

Table 5-5. Acoustic Coupler Connector Pinout

Pin	Signal
1	GND
2	+ 17 V UNREG
3	− 17 V UNREG
4	RCV DATA
5	A.C. ENABLE (Model 709 only)
6	XMT DATA

5.15 MODEL 707 DIRECT-CONNECT INTERFACE

The Model 707 contains an interface which provides a normal data communications path between the Model 707 and the switched public telephone network. The connector is located at the rear of the terminal near the acoustic coupler interface connector. This direct-connect interface is implemented as a six-pin connector, and is designated J1, and is labeled WALL on the rear of the terminal.

5.15.1 Compatibility

The interface supports only TIP and RING on its two center conductors. The remaining four conductors, in any compatible six-pin phone jack, are open-circuited.

The following phone jacks are compatible with the Model 707 direct-connect interface.

- RJ11 (Standard household jack with TIP and RING)
- RJ12 (TIP and RING, A and A1)
- RJ13 (TIP and RING, A and A1)
- RJ14 (two lines, TIP and RING, TIP1 and RING1)

5.15.2 Connector Pinout

The pin assignments for the direct-connect interface connector are shown in Table 5-6.

Table 5-6. Direct-Connect Interface Pinout

Pin	Signal	
	Wall	Phone
1	(No connection)	(No connection)
2	Pass through A	Pass through B
3	TIP	RING
4	RING	TIP
5	Pass through B	Pass through A
6	(No connection)	(No connection)

5.16 MODULAR TELEPHONE JACK

The Model 707 contains a six-pin modular telephone jack that can be used to connect a standard telephone set. This jack, designated J2, is located on the rear of the terminal, and is labeled **PHONE**. This modular telephone jack permits normal telephone communication while the terminal is in a direct-connect configuration, and *is not* transmitting or receiving data.

5.17 AURAL MONITOR

The Model 707 is equipped with an aural monitor that allows the operator to monitor the phone line when the terminal is dialing in the direct-connect configuration. The aural monitor is enabled by the TMS 7041 through a decoder. The aural monitor speaker is also the bell alarm in the Model 707. Either the bell circuit or the aural monitor circuit, when they are enabled, can control the aural monitor's operation. The bell circuit operates identically in both terminals.

5.18 MODEL 707 OPTIONAL BATTERY PACK AND RECHARGE CIRCUIT

The power supply on the Model 707 terminal has a built-in recharge circuit for the optional battery pack. The battery pack can be installed by the customer using the installation procedure in Section 2 of this manual. Recharge of the battery pack takes place when the terminal's line transformer is plugged into a 115 Vac source, with the **POWER** switch on or off. Recharge is inhibited only while the printhead is in motion.

5.18.1 Battery Type and Configuration

The battery system consists of eight lead-acid cells, each cell is comparable in size to a D size flashlight battery. The battery pack is configured as two units with four cells each. A two-wire cable and connector is attached to each battery unit.

5.18.2 Battery Operating Characteristics

The operating and recharge times of the Model 707 terminal, when operating with the optional battery pack, are as follows:

- Minimum operating time — One hour from a completely charged battery pack. (Typically, this time is greater than three hours.)
- Maximum operating time — This is not specified because of the combined dependence on connection time and the amount of printing done during that time.
- Recharge time — Ten hours (with the terminal not printing) is required to recharge the battery pack, from a normal power-down caused by a low battery.

5.18.3 Low Battery Indication and Power-Down

The Model 707 terminal automatically powers down when the battery pack reaches its low charge level.

The **PWR** LED begins to flash no less than four minutes before the battery pack's low charge level is reached.

Table 5-7 shows the battery charge level threshold voltages. The battery charge level is determined by comparing the battery voltage to a fixed reference voltage. The minimum and maximum values are the result of five components: the reference voltage, three resistors, and one diode (all at worst case tolerance).

CAUTION

Battery damage can occur if the POWER switch is not set to the off position after a power-down caused by a low battery voltage. There is a current draw of 2.5 mA from the batteries until the POWER switch is set to the off position after a low battery voltage power-down. The safety margin (power-down until battery damage) is a minimum of 168 hours (7 days).

5.18.3.1 Battery Restoration. Batteries discharged for greater than 168 hours after power-down *can possibly be restored* through multiple charge/discharge cycles. Refer to Section 6 of this manual for the restoration procedure.

Table 5-7. Battery Charge Level Threshold Voltages

Parameter	Min	Typical	Maximum	Result
Upper threshold voltage	14.89 V	15.23 V	15.59 V	**PWR** LED begins to flash.
Lower threshold voltage	14.12 V	14.45 V	14.78 V	Power supply shuts down.

Section 6

Maintenance

6.1 INTRODUCTION

This section contains preventive and corrective maintenance procedures, adjustment and alignment procedures, and removal and replacement instructions for all replaceable assemblies on the Model 703/707. It is intended to aid technical personnel in troubleshooting and isolating system malfunctions.

6.2 SPECIAL TOOLS AND MATERIALS REQUIRED

A Torx Head Screwdriver (T-15) is required for maintenance procedures.

6.3 MODEL 703/707 DISASSEMBLY

During this disassembly procedure the following subassemblies are removed from the terminal, in the order listed.

1. Top cover assembly
2. Keyboard assembly
3. Control panel circuit board
4. Print mechanism
5. Main circuit board

Before beginning this procedure, turn off the power to the terminal and remove the power cord. If a battery pack is installed, remove it using the procedure presented in Section 2 of this manual but do not reinstall the battery doors. If a UIM cartridge is installed, remove it after the power is disconnected.

1. Remove the top cover assembly.

   a. Remove two torx head, top cover hold-down screws, one from each battery compartment.

   b. Unlatch the paper door.

   c. Set the terminal down in its normal operating position. Notice the routing of the printhead cable through the cover. Remember this for reassembly purposes.

   d. Press the two top cover assembly releases, in the front of the base assembly, until the top cover assembly pops up.

   e. Pivot the top cover assembly up and pull it toward you to remove the four rear tabs from their slots in the rear of the base assembly.

2. Remove the keyboard assembly.

   a. Lift the keyboard assembly from its supports.

   b. Unplug the keyboard assembly's ribbon cable from plug P5 on the main circuit board.

3. Remove the control panel circuit board.

   a. Unplug the paper advance motor (on the right side of the print mechanism) from plug P2 on the control panel circuit board.

   b. Press the locking tabs of the board supports, and lift the rear edge of the control panel circuit board from its supports.

   c. Unplug the control panel circuit board ribbon cable from plug P6 on the main circuit board.

   d. Pull the control panel circuit board up and toward the rear of the terminal to remove it.

4. Remove the print mechanism.

   a. Unplug the printhead motor (on the left side of the print mechanism) from plug P3 on the main circuit board.

   b. Unplug the printhead ribbon cable from plug P2 on the main circuit board.

   c. Lift out the print mechanism.

5. Disassemble the print mechanism. Refer to Figure 6-1 for the locations of the various parts.

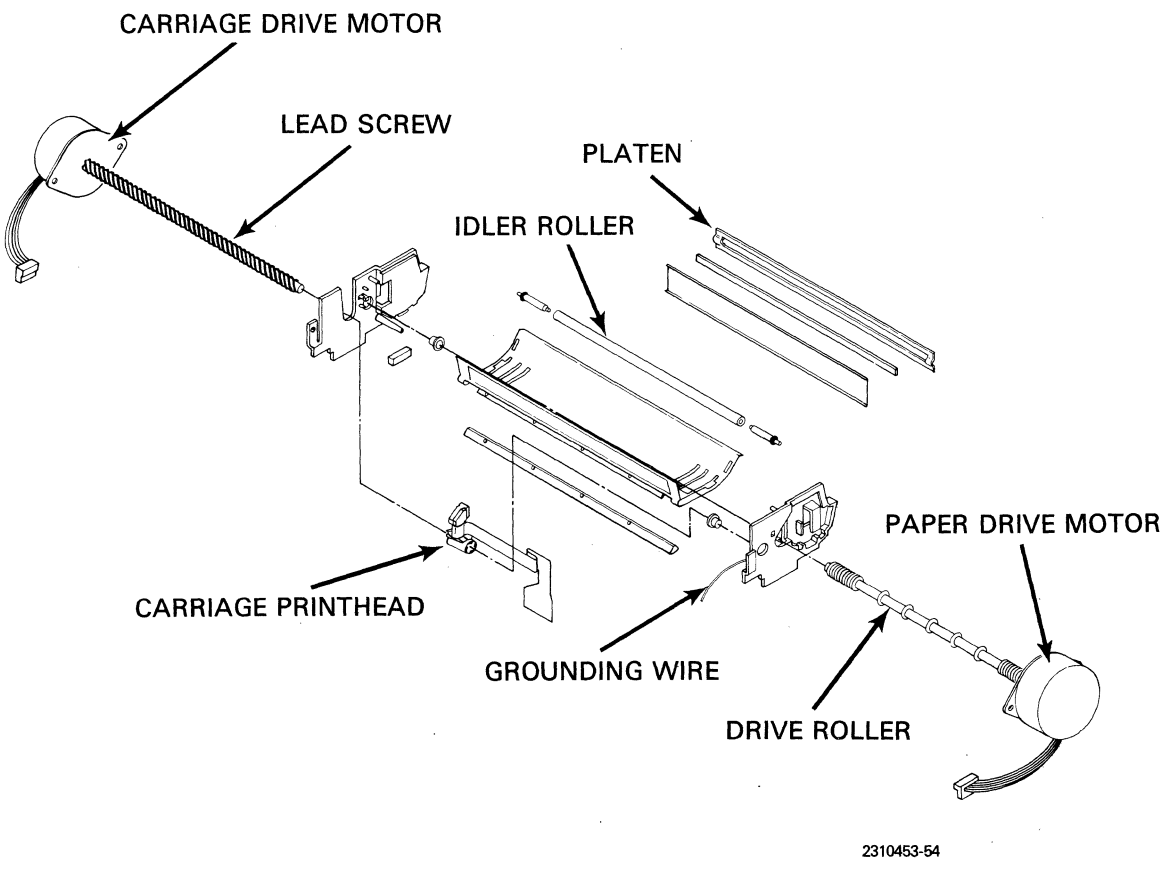


Figure 6-1. The Print Mechanism

a. Remove the grounding wire from between the right motor mount and the flange of the paper drive motor.

b. Insert a screwdriver between one of the tabs and the flange on the paper drive motor and open it slightly. Grasp the paper drive motor and twist it clockwise until the flange comes loose as shown in Figure 6-2.

c. Repeat the procedure for the other flange until it is loose.

d. Turn the paper drive motor until both flanges are clear of the tabs and pull the paper drive shaft completely out of the print mechanism.

e. Lift out the idler roller from the print mechanism and set it aside (refer to Figure 6-3).

f. Turn the print mechanism around so that the carriage drive motor is facing you.

g. Insert a screwdriver between one of the tabs and the flange on the carriage drive motor and open it slightly. Grasp the paper drive motor and twist it clockwise until the flange comes loose.

h. Repeat the procedure for the other flange until it is loose.

i. Turn the carriage drive motor counter-clockwise until both flanges are clear of the tabs and lift the carriage drive motor out of the motor mounts.

j. Slide the printhead carriage assembly off the lead screw of the carriage drive motor (refer to Figure 6-4).

k. Snap the platen out of the motor mount (refer to Figure 6-5).

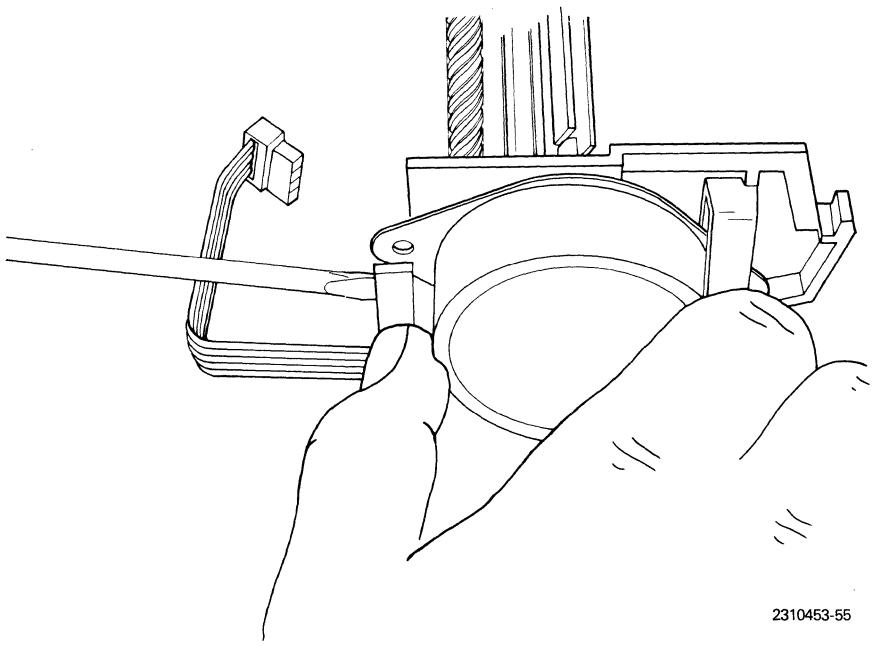
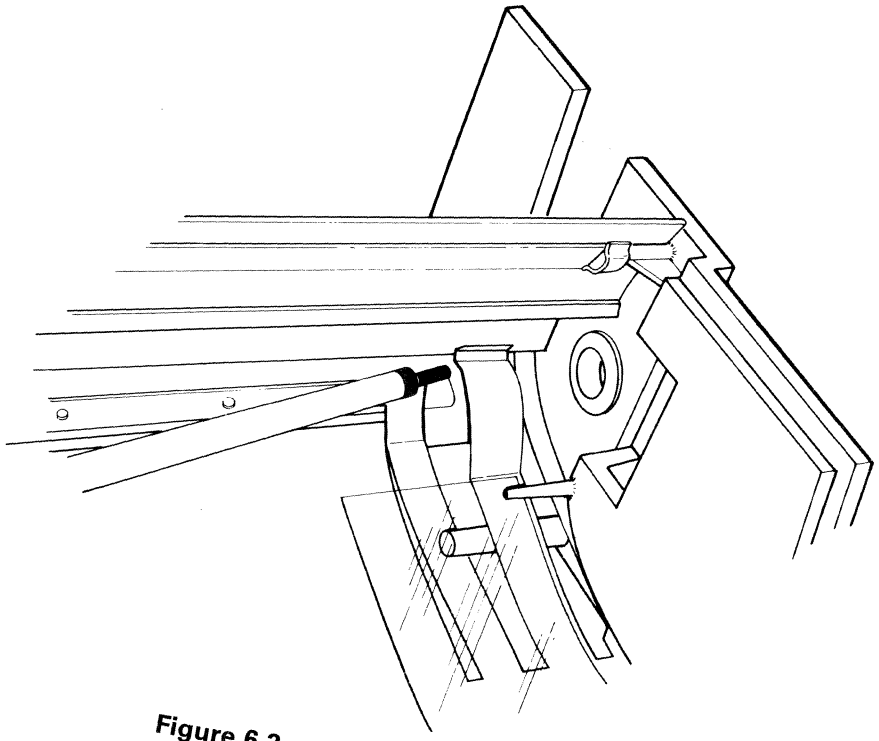


Figure 6-2. Releasing the Flange



2310453-56

Figure 6-3. Removing the Idler Roller

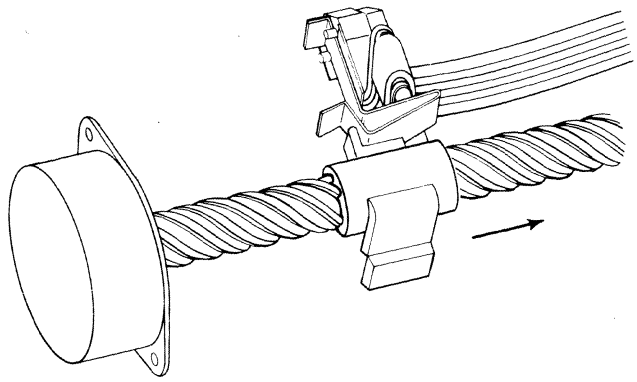


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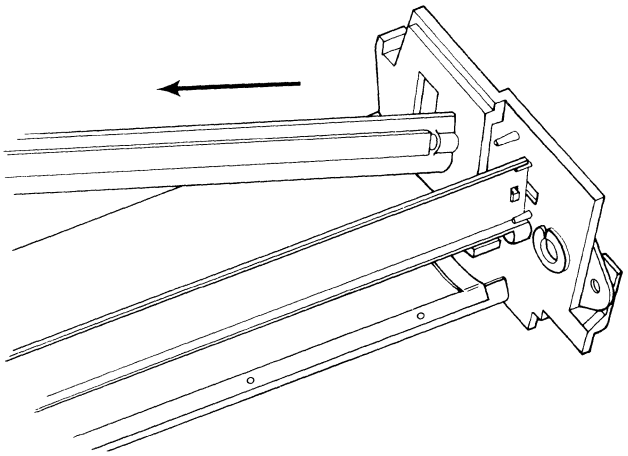
Figure 6-4. Removing the Printhead Carriage Assembly



2310453-58

Figure 6-5. Removing the Platen

6. Remove the main circuit board.

   a. Remove one torx head hold-down screw from the center of the main circuit board.

   b. On Model 707 terminals, pull the battery cables so that they are free of the base assembly.

   c. Lift the main circuit board from the front edge and pull it toward the front to allow the connectors and **POWER** switch on the rear edge to clear the base assembly.

6.4 MODEL 703/707 REASSEMBLY

Reassembly of the Model 703/707 is accomplished by reversing the disassembly procedure.

1. Install the main circuit board.

   a. Slide the connectors, potentiometer, and **POWER** switch on the rear edge of the board into their respective holes.

   b. Lower the board so that the two plastic locating posts from the base assembly go through their respective holes in the board.

   c. Install the torx head hold-down screw.

   d. On the Model 707 terminal, route the battery cables through to the battery compartment.

2. Reassemble the print mechanism.

   a. Install the platen in the motor mount assembly behind the paper guide portion of the tray, with the curved side of the platen faced down (refer to Figure 6-6).

   b. Insert the shaft through the opening of the right motor mount and seat it into the nylon bearing of the left motor mount (refer to Figure 6-7).

   c. Turn the paper drive motor counterclockwise until the flanges snap into the tabs.

NOTE

If you install the paper drive motor correctly, you will see wires coming out of the *bottom* of the motor.

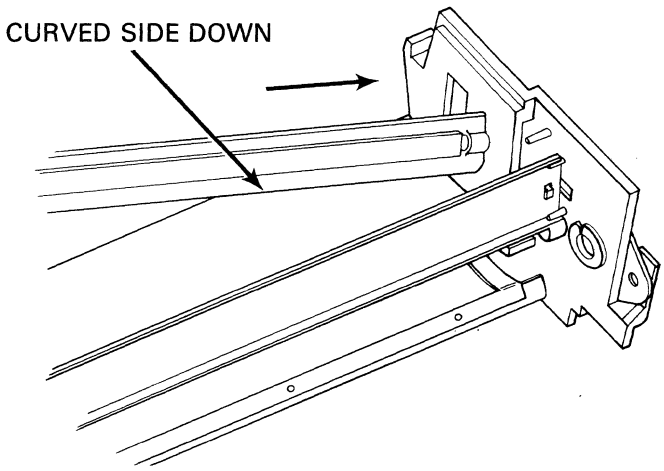


Figure 6-6. Installing the Platen

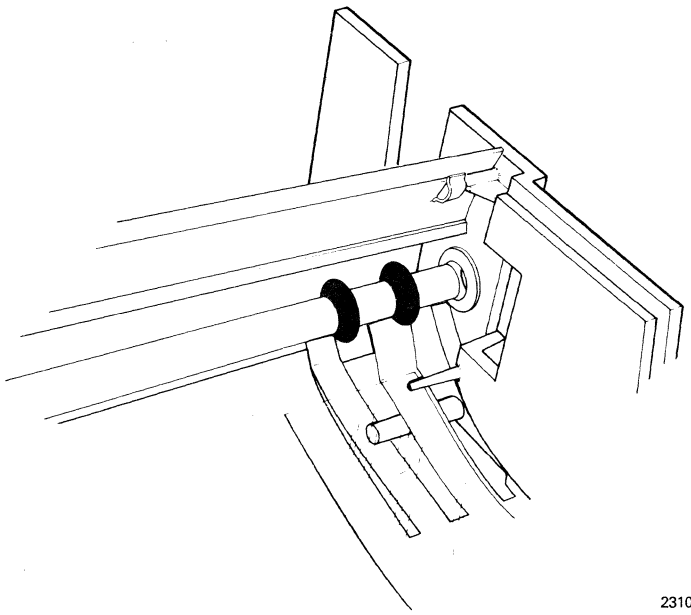


Figure 6-7. Inserting the Shaft into the Nylon Bearing

d. Position the idler roller under the drive roller and press it back under the drive roller until it snaps into place on both sides (refer to Figure 6-8).

e. Slide the printhead carriage onto the lead screw close to the carriage drive motor with the printhead facing *away* from you (refer to Figure 6-9).

f. Lower the carriage drive assembly into the slot in the left motor mount, making sure that the foot of the printhead carriage is under the carriage guide (refer to Figure 6-10).

g. Insert the right end of the lead screw into the nylon bearing in the right motor mount (refer to Figure 6-11).

h. Grasp the carriage drive motor and turn it clockwise until the flanges snap into the tabs of the motor mount.

NOTE

If you install the carriage drive motor correctly, you will see wires coming out of the *bottom* of the motor.

i. Insert the grounding wire between the right motor mount and flange of the paper drive motor.

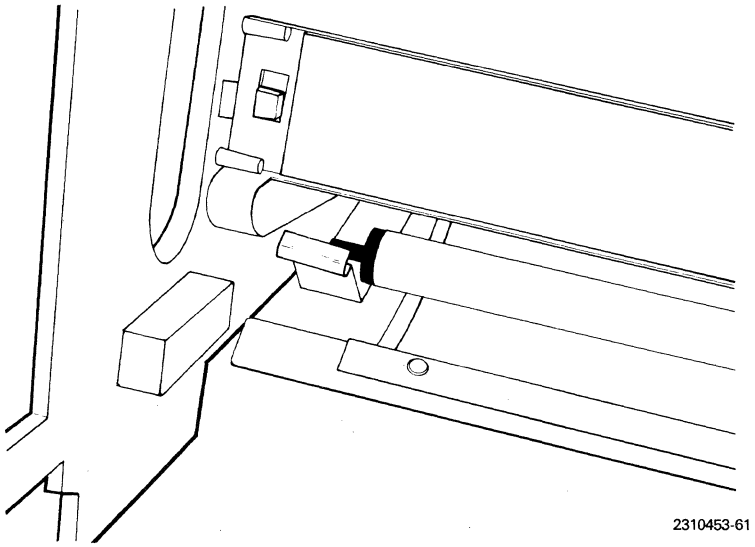


Figure 6-8. Snapping the Idler Roller into Place

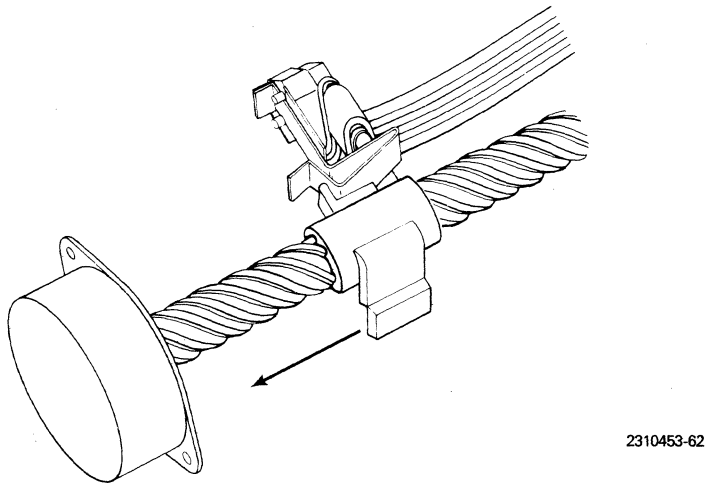


Figure 6-9. Sliding the Printhead onto the Lead Screw

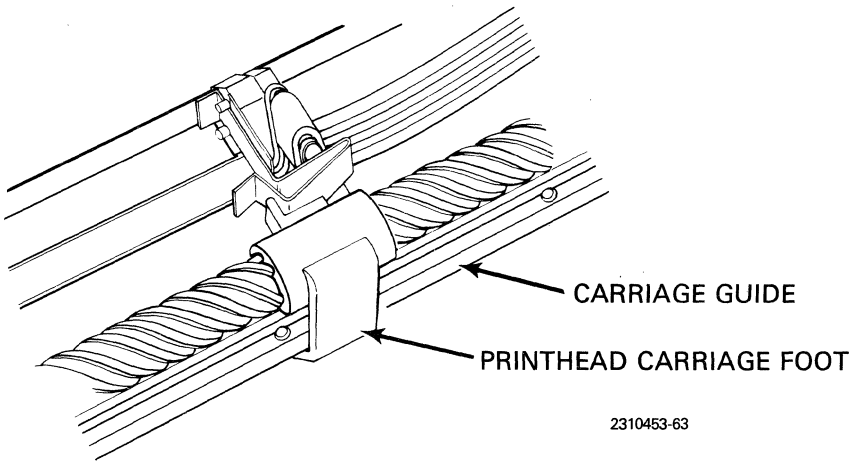


Figure 6-10. Printhead Carriage Placement

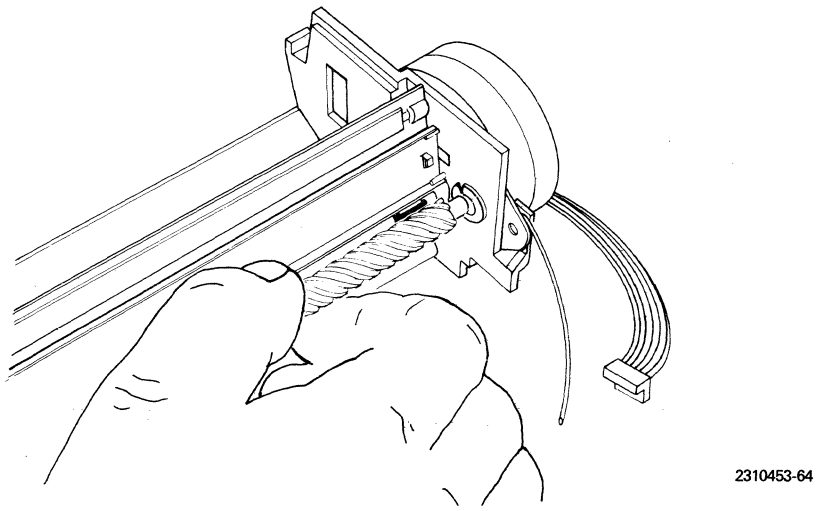


Figure 6-11. Inserting Lead Screw into Nylon Bearing

3. Install the print mechanism.

   a. Set the print mechanism into the slots in the base assembly.

   b. Plug the printhead ribbon cable into plug P2 on the main board.

   c. Plug the printhead motor into plug P3 on the main board.

4. Install the control panel circuit board.

   a. Place the two tabs on the front edge of the control panel circuit board into their slots in the base assembly.

   b. Plug the ribbon cable on the left side of the board into plug P6 on the main circuit board.

   c. Lower the board so that five tabs on the base assembly extend through the five slots in the control panel circuit board.

CAUTION

When installing the control panel circuit board, watch that the printhead ribbon cable is not pinched, and its routing is not disturbed.

d. Plug the paper advance motor into the control panel circuit board.

5. Install the keyboard.

   a. Plug the keyboard ribbon cable into plug P5 on the main circuit board.

   b. Place the keyboard on its supports (four supports to the front, eight supports to the rear.

6. Install the top cover assembly.

   a. Place the four tabs on the rear of the top cover assembly into their slots on the rear of the base assembly.

   b. Reroute the printhead cable through the slots in the cover, while lowering the top cover assembly until it is seated on the base assembly and it snaps into place.

   c. Set the terminal on its rear edge to replace the two top cover hold down screws, one in each battery compartment.

6.5 PRINTHEAD REMOVAL AND REPLACEMENT

Use the following procedure to remove and replace the Model 703/707 printhead.

1. Open the paper compartment door.

2. If a cartridge is installed in the terminal, move the printhead to the middle of the carriage, turn the terminal power off, remove the cartridge, and turn the power back on. If a cartridge is not installed, make sure the printhead is at the left margin by pressing the **RTN** key.

3. Remove the plastic printhead positioning tool from the package that contains the new printhead.

4. Install the printhead positioning tool in the cutout behind the cartridge slot, as shown in Figure 6-12.

5. Press and hold the space bar until the printhead is stopped by the printhead positioning tool.

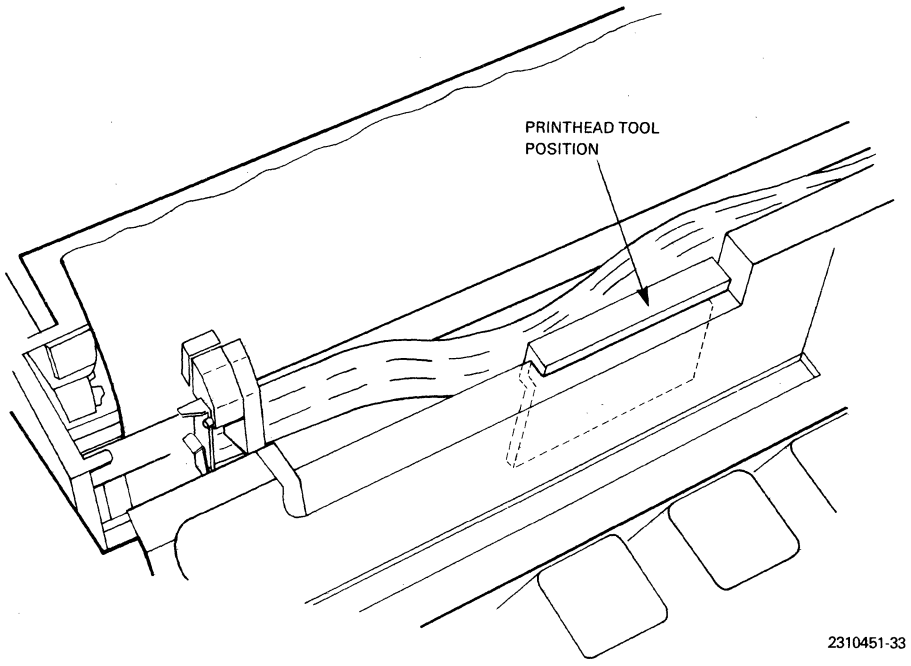


Figure 6-12. Tool Placement

6. Place the **POWER** switch in the off position.

7. Locate the metal retaining clip on the left side of the printhead. Squeeze the clip to release it, then move the clip and ribbon cable away from the printhead (refer to Figure 6-13).

8. Pull the printhead to the left, off of its two locating pins (refer to Figure 6-14).

9. Gently pull the carriage away from the paper. Slide a new printhead onto the locating pins.

10. Replace the retaining clip/ribbon cable as follows (refer to Figure 6-15):

    a. Squeeze the clip and slide it under the printhead assembly.

    b. Line up the locating pin with the grooves on the clip.

11. Press against the vertical portion of the clip to assure the ribbon cable is in full contact with the printhead.

12. Place the **POWER** switch in the on position. This moves the printhead to the left, away from the positioning tool.

13. Remove and discard the printhead positioning tool.

14. Feed the paper through the slot in the paper compartment cover, close and latch the cover.

15. Perform the barberpole test to verify that the printhead makes contact across the entire width of the paper.

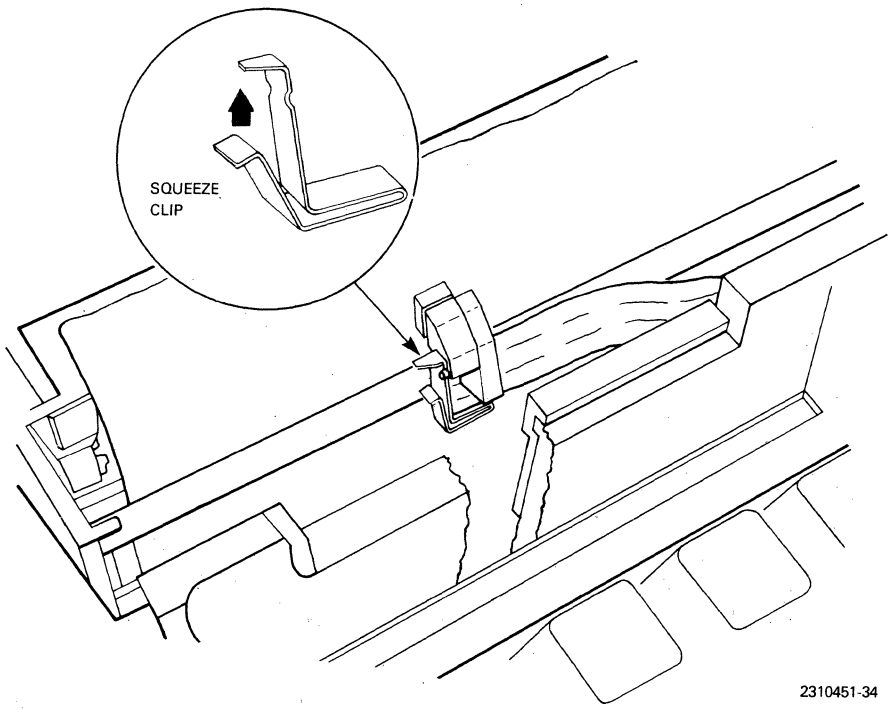


Figure 6-13. Retaining Clip Release

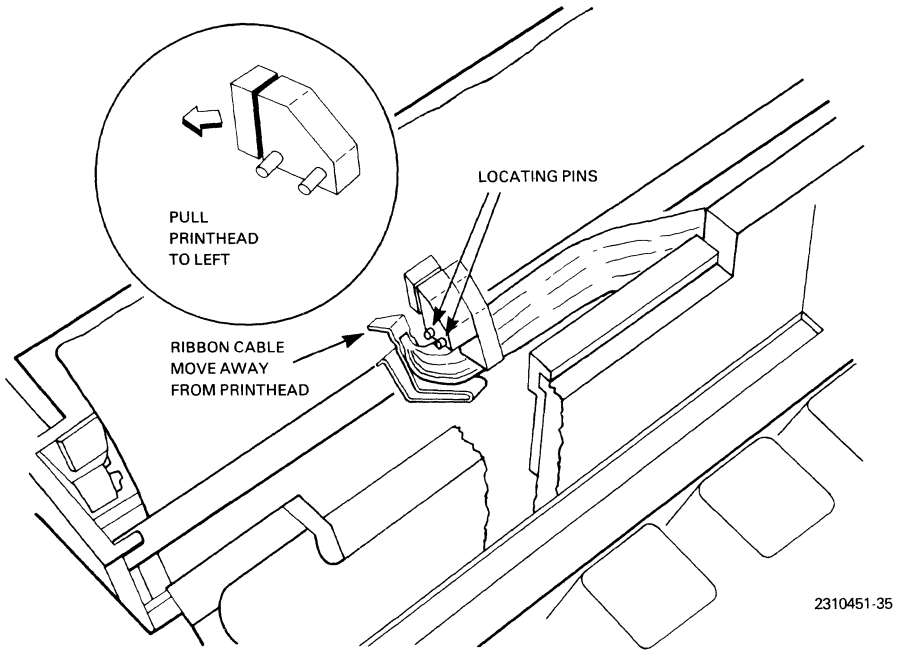


Figure 6-14. Disassembling the Printhead

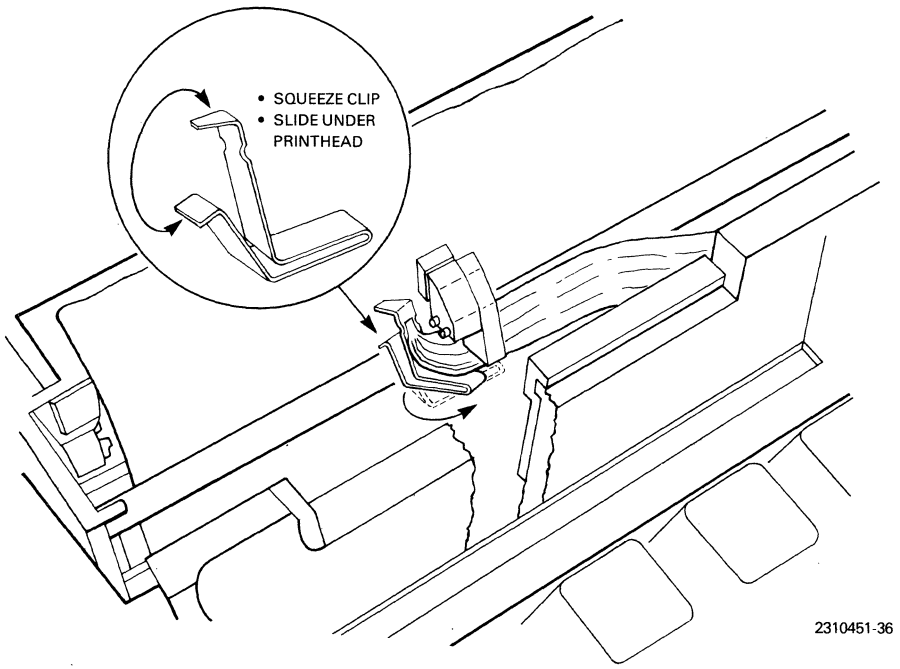


Figure 6-15. Replacing the Clip/Ribbon Cable

6.6 BATTERY PACK REMOVAL AND REPLACEMENT

The Model 707 terminal accommodates an optional battery pack when the terminal is in use, away from a standard ac power source. The battery pack is operator-installable. The installation and removal procedures are presented in Section 2 of this manual.

6.7 ADJUSTMENTS

This section describes the adjustments for print contrast and the acoustic coupler transmit level.

6.7.1 Print Image Contrast Adjustment

1. Refering to Figure 6-16, locate the thumbwheel labeled **CONTRAST** on the back of the terminal.

2. For *darker* print, rotate the thumbwheel toward + while printing, until the character image is dark enough.

NOTE

If the print blurs, you have rotated the thumbwheel too far. Turn it in the opposite direction.

3. For *lighter* print, rotate the thumbwheel toward — while printing, until the character image is light enough.

6.7.2 Optional Acoustic Coupler, Transmit Level Adjustment

The acoustic transmit level is factory-calibrated. Adjustment is normally only required to compensate for unusual conditions in the telephone or telephone network.

Adjust the transmit level with a small flat-bladed screwdriver, through the access hole on the side of the acoustic coupler (refer to Figure 6-17).

To correct connection problems, increase the transmit level by turning the adjustment screw clockwise. To reduce data errors, decrease the

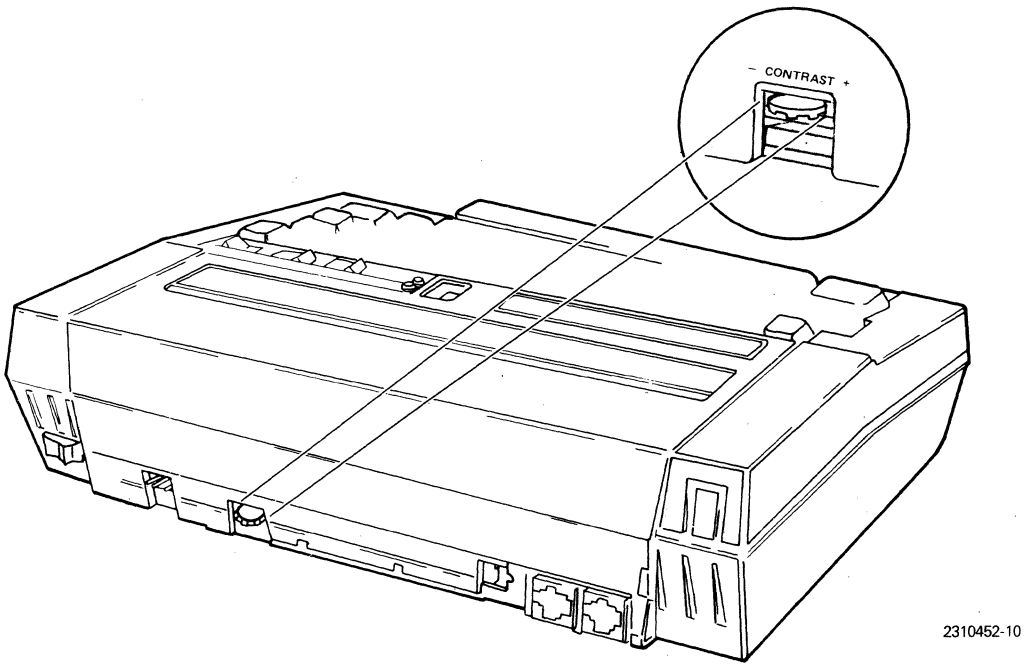


Figure 6-16. Print Contrast Adjustment

transmit level by turning the screw counter-clockwise. When making either adjustment, turn the screw by a measured amount, and remember how far you turned it. If making an adjustment doesn't resolve the problem, return the screw to its original position.

6.8 POWER SYSTEM CHECKS AND MAINTENANCE

This section describes power supply checking and gives a battery restoration procedure.

6.8.1 Power Supply Checks

The power supply is an integral part of the main PCB. Testing is limited to verifying the presence or absence of the voltages it provides. Figures 6-18 and 6-19 show the location of the test points on each terminal's main PCB. Use the following procedures for measuring the voltages.

6.8.1.1 Model 707 Power Supply Check.

Place the low side (–) of a digital voltmeter probe on the left-hand side of R42 (signal ground). Verify the presence of the following voltages, using the high side (+) voltmeter probe.

- + 5 V at pin 5 of U9
- + 16 V at pin 7 of U10
- – 16 V at pin 4 of U9
- + 12 V at pin 8 of U1
- – 12 V at pin 4 of U1

6.8.1.2 Model 703 Power Supply Check.

Place the low side (–) of a digital voltmeter probe on the anode of CR11 (signal ground). Verify the presence of the following voltages, using the high side (+) voltmeter probe.

- + 5 V at pin 5 of U6
- + 16 V at pin 7 of U7
- – 16 V at pin 4 of U6
- + 12 V at the anode of CR5
- – 12 V at the cathode of CR6

6.8.2 Battery Pack Restoration

The Model 707 terminal automatically powers down when the battery pack reaches its low charge level (refer to Section 5).

There is a current draw of 2.5 mA from the batteries until the **POWER** switch is set to the off position after a power-down caused by low battery voltage. The safety margin (power-down until battery damage) is a minimum of 168 hours.

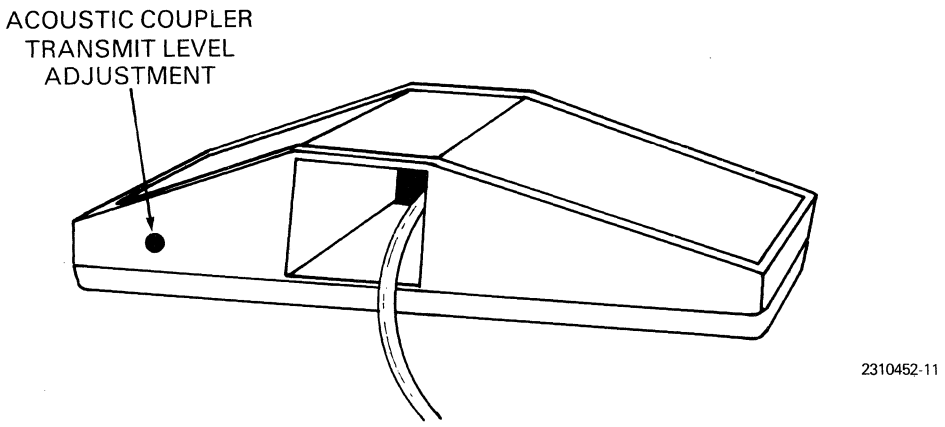


Figure 6-17. Acoustic Coupler Transmit Level Adjustment

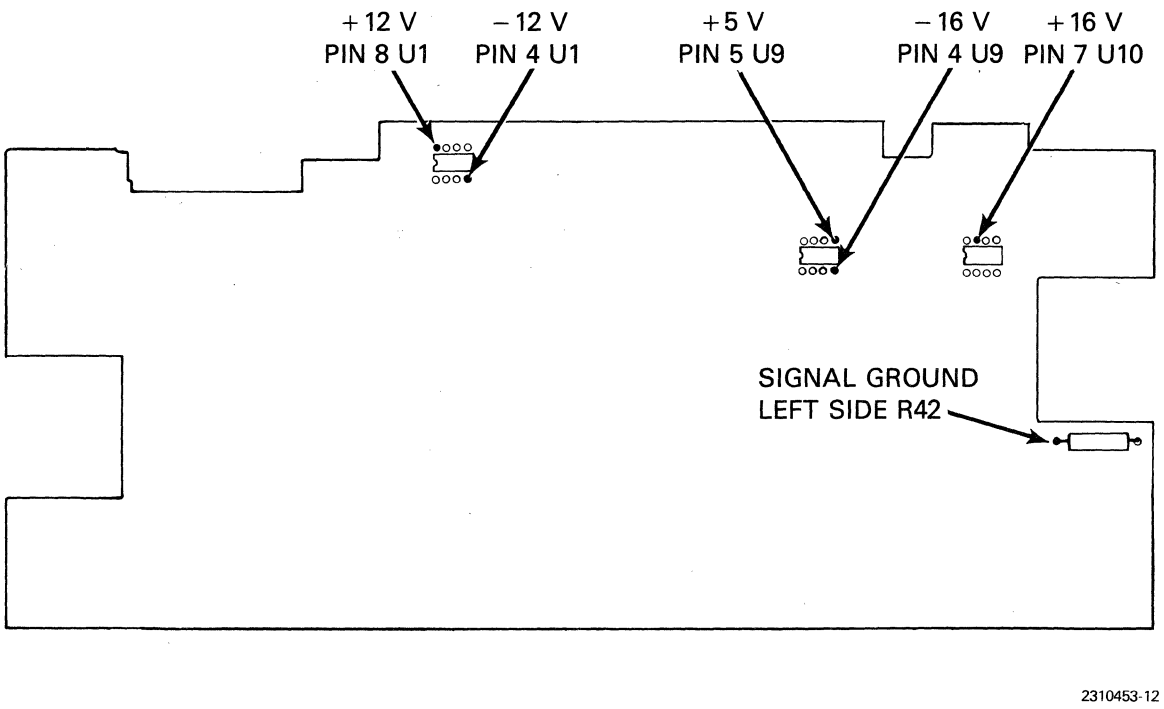


Figure 6-18. Power Supply Test Points, Model 707

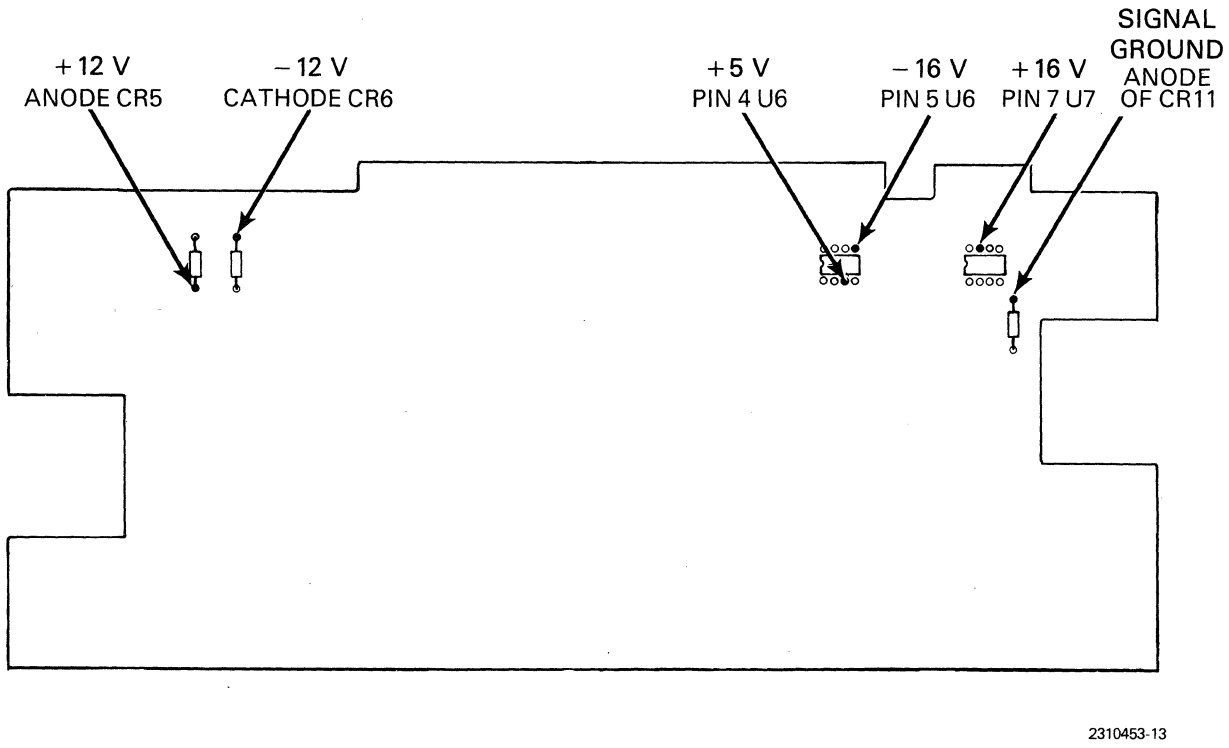


Figure 6-19. Power Supply Test Points, Model 703

Batteries discharged for greater than 168 hours after power-down can possibly be restored through multiple charge/discharge cycles. Perform the following procedure:

1. Charge the batteries for 10 hours, with the printer not operating.

2. Operate the terminal until power-down occurs. The terminal should operate for a minimum of one hour. There is no problem if the terminal operates normally at this point.

3. If the terminal does not operate at all, or only for a short period of time, charge the batteries for 48 to 72 more hours, with the printer not operating.

4. Again operate the terminal until power-down occurs. If necessary, repeat this process several times.

5. If no improvement in battery life is noted, the batteries require replacement.

6.9 SYSTEM TESTING

The basic Model 703/707 has two built-in tests, a power-up test and a barberpole test.

6.9.1 Power-Up Self-Test

When the **POWER** switch is placed in the on position, the Model 703/707 performs a test of its memory. The visual and audible indications that accompany this self-test are as follows:

1. All three LED indicators come on.

2. At the successful completion of the Model 703/707's memory test, the terminal emits a short audible tone.

3. The **CMD** and **LINE RDY** LEDs go off.

4. The terminal prints out the model number: 703 or 707.

5. The printer executes a carriage return and line feed.

Refer to the troubleshooting guide in this section if a bad indication is received.

6.9.2 Barberpole Test

The barberpole test is performed through the Test command in the offline mode. The barberpole test is a test of the terminal's carriage mechanism and printhead. The Test command is initiated as follows:

Press **CMD** and press **T**.

To terminate the test, press the **ESC** key.

A print quality problem made apparent by this procedure should be approached as follows.

1. Perform the print image contrast adjustment (presented in this section).

2. If the problem is still evident, replace the printhead as outlined in this section.

3. If a problem still exists, refer to the troubleshooting guide.

6.10 AUDIBLE STATUS INDICATORS

The terminal produces an audible tone that provides information to the operator concerning the completion of terminal activities. There are two tones in use:

Short tone: A tone of 80 to 100 milliseconds indicates the normal termination of an operation.

Long tone: A one-second tone indicates that an error or an abnormal operating condition has been detected.

Table 6-1 describes the operating conditions that cause an audible tone to occur.

Table 6-1. Model 703/707 Audible Tone Signals

Signal	Cause
Short tone	1. An ASCII BEL character has been received. 2. The command mode has been entered. 3. The power-up test has been completed successfully.
Long tone	1. One of the following errors has been detected: a) Receiver buffer overflow error b) Keyboard buffer overflow error 2. An invalid keyboard entry has been detected in the command mode.

6.11 TROUBLESHOOTING GUIDE

The following failure analysis table is a list of some of the most common power, print quality, and communications-related problems. Every troubleshooting effort in these areas should begin here, at the basics.

Table 6-2. Failure Analysis

Power-Up Failures

Symptom	Possible Cause	Corrective Action
Won't energize (no lights come on)	Bad external transformer	Replace transformer
	Bad power supply	Main circuit board or control panel circuit board
	Batteries discharged	Try external transformer Recharge batteries
	Batteries won't hold a charge	Recondition batteries as described in Section 6.8.2. Replace batteries
PWR light flashes (batteries installed)	Batteries low	Recharge batteries
PWR light flashes (no batteries installed)	Low voltage or sags on ac power line	Try another circuit
All lights remain on at power-up	Self-Test failed	Main circuit board or control panel
No printhead motion	See no printhead motion under local operation	
No paper motion	See no paper motion under local operation	

Table 6-2. Failure Analysis (Continued)

Local Operation Failures

Check local operation by typing in local and running the barberpole test. The barberpole test is initiated by entering CMD "T."

Symptom	Possible Cause	Corrective Action
No keyboard response	Isolated failure	Turn **POWER** switch off and back on.
	Hard failure	Main electrical board or control panel
No keyboard response from specific keys	Bad contacts on keyboard	Replace keyboard.
Getting double characters from specific keys	Dirty contacts on keyboard, or excessive key-switch bounce.	Replace keyboard.
No printhead motion or erratic character spacing, margin drift	Carriage obstructed	Check for any obstructions that may interfere with carriage motion. Check the routing of the printhead cable.
	Defective part(s)	Main board Carriage motor/Lead screw assembly Carriage assembly
No paper motion	Defective part(s)	Control panel circuit board Paper motor Electronics board
Erratic paper feed	Drive roller	Inspect paper drive system.
Erratic line spacing	Paper tray assembly Idler roller See "no paper motion" above	Replace parts as required.
Printhead moves but no dots are printed	Paper installed backwards	Install paper correctly.
	Defective part(s)	Printhead Electronics board
Missing dots	Printhead cable contacts	Clean contacts. Reseat printhead and cable.
	Bad printhead	Replace printhead.
	Bad printhead cable	Replace carriage assembly.

Table 6-2. Failure Analysis (Continued)

Local Operation Failures

Symptom	Possible Cause	Corrective Action
Poor print quality	Inspect printed characters closely. Many print quality problems fall into one of the categories discussed above.	
	Poor quality thermal paper	Use Texas Instruments approved paper.
	Missing dots or printing weak dots	Replace printhead.
	Dot placement is off horizontally	See erratic character spacing above.
	Dot placement is off vertically	See erratic paper feed above.

Online Operation Failures — Model 703

For most problems you encounter during online operation, the first step is to find out if the problem occurs offline. If so, use the local chart. If not, use the following chart.

Symptom	Possible Cause	Corrective Action
Won't print online (initial installation)	Baud rates do not match	Ensure that the host is running at 300 baud.
	Interfacing problem	See communications section. Ensure cabling and pinout is correct.
	If the **LINE RDY** light is off, "DSR" is missing on the EIA port	DSR must be held high in order to communicate.
	If the **LINE RDY** light is flashing and you are not in the command mode, CTS or DCD is low.	Circuits must be on to transmit. DCD must be on to receive. These signals default to on when they are open.
Won't print online	Host isn't sending anything	Isolate the problem to either the Model 703 or host:
		Test the Model 703 using the loopback plug.
		Try the Model 703 on another host or another port.
		Try another Model 703 on the host.
	Problem with the Model 703	Replace TEB.

Table 6-2. Failure Analysis (Continued)

Online Operation Failures — Model 703

Symptom	Possible Cause	Corrective Action
Prints garbage	Baud rates don't match	Ensure proper baud rate.
	Data cable is too long Problem with the Model 703	Try a shorter cable. Replace TEB.
Data sent to host is not being printed	Local copy is required but not selected	Select local copy.
Each character sent to host is being printed twice	Local copy is selected but not required	Deselect local copy.
Long bell and lost data.	Receive buffer overflow. Model 703 is receiving data faster than it can print.	This should not occur except in worst case data patterns, such as alternating very long and very short lines.

Online Operation Failures — Model 707 (Direct-Connect only)

For most problems you encounter during online operation, the first step is to find out if the problem occurs offline. If so, use the local chart. If not, use the chart below.

Symptom	Possible Cause	Corrective Action
Cannot connect with host computer.	Host never answers or phone is answered but you hear no answer tone.	Verify the number you dialed. Call your contact at the computer site to see if system is operative. Ensure host modem is compatible with a Bell 103 modem. Ensure **ONLINE** switch is in online position.
	Host carrier is not loud enough.	Try another phone line outside of a switchboard. Try another phone number or a different host. Notify the contact at the host site.
	Using the Originate command, you waited too long before pressing **CMD** and **O** keys.	Try again.
	Local copy is required.	Make sure **LOCAL COPY** switch is set.

Table 6-2. Failure Analysis (Continued)

Online Operation Failures—Model 707 (Direct-Connect only)

Symptom	Possible Cause	Corrective Action
	NOTE	
The phone company does not guarantee data communication over voice grade phone lines (that is, those using an RJ-11C voice grade jack). In some rate cases it may be necessary to order a data line with an RJ45S programmable data jack, or an RJ-41S switched to programmable. This ensures data integrity and/or telephone company support.		
Won't print online	Host isn't sending anything	Isolate the problem to either the Model 707 or host: Try the Model 707 on another host or another line. Try another Model 707 on the host.
	Problem with the Model 707	Replace TEB.
Prints garbage	Baud rates don't match	Ensure host is operating at 300 baud.
Printing unintelligible data when online	Problems with phone line or switching system.	Try another phone that doesn't go through a switchboard.
	Someone is on an extension phone or call waiting feature is interfering.	Use a dedicated telephone.
	Problem with the Model 707	Replace TEB.
Disconnects	Disconnect on EOT or disconnect on DLE EOT selected in AAC See also won't connect and prints garbage	Deselect unnecessary line control configuration options.
No line feeds, or extra line feeds	Incorrect terminal control configuration selected in Auto-Access Cartridge.	Check terminal control parameters per Auto-Access Cartridge manual.
Data sent to host is not being printed	Local copy is required but not selected	Select local copy.
Each character sent to host is being printed twice	Local copy is selected but not required	Deselect local copy.
Long bell and lost data	Receive buffer overflow. Model 703 is receiving data faster than it can print.	This should not occur except in worst case data patterns, such as alternating very long and very short lines.

Table 6-2. Failure Analysis (Concluded)

Online Operation Failures — Model 707 (Direct-Connect only)

Symptom	Possible Cause	Corrective Action
Error message or other unexpected responses that are not defined in this manual	The Model 707 only acts as a communication interface to a larger host computer. It sends the characters you type, and prints data that is sent to you. if you can send and receive intelligible information, the terminal is working properly. Difficulties with the application should be discussed with the contact at the host computer.	If you are using an optional Auto-Access Cartridge, refer to the *Auto-Access Cartridge User's Guide.*

Online Failures — Model 707 with Acoustic Coupler

Symptom	Possible Cause	Corrective Action
Cannot connect with host computer	Transmit level needs adjustment	Check acoustic transmit level
	Carbon granules in the telephone mouthpiece are packed.	Tap the telephone mouthpiece on a table to unpack the carbon granules.
	Phone signal is too weak.	Try another phone line that does not go through a switchboard.
		Use a direct-connect interface if possible.
Prints garbage	Phone not seated properly.	Seat the phone with Velcro strap.
	Transmit level needs adjustment	Refer to Chapter 4 for adjustment.
	Terminal is in a noisy location.	Move the terminal. Use the direct-connect interface if possible.

NOTE

A linear microphone can be installed in a telephone handset to increase the strength of the signal and eliminate some acoustic coupling problems. The Texas Instruments Data Mike linear microphone is available as TI Part No. 2266038-0001.

Section 7

Schematics

This section contains schematics for the Model 703 and Model 707 Data Terminals.

8 | 7 | 6 | 5 | 4 | 3 | DWG NO 2310457 SH 1 | 1

NOTES: UNLESS OTHERWISE SPECIFIED:

1. ALL DEVICE TYPES ARE PREFIXED WITH SN74
2. Vcc IS APPLIED TO PIN 14 OF 14 PIN IC'S, PIN 16 OF 16 PIN IC'S, PIN 18 OF 18 PIN IC'S, PIN 20 OF 20 PIN IC'S
3. GROUND IS APPLIED TO PIN 7 OF 14 PIN IC'S, PIN 8 OF 16 PIN IC'S, PIN 9 OF 18 PIN IC'S, PIN 10 OF 20 PIN IC'S
4. RESISTORS ARE 1/4 WATT, 5%

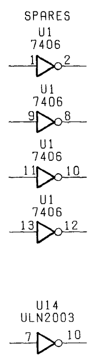
[5] SYSTEM CLOCK GOES LOW FOR 520 usec EVERY 12.7 msec. PROVIDES TIMING FOR KEYBOARD SCAN AND TASK SCHEDULER ROUTINES

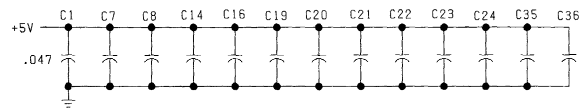
[6] WALL TRANSFORMER

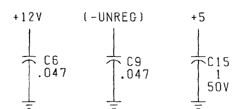
[7] LOCATED ON CONTROL PANEL

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	REDRAWN WITH EXTENSIVE ENGINEERING CHANGE		
B	EXTENSIVE CHANGE TO REFERENCE DESIGNATORS AND SOME CIRCUIT CHANGES		
C	MINOR CHANGES INCORPORATED DUE TO ENGINEERING CHANGES		
	FORMAL RELEASE		
D	CN455181 (D) M.DURHAM (1) CORRECTED PIN OUT FOR PAPER ADVANCE MOTOR	9-1-83	D. HOWARD







COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

NEXT ASSY	USED ON
2310455	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER 000-0-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE
0.33 THRU 3.18 +0.10/-0.03
3.20 THRU 6.35 +0.13/-0.03
6.38 THRU 12.70 +0.15/-0.03
12.73 THRU 19.05 +0.20/-0.03
19.08 THRU 25.40 +0.25/-0.03
25.43 THRU 50.80 +0.30/-0.03

THIRD ANGLE PROJECTION

		DATE
DWN	R. PARKER	3-16-82
CHK	V. HAYTER	4-18-83
ENGR	G. EBNER	4-19-83
APVD-ENGR	G. HARE	4-19-83
QA	G. HEBERT	4-19-83
APVD-MFG	J. HAZARD	4-20-83
RLSE	TONY BAILEY	4-21-83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

LOGIC DIAGRAM,
MODEL 703

SIZE D | FSCM NO 06668 | DRAWING NO 2310457

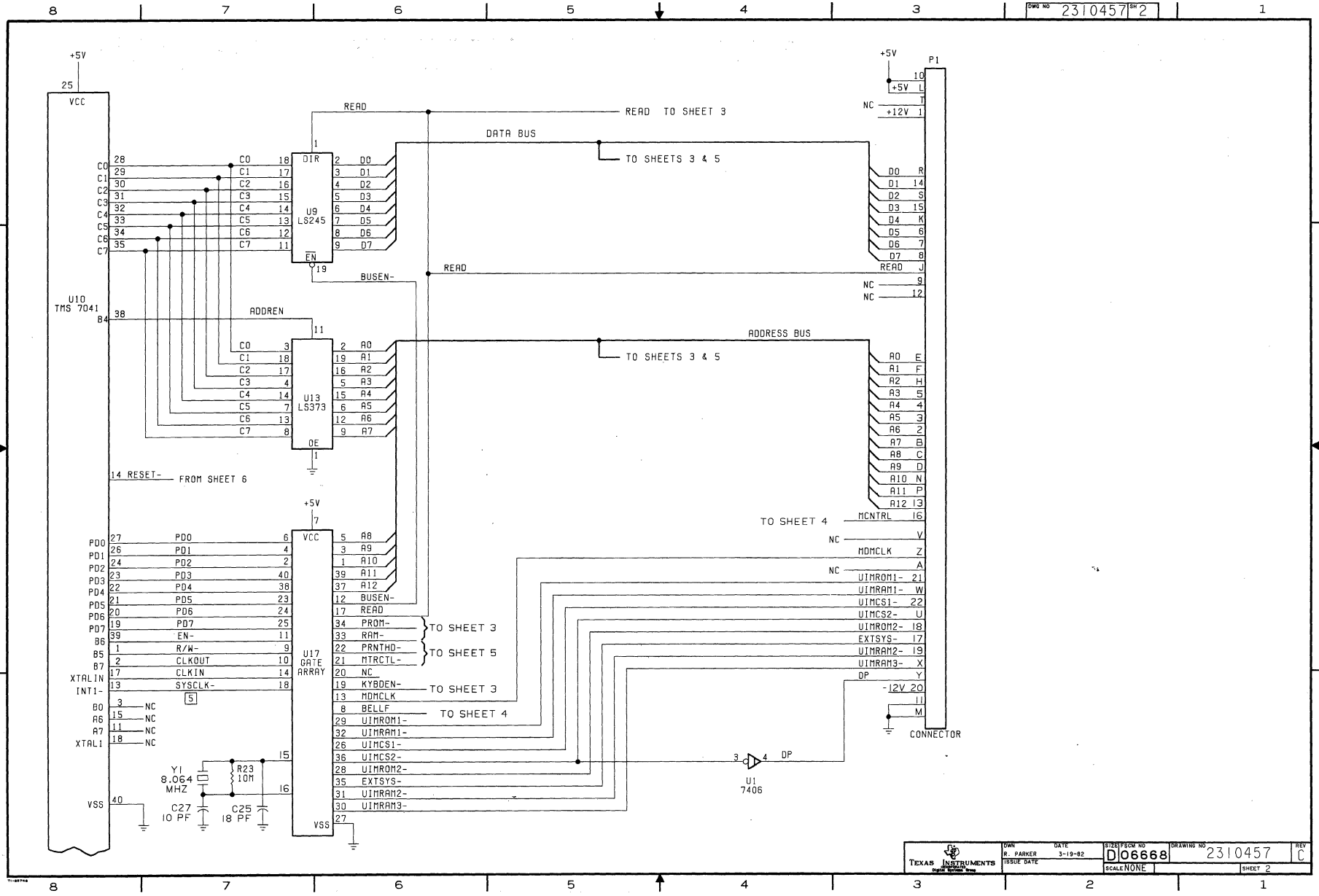
SCALE NONE | SHEET 1 OF 6

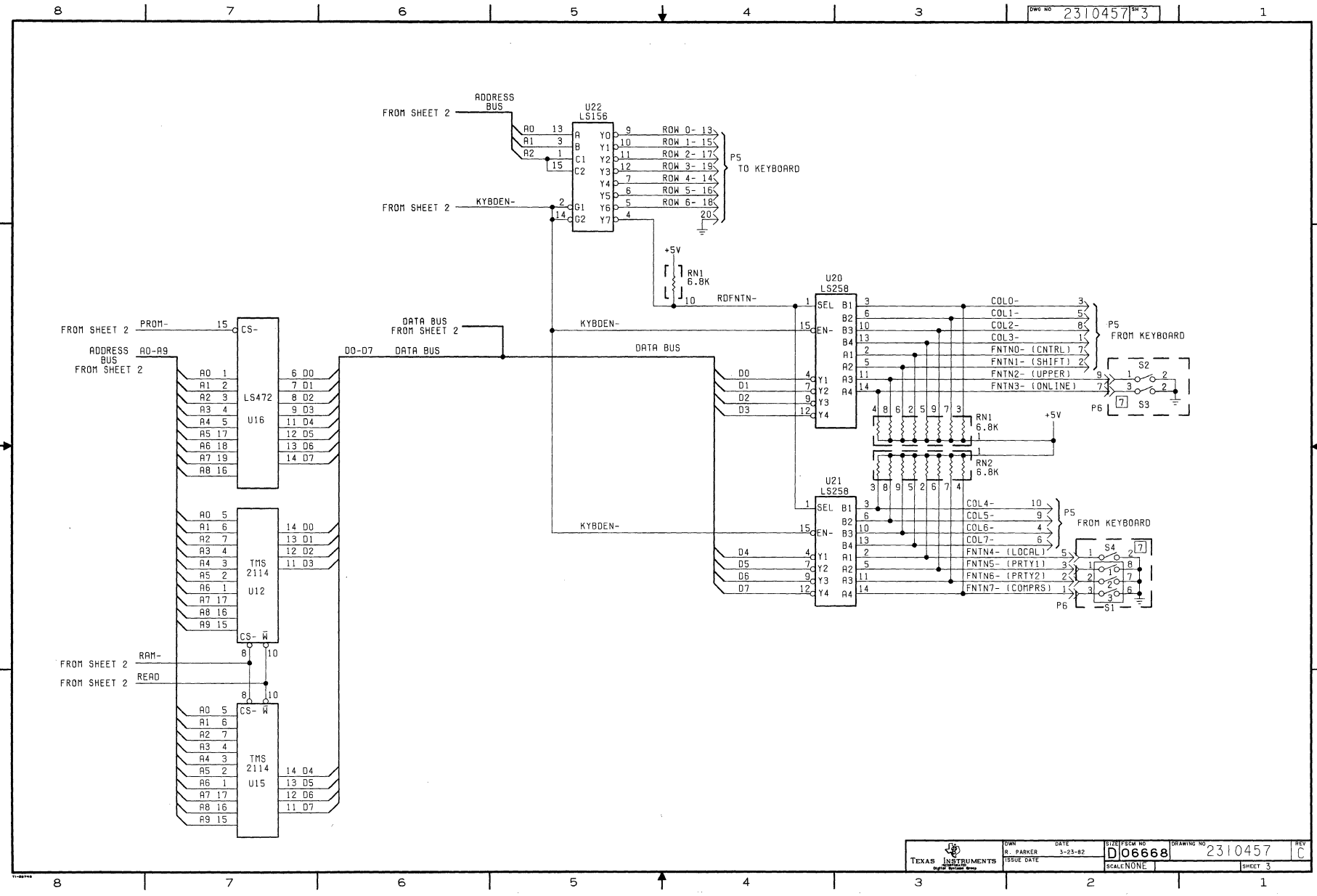
SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
	PROCESS			CLASSIFICATION	

PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

REV STATUS OF SHEETS						
REV	D	C	C	C	D	C
SH	1	2	3	4	5	6

8 | 7 | 6 | 5 | 4 430 | 3 | 2 | TB 1


DWG NO 2310457 SH 2
+5V
VCC
U10
TMS 7041
READ
READ TO SHEET 3
DATA BUS
TO SHEETS 3 & 5
U9
LS245
DIR
EN
BUSEN-
ADDREN
U13
LS373
OE
ADDRESS BUS
TO SHEETS 3 & 5
14 RESET-
FROM SHEET 6
U17
GATE
ARRAY
VSS
P1
CONNECTOR
TO SHEET 4
TO SHEET 3
TO SHEET 5
PROM-
RAM-
PRNTHD-
MTRCTL-
KYBDEN-
MDMCLK
BELLF
UIMROM1-
UIMRAM1-
UIMCS1-
UIMCS2-
UIMROM2-
EXTSYS-
UIMRAM2-
UIMRAM3-
DP
U1
7406
Y1
8.064
MHZ
R23
10M
C27
10 PF
C25
18 PF
TEXAS INSTRUMENTS
DRAWN R. PARKER
DATE 3-19-82
ISSUE DATE
SIZE D
FSCM NO 06668
DRAWING NO 2310457
REV C
SCALE NONE
SHEET 2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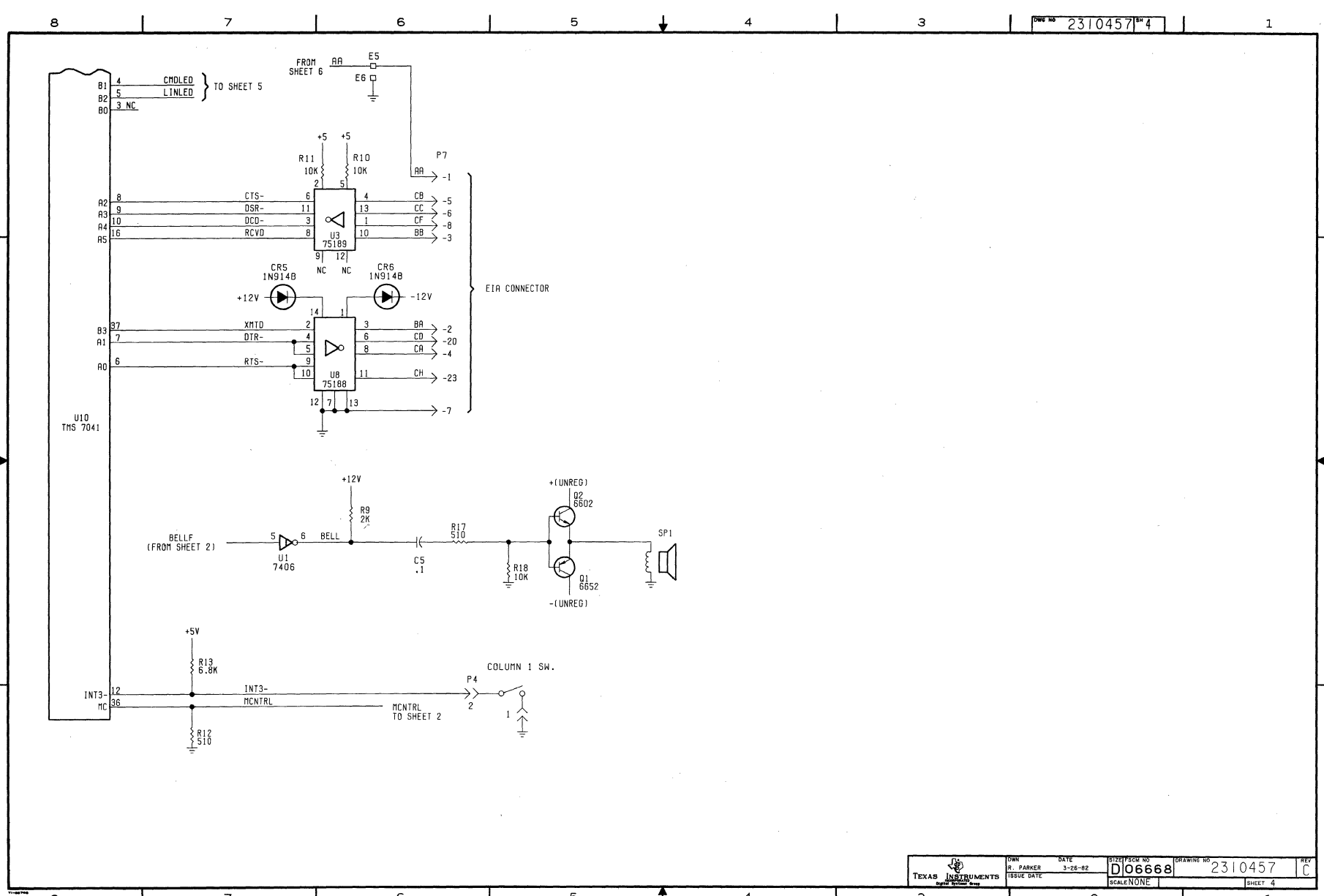
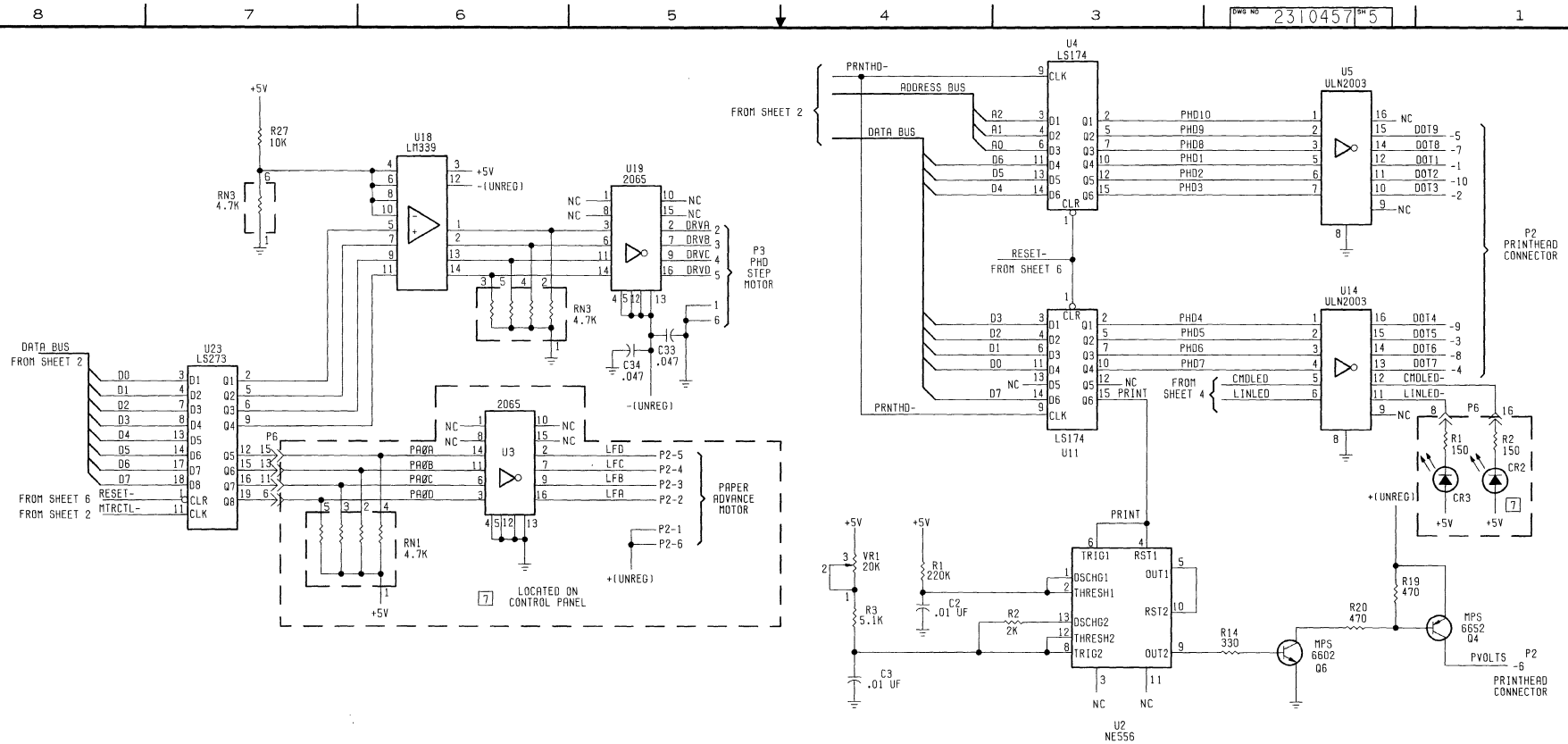
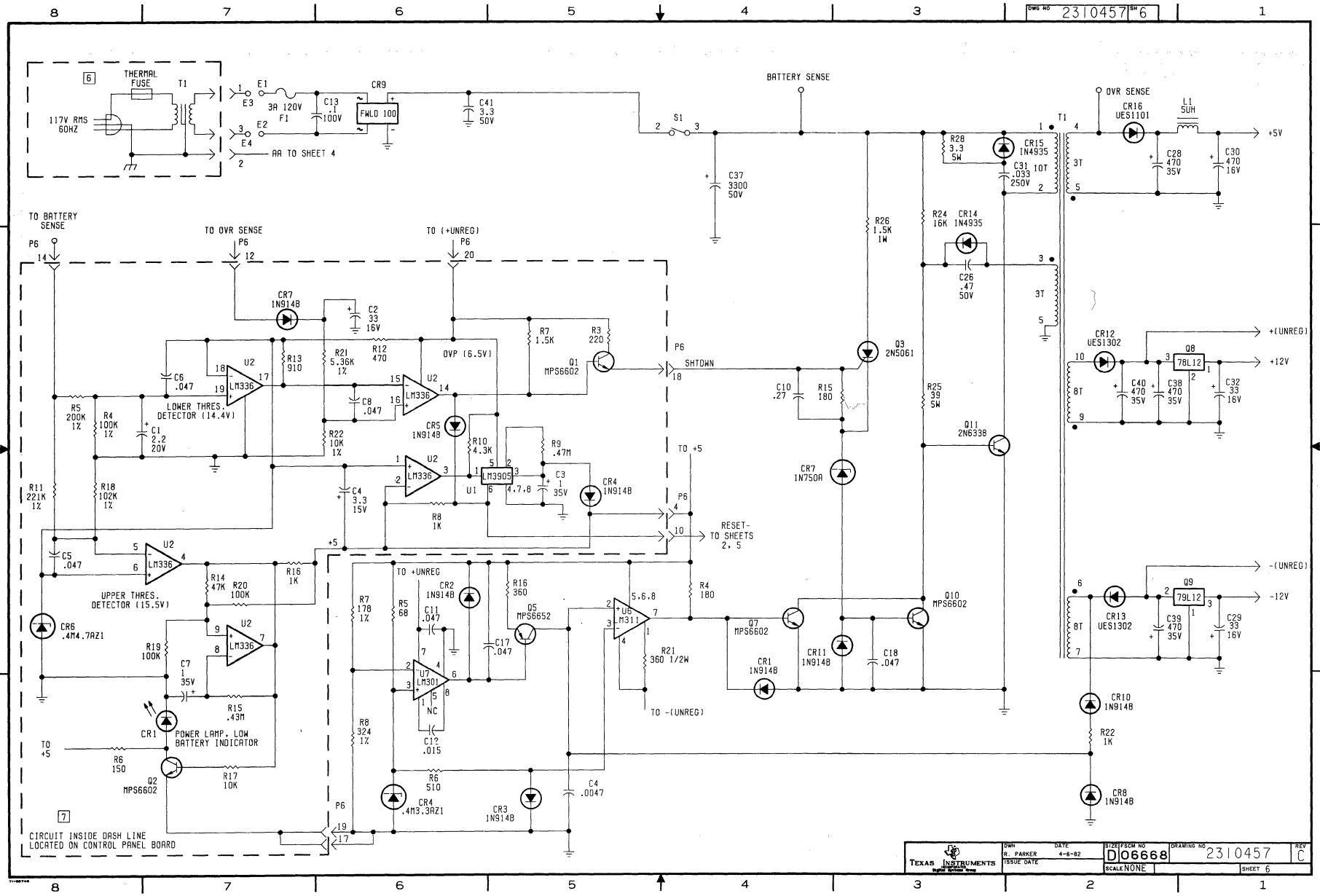
U22 LS156
ADDRESS BUS FROM SHEET 2
A0 13
A1 3
A2 1
15
A B C1 C2
Y0 9 ROW 0- 13
Y1 10 ROW 1- 15
Y2 11 ROW 2- 17
Y3 12 ROW 3- 19
Y4 7 ROW 4- 14
Y5 6 ROW 5- 16
Y6 5 ROW 6- 18
Y7 4
20
P5 TO KEYBOARD
FROM SHEET 2 KYBDEN- 2 14 G1 G2
+5V
RN1 6.8K
10
RDFNTN-
U20 LS258
1 SEL
15 EN-
B1 B2 B3 B4 A1 A2 A3 A4
Y1 Y2 Y3 Y4
COL0- 3
COL1- 5
COL2- 8
COL3- 1
FNTN0- (CNTRL) 7
FNTN1- (SHIFT) 2
FNTN2- (UPPER) 9
FNTN3- (ONLINE) 7
P5 FROM KEYBOARD
S2
S3
P6
RN1 6.8K
RN2 6.8K
+5V
FROM SHEET 2 PROM- 15 CS-
ADDRESS BUS FROM SHEET 2 A0-A9
A0 1
A1 2
A2 3
A3 4
A4 5
A5 17
A6 18
A7 19
A8 16
LS472 U16
6 D0
7 D1
8 D2
9 D3
11 D4
12 D5
13 D6
14 D7
DO-D7 DATA BUS
DATA BUS FROM SHEET 2
DATA BUS
D0 D1 D2 D3
D4 D5 D6 D7
KYBDEN-
U21 LS258
COL4- 10
COL5- 9
COL6- 4
COL7- 6
P5 FROM KEYBOARD
FNTN4- (LOCAL) 5
FNTN5- (PRTY1) 3
FNTN6- (PRTY2) 2
FNTN7- (COMPRS) 1
S4
S1
P6
A0 5
A1 6
A2 7
A3 4
A4 3
A5 2
A6 1
A7 17
A8 16
A9 15
TMS 2114 U12
14 D0
13 D1
12 D2
11 D3
CS- W
FROM SHEET 2 RAM-
FROM SHEET 2 READ
8
10
TMS 2114 U15
14 D4
13 D5
12 D6
11 D7
TEXAS INSTRUMENTS
DWN R. PARKER DATE 3-23-82
ISSUE DATE
SIZE D FSCM NO 06668
DRAWING NO 2310457
REV C
SCALE NONE
SHEET 3


DWG NO 2310457 SH 4
FROM SHEET 6
AA
E5
E6
B1 4 CMDLED
B2 5 LINLED
TO SHEET 5
B0 3 NC
+5
+5
R11 10K
R10 10K
P7
AA -1
A2 8 CTS-
A3 9 DSR-
A4 10 DCD-
A5 16 RCVD
U3 75189
CB -5
CC -6
CF -8
BB -3
NC NC
CR5 1N914B
CR6 1N914B
+12V
-12V
EIA CONNECTOR
B3 37 XMTD
A1 7 DTR-
A0 6 RTS-
U8 75188
BA -2
CD -20
CA -4
CH -23
-7
U10 TMS 7041
+12V
R9 2K
+(UNREG)
Q2 6602
BELLF (FROM SHEET 2)
U1 7406
BELL
R17 510
SP1
C5 .1
R18 10K
Q1 6652
-(UNREG)
+5V
R13 6.8K
COLUMN 1 SW.
P4
INT3-
MC
INT3-
MCNTRL
MCNTRL TO SHEET 2
R12 510
TEXAS INSTRUMENTS
DWN R. PARKER
DATE 3-26-82
ISSUE DATE
SIZE D
FSCM NO 06668
DRAWING NO 2310457
REV C
SCALE NONE
SHEET 4


DWG NO 2310457 SH 5
U4 LS174
U5 ULN2003
U14 ULN2003
U11
U23 LS273
U18 LM339
U19 2065
U3 2065
U2 NE556
PRNTHD-
ADDRESS BUS
DATA BUS
FROM SHEET 2
RESET-
FROM SHEET 6
FROM SHEET 4
PRINT
PHD10
PHD9
PHD8
PHD1
PHD2
PHD3
PHD4
PHD5
PHD6
PHD7
DOT9
DOT8
DOT1
DOT2
DOT3
DOT4
DOT5
DOT6
DOT7
CMDLED-
LINLED-
P2 PRINTHEAD CONNECTOR
P3 PHD STEP MOTOR
PAPER ADVANCE MOTOR
P6
LFD
LFC
LFB
LFA
P2-5
P2-4
P2-3
P2-2
P2-1
P2-6
MTRCTL-
+5V
-(UNREG)
+(UNREG)
R27 10K
RN3 4.7K
RN1 4.7K
C34 .047
C33 .047
VR1 20K
R1 220K
R2 2K
R3 5.1K
C2 .01 UF
C3 .01 UF
R14 330
R19 470
R20 470
R1 150
R2 150
CR2
CR3
MPS 6602 Q6
MPS 6652 Q4
PVOLTS
LOCATED ON CONTROL PANEL
TEXAS INSTRUMENTS
R. PARKER
4-6-82
D06668
2310457
SCALE NONE
SHEET 5
REV D


DWG NO 2310457 SH 6
THERMAL FUSE
T1
117V RMS 60HZ
E1
E3
3A 120V F1
C13 .1 100V
CR9 FWLD 100
E2
E4
AA TO SHEET 4
C41 3.3 50V
BATTERY SENSE
S1
C37 3300 50V
OVR SENSE
CR16 UES1101
L1 5UH
+5V
R28 3.3 5W
CR15 IN4935
C31 .033 250V
C28 470 35V
C30 470 16V
TO BATTERY SENSE
TO OVR SENSE
TO (+UNREG)
P6 14
P6 12
P6 20
CR7 1N914B
C2 33 16V
R7 1.5K
R3 220
R26 1.5K 1W
R24 16K
CR14 IN4935
C26 .47 50V
Q3 2N5061
+(UNREG)
CR12 UES1302
Q8 78L12
+12V
C40 470 35V
C38 470 35V
C32 33 16V
R13 910
R21 5.36K 1%
R12 470
OVP (6.5V)
Q1 MPS6602
P6 SHTDWN 18
C6 .047
U2 LM336
LOWER THRES. DETECTOR (14.4V)
C8 .047
R5 200K 1%
R4 100K 1%
C1 2.2 20V
R22 10K 1%
CR5 1N914B
R10 4.3K
R9 .47M
C10 .27
R15 180
R25 39 5W
Q11 2N6338
CR7 1N750A
TO +5
R11 221K 1%
R18 102K 1%
C4 3.3 15V
U1 LM3905
C3 1 35V
CR4 1N914B
R8 1K
P6 4
P6 10
RESET- TO SHEETS 2, 5
C5 .047
UPPER THRES. DETECTOR (15.5V)
R14 47K
R20 100K
R16 1K
+5
TO +UNREG
CR2 1N914B
R16 360
R7 178 1%
R5 68
C11 .047
Q5 MPS6652
U6 M311
5,6,8
R4 180
Q10 MPS6602
Q7 MPS6602
CR11 1N914B
C18 .047
CR1 1N914B
R21 360 1/2W
TO -(UNREG)
-(UNREG)
CR13 UES1302
Q9 79L12
-12V
C39 470 35V
C29 33 16V
CR6 .4M4.7AZ1
R19 100K
C7 1 35V
R15 .43M
U7 LM301
NC
C17 .047
C12 .015
R8 324 1%
CR10 1N914B
R22 1K
CR1
POWER LAMP, LOW BATTERY INDICATOR
TO +5
R6 150
Q2 MPS6602
R17 10K
R6 510
CR4 .4M3.3AZ1
CR3 1N914B
C4 .0047
CR8 1N914B
P6 19
P6 17
CIRCUIT INSIDE DASH LINE LOCATED ON CONTROL PANEL BOARD
TEXAS INSTRUMENTS
DWN R. PARKER
DATE 4-6-82
ISSUE DATE
SIZE D
FSCM NO 06668
DRAWING NO 2310457
REV C
SCALE NONE
SHEET 6

DWG NO 2310467 SH 1

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
F	CN455180 (D) M. KUEHN	83/10/31	Ref Karl

NOTES: UNLESS OTHERWISE SPECIFIED:

1. ALL DEVICE TYPES ARE PREFIXED WITH SN74
2. VCC IS APPLIED TO PIN 14 OF 14 PIN IC'S, PIN 16 OF 16 PIN IC'S, PIN 18 OF 18 PIN IC'S, PIN 20 OF 20 PIN IC'S
3. GROUND IS APPLIED TO PIN 7 OF 14 PIN IC'S, PIN 8 OF 16 PIN IC'S, PIN 9 OF 18 PIN IC'S, PIN 10 OF 20 PIN IC'S
4. RESISTORS ARE 1/4 WATT, 5%

[5] SYSTEM CLOCK GOES LOW FOR 510 USEC EVERY 12.7 MSEC. PROVIDES TIMING FOR KEYBOARD SCAN AND TASK SCHEDULER ROUTINES.

[6] REQUIRES HEATSINK

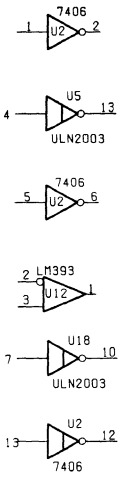
[7] BATTERY OPTIONAL

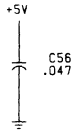
[8] WALL TRANSFORMER

[9] LOCATED ON CONTROL PANEL

[10] DO NOT INSTALL THESE COMPONENTS WHEN 100 MA DC TRANSFORMER (P/N 2310580-0001) IS USED FOR T1. INSTALL JUMPER, ZERO-OHM RESISTOR FOR CR6, CR7, R12 AND C26.

SPARES





COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

2310465	7114
NEXT ASSY	USED ON
APPLICATION	

	DATE
DWN R. PARKER	5-19-82
CHK V. HAYTER	4-15-83
ENGR D. EBNER	4-19-83
APVD-ENGR D. HIRE	4-19-83
DA D. HEBERT	4-19-83
APVD-MFG J. HAZARD	4-20-83
RLSE TONY BAILEY	4-21-83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

LOGIC DIAGRAM, MODEL 707

SIZE D | FSCM NO 06668 | DRAWING NO 2310467

SCALE NONE | SHEET 1 OF 6

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
	PROCESS		CLASSIFICATION		

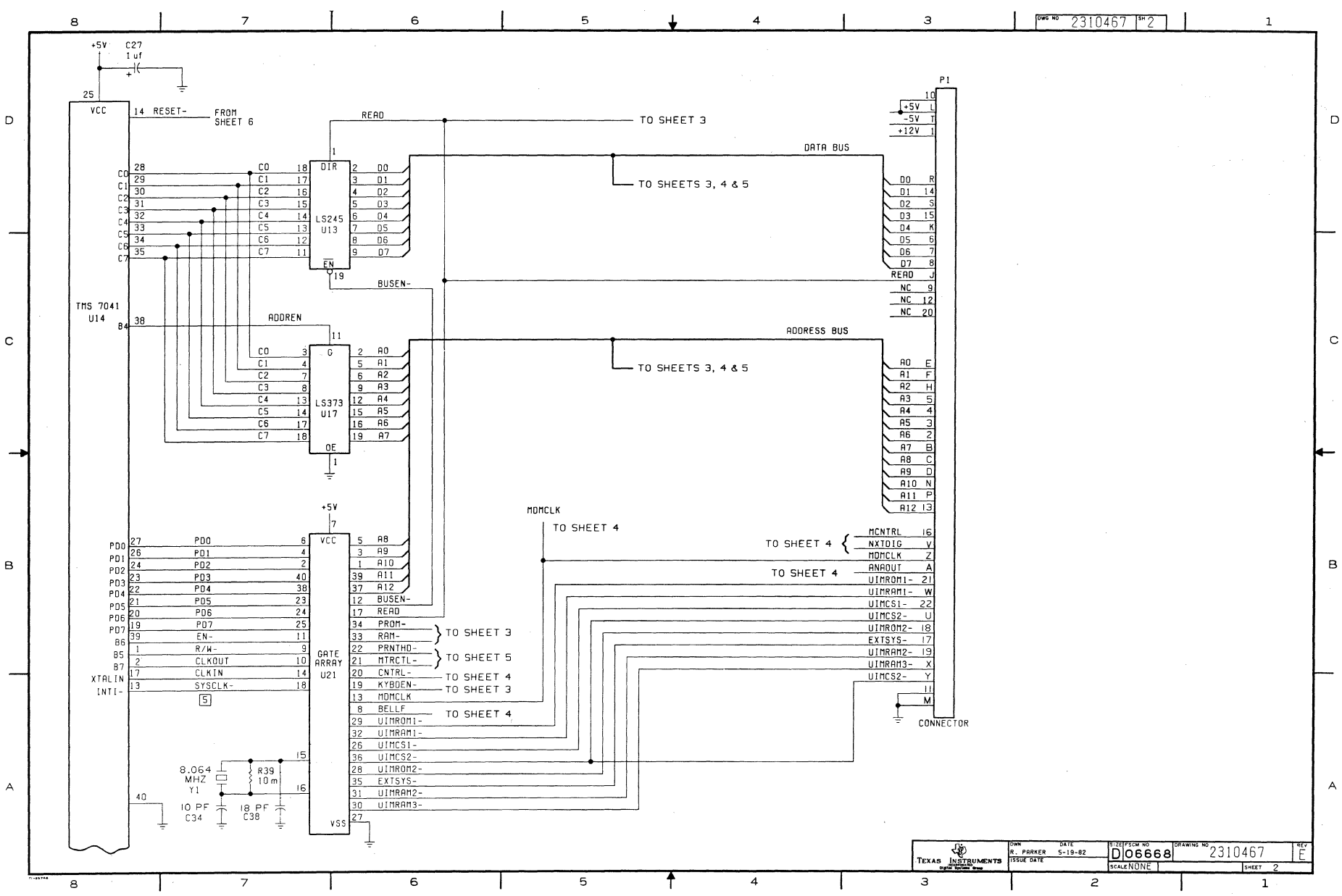
PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729487

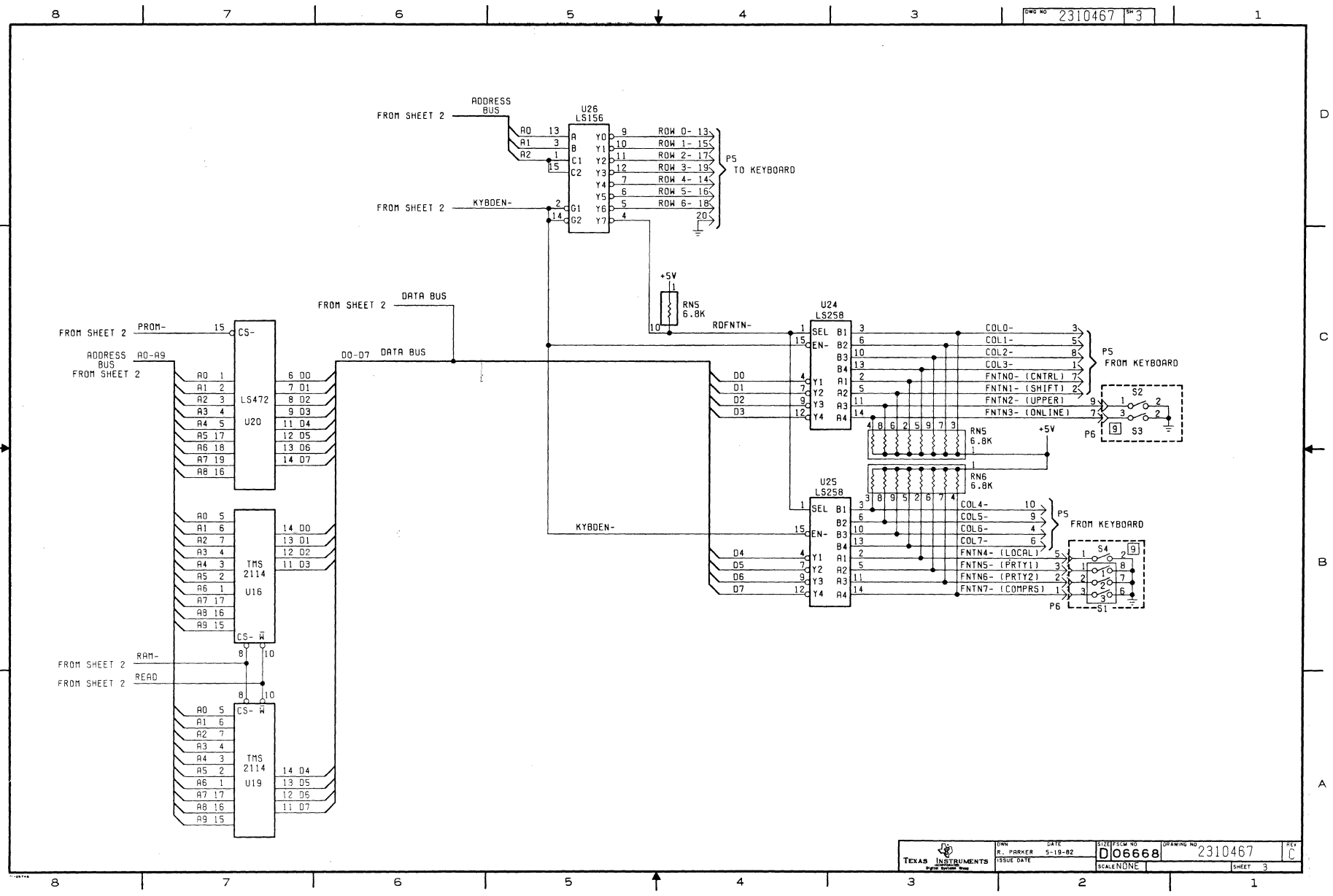
REV STATUS OF SHEETS

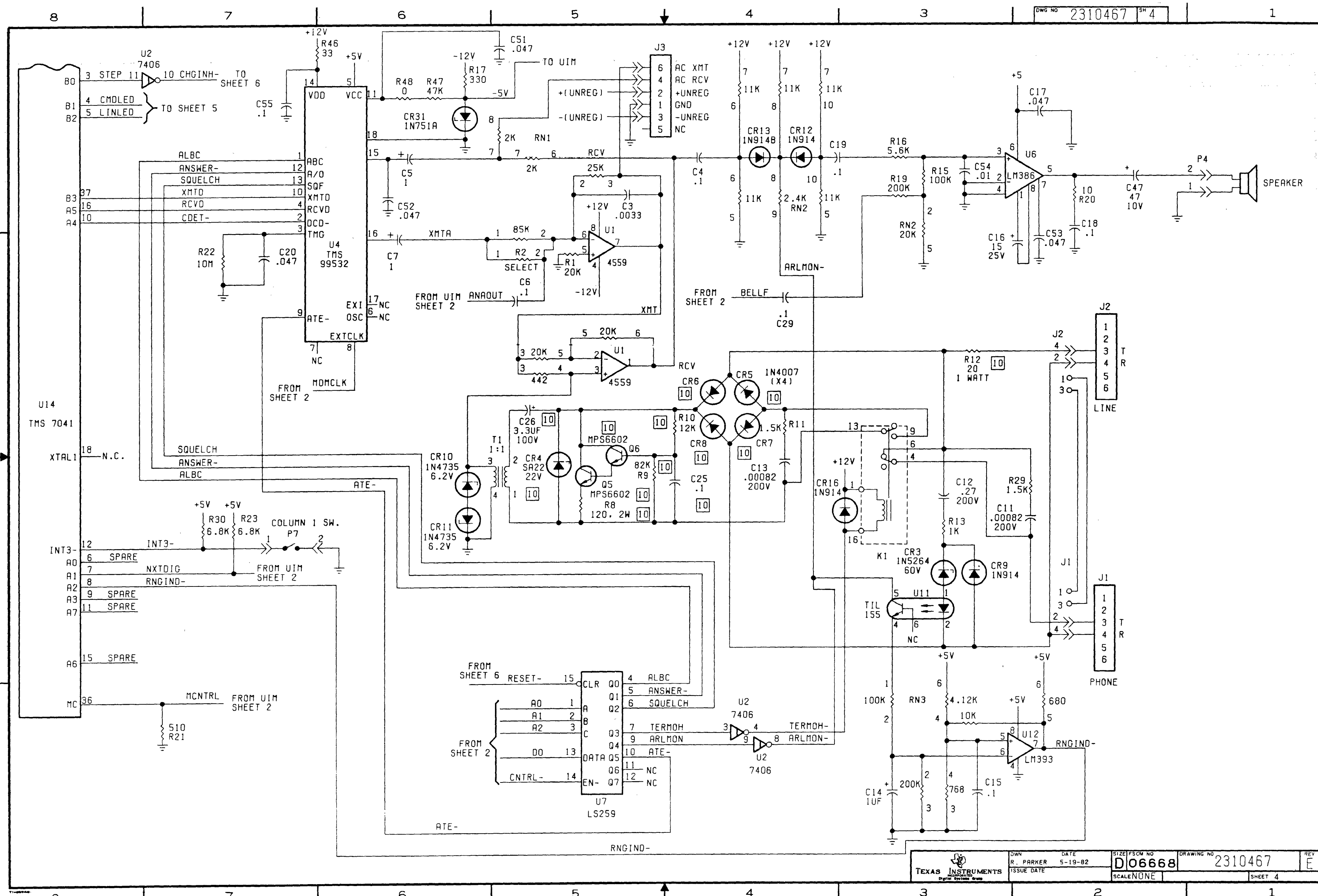
REV	F	E	C	E	F	E
SH	1	2	3	4	5	6

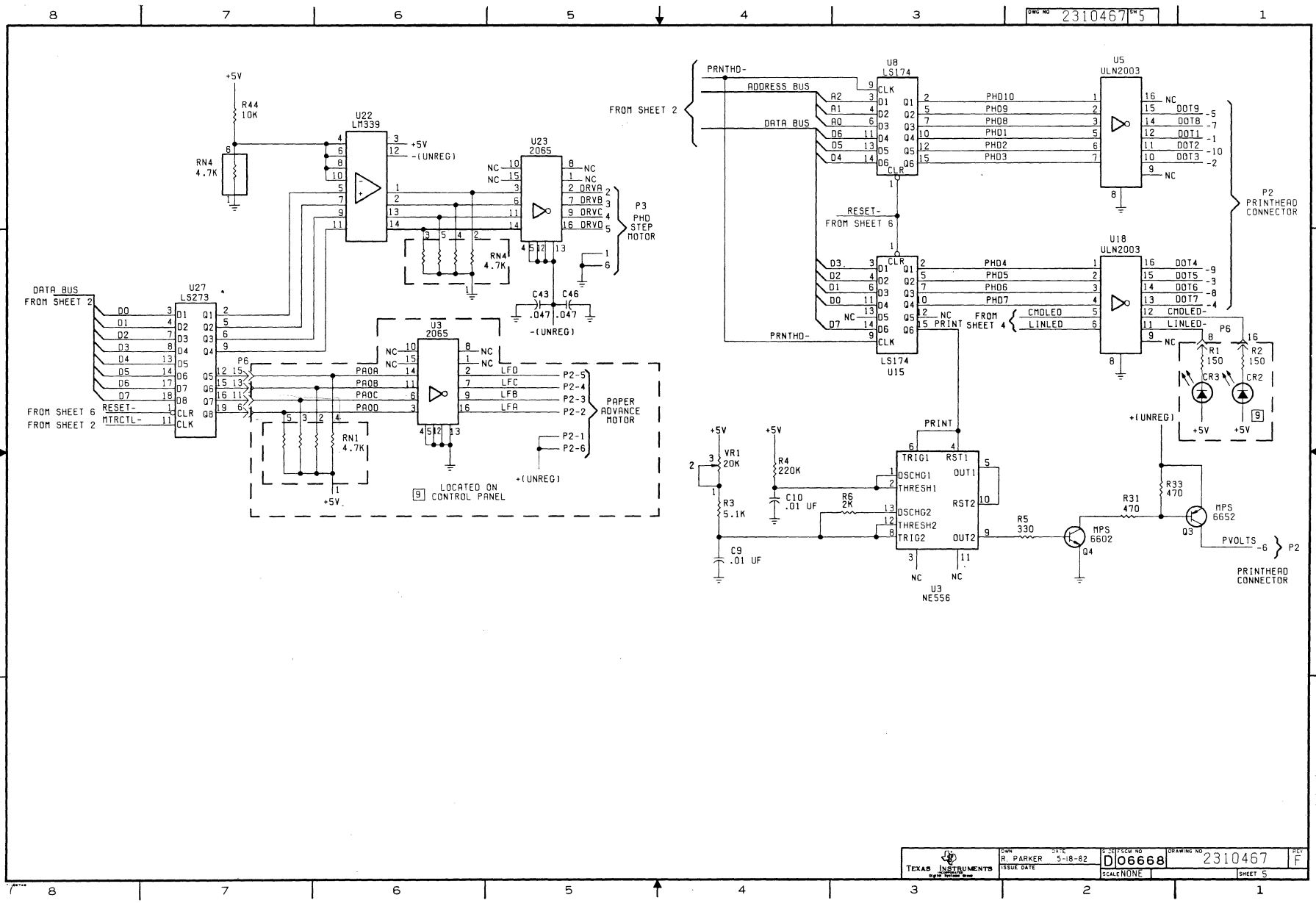
8 7 6 5 4 3 2 1

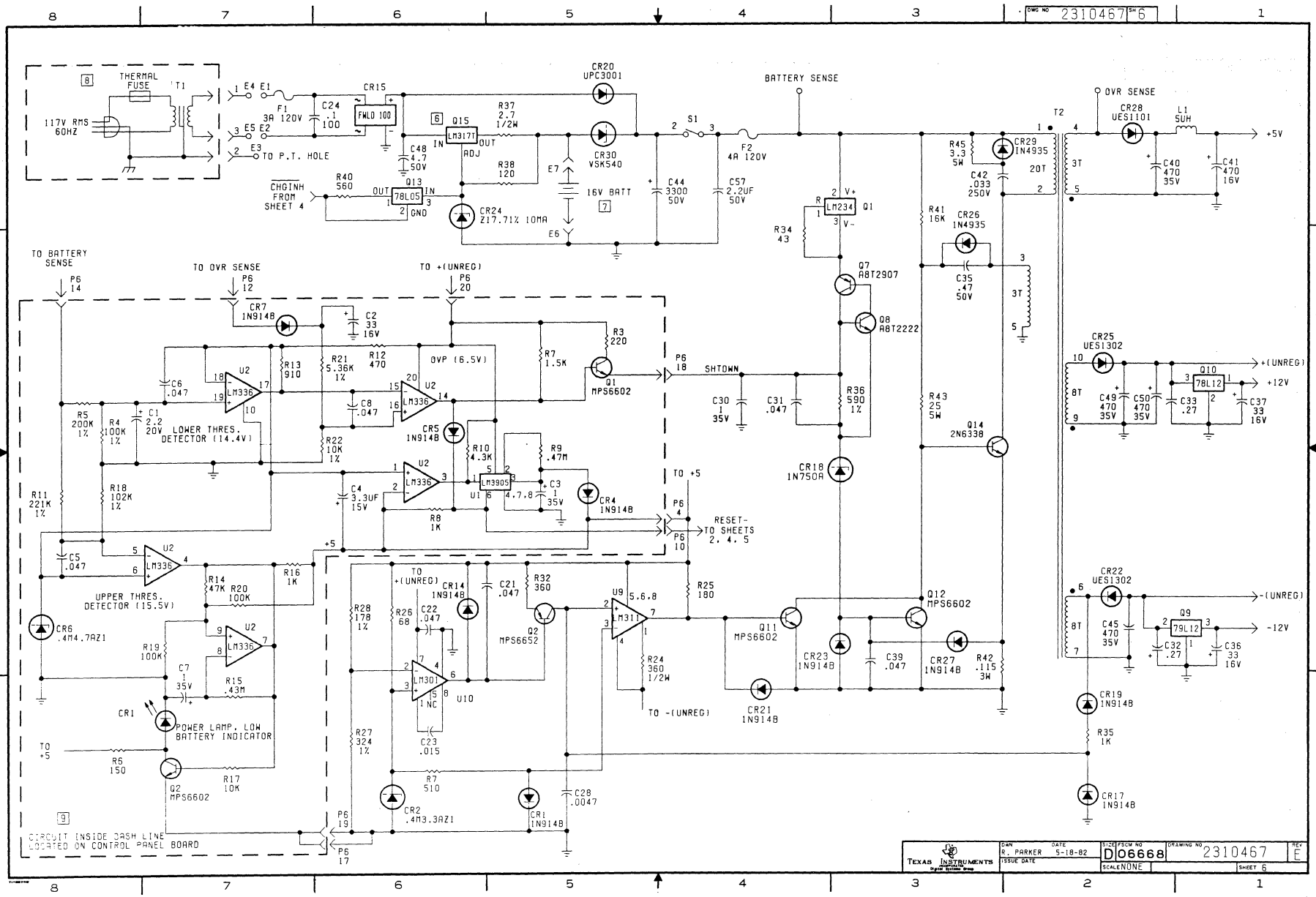
8I E-11 4430 TB


DWG NO 2310467 SH 2
+5V C27 1 uf
VCC
14 RESET- FROM SHEET 6
TMS 7041 U14
READ
TO SHEET 3
DATA BUS
TO SHEETS 3, 4 & 5
BUSEN-
ADDREN
ADDRESS BUS
TO SHEETS 3, 4 & 5
LS245 U13
DIR
EN
LS373 U17
G
OE
GATE ARRAY U21
VCC
VSS
MDMCLK
TO SHEET 4
TO SHEET 3
TO SHEET 5
TO SHEET 4
TO SHEET 3
TO SHEET 4
8.064 MHZ Y1
R39 10 m
10 PF C34
18 PF C38
P1
+5V L
-5V T
+12V 1
READ J
NC 9
NC 12
NC 20
MCNTRL 16
NXTDIG V
MDMCLK Z
ANAOUT A
UIMROM1- 21
UIMRAM1- W
UIMCS1- 22
UIMCS2- U
UIMROM2- 18
EXTSYS- 17
UIMRAM2- 19
UIMRAM3- X
UIMCS2- Y
CONNECTOR
TEXAS INSTRUMENTS
R. PARKER 5-19-82
D06668
2310467
SCALE NONE
SHEET 2


DWG NO 2310467 SH 3
FROM SHEET 2
ADDRESS BUS
U26 LS156
A0 13
A1 3
A2 1
15
A B C1 C2
Y0 9
Y1 10
Y2 11
Y3 12
Y4 7
Y5 6
Y6 5
Y7 4
ROW 0- 13
ROW 1- 15
ROW 2- 17
ROW 3- 19
ROW 4- 14
ROW 5- 16
ROW 6- 18
20
P5
TO KEYBOARD
FROM SHEET 2
KYBDEN-
2
14
G1 G2
+5V
1
RN5
6.8K
10
RDFNTN-
FROM SHEET 2
DATA BUS
FROM SHEET 2
PROM-
15
CS-
ADDRESS BUS
FROM SHEET 2
A0-A9
DO-D7
DATA BUS
A0 1
A1 2
A2 3
A3 4
A4 5
A5 17
A6 18
A7 19
A8 16
LS472
U20
6 D0
7 D1
8 D2
9 D3
11 D4
12 D5
13 D6
14 D7
A0 5
A1 6
A2 7
A3 4
A4 3
A5 2
A6 1
A7 17
A8 16
A9 15
TMS 2114
U16
CS- W
14 D0
13 D1
12 D2
11 D3
8
10
FROM SHEET 2
RAM-
FROM SHEET 2
READ
TMS 2114
U19
14 D4
13 D5
12 D6
11 D7
U24 LS258
U25 LS258
SEL
EN-
B1 B2 B3 B4
A1 A2 A3 A4
Y1 Y2 Y3 Y4
D0
D1
D2
D3
D4
D5
D6
D7
COL0-
COL1-
COL2-
COL3-
FNTN0- (CNTRL)
FNTN1- (SHIFT)
FNTN2- (UPPER)
FNTN3- (ONLINE)
COL4-
COL5-
COL6-
COL7-
FNTN4- (LOCAL)
FNTN5- (PRTY1)
FNTN6- (PRTY2)
FNTN7- (COMPRS)
P5
FROM KEYBOARD
RN5
6.8K
RN6
6.8K
+5V
S2
S3
S4
S1
P6
TEXAS INSTRUMENTS
DWN R. PARKER
DATE 5-19-82
ISSUE DATE
SIZE D
FSCM NO 06668
DRAWING NO 2310467
REV C
SCALE NONE
SHEET 3


DWG NO 2310467 SH 4
U14
TMS 7041
XTAL1
N.C.
U2
7406
STEP
CHGINH-
TO SHEET 6
CMOLED
LINLED
TO SHEET 5
U4
TMS 99532
VDD
VCC
ALBC
ANSWER-
SQUELCH
XMTD
RCVD
CDET-
TMG
ATE-
EXI
OSC
EXTCLK
NC
FROM SHEET 2
MDMCLK
R22 10M
C20 .047
C55 .1
R46 33
+12V
+5V
-12V
C51 .047
TO UIM
R48 0
R47 47K
-5V
R17 330
CR31 1N751A
RN1
2K
RCV
C5 1
C52 .047
XMTA
C7 1
85K
SELECT
R1 20K
R2
C3 .0033
25K
U1 4559
FROM UIM SHEET 2
ANAOUT
C6 .1
XMT
20K
442
J3
AC XMT
AC RCV
+UNREG
GND
-UNREG
NC
+(UNREG)
-(UNREG)
C4 .1
11K
CR13 1N914B
CR12 1N914
2.4K RN2
ARLMON-
C19 .1
R16 5.6K
R15 100K
R19 200K
RN2 20K
C54 .01
U6 LM386
C17 .047
C16 15 25V
C53 .047
R20 10
C18 .1
C47 47 10V
P4
SPEAKER
FROM SHEET 2
BELLF
C29 .1
J2
LINE
R12 20 1 WATT
T
R
CR6
CR5
1N4007 (X4)
CR8
CR7
R10 12K
R11 1.5K
C13 .00082 200V
C25 .1
T1 1:1
C26 3.3UF 100V
CR4 SA22 22V
MPS6602
Q6
Q5 MPS6602
R8 120, 2W
R9 82K
CR10 1N4735 6.2V
CR11 1N4735 6.2V
CR16 1N914
K1
C12 .27 200V
R13 1K
CR3 1N5264 60V
CR9 1N914
R29 1.5K
C11 .00082 200V
TIL 155
U11
J1
PHONE
INT3-
SPARE
NXTDIG
RNGIND-
FROM UIM SHEET 2
R30 6.8K
R23 6.8K
COLUMN 1 SW.
P7
MCNTRL
R21 510
FROM SHEET 6
RESET-
U7 LS259
CLR
DATA
EN-
A0
A1
A2
D0
CNTRL-
TERMOH
ARLMON
TERMOH-
ARLMON-
RN3
100K
4.12K
10K
680
U12 LM393
RNGIND-
C14 1UF
200K
768
C15 .1
TEXAS INSTRUMENTS
R. PARKER 5-19-82
D 06668
2310467
E
SCALE NONE
SHEET 4


DWG NO 2310467 SH 5
+5V
R44 10K
RN4 4.7K
U22 LM339
+5V
-(UNREG)
U23 2065
P3 PHD STEP MOTOR
C43 .047
C46 .047
-(UNREG)
DATA BUS FROM SHEET 2
U27 LS273
RESET-
MTRCTL-
FROM SHEET 6
FROM SHEET 2
P6
U3 2065
PA0A
PA0B
PA0C
PA0D
LFD
LFC
LFB
LFA
P2-5
P2-4
P2-3
P2-2
P2-1
P2-6
PAPER ADVANCE MOTOR
RN1 4.7K
+(UNREG)
LOCATED ON CONTROL PANEL
9
FROM SHEET 2
PRNTHD-
ADDRESS BUS
DATA BUS
U8 LS174
PHD10
PHD9
PHD8
PHD1
PHD2
PHD3
U5 ULN2003
DOT9 -5
DOT8 -7
DOT1 -1
DOT2 -10
DOT3 -2
P2 PRINTHEAD CONNECTOR
RESET-
FROM SHEET 6
PHD4
PHD5
PHD6
PHD7
U18 ULN2003
DOT4 -9
DOT5 -3
DOT6 -8
DOT7 -4
FROM SHEET 4
CMDLED
LINLED
CMDLED-
LINLED-
PRINT
LS174 U15
P6
R1 150
R2 150
CR3
CR2
+5V
+(UNREG)
VR1 20K
R4 220K
R3 5.1K
C10 .01 UF
C9 .01 UF
R6 2K
PRINT
TRIG1
RST1
OUT1
DSCHG1
THRESH1
RST2
DSCHG2
THRESH2
TRIG2
OUT2
U3 NE556
R5 330
MPS 6602
Q4
R31 470
R33 470
MPS 6652
Q3
PVOLTS
-6
P2
PRINTHEAD CONNECTOR
TEXAS INSTRUMENTS
DWN R. PARKER
DATE 5-18-82
ISSUE DATE
SIZE D
FSCM NO 06668
DRAWING NO 2310467
REV F
SCALE NONE
SHEET 5


DWG NO 2310467 SH 6
THERMAL FUSE
T1
117V RMS 60HZ
F1 3A 120V
C24 .1 100
CR15 FWLD 100
Q15 LM317T
R37 2.7 1/2W
R38 120
C48 4.7 50V
CR20 UPC3001
CR30 VSK540
E7 16V BATT
E6
S1
F2 4A 120V
BATTERY SENSE
CHGINH FROM SHEET 4
R40 560
Q13 78L05
CR24 Z17.71% 10MA
C44 3300 50V
C57 2.2UF 50V
OVR SENSE
CR28 UES1101
L1 5UH
T2
+5V
R45 3.3 5W
CR29 1N4935
C42 .033 250V
C40 470 35V
C41 470 16V
TO P.T. HOLE
TO BATTERY SENSE
TO OVR SENSE
TO +(UNREG)
P6 14
P6 12
P6 20
CR7 1N914B
C2 33 16V
R3 220
R7 1.5K
Q1 MPS6602
OVP (6.5V)
R13 910
R21 5.36K 1%
R12 470
C6 .047
C8 .047
R5 200K 1%
R4 100K 1%
C1 2.2 20V
LOWER THRES. DETECTOR (14.4V)
R22 10K 1%
CR5 1N914B
R10 4.3K
R9 .47M
U1 LM3905
C3 1 35V
CR4 1N914B
R11 221K 1%
R18 102K 1%
C4 3.3UF 15V
R8 1K
P6 18 SHTDWN
C30 1 35V
C31 .047
R36 590 1%
TO +5
P6 4
P6 10
RESET- TO SHEETS 2, 4, 5
R34 43
LM234 Q1
Q7 A8T2907
Q8 A8T2222
R41 16K
CR26 1N4935
C35 .47 50V
R43 25 5W
Q14 2N6338
CR18 1N750A
CR25 UES1302
Q10 78L12
+(UNREG)
+12V
C49 470 35V
C50 470 35V
C33 .27
C37 33 16V
C5 .047
R14 47K
R20 100K
R16 1K
UPPER THRES. DETECTOR (15.5V)
CR6 .4M4.7AZ1
R19 100K
C7 1 35V
R15 .43M
CR1 POWER LAMP, LOW BATTERY INDICATOR
R6 150
Q2 MPS6602
R17 10K
TO +5
TO +(UNREG)
CR14 1N914B
C21 .047
R32 360
R28 178 1%
R26 68
C22 .047
Q2 MPS6652
U10 LM301
U9 LM311 5,6,8
R25 180
R24 360 1/2W
TO -(UNREG)
Q12 MPS6602
Q11 MPS6602
CR21 1N914B
CR23 1N914B
C39 .047
CR27 1N914B
R42 .115 3W
CR22 UES1302
-(UNREG)
-12V
Q9 79L12
C45 470 35V
C32 .27
C36 33 16V
CR19 1N914B
R35 1K
CR17 1N914B
R27 324 1%
R7 510
CR2 .4M3.3AZ1
CR1 1N914B
C28 .0047
P6 19
P6 17
CIRCUIT INSIDE DASH LINE LOCATED ON CONTROL PANEL BOARD
TEXAS INSTRUMENTS
DWN R. PARKER
DATE 5-18-82
ISSUE DATE
SIZE D
FSCM NO 06668
DRAWING NO 2310467
REV E
SCALE NONE
SHEET 6

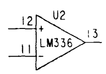
DWG NO 2310492 SH 1

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
C	CN455179 (D) M. DURHAM	11-4-83	[signature]

NOTES: UNLESS OTHERWISE SPECIFIED:

1. ALL DEVICE TYPES ARE PREFIXED WITH SN74
2. Vcc IS APPLIED TO PIN 14 OF 14 PIN IC'S, PIN 16 OF 16 PIN IC'S, PIN 18 OF 18 PIN IC'S, PIN 20 OF 20 PIN IC'S
3. GROUND IS APPLIED TO PIN 7 OF 14 PIN IC'S, PIN 8 OF 16 PIN IC'S, PIN 9 OF 18 PIN IC'S, PIN 10 OF 20 PIN IC'S
4. RESISTORS ARE 1/4 WATT, 5%

SPARES



COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

NEXT ASSY	USED ON
2310490	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.07/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

	Name	Date
DWN	R. PARKER	5-20-82
CHK	V. HAYTER	3-.7-83
ENGR	G. EBNER	3-22-83
APVD-ENGR	G. HARE	3-22-83
QA	G. HEBERT	3-22-83
APVD-MFG	J. HAZARD	3-22-83
RLSE	T. BAILEY	3-23-83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

LOGIC DIAGRAM, CONTROL PANEL

SIZE D FSCM NO 06668 DRAWING NO 2310492

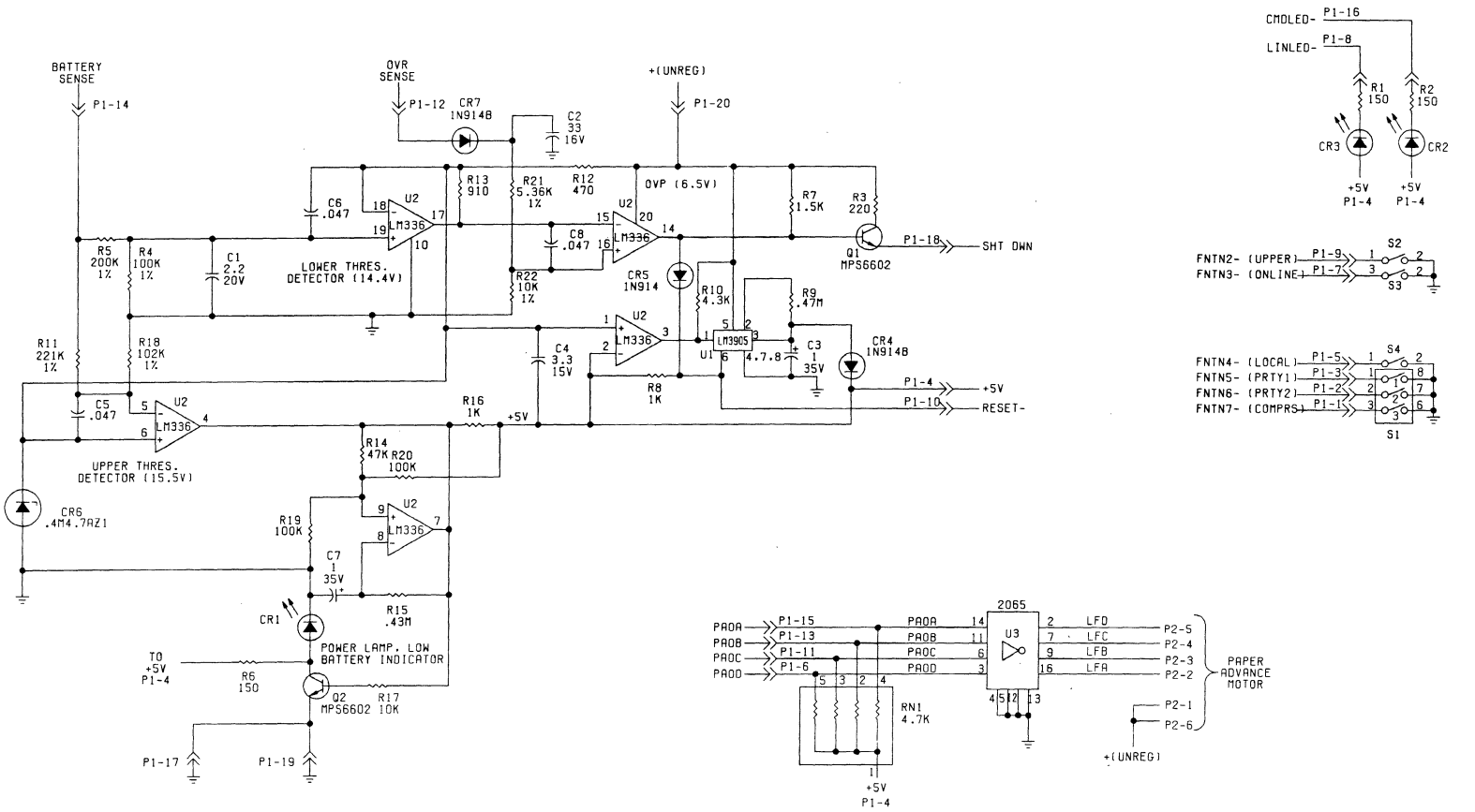
SCALE NONE SHEET 1 OF 2

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES	REV STATUS OF SHEETS	REV	C	C
	PROCESS		CLASSIFICATION				SH	1	2

PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729487

4430

TB



TEXAS INSTRUMENTS	DWN R. PARKER	DATE 5-20-82	SIZE D	FSCM NO 06668	DRAWING NO 2310492	REV C
	ISSUE DATE		SCALE NONE		SHEET 2	

DWG NO 2310497 SH 1

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN4809661(D) J.VALLEJO (1) REPLACES REV NONE W/CHANGE (2)DWG WAS MANUAL	5-2-83	C.KEELER
B	CN4659791(E) J.VALLEJO	5-5-83	C.KEELER
C	CN4757461(D) J.VALLEJO	6-2-83	C. KEELER

NOTES: UNLESS OTHERWISE SPECIFIED:

1. NOT REQUIRED FOR 703 TYPE MODULE
2. DO NOT INSTALL FOR NORMAL OPERATION
3. THESE DEVICES INSTALLED ON SOLDER SIDE
4. ALL RESISTORS ARE 1/4W, 5%
5. RESISTANCE VALUES ARE IN OHMS
6. CAPACITANCE VALUES ARE IN MICROFARADS

SPARE

RC4558 U6

+5V C1,C3 THRU C5 0.047

DATA BUS

(OR 2532-35 EPROM)

TMS4732 4K X 8 ROM U1

TMS4764 8K X 8 ROM (OR TMS 2564 EPROM) U2

TC5517APL 2K X 8 CMOS ROM U3

74C374 OCTAL CMOS LATCH U4

S2860 TONE DIALER U5

CR1 1N6263

CR2 VSK130

B1 BR2325

Y1. 3.579545 MHZ

R1 10M

R2 1K

R3 2.4K

R4 6.2K

R5 300

R7 10K

R8 3.3K

R9 6.8K 1/8W

C2 .01UF

C6 0.15

C7 0.15

UIMRAM3-

UIMRAM1-

READ

UIMROM1-

DP

ANAOUT

MCNTRL

ADDRESS BUS

COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	THIRD ANGLE PROJECTION
0.33 THRU 3.18 +0.10/-0.03	
3.20 THRU 6.35 +0.13/-0.03	
6.38 THRU 12.70 +0.15/-0.03	
12.75 THRU 19.05 +0.20/-0.03	
19.08 THRU 25.40 +0.25/-0.05	
25.43 THRU 50.80 +0.30/-0.05	

		DATE
DWN	J.VALLEJO	4-20-83
CHK	VERNON HAYTER	12-3-82
ENGR	JIM REES	2/6/82
APVD-ENGR	GEORGE HARE	12/6/82
QA	GLENN HEBERT	12/6/82
APVD-MFG	JOHN HAZARD	2/8/83
RLSE	TONY BAILEY	2/9/83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group — SI-METRIC

LOGIC DIAGRAM, AUTO ACCESS CARTRIDGE 703/707

SIZE D | FSCM NO 06668 | DRAWING NO 2310497 | SCALE NONE | SHEET

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL
	PROCESS		CLASSIFICATION	

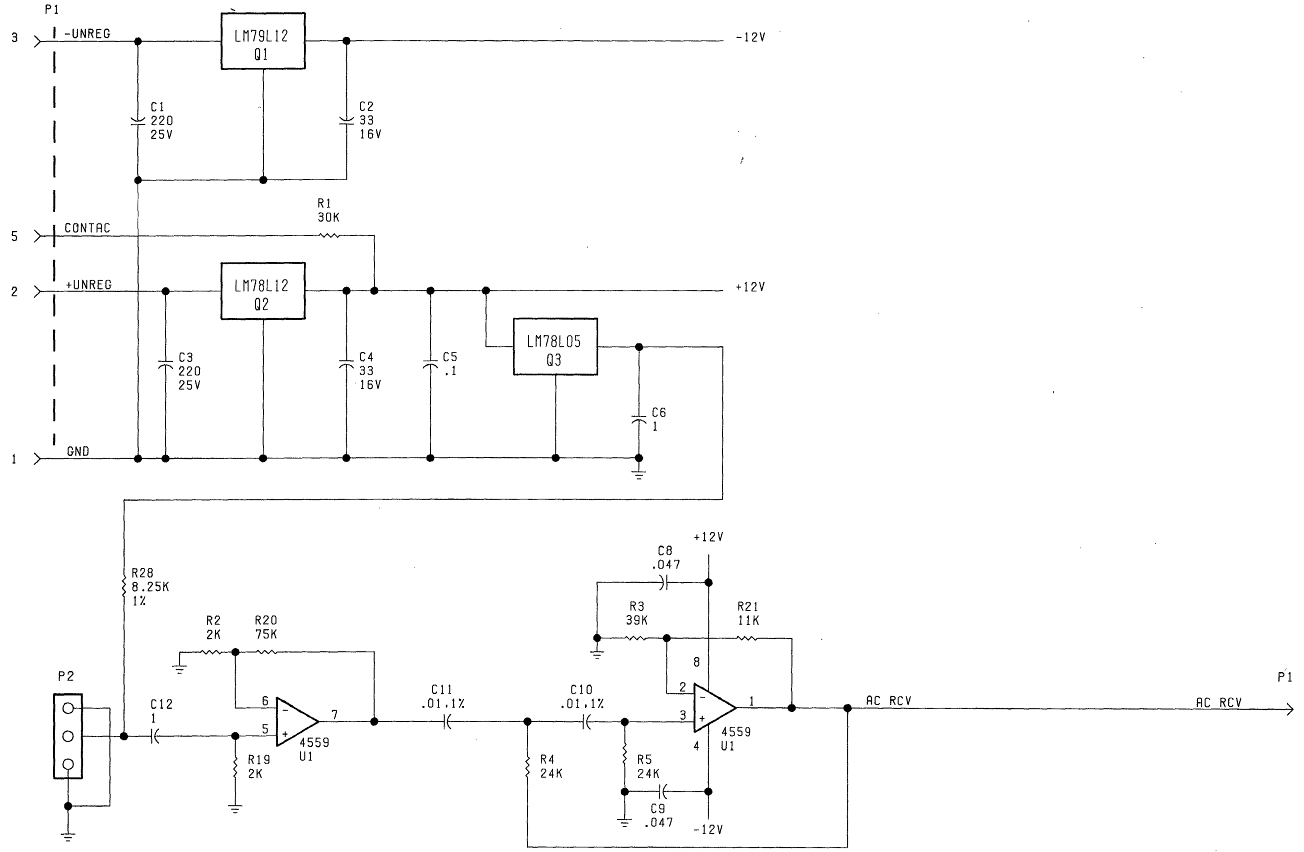
PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729487

NOTES | REV STATUS OF SHEETS | REV | SH

2310495 NEXT ASSY | 7114 USED ON | APPLICATION

NOTES: UNLESS OTHERWISE SPECIFIED:

1. DO NOT INSTALL
2. INSTALL ZERO OHM RESISTOR
3. RESISTANCE VALUES ARE IN OHMS
4. CAPACITANCE VALUES ARE IN MICROFARADS
5. RESISTORS ARE 1/4W, 5%



COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

DWG NO 2310522 SH 1

REVISIONS

REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

DWN J. VALLEJO DATE 5-6-83

TEXAS INSTRUMENTS INCORPORATED — SI-METRIC

LOGIC DIAGRAM, ACOUSTIC COUPLER

SIZE D FSCM NO 06668 DRAWING NO 2310522

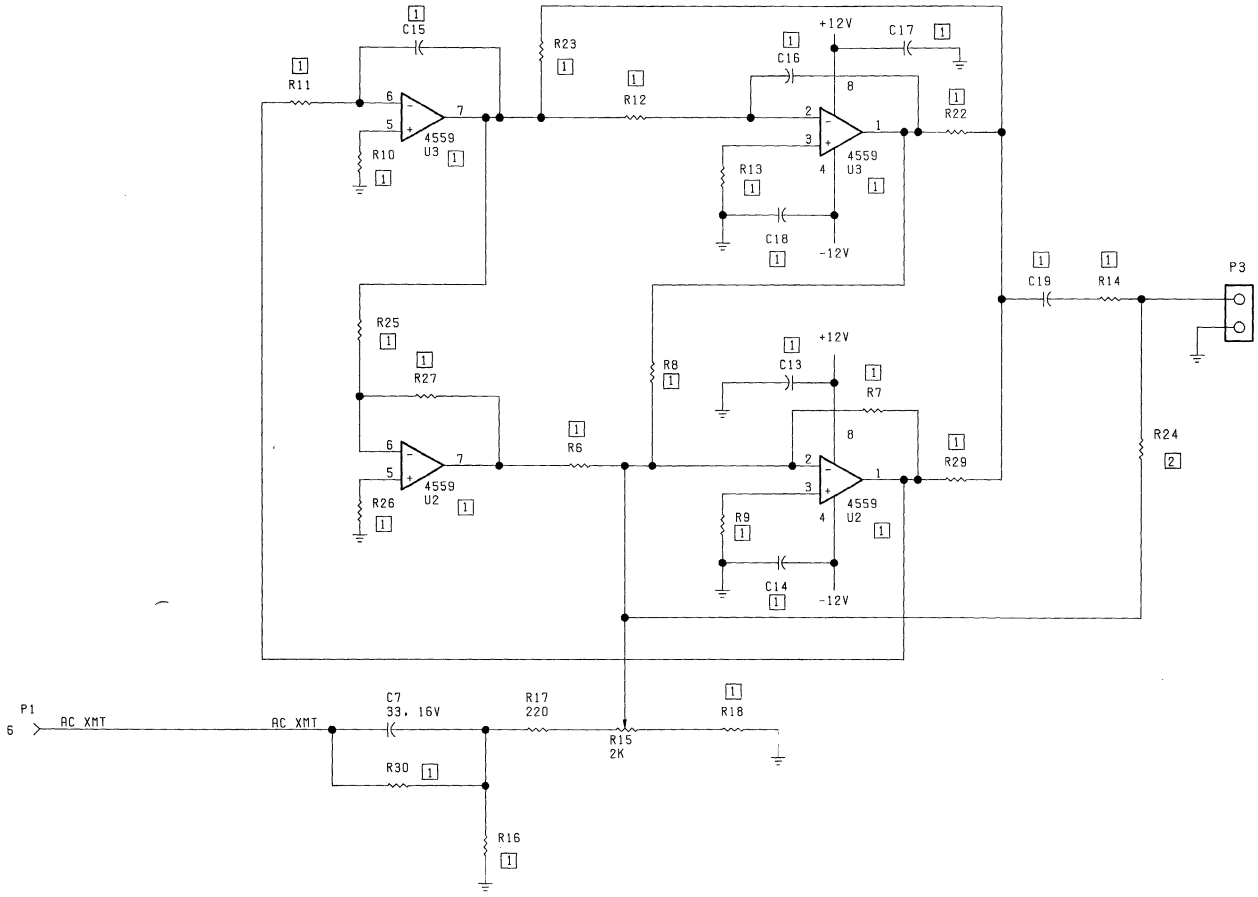
SCALE NONE SHEET 1 OF 2

NEXT ASSY 2310520 USED ON 7114

APPLICATION

4 430

FILMED

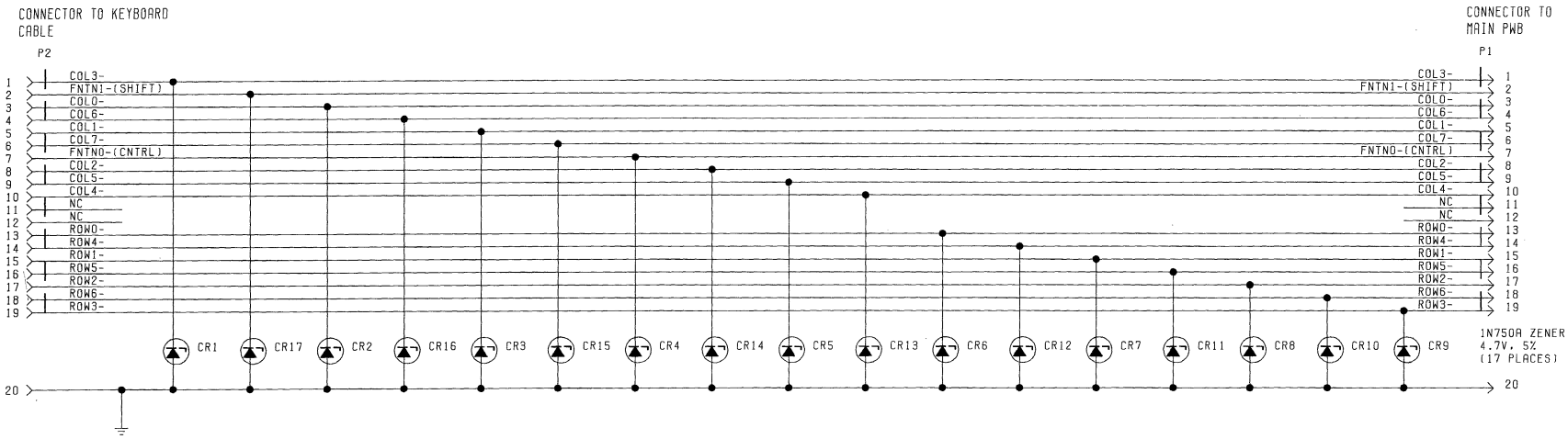


TEXAS INSTRUMENTS	DWN J.VALLEJO 5-6-83	ISSUE DATE	SIZE D	FSCM NO 06668	DRAWING NO 2310522	REV
			SCALE NONE		SHEET 2	

NOTES: UNLESS OTHERWISE SPECIFIED:

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

DWG NO 2310587 SH



COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE

0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.13/+0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

2310585	7114
NEXT ASSY	USED ON
APPLICATION	

DWN	J. VALLEJO	DATE 5-5-83
CHK	[illegible]	7-6-83
ENGR	[illegible]	7-6-83
APVD-ENGR	[illegible]	7-6-83
MFG	[illegible]	7/5/83
APVD-MFG	[illegible]	7-6-83
RLSE	[illegible]	7-13-83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group — SI-METRIC

ELECTRONIC SCHEMATIC DIAGRAM, ESD ADAPTER

SIZE D | FSCM NO 06668 | DRAWING NO 2310587 | SCALE NONE | SHEET

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
	PROCESS		CLASSIFICATION		

PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 7E9467

REV STATUS OF SHEETS | REV | SH

TI-83748

Section 8

Assembly Drawings

This section contains assembly drawings and lists of materials for the Model 703 and Model 707 Data Terminals.

Model 703 Assemblies

Model 707 Assemblies

Common Assemblies

Maintenance Assemblies

Option Assemblies

DWG NO 2310503 SH 1

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
C	CN511940 (D) M.KUHEN (1) REDRAWN WITH CHANGE (2) DWG WAS "A" SIZE	8-30-83	[illegible]

NOTES: UNLESS OTHERWISE SPECIFIED:

1. PHASE A BUMPER (ITEM 44) IS ATTACHED TO THE LEFT MOTOR MOUNT (ITEM 3)
2. LEAD SCREW (ITEM 9) IS INSTALLED ON PRINTHEAD MOTION MOTOR (ITEM 6) BY A THERMAL INDUCED INTERFERENCE FIT
3. BATTERY DOORS (ITEM 23) TO BE INSTALLED AFTER TIGHTENING BASE (ITEM 1) AND COVER (ITEM 26) TOGETHER WITH SCREWS (ITEM 33)
4. APPLY ITEM TO NON-TEXTURED AREA SHOWN WITH NO OVERLAP ONTO TEXTURED AREA
5. THE SERIAL NUMBER ON THE LABEL (ITEM 46) WILL BE IN THE FORMAT WWMMMYXXXX, WHERE WW IS THE WEEK (1-52), MMM IS THE MODEL, Y IS THE LAST DIGIT OF THE YEAR, AND XXXX IS THE SEQUENTIAL NUMBER
6. TIGHTEN SCREW (ITEM 32) TO 0.79 ± 0.11 Nm, TIGHTEN SCREWS (ITEM 33) TO 1.13 ± 0.11 Nm
7. FOR ASSEMBLIES USING 2310491 (ITEM 22) REV B AND UNDER, PIN 1 OF THE CABLE FOR THE PAPER ADVANCE MOTOR (ITEM 7) WILL GO TO PIN 6 ON THE PCB ASSEMBLY
8. PAPER ADVANCE DRIVE ROLLER (ITEM 38) MUST BE FULLY SEATED INTO MOTOR COUPLER (ITEM 39) WITHIN 0.5 MM
9. SLOTS ON COMPRESSION RINGS (ITEM 41) MUST NOT ALIGN WITH SLOT ON MOTOR COUPLER (ITEM 39)
10. TURNED DOWN END OF PAPER ADVANCE DRIVE ROLLER (ITEM 38) MUST JOIN WITH BEARING (ITEM 14) IN LEFT MOTOR MOUNT (ITEM 3)
11. MARK PART NUMBER IN APPROPRIATE LOCATION SHOWN PER TABLE 3
12. MARK TERMINAL DESCRIPTION IN APPROPRIATE LOCATION SHOWN PER TABLE 3
13. MARK SERIAL NUMBER IN APPROPRIATE LOCATION
14. MARK VOLTAGE IN APPROPRIATE LOCATION SHOWN PER TABLE 3
15. MARK FREQUENCY IN APPROPRIATE LOCATION SHOWN PER TABLE SHOWN
16. MARK AMPERAGE IN APPROPRIATE LOCATION SHOWN PER TABLE 3
17. MARK WATTAGE IN APPROPRIATE LOCATION SHOWN PER ITEM 3
18. MARK LABEL PER TABLE 3 USING AN IMPACT PRINTER WITH EPOXY INK RIBBON
19. UNIT AND TRANSFORMER (ITEM 60), PAPER (ITEM 52), PUBLICATIONS KIT (ITEM 61), CARTRIDGE (ITEM 73), AND SHIPPING LABEL (ITEM 71) PACKED PER ITEM 72
20. FOR ASSEMBLIES -0004 THRU-0007, KEYBOARD (ITEM 25) IS MODIFIED USING KEYBOARD CONVERSION KIT (ITEM 62)

PART NUMBER	DESCRIPTION
2310503-0100	2310503-000X COMMON PARTS LIST
2310503-0007	MODEL 703 DATA TERMINAL, FRANCE DP
2310503-0006	MODEL 703 DATA TERMINAL, FRANCE WP
2310503-0005	MODEL 703 DATA TERMINAL, GERMANY
2310503-0004	MODEL 703 DATA TERMINAL, UK
2310503-0003	MODEL 703 DATA TERMINAL, INTERNATIONAL
2310503-0002	MODEL 703 DATA TERMINAL, CANADA
2310503-0001	MODEL 703 DATA TERMINAL

COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

NEXT ASSY	USED ON
	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN M. DURHAM DATE 8-23-83
CHK [signature] 8-30-83
ENGR [signature] 9/2/83
APVD-ENGR [signature] 9/6/83
QA [signature] 9/6/83
APVD-MFG [signature] 9/7/83
REL [signature] 9-7-83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

MODEL 703
DATA TERMINAL

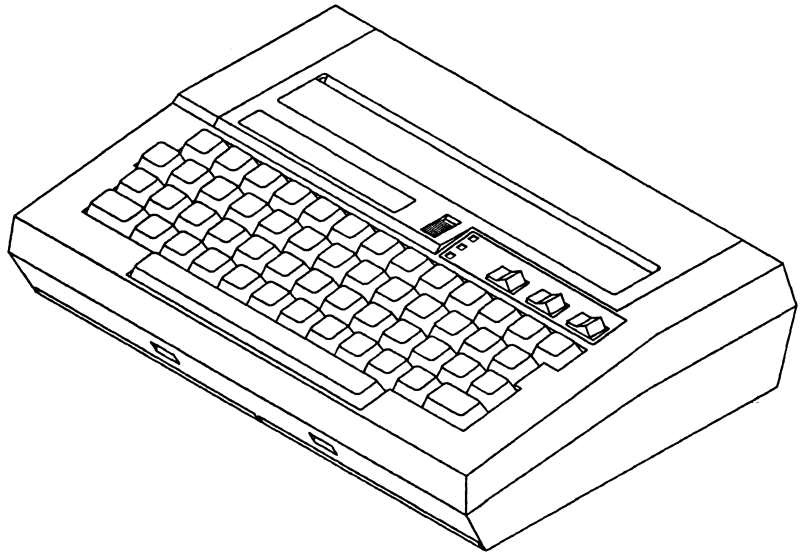
SIZE D FSCM NO 06668 DRAWING NO 2310503

SCALE 1:2 SHEET 1 OF 5

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES	REV STATUS OF SHEETS	REV	C	C	C	C	C
	PROCESS		CLASSIFICATION				SH	1	2	3	4	5

PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

300



REFERENCE ONLY
TABLE I

PART NUMBER	MAINT KIT DESCRIPTION	ITEMS INCLUDED	VIEWS / NOTES
2310439-0001	MAINT KIT, ADVANCE IDLER ROLLER ASSY	36,37	SH 3, C4-5
2310440-0001	MAINT KIT, ADVANCE DRIVE ROLLER ASSY	38,39,40,41	SH 4, B3: SH5, B7
2310489-0001	MAINT KIT, PLATEN ASSY	8,11,12	SH 3, C4-5
2310531-0001	MAINT KIT, CARRIAGE MOTOR	6,9	SH 4, D6 / 2
2310546-0001	MAINT KIT, CARRIAGE ASSY	13,15,17,18,19,29	SH 4, B6
2310548-0001	MAINT KIT, PAPER DOOR	27,28,45	SH 3, C2
2310551-0001	MAINT KIT, BASE	1,23,24,47,48,49,50	SH 4, C3 / 3,4
2310552-0001	MAINT KIT, PAPER TRAY W/MOTOR MOUNTS	3,4,5,10,14,29,30,44	SH 3, C4-5: SH5, C7 / 1

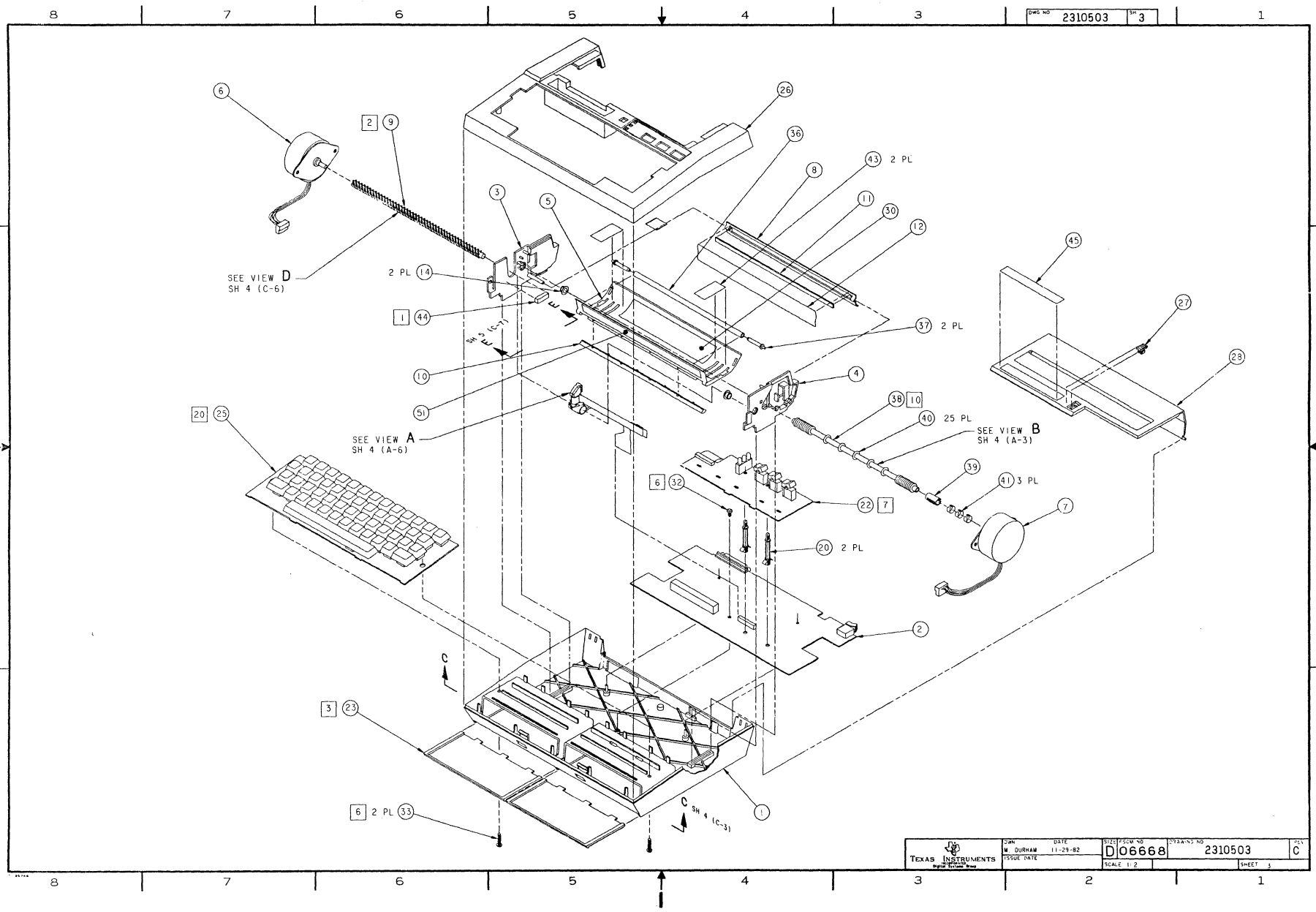
WHEN ANY ITEMS OR NOTES ARE CHANGED,
AN ECN WILL BE NEEDED TO THE APPLICABLE MAINT. KIT DRAWING TO REFLECT
A REVISION CHANGE

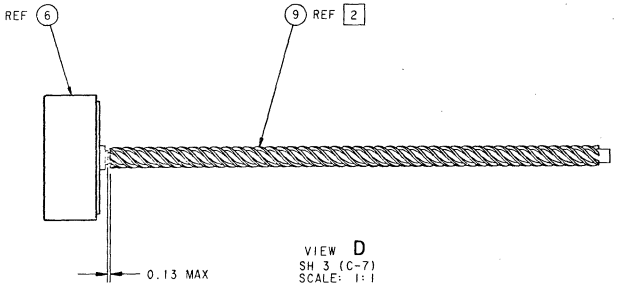
TABLE II

CABLE HOOK-UP SCHEDULE		REMARKS
DESCRIPTION	FINISH	
PRINTHEAD CABLE (ITEM 19)	P2 - MAIN ELECTRONICS PCB	
PRINTHEAD MOTION MOTOR (ITEM 6)	P3 - MAIN ELECTRONICS PCB	
CONTROL PANEL (ITEM 22)	P6 - MAIN ELECTRONICS PCB	
PAPER ADVANCE MOTOR (ITEM 7)	P2 - CONTROL PANEL PCB	7
KEYBOARD (ITEM 25)	P2 - ESD ADAPTER	

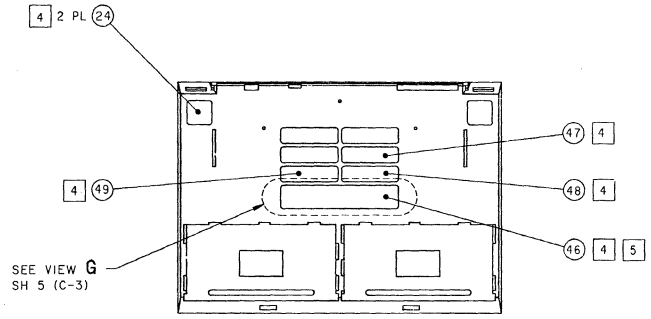
TEXAS INSTRUMENTS

DWN	DATE	SIZE	FSCM NO	DRAWING NO	REV
M. DURHAM	11-29-82	D	06668	2310503	C
ISSUE DATE		SCALE 1:2		SHEET 2	

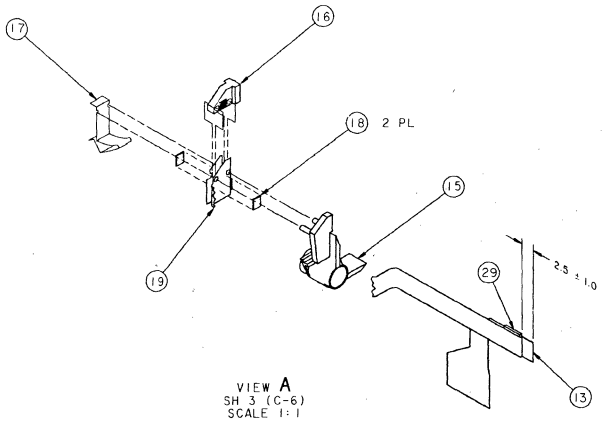

DWG NO 2310503 SH 3
SEE VIEW D SH 4 (C-6)
SEE VIEW A SH 4 (A-6)
SEE VIEW B SH 4 (A-3)
SH 3 (C-7)
SH 4 (C-3)
2 PL
25 PL
3 PL
TEXAS INSTRUMENTS
DRAWN M. DURHAM DATE 11-29-82
ISSUE DATE
SIZE D PSCM NO 06668
DRAWING NO 2310503
REV C
SCALE 1:2
SHEET 3



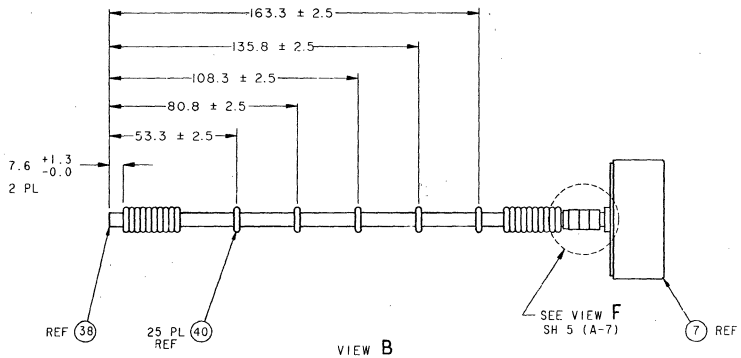
VIEW D
SH 3 (C-7)
SCALE: 1:1



VIEW C-C
SH 3 (A-4)

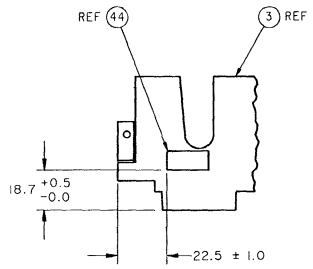


VIEW A
SH 3 (C-6)
SCALE 1:1

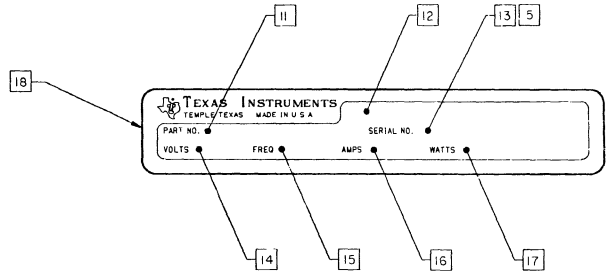


VIEW B
SH 3 (B-3)
SCALE 1:1

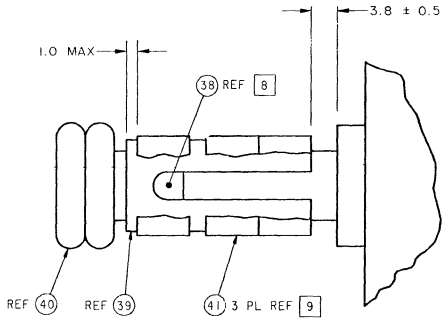
TEXAS INSTRUMENTS	DWN M. DURHAM	DATE 11-29-82	SIZE D	FSCM NO 06668	DRAWING NO 2310503 REV C
	ISSUE DATE		SCALE 1:2		SHEET 4



VIEW E-E
SH 3 (C-5)
SCALE 1:1



VIEW G
SH 4 (C-4)
SCALE 2:1



VIEW F
SH 4 (B-2)
SCALE 5:1

2310503-0007	MODEL 703 DATA TERMINAL, FRANCE DP	20 VAC	50 HZ	1.8 A	35 W
2310503-0006	MODEL 703 DATA TERMINAL, FRANCE WP	20 VAC	50 HZ	1.8 A	35 W
2310503-0005	MODEL 703 DATA TERMINAL, GERMANY	20 VAC	50 HZ	1.8 A	35 W
2310503-0004	MODEL 703 DATA TERMINAL, UK	20 VAC	50 HZ	1.8 A	35 W
2310503-0003	MODEL 703 DATA TERMINAL, INTERNATIONAL	20 VAC	50 HZ	1.8 A	35 W
2310503-0002	MODEL 703 DATA TERMINAL, CANADA	20 VAC	60 HZ	1.8 A	35 W
2310503-0001	MODEL 703 DATA TERMINAL	20 VAC	60 HZ	1.8 A	35 W
PART NUMBER	TERMINAL DESCRIPTION	VOLTS	FREQ	AMPS	WATTS

TABLE III

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310503-0001 E MODEL 703 DATA TERMINAL

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310442-0001	TRANSFORMER,WALL MOUNTED (UL)	EA
0061	00001.000	2310478-0001	PUBLICATION KIT,MODEL 703 1661-0478-000	EA
0070	00001.000	2310503-0100	2310503-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0001	LABEL,PACKING,MODEL 703 1661- -000	EA
0072	00000.000	2233040-0001	PACK ASSY, MODEL 703 1661- -000	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310503-0002 E MODEL 703 DATA TERMINAL, CANADA

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0049	00001.000	2310558-0001	LABEL, CSA, (50MM X 13MM)	EA
0060	00001.000	2310442-0002	TRANSFORMER,FLOOR MOUNTED (CSA)	EA
0061	00001.000	2310478-0001	PUBLICATION KIT,MODEL 703 1661-0478-000	EA
0070	00001.000	2310503-0100	2310503-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0002	LABEL,PACKING,MODEL 703 1661- -000	EA
0072	00000.000	2233040-0002	PACK ASSY, MODEL 703, CANADA 1661- -000	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310503-0003 E MODEL 703 DATA TERMINAL,INTERNATIONAL

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0049	00001.000	2310553-0001	LABEL,UL	EA
0061	00001.000	2310478-0001	PUBLICATION KIT,MODEL 703 1661-0478-000	EA
0070	00001.000	2310503-0100	2310503-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0003	LABEL,PACKING,MODEL 703 1661- -000	EA
J072	00000.000	2233040-0003	PACK ASSY,MODEL 703, INTERNATIONAL 1661- -000	EA

List of Materials

11/16/83

PART NUMBER 2310503-0004 REV E DESCRIPTION..... MODEL 703 DATA TERMINAL, U. K.

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310448-0002	XFORMER,INTER.240V/50HZ (GREAT BRITAIN) SEE TI- DRAWING	EA
0061	00001.000	2310478-0001	PUBLICATION KIT,MODEL 703 1661-0478-000	EA
0062	00001.000	2310475-0002	KYBD CONV. SET,UNITED KINGDOM SEE TI- DRAWING	EA
0070	00001.000	2310503-0100	2310503-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0007	LABEL,PACKING,MODEL 703 1661- -000	EA
0072	00000.000	2233040-0004	PACK ASSY, MODEL 703, U.K. 1661- -000	EA
0073	00001.000	2310530-0003	AUTO ACCESS CARTRIDGE, U.K. 1661- -000	EA

11/16/83

PART NUMBER 2310503-0005 REV E DESCRIPTION..... MODEL 703 DATA TERMINAL, GERMANY

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310448-0001	XFORMER,INTER.220V/50HZ (WESTERN EUROPE) SEE TI- DRAWING	EA
0061	00001.000	2310478-0001	PUBLICATION KIT,MODEL 703 1661-0478-000	EA
0062	00001.000	2310475-0003	KYBD CONV. SET,GERMANY SEE TI- DRAWING	EA
0070	00001.000	2310503-0100	2310503-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0008	LABEL, PACKING, MODEL 703 1661- -000	EA
0072	00000.000	2233040-0005	PACK ASSY, MODEL 703, GERMANY 1661- -000	EA
0073	00001.000	2310530-0004	AUTO ACCESS CARTRIDGE, GERMAN 1661- -000	EA

11/16/83

PART NUMBER 2310503-0006 REV E DESCRIPTION..... MODEL 703 DATA TERMINAL, FRANCE WP

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310448-0001	XFORMER,INTER.220V/50HZ (WESTERN EUROPE) SEE TI- DRAWING	EA
0061	00001.000	2310478-0001	PUBLICATION KIT,MODEL 703 1661-0478-000	EA
0062	00001.000	2310475-0005	KYBD CONV. SET,FRANCE WP SEE TI- DRAWING	EA
0070	00001.000	2310503-0100	2310503-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0009	LABEL, PACKING, MODEL 703 1661- -000	EA
0072	00000.000	2233040-0006	PACK ASSY, MODEL 703, FRANCE WP 1661- -000	EA
0073	00001.000	2310530-0005	AUTO ACCESS CARTRIDGE, FRENCH WP 1661- -000	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310503-0007	E	MODEL 703 DATA TERMINAL, FRANCE DP

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310448-0001	XFORMER,INTER.220V/50HZ (WESTERN EUROPE) SEE TI- DRAWING	EA
0061	00001.000	2310478-0001	PUBLICATION KIT,MODEL 703 1661-0478-000	EA
0062	REF	2310475-0004	KYBD CONV. SET,FRANCE DP	EA
0062A			* KEYCAP SWAP,NO PARTS REQD SEE TI- DRAWING	
0070	00001.000	2310503-0100	2310503-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0010	LABEL, PACKING, MODEL 703 1661- -000	EA
0072	00000.000	2233040-0007	PACK ASSY, MODEL 703, FRANCE DP 1661- -000	EA
0073	00001.000	2310530-0006	AUTO ACCESS CARTRIDGE, FRENCH DP 1661- -000	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310503-0100	E	2310503-000X COMMON PARTS LIST

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310432-0001	BASE 1255-3031-005	EA
0002	00001.000	2310455-0001	TERM.ELEC,MODEL 703,EIA,RS-232 1661-5501-010	EA
0003	00001.000	2310421-0001	MOTOR MOUNT, LEFT 1255-3027-005	EA
0004	00001.000	2310423-0001	MOTOR MOUNT, RIGHT 1255-3026-004	EA
0005	00001.000	2310600-0001	PAPER TRAY ASSEMBLY, 70X 1689-0600-007	EA
0006	00001.000	2310473-0001	MOTOR,STEPPING,PRINTHEAD MOTION	EA
0007	00001.000	2310473-0002	MOTOR,STEPPING,PAPER ADVANCE	EA
0008	00001.000	2310426-0001	PLATEN, 70X 1689-0426-009	EA
0009	00001.000	2310430-0001	LEAD SCREW	EA
0010	00001.000	2310429-0001	CARRIAGE GUIDE 1255-3022-006	EA
0011	00001.000	2310479-0001	CUSHION, PLATEN	EA
0012	00001.000	2310487-0001	TAPE, UHMW, 210.0 X 22.0 MM LONG	EA
0013	00001.000	2310536-0001	GUIDE,PRINTHEAD CABLE	EA
0014	00002.000	0772684-0005	BEARINGS,SLEEVE-FLANGED NYLON .2510 ID THM -4L1	EA
0015	00001.000	2310427-0001	CARRIAGE	EA
0016	00001.000	2310472-0001	PRINTHEAD, THERMAL	EA
0017	00001.000	2310471-0001	CLIP, PRINTHEAD	EA
0018	00002.000	2310481-0001	PAD,ADHESIVE,DOUBLE COATED	EA

List of Materials

11/16/83

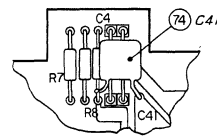
PART NUMBER	REV	DESCRIPTION
2310503-0100	E	2310503-000X COMMON PARTS LIST

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0019	00001.000	2310441-0001	CABLE, PRINTHEAD	EA
0020	00002.000	2310436-0001	SPACER, PWB	EA
0022	00001.000	2310490-0001	PWB ASSY,CONTROL PANEL,700 SERIES 1661-9001-014	EA
0023	00002.000	2310420-0001	DOOR, BATTERY 1255-3023-005	EA
0024	00002.000	2310488-0002	FOOT,RUBBER,19 MM SQ.	EA
0025	00001.000	2310486-0001	KYBD,700 SERIES W/KEYTOPS,UNENCODED	EA
0026	00001.000	2310431-0001	COVER 1255-3025-004	EA
0027	00001.000	2310425-0001	LOCK, PAPER DOOR 1255-3029-005	EA
0028	00001.000	2310428-0002	DOOR,PAPER, W/O LOGO 1255-3033-004	EA
0029	00001.000	2265966-0007	TAPE,FOAM,DOUBLE STICK,9.3 X 12.7 SEE TI- DRAWING	EA
0030	00001.000	2310435-0001	LABEL, PARAMETER DEFAULT	EA
0032	00001.000	2211895-0014	SCREW,PLASTITE SEE TI- DWG	EA
0033	00002.000	2211895-0610	SCREW,PLASTITE SEE TI- DWG	EA
0036	00001.000	2310482-0001	ROLLER,PAPER ADVANCE IDLER 1689-0482-009	EA
0037	00002.000	0983874-0001	PIVOT 1255-2025-030	EA
0038	00001.000	2310603-0001	ROLLER, PAPER ADVANCE DRIVE 1689-0603-007	EA
0039	00001.000	2310474-0001	COUPLER, MOTOR	EA
0040	00025.000	2211811-0002	SEAL,O-RING,NITRILE,.220"IC,.094"THK SEE TI- DWG	EA
0041	00003.000	2221042-0007	RING,RETAINING,SPLIT,STEEL SEE TI- DRAWING	EA
0043	00002.000	2310487-0002	TAPE, UHMW, 50.0 X 22.0MM LONG	EA
0044	00001.000	2310541-0001	BUMPER, PHASE A	EA
0045	00001.000	2310554-0001	LABEL,SILENT 700 DATA TERMINAL	EA
0046	00001.000	2310572-0001	LABEL,IDENTIFICATION	EA
0047	00001.000	2310559-0001	LABEL,COPYWRIGHT	EA
0048	00001.000	2310556-0001	LABEL,NOTE.OF COMP.,FCC CLASS B	EA
0051	00001.000	2310487-0003	TAPE, UHMW, 210.0 X 12.7 MM LONG SEE TI- DRAWING	EA
0052	00001.000	0972603-0001	SPECIFICATION-THERMAL PAPER 100 FT ROLL LAB - 70930108	RL
0075	00001.000	0999456-9701	MANUAL,INFORMATION REQUEST FORM 1225-9456-000	EA
9999	00002.000	0239999-9999	COST, SHRINKAGE	EA

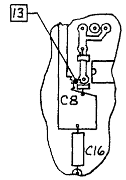
DWG NO 2310455 SH 1

NOTES: UNLESS OTHERWISE SPECIFIED:

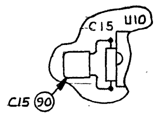
1. CLINCHING COMPONENT LEAD OPTIONAL
2. [2] MAXIMUM LEAD LENGTH FROM CONDUCTOR SIDE OF BOARD IS 1.52
3. [3] POWER RESISTORS R25 (ITEM 39) AND R28 (ITEM 39) WILL BE INSTALLED WITH A CLEARANCE OF 10.16 MINIMUM AND 12.70 MAXIMUM BETWEEN COMPONENT BODY AND PWB (ITEM 1)
4. [4] SECURE CRYSTAL (ITEM 78) TO PWB WITH DOUBLE SIDED TAPE (ITEM 89) WHILE INSULATING CAN FROM PWB (ITEM 1)
5. [5] INSTALL SYMBOLIZATION LABEL (ITEM 106) AFTER FLOW SOLDER ON FAR SIDE OF ASSEMBLY UNDERNEATH LOGIC ARRAY (U17)
6. ITEM 100 ON THE -0001 LM IS THE AUTO INSERTED PARTS CONTAINED ON THE -5001 LM
7. ALL SYMBOLIZATION IS TO BE DONE USING INDELIBLE INK
8. [8] TIGHTEN NUTS (ITEM 86) TO 0.56 ± 0.15NM
9. [9] LABEL TO BE MARKED WITH SITE/DATE CODE PER 994396 (ITEM 103) ASSEMBLY PART NUMBER AND REVISION LETTER, SCHEMATIC REV LETTER AND RUN NUMBER
10. MASK TOOLING HOLES ON BOTH SIDES OF BOARD TO PREVENT SOLDER FROM ENTERING HOLES
11. [11] CLIP PINS 3 AND 4 ON U1 AND SHORT PADS TOGETHER USING BUS WIRE (ITEM 95), ON REV A AND B PWB'S ONLY
12. **CAUTION: STATIC SENSITIVE** ELECTROSTATIC DISCHARGE CAN DAMAGE THIS COMPONENT. PRODUCT MUST BE SHIPPED IN ANTISTATIC CONTAINER AND MAINTAINED IN ANTISTATIC PACKAGING. INDIVIDUAL DEVICES SHOULD BE HANDLED ONLY AT STATIC-FREE WORK STATION.
13. [13] REMOVE ETCH ON REV A PWB (ITEM 1), ISOLATING +5V AND GROUND PLANE PRIOR TO INSTALLING C8 (ITEM 98)
14. [14] INSTALL P2 WITH PIN 1 ORIENTED TOWARD C28
15. [15] DIODES CR103, CR106, CR111, AND CR114 (ITEM 210) ARE INSTALLED BETWEEN PINS 3 AND 4, PINS 6 AND 5, PINS 11 AND 12, AND PINS 14 AND 13, RESPECTIVELY, (CATHODE PINS NAMED FIRST) OF QUAD DRIVER, ITEM 19
16. [16] INSTALL JUMPER WIRE (ITEM 211) BETWEEN QUAD DRIVER (ITEM 19, U19) PIN 8 AND FEED THRU HOLE AS SHOWN



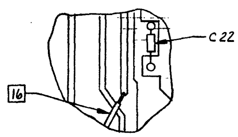
VIEW J
(SH 2, C-3)



VIEW K
(SH 2, C-4)



VIEW L
(SH 2, B-5/6)



VIEW M
(SH 2 B-7)

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	CN497793 (C) O OWENS	—	—
B	CN498725 (C) O OWENS	—	—
C	CN 475789 (D) O Owens	—	—
D	CN505538 (D) O Owens	—	—
E	CN465955 (D) O Owens	—	—
F	CN513074 (D) O Owens	—	—
	FORMAL RELEASE		
G	CN515082 (C) S Dodson (1) REVISED PER EXT ENGR CHANGES	9-9-82	D Howard
H	CN509747 (C) S Dodson (1) ADDED NOTE 14	9-9-83	D. Howard
J	CN 511916 (B) S. VINSON (1) LM-1, ADDED ITEM 211 (2) SH 2, NOTES 5 & 9 WERE IN ZN B-7, UPDATED NOTE 5, ADDED JUMPER IN ZN B-7 (3) ADDED NOTES 15, 16, ADDED VIEW M, VIEW N-N (4) UPDATED REV LEVEL BLOCK	83/11/2	R. Karl
K	CN 511568 (B) S. VINSON (1) LM -1, ITEM 104 WAS 2310599-1	83/11/2	R. Karl

PART NUMBER	DESCRIPTION
2310455-5501	SEQUENCE TAPE PARTS FOR 2310455-5001
2310455-5001	AUTO INSERT PARTS FOR 2310455-0001
2310455-0001	PWB ASSEMBLY, TERMINAL ELECTRONICS, MODEL 703, EIA, RS-232

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

PARTS LIST

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL
2	SLDR	127-01	00	
1	SLDR	124-02	00	

PROCESS | CLASSIFICATION | NOTES

PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

REV LEVEL BLOCK							
ASSY	2310455	F	G	H	J	K
PWB	2310456	A	B	B	A	A
SCHEM	2310457	C	C	C	E	E

REV STATUS OF SHEETS			
REV	K	J	J
SH	1	2	3

NEXT ASSY	USED ON
2310450	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ±0.25, 1 PLACE DECIMALS ±0.5, ANGLES ±1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN	D.E. Howard	4-27-83
CHK	O Owens	6-9-83
ENGR	Kenneth E. Stewart	6/9/83
APVD-ENGR	George Hare	6/9/83
QA	Glen Hebert	6/9/83
APVD-MFG	[illegible]	6/9/3
RLSE	Tony Brinley	6-15-83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

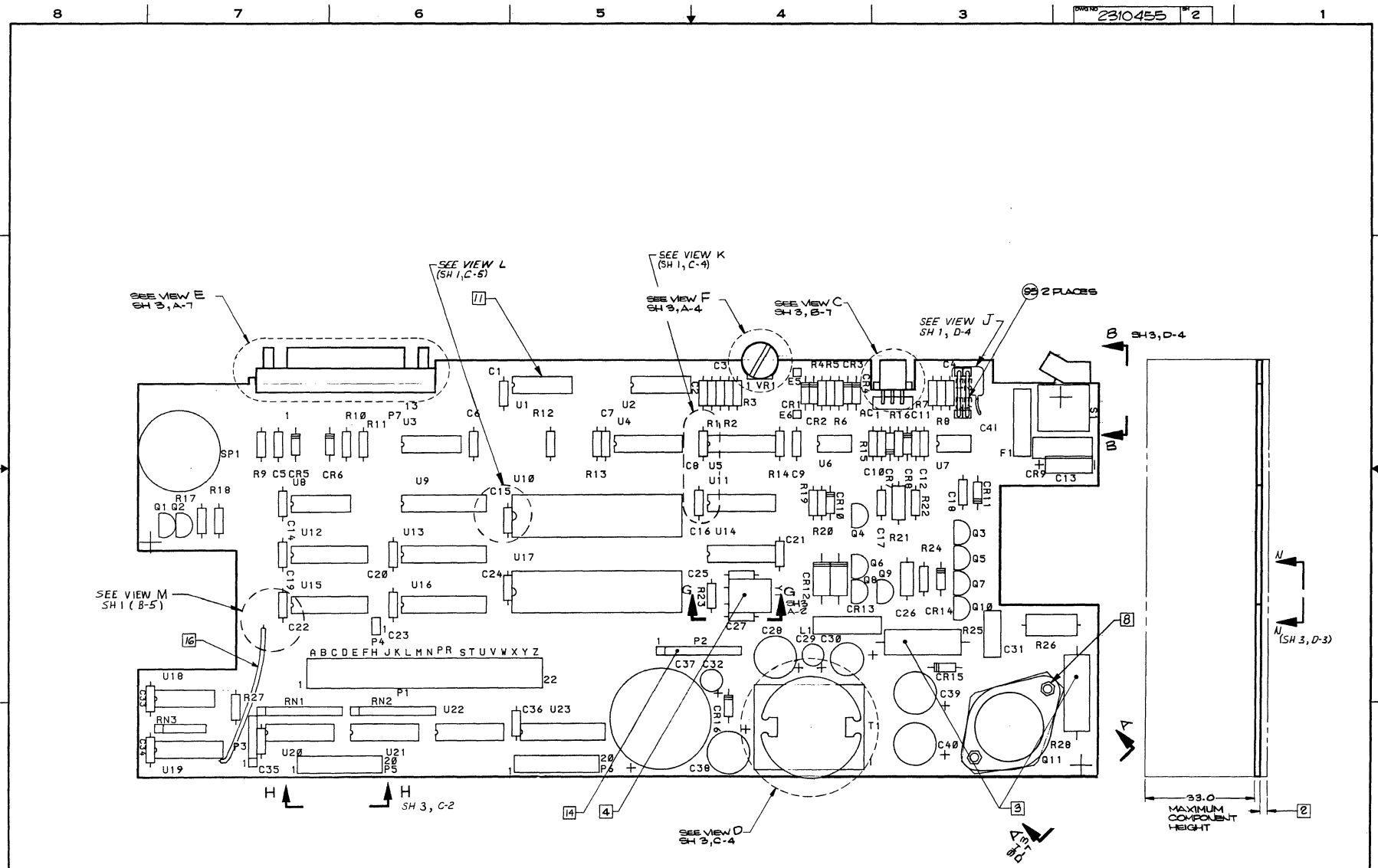
SI-METRIC

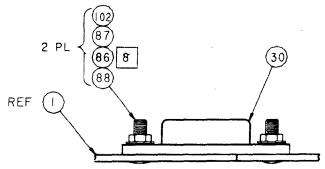
PWB ASSEMBLY, TERMINAL ELECTRONICS, MODEL 703, EIA, RS-232

SIZE D | FSCM NO 06668 | DRAWING NO 2310455

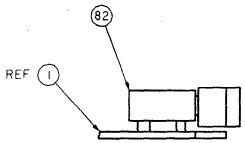
SCALE 2:1 | SHEET 1 OF 3

320 FILMED LM

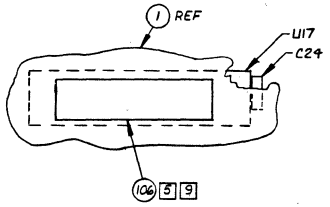

DWG NO 2310455 SH 2
SEE VIEW E SH 3, A-7
SEE VIEW L (SH 1, C-5)
SEE VIEW K (SH 1, C-4)
SEE VIEW F SH 3, A-4
SEE VIEW C SH 3, B-7
SEE VIEW J SH 1, D-4
2 PLACES
B SH 3, D-4
SEE VIEW M SH 1 (B-5)
H SH 3, C-2
SEE VIEW D SH 3, C-4
N (SH 3, D-3)
33.0 MAXIMUM COMPONENT HEIGHT
TEXAS INSTRUMENTS INCORPORATED
DSGN
DATE 4-26-83
ISSUE DATE
SIZE D
PSDM NO 06668
DRAWING NO 2310455
REV J
SCALE 2:1
SHEET 2



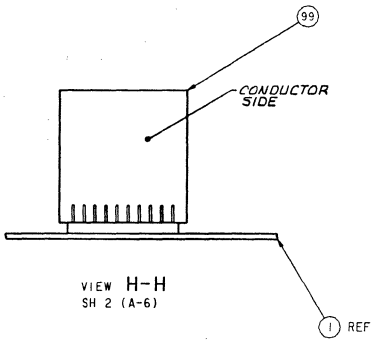
VIEW A-A
SH 2 (A-3)
ROTATED 45° CW
R28 OMITTED
FOR CLARITY



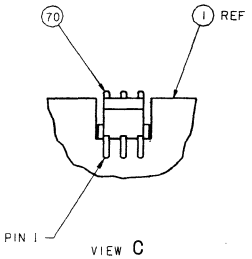
VIEW B-B
SH 2 (C-3)



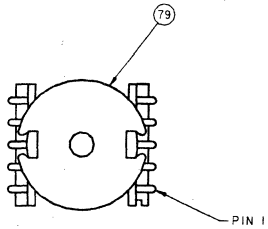
VIEW N-N
(SH 2, B-1)



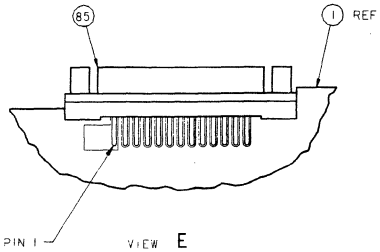
VIEW H-H
SH 2 (A-6)



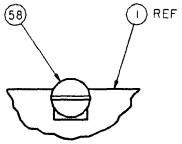
VIEW C
SH 2 (C-3)



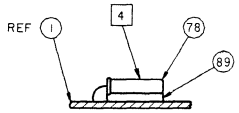
VIEW D
SH 2 (A-4)



VIEW E
SH 2 (C-7)



VIEW F
SH 2 (C-4)



SECTION G-G
SH 2 (B-4)

TEXAS INSTRUMENTS	DWN M. DURHAM 3-8-83	SIZE D	FSCM NO 06668	DRAWING NO 2310455 REV J
	ISSUE DATE	SCALE 2:1		SHEET 3

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310455-0001 < TERM,ELEC,MODEL 703,EIA,RS-232

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0002	00001.000	2310476-0001	IC,MICROCOMPUTER,703,TMS7041	EA
0002A			U10	
0004	00001.000	2310447-0001	IC, ARRAY, CUSTOM	EA
0004A			U17	
0005	00001.000	0222222-7406	NETWORK SN7406N	EA
0005A			U1	
0008	00001.000	2211247-0012	CAP,FXD, 18.0 PF,5%,50VDC,CERAMIC,AXIAL	EA
			SEE TI- DRAWING	
0008A			C25	
			SEE TI- DRAWING	
0014	00001.000	0972978-0105	RES FIX COMP 1.0 W 1.5 K OHMS 5 %	EA
			QPL -RC32G152JS	
0014A			R26	
			QPL -RC32G152JS	
0025	00001.000	0996936-0002	IC,PDS.12V REG.,78L12	EA
			SEE TI- DRAWING	
0025A			Q8	
			SEE TI- DRAWING	
0026	00001.000	0996938-0002	IC,NEG.12V REG.,79L12	EA
			SEE TI- DWG	
0026A			Q9	
			SEE TI- DWG	
0027	00004.000	2211878-0002	TRANS,MPS6602,NPN,COMPLEMENTRY DRIVER	EA
			SEE TI- DRAWING	
0027A			Q2,Q6,Q7,Q10	
			SEE TI- DRAWING	
0028	00003.000	2211878-0004	TRANS,MPS6652,PNP,COMPLEMENTRY DRIVER	EA
			SEE TI- DRAWING	
0028A			Q1,Q4,Q5	
			SEE TI- DRAWING	
0029	00001.000	2220550-0002	THYRISTOR,DIODE,2N5061,SCR	EA
			SEE TI- DWG	
0029A			Q3	
			SEE TI- DWG	
0030	00001.000	0972238-0001	TRANSISTOR,2N6338	EA
			MOT --2N6338	
0030A			Q11	
			MOT --2N6338	
0031	00001.000	2220772-0002	DIODE,RECTIFIER,FWLD100	EA
			SEE TI- DWG	
0031A			CR9	
			SEE TI- DWG	
0033	00001.000	0972268-0003	DIODE IN4935 1 AMP	EA
			SEE - TI DRAWING	
0033A			CR14,CR15	
			SEE - TI DRAWING	
0034	00002.000	0996281-0006	RECTIFIER,SS3892/UES1302,V(R)100V I(O)6A	EA
			014099-SS3892	
0034A			CR12,CR13	
			014099-SS3892	
0037	00001.000	2210025-0043	NETWORK RES,+,-2%TOL-47000HMS 6PINS	EA
			SEE TI- DRAWING	
0037A			RN3	
			SEE TI- DRAWING	
0038	00002.000	2210025-0128	NET,RES,6800 OHMS+-2% 1.25W 10-PIN	EA
			SEE TI- DRAWING	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310455-0001	K	TERM.ELEC,MODEL 703,EIA,RS-232

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0038A			RN1,RN2	
			SEE TI- DRAWING	
0039	00001.000	0972942-0065	RESISTOR, 3.30HMS 5WATT FXD	EA
0039A			R28	
0041	00001.000	0972946-0053	RES FIX 330 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0041A			R14	
			ROH - R-25	
0058	00001.000	2210382-0011	VAR.RESISTOR,20K OHM,THUMB WHEEL	EA
			SEE TI- DWG	
0058A			VR1	
			SEE TI- DWG	
0059	00001.000	0972942-0100	RES FIXED 39 OHMS 5 WATT 5%	EA
			DAE - CWS,RS 5	
0059A			R25	
			DAE - CWS,RS 5	
0060	00001.000	2211247-0009	CAP,10.0 PF, 5%,50VDC,CERAMIC	EA
			SEE TI- DRAWING	
0060A			C27	
			SEE TI- DRAWING	
0065	00001.000	0996311-0013	CAPACITOR,0.1000 UF 100 VDC 10%	EA
			- ZD1R104	
0065A			C13	
			- ZD1R104	
0066	00002.000	2220776-0022	CAP,AL ELEC,33 UF,16 V,RADIAL TERMINALS	EA
			SEE TI- DWG	
0066A			C29,C32	
			SEE TI- DWG	
0067	00001.000	2211131-0025	CAP,470UF,16V,AL ELECT	EA
			SEE TI- DRAWING	
0067A			C30	
			SEE TI- DRAWING	
0068	00004.000	2211131-0042	CAP,470UF,35V AL ELECT	EA
			SEE TI- DRAWING	
0068A			C28,C38,C39,C40	
			SEE TI- DRAWING	
0069	00001.000	2220565-0002	CAP,PCB LEADS,3300 UF+/-20%,50V DC	EA
			SEE TI- DWG	
0069A			C37	
			SEE TI- DWG	
0070	00001.000	2310443-0001	CONNECTOR, RIGHT ANGLE	EA
0070A			AC	
0074	00001.000	0972225-0533	CAPACITOR,3.3 UF 50V 20% CERAMIC	EA
			020932-5050ES50RD335M	
0074A			C41	
			020932-5050ES50RD335M	
0075	00001.000	2221031-0001	CONN,CARD-EDGE,2-ROW,44 CONTACTS,.2"CTRS	EA
			SEE TI- DWG	
0075A			P1	
			SEE TI- DWG	
0076	00001.000	2221026-0009	CONNECTOR,FLAT CABLE,10 CONTACTS	EA
0076A			P2	
0077	00001.000	2210188-0014	SOCKET,DIP,20-PIN,LOW PROFILE	EA
			SEE T -I DRAWING	
0077A			XU16	
			SEE T -I DRAWING	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310455-0001 K TERM,FLEC,MODEL 703,EIA,RS-232

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0078	00001.000	2310508-0001	CRYSTAL, 8.064 MHZ	EA
0078A			Y1	
0079	00001.000	2310480-0001	TRANSFORMER,POT CORE,SWITCHING,REGULATOR	EA
0079A			T1	
0080	00001.000	0945247-0004	INDUCTOR,5UH,3AMP,FERRITE CORE	EA
0080A			L1	
0081	00001.000	2211668-0005	FUSE,3.0A,UL APVD,PIGTAIL	EA
			SEE TI- DWG	
0081A			F1	
			SEE TI- DWG	
0082	00001.000	2310504-0001	SWITCH,ROCKER,POWER,703/707	EA
0082A			S1	
0083	00001.000	2210858-0001	BUZZER, PIEZOELECTRIC	EA
			SEE TI- DRAWING	
0083A			SP1	
			SEE TI- DRAWING	
0084	00001.000	2310571-0010	CAPACITOR, .033 UF,DBL MTL POLYPROPYLENE	EA
0084A			C31	
0085	00001.000	2220887-0021	CONN,RECTANGULAR,25 PIN,CBL MOUNT	EA
			SEE TI- DWG	
0085A			P7	
			SEE TI- DWG	
0086	00002.000	0416453-0021	NUT,PLAIN,4-40 UNC-2B HEX,CRES,SMALL	EA
			QPL - NAS671-C4	
0087	00002.000	0411101-0057	LOCKWASHER # 4 EXTERNAL TOOTH CRES	EA
			QPL - MS35335-57	
0088	00002.000	0972355-0003	STUD,CLINCH,.375 LONG,BRONZE	EA
			046384-KFH-440-6	
0089	00001.000	2265966-0007	TAPE,FOAM,DOUBLE STICK,9.3 X 12.7	EA
			SEE TI- DRAWING	
0090	00001.000	0972225-0510	CAPACITOR,1.0 UF 50V 20% CERAMIC	EA
			020932-5030ES50RD105M	
0090A			C15	
			020932-5030ES50RD105M	
0096	REF	2310458-0001	TEST PROCEDURE, MODEL 703	EA
0097	REF	2310457-0001	LOGIC DIAGRAM, MODEL 703	EA
0098	00006.000	0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%,-20%	EA
			1632-0000-000	
0098A			C8,C21,C33,C34,C35,C36	
			1632-0000-000	
0099	00001.000	2310585-0001	PWB ASSY,ESD ADAPTOR	EA
			1661-0585-013	
0099A			P5	
			1661-0585-013	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310455-0001	K	TERM,ELEC,MODEL 703,EIA,RS-232

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0100	00001.000	2310455-5001	AUTO INSERT PARTS FOR 2310455-1	EA
			1661-5551-010	
0102	00002.000	0411027-0803	WASHER .125 X .250 X .022 FLAT CRES	EA
			QPL - MS15795-803	
0104	00001.000	2310599-0003	PATCH PROM,70X (CURRENT)	EA
			1661-5993-001	
0104A			U16	
			1661-5993-001	
0106	00001.000	2363830-0002	LABEL,SYMBOLIZATION (51MM X 13MM)	EA
			1225- -000	
0107	00001.000	0996151-0006	HEADER,PIN,10 PINS,STRAIGHT,DBL ROW	EA
			022526-65611-120	
0107A			P6	
			022526-65611-120	
0108	00001.000	2211348-0006	HEADER, 1-ROW,6 CONTACTS,.100"CENTERS	EA
			SEE TI- DRAWING	
0108A			P3	
			SEE TI- DRAWING	
0210	00004.000	2220699-0001	DIODE,SHOTTKY,GEN PURP.SWITCH,DO-35 PKG	EA
			SEE TI- DWG	
0210A			CR103,CR106,CR111,CR114	
			SEE TI- DWG	
0211	00001.000	0941408-0308	WIRE,PREPPED,?.75 INCH LONG	EA
			1224-8308-000	

11/16/83

PART NUMBER	REV	DESCRIPTION
2310455-5001	K	AUTO INSERT PARTS FOR 2310455-1

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310456-0001	PWB,MODEL 703 TERM.ELEC.	EA
0003	00002.000	0996464-0003	IC,2114 1024X4-BIT STATIC RAM	EA
			001295-TMS4045-45NL	
0003A			U12,U15	
			001295-TMS4045-45NL	
0009	00001.000	0996731-0001	IC,SN74LS156N,DECODER	EA
			SEE TI- DRAWING	
0009A			U22	
			SEE TI- DRAWING	
0010	00002.000	0972900-7174	NETWORK SN74LS174N	EA
0010A			U4,U11	
0011	00001.000	0996755-0001	IC,SN74LS245N BUS XCVR TRANSITION	EA
			001295-SN74LS245N	
0011A			U9	
			001295-SN74LS245N	
0012	00002.000	0996136-0002	IC,SN74LS258N,DATA SELECTORS/MULTIPLEXER	EA
			TI -SN74LS258N	
0012A			U20,U21	
			TI -SN74LS258N	
0013	00001.000	0996029-0001	IC,SN74LS273N OCTAL D-TYPE FLIP/FLOP	EA
			TI -SN74LS273N	
0013A			U23	
			TI -SN74LS273N	
0015	00001.000	0996420-0001	IC, SN74LS373N	EA
			001295-SN74LS373N	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310455-5001 K AUTO INSERT PARTS FOR 2310455-1

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0015A			U13	
			001295-SN74LS373N	
0017	00002.000	2210123-0001	IC,ULN2003AN,TRANSISTOR ARRAY,DARLINGTON	EA
			001295-ULN2003AN	
0017A			U5,U14	
			001295-ULN2003AN	
0018	00001.000	2310562-0001	IC,DRIVER,QUAD DARLINGTON	EA
0018A			U19	
0019	00001.000	2220849-0001	IC,TIMING DELAY NE556	EA
0019A			U2	
0020	00001.000	0972663-0001	NETWORK,LM339N	EA
0020A			U18	
0021	00001.000	0222224-3011	NETWORK LM301AN OPERATIONAL AMP	EA
			-LM301AN	
0021A			U7	
			-LM301AN	
0022	00001.000	0222225-2311	NETWORK,COMPARATOR,SEE DRAWING	EA
			SEE - TI DRAWING	
0022A			U6	
			SEE - TI DRAWING	
0023	00001.000	0996015-0001	IC,QUAD LINE DRIVERS SN75188N	EA
			TI -SN75188N	
0023A			U8	
			TI -SN75188N	
0024	00001.000	0972450-0002	NETWORK,SN75189AN/MC1489AL QUAD LINE RCR	EA
			SEE - TI DRAWING	
0024A			U3	
			SEE - TI DRAWING	
0101	00001.000	2310455-5501	SEQUENCE TAPE PARTS FOR 2310455-5001	EA
			1661-5555-005	
0103	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310455-5501 K SEQUENCE TAPE PARTS FOR 2310455-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0006	00001.000	0972763-0030	CAP FIXED .27 UF 50 VOLTS	EA
			5910-0113-000	
0006A			C10	
			5910-0113-000	
0007	00001.000	0972763-0025	CAPACITOR,.10UF 50V FX,CERAMIC DIEL	EA
			COR CA-C03Z5U104Z050A	
0007A			C5	
			COR CA-C03Z5U104Z050A	
0016	00001.000	0972934-0005	DIODE,1N750A 4.7 V 5% SIL VOLT REG	EA
			QPL - 1N750A	
0016A			CR7	
			QPL - 1N750A	
0032	00008.000	0972932-0001	DIODE 1N914B	EA
			SEE TI- DRAWING	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310455-5501 K SEQUENCE TAPE PARTS FOR 2310455-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0032A			CR1,CR2,CR3,CR5,CR6,CR8	
			SEE TI- DRAWING	
0032B			CR10,CR11	
			SEE TI- DRAWING	
0033	00001.000	0972268-0003	DIODE IN4935 1 AMP	EA
			SEE - TI DRAWING	
0033A			CR14	
			SEE - TI DRAWING	
0034	00002.000	0996281-0006	RECTIFIER,SS3892/UES1302,V(R)100V I(O)5A	EA
			014099-SS3892	
0034A			CR12,CR13	
			014099-SS3892	
0035	00001.000	0996281-0001	DIODE UES 1101	EA
			014099-UES 1101	
0035A			CR16	
			014099-UES 1101	
0036	00001.000	2310449-0003	DIODE, ZENER, 1%, 1WATT, 3.3V	EA
0036A			CR4	
0040	00001.000	0972946-0037	RES FIX 68.0 OHM 5 % .25 W.CARBON FILM	EA
			ROH - R-25	
0040A			R5	
			ROH - R-25	
0042	00002.000	0972946-0057	RES FIX 470 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0042A			R19,R20	
			ROH - R-25	
0043	00003.000	0972946-0058	RES FIX 510 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0043A			R6,R12,R17	
			ROH - R-25	
0044	00001.000	0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	EA
			ROH - R-25	
0044A			R22	
			ROH - R-25	
0045	00002.000	0972946-0072	RES FIX 2.0K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0045A			R2,R9	
			ROH - R-25	
0045	00001.000	0972946-0082	RES FIX 5.1K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0046A			R3	
			ROH - R-25	
0047	00001.000	0972946-0085	RES FIX 6.8K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0047A			R13	
			ROH - R-25	
0048	00004.000	0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM	EA
			1658- -000	
0048A			R10,R11,R18,R27	
			1658- -000	
0049	00001.000	0972946-0094	RES FIX 16 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0049A			R24	
			ROH - R-25	
0050	00001.000	0972946-0121	RES FIX 220K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310455-5501 K SEQUENCE TAPE PARTS FOR 2310455-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0050A			R1	
			ROH - R-25	
0051	00002.000	0972946-0047	RES FIX 180 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0051A			R4,R15	
			ROH - R-25	
0052	00001.000	0539370-0313	RES FIX FILM 178 OHM 1% .25 WATT	EA
			COR - NA55	
0052A			R7	
			COR - NA55	
0053	00001.000	0539370-0338	RES FIX FILM 324 OHM 1% .25 WATT	EA
			COR -NA55D-100PPM/C	
0053A			R8	
			COR -NA55D-100PPM/C	
0054	00001.000	0972946-0054	RES FIX 360 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0054A			R16	
			ROH - R-25	
0055	00001.000	0972976-0183	RES FIX COMP 1/4 W 10 MEGOHM 5 %	EA
			QPL -RC07G106JS	
0055A			R23	
			QPL -RC07G106JS	
0056	00001.000	0972947-0054	RES FIX 360 OHM 5% .5 W CARBON FILM	EA
			ROH - R-50	
0056A			R21	
			ROH - R-50	
0057	00001.000	0972757-0027	CAPACITOR,.015UF 50VOLTS,10 PERCENT	EA
0057A			C12	
0061	00001.000	0972763-0009	CAP,FIXED .0047MF 50 VOLTS	EA
			004222-MC105E472Z	
0061A			C4	
			004222-MC105E472Z	
0062	00014.000	0972757-0033	CAP,FIX,CERAMIC,.047MF,50V,+/-10% TOL.	EA
0062A			C1,C6,C7,C9,C11,C14,C16	
0062B			C17,C18,C19,C20,C22,C23	
0062C			C24	
0063	00001.000	0972763-0033	CAP FIXED .47 UF 50 VOLTS	EA
			UC -C53C474Z	
0063A			C26	
			UC -C53C474Z	
0064	00002.000	0972757-0025	CAP FIX CER .01MF 10% 50V	EA
0064A			C2,C3	
0095	AR	0411400-0022	WIRE 22AWG ELETRO-TIN-PLATED,COPPER	FT
			- - -000	
0095A			E1-E3,E2-E4	
			- - -000	
0098	00005.000	0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%,-20%	EA
			1632-0000-000	
0098A			C8,C21,C33,C34,C35,C36	
			1632-0000-000	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310455-0001	K	TERM.ELEC,MODEL 703,EIA,RS-232,SPARES

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310455-0001	TERM.ELEC,MODEL 703,EIA,RS-232 1661-5501-010	EA
0020	00002.000	2310436-0001	SPACER, PWB	EA
1000	00000.000	2310450-0001	OBSOLETE REPLACED BY 2310503 1661-0450-001	EA

DWG NO 2310507 SH 1

NOTES: UNLESS OTHERWISE SPECIFIED:

1. BATTERY CABLE FROM TERMINAL ELECTRONICS (ITEM 2) SHALL HAVE ONE BATTERY CONNECTOR IN EACH BATTERY COMPARTMENT IN THE BASE (ITEM 1) UPON INSTALLATION OF ITEM 2 INTO THE BASE
2. LEAD SCREW (ITEM 9) IS INSTALLED ON PRINTHEAD MOTION MOTOR (ITEM 6) BY A THERMAL INDUCED INTERFERENCE FIT
3. PHASE A BUMPER (ITEM 44) IS ATTACHED TO THE LEFT MOTOR MOUNT (ITEM 3)
4. SPEAKER (ITEM 21) IS ATTACHED TO THE LEFT MOTOR MOUNT (ITEM 3) WITH DOUBLE SIDED TAPE (ITEM 29)
5. BATTERY DOORS (ITEM 23) TO BE INSTALLED AFTER TIGHTENING BASE (ITEM 1) AND COVER (ITEM 26) TOGETHER WITH SCREWS (ITEM 33)
6. APPLY ITEM TO NON-TEXTURED AREA SHOWN WITH NO OVERLAP ONTO TEXTURED AREA
7. THE SERIAL NUMBER ON THE LABEL (ITEM 46) SHALL BE IN THE FORMAT WWMMMYXXXX, WHERE WW IS THE WEEK (1-52, OVERFLOW: 53-59, 61-69, 71-99), MMM IS THE MODEL, Y IS THE LAST DIGIT OF THE YEAR, AND XXXX IS THE SEQUENTIAL NUMBER
8. ~~TIGHTEN SCREW (ITEM 32) TO 0.79 ± 0.11 Nm. TIGHTEN SCREWS (ITEM 33) TO 1.58 ± 0.11 Nm.~~
9. FOR ASSEMBLIES USING CONTROL PANEL (ITEM 22) WITH 2310491 REV B AND UNDER, PIN 1 OF THE CABLE FOR THE PAPER ADVANCE MOTOR (ITEM 7) WILL GO TO PIN 6 ON THE PCB ASSEMBLY
10. PAPER ADVANCE DRIVE ROLLER (ITEM 38) MUST BE FULLY SEATED INTO MOTOR COUPLER (ITEM 39) WITHIN 0.5 MM
12. TURNED DOWN END OF PAPER ADVANCE DRIVE ROLLER (ITEM 38) MUST JOIN WITH BEARING (ITEM 14) IN LEFT MOTOR MOUNT (ITEM 3)
13. MARK PART NUMBER IN APPROXIMATE LOCATION SHOWN PER TABLE 3
14. MARK TERMINAL DESCRIPTION IN APPROXIMATE LOCATION SHOWN PER TABLE 3
15. MARK SERIAL NUMBER IN APPROXIMATE LOCATION SHOWN
16. MARK VOLTAGE IN APPROXIMATE LOCATION SHOWN PER TABLE 3
17. MARK FREQUENCY IN APPROXIMATE LOCATION SHOWN PER TABLE 3
18. MARK AMPERAGE IN APPROXIMATE LOCATION SHOWN PER TABLE 3
19. MARK WATTAGE IN APPROXIMATE LOCATION SHOWN PER TABLE 3
20. MARK LABEL PER TABLE 3 USING AN IMPACT PRINTER WITH EPOXY INK RIBBON
21. UNIT AND TRANSFORMER (ITEM 60), PAPER (ITEM 52), PUBLICATIONS KIT (ITEM 61), AND SHIPPING LABEL (ITEM 71) PACKED PER ITEM 72
22. ~~FOR -0004 ASSEMBLY, PROGRAM PROM (ITEM 74) PER TABLE 4 AND INSTALL PROM IN LOCATION U20 ON MAIN ELECTRONICS (ITEM 2)~~
23. FOR -0004 ASSEMBLY, CUSTOMER WILL BE ADVISED OF ABM CONTENTS FOR EACH UNIT BY FACTORY
24. FOR -0004 ASSEMBLY, PROM INSTALLED IN U20 CONTAINING AN ABM WILL BE LABELED WITH ITEM 80, USING AN IMPACT PRINTER. MARKING ON LABEL SHALL BE "599-3-ABM"
25. VINYL CLOTH LABELS (ITEM 76) ARE MARKED WITH THE TERMINAL SERIAL NUMBER PER NOTE 7 USING AN IMPACT PRINTER
26. FOR -0003 ASSEMBLIES, THE VINYL CLOTH LABELS (ITEM 76) ARE ATTACHED TO THE SHIPPING LABELS (ITEM 71) BETWEEN THE MODEL NUMBER AND THE PART NUMBER PRIOR TO PACKING

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
E	CN5II596 (C) D.ANDERSEN	10-31-83	REX KARL
	(1) DELETED NOTE 11 (2) REVISED NOTES 7 AND 9 (3) NOTE 22 WAS A FLAG NOTE		
F	CN5I0082 (D) D.ANDERSEN (1) IN NOTE 6, 1.58±0.11 WAS 1.13±0.11	10-31-83	REX KARL
G	CN5II570 (B) M.DURHAM	10-31-83	REX KARL
	(1) ON -0004 LM, ITEM 74 WAS 2310599-0002 (2) ADDED 1000H TO TABLE 4 (3) ADDED NOTES 23 AND 24 (4) ON -0004 LM, ADDED ITEM 80		
H	CN5I3919 (B) M.DURHAM (1) ON -0003 LM, ADDED ITEM 76 (2) ADDED NOTES 25 AND 26	10-31-83	REX KARL
J	CN5II939 (D) M.DURHAM (1) ADDED VIEW H-H	10-31-83	REX KARL

2310507-0100	2310507-000X COMMON PARTS LIST
2310507-0004	MODEL 707 DATA TERMINAL, LADD ABM
2310507-0003	MODEL 707 DATA TERMINAL, GTE TELENET
2310507-0002	MODEL 707 DATA TERMINAL, CSA
2310507-0001	MODEL 707 DATA TERMINAL, DOMESTIC
PART NUMBER	DESCRIPTION

COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

ANGLE TOLERANCE	THIRD ANGLE PROJECTION
0.33 THRU 3.18 ±0.40/-0.05	
3.20 THRU 6.35 ±0.13/-0.03	
6.38 THRU 12.70 ±0.15/-0.03	
12.73 THRU 19.05 ±0.20/-0.03	
19.08 THRU 25.40 ±0.25/-0.03	
25.43 THRU 50.80 ±0.30/-0.03	

7.114

NEXT ASSY | USED ON

APPLICATION

		NO	ADDITIONAL	NOTES
SEQ NO	IDENT	F-SPEC	CLASSIFICATION	
	PROCESS			

PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 2B9467

REV STATUS OF SHEETS	REV	J	J	J	D	J
	SH	1	2	3	4	5

	NAME	DATE
DWN	M. DURHAM	9-23-83
CHK	JD DODSON	9-30-83
ENGR	STEVE PUTNAM	9-2-83
APVD-ENGR	KEN STEWART	9-6-83
QA	GLEN HEBERT	9-6-83
APVD-MFG	MARK JERMSTAD	9-7-83
RLSE	JD DODSON	9-7-83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

MODEL 707
DATA TERMINAL

SIZE D | FSCM NO 06668 | DRAWING NO 2310507

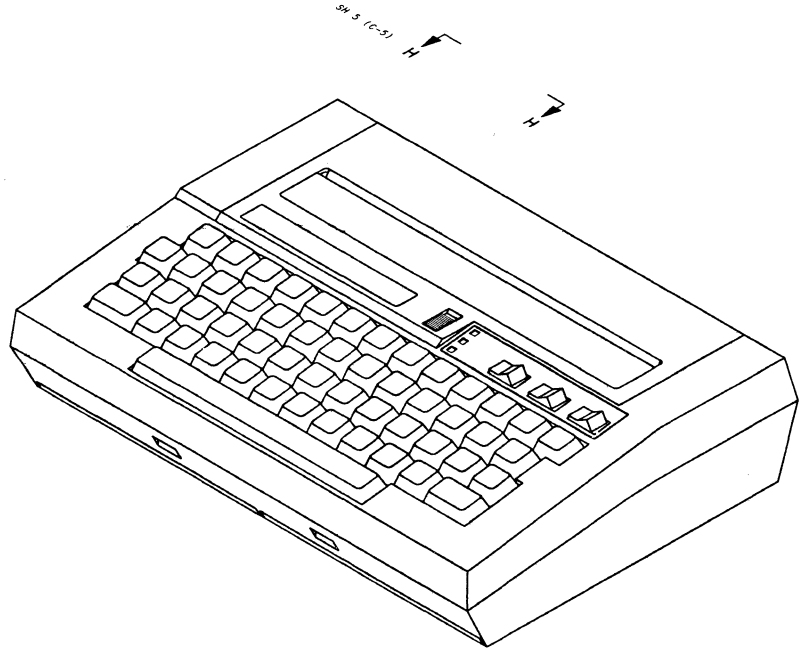
SCALE 1:2 | SHEET 1 OF 5

300

TR 1 LM

8-23

DWG NO 2310507 SH 2



REFERENCE ONLY
TABLE I

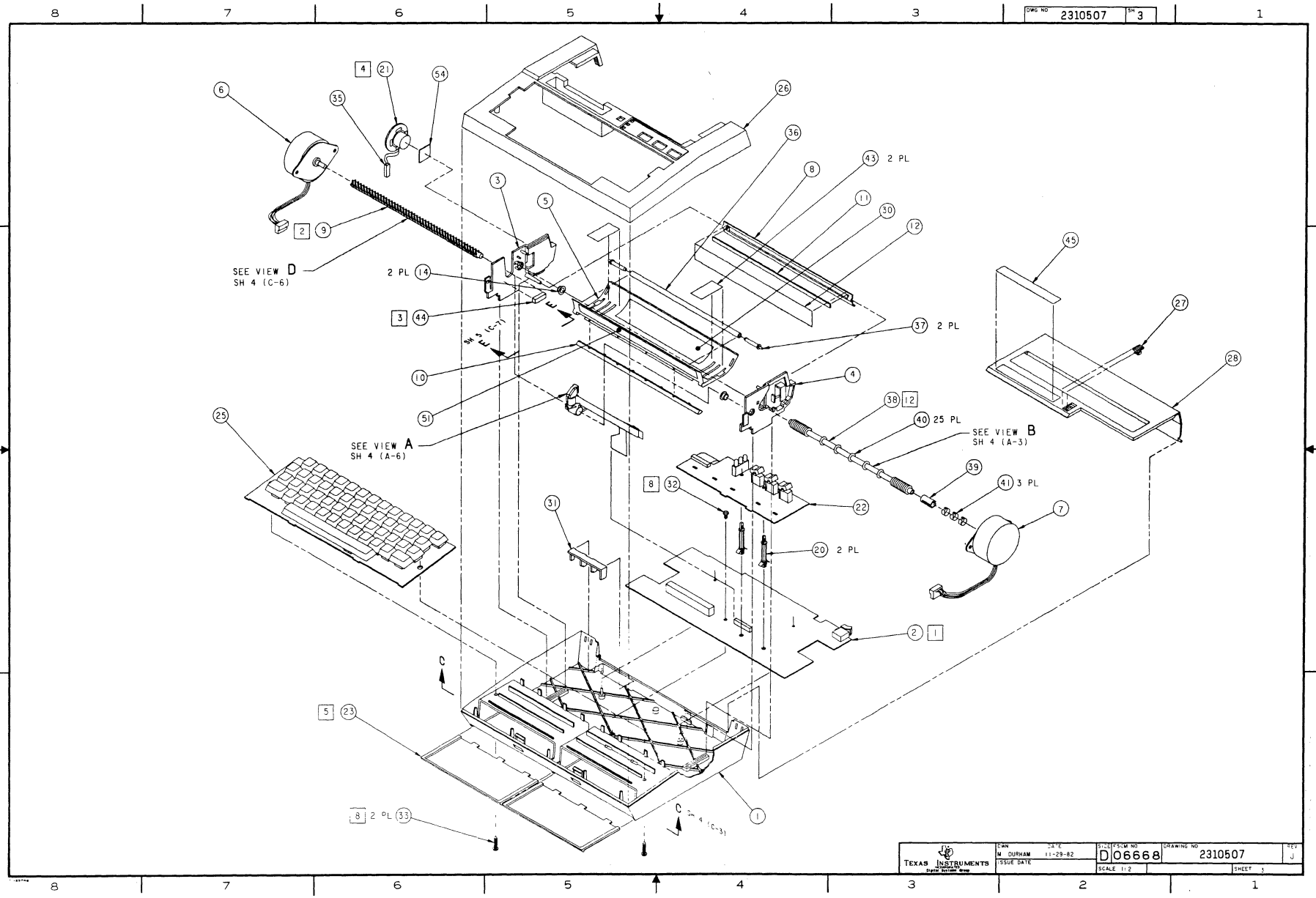
PART NUMBER	MAINT KIT DESCRIPTION	ITEMS INCLUDED	VIEWS / NOTES
2310439-0001	MAINT KIT, ADVANCE IDLER ROLLER ASSY	36,37	SH 3, C4-5
2310440-0001	MAINT KIT, ADVANCE DRIVE ROLLER ASSY	38,39,40,41	SH 4, B3; SH5, B7
2310489-0001	MAINT KIT, SPEAKER ASSY, MODEL 707	21,29,35	SH 3, C5 / 4
2310531-0001	MAINT KIT, PLATEN ASSY	8, 11,12	SH 3, C4-5
2310546-0001	MAINT KIT, CARRIAGE MOTOR	6,9	SH 4, D6 / 2
2310548-0001	MAINT KIT, CARRIAGE ASSY	13,15,17, 18,19,29	SH 4, B6
2310551-0001	MAINT KIT, PAPER DOOR	27,28,45	SH 3, C2
2310552-0001	MAINT KIT, BASE	23,24,47,48,49,50	SH 4, C3 / 1,5,6
2310573-0001	MAINT KIT, PAPER TRAY W/MOTOR MOUNTS	3,4,5,10,14,29,30,44	SH 3, C4-5,SH5, C7 / 3

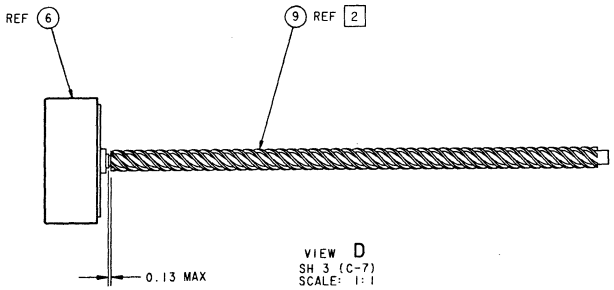
WHEN ANY ITEMS OR NOTES ARE CHANGED, AN ECN WILL BE NEEDED TO THE APPLICABLE MAINT. KIT DRAWING TO REFLECT A REVISION CHANGE

TABLE II

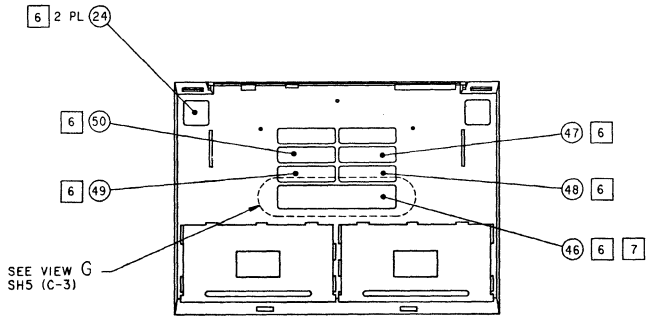
CABLE HOOK-UP SCHEDULE		REMARKS
DESCRIPTION	FINISH	
PRINTHEAD CABLE (ITEM 19)	P2 - MAIN ELECTRONICS PCB	
PRINTHEAD MOTION MOTOR (ITEM 6)	P3 - MAIN ELECTRONICS PCB	
SPEAKER (ITEM 21)	P4 - MAIN ELECTRONICS PCB	
CONTROL PANEL (ITEM 22)	P6 - MAIN ELECTRONICS PCB	
PAPER ADVANCE MOTOR (ITEM 7)	P2 - CONTROL PANEL PCB	9
KEYBOARD (ITEM 25)	P2 - ESD ADAPTER	

TEXAS INSTRUMENTS	DWN M DURHAM 11-29-82	SIZE/FSCM NO D 06668	DRAWING NO 2310507	REV J
	ISSUE DATE	SCALE 1:2	SHEET 2	

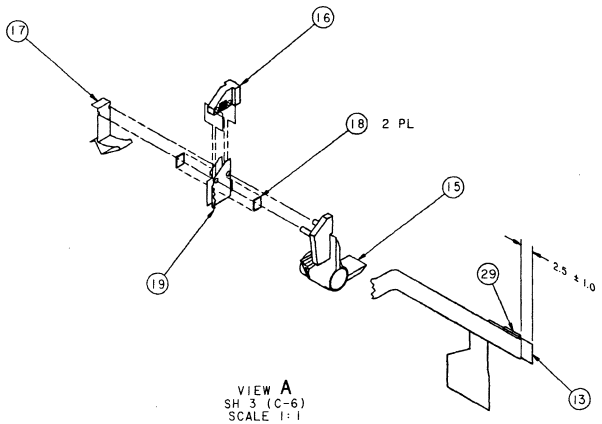

DWG NO 2310507 SH 3
SEE VIEW D SH 4 (C-6)
SEE VIEW A SH 4 (A-6)
SEE VIEW B SH 4 (A-3)
2 PL
25 PL
3 PL
TEXAS INSTRUMENTS
DRAWN M DURHAM DATE 11-29-82
ISSUE DATE
SIZE D
CM NO 06668
DRAWING NO 2310507
REV J
SCALE 1:2
SHEET 1



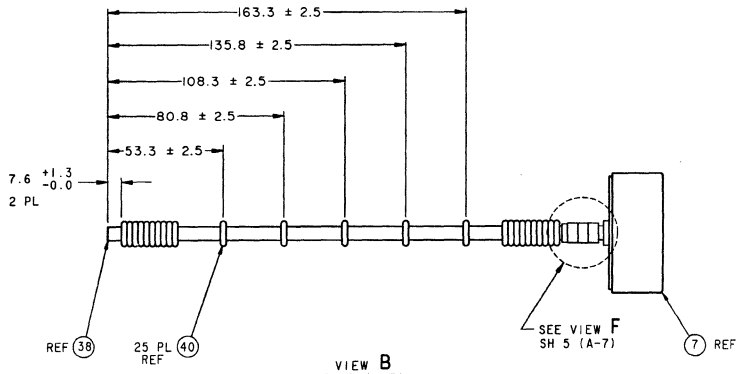
VIEW D
SH 3 (C-7)
SCALE: 1:1



VIEW C-C
SH 3 (A-4)

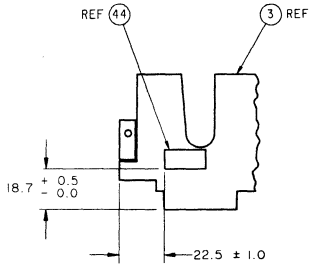


VIEW A
SH 3 (C-6)
SCALE 1:1

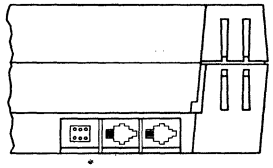


VIEW B
SH 3 (B-3)
SCALE 1:1

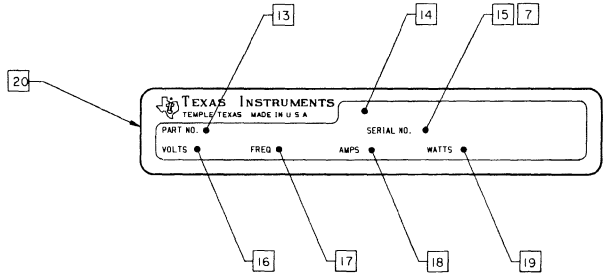
TEXAS INSTRUMENTS	DWN M. DURHAM DATE 11-29-82	SIZE D	FSCM NO 06668	DRAWING NO 2310507 REV D
	ISSUE DATE	SCALE 1:2		SHEET 4



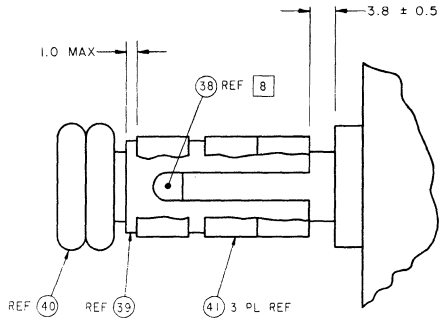
VIEW E-E
SH 3 (C-5)
SCALE 1:1



VIEW H-H
SH 2 (D-5)



VIEW G
SH 4 (C-4)
SCALE 2:1



VIEW F
SH 4 (B-2)
SCALE 5:1

2310507-0004	MODEL 707 DATA TERMINAL, LADD ABM	20 VAC	60 HZ	1.8 A	35 W
2310507-0003	MODEL 707 DATA TERMINAL, GTE TELENET	20 VAC	60 HZ	1.8 A	35 W
2310507-0002	MODEL 707 DATA TERMINAL, CANADA	20 VAC	60 HZ	1.8 A	35 W
2310507-0001	MODEL 707 DATA TERMINAL	20 VAC	60 HZ	1.8 A	35 W
PART NUMBER	TERMINAL DESCRIPTION	VOLTS	FREQ	AMPS	WATTS

TABLE III

TABLE IV

SYSTEM ADDRESS	CONTENT	COMMENTS
1000H	55H	SIGNIFIES PRESENCE OF PATCH
1001H	55H	SIGNIFIES PRESENCE OF ABM
1002H THRU N-1	ABM REQUESTED BY CUSTOMER	ANY OF 128 ASCII CHARACTERS MAY BE CHOSEN
N	FFH	TERMINATION CHARACTER N=1022H MAXIMUM

TEXAS INSTRUMENTS Digital Systems Group	DRWN M DURHAM	DATE 11-29-82	SIZE D	FSCM NO 06668
	ISSUE DATE		SCALE 1:2	DRAWING NO 2310507 REV J
				SHEET 5

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310507-0001	J	MODEL 707 DATA TERMINAL

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0045	00001.000	2310554-0001	LABEL,SILENT 700 DATA TERMINAL	EA
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310442-0001	TRANSFORMER,WALL MOUNTED (UL)	EA
0061	00001.000	2310582-0001	PUBLICATION KIT,MODEL 707 1661-0582-000	EA
0070	00001.000	2310507-0100	2310507-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0004	LABEL,PACKING,MODEL 707 1661- -000	EA
0072	00000.000	2233040-0008	PACK ASSY, MODEL 707 1661- -000	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310507-0002	J	MODEL 707 DATA TERMINAL, CANADA

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0045	00001.000	2310554-0001	LABEL,SILENT 700 DATA TERMINAL	EA
0049	00001.000	2310558-0001	LABEL, CSA, (50MM X 13MM)	EA
0060	00001.000	2310442-0002	TRANSFORMER,FLOOR MOUNTED (CSA)	EA
0061	00001.000	2310582-0001	PUBLICATION KIT,MODEL 707 1661-0582-000	EA
0070	00001.000	2310507-0100	2310507-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0005	LABEL,PACKING,MODEL 707 1661- -000	EA
0072	00000.000	2233040-0009	PACK ASSY, MODEL 707, CANADA 1661- -000	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310507-0003	J	MODEL 707 DATA TERMINAL, GTE TELENET

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0045	00001.000	2310554-0002	LABEL,GTE TELENET SEE TI- DRAWING	EA
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310442-0001	TRANSFORMER,WALL MOUNTED (UL)	EA
0061	00001.000	2310582-0001	PUBLICATION KIT,MODEL 707 1661-0582-000	EA
0070	00001.000	2310507-0100	2310507-000X COMMON PARTS LIST 1661- -000	EA
0071	00002.000	2233038-0011	LABEL, PACKING, MODEL 707 1661- -000	EA
0072	00000.000	2233040-0010	PACK ASSY, MODEL 707, GTE TELENET 1661- -000	EA
0076	00002.000	0232208-3500	LABEL WIRE MARKER DATABS VINYL CLOTH 1286-2208-000	EA

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310507-0004 J MODEL 707 DATA TERMINAL, LADD ABM

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0045	00001.000	2310554-0001	LABEL,SILENT 700 DATA TERMINAL	EA
0049	00001.000	2310553-0001	LABEL,UL	EA
0060	00001.000	2310442-0001	TRANSFORMER,WALL MOUNTED (UL)	EA
0061	00001.000	2310582-0001	PUBLICATION KIT,MODEL 707 1661-0582-000	EA
0070	00001.000	2310507-0100	2310507-000X COMMON PARTS LIST 1651- -000	EA
0071	00002.000	2233038-0012	LABEL, PACKING, MODEL 707 1661- -000	EA
0072	00000.000	2233040-0011	PACK ASSY, MODEL 707, LADD ABM 1661- -000	EA
0074	00000.000	2310599-0003	PATCH PROM,70X (CURRENT) 1661-5993-001	EA
0080	00001.000	0996943-0001	LABEL,SELF-ADHESIVE,.656 X .25 1652-1274-000	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310507-0100 J 2310507-000X COMMON PARTS LIST

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310432-0001	BASE 1255-3031-005	EA
0002	00001.000	2310465-0001	TERM.ELEC,MODEL 707,DIR.CON,103 ANS/ORIG 1661-6501-012	EA
0003	00001.000	2310421-0001	MOTOR MOUNT, LEFT 1255-3027-005	EA
0004	00001.000	2310423-0001	MOTOR MOUNT, RIGHT 1255-3026-004	EA
0005	00001.000	2310600-0001	PAPER TRAY ASSEMBLY, 70X 1689-0600-007	EA
0006	00001.000	2310473-0001	MOTOR,STEPPING,PRINTHEAD MOTION	EA
0007	00001.000	2310473-0002	MOTOR,STEPPING,PAPER ADVANCE	EA
0008	00001.000	2310426-0001	PLATEN, 70X 1689-0426-009	EA
0009	00001.000	2310430-0001	LEAD SCREW	EA
0010	00001.000	2310429-0001	CARRIAGE GUIDE 1255-3022-006	EA
0011	00001.000	2310479-0001	CUSHION, PLATEN	EA
0012	00001.000	2310487-0001	TAPE, UHMW, 210.0 X 22.0 MM LONG	EA
0013	00001.000	2310536-0001	GUIDE,PRINTHEAD CABLE	EA
0014	00002.000	0772684-0005	BEARINGS,SLEEVE-FLANGED NYLON .2510 ID THM -4L1	EA
0015	00001.000	2310427-0001	CARRIAGE	EA
0016	00001.000	2310472-0001	PRINTHEAD, THERMAL	EA
0017	00001.000	2310471-0001	CLIP, PRINTHEAD	EA
0018	00002.000	2310481-0001	PAD,ADHESIVE,DOUBLE COATED	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310507-0100	J	2310507-000X COMMON PARTS LIST

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0019	00001.000	2310441-0001	CABLE, PRINTHEAD	EA
0020	00002.000	2310436-0001	SPACER, PWB	EA
0021	00001.000	2220935-0001	SPEAKERS,8 OHM,100 MWATT,0.9 KHZ-5KHZ SEE TI- DWG	EA
0022	00001.000	2310490-0001	PWB ASSY,CONTROL PANEL,700 SERIES 1661-9001-014	EA
0023	00002.000	2310420-0001	DOOR, BATTERY 1255-3023-005	EA
0024	00002.000	2310488-0002	FOOT,RUBBER,19 MM SQ.	EA
0025	00001.000	2310486-0001	KYBD,700 SERIES W/KEYTOPS,UNENCODED	EA
0026	00001.000	2310431-0001	COVER 1255-3025-004	EA
0027	00001.000	2310425-0001	LOCK, PAPER DOOR 1255-3029-005	EA
0028	00001.000	2310428-0002	DOOR,PAPER, W/O LOGO 1255-3033-004	EA
0029	00001.000	2265966-0007	TAPE,FOAM,DOUBLE STICK,9.3 X 12.7 SEE TI- DRAWING	EA
0030	00001.000	2310435-0001	LABEL, PARAMETER DEFAULT	EA
0031	00001.000	2310434-0001	BRACKET, CONNECTOR	EA
0032	00001.000	2211895-0014	SCREW,PLASTITE SEE TI- DWG	EA
0033	00002.000	2211895-0610	SCREW,PLASTITE SEE TI- DWG	EA
0035	00001.000	0983835-0001	WIRING HARNESS,SPEAKER ACOUSTIC COUPLER 1224-3835-080	EA
0036	00001.000	2310482-0001	ROLLER,PAPER ADVANCE IDLER 1689-0482-009	EA
0037	00002.000	0983874-0001	PIVOT 1255-2025-030	EA
0038	00001.000	2310603-0001	ROLLER, PAPER ADVANCE DRIVE 1689-0603-007	EA
0039	00001.000	2310474-0001	COUPLER, MOTOR	EA
0040	00025.000	2211811-0002	SEAL,O-RING,NITRILE,.220"IC,.094"THK SEE TI- DWG	EA
0041	00003.000	2221042-0007	RING,RETAINING,SPLIT,STEEL SEE TI- DRAWING	EA
0043	00002.000	2310487-0002	TAPE, UHMW, 50.0 X 22.0MM LONG	EA
0044	00001.000	2310541-0001	BUMPER, PHASE A	EA
0046	00001.000	2310572-0001	LABEL,IDENTIFICATION	EA
0047	00001.000	2310559-0001	LABEL,COPYWRIGHT	EA
0050	00001.000	2310560-0001	LABEL,PART 68	EA
0051	00001.000	2310487-0003	TAPE, UHMW, 210.0 X 12.7 MM LONG SEE TI- DRAWING	EA
0052	00001.000	0972603-0001	SPECIFICATION-THERMAL PAPER 100 FT ROLL LAB - 70930108	RL
0053	00001.000	2211801-0002	CABLE,FLAT,2-CNDCT,6-POS PLUG,14 FT SEE TI- DRAWING	EA
0054	00001.000	2265966-0002	TAPE,FOAM,DOUBLE STICK,3/4 INCH SQUARE	EA

List of Materials

11/16/83

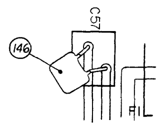
PART NUMBER	REV	DESCRIPTION
2310507-0100	J	2310507-000X COMMON PARTS LIST

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0075	00001.000	0999456-9701	MANUAL,INFORMATION REQUEST FORM 1225-9456-000	EA
9999	00002.000	0239999-9999	COST, SHRINKAGE	EA

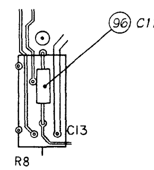
DWG NO 2310465 SH 1

NOTES: UNLESS OTHERWISE SPECIFIED:

1. CLINCHING COMPONENT LEAD OPTIONAL
2. [2] MAXIMUM LEAD LENGTH FROM CONDUCTOR SIDE OF BOARD IS 1.52
3. [3] POWER RESISTORS R43 (ITEM 86) AND R45 (ITEM 85) WILL BE INSTALLED WITH A CLEARANCE OF 10.16 MINIMUM AND 12.70 MAXIMUM BETWEEN COMPONENT BODY AND PWB (ITEM 1)
4. [4] SECURE CRYSTAL (ITEM 112) TO PWB WITH DOUBLE SIDED TAPE (ITEM 134) WHILE INSULATING CAN FROM PWB (ITEM 1)
5. [5] INSTALL SYMBOLIZATION LABEL (ITEM 145) AFTER FLOW SOLDER ON FAR SIDE OF ASSEMBLY UNDERNEATH LOGIC ARRAY (ITEM 5) OR UNDER PROCESSOR U14 (ITEM 0002)
6. ITEM 200 ON THE -0001 LM IS THE AUTO INSERTED PARTS CONTAINED ON THE -5001 LM
7. ALL SYMBOLIZATION IS TO BE DONE USING INDELIBLE INK
8. [8] TIGHTEN NUTS (ITEM 131) TO 0.56 ± 0.15 NM
9. ~~MASK TOOLING HOLES ON BOTH SIDES OF BOARD TO PREVENT SOLDER FROM ENTERING HOLES~~
10. [10] LABEL TO BE MARKED WITH SITE/DATE CODE PER 994396 (ITEM 176), ASSEMBLY PART NUMBER, AND REVISION LETTER, SCHEMATIC REV LETTER AND RUN NO.
11. [11] RESISTOR (ITEM 177) INSTALLED IN R2 MAY BE REPLACED BY SELECTED RESISTOR (ITEM T3) AT BOARD TEST
12. [12] SECURE BATTERY CABLE (ITEM 110) WITH TIE-WRAP (ITEM 127) AFTER BOARD TEST WITH KNOT ON COMPONENT SIDE OF BOARD. BATTERY CABLE (ITEM 110) RED/WHITE WIRE TO BE INSTALLED IN E-7 (+) AND BLACK/WHITE WIRE INSTALLED IN E-6
13. [13] CLIP PINS 1 AND 2 ON U12 AND SHORT PADS TOGETHER USING BUS WIRE (ITEM 143) ON REV A PWBs ONLY
14. **CAUTION: STATIC SENSITIVE**
    ELECTROSTATIC DISCHARGE CAN DAMAGE THIS COMPONENT. PRODUCT MUST BE SHIPPED IN ANTISTATIC CONTAINER AND MAINTAINED IN ANTISTATIC PACKAGING. INDIVIDUAL DEVICES SHOULD BE HANDLED ONLY AT STATIC-FREE WORK STATION.
15. [15] MAXIMUM LEAD LENGTH FROM CONDUCTOR SIDE, 1.91 FOR SWITCH (ITEM 118)
16. [16] INSTALL P2 WITH PIN 1 ORIENTED TOWARD C40
17. [17] DIODES CR103, CR106, CR111, AND CR114 (ITEM 210) ARE INSTALLED BETWEEN PINS 3 AND 4, PINS 6 AND 5, PINS 11 AND 12, AND PINS 14 AND 13, RESPECTIVELY (CATHODE PINS NAMED FIRST) OF QUAD DRIVER (ITEM 20)
18. [18] INSTALL JUMPER WIRE (ITEM 211) BETWEEN QUAD DRIVER (ITEM 20, U23) PIN 8 AND CAPACITOR (ITEM 126, C33) AS SHOWN



VIEW M
SH 2, D-3



VIEW N
SH 2, C-8

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN506576 (C) O. OWENS		
B	CN498730 (C) O. OWENS		
C	CN475786 (C) O. OWENS		
D	CN475790 (D) O Owens		
E	CN505549 (D) O Owens		
F	CN465956 (D) O Owens		
G	CN513073 (D) O Owens		
	FORMAL RELEASE		
H	CN515083 (C) O Owens (1) REVISED NOTES 5 & 13 2 ADDED NOTE 15 (3) UPDATED LM	9-13-83	D. Howard
J	CN509735 (C) O Owens (1) ADDED NOTE 16	9-13-83	D Howard
K	CN511513 (B) D HOWARD (1) ADDED VIEW O, SH 2 A-8. (2) ADDED IT 201 TO LM	11-3-83	[signature]
L	CN511916 (B) D HOWARD 1) REV PER EXT ENGR CHNGS	11-3-83	[signature]
M	CN511600 (D) D HOWARD 1) ADDED IT 177 AND REVISED NOTE 11	11-3-83	[signature]
N	CN511915 (D) D HOWARD (1) REV NOTE 12	11-3-83	[signature]
P	CN511568 (B) D HOWARD 1) REV IT 173 PN FROM -0001 TO -0003	11-3-83	[signature]

PART NUMBER	DESCRIPTION
2310465-8001	TERMINAL, ELEC, MODEL 707, SPARES
2310465-5501	SEQUENCE TAPE PARTS FOR 2310465-5001
2310465-5001	AUTO INSERT PARTS FOR 2310465-1
2310465-0001	PWB ASSY. TERM. ELECT, MODEL 707, DIR. CON, 103 ANS/ORIG

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

PARTS LIST

NEXT ASSY	USED ON
2310507	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ±0.25, 1 PLACE DECIMALS ±0.5, ANGLES ±1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN [signature] DATE 4-4-83
CHK O Owens 6-9-83
ENGR [signature] 6/9/83
APVD-ENGR [signature] 6/9/83
QA [signature] 6/9/83
APVD-MFG [signature]
RLSE Tony Bailey 6-15-83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

PWB ASSY, TERMINAL ELECTRONICS, MODEL 707, DIR. CON, 103 ANS / ORG

SIZE D FSCM NO 06668 DRAWING NO 2310465

SCALE 2:1 SHEET 1 OF 3

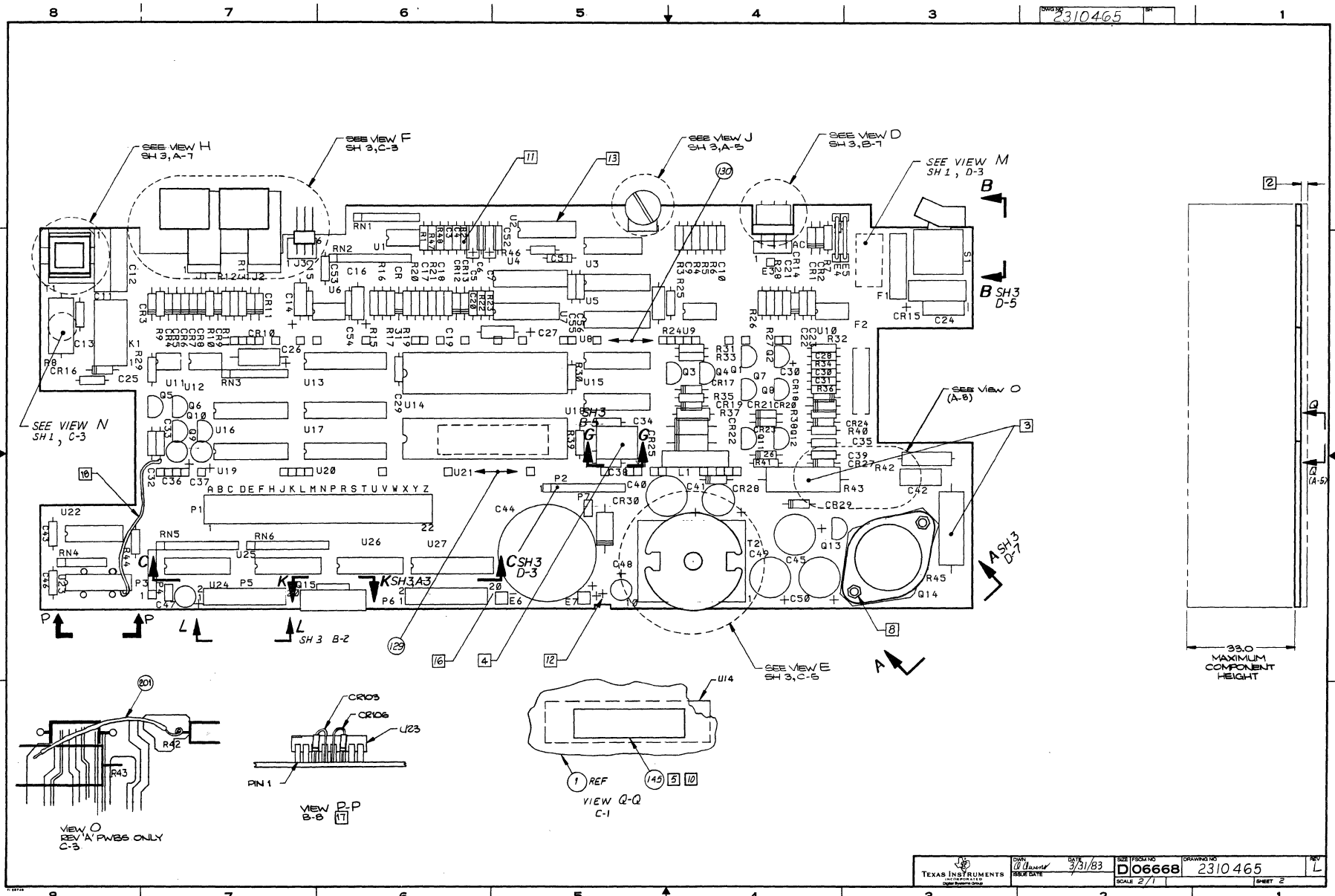
REV LEVEL BLOCK									
ASSY	2310465	G	H	J	K	L	M	N	P
PWB	2310466	A	A	A	A	A	A	A	A
SCHEM	2310467	E	E	E	E	G	G	G	G

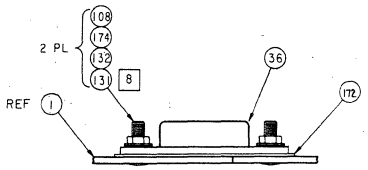
REV STATUS OF SHEETS			
REV	P	L	H
SH	1	2	3

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
2	SLDR	127-01	00		
1	SLDR	124-02	00		
	PROCESS		CLASSIFICATION		

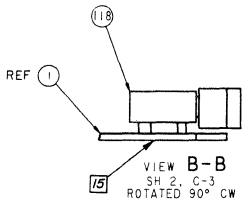
PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

320 FILMED LM

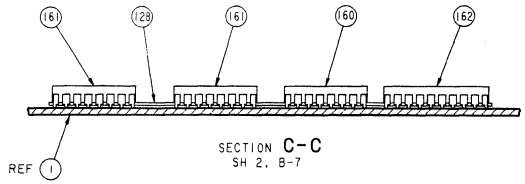

SEE VIEW H SH 3, A-7
SEE VIEW F SH 3, C-3
SEE VIEW J SH 3, A-5
SEE VIEW D SH 3, B-7
SEE VIEW M SH 1, D-3
SEE VIEW N SH 1, C-3
SEE View O (A-8)
SEE VIEW E SH 3, C-5
B SH3 D-5
C SH3 D-3
K SH3 A3
A SH3 D-7
L SH 3 B-2
G SH3 B-5
VIEW O REV 'A' PWBS ONLY C-3
VIEW P-P B-8
VIEW Q-Q C-1
PIN 1
33.0 MAXIMUM COMPONENT HEIGHT
TEXAS INSTRUMENTS
DRAWN 3/31/83
ISSUE DATE
SIZE D
FSCM NO 06668
DRAWING NO 2310465
REV L
SCALE 2/1
SHEET 2



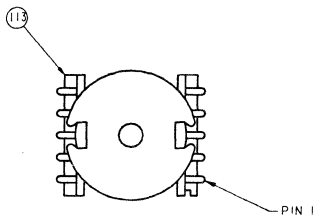
VIEW A-A
SH 2, B-3
ROTATED 45° CW
R45 OMITTED
FOR CLARITY



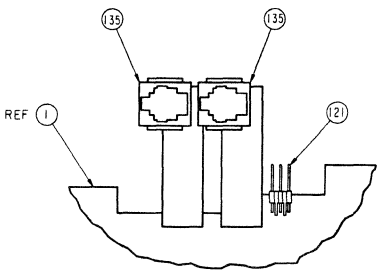
VIEW B-B
SH 2, C-3
ROTATED 90° CW



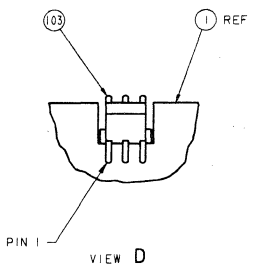
SECTION C-C
SH 2, B-7



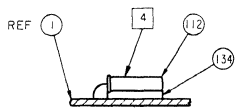
VIEW E
SH 2, B-4



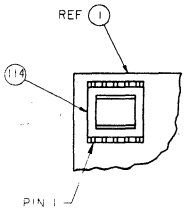
VIEW F
SH 2, D-7



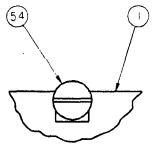
VIEW D
SH 2, D-4



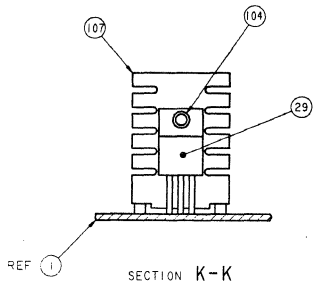
SECTION G-G
SH 2, C-5



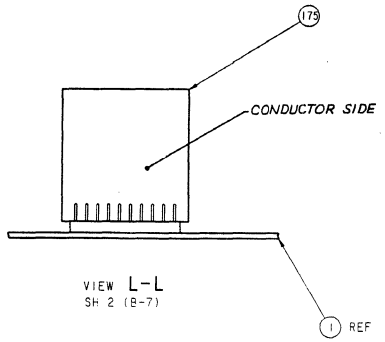
VIEW H
SH 2, C-8



VIEW J
SH 2, D-5



SECTION K-K
SH 2, B-6
ROTATED 180° CW



VIEW L-L
SH 2 (B-7)

TEXAS INSTRUMENTS	DWN M. DURHAM 3-8-83	FSCM NO D06668	DRAWING NO 2310465	REV H
	ISSUE DATE	SCALE 2:1	SHEET 3	

List of Materials

11/16/83

PART NUMBER REV
2310465-0001 P

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0002	00001.000	2310476-0002	IC,MICROCOMPUTER,707,TMS7041	EA
0002A			U14	
0003	00001.000	2220341-0001	IC,TMS99532,FREQ.SHIFT MODEM	EA
			SEE TI- DRAWING	
0003A			U4	
			SEE TI- DRAWING	
0005	00001.000	2310447-0001	IC, ARRAY, CUSTOM	EA
0005A			U21	
0006	00001.000	0222222-7406	NETWORK SN7406N	EA
0006A			U2	
0027	00001.000	2210562-0003	OPTICAL COUPLER, TIL155	EA
			SEE TI- DRAWING	
0027A			U11	
			SEE TI- DRAWING	
0028	00001.000	2220535-0002	IC,ADJ CURRENT SOURCE,LM234Z-6	EA
			SEE TI- DWG	
0028A			Q1	
			SEE TI- DWG	
0029	00001.000	0996889-0001	IC,LM317T VOLTAGE REGULATOR,POS 3-TERM	EA
			027014-LM317T	
0029A			Q15	
			027014-LM317T	
0030	00001.000	0996936-0002	IC,POS.12V REG.,78L12	EA
			SEE TI- DRAWING	
0030A			Q10	
			SEE TI- DRAWING	
0031	00001.000	0996938-0002	IC,NEG.12V REG.,79L12	EA
			SEE TI- DWG	
0031A			Q9	
			SEE TI- DWG	
0032	00003.000	2211878-0002	TRANS,MPS6602,NPN,COMPLEMENTRY DRIVER	EA
			SEE TI- DRAWING	
0032A			Q4,Q11,Q12	
			SEE TI- DRAWING	
0033	00002.000	2211878-0004	TRANS,MPS6652,PNP,COMPLEMENTRY DRIVER	EA
			SEE TI- DRAWING	
0033A			Q2,Q3	
			SEE TI- DRAWING	
0034	00001.000	2211416-0001	TRANSISTOR,PNP	EA
			SEE TI- DRAWING	
0034A			Q7	
			SEE TI- DRAWING	
0035	00001.000	2211415-0001	TRANSISTOR NPN	EA
0035A			Q8	
0036	00001.000	0972238-0001	TRANSISTOR,2N6338	EA
			MOT --2N6338	
0036A			Q14	
			MOT --2N6338	
0037	00001.000	2220772-0002	DIODE,RECTIFIER,FWLD100	EA
			SEE TI- DWG	
0037A			CR15	
			SEE TI- DWG	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310455-0001	P	TERM.ELEC,MODEL 707,DIR.CON,103 ANS/ORIG

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0038	00001.000	0972932-0001	DIODE 1N914B	EA
			SEE TI- DRAWING	
0038A			CR16	
			SEE TI- DRAWING	
0041	00001.000	0996280-0001	DIODE UCP3001 RECTIFIER 3 AMP	EA
0041A			CR20	
0042	00002.000	0996281-0006	RECTIFIER,SS3892/UES1302,V(R)100V I(O)6A	EA
			014099-SS3892	
0042A			CR22,CR25	
			014099-SS3892	
0044	00001.000	2210994-0003	DIODE,VSK 540,5 AMP,SCHOTTKY	EA
			SEE TI- DRAWING	
0044A			CR30	
			SEE TI- DRAWING	
0049	00001.000	2210025-0043	NETWORK RES,+,-2%TOL-47000HMS 6PINS	EA
			SEE TI- DRAWING	
0049A			RN4	
			SEE TI- DRAWING	
0050	00002.000	2210025-0128	NET,RES,6800 OHMS+-2% 1.25W 10-PIN	EA
			SEE TI- DRAWING	
0050A			RN5,RN6	
			SEE TI- DRAWING	
0051	00001.000	2310438-0001	RES.SIP, HYBRID, 8 PIN	EA
0051A			RN1	
0052	00001.000	2310438-0002	RES.SIP, RING INDICATOR, 8 PIN	EA
0052A			RN3	
0053	00001.000	2310438-0003	RES.SIP, AURAL MONITOR, 10 PIN	EA
0053A			RN2	
0054	00001.000	2210382-0011	VAR.RESISTOR,20K OHM,THUMB WHEEL	EA
			SEE TI- DWG	
0054A			VR1	
			SEE TI- DWG	
0066	00001.000	0972946-0085	RES FIX 6.8K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0066A			R23	
			ROH - R-25	
0073	00001.000	2310581-0001	RESISTOR, SELECTED,707 PWB,MODEM CKT	EA
			1661-0000-000	
0073A			R2	
			1661-0000-000	
0084	00001.000	2220248-0002	RES,.115OHM,1%,3WATT,.560"L X .187D	EA
			SEE TI- DWG	
0084A			R42	
			SEE TI- DWG	
0085	00001.000	0972942-0065	RESISTOR, 3.3OHMS 5WATT FXD	EA
0085A			R45	
0086	00001.000	0972942-0093	RESISTOR,FXD,25 OHMS,5%,5W,WW	EA
			SEE TI- DRAWING	
0086A			R43	
			SEE TI- DRAWING	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310455-0001	P	TERM.ELEC,MODEL 707,DIR.CON,103 ANS/ORIG

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0088	00001.000	2211254-0002	CAP,.27UF 200 VOLT,CERAMIC,RECTANGULAR SEE TI- DWG	EA
0088A			C12 SEE TI- DWG	
0090	00001.000	0972757-0033	CAP,FIX,CERAMIC,.047MF,50V,+/-10% TOL.	EA
0090A			C51	
0092	00001.000	0972757-0025	CAP FIX CER .01MF 10% 50V	EA
0092A			C54	
0094	00001.000	0972757-0037	CAP FIX CER 0.1MF 10% 50V	EA
0094A			C15	
0095	00001.000	0996311-0013	CAPACITOR,0.1000 UF 100 VDC 10% - ZD1R104	EA
0095A			C24 - ZD1R104	
0096	00001.000	2220924-0016	CAPACITOR,.00082 UF,AXIAL LEADS,MYLAR	EA
0096A			C11	
0098	00001.000	2310571-0010	CAPACITOR, .033 UF,DBL MTL POLYPROPYLENE	EA
0098A			C42	
0099	00002.000	2220776-0022	CAP,AL ELEC,33 UF,16 V,RADIAL TERMINALS SEE TI- DWG	EA
0099A			C36,C37 SEE TI- DWG	
0100	00001.000	2211131-0025	CAP,470UF,16V,AL ELECT SEE TI- DRAWING	EA
0100A			C41 SEE TI- DRAWING	
0101	00004.000	2211131-0042	CAP,470UF,35V AL ELECT SEE TI- DRAWING	EA
0101A			C40,C45,C49,C50 SEE TI- DRAWING	
0102	00001.000	2220565-0002	CAP,PCB LEADS,3300 UF+/-20%,50V DC SEE TI- DWG	EA
0102A			C44 SEE TI- DWG	
0103	00001.000	2310443-0001	CONNECTOR, RIGHT ANGLE	EA
0103A			AC	
0104	00001.000	2220130-0001	EYELET,ROLLED FLANGE,.121" BARREL OD SEE TI- DRAWING	EA
0105	00001.000	0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%,-20% 1632-0000-000	EA
0105A			C56 1632-0000-000	
0107	00001.000	0996716-0002	HEATSINK,PC SEMICONDUCTOR MOUNTING SEE TI- DRAWING	EA
0108	00002.000	0972355-0003	STUD,CLINCH,.375 LONG,BRONZE 046384-KFH-440-6	EA
0109	00002.000	2310511-0001	CABLE,DIRECT CONN.FLEX CIRCUIT	EA

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310465-0001 P TERM.ELEC,MODEL 707,DIR.CON,103 ANS/ORIG

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0109A			J1,J2	
0110	00001.000	2310506-0001	CABLE,BATTRY CONNECTOR	EA
			1661-1506-011	
0110A			E6,E7	
			1661-1506-011	
0111	00001.000	2210188-0014	SOCKET,DIP,20-PIN,LOW PROFILE	EA
			SEE T -I DRAWING	
0111A			XU20	
			SEE T -I DRAWING	
0112	00001.000	2310508-0001	CRYSTAL, 8.064 MHZ	EA
0112A			Y1	
0113	00001.000	2310480-0001	TRANSFORMER,POT CORE,SWITCHING,REGULATOR	EA
0113A			T2	
0114	00001.000	2310580-0001	TRANSFORMER, DAA, 100 MADC	EA
0114A			T1	
0116	00001.000	0945247-0004	INDUCTOR,5UH,3AMP,FERRITE CORE	EA
0116A			L1	
0117	00001.000	2211668-0006	FUSE,4.0A,UL APVD,PIGTAIL	EA
			SEE TI- DWG	
0117A			F2	
			SEE TI- DWG	
0118	00001.000	2310504-0001	SWITCH,ROCKER,POWER,703/707	EA
0118A			S1	
0119	00001.000	2211668-0005	FUSE,3.0A,UL APVD,PIGTAIL	EA
			SEE TI- DWG	
0119A			F1	
			SEE TI- DWG	
0120	00001.000	0996936-0001	IC,UA78L05ACLP,POSITIVE VOLTAGE RGLTR	EA
			001295-UA78L05ACLP	
0120A			Q13	
			001295-UA78L05ACLP	
0121	00001.000	0996445-0003	POST HEAD.,DOU. ROW, RIGHT ANGLE .100CEN	EA
			SEE TI-DRAWING	
0121A			J3	
			SEE TI-DRAWING	
0125	00001.000	0972757-0025	CAP FIX CER .01MF 10% 50V	EA
0125A			C23	
0127	00001.000	0418212-0040	STRAP,TIEDOWN,ADJUSTABLE,PLASTIC	EA
			QPL - MS3367-4-9	
0128	00001.000	2310464-0001	BUS BAR,4"	EA
0129	00001.000	2310532-0001	BUS BAR,7",POS.UNREG,+5V,GROUND	EA
0130	00001.000	2310533-0001	BUS BAR,7",NEG.UNREG,+5V,GROUND	EA
0131	00002.000	0416453-0021	NUT,PLAIN,4-40 UNC-2B HEX,CRES,SMALL	EA
			QPL - NAS671-C4	
0132	00002.000	0411101-0057	LOCKWASHER # 4 EXTERNAL TOOTH CRES	EA
			QPL - MS35335-57	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310465-0001	P	TERM.ELEC,MODEL 707,DIR.CON,103 ANS/ORIG

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0134	00001.000	2265966-0007	TAPE,FOAM,DOUBLE STICK,9.3 X 12.7 SEE TI- DRAWING	EA
0135	00002.000	2211539-0004	TELEPHONE JACK, 4-CONTACTS, PC MOUNTED SEE TI- DRAWING	EA
0136	00001.000	2211700-0036	CAP, 15UF,25V, AL ELEC SEE TI- DRAWING	EA
0136A			C16 SEE TI- DRAWING	
0137	00001.000	2220776-0060	CAP,AL ELE, 4.7 UF, 50V, RADIAL TERM SEE TI- DWG	EA
0137A			C48 SEE TI- DWG	
0138	00001.000	2220776-0011	CAP,AL ELE, 47 UF,10V,RADIAL TERMINALS SEE TI- DWG	EA
0138A			C47 SEE TI- DWG	
0140	00001.000	0972946-0096	RES FIX 20 K OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0140A			R1 ROH - R-25	
0145	00001.000	2363830-0002	LABEL,SYMBOLIZATION (51MM X 13MM) 1225- -000	EA
0146	00001.000	0972225-0522	CAPACITOR,2.2 UF 50V 20% CERAMIC 020932-5042ES50RD225M	EA
0146A			C57 020932-5042ES50RD225M	
0147	00001.000	0996151-0006	HEADER,PIN,10 PINS,STRAIGHT,DBL ROW 022526-65611-120	EA
0147A			P6 022526-65611-120	
0148	00001.000	2211348-0006	HEADER, 1-ROW,6 CONTACTS,.100"CENTERS SEE TI- DRAWING	EA
0148A			P3 SEE TI- DRAWING	
0149	00001.000	2211348-0002	HEADER,1-ROW 2-POS,100 CENTER GOLD SEE TI- DRAWING	EA
0149A			P4 SEE TI- DRAWING	
0160	00001.000	0996731-0001	IC,SN74LS156N,DECODER SEE TI- DRAWING	EA
0160A			U26 SEE TI- DRAWING	
0161	00002.000	0996136-0002	IC,SN74LS258N,DATA SELECTORS/MULTIPLEXER TI -SN74LS258N	EA
0161A			U24,U25 TI -SN74LS258N	
0162	00001.000	0996029-0001	IC,SN74LS273N OCTAL D-TYPE FLIP/FLOP TI -SN74LS273N	EA
0162A			U27 TI -SN74LS273N	
0163	00001.000	2221054-0001	RELAY,ARMATURE,SEALED,DPDT,2.0 A	EA
0163A			K1	
0164	00001.000	2221026-0009	CONNECTOR,FLAT CABLE,10 CONTACTS	EA
0164A			P2	
0165	00001.000	2221031-0001	CONN,CARD-EDGE,2-ROW,44 CONTACTS,.2"CTRS SEE TI- DWG	EA
0165A			P1 SEE TI- DWG	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310465-0001 P TERM.ELEC,MODEL 707,DIR.CON,103 ANS/ORIG

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0170	REF	2310467-0001	LOGIC DIAGRAM, MODEL 707	EA
0172	00001.000	0972567-0001	INSULATOR,TO-3-TRANSISTOR-MICA	EA
			1286-2567-000	
0173	00001.000	2310599-0003	PATCH PROM,70X (CURRENT)	EA
			1661-5993-001	
0173A			U20	
			1661-5993-001	
0174	00002.000	0411027-0803	WASHER .125 X .250 X .022 FLAT CRES	EA
			QPL - MS15795-803	
0175	00001.000	2310585-0001	PWB ASSY,ESD ADAPTOR	EA
			1661-0585-013	
0175A			P5	
			1661-0585-013	
0200	00001.000	2310465-5001	AUTO INSERT PARTS FOR 2310465-1	EA
			1661-6551-012	
0201	00001.000	0941408-0304	WIRE,PREPPED,1.75 INCH LONG	EA
			1661-8304-008	
0210	00004.000	2220699-0001	DIODE,SHOTTKY,GEN PURP.SWITCH,DO-35 PKG	EA
			SEE TI- DWG	
0210A			CR103,CR106,CR111,CR114	
			SEE TI- DWG	
0211	00001.000	0941408-0308	WIRE,PREPPED,2.75 INCH LONG	EA
			1224-8308-000	

11/16/83

PART NUMBER REV DESCRIPTION.....
2310465-5001 P AUTO INSERT PARTS FOR 2310465-1

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310466-0001	PWB,MODEL 707 TERM.ELEC.	EA
0004	00002.000	0996464-0003	IC,2114 1024X4-BIT STATIC RAM	EA
			001295-TMS4045-45NL	
0004A			U16,U19	
			001295-TMS4045-45NL	
0007	00001.000	0996304-0001	IC,LM386,AMPL,PWR,AUDIO	EA
0007A			U6	
0008	00001.000	2220907-0001	IC,OP AMP,LINEAR,4559	EA
			SEE TI- DWG	
0008A			U1	
			SEE TI- DWG	
0011	00002.000	0972900-7174	NETWORK SN74LS174N	EA
0011A			U8,U15	
0012	00001.000	0996755-0001	IC,SN74LS245N BUS XCVR TRANSITION	EA
			001295-SN74LS245N	
0012A			U13	
			001295-SN74LS245N	
0014	00001.000	0996023-0001	IC,SN74LS259N	EA
			TI -SN74LS259N	
0014A			U7	
			TI -SN74LS259N	
0017	00001.000	0996420-0001	IC, SN74LS373N	EA
			001295-SN74LS373N	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310465-5001 P AUTO INSERT PARTS FOR 2310465-1

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0017A			U17 001295-SN74LS373N	
0019	00002.000	2210123-0001	IC,ULN2003AN,TRANSISTOR ARRAY,DARLINGTON 001295-ULN2003AN	EA
0019A			U5,U18 001295-ULN2003AN	
0020	00001.000	2310562-0001	IC,DRIVER,QUAD DARLINGTON	EA
0020A			U23	
0021	00001.000	2220849-0001	IC,TIMING DELAY NE556	EA
0021A			U3	
0022	00001.000	0972663-0001	NETWORK,LM339N	EA
0022A			U22	
0023	00001.000	0996709-0001	IC, LM393P DIFFERENTIAL COMPARATOR 001295-LM393P	EA
0023A			U12 001295-LM393P	
0024	00001.000	0222224-3011	NETWORK LM301AN OPERATIONAL AMP -LM301AN	EA
0024A			U10 -LM301AN	
0025	00001.000	0222225-2311	NETWORK,COMPARATOR,SEE DRAWING SEE - TI DRAWING	EA
0025A			U9 SEE - TI DRAWING	
0176	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA
0201	00001.000	2310465-5501	SEQUENCE TAPE PARTS FOR 2310465-5001 1661-6555-012	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310465-5501 P SEQUENCE TAPE PARTS FOR 2310465-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0016	00001.000	0972934-0005	DIODE,1N750A 4.7 V 5% SIL VOLT REG QPL - 1N750A	EA
0016A			CR18 QPL - 1N750A	
0038	00010.000	0972932-0001	DIODE 1N9148 SEE TI- DRAWING	EA
0038A			CR1,CR9,CR12,CR13,CR14 SEE TI- DRAWING	
0038B			CR17,CR19,CR21,CR23,CR27 SEE TI- DRAWING	
0040	00002.000	0972268-0003	DIODE IN4935 1 AMP SEE - TI DRAWING	EA
0040A			CR26,CR29 SEE - TI DRAWING	
0043	00001.000	0996281-0001	DIODE UES 1101 014099-UES 1101	EA
0043A			CR28 014099-UES 1101	
0045	00002.000	2211130-0008	DIODE,1N4735,6.2V 10% VOLT.REGULATOR SEE TI- DRAWING	EA

List of Materials

11/16/83

PART NUMBER 2310465-5501 REV P
DESCRIPTION..... SEQUENCE TAPE PARTS FOR 2310465-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0045A			CR10,CR11 SEE TI- DRAWING	
0047	00001.000	2310449-0003	DIODE, ZENER, 1%, 1WATT, 3.3V	EA
0047A			CR2	
0048	00001.000	2310449-0001	DIODE, 17.7 VOLT, 1% ZENER	EA
0048A			CR24	
0055	00001.000	0972934-0006	DIODE,1N751A 5.1 V 5% SIL VOLT REG QPL - 1N751A	EA
0055A			CR31 QPL - 1N751A	
0056	00001.000	0972946-0037	RES FIX 68.0 OHM 5 % .25 W.CARBON FILM ROH - R-25	EA
0056A			R26 ROH - R-25	
0057	00001.000	0972946-0043	RES FIX 120 OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0057A			R38 ROH - R-25	
0058	00005.000	2211400-0001	JUMPER,ZERO-OHM RESISTOR SEE TI- DRAWING	EA
0058A			CR6,CR7,R12,R48,C26 SEE TI- DRAWING	
0059	00002.000	0972946-0053	RES FIX 330 OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0059A			R5,R17 ROH - R-25	
0060	00002.000	0972946-0057	RES FIX 470 OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0060A			R31,R33 ROH - R-25	
0061	00002.000	0972946-0058	RES FIX 510 OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0061A			R7,R21 ROH - R-25	
0062	00002.000	0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM ROH - R-25	EA
0062A			R13,R35 ROH - R-25	
0063	00001.000	0972946-0072	RES FIX 2.0K OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0063A			R6 ROH - R-25	
0064	00001.000	0972946-0082	RES FIX 5.1K OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0064A			R3 ROH - R-25	
0065	00001.000	0972946-0083	RES FIX 5.6K OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0065A			R16 ROH - R-25	
0066	00001.000	0972946-0085	RES FIX 6.8K OHM 5 % .25 W CARBON FILM ROH - R-25	EA
0066A			R30 ROH - R-25	
0067	00001.000	0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM 1658- -000	EA
0067A			R44 1658- -000	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310465-5501	P	SEQUENCE TAPE PARTS FOR 2310465-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0068	00002.000	0972946-0069	RES FIX 1.5K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0068A			R11,R29	
			ROH - R-25	
0069	00001.000	0972946-0094	RES FIX 16 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0069A			R41	
			ROH - R-25	
0070	00001.000	0972946-0113	RES FIX 100K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0070A			R15	
			ROH - R-25	
0071	00001.000	0972946-0032	RES FIX 43.0 OHM 5 % .25 W.CARBON FILM	EA
			ROH - R-25	
0071A			R34	
			ROH - R-25	
0072	00001.000	0801126-0044	DIODE,1N5264B,ZENER,60V 5%	EA
			SEE TI- DRAWING	
0072A			CR3	
			SEE TI- DRAWING	
0074	00001.000	0972946-0121	RES FIX 220K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0074A			R4	
			ROH - R-25	
0075	00001.000	0972946-0105	RES FIX 47 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0075A			R47	
			ROH - R-25	
0076	00001.000	0972946-0017	RES FIX 10.0 OHM 5 % .25 W.CARBON FILM	EA
			ROH - R-25	
0076A			R20	
			ROH - R-25	
0077	00001.000	0539370-0313	RES FIX FILM 178 OHM 1% .25 WATT	EA
			COR - NA55	
0077A			R28	
			COR - NA55	
0078	00001.000	0539370-0338	RES FIX FILM 324 OHM 1% .25 WATT	EA
			COR -NA55D-100PPM/C	
0078A			R27	
			COR -NA55D-100PPM/C	
0079	00001.000	0539370-0363	RESIS,590 OHM,.25W,PCT	EA
			SEE TI- DWG	
0079A			R36	
			SEE TI- DWG	
0080	00001.000	0972947-0003	RES FIX 2.7 OHM 5 % .5 W CARBON FILM	EA
			ROH - R-50	
0080A			R37	
			ROH - R-50	
0081	00001.000	2211247-0012	CAP,FXD, 18.0 PF,5%,50VDC,CERAMIC,AXIAL	EA
			SEE TI- DRAWING	
0081A			C38	
			SEE TI- DRAWING	
0082	00001.000	0972947-0054	RES FIX 360 OHM 5% .5 W CARBON FILM	EA
			ROH - R-50	
0082A			R24	
			ROH - R-50	
0087	00001.000	2211247-0009	CAP,10.0 PF, 5%,50VDC,CERAMIC	EA
			SEE TI- DRAWING	
0087A			C34	
			SEE TI- DRAWING	
0089	00001.000	0972763-0009	CAP,FIXED .0047MF 50 VOLTS	EA
			004222-MC105E472Z	

List of Materials

11/16/83

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
			PART NUMBER REV DESCRIPTION.....	
			2310465-5501 P SEQUENCE TAPE PARTS FOR 2310465-5001	
0089A			C28	
			004222-MC105E472Z	
0090	00010.000	0972757-0033	CAP,FIX,CERAMIC,.047MF,50V,+/-10% TOL.	EA
0090A			C17,C20,C21,C22,C31	
0090B			C39,C43,C46,C52,C53	
0091	00001.000	0972763-0033	CAP FIXED .47 UF 50 VOLTS	EA
			UC -C53C474Z	
0091A			C35	
			UC -C53C474Z	
0092	00002.000	0972757-0025	CAP FIX CER .01MF 10% 50V	EA
0092A			C9,C10	
0093	00005.000	0972924-0017	CAP FIX TANT SOLID 1.0 MFD 10 % 35 VOLT	EA
			1294- -000	
0093A			C5,C7,C14,C27,C30	
			1294- -000	
0094	00006.000	0972757-0037	CAP FIX CER 0.1MF 10% 50V	EA
0094A			C4,C6,C18,C19,C29,C55	
0096	00001.000	2220924-0016	CAPACITOR,.00082 UF,AXIAL LEADS,MYLAR	EA
0096A			C13	
0097	00001.000	0972757-0019	CAP,FIXED CER 3300PF 10% 50V	EA
0097A			C3	
0122	00001.000	0972946-0059	RES FIX 560 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0122A			R40	
			ROH - R-25	
0123	00001.000	0972946-0047	RES FIX 180 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0123A			R25	
			ROH - R-25	
0124	00001.000	0972946-0054	RES FIX 360 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0124A			R32	
			ROH - R-25	
0126	00002.000	0972763-0030	CAP FIXED .27 UF 50 VOLTS	EA
			5910-0113-000	
0126A			C32,C33	
			5910-0113-000	
0139	00002.000	0972976-0183	RES FIX COMP 1/4 W 10 MEGOHM 5 %	EA
			QPL -RC07G106JS	
0139A			R22,R39	
			QPL -RC07G106JS	
0141	00001.000	0972946-0029	RES FIX 33.0 OHM 5 % .25 W.CARBON FILM	EA
			ROH - R-25	
0141A			R46	
			ROH - R-25	
0142	00001.000	0972946-0120	RES FIX 200K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0142A			R19	
			ROH - R-25	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310465-5501	P	SEQUENCE TAPE PARTS FOR 2310465-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0143	AR	0411400-0024	WIRE, 24AWG ELECTRO TIN PLATED COPPER	FT
0143A			E1-E4,E2-E5	
0177	00001.000	0972946-0095	RES FIX 18K OHM 5% .25 W CARBON FILM ROH - R-25	EA
0177A			R2 ROH - R-25	

11/16/83

PART NUMBER	REV	DESCRIPTION
2310465-8001	P	TERM.ELEC,MODEL 707, SPARES

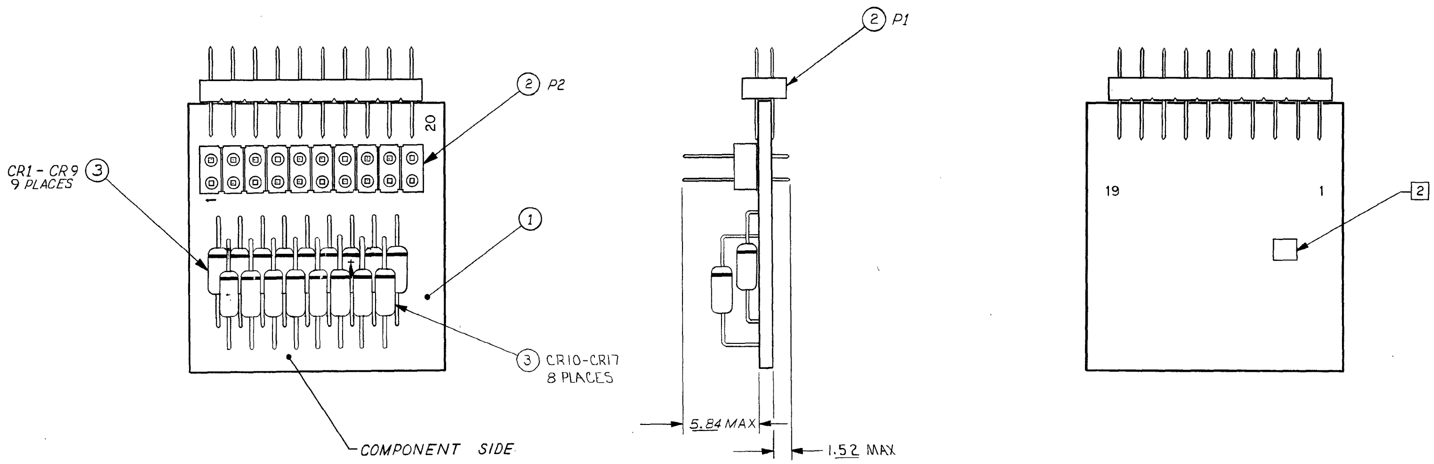
ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310465-0001	TERM.ELEC,MODEL 707,DIR.CON,103 ANS/ORIG 1661-6501-012	EA
0020	00002.000	2310436-0001	SPACER, PWB	EA
1000	00000.000	2310460-0001	OBSOLETE REPLACED BY 2310507 1661-0460-001	EA

DWG NO 2310585 SH

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN448984(D) D Owens		
B	CN506794(D) D Owens		
	FORMAL RELEASE		
C	CN 515081 (C) D. Jones (1) DELETED CR10 THRU CR17 FROM CONDUCTOR SIDE AND ADDED TO COMPONENT SIDE (2) P1 ALL 3 VIEWS WAS LONG LEADS OFF BOARD (3) UPDATED REV LEVEL BLOCK (4) SIDE VIEW DIM 1.52 MAX WAS 3.05	7-20-83	E. Diaz
D	CN515096(D) R KARL (1) -1 LM: ITEM 3 WAS QTY 8 / CR10 THRU CR17 (2) -5501 LM: ITEM 3 WAS QTY 9 / CR1 THRU CR9	9-8-83	JD Dodson

NOTES: UNLESS OTHERWISE SPECIFIED:

1. CLINCHING COMPONENT LEADS OPTIONAL
2. [2] MARK APPROPRIATE PWB REVISION LETTER APPROXIMATE WHERE SHOWN PER PROCESS 1
3. ALL SYMBOLIZATION IS TO BE DONE USING INDELIBLE INK
4. MASK TOOLING HOLES ON BOTH SIDES OF BOARD TO PREVENT SOLDER FROM ENTERING HOLES



2310585-5501	SEQUENCE TAPE PARTS FOR 2310585-0001
2310585-0001	PWB ASSEMBLY, ESD ADAPTER
PART NUMBER	DESCRIPTION

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

PARTS LIST

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
3	SLDR	124-01	00		
2	SLDR	124-02	00		
1	MARK	914-01	01	USING ITEM TI-30257, HGT 2.3	2
	PROCESS			CLASSIFICATION	

PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

REV LEVEL BLOCK					
REV	ASSY	2310585	B	C	D
LEVEL	PWB	2310586	A	A	A
BLOCK	SCHEM	2310587	*	*	*

REV STATUS OF SHEETS — REV / SH

NEXT ASSY	USED ON
2310565	7114
2310455	7114
2310465	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ±0.25, 1 PLACE DECIMALS ±0.5, ANGLES ±1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN D Owens 5-26-83
CHK JD Dodson 6-9-83
ENGR 6/9/83
APVD-ENGR 6/9/83
QA 6/9/83
APVD-MFG 6/13/83
RLSE 6-16-83

TEXAS INSTRUMENTS INCORPORATED — Digital Systems Group

SI-METRIC

PWB ASSEMBLY, ESD ADAPTER

SIZE D | FSCM NO 06668 | DRAWING NO 2310585

SCALE 4:1 | SHEET

320

FILMED LM

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310585-0001	D	PWB ASSY,ESD ADAPTOR

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00000.062	2310586-0001	PWB, ESD ADAPTOR	EA
0002	00002.000	0996151-0006	HEADER,PIN,10 PINS,STRAIGHT,DBL ROW 022526-65611-120	EA
0002A			P1,P2 022526-65611-120	
0003	00009.000	0972934-0005	DIODE,1N750A 4.7 V 5% SIL VOLT REG QPL - 1N750A	EA
0003A			CR1,CR2,CR3,CR4,CR5,CR6,CR7 QPL - 1N750A	
0003B			CR8,CR9 QPL - 1N750A	
0004	REF	2310587-0001	SCHEMATIC,ESD ADAPTER	EA
0006	00001.000	2310585-5501	AUTO INSERT SEQUENCE PARTS FOR -0001 1661-5585-013	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310585-5501	D	AUTO INSERT SEQUENCE PARTS FOR -0001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0003	00008.000	0972934-0005	DIODE,1N750A 4.7 V 5% SIL VOLT REG QPL - 1N750A	EA
0003A			CR10,CR11,CR12,CR13 QPL - 1N750A	
0003B			CR14,CR15,CR16,CR17 QPL - 1N750A	

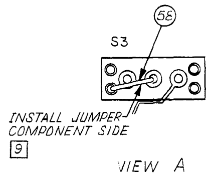
DWG NO 2310490 SH

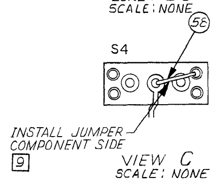
NOTES: UNLESS OTHERWISE SPECIFIED:

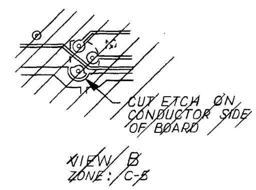
1. CLINCHING COMPONENT LEAD OPTIONAL
2. [2] MAXIMUM LEAD LENGTH FROM CONDUCTOR SIDE OF BOARD IS 2.40
3. [3] INSTALL SYMBOLIZATION LABEL (ITEM 57) AFTER FLOW SOLDER ON FAR SIDE OF ASSEMBLY APPROXIMATELY WHERE SHOWN
4. ITEM 30 ON THE -0001 LM IS THE AUTO-INSERTED PARTS CONTAINED ON THE -5001 LM
5. ALL SYMBOLIZATION IS TO BE DONE USING INDELIBLE INK
6. [6] MAXIMUM COMPONENT HEIGHT FROM COMPONENT SIDE OF BOARD IS 25.50
7. [7] LABEL TO BE MARKED WITH SITE/DATE CODE PER 994396 (ITEM 56) ASSEMBLY PART NUMBER AND REVISION LETTER SCHEMATIC REVISION LETTER AND RUN NO.
8. MASK TOOLING HOLES ON BOTH SIDES OF BOARD TO PREVENT SOLDER FROM ENTERING HOLES
9. [9] INSTALL BUS WIRE BEFORE SWITCH IS INSTALLED. SWITCHES (ITEM 30) TO HAVE MOUNTING FRAM CORNERS TRIMMED TO CLEAR COMPONENT SIDE ETCH RUNS AS REQUIRED PRIOR TO INSTALLATION ON ALL REV B PWB'S.
10. BUS WIRE (ITEM 58) MAY TOUCH RIGHT PIN OF S2 & S4 AND LEFT PIN OF S3
11. MAXIMUM HEIGHT OF CR1, CR2 AND CR3 IS 23.8, 23.2 AND 22.6 RESPECTIVELY
12. [12] C2 NEGATIVE LEAD TIED TO GROUND WITH BUS WIRE (ITEM 58) ON REV B PWB

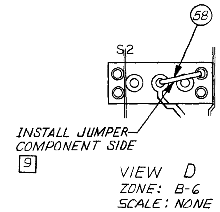
REVISIONS

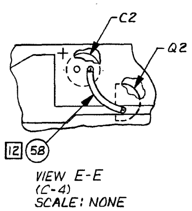
REV	DESCRIPTION	DATE	APPROVED
A	CN498731 (C) O Owens	—	—
B	CN497800 (C) O Owens	—	—
C	CN465991 (D) O Owens	—	—
D	CN465998 (D) O Owens	—	—
E	CN513082 (D) O Owens	—	—
	FORMAL RELEASE		
F	CN515080(C) R KARL (1) REVISED PER EXTENSIVE ENGR CHANGES	9-12-83	JD Dodson

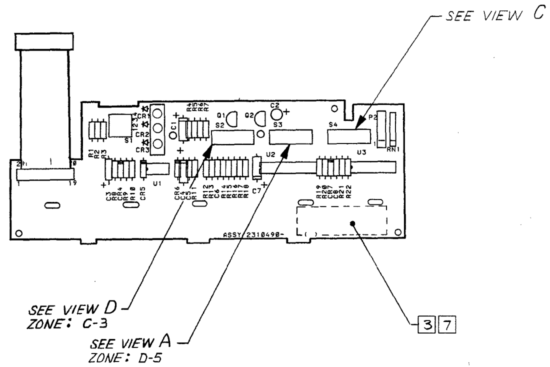


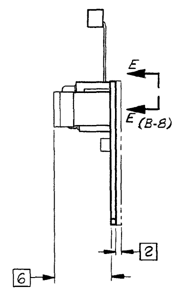












PART NUMBER	DESCRIPTION
2310490-5501	SEQUENCE TAPE PARTS FOR 2310490-5001
2310490-5001	AUTO INSERT PARTS FOR 2310490-0001
2310490-0001	PWB ASSEMBLY CONTROL PANEL, 700 SERIES

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

PARTS LIST

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL
2	SLDR	127-01	00	
1	SLDR	124-02	00	

PROCESS — CLASSIFICATION — NOTES

PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

REV LEVEL BLOCK	ASSY 2310490	E	F	
	PWB 2310491	B	B	
	SCHEM 2310492	*	*	

REV STATUS OF SHEETS — REV — SH

NEXT ASSY	USED ON
2310509	7114
2310460	7114
2310450	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ±0.25, 1 PLACE DECIMALS ±0.5, ANGLES ±1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN O Owens DATE 3-22-83
CHK S D Dodson 6-9-83
ENGR 6/9/83
APVD-ENGR George Hare 6/9/83
QA 6/9/83
APVD-MFG 6/9/83
RLSE Tony Bailey 6/17/83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

PWB ASSEMBLY, CONTROL PANEL, 700 SERIES

SIZE D FSCM NO 06668 DRAWING NO 2310490

SCALE 1/1 SHEET

320 LM FILMED

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310490-0001	G	PWR ASSY,CONTROL PANEL,700 SERIES

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	0972932-0001	DIODE IN914B	EA
			SEE TI- DRAWING	
0002A			CR5	
			SEE TI- DRAWING	
0013	00001.000	0972946-0113	RES FIX 100K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0013A			R19	
			ROH - R-25	
0017	00001.000	0539370-0481	RES FIX FILM 10.0K OHM 1% .25 WATT	EA
			COR -NA55D-100PPM/C	
0017A			R22	
			COR -NA55D-100PPM/C	
0024	00002.000	2211878-0002	TRANS,MPS6602,NPN,COMPLEMENTRY DRIVER	EA
			SEE TI- DRAWING	
0024A			Q1,Q2	
			SEE TI- DRAWING	
0025	00001.000	2220776-0022	CAP,AL ELEC,33 UF,16 V,RADIAL TERMINALS	EA
			SEE TI- DWG	
0025A			C2	
			SEE TI- DWG	
0027	00001.000	2210025-0043	NETWORK RES,+,-2%TOL-47000HMS 6PINS	EA
			SEE TI- DRAWING	
0027A			RN1	
			SEE TI- DRAWING	
0028	00003.000	2220891-0002	DIODE,LED,GREEN,WHITE FSTD.LENS	EA
			SEE TI- DWG	
0028A			CR1,CR2,CR3	
			SEE TI- DWG	
0029	00001.000	2310485-0001	HOLDER, LED	EA
0030	00003.000	2310563-0001	SWITCH,ROCKER,PCB,SPDT	EA
0030A			S2,S3,S4	
0031	00000.000	2211880-0003	ROCKER SWITCH,DIP,4 POSITION	EA
			SEE EI-S	
0031A			S1,1-4	
			SEE EI-S	
0031B			*ALTERNATE FOR ITEM 40	
			SEE EI-S	
0032	00001.000	2211348-0006	HEADER, 1-ROW,6 CONTACTS,.100"CENTERS	EA
			SEE TI- DRAWING	
0032A			P2	
			SEE TI- DRAWING	
0033	00001.000	2310505-0001	CABLE,CTL PNL TO TERM.EL.,700 SERIES	EA
0033A			P1	
0035	00002.000	0972924-0017	CAP FIX TANT SOLID 1.0 MFD 10 % 35 VOLT	EA
			1294- -000	
0035A			C3,C7	
			1294- -000	
0036	00001.000	0972924-0009	CAP FIX TANT SOLID 3.3 MFD 10 % 15 VOLT	EA
			QPL -M39003/1-2268	
0036A			C4	
			QPL -M39003/1-2268	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310490-0001	G	PWB ASSY,CONTROL PANEL,700 SERIES

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0040	00001.000	2221277-0004	SLIDE SWITCH,4-SECTION,SPST,PCB MOUNTING	EA
			SEE TI- DRAWING	
0040A			S1,1-4	
			SEE TI- DRAWING	
0040B			*ITEM 31 IS AN ALTERNATE	
			SEE TI- DRAWING	
0050	00001.000	2310490-5001	AUTO INSERT PARTS FOR 2310490-1	EA
			1661-9051-014	
0057	00001.000	2363830-0002	LABEL,SYMBOLIZATION (51MM X 13MM)	EA
			1225- -000	
0058	AR	0411400-0024	WIRE, 24AWG ELECTRO TIN PLATED COPPER	FT

11/16/83

PART NUMBER	REV	DESCRIPTION
2310490-5001	G	AUTO INSERT PARTS FOR 2310490-1

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00000.334	2310491-0001	PWB,CONTROL PANEL,700 SERIES	EA
0021	00001.000	2210988-0001	IC, HEX DIFFERENTIAL COMPARATOR	EA
			SEE TI- DRAWING	
0021A			U2	
			SEE TI- DRAWING	
0022	00001.000	2310562-0001	IC,DRIVER,QUAD DARLINGTON	EA
0022A			U3	
0023	00001.000	2220774-0001	IC,LM3905,CLOCK GEN,DRIVER,TIMER	EA
			SEE TI- DWG	
0023A			U1	
			SEE TI- DWG	
0055	00001.000	2310490-5501	SEQUENCE TAPE PARTS FOR 2310490-5001	EA
			1661-9055-014	
0055	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310490-5501	G	SEQUENCE TAPE PARTS FOR 2310490-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00002.000	0972932-0001	DIODE 1N914B	EA
			SEE TI- DRAWING	
0002A			CR4,CR7	
			SEE TI- DRAWING	
0003	00001.000	0972460-0005	DIODE,SILICON,ZENER-1%,4.7V	EA
0003A			CR6	
0004	00003.000	0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%,-20%	EA
			1632-0000-000	
0004A			C5,C6,C8	
			1632-0000-000	

List of Materials

11/16/83

PART NUMBER 2310490-5501 REV G
DESCRIPTION..... SEQUENCE TAPE PARTS FOR 2310490-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0005	00001.000	0972946-0049	RES FIX 220 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0005A			R3	
			ROH - R-25	
0006	00003.000	0972946-0045	RES FIX 150 OHM 5 % .25 W CARBON FILM	EA
			SEE TI- DRAWING	
0006A			R1,R2,R6	
			SEE TI- DRAWING	
0007	00001.000	0972946-0057	RES FIX 470 OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0007A			R12	
			ROH - R-25	
0008	00001.000	0972946-0064	RES FIX 910 OHM 5% .25 W CARBON FILM	EA
			ROH - R-25	
0008A			R13	
			ROH - R-25	
0009	00002.000	0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	EA
			ROH - R-25	
0009A			R8,R16	
			ROH - R-25	
0010	00001.000	0972946-0080	RES FIX 4.3K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0010A			R10	
			ROH - R-25	
0011	00001.000	0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM	EA
			1658- -000	
0011A			R17	
			1658- -000	
0012	00001.000	0972946-0105	RES FIX 47 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0012A			R14	
			ROH - R-25	
0013	00001.000	0972946-0113	RES FIX 100K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0013A			R20	
			ROH - R-25	
0014	00001.000	0972946-0128	RES FIX 430K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0014A			R15	
			ROH - R-25	
0015	00001.000	0972946-0129	RES FIX 470K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0015A			R9	
			ROH - R-25	
0016	00001.000	0539370-0455	RES FIX FILM 5.36K OHM 1% .25W	EA
			COR --NA55D-100PPM/	
0016A			R21	
			COR --NA55D-100PPM/	
0018	00001.000	0539370-0577	RES FIX FILM 100 K OHM 1% .25 WATT	EA
			COR - NA55	
0018A			R4	
			COR - NA55	
0019	00001.000	0539370-0606	RES FIX FILM 200 K OHM 1% .25 WATT	EA
			COR - NA55	
0019A			R5	
			COR - NA55	
0020	00001.000	0539370-0610	RES FIX FILM 221K OHM 1% .25 WATT	EA
			COR - NA55	
0020A			R11	
			COR - NA55	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310490-5501 G SEQUENCE TAPE PARTS FOR 2310490-5001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0026	00001.000	0539370-0578	RES FIX FILM 102 K OHM 1% .25 WATT	EA
			COR - NA55	
0026A			R18	
			COR - NA55	
0034	00001.000	0972924-0013	CAP FIX TANT SOLID 2.2 MFD 10 % 20 VOLT	EA
			QPL -M39003/1-2283	
0034A			C1	
			QPL -M39003/1-2283	
0038	00001.000	0972946-0069	RES FIX 1.5K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0038A			R7	
			ROH - R-25	

11/16/83

PART NUMBER REV DESCRIPTION.....
2310490-8001 G PWB ASSY,CONTROL PANEL,700 SERIES,SPARES

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0022	00001.000	2310490-0001	PWB ASSY,CONTROL PANEL,700 SERIES	EA
			1661-9001-014	
1000	REF	2310503-0001	MODEL 703 DATA TERMINAL	EA
2000	REF	2231993-0001	SERVICE PACK INDEX-RMR	EA

DWG NO 2310439 SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN504893(D) INFORMAL	7-18-83	JDD
	FORMAL RELEASE		

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV																																
SHEET																																
REV STATUS OF SHEETS	REV																															
	SHEET																															

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

DWN	JD DODSON	DATE 7-18-83
CHK	JD DODSON	7-18-83
ENGR	[signature]	7/28/83
APVD-ENGR	[signature]	7/28/83
QA	[signature]	7/28/83
APVD-MFG	[signature]	7/28/83
RLSE	[signature]	7/28/83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, ADVANCE IDLER ROLLER ASSEMBLY

SIZE	FSCM NO	DRAWING NO
A	06668	2310439

SCALE NONE SHEET

E I S

TI-25739

300 LM

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310439-0001	A	MAINT KIT, ADVANCE IDLER ROLLER ASSY

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0035	00001.000	2310482-0001	ROLLER,PAPER ADVANCE IDLER 1689-0482-009	EA
0037	00002.000	0983874-0001	PIVOT 1255-2025-030	EA

DWG NO 2310440 SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN497519(D) INFORMAL	—	JDD
B	CN513043 (D) INFORMAL	—	JDD
C	CN509762(D) INFORMAL	—	JDD
	FORMAL RELEASE		

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV																														
SHEET																														
REV STATUS OF SHEETS	REV																													
	SHEET																													

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

		DATE
DWN	JD DODSON	7-18-83
CHK	JDodson	8-2-83
ENGR		8/4/83
APVD-ENGR		8/4/83
QA		8/12/83
APVD-MFG		
RLSE	by JDD	8-17-83

TEXAS INSTRUMENTS
INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, ADVANCE DRIVE ROLLER ASSEMBLY

SIZE	FSCM NO	DRAWING NO
A	06668	2310440

SCALE NONE SHEET

TI-25739

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310440-0001	D	MAINT KIT, 70X, PAPER ADVANCE DRIVE

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0006	00000.000	2310473-0001	MOTOR,STEPPING,PRINTHEAD MOTION	EA
0006A			*ITEM 7 IS ALTERNATE	
0007	00001.000	2310473-0002	MOTOR,STEPPING,PAPER ADVANCE	EA
0007A			*ALTERNATE FOR ITEM 6 USED	
0007B			*WITH ITEMS 38, 39, 79	
0038	00001.000	2310603-0001	ROLLER, PAPER ADVANCE DRIVE 1689-0603-007	EA
0038A			*ALTERNATE FOR ITEM 77 1689-0603-007	
0038B			*USED WITH ITEMS 7,39,78 1689-0603-007	
0039	00001.000	2310648-0001	COUPLER, PAPER ADVANCE SEE TI- DRAWING	EA
0039A			*USED WITH ITEMS 7,38,78 SEE TI- DRAWING	
0040	00025.000	2211811-0002	SEAL,O-RING,NITRILE,.220"ID,.094"THK SEE TI- DWG	EA
0077	00000.000	2310647-0001	ROLLER,PAPER ADVANCE DRIVE,PRESS-ON 1689-0647-001	EA
0077A			*ITEM 38 IS AN ALTERNATE 1689-0647-001	
0078	AR	0996552-0002	ADHESIVE,50CC BOTTLE,WELD AND POROSITY 005972-290-31	EA
0078A			*USED WITH ITEMS 7,38,39 005972-290-31	

2310489
DWG NO | SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	CN497518(D) INFORMAL	7-18-83	JDD
	FORMAL RELEASE		

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV		
SHEET		
REV STATUS OF SHEETS	REV	
	SHEET	

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

DWN	JD DODSON	7-18-83
CHK	JD DODSON	7-18-83
ENGR	[signature]	7/28/83
ARVD-ENGR	[signature]	7/25/83
QA	[signature]	7/28/83
APVD-MFG	[signature]	
RLSE	[signature]	7/28/83

TEXAS INSTRUMENTS
INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, SPEAKER ASSEMBLY, MODEL 707

SIZE	FSCM NO	DRAWING NO
A	06668	2310489
SCALE NONE		SHEET

E I S

TI-25739 300 LM

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310489-0001	A	MAINT KIT, SPEAKER ASSY, MODEL 707

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0021	00001.000	2220935-0001	SPEAKERS,8 OHM,100 MWATT,0.9 KHZ-5KHZ SEE TI- DWG	EA
0029	00001.000	2265966-0007	TAPE,FOAM,DOUBLE STICK,9.3 X 12.7 SEE TI- DRAWING	EA
0035	00001.000	0983835-0001	WIRING HARNESS,SPEAKER ACOUSTIC COUPLER 1224-3835-080	EA

DWG NO 2310531 SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN478110(D) INFORMAL	7-18-83	JDD

FORMAL RELEASE

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV																														
SHEET																														
REV STATUS OF SHEETS	REV																													
	SHEET																													

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

DWN	JD DODSON	DATE 7-18-83
CHK	JD DODSON	7-18-83
ENGR		7/28/83
APVD-ENGR		7/28/83
QA		7/28/83
APVD-MFG		
RLSE		7/28/83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, PLATEN ASSEMBLY

SIZE	FSCM NO	DRAWING NO
A	06668	2310531

SCALE NONE SHEET

TI-23739

300 LM E I S

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310531-0001	A	MAINT KIT, PLATEN ASSEMBLY

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0008	00001.000	2310426-0001	PLATEN, 70X 1689-0426-009	EA
0011	00001.000	2310479-0001	CUSHION, PLATEN	EA
0012	00001.000	2310487-0001	TAPE, UHMW, 210.0 X 22.0 MM LONG	EA

DWG NO 2310546 SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN478111(D) INFORMAL	7-18-83	JDD

FORMAL RELEASE

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV																														
SHEET																														
REV STATUS OF SHEETS	REV																													
	SHEET																													

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

DWN JD DODSON DATE 7-18-83
CHK JD DODSON 7-18-83
ENGR [signature] 7/20/83
APVD-ENGR [signature] 7/25/83
QA [signature] 7/20/83
APVD-MFG [signature]
RLSE [signature] 7/25/83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, CARRIAGE MOTOR

SIZE	FSCM NO	DRAWING NO
A	06668	2310546

SCALE NONE SHEET

E I S

TI-25739

300 LM

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310546-0001	B	MAINT KIT, 70X, CARRIAGE MOTOR

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0006	00001.000	2310473-0001	MOTOR,STEPPING,PRINTHEAD MOTION	EA
0009	00001.000	2310430-0001	LEAD SCREW	EA
0055	AR	0996622-0001	OIL,TURBINE-GRADE 32 059595-TEXACO	EA

DWG NO 2310548 SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN505346(D) INFORMAL	7-18-83	JDD
	FORMAL RELEASE		
B	CN509799(D) D MOSELEY	8-19-83	TJDodson

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV																																
SHEET																																
REV STATUS OF SHEETS	REV																															
	SHEET																															

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

		DATE
DWN	JD DODSON	6-24-83
CHK	JD DODSON	7-18-83
ENGR		7/22/83
APVD-ENGR		7/23/83
QA		7/22/83
APVD-MFG		
RLSE		7/28/83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, CARRIAGE ASSEMBLY

SIZE	FSCM NO	DRAWING NO
A	06668	2310548

SCALE NONE SHEET

TI-25739

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310548-0001	B	MAINT KIT, CARRIAGE ASSEMBLY

ITEM	QUANTITY	COMPONENT	DESCRIPTION	UM
0013	00001.000	2310536-0001	GUIDE,PRINTHEAD CABLE	EA
0015	00001.000	2310427-0001	CARRIAGE	EA
0017	00001.000	2310471-0001	CLIP, PRINTHEAD	EA
0018	00002.000	2310481-0001	PAD,ADHESIVE,DOUBLE COATED	EA
0019	00001.000	2310441-0001	CABLE, PRINTHEAD	EA
0029	00001.000	2265966-0007	TAPE,FOAM,DOUBLE STICK,9.3 X 12.7 SEE TT- DRAWING	EA

DWG NO 2310551 SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN505349(D) INFORMAL	7-18-83	JDD

FORMAL RELEASE

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV																										
SHEET																										
REV STATUS OF SHEETS	REV																									
	SHEET																									

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

		DATE
DWN	JD DODSON	7-18-83
CHK	JD DODSON	7-18-83
ENGR		7/23/83
APVD-ENGR		7/28/83
QA		7/28/83
APVD-MFG		
RLSE		7/28/83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, PAPER DOOR

SIZE	FSCM NO	DRAWING NO
A	06668	2310551

SCALE NONE SHEET

E I S

TI-25739

300 LM

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310551-0001	B	MAINT KIT, PAPER DOOR

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0027	00001.000	2310425-0001	LOCK, PAPER DOOR 1255-3029-005	EA
0028	00001.000	2310428-0002	DOOR,PAPER, W/O LOGO 1255-3033-004	EA
0045	00001.000	2310554-0001	LABEL,SILENT 700 DATA TERMINAL	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310551-0002	B	MAINT KIT, PAPER DOOR, GTE

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0027	00001.000	2310425-0001	LOCK, PAPER DOOR 1255-3029-005	EA
0028	00001.000	2310428-0002	DOOR,PAPER, W/O LOGO 1255-3033-004	EA
0045	00001.000	2310554-0002	LABEL,GTE TELENET SEE TI- DRAWING	EA

DWG NO 2310552 SH

APPLICATION	
NEXT ASSY	USED ON
	7114

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN505350(D) INFORMAL	7-18-83	JDD

FORMAL RELEASE

NOTES, UNLESS OTHERWISE SPECIFIED:

1. FOR A PICTORIAL REPRESENTATION AND APPLICABLE NOTES SEE CHART A ON DRAWING 2310450 FOR USE ON MODEL 703, 2310460 FOR USE ON MODEL 707, AND 2310570 FOR USE ON MODEL 709.

REV																														
SHEET																														
REV STATUS OF SHEETS	REV																													
	SHEET																													

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

DWN JD DODSON DATE 7-18-83
CHK JD DODSON 7-18-83
ENGR 7/28/83
APVD-ENGR 7/28/83
QA 7/28/83
APVD-MFG
RLSE 7/28/83

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

MAINTENANCE KIT, BASE

SIZE	FSCM NO	DRAWING NO
A	06668	2310552

SCALE NONE SHEET

TI-25739

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310552-0001	B	MAINT KIT, BASE

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310432-0001	BASE 1255-3031-005	EA
0023	00002.000	2310420-0001	DOOR, BATTERY 1255-3023-005	EA
0024	00002.000	2310488-0002	FOOT,RUBBER,19 MM SQ.	EA

DWG NO 2310530 SH

REV	DESCRIPTION	DATE	APPROVED
C	CN509764 (D) D.K.ANDERSEN 1) REPLACES REV B WITH CHANGE. DWG WAS A SIZE	7-28-83	JD Dodson

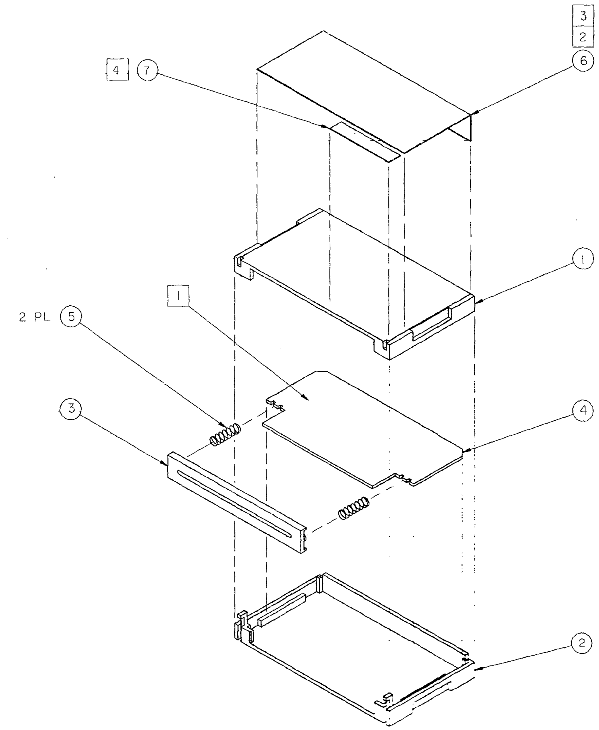
NOTES: UNLESS OTHERWISE SPECIFIED:

1 COMPONENT SIDE OF BOARD

2 LABEL (ITEM 6) WILL HOLD ASSEMBLY TOGETHER SO MUST BE INSTALLED AFTER INSTALLING ITEM 1 TO ITEM 2

3 ALIGN SMALL MARKS ON LABEL EDGE WITH CORNER OF MODULE. CENTER LABEL BETWEEN RIBS ON EDGE OF ITEM 1

4 INSTALL LABEL (ITEM 7) AFTER INSTALLING ITEM 6, SO THE PRINT IS IN THE SAME ORIENTATION AS ITEM 6. INSTALL IN APPROXIMATE LOCATION AS SHOWN



PART NUMBER	DESCRIPTION
2310530-0014	AUTO ACCESS CARTRIDGE, SPANISH
2310530-0013	AUTO ACCESS CARTRIDGE, ITALIAN
2310530-0012	AUTO ACCESS CARTRIDGE, SWISS
2310530-0011	AUTO ACCESS CARTRIDGE, DUTCH
2310530-0010	AUTO ACCESS CARTRIDGE, NORWEGIAN
2310530-0009	AUTO ACCESS CARTRIDGE, FINNISH
2310530-0008	AUTO ACCESS CARTRIDGE, DANISH
2310530-0007	AUTO ACCESS CARTRIDGE, SWEDISH
2310530-0006	AUTO ACCESS CARTRIDGE, FRENCH DP
2310530-0005	AUTO ACCESS CARTRIDGE, FRENCH WP
2310530-0004	AUTO ACCESS CARTRIDGE, GERMAN
2310530-0003	AUTO ACCESS CARTRIDGE, U.K.
2310530-0002	AUTO ACCESS CARTRIDGE, GTE TELENET
2310530-0001	AUTO ACCESS CARTRIDGE, DOMESTIC

COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

NEXT ASSY	USED ON
	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN M. DURHAM DATE 2-2-83
CHK JD Dodson 7-28-83
ENGR George Hope 7-28-83
APVD-ENGR [signature] 7/28/83
QA [signature] Hebert 7/28/83
APVD-MFG [signature] 7/29/83
RLSE [signature] 7/29/83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

AUTO ACCESS CARTRIDGE

SIZE D | FSCM NO 06668 | DRAWING NO 2310530

SCALE 1:1 | SHEET

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES	REV STATUS OF SHEETS	REV
	PROCESS			CLASSIFICATION			SH

PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

300 FILMED TB 1 LM

List of Materials

11/16/83

PART NUMBER 2310530-0001 REV D DESCRIPTION..... AUTO ACCESS CARTRIDGE, DOMESTIC

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0001	PWB ASSY, UIM 700 SERIES 1661-9501-006	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER 2310530-0002 REV D DESCRIPTION..... AUTO ACCESS CARTRIDGE, GTE TELENET

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0002	PWB ASSY, UIM 700 SERIES, GTE 1661-9502-003	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310530-0003	D	AUTO ACCESS CARTRIDGE, U.K.

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0003	PWB ASSY, UIM 700 SERIES, U.K. 1661-9503-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310530-0004	D	AUTO ACCESS CARTRIDGE, GERMAN

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0004	PWB ASSY, UIM 700 SERIES, GERMANY 1661-9504-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310530-0005 D AUTO ACCESS CARTRIDGE, FRENCH WP

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0005	PWB ASSY, UIM 700 SERIES, FRANCE W.P. 1661-9505-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310530-0006 D AUTO ACCESS CARTRIDGE, FRENCH DP

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0006	PWB ASSY, UIM 700 SERIES, FRANCE D.P. 1661-9506-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310530-0007 D AUTO ACCESS CARTRIDGE, SWEDISH

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0007	PWB ASSY, UIM 700 SERIES, SWEDEN 1661-9507-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310530-0008 D AUTO ACCESS CARTRIDGE, DANISH

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0008	PWB ASSY, UIM 700 SERIES, DENMARK 1661-9508-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310530-0009	D	AUTO ACCESS CARTRIDGE, FINNISH

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0009	PWB ASSY, UIM 700 SERIES, FINLAND 1661-9509-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310530-0010	D	AUTO ACCESS CARTRIDGE, NORWEGIAN

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0010	PWB ASSY, UIM 700 SERIES, NORWAY 1661-9510-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310530-0011 D AUTO ACCESS CARTRIDGE, DUTCH

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0011	PWB ASSY, UIM 700 SERIES, HOLLAND 1661-9511-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310530-0012 D AUTO ACCESS CARTRIDGE, SWISS

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0012	PWB ASSY, UIM 700 SERIES, SWITZERLAND 1661-9512-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310530-0013	D	AUTO ACCESS CARTRIDGE, ITALIAN

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0013	PWB ASSY, UIM 700 SERIES, ITALY 1661-9513-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310530-0014	D	AUTO ACCESS CARTRIDGE, SPANISH

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0014	PWB ASSY,UIM 700 SERIES,SPAIN/LATIN AMER 1661-9514-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310530-0015	D	AUTO ACCESS CARTRIDGE, BELGIAN

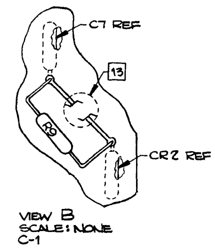
ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310416-0001	COVER,MODULE,FRONT 1255-3032-004	EA
0002	00001.000	2310417-0001	COVER,MODULE,REAR 1255-3030-004	EA
0003	00001.000	2310418-0001	DOOR, MODULE 1255-3028-004	EA
0004	00001.000	2310495-0015	PWB ASSY, UIM SERIES 700, BELGIUM 1661-9515-001	EA
0005	00002.000	2211146-0005	SPRING,COMP,ST.STEEL,1.79 LB/IN SPRG RAT SEE TI- DWG	EA
0006	00001.000	2310422-0001	LABEL,AUTO ACCESS CARTRIDGE SEE TI- DRAWING	EA
0007	00001.000	2310601-0001	LABEL,SERIAL NUMBER, AUTO ACCESS SEE TI- DRAWING	EA
0008	00001.000	2310611-0001	PUBLICATION KIT,AUTO ACCESS CARTRIDGE 1661-0611-000	EA
0009	00001.000	2233031-0001	CORRUGATED INSERT, U. I. M. SEE TI- DRAWING	EA
0010	00001.000	2233030-0001	BOX, U. I. M. SEE TI- DRAWING	EA
0011	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0012	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

DWG NO 2310495 SH

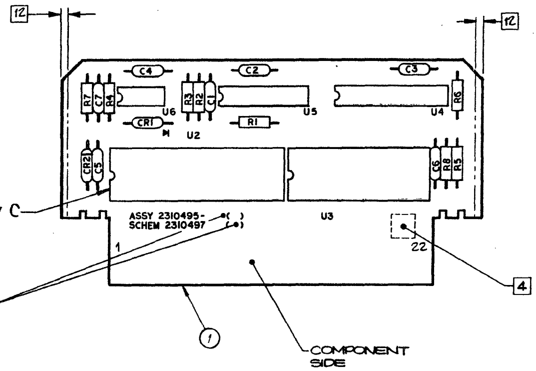
REV	DESCRIPTION	DATE	APPROVED
A	CN506595 (C) O Owens		
B	CN506733 (C) O Owens		
C	CN465996 (D) O Owens		
D	CN475744 (D) O Owens		
	FORMAL RELEASE		
E	CN515079 (C) D. HOWARD (1) REV PER EXT ENGR CHNGS	8-4-83	JD Dodson
F	CN515086 (C) D. HOWARD (1) ADDED -0002, -5002 & 5502 LMS (2)	8-4-83	JD Dodson
G	CN 515093 (D) S. VINSON (1) ADDED VIEW C AND NOTE 14 (2) ON L/M, ADDED -0100, -5501, -0001 THRU -0015, RESP., DELETED -5002, -5502	9-13-83	D Howard
H	CN 511525 (D) S. VINSON (1) ON -0100, ADDED ITEM 1, DELETED ITEM 25	9-13-83	D Howard

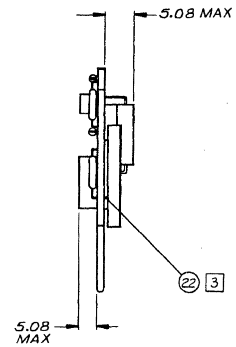
NOTES: UNLESS OTHERWISE SPECIFIED:

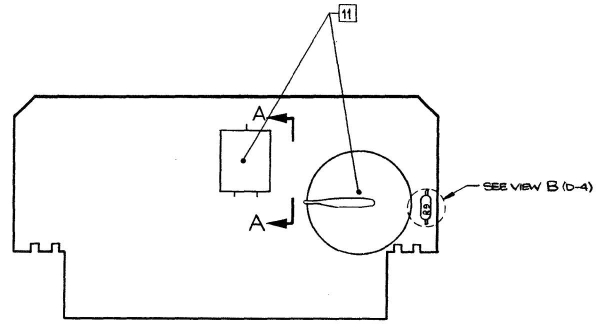
1. CLINCHING COMPONENT LEAD OPTIONAL
2. MAXIMUM LEAD LENGTH FROM CONDUCTOR SIDE OF BOARD IS 1.91
[3] SECURE CRYSTAL (ITEM 5) AND BATTERY (ITEM 4) TO PWB WITH TAPE (ITEM 13) AND ITEM 22 WHILE INSULATING CANS FROM PWB (ITEM 1)
[4] MARK SITE/DATE CODE IN APPROXIMATE LOCATION SHOWN PER 994398 PARAGRAPH 4.0 AND PROCESS 1
5. ITEM 25 ON THE -0001 LM IS THE AUTO-INSERTED PARTS CONTAINED ON THE -5001 LM
6. ALL SYMBOLIZATION IS TO BE DONE USING INDELIBLE INK
[7] MARK APPROPRIATE DASH NO. AND REVISION LETTER APPROXIMATELY WHERE SHOWN PER PROCESS 1
~~8. MASK TOOLING HOLES ON BOTH SIDES OF BOARD TO PREVENT SOLDER FROM ENTERING HOLES~~
9. **CAUTION: STATIC SENSITIVE** — ELECTROSTATIC DISCHARGE CAN DAMAGE THIS COMPONENT. PRODUCT MUST BE SHIPPED IN ANTISTATIC CONTAINER AND MAINTAINED IN ANTISTATIC PACKAGING. INDIVIDUAL DEVICES SHOULD BE HANDLED ONLY AT STATIC-FREE WORK STATION.
10. CLIP ALL PINS OF U2 (ITEM 2) FLUSH TO CONDUCTOR SIDE OF PWB (ITEM 1) BEFORE INSTALLING TAPE (ITEM 13) AND ITEM 22
[11] CRYSTAL (ITEM 5) AND BATTERY (ITEM 4) TO BE INSTALLED ON PWB (ITEM 1) AFTER PANELS ARE SHEARED
[12] 1.91 MINIMUM MUST BE MAINTAINED FROM ALL PARTS
[13] CUT ETCH BETWEEN C7 AND CR2 ON ALL REVISION A PWBS (PN 2310496)
[14] WHEN USING (ITEM 21) ROM, PIN 1 WILL BE INSTALLED IN PWB LOCATIONS PIN 3. PWB PINS 1,2,27,28 WILL BE UNUSED.



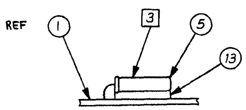
VIEW B
SCALE: NONE
C-1



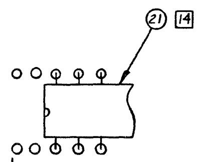




DASH NUMBER	DESCRIPTION
-5501	SEQUENCE TAPE PARTS FOR 2310495-0100
-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE
-0015	PWB ASSY, UIM SERIES 700, BELGIUM
-0014	PWB ASSY, UIM 700 SERIES, SPAIN/LATIN AMER
-0013	, ITALY
-0012	, SWITZERLAND
-0011	, HOLLAND
-0010	, NORWAY
-0009	, FINLAND
-0008	, DENMARK
-0007	, SWEDEN
-0006	, FRANCE D.P.
-0005	, FRANCE W.P.
-0004	, GERMANY
-0003	, U.K.
-0002	PWB ASSY, UIM 700 SERIES, GTE
-0001	PWB ASSY, UIM 700 SERIES



VIEW A-A
ROTATED 90° CW
ZONE: C-2



VIEW C

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

PARTS LIST

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
3	SLDR	127-01	00		
2	SLDR	124-02	00		
1	MARK	914-01	01	USING ITEM TI-30257, HGT 2.3	[4] [7]
	PROCESS		CLASSIFICATION		

PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS. SEE TI DRAWING 729467

REV LEVEL BLOCK							
ASSY	2310495	D	E	F	G	H
PWB	2310496	*	B	B	B	B
SCHEM	2310497	*	C	C	C	C

REV STATUS OF SHEETS — REV / SH

NEXT ASSY	USED ON
2310415	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ±0.25, 1 PLACE DECIMALS ±0.5, ANGLES ±1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN David E. Howard 3-14-83
CHK Odie Owens 6-9-83
ENGR Kenneth E. Elmore 6/9/83
APVD-ENGR George Hone 6/9/83
QA Glen Hebert 6/9/83
APVD-MFG 6/9/83
RLSE Tony Bunley 6-16-83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

PWB ASSEMBLY, CARTRIDGE ELECTRONICS, AUTO ACCESS, 700 SERIES

SIZE D FSCM NO 06668 DRAWING NO 2310495

SCALE 2:1 SHEET

320 LM 1FILMED

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0001	H	PWB ASSY, UIM 700 SERIES

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00000.000	2310540-0001	PROGRAMED EPROM FOR 707 UIM	EA
			1661-0540-000	
0002A			U2	
			1661-0540-000	
0002B			*ALTERNATE TO ITEM 21	
			1661-0540-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE	EA
			1661-1495-002	
0021	00001.000	2310500-0001	IC,ROM,U.I.M.,707	EA
			1661-5001-000	
0021A			U2	
			1661-5001-000	
0021B			*ITEM 2 IS AN ALTERNATE	
			1661-5001-000	

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0002	H	PWB ASSY, UIM 700 SERIES, GTE

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0001	PROGRAMMED EPROM GTE	EA
			1661-7001-000	
0002A			U2	
			1661-7001-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE	EA
			1661-1495-002	

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0003	H	PWB ASSY, UIM 700 SERIES, U.K.

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0002	PROGRAMMED EPROM U.K.	EA
			1661-7002-000	
0002A			U2	
			1661-7002-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE	EA
			1661-1495-002	

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0004	H	PWB ASSY, UIM 700 SERIES, GERMANY

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0003	PROGRAMMED EPROM GERMANY	EA
			1661-7003-000	
0002A			U2	
			1661-7003-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE	EA
			1661-1495-002	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0005	H	PWB ASSY, UIM 700 SERIES, FRANCE W.P.

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0004	PROGRAMMED EPROM FRANCE WP 1661-7004-000	EA
0002A			U2 1661-7004-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0006	H	PWB ASSY, UIM 700 SERIES, FRANCE D.P.

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0005	PROGRAMMED EPROM FRANCE DP 1661-7005-000	EA
0002A			U2 1661-7005-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0007	H	PWB ASSY, UIM 700 SERIES, SWEDEN

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0006	PROGRAMMED EPROM SWEDEN 1661-7006-000	EA
0002A			U2 1661-7006-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0008	H	PWB ASSY, UIM 700 SERIES, DENMARK

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0007	PROGRAMMED EPROM DENMARK 1661-7007-000	EA
0002A			U2 1661-7007-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0009	H	PWB ASSY, UIM 700 SERIES, FINLAND

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0008	PROGRAMMED EPROM FINLAND 1661-7008-000	EA
0002A			U2 1661-7008-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0010	H	PWB ASSY, UIM 700 SERIES, NORWAY

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0009	PROGRAMMED EPROM NORWAY 1661-7009-000	EA
0002A			U2 1661-7009-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0011	H	PWB ASSY, UIM 700 SERIES, HOLLAND

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0010	PROGRAMMED EPROM HOLLAND 1661-7010-000	EA
0002A			U2 1661-7010-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0012	H	PWB ASSY, UIM 700 SERIES, SWITZERLAND

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0011	PROGRAMMED EPROM SWITZERLAND 1661-7011-000	EA
0002A			U2 1661-7011-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0013	H	PWB ASSY, UIM 700 SERIES, ITALY

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0012	PROGRAMMED EPROM ITALY 1661-7012-000	EA
0002A			U2 1661-7012-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0014	H	PWB ASSY,UIM 700 SERIES,SPAIN/LATIN AMER

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0013	PROGRAMMED EPROM SPAIN/LATIN AMERICA 1661-7013-000	EA
0002A			U2 1661-7013-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0015	H	PWB ASSY, UIM SERIES 700, BELGIUM

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0002	00001.000	2310570-0014	PROGRAMMED EPROM BELGIUM 1661-7014-000	EA
0002A			U2 1661-7014-000	
0018	00001.000	2310495-0100	COMMON PARTS, AUTO ACCESS CARTRIDGE 1661-1495-002	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2310495-0100	H	COMMON PARTS, AUTO ACCESS CARTRIDGE

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310496-0001	PWB,U.I.M.,700 SERIES	EA
0003	00001.000	2220383-0001	IC,CMOS RAM - - -000	EA
0003A			U3 - - -000	
0004	00001.000	2266030-0001	BATTERY, LITHIUM BR-232-5L1-MM	EA
0004A			B1 BR-232-5L1-MM	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310495-0100 H COMMON PARTS, AUTO ACCESS CARTRIDGE

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0005	00001.000	2210835-0005	CRYSTAL, 3.579545 MHZ, GND LEAD HC18/U SEE TI- DRAWING	EA
0005A			Y1 SEE TI- DRAWING	
0006	00001.000	2211781-0002	IC, S2860, TONE GENERATOR SEE TI- DRAWING	EA
0006A			U5 SEE TI- DRAWING	
0007	00001.000	2221403-0001	IC,OCTAL D FLIP-FLOP,TC40H374P SEE TI- DRAWING	EA
0007A			U4 SEE TI- DRAWING	
0008	00001.000	0996034-0002	IC,RC4558P OPERATIONAL AMPLIFIER 001295-RC4558P	EA
0008A			U6 001295-RC4558P	
0011	00002.000	0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%,-20% 1632-0000-000	EA
0011A			C3,C4 1632-0000-000	
0013	00001.000	2265966-0007	TAPE,FOAM,DOUBLE STICK,9.3 X 12.7 SEE TI- DRAWING	EA
0022	00001.000	2265966-0002	TAPE,FOAM,DOUBLE STICK,3/4 INCH SQUARE	EA
0026	00001.000	2310495-5501	SEQUENCE TAPE PARTS FOR 2310495-0100 1661-9555-005	EA
0027	00001.000	0972975-0069	RESISTOR,FIXED 6.8K 1/8 WATT 5% QPL RC-R05G682JS	EA
0027A			R9 QPL RC-R05G682JS	
0028	REF	0994396-0001	PROC., SITE/DATE CODE AND SERIALIZATION	EA

11/16/83

PART NUMBER REV DESCRIPTION.....
2310495-5501 H SEQUENCE TAPE PARTS FOR 2310495-0100

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0009	00001.000	0996463-0002	DIODE,VSK130 RECTIFIER,1 AMP 1312-1632-000	EA
0009A			CR2 1312-1632-000	
0010	00001.000	0972763-0025	CAPACITOR,.10UF 50V FX,CERAMIC DIEL COR CA-C03Z5U104Z050A	EA
0010A			C2 COR CA-C03Z5U104Z050A	
0011	00002.000	0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%,-20% 1632-0000-000	EA
0011A			C1,C5 1632-0000-000	
0012	00001.000	2220699-0001	DIODE,SHOTTKY,GEN PURP.SWITCH,DO-35 PKG SEE TI- DWG	EA
0012A			CR1 SEE TI- DWG	

List of Materials

11/16/83

PART NUMBER REV DESCRIPTION.....
2310495-5501 H SEQUENCE TAPE PARTS FOR 2310495-0100

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0014	00001.000	0972976-0183	RES FIX COMP 1/4 W 10 MEGOHM 5 %	EA
			QPL -RC07G106JS	
0014A			R1	
			QPL -RC07G106JS	
0015	00001.000	0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	EA
			ROH - R-25	
0015A			R2	
			ROH - R-25	
0016	00001.000	0972946-0074	RES FIX 2.4K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0016A			R3	
			ROH - R-25	
0017	00001.000	0972946-0084	RES FIX 6.2K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0017A			R4	
			ROH - R-25	
0019	00001.000	0972946-0095	RES FIX 18K OHM 5% .25 W CARBON FILM	EA
			ROH - R-25	
0019A			R7	
			ROH - R-25	
0020	00001.000	0972946-0077	RES FIX 3.3K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0020A			R8	
			ROH - R-25	
0023	00002.000	0972757-0039	CAPACITOR, .15 UF, 50 VDC, CERAMIC	EA
			SEE TI- DRAWING	
0023A			C6,C7	
			SEE TI- DRAWING	

DWG NO 2310518 SH 1

NOTES: UNLESS OTHERWISE SPECIFIED:

~~1. ATTACH SOLID COLOR WIRE TO POSITIVE LEAD ON SPEAKER~~

2. APPLY ITEM TO NON-TEXTURED AREA SHOWN WITH NO OVERLAP ONTO TEXTURED AREAS

3. TIGHTEN SCREWS (ITEM 18) TO 1.92 ± 1.1 NM

4. THE SERIAL NUMBER ON THE LABEL (ITEM 20) WILL BE IN THE FORMAT SSYWWXXXX, WHERE SS IS THE SITE DESIGNATOR, Y IS THE LAST DIGIT OF THE YEAR, WW IS THE WEEK (1-52), AND XXXX IS THE SEQUENTIAL SERIAL NUMBER

5. MARK PART NUMBER IN APPROXIMATE LOCATION SHOWN

6. MARK SERIAL NUMBER IN APPROXIMATE LOCATION SHOWN

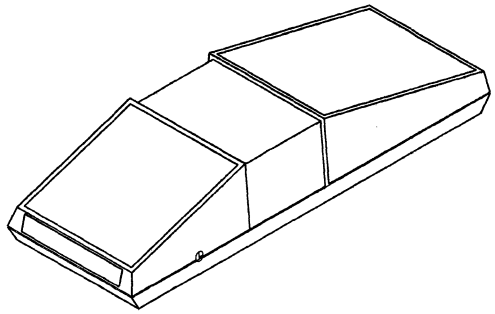
7. MARK DESCRIPTION IN APPROXIMATE LOCATION SHOWN

8. MARK LABEL USING AN IMPACT PRINTER WITH EPOXY INK RIBBON

9. CUT WIRES OF SPEAKER (ITEM 9) TO 100 ± 0.5 LENGTH. WIRES TO BE TWISTED PAIR

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN465994 (D) M.DURHAM	8-11-83	
B	CN5I3615 (D) M.DURHAM	8-11-83	

FORMAL RELEASE



COMPUTER GENERATED DRAWING
DO NOT REVISE MANUALLY

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ± 0.25, 1 PLACE DECIMALS ± 0.5, ANGLES ± 1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

DWN M. DURHAM DATE 6-27-83
CHK [signature] 8-11-83
AGR [signature] 8-15-83
APVD [signature] 8/15/83
QA [signature] 8/12/83
APVD [signature] 8/15/83
RLSD [signature] 8/16/83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

ACOUSTIC COUPLER

SIZE D | FSCM NO 06668 | DRAWING NO 2310518

SCALE NONE | SHEET 1 OF 3

NEXT ASSY 7114 | USED ON 300

APPLICATION

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
	PROCESS			CLASSIFICATION	

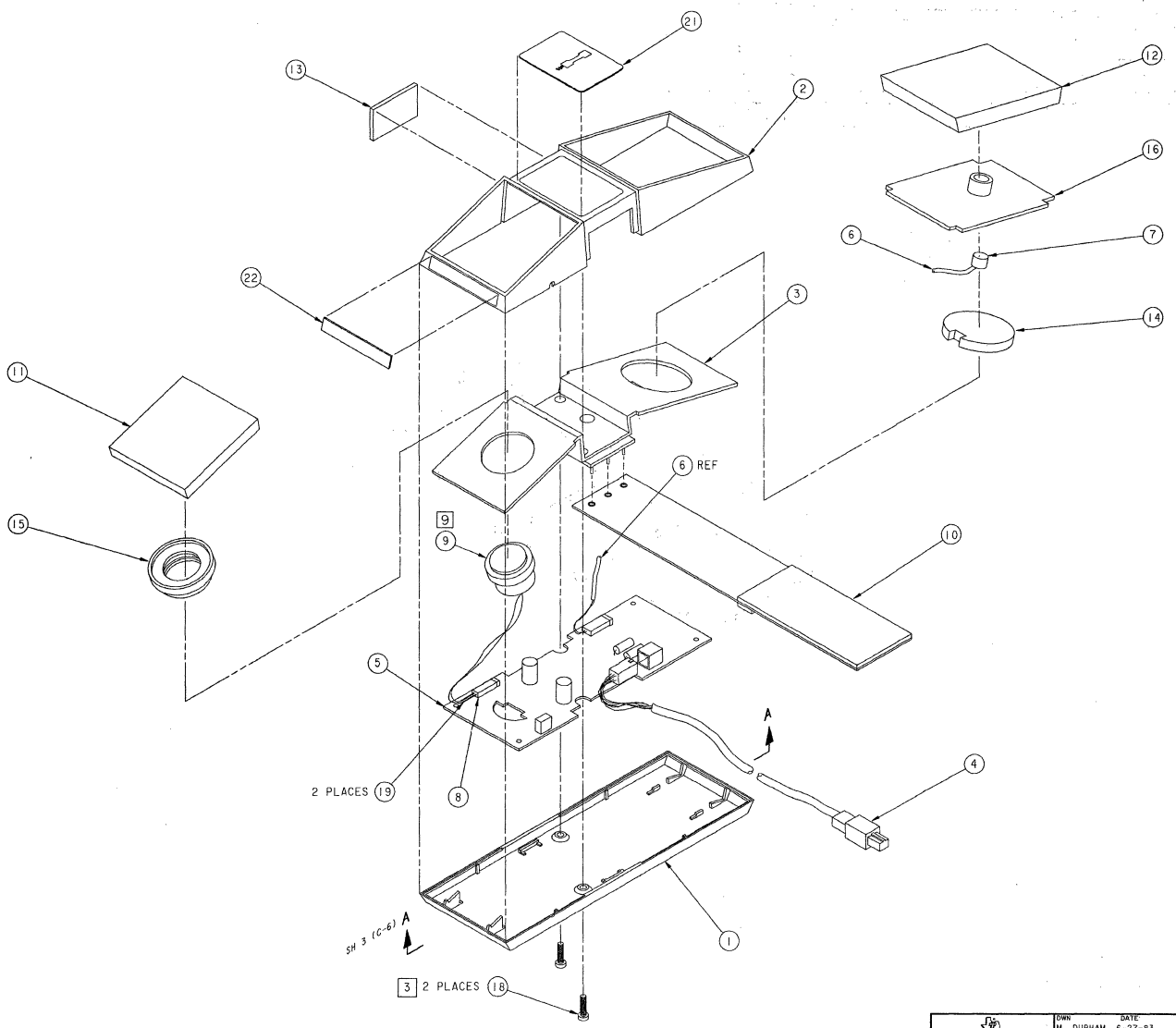
PROCESSES - FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

REV STATUS OF SHEETS	REV	B	B	B
	SH	1	2	3

TI-89748

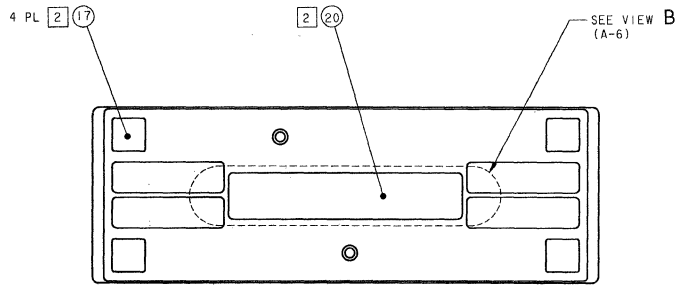
TB 1 LM

8-85

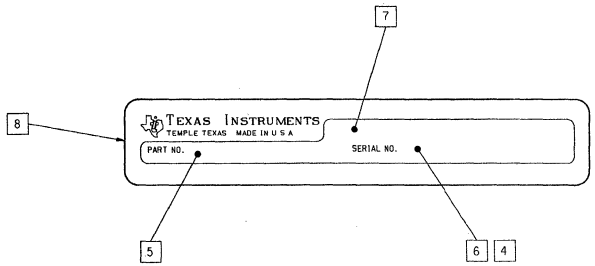


TEXAS INSTRUMENTS INCORPORATED Digital Systems Group	DWN M. DURHAM DATE 6-27-83	SIZE D	FSCM NO 06668	DRAWING NO 2310518	REV B
	ISSUE DATE	SCALE NONE		SHEET 2	

DWG NO 2310518 SH 2



VIEW A-A
SH 2 (A-6)
SCALE 1:1



VIEW B
(D-5)
SCALE 2:1

TEXAS INSTRUMENTS Digital Systems Group	DWN M. DURHAM DATE 6-27-83 ISSUE DATE	SIZE D	FSCM NO 06668	DRAWING NO 2310518 REV B
		SCALE NONE		SHEET 3

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310518-0001	C	ACOUSTIC COUPLER

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310515-0001	BASE, ACOUSTIC COUPLER 1255-3034-003	EA
0002	00001.000	2310516-0001	COVER, ACOUSTIC COUPLER 1255-3035-003	EA
0003	00001.000	2310517-0001	CHASSIS, ACOUSTIC COUPLER 1255-3036-003	EA
0004	00001.000	2310519-0001	CABLE, ACOUSTIC COUPLER	EA
0005	00001.000	2310520-0001	PWB ASSY, ACOUSTIC COUPLER 1661-5201-009	EA
0006	00001.000	2310635-0001	WIRING HARNESS,MICROPHONE-ACOUSTIC CPLR 1661-1635-005	EA
0007	00001.000	2220763-0001	MICROPHONE,SENSITIVITY OF -64DB,AL CASE SEE TI- DWG	EA
0008	00001.000	0972484-0002	CONNECTOR HOUSING 2 CONTACT TI8 -7175-6	EA
0009	00001.000	2211305-0001	SPEAKER, 1200 BDS ACOUSTIC COUPLER SEE TI- DRAWING	EA
0010	00001.000	2310527-0001	STRAP,ACOUSTIC COUPLER	EA
0011	00001.000	2310631-0001	CUSHION, ACOUSTIC COUPLER, SPEAKER SEE TI- DRAWING	EA
0012	00001.000	2310631-0002	CUSHION, ACOUSTIC COUPLER, MICROPHONE SEE TI- DRAWING	EA
0013	00001.000	2310528-0001	FASTNER, HOOK	EA
0014	00001.000	2310444-0003	ACOUSTIC FOAM, CHASSIS SEE TI- DRAWING	EA
0015	00001.000	2310583-0001	HOLDER SPEAKER, ACOUSTIC COUPLER SEE TI- DRAWING	EA
0016	00001.000	2310445-0001	SUPPORT, MICROPHONE	EA
0017	00004.000	2310542-0001	FOOT, ACOUSTIC COUPLER	EA
0018	00002.000	2211895-0016	SCREW,PLASTITE SEE TI- DWG	EA
0019	00002.000	0972104-0001	CONTACT ELEC-LOCKING,WIRE-TO.025 SQ POST AMP - 87124-1	EA
0020	00001.000	2310598-0001	LABEL, ID.,ACOUSTIC COUPLER SEE TI- DRAWING	EA
0021	00001.000	2310584-0001	LABEL, ORIENTATION, HANDSET SEE TI- DRAWING	EA
0022	00001.000	2310597-0001	LABEL, LOGO, ACOUSTIC COUPLER SEE TI- DRAWING	EA
0023	AR	0996527-0001	ADHESIVE,LOCTITE 416 059724-16SUPERBONDER	BT
0024	00001.000	0532997-0016	BAG,POLYETHYLENE,HEAT SEALED 1641-9999-000	EA
0025	00001.000	2233025-0001	BOX, ACOUSTIC COUPLER - TICLIP SEE TI- DRAWING	EA
0026	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0027	REF	2233041-0001	PACK ASSY,ACOUSTIC COUPLER-TICLIP	EA

List of Materials

11/16/83

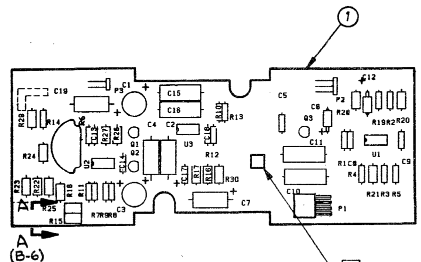
PART NUMBER	REV	DESCRIPTION
2310518-0002	C	ACOUSTIC COUPLER, INTERNATIONAL

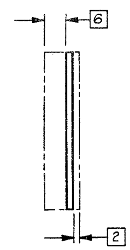
ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310515-0001	BASE, ACOUSTIC COUPLER 1255-3034-003	EA
0002	00001.000	2310516-0001	COVER, ACOUSTIC COUPLER 1255-3035-003	EA
0003	00001.000	2310517-0001	CHASSIS, ACOUSTIC COUPLER 1255-3036-003	EA
0004	00001.000	2310519-0002	CABLE, ACOUSTIC COUPLER SEE TI- DRAWING	EA
0005	00001.000	2310520-0001	PWB ASSY, ACOUSTIC COUPLER 1661-5201-009	EA
0006	00001.000	2310635-0001	WIRING HARNESS,MICROPHONE-ACOUSTIC CPLR 1661-1635-005	EA
0007	00001.000	2220763-0001	MICROPHONE,SENSITIVITY OF -64DB,AL CASE SEE TI- DWG	EA
0008	00001.000	0972484-0002	CONNECTOR HOUSING 2 CONTACT TIB -7175-6	EA
0009	00001.000	2211305-0001	SPEAKER, 1200 BDS ACOUSTIC COUPLER SEE TI- DRAWING	EA
0010	00001.000	2310527-0001	STRAP,ACOUSTIC COUPLER	EA
0011	00001.000	2310631-0001	CUSHION, ACOUSTIC COUPLER, SPEAKER SEE TI- DRAWING	EA
0012	00001.000	2310631-0002	CUSHION, ACOUSTIC COUPLER, MICROPHONE SEE TI- DRAWING	EA
0013	00001.000	2310528-0001	FASTNER, HOOK	EA
0014	00001.000	2310444-0003	ACOUSTIC FOAM, CHASSIS SEE TI- DRAWING	EA
0015	00001.000	2310583-0001	HOLDER SPEAKER, ACOUSTIC COUPLER SEE TI- DRAWING	EA
0016	00001.000	2310445-0001	SUPPORT, MICROPHONE	EA
0017	00004.000	2310542-0001	FOOT, ACOUSTIC COUPLER	EA
0018	00002.000	2211895-0016	SCREW,PLASTITE SEE TI- DWG	EA
0019	00002.000	0972104-0001	CONTACT ELEC-LOCKING,WIRE-TO.025 SQ POST AMP - 87124-1	EA
0020	00001.000	2310598-0001	LABEL, ID.,ACOUSTIC COUPLER SEE TI- DRAWING	EA
0021	00001.000	2310584-0001	LABEL, ORIENTATION, HANDSET SEE TI- DRAWING	EA
0022	00001.000	2310597-0001	LABEL, LOGO, ACOUSTIC COUPLER SEE TI- DRAWING	EA
0023	AR	0996527-0001	ADHESIVE,LOCTITE 416 059724-16SUPERBONDER	BT
0024	00001.000	0532997-0016	BAG,POLYETHYLENE,HEAT SEALED 1641-9999-000	EA
0025	00001.000	2233025-0001	BOX, ACOUSTIC COUPLER - TICLIP SEE TI- DRAWING	EA
0026	00001.000	2209021-0004	LABEL,PRES-SENS ADHESIVE 15/16X3.5 INCH SEE TI- DRAWING	EA
0027	REF	2233041-0002	PACK ASSY,ACOUSTIC COUPLER-TICLIP,W/TAPE	EA
0028	AR	2362817-0004	TAPE,PRESSURE SENSITIVE ADH,19.1MM WIDE SEE TI- DRAWING	RL

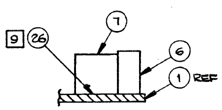
NOTES: UNLESS OTHERWISE SPECIFIED:

1. CLINCHING COMPONENT LEAD OPTIONAL
2. [2] MAXIMUM LEAD LENGTH FROM CONDUCTOR SIDE OF BOARD IS 1.91
3. [3] MARK SITE/DATE CODE, REV. LETTER AND ASSY. USING ITEM 49 IN APPROXIMATE LOCATION
4. ITEM 51 ON THE -0001 LM IS THE AUTOINSERTED PARTS CONTAINED ON THE -5501 LM
5. [5] ALL SYMBOLIZATION IS TO BE DONE USING INDELIBLE INK PER PROCESS 1
6. [6] MAXIMUM COMPONENT HEIGHT FROM COMPONENT SIDE OF BOARD IS 18.8
7. MASK TOOLING HOLES ON BOTH SIDES OF BOARD TO PREVENT SOLDER FROM ENTERING HOLES
9. [9] ATTACH SUPPORT (ITEM 7) TO PWB (ITEM 1) USING ADHESIVE (ITEM 26)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN 465995 (D) D.Owens	—	JDD
B	CN513302 (D) O.OWENS	—	JDD
C	CN515085 (D) P.HOWARD	—	JDD
	FORMAL RELEASE		
D	CN515094 (D) M.DURHAM (1) 1.91 WAS 1.52 (2) REVISED NOTES 3 AND 5, DELETED NOTE 8 (3) ITEM 49 WAS 0994396-0001	83/10/31	R. Karl







SECTION A-A
ROTATED 90°CCW
(B-6)

PART NUMBER	DESCRIPTION
2310520-5501	SEQUENCE TAPE PARTS FOR 2310520-0001
~~2310520-5001~~	~~AUTO INSERT PARTS FOR 2310520-0001~~
2310520-0001	PWB ASSEMBLY, ACOUSTIC COUPLER

CAUTION: STATIC SENSITIVE

ELECTROSTATIC DISCHARGE CAN DAMAGE THIS COMPONENT. PRODUCT MUST BE SHIPPED IN ANTISTATIC CONTAINER AND MAINTAINED IN ANTISTATIC PACKAGING. INDIVIDUAL DEVICES SHOULD BE HANDLED ONLY AT STATIC-FREE WORK STATION.

-3 QTY	-2 QTY	-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	NOTES

PARTS LIST

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
3	SLDR	127-01	00		
2	SLDR	124-02	00		
1	MARK	914-01	01	USING ITEM TI-30257, HGT 2.3	[5]
	PROCESS			CLASSIFICATION	

PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

REV	ASSY	2310520	A	B	C	D
LEVEL	PWB	2310521	A	B	C	C
BLOCK	SCHEM	2310522	*	*	*	*

REV STATUS OF SHEETS — REV / SH

NEXT ASSY	USED ON
2310518	7114

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: 2 PLACE DECIMALS ±0.25, 1 PLACE DECIMALS ±0.5, ANGLES ±1°
- INTERPRET DRAWING PER DOD-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS 0.25 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE	
0.33 THRU 3.18	+0.10/-0.03
3.20 THRU 6.35	+0.13/-0.03
6.38 THRU 12.70	+0.15/-0.03
12.73 THRU 19.05	+0.20/-0.03
19.08 THRU 25.40	+0.25/-0.03
25.43 THRU 50.80	+0.30/-0.03

THIRD ANGLE PROJECTION

		DATE
DWN	D. Owens	5/6/83
CHK	J.D. Dodson	7-21-83
ENGR	[illegible]	7-21-83
APVD ENGR	[illegible]	7-21-83
QA	[illegible]	7-21-83
APVD MFG	[illegible]	7-21-83
RLSE	[illegible]	7/21/83

TEXAS INSTRUMENTS INCORPORATED Digital Systems Group

SI-METRIC

PWB ASSEMBLY, ACOUSTIC COUPLER

SIZE	FSCM NO	DRAWING NO
D	06668	2310520

SCALE 1/1 SHEET

320 LM

1 FILMED

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2310520-0001	D	PWB ASSY, ACOUSTIC COUPLER

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2310521-0001	PWB, ACOUSTIC COUPLER	EA
0002	00001.000	2220907-0001	IC,OP AMP,LINEAR,4559	EA
			SEE TI- DWG	
0002A			U1	
			SEE TI- DWG	
0003	00001.000	0996936-0002	IC,POS.12V REG.,78L12	EA
			SEE TI- DRAWING	
0003A			Q2	
			SEE TI- DRAWING	
0004	00001.000	0996938-0002	IC,NEG.12V REG.,79L12	EA
			SEE TI- DWG	
0004A			Q1	
			SEE TI- DWG	
0005	00001.000	0996936-0001	IC,UA78L05ACLP,POSITIVE VOLTAGE RGLTR	EA
			001295-UA78L05ACLP	
0005A			Q3	
			001295-UA78L05ACLP	
0006	00001.000	2211504-0005	RES,VAR,2K,1/2 WATT,10%	EA
			SEE TI- DRAWING	
0006A			R15	
			SEE TI- DRAWING	
0007	00001.000	2213592-0001	SUPPORT,POTENTIOMETER-CLEAR PLEXIGLASS	EA
			1689-3592-000	
0009	00002.000	2220776-0037	CAP,AL ELEC,220 UF,25 V,RADIAL TERMINALS	EA
			SEE TI- DWG	
0009A			C1,C3	
			SEE TI- DWG	
0010	00003.000	2211700-0021	CAP,AL ELEC, 33UF,16V	EA
			SEE TI- DWG	
0010A			C2,C4,C7	
			SEE TI- DWG	
0012	00007.000	0972476-0001	CAP,.01UF,1% 50WVDC MINIMUM	EA
			SEE - TI DRAWING	
0012A			C10,C11	
			SEE - TI DRAWING	
0023	00001.000	2211863-0001	CONN, HEADER, 2-POS.,RT ANGLE	EA
			SEE TI- DRAWING	
0023A			P3	
			SEE TI- DRAWING	
0024	00001.000	2211863-0002	HEADER,1-ROW,3 CONTRACTS,.100"CENTERS	EA
0024A			P2	
0025	00001.000	2221103-0012	6-POS,2-ROW R.ANGLE HEADER ASSY,.100"CEN	EA
0025A			P1	
0026	AR	0996527-0001	ADHESIVE,LOCTITE 416	BT
			059724-16SUPERBONDER	
0049	00001.000	2363830-0001	LABEL, SYMBOLIZATION (38MM X 13MM)	EA
			1225- -000	
0050	REF	2310522-0001	LOGIC DIAGRAM,ACOUSTIC COUPLER	EA
0051	00001.000	2310520-5501	SEQUENCE TAPE PARTS FOR 2310520-0001	EA
			1661-5255-009	

List of Materials

11/16/83

PART NUMBER 2310520-5501 REV D DESCRIPTION..... SEQUENCE TAPE PARTS FOR 2310520-0001

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION.....	UM
0008	00002.000	0972924-0017	CAP FIX TANT SOLID 1.0 MFD 10 % 35 VOLT	EA
			1294- -000	
0008A			C6,C12	
			1294- -000	
0011	00001.000	0972763-0025	CAPACITOR,.10UF 50V FX,CERAMIC DIEL	EA
			COR CA-C03Z5U104Z050A	
0011A			C5	
			COR CA-C03Z5U104Z050A	
0013	00002.000	0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%,-20%	EA
			1632-0000-000	
0013A			C8,C9	
			1632-0000-000	
0014	00002.000	0972946-0072	RES FIX 2.0K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0014A			R2,R19	
			ROH - R-25	
0015	00001.000	0972946-0100	RES FIX 30 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0015A			R1	
			ROH - R-25	
0016	00001.000	0972946-0110	RES FIX 75 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0016A			R20	
			ROH - R-25	
0017	00001.000	0972946-0103	RES FIX 39 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0017A			R3	
			ROH - R-25	
0018	00002.000	0972946-0098	RES FIX 24 K OHM 5 % .25 W CARBON FILM	EA
			ROH - R-25	
0018A			R4,R5	
			ROH - R-25	
0019	00002.000	0539370-0473	RES FIX FILM 8.25K OHM 1% .25 WATT	EA
			COR - NA55	
0019A			R28	
			COR - NA55	
0020	00001.000	2211400-0001	JUMPER,ZERO-OHM RESISTOR	EA
			SEE TI- DRAWING	
0020A			R24	
			SEE TI- DRAWING	
0021	00001.000	0539370-0485	RES FIX FILM 11.0K OHM 1% .25 WATT	EA
			COR - NA55	
0021A			R21	
			COR - NA55	

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2207634-0001	D	CABLE ASSY,ASYNCH/SYNCH ETA

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00002.000	0539409-0005	CONNECTOR,PLUG 25 PINS	EA
			AMP -205208-1	
0002	00002.000	2210305-0003	HOOD STRN RLF 45/180DEG,BULK PK 25 POS	EA
			SEE TI- DRAWING	
0004	00002.000	2210317-0001	LABEL,BLANK,CABLE MARKER	EA
			085480-SLPF-19319-4	
0007	00001.000	0532997-0004	BAG POLYETHLENE HEAT SEALED 6 X 8	EA
0008	REF	2265070-0001	SPEC, PRE-PRINTED CABLE MARKER	EA
0009	00000.000	0539903-0001	HOOD,CONN 25 PIN WITH RETAINERS	EA
			AMP - 206478-3	
0009A			*ALTERNATE FOR ITEM 2	
			AMP - 206478-3	
0101	00001.000	2207634-5001	BULK CABLE ASSY MAT'L FOR -1	EA
			1221-0634-043	

11/16/83

PART NUMBER	REV	DESCRIPTION
2207634-5001	D	BULK CABLE ASSY MAT'L FOR -1

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0003	00030.000	0539430-0003	CONTACT,PIN 24-20AWG .068 INSUL DIA	EA
			AMP -205202-2 ST	
0005	00006.500	0972444-0002	CABLE,15COND 22AWG UL LISTED	FT

NOTES: UNLESS OTHERWISE SPECIFIED:

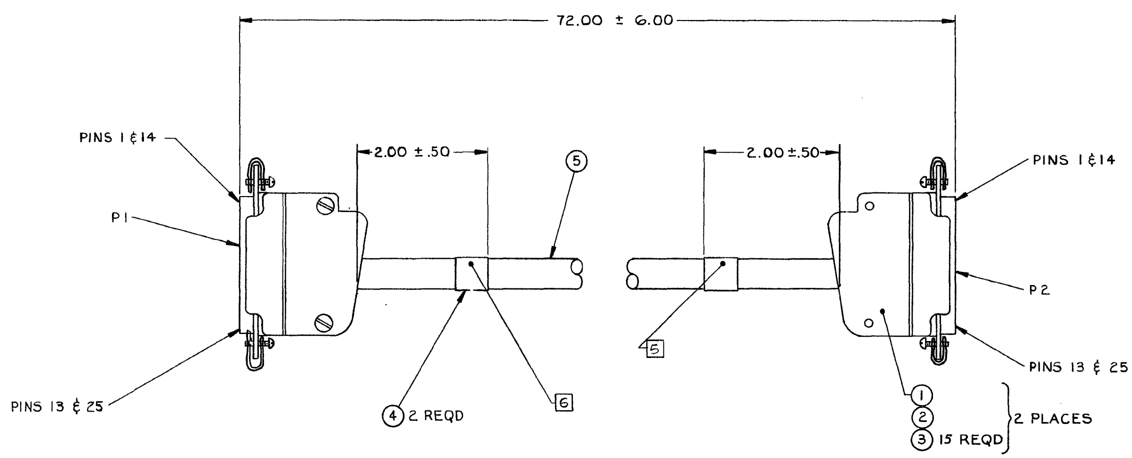
1. CABLE CLAMP SCREWS & RETAINER CLIPS & SCREWS INCLUDED WITH ITEM 2
2. RETAINER CLIP INSTALLED WITH THREADED HOLE ON SAME SIDE AS SCREW HEAD
3. ~~SCREWS MUST BE THREADED COMPLETELY THRU RETAINER CLIPS~~
4. RETAINER CLIPS AND SCREWS INCLUDED WITH ITEM 2 ARE TO BE PLACED IN A PLASTIC BAG AND SECURED TO CABLE
5. MARK PER 2265070
6. MARK PER 2265070, ONE LINE ONLY, TEXT "ASYNCH/SYNCH EIA"

WIRE COLOR	WIRE NO	DESCRIPTION	START STATION	FINISH STATION	SIGNATURE	ITEM NO	REMARKS
BLK	1	22 AWG CABLE	P1 - 1	P2 - 1	AA	5	PROTECTIVE GROUND
WHT	2		2	2	BA		TRANSMITTED DATA
RED	3		3	3	BB		RECEIVED DATA
GRN	4		4	4	CA		REQUEST TO SEND
ORN	5		5	5	CB		CLEAR TO SEND
BLU	6		6	6	CC		DATA SET READY
WHT/BLK	7		7	7	AB		SIGNAL GROUND
RED/BLK	8		8	8	CF		RECEIVED LINE SIGNAL DETECTOR
GRN/BLK	9		11	11	SCA		SEC. CLEAR TO SEND
ORN/BLK	10		12	12	SCF		SEC. REC'D LINE SIGNAL DETECTOR
BLU/BLK	11		20	20	CD		DATA TERMINAL READY
BLK/WHT	12		22	22	CE		RING INDICATOR
RED/WHT	13		23	23	CH		DATA SIGNAL RATE SELECTOR (DTE)
GRN/WHT	14		15	15	DB		TRANSMISSION SIGNAL ELEMENT TIMING
BLU/WHT	15	22 AWG CABLE	P1 - 17	P2 - 17	DD	5	RECEIVER SIGNAL ELEMENT TIMING

DWG NO 2207634 SH

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	CN441319 (C) S Dodson (1) NOTES 1 AND 2 WERE FLAG NOTES (2) DELETED NOTE 3 (3) ADDED: NOTE 4 AND ITEM 7	11-14-80	S Dodson
B	CN495692 (D) D HOWARD (1) ON -0001 LM, DEL IT 3 & 5 AND ADDED IT 101 (2) CREATED -5001 LM WITH IT 3 & 5 (PN 0539430-3 & 0972444-2 RESPECTIVELY)	8-24-82	M Kuehn
C	CN497512 (D) D HOWARD (1) REV PER EXT ENGR CHNGS	6/13/83	Ralolgene
D	CN506688 (D) D HOWARD (1) DELETED PROCESS 2	6/13/83	Ralolgene



PART NUMBER	DESCRIPTION
2207634-0001	CABLE ASSY, ASYNCH/SYNCH EIA
2207634-5001	BULK CABLE ASSY MATL FOR -0001

-1 QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION	NOTES

PARTS LIST

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
~~2~~	~~MARK~~	~~100-07~~	~~712~~	~~COLOR WHITE, TYPE 9~~	
~~1~~	~~MARK~~	~~100-07~~	~~712~~	~~COLOR BLACK, TYPE 6~~	
	PROCESS			CLASSIFICATION	

PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

NEXT ASSY	USED ON
999683	8740

APPLICATION

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN INCHES
- TOLERANCES. ANGLES ±1°
  3 PLACE DECIMALS ± .010
  2 PLACE DECIMALS ± 02
- INTERPRET DRAWING PER MIL-D-1000
- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS .010 FIM
- DIMENSIONAL LIMITS APPLY BEFORE PROCESSES
- PARENTHETICAL INFO FOR REF ONLY

HOLE TOLERANCE

.013 THRU .125 +.004 -.001	.126 THRU .250 +.005 -.001	.251 THRU .500 +.006 -.001
.501 THRU .750 +.008 -.001	.751 THRU 1.000 +.010 -.001	1.001 THRU 2.000 +.012 -.001

DWN	D Vykouhal	DATE 6-16-79
CHK	D Starnes	8-21-79
ENGR	Walt Russell	8-22-79
APVD	C Nash	8-23-79
QA	C Broadaird	8/22/79
CONTR	Lyn Baird	8-22-79
RLSE	Louis Villa	8/24/79

TEXAS INSTRUMENTS INCORPORATED Dallas, Texas

CABLE ASSEMBLY, ASYNCH/SYNCH EIA

SIZE D | FSCM NO 96214 | DRAWING NO 2207634

SCALE NONE | SHEET

List of Materials

11/16/83

PART NUMBER	REV	DESCRIPTION
2266038-0001	*	TI DATA MIKE KIT

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2266035-0001	BAG, DATA MIKE CARRYING 1238-6035-000	EA
0002	00001.000	2266036-0001	DATA MIKE, WESTERN ELECTRIC STYLE 1238-6036-000	EA
0003	00001.000	2266037-0001	DATA MIKE, G.T.E. STYLE 1238-6037-000	EA
0004	00001.000	2266055-9701	MANUAL, TI DATA MIKE INSTRUCTION 1238-6055-000	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2266038-0002	*	TI DATA MIKE KIT (W.E. ONLY)

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2266036-0001	DATA MIKE, WESTERN ELECTRIC STYLE 1238-6036-000	EA
0002	00001.000	2266055-9701	MANUAL, TI DATA MIKE INSTRUCTION 1238-6055-000	EA
0003	00001.000	2266035-0001	BAG, DATA MIKE CARRYING 1238-6035-000	EA

11/16/83

PART NUMBER	REV	DESCRIPTION
2266038-0003	*	TI DATA MIKE KIT (GTE ONLY)

ITEM.	QUANTITY.	COMPONENT..	DESCRIPTION	UM
0001	00001.000	2266037-0001	DATA MIKE, G.T.E. STYLE 1238-6037-000	EA
0002	00001.000	2266055-9701	MANUAL, TI DATA MIKE INSTRUCTION 1238-6055-000	EA
0003	00001.000	2266035-0001	BAG, DATA MIKE CARRYING 1238-6035-000	EA

DWG NO 2266038 SH 1

APPLICATION	
NEXT ASSY	USED ON
	7058

REVISIONS

REV	DESCRIPTION	DATE	APPROVED

CONVERSION CHART	
MM	INCHES
0.25	.010
0.5	.020

2266038-0003	TI DATA MIKE KIT (GTE ONLY)
2266038-0002	TI DATA MIKE KIT (W.E. ONLY)
2266038-0001	TI DATA MIKE KIT
PART NUMBER	DESCRIPTION

REV
SHEET
REV STATUS OF SHEETS — REV / SHEET

UNLESS OTHERWISE SPECIFIED
- DIMENSIONS ARE IN MILLIMETERS
- TOLERANCES: ANGLE ±1°, 1 PLACE DECIMALS ±0.5, 2 PLACE DECIMALS ±0.25
- PARENTHETICAL INFO FOR REF ONLY

THIRD ANGLE PROJECTION

		DATE
DWN	[illegible]	[illegible]
CHK	[illegible]	3-8-82
ENGR	[illegible]	3-8-82
APVD-ENGR	[illegible]	3/8/82
QA	[illegible]	3/8/82
APVD-MFG		
RLSE	[illegible]	3/15/82
	[illegible]	[illegible]

TEXAS INSTRUMENTS INCORPORATED
Digital Systems Group

SI-METRIC

KIT, TI DATA MIKE

SIZE A | FSCM NO 06668 | DRAWING NO 2266038

SCALE NONE | SHEET

TI-25739

30

LM

Appendix A

Field Replaceable Assemblies

The field replaceable assemblies listed below are Model 703/707 interchangeable parts unless specified in the description.

Description	Part Number
Electronics	
Terminal Electronics (Model 707)	2310465-8001
Terminal Electronics (Model 703)	2310455-8001
Control Panel	2310490-8001
Keyboard	2310486-8001
Mechanism Parts	
Carriage Motor with Lead Screw	2310546-0001
Paper Advance Motor w/ Drive Roller	2310440-0001
Carriage with Cable and Clip	2310548-0001
Paper Tray with Motor Mounts	2310573-0001
Platen Assembly	2310531-0001
Idler Roller Assembly	2310439-0001
Case Parts	
Paper Door with Latch	2310551-0001
Base Assembly	2310552-0001
Top Cover	2310431-0001
Direct-Connect Bracket (Model 707)	2310434-0001
Options	
Auto-Access Cartridge Kit	2310530-0001
Acoustic Coupler (Model 707)	2310518-0001
Batteries (Model 707)	2310446-0001
Miscellaneous	
Transformer, Wall Mounted (UL)	2310442-0001
Transformer, Floor Mount (CSA)	2310442-0002
Transformer, International	2310448-0003 2310448-0004
Speaker	2310489-0001
Direct-Connect Cable (Model 707) (2-wire)	2211801-0002
Direct-Connect Cable (Model 707) (6-wire)	2211467-0003
Printhead	2310472-0001
Printhead Kit	2310643-0001

Index

USER'S RESPONSE SHEET

Manual Title: Model 703/707 Data Terminals Maintenance Manual

TI Part No. 2310453-0001

Manual Date: February 1984 **Date of This Letter** _____

User's Name: _____ **Telephone:** _____

Company: _____ **Office/Department:** _____

Street Address: _____

City/State/Zip Code: _____

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	_____
	_____

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