

**Codex  
Digital  
Sharing  
Device**

**User  
Manual**

# Digital Sharing Device User Manual

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**codex**  
corporation

20 Cabot Boulevard  
Mansfield, Massachusetts 02048

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### **User/Reader Comments**

Your attention is directed to the last page of this document which is a Codex-addressed reply form to be used for evaluating the effectiveness of this manual. All comments are beneficial to both you, the product consumer, and to Codex, the supplier.

### **Scope**

This manual contains general information together with operation and maintenance instructions for the Codex Digital Sharing Device (DSD). Instructions and associated information are presented in four chapters, as follows:

- Chapter 1, Introduction — Acquaints the new user with the purpose, application, features, and specifications of the equipment.
- Chapter 2, Installation — Contains instructions for both mechanical and electrical installation of the unit and strapping information.
- Chapter 3, Operation — Describes the basic operation procedures for the unit.
- Chapter 4, Maintenance — Describes basic maintenance procedures applicable to the user.

### **WARNING**

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. As temporarily permitted by regulation, it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

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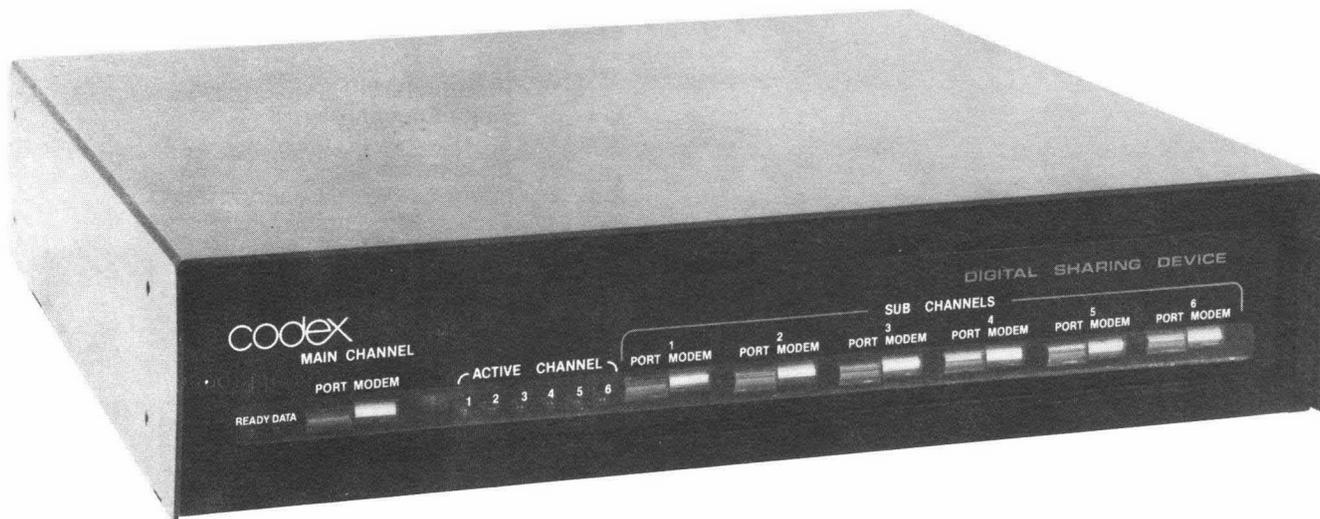
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**Figure 1-1**  
**Codex Digital Sharing Device**

# Chapter 1

## Introduction

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### Contents

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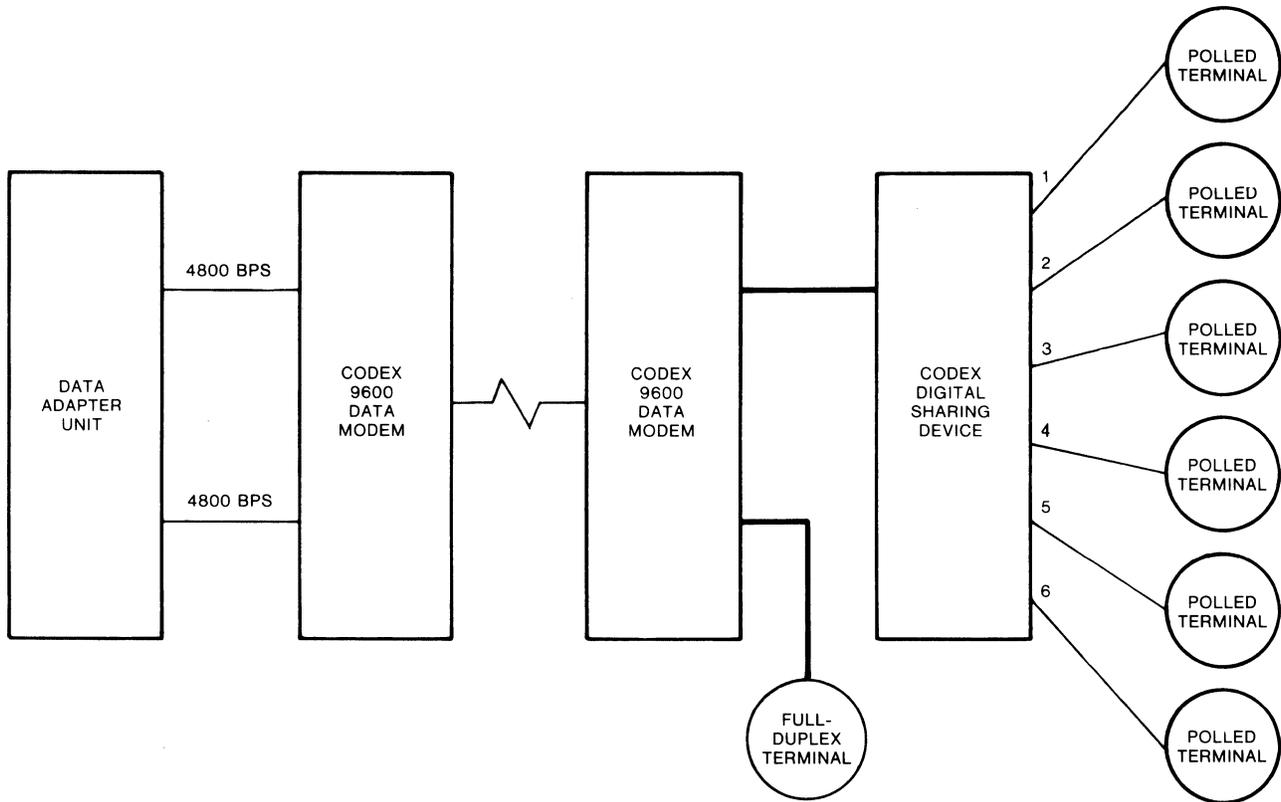
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### 1.1 GENERAL

The Codex Digital Sharing Device (DSD), shown in Figure 1-1, is a multipurpose data communications device designed to enable up to six modems or ports in any combination to share a single connection with one master modem or port. Another way of stating this is to say that the DSD allows equipment from up to six subchannels to use the same main channel modem or port. Significant hardware savings can result from employing the DSD since it functions as an easily convertible modem/port sharing unit.

Connected to all synchronous or all asynchronous equipment, the DSD operates in a number of efficient system designs, one of which is shown in Figure 1-2. The main channel modem or port broadcasts signals to all subchannels simultaneously, while subchannel modems or ports with data to transmit to the main channel must first wait to be selected one at a time by DSD control circuitry. Unselected subchannel data transmissions are locked out.

Completely transparent to the communications system, the DSD operates with externally or internally generated timing signals. Regular straight-through cables connect all equipment to the DSD. When both the main channel and a subchannel are either modems or ports, the DSD performs any necessary signal crossovers internally. Crossover cables are never required in any DSD system configuration.



**Figure 1-2**  
**Typical System Configuration**

## 1.2 DESCRIPTION

The following sections contain a functional and physical description of the DSD as well as a description of the unit's major elements.

### 1.2.1 Functional

Signals pass through the DSD from main channel and subchannel ports or modems via 25-pin EIA RS-232-C connectors. Figures 1-3 through 1-6 are block diagrams depicting signal paths through the DSD. Refer to Chapter 2 for further explanation of the EIA RS-232-C interface.

Subchannels access the main channel for data transmission via RTS/DCD (Request To Send/Receive Line Signal Detector) or data contention. When selected, the active subchannel's data and timing signals pass through the contention circuit to the elastic store buffer where data is clocked in and out to the main channel. An internally generated high-speed clock is provided to the buffer when working with asynchronous data which minimizes bias distortion. When the 16 Marks in succession are detected, contention is released and the contention circuit breaks the data path with the active subchannel. It then selects another subchannel and resets the buffer.

Subchannel control signals are combined to provide a composite signal to the main channel. Data, control signals, and timing signals from the main channel are passed to the subchannels in parallel.

### 1.2.2 Physical

The Codex Digital Sharing Device is provided as either a tabletop model or rack-mount unit and contains an integral power supply. The components are protected by a cover which can be removed by unfastening two bolts on the rear panel and two bolts behind the front panel, and sliding the chassis free of the cover.

Light-emitting diodes (LED's) and orange/black dual interlock switches may be viewed through the semi-transparent front panel for instant diagnosis of system status (see Figure 1-7). This front panel may be lowered to access the dual interlock switches to easily modify system configuration. Chapter 3 describes the controls and indicators located on the front panel.

The rear panel contains seven EIA RS-232-C 25-pin connectors, the power switch, a fuse, a grounding outlet, and an outlet for the ac line cord (see Figure 1-7). The six black 25-pin connectors on the lower half of the rear panel connect the DSD with up to six sub-

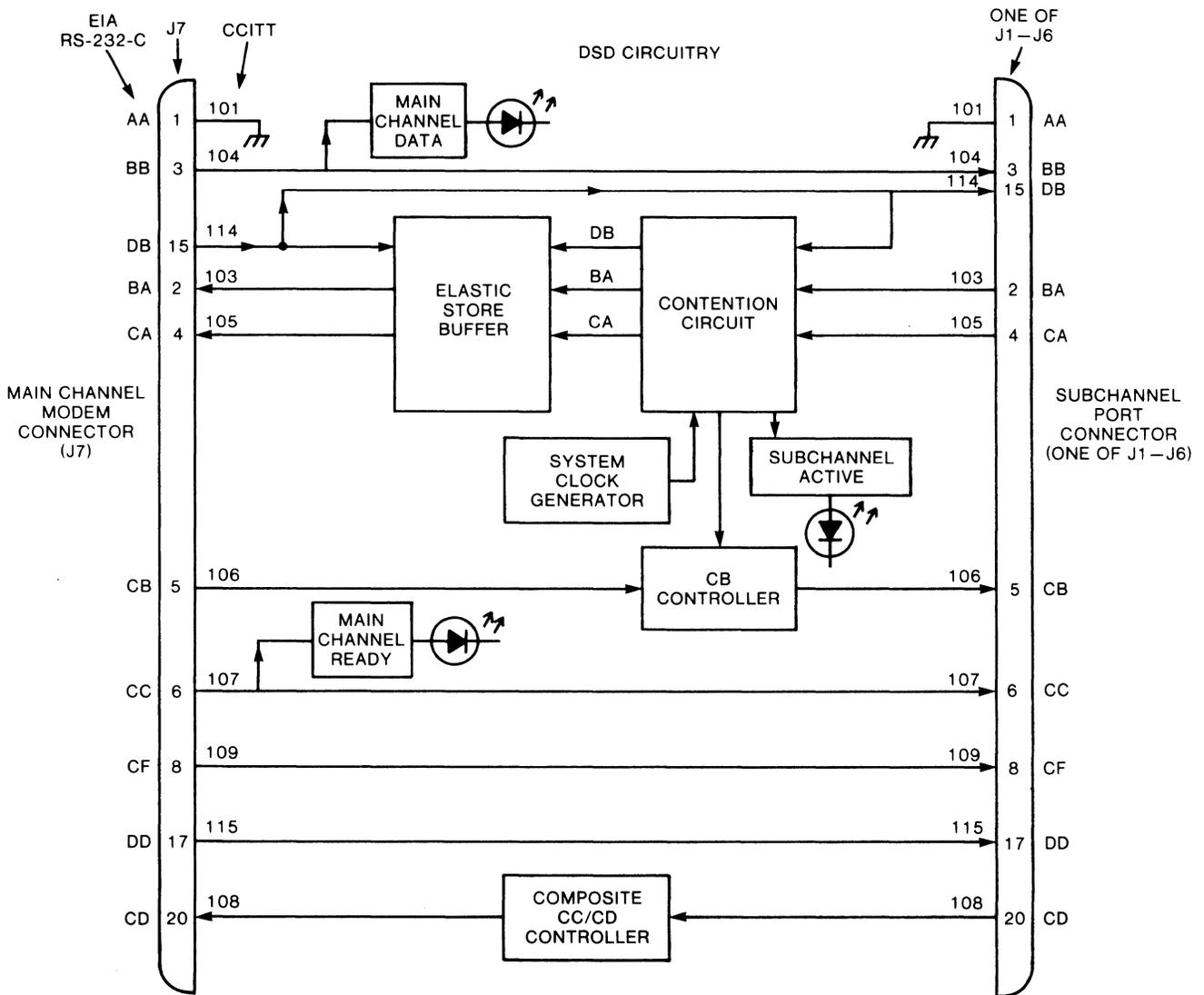
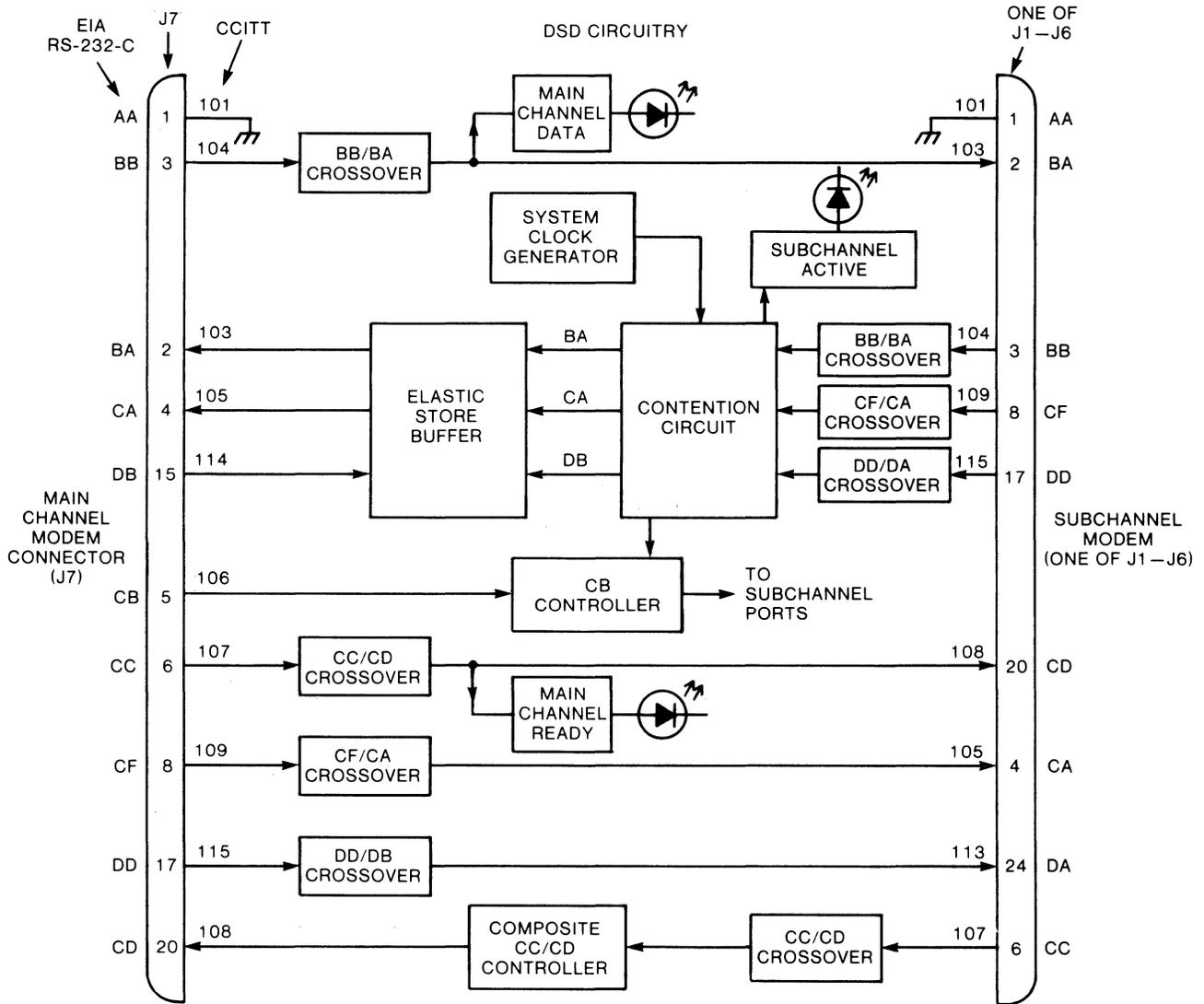


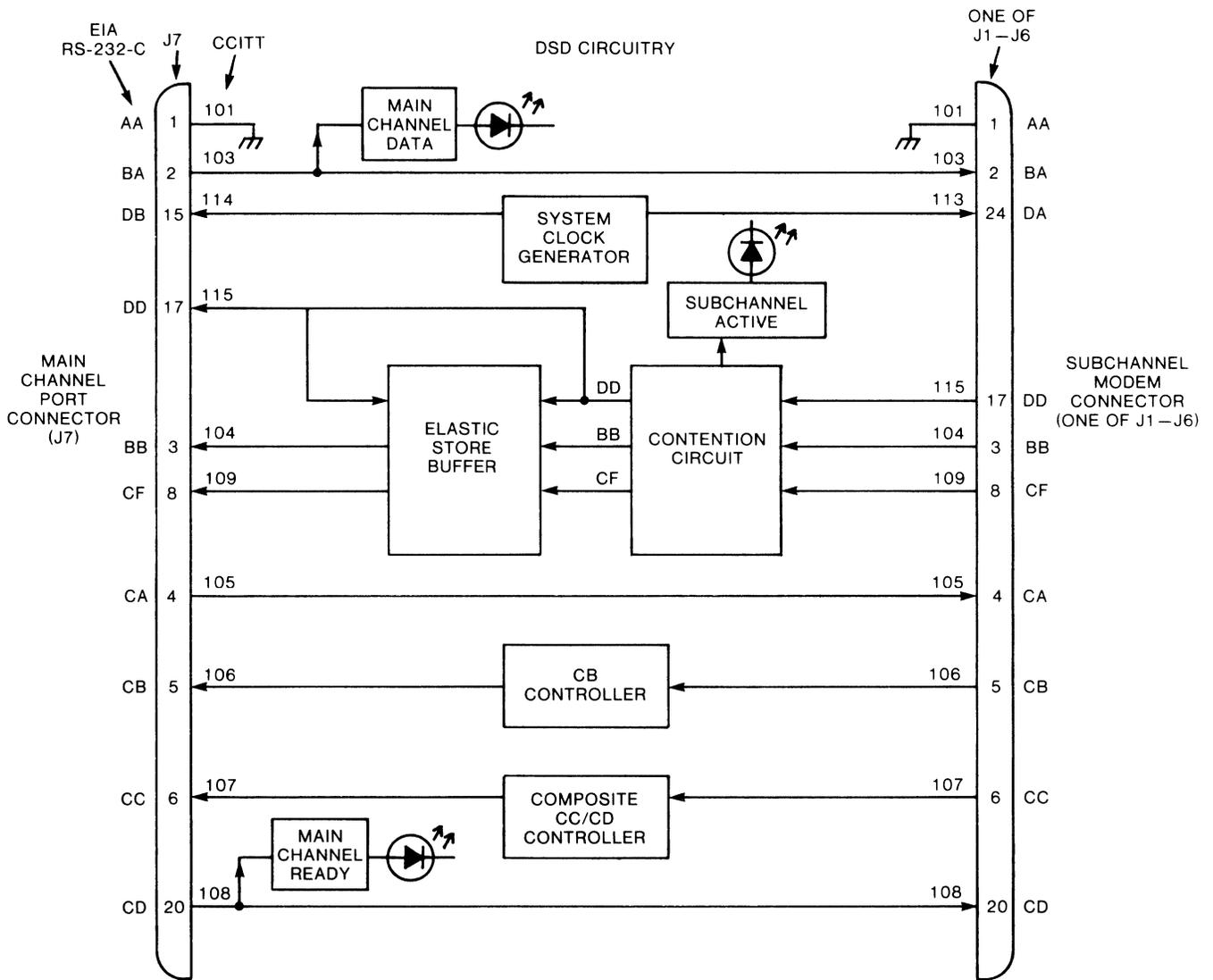
Figure 1-3  
Main Channel Modem with Subchannel Port (Sync Strapped)

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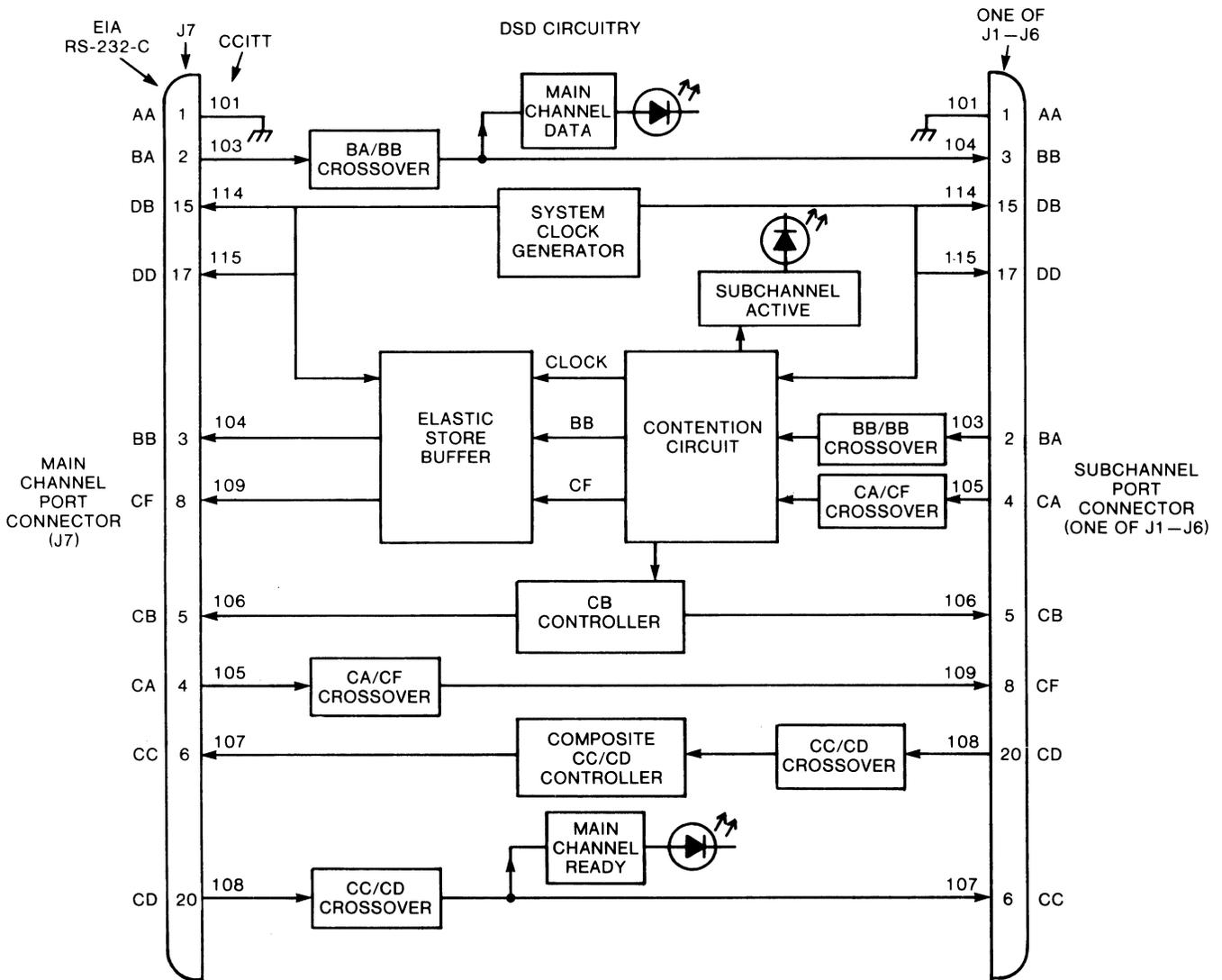
**Figure 1-4**  
**Main Channel Modem with Subchannel Modem (Sync Strapped)**

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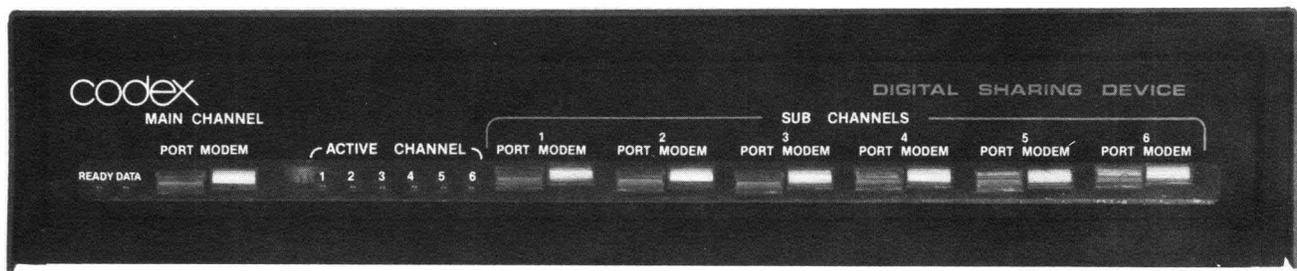
05450-6

**Figure 1-5**  
**Main Channel Port with Subchannel Modem (Sync Strapped)**



**Figure 1-6**  
Main Channel Port with Subchannel Port (Sync Strapped)

05450-7



(A) FRONT PANEL

47050-2



(B) REAR PANEL

47050-6

**Figure 1-7**  
Front and Rear Panels

channel modems or ports through straight-through cables. The seventh connector, colored white, connects the DSD to the main channel modem or port.

### 1.2.3 Major Elements

Each DSD (Model 47050, Part No. 37742G01) can be divided into five major elements or assemblies and a rack-mount option. These are listed in Table 1-1.

## 1.3 EQUIPMENT USE

The DSD operates in one of three modes: modem sharing, port sharing, or a combination modem/port sharing. System configurations incorporating the DSD in each operating mode are described in the following paragraphs and block diagrams.

The following should be taken into consideration when configuring a DSD system:

- a. The rate of subchannel modems and/or ports must be equal to the bps rate strapped within the DSD.
- b. The rate strapped within the DSD must be equal to the rate of the main channel modem or port.
- c. All inactive subchannels must have neither PORT nor MODEM switches illuminated. This can be accomplished by depressing and releasing both PORT and MODEM switches simultaneously for that subchannel.
- d. Only all synchronous or all asynchronous subchannels may be configured. Asynchronous equipment may not be mixed with synchronous equipment on the same DSD.

### 1.3.1 Modem Sharing Operation

In the modem sharing mode, only ports or other DTE equipment are subchannels (see Figure 1-8). The DTE signals are fed through the DSD to the main channel modem. Signals from the main channel modem are sent through the DSD in parallel to the subchannel DTE's. This mode is properly installed when the main channel's MODEM switch and all active subchannel PORT switches are depressed and illuminated.

### 1.3.2 Port Sharing Operation

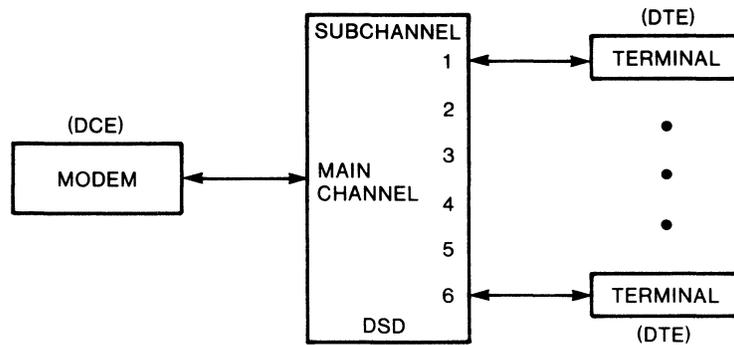
In the port sharing mode, only modems are subchannels, while the main channel is a port such as a communications control unit (see Figure 1-9). Signals from the subchannel modems are fed through the DSD to the main channel port and signals from the main channel port are broadcast through the DSD in parallel to the subchannel ports. When this mode is properly installed, the main channel's PORT switch and all active subchannel MODEM switches are depressed and illuminated.

### 1.3.3 Modem/Port Sharing Operation

More flexibility in configuring certain communication systems is supplied by the modem/port sharing mode than would be possible with either of the two modes discussed previously. In the modem/port sharing mode, each subchannel may be either a modem or a port. Modems and ports may be subchannels on the same DSD in any combination provided that their total number does not exceed six. Examples of modem/port

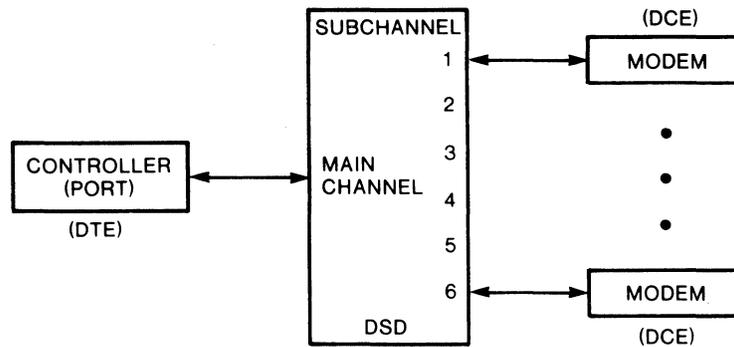
**Table 1-1  
Major Elements**

Assembly	Part No.	Description/Contents
Chassis	37741G01	Circuit card, transformer assembly, and ac line filter.
Front Panel	37747G01	Header, front panel insert, hinge, and end cap.
Nameplate	31683-01	Model and part number identification.
Cover	37752G01	Molded solid cover for DSD top and sides.
Cables and Accessories	38237G01	User Manual, ac power cord, spare fuse, and 15-foot straight-through male-to-male cable (EIA RS-232-C 25-pin interface).
Rack-Mount Kit Option	PL37753G01	Rack-mount assembly and instruction booklet (Product Code 47051).



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**Figure 1-8  
Modem Sharing Mode**



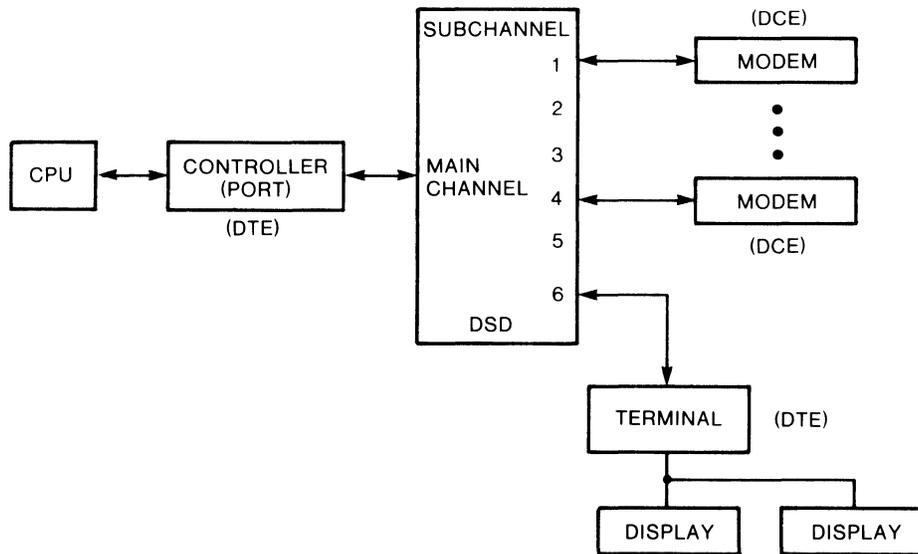
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**Figure 1-9  
Port Sharing Mode**

sharing applications are discussed in the following paragraphs and block diagrams.

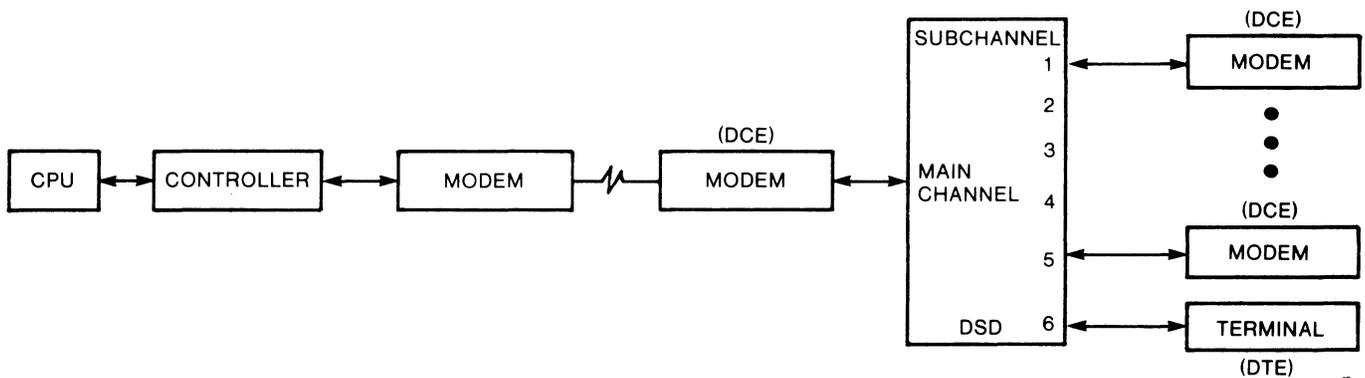
**1.3.3.1 Colocated Terminals.** A CPU communications controller port is shared by up to six modems and/or colocated terminals in any combination (see Figure 1-10). This configuration is properly installed when the main channel's PORT switch and the desired combination of subchannel MODEM/PORT switches are depressed and illuminated.

**1.3.3.2 Remote Port Sharing.** When the port sharing unit must be remote from the CPU communications controller, the Remote Port Sharing mode is used. Up to six modems and/or ports are connected to the DSD subchannels. A modem is the DSD main channel leading through a telephone line to another modem and the CCU (see Figure 1-11). This configuration is properly installed when the main channel MODEM switch for the main channel and the desired combination of subchannel MODEM/PORT switches are depressed and illuminated.



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**Figure 1-10**  
**Port Sharing Mode with Colocated Terminal**



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**Figure 1-11**  
**Remote Port Sharing**

## 1.4 SPECIFICATIONS

### 1.4.1 Dimensions and Weight

- a. Height: 3.5 in. (8.9 cm).
- b. Width: 17 in. (43.2 cm).
- c. Depth: 15.5 in. (39.4 cm).
- d. Weight: 20 lbs (9.1 kg).

### 1.4.2 Environmental Conditions

- a. Operating Temperature: 0° to 50°C (32° to 122°F).
- b. Humidity: 95% maximum.
- c. Altitude: 0 to 10,000 ft (0 to 3048 m).

### 1.4.3 Primary Power Requirements

- a. Power: 100/117/130/200/220/250 Vac  $\pm 10\%$  (internally selectable); 47 to 63 Hz; 30W maximum.
- b. Slo-Blo fuse: 1A.
- c. The power supply supplies regulated +9 Vdc, -9 Vdc, and +5 Vdc.

### 1.4.4 Data Rates

- a. Synchronous: 19200/9600/7200/4800/2400/1200 bps (internally strap-selectable); externally clocked, 19200 bps maximum.
- b. Asynchronous: 19200 bps maximum.

### 1.4.5 Data Buffer

The data buffer is an elastic storage buffer with capability of  $\pm 4$  bits.

### 1.4.6 Subchannel to Main Channel Contention

- a. Synchronous: RTS/DCD or data contention.
- b. Asynchronous: Data contention.

### 1.4.7 Internal Crossover Functions

The internal crossover functions are BA/BB, CA/CF, CC/CD, DB/DD.

### 1.4.8 Interface

The interface requirements conform to EIA RS-232-C and CCITT V.24.

# Chapter 2

## Installation

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### Contents

2.1	General
2.2	Unpacking/Repacking
2.2.1	Equipment Supplied
2.2.2	Additional Equipment Required
2.3	Site Selection and Preparation
2.4	Equipment Assembly
2.5	Installation Procedure
2.5.1	Mechanical
2.5.2	Electrical
2.5.3	Strap Selection
2.6	Installation Checkout Procedure

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### 2.1 GENERAL

This chapter provides the necessary information to plan and accomplish the mechanical and electrical installation of the Digital Sharing Device. Upon completion of the entire installation, refer to Chapter 3 for operating and system check procedures to assure normal operation.

### 2.2 UNPACKING/REPACKING

A shock-absorbing packing material is wrapped around the assembled Digital Sharing Device. It is recommended that the packing material and shipping carton be retained for use in any future storage or repackaging and shipment.

After unpacking the unit, check all items against the packing list, then check carefully for damage that may have occurred in shipment. If any damage or material shortage is noted, contact the shipping agent and notify the nearest Codex representative for advice and assistance, or contact:

Codex Corporation  
Sales Operations  
20 Cabot Boulevard  
Mansfield, Massachusetts 02048

#### 2.2.1 Equipment Supplied

The following equipment should be found packed within the shipping carton:

- a. Unit itself (Model 47050).
- b. 15-foot straight-through male-to-male cable (EIA RS-232-C 25-pin connectors).
- c. Power cord.
- d. Spare fuse (1A, Slo-Blow).
- e. User Manual.

#### 2.2.2 Additional Equipment Required

No special tools or equipment are necessary when installing the DSD. Any standard field service tool kit can be used.

### 2.3 SITE SELECTION AND PREPARATION

The Codex Digital Sharing Device should be installed within 6 to 7 feet (1.8 to 2.1 meters) of a grounded ac outlet capable of furnishing one of the following switch-selectable voltages at 30 watts: 110/117/130/200/220/250 Vac. The plug on the power cord is for use at 115V nominal 15A supply outlet installations. The DSD should also be no further than 50 feet (15.2 meters) from the associated data terminals and/or modems.

The installation area should be clean, well-lighted, and free from extremes of temperature, humidity, shock, and vibration. See the equipment specifications in Chapter 1, section 1.4 for detailed information on these items. Ensure that there is at least 4 inches (10.2 cm) of clearance at the rear of the unit for signal line and interface cabling. For a rack-mount unit, 3.5 inches (8.9 cm) of vertical rack space is required. Allow at least 36 inches (91.5 cm) of frontal clearance. Side, top, and rear clearances are dictated by the rack-cabinet configuration.

### 2.4 EQUIPMENT ASSEMBLY

The DSD is shipped as a completely assembled unit with the circuit card and power supply already completely installed. No further unit assembly procedure is necessary.

### 2.5 INSTALLATION PROCEDURE

The DSD is installed in three phases: (1) mechanical installation, (2) electrical installation, and (3) strap-

ping. The steps required to perform each phase are outlined in the following paragraphs. After all three phases have been completed, refer to Chapter 3 for DSD operation procedures before attempting to power-up or operate the unit.

#### 2.5.1 Mechanical

When the DSD is to be installed as a tabletop model, simply place the chassis into position as desired. Provisions have not been made for securing the chassis to any surface.

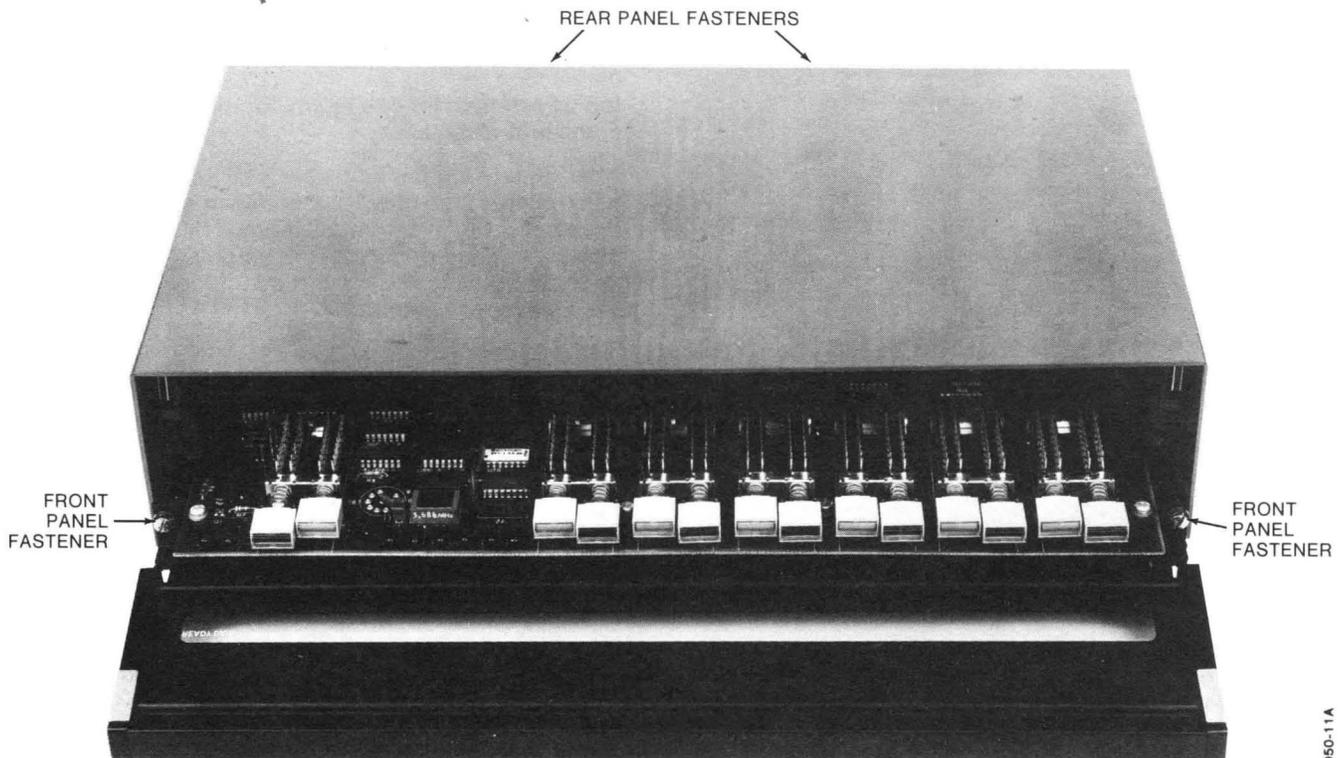
If the DSD is to be rack-mounted, first assemble Rack-Mount Kit Model 47051 (Part No. PL37753G01) and attach it to the DSD according to instructions found in the kit.

#### 2.5.2 Electrical

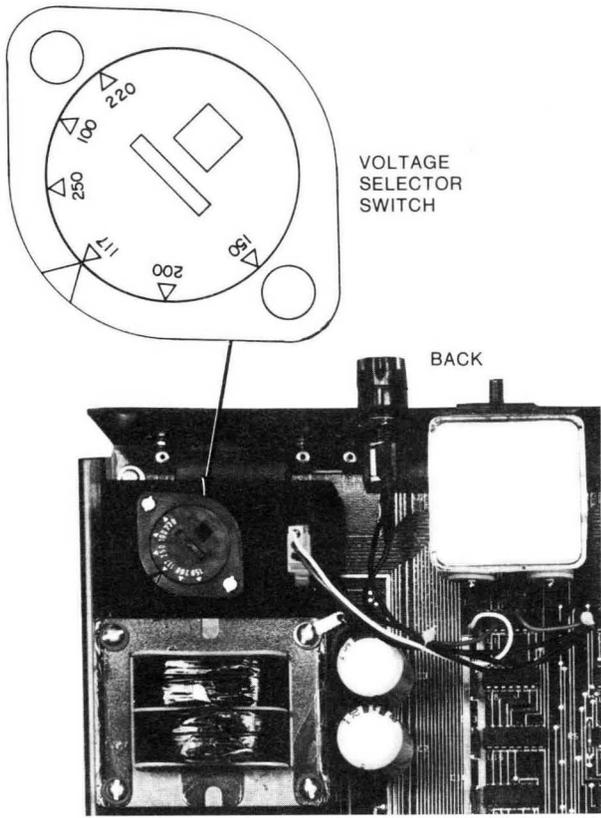
##### **WARNING**

Ensure that power has been turned off for ten minutes before performing the following procedures to prevent severe skin burns and dangerous potential electric shock hazard.

With power off, loosen the bolts at the rear of the unit and behind the front panel, sliding the chassis forward to gain access to the voltage selector switch (see Figures 2-1 and 2-2). Set this switch to accept the primary power source available at the site (i.e. 110/117/130/200/220/250 Vac). Install the proper power plug



**Figure 2-1**  
**Chassis Access**



**Figure 2-2**  
Voltage Selector Switch

(if other than 115V nominal convenience outlet type). Connect a grounding wire if necessary to the ground outlet on the rear panel. Connect the ac cord and interface cables as described in the following paragraphs. Refer to Figure 2-3 for rear panel connections.

**2.5.2.1 AC Line Cord.** Plug one end of the 7-foot (2.1 meters) ac line cord into the outlet on the DSD rear panel and then plug the other end into the available power source. The 3-wire plug has chassis (protective) ground running through the third prong of the plug, eliminating the need for a separate grounding wire.

**2.5.2.2 Connector Cables.** Electrical connectors are located on the rear panel of the DSD as shown in Figure 2-3. These connectors consist of seven 25-pin connectors: one connector for interface with the main channel modem or port, and six connectors for interfacing with the subchannel modems or ports. The interface signals are illustrated in Figure 2-4 and described in Table 2-1.

**2.5.3 Strap Selection**

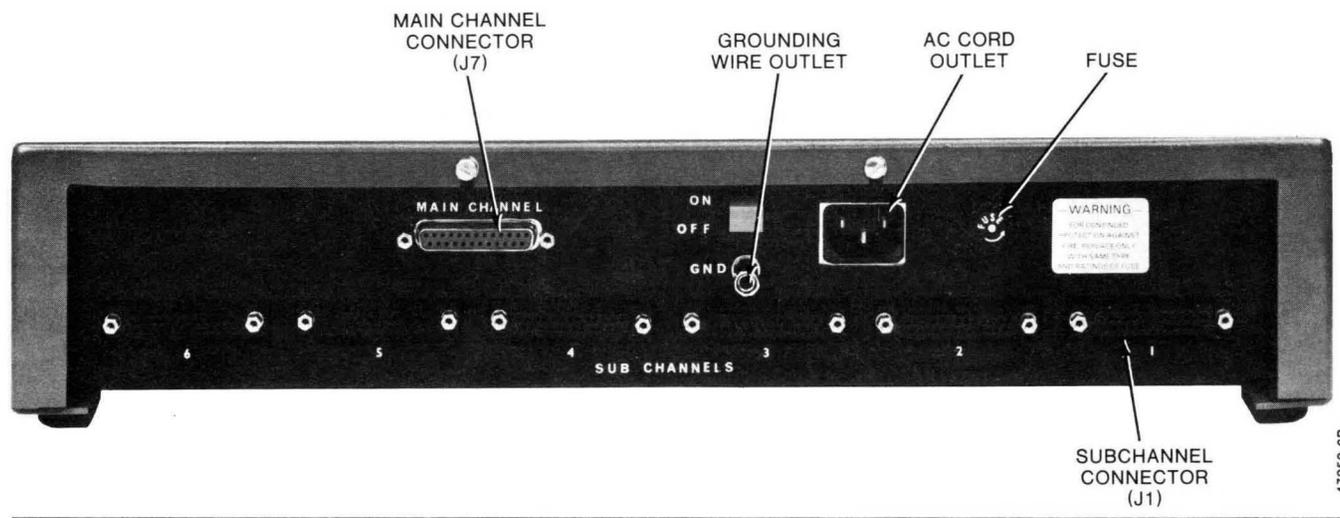
**WARNING**

Ensure that power has been turned off for ten minutes before changing any straps to prevent severe skin burns and dangerous potential electric shock.

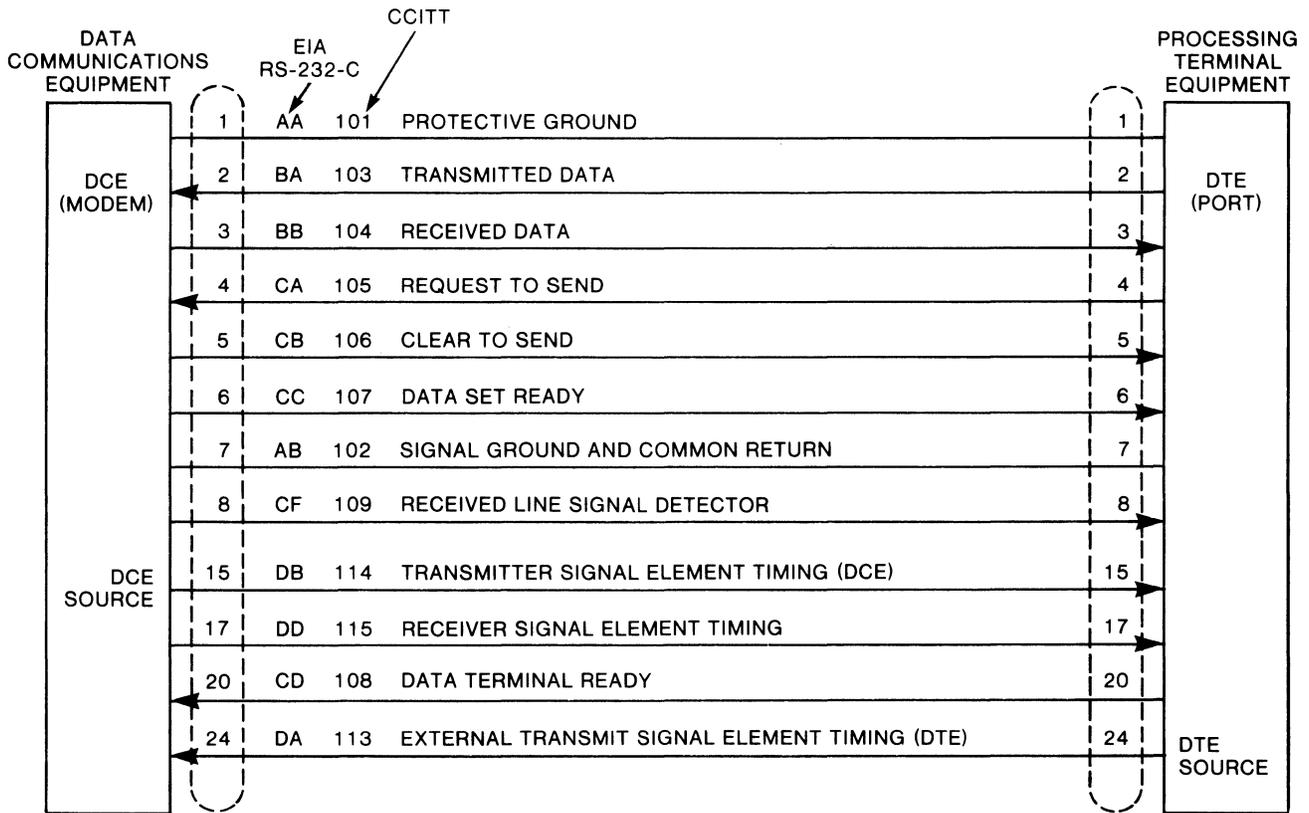
Once the mechanical and electrical installation procedures have been completed, determine the configuration of the DSD within the data communications system so that strapping can be set on the printed circuit board as required. Straps are located on the circuit board as shown in Figure 2-5. Table 2-2 lists the strap locations, identities, and functions. These straps are accessible by unbolting the DSD chassis from its cover and sliding the chassis forward. Spare jumper plugs are located on pins 10, 11, and 12.

**2.6 INSTALLATION CHECKOUT PROCEDURE**

When all procedures for mechanical installation, electrical installation, and strapping have been performed and completed, carefully inspect all connections to ensure proper installation. Next, proceed to the operating procedures given in Chapter 3 before applying power to the Digital Sharing Device.



**Figure 2-3**  
Rear Panel Connectors



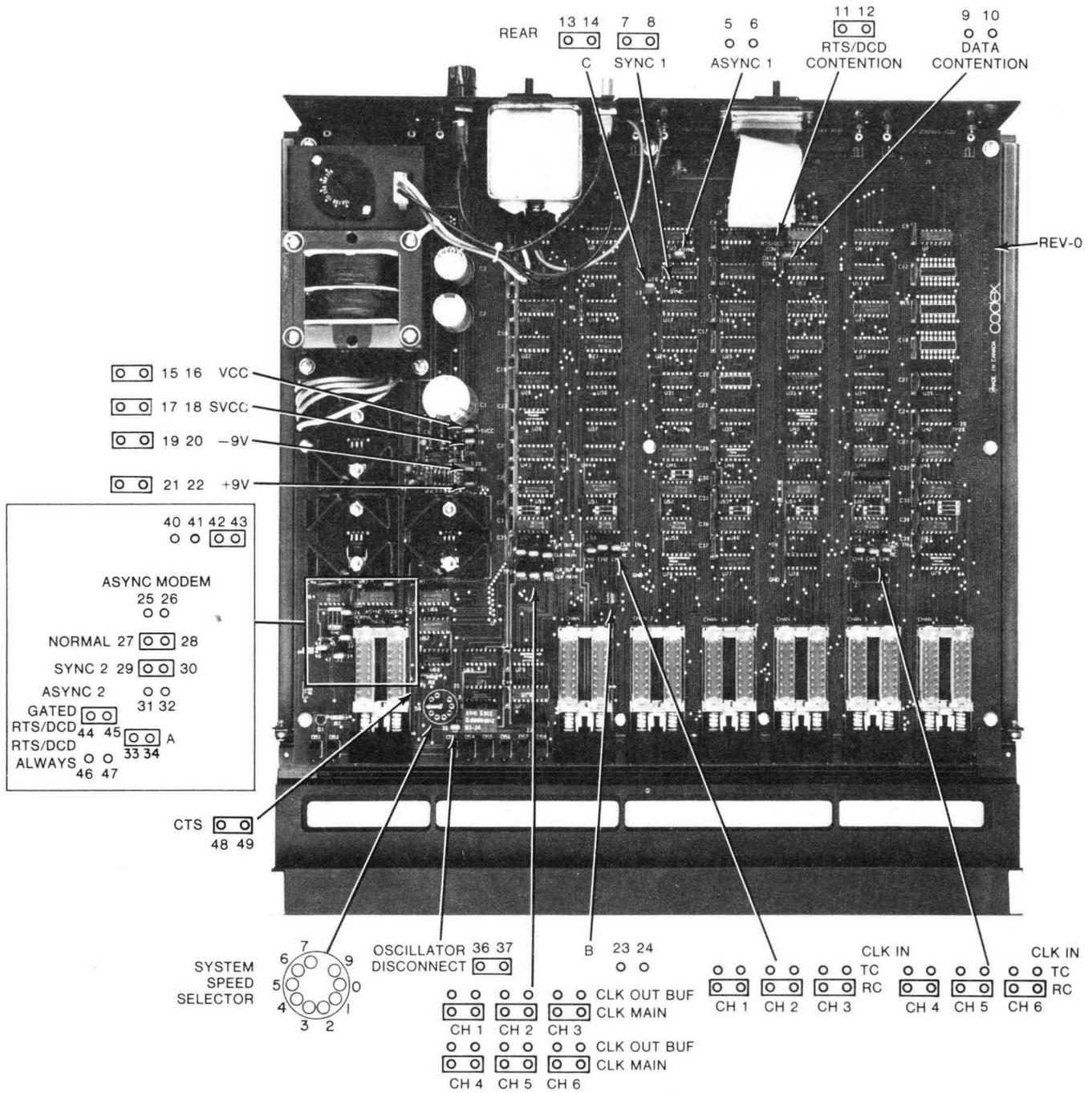
NOTE: THE DSD MAY HAVE ITS MAIN CHANNEL OR ANY SUBCHANNEL CONFIGURED AS A DCE OR DTE. ANY NECESSARY SIGNAL CROSSOVERS ARE PERFORMED INTERNALLY.

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**Figure 2-4**  
**Interface Signals**

**Table 2-1  
Interface Signal Descriptions**

<b>EIA RS-232-C</b>	<b>CCITT V.24</b>	<b>Pin</b>	<b>Signal Name</b>	<b>Description</b>
AA	101	1	Protective Ground or Earth	Chassis ground. Isolated from Signal Ground or Common Return (AB, pin 7).
AB	102	7	Signal Ground or Common Return	Common signal and dc power ground. Isolated from Protective Ground (AA, pin 1).
BA	103	2	Transmitted Data	Serial digital data from DTE accompanied by DB. If accompanied by an external data rate clock (DA), data transitions must occur on positive going transitions of the external transmit input clock.
BB	104	3	Received Data	Serial digital data at the output of the DCE receiver. The data is accompanied by an internal data rate clock (DD) whose positive going transitions occur on the data transitions.
CA	105	4	Request To Send	A positive level to the DCE when data transmission is desired.
CB	106	5	Clear To Send	A positive level from the DCE with a selectable delay, after receipt of Request To Send (CA) and when the DCE is ready to transmit. Clear To Send is low during training or when Request To Send is low.
CC	107	6	Data Set Ready	A positive level from the DCE when power is on and not in the test mode.
CD	108	20	Data Terminal Ready	A positive level to the DCE when power is on and not in the test mode.
CF	109	8	Received Line Signal Detector (DCD)	A positive level from the DCE except when a loss of the received input signal is detected (carrier detect).
DA	113	24	External Transmit Signal Element Timing	A serial data rate clock input from the data source. Positive clock transitions correspond to data transitions.
DB	114	15	Transmitter Signal Element Timing	A transmit data clock output for use by an external data source. Positive clock transitions correspond to data transitions.
DD	115	17	Receiver Signal Element Timing	A receive data rate clock output for use by the external data sink. Positive clock transitions correspond to data transitions.



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Figure 2-5  
Strap Locations

**Table 2-2  
Jumper Plug Straps**

Strap	Normal IN/OUT	Description
Synchronous No. 1 (7-8)	IN	Provides bit rate clock out to buffer. Must be used in conjunction with Normal Mode and Synchronous No. 2 straps.
Asynchronous No. 1 (5-6)	OUT	Provides high-speed sample clock out to buffer in asynchronous data mode. Must be used in conjunction with the other two asynchronous straps.
Normal (27-28)	IN	Provides TC/RC for subchannel ports or external timing (EIA pin 24) for subchannel modems. Must be used in conjunction with Synchronous No. 1 and 2 straps.
Asynchronous Modem (25-26)	OUT	Provides optional internally generated timing for subchannels when main channel is interfaced with an asynchronous modem. Must be used in conjunction with the other two asynchronous straps.
Synchronous No. 2 (29-30)	IN	Provides bit rate clock in to buffer. Must be used in conjunction with Normal Mode and Synchronous No. 1 straps.
Asynchronous No. 2 (31-32)	OUT	Provides high-speed asynchronous sample clock in to buffer. Must be used in conjunction with the other two asynchronous straps.
Oscillator Disconnect	IN	Disconnects oscillator for test purposes.
S VCC (17-18)	IN	Connects internal logical one to logic.
VCC (15-16)	IN	Connects +5V supply to logic.
Data Contention (9-10)	OUT	Selects contention from input data.
RTS/DCD Contention (11-12)	IN	Selects contention from control signal RTS/DCD.
+9V Disconnect (21-22)	IN	Connects +9V supply to interface logic.
-9V Disconnect (19-20)	IN	Connects !19V supply to interface logic.
A (33-34)	OUT	Provides DA when main channel is selected as modem.
B (23-24)	OUT	Tracks subchannel 1 when main channel and subchannel 1 are both modems. Connects subchannel 1's pin 17 (receive clock) to main channel's pin 24. Cannot be used in conjunction with system speed.
C (13-14)	IN	This strap <i>must</i> be IN for the DSD to operate. It is not used just during testing.
System Speed (at 1)	IN	Straps speed in bits per second with which the main channel is to receive data. Rates for cups 0 through 9 are as follows:  <div style="margin-left: 40px;">           0    19200            1    9600            2    7200            3    4800            4    2400            5    1200            6    FSK HI (1200)            7    FSK LO (75)            8    Blank (unused)            9    Special         </div>
AC/DC Ground (2-3)	IN	Strap IN connects chassis ground to signal ground.
40-41	OUT	Not used (for future options).
42-43	IN	Must be IN for normal operation.
44-45	IN	Normal RTS/DCD to main channel (Gated RTS/DCD).

**Table 2-2 (Cont)  
Jumper Plug Straps**

Strap	Normal IN/OUT	Description
46-47	OUT	RTS/DCD always High on main channel. Normally used when data contention operation is used with async data (Gated RTS/DCD).
48-49	IN	Normal CTS from main channel to all subchannels when selected as modem. When OUT, provides CTS High to all subchannels regardless of main channel selection when subchannel contends.
CLOCK IN		
Channels 1 to 6		
TC	OUT	Clock In is the clock used to clock data into the buffer of the DSD. In normal operation, these are set for Receive Clock (RC). For 9600 fast-poll operation, split-stream clocks are used: e.g., 9600 outbound, 4800 inbound. These must be set for Transmit Clock (TC) when a subchannel is a PORT, and RC when a subchannel is a modem. When the DSD is used with fast-poll modems, the main channel must be a MODEM. The DSD will not operate with fast-poll modems if the main channel is a PORT.
RC	IN	
CLOCK OUT BUFFER		
Channels 1 to 6	OUT	When IN, the TC, pin 15, of the main channel modem is used to clock data out of the DSD's buffer. This position is used when configured with a fast-poll modem on main channel. Also see CLOCK IN.
CLOCK MAIN		
Channels 1 to 6	IN	The RC of the main channel modem is used to supply clock to pin 15 of subchannels 1 to 6 when they are in the Port position, and pin 24 of subchannels when they are in the Modem position.

# Chapter 3

## Operation

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### Contents

3.1	General
3.2	Controls and Indicators
3.3	Power-up and Initialization
3.4	Normal Operation
3.5	Shut-Down Procedure

---

### 3.1 GENERAL

This chapter provides descriptions of all controls and indicators used to power-up and operate the Digital Sharing Device. Installation procedures given in Chapter 2 must be completed and checked before attempting to operate the DSD. The operator should become familiar with all of the controls/indicators described in the following paragraphs before attempting to power-up or operate the unit.

### 3.2 CONTROLS AND INDICATORS

All operating controls and indicators are located at the front of the unit with the exception of the Power switch which is located on the rear panel. Access to the controls and indicators is easily gained by lowering the front panel of the DSD. Note that the front panel is semitransparent, allowing visual monitoring of the DSD indicators even when it is closed.

Control and indicator locations and identities are shown in Figure 3-1. The function of each control and indicator is described in Table 3-1.

### 3.3 POWER-UP AND INITIALIZATION

The following procedures must be followed to place the DSD on-line:

- a. With power OFF, ensure that the DSD has the voltage selector switch set to the appropriate level, that strapping is properly set, and that a power plug compatible with the power source is installed.
- b. Ensure that modems and/or data terminal equipment are connected by straight-through cables to the EIA connectors on the rear panel for the main channel and subchannels in the system configuration. Refer to Chapter 1, section 1.3 for a description of typical configurations.
- c. Ensure that the PORT/MODEM switches for the main channel and each connected subchannel are in the correct position for the connected equipment. The orange color of the switch indicates the active position of the switch.

d. Ensure that the PORT/MODEM switch is black for each subchannel not to be used in the system configuration. If not, depress both the PORT and MODEM pushbuttons simultaneously for the unused subchannel, making the switch black.

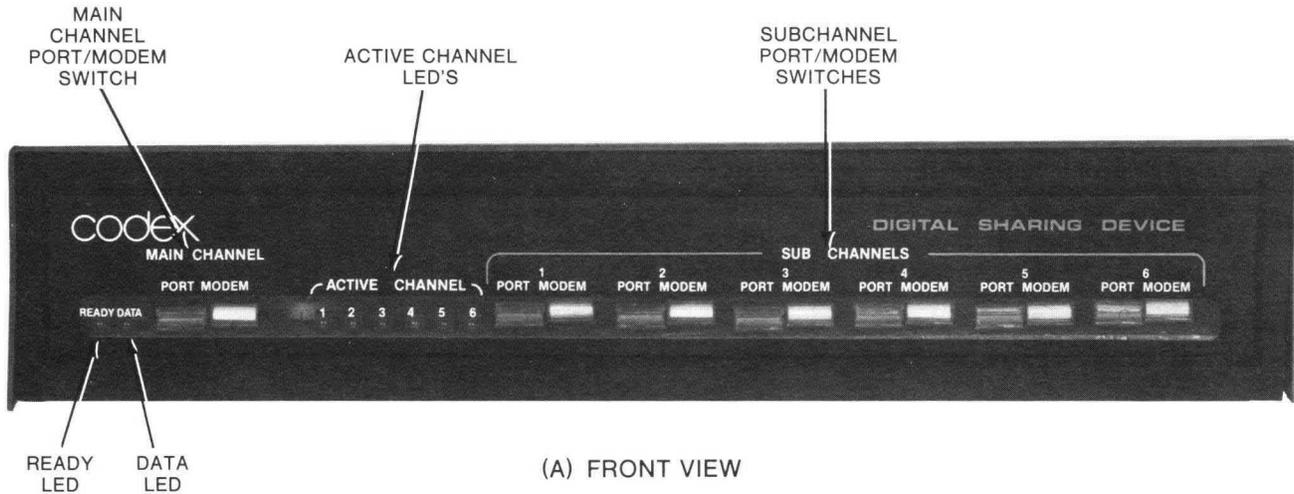
e. Apply power by moving the Power switch located on the rear panel to the ON (up) position.

### 3.4 NORMAL OPERATION

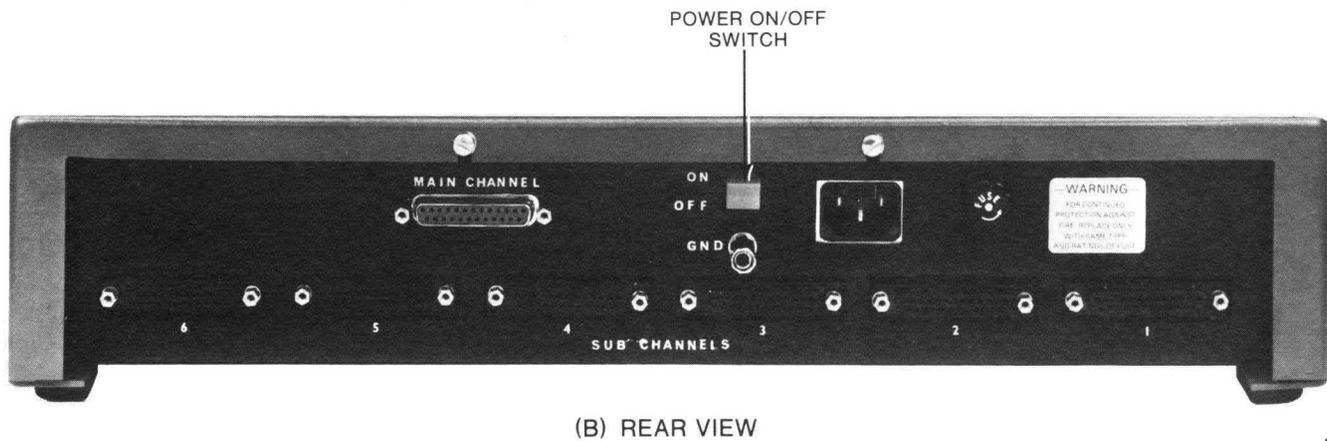
No further operator intervention is necessary. The system will operate completely unattended, except for occasional monitoring of status indicators.

### 3.5 SHUT-DOWN PROCEDURE

To power-down, place the Power switch in the OFF (down) position.



47050-2A



47050-6A

**Figure 3-1**  
**Controls and Indicators**

**Table 3-1  
Controls and Indicators**

<b>Control/Indicator</b>	<b>Function</b>
Power ON/OFF switch (rear panel)	Rocker switch used to apply dc power to all circuitry in the DSD. Up = power On. Down = power Off.
MAIN CHANNEL PORT/MODEM switch (behind front panel)	Pushbutton dual interlocked switch used to configure main channel as either a port or a modem. Orange color shows the active position of the switch.
SUBCHANNEL PORT/MODEM switches 1–6 (behind front panel)	Pushbutton dual interlocked switch used to configure a sub-channel as a port or modem. Orange color indicates the active position of the switch. To remove subchannel from system configuration entirely, depress both PORT and MODEM pushbuttons simultaneously; both buttons will be black.
READY indicator (visible through front panel)	LED illuminates when main channel and at least one sub-channel are ready to pass data.
DATA indicator (visible through front panel)	LED illuminates when main channel is passing data.
ACTIVE CHANNEL indicators 1–6 (visible through front panel)	LED illuminates for the subchannel that has gained access to the main channel through contention. Only one of these indicators should illuminate at a time.

# Chapter 4 Maintenance

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## Contents

- 4.1 General
- 4.2 Return of Units

---

### 4.1 GENERAL

The Digital Sharing Device should provide totally maintenance free service. Occasionally, it may be necessary to remove whatever dust may have settled on or in the unit. A soft brush should be used to remove dust that may have built up on electrical components. Remove dust that may have built up on the outside of the unit with a soft cloth.

#### **WARNING**

Disconnect ac power and wait ten minutes before performing any maintenance on the unit. Dangerous voltage levels are present and heat sinks in the power supply will reach temperatures which cause severe skin burns. Disconnecting the power will ensure that no potential electric shock hazard could be present.

#### **CAUTION**

Follow proper static electricity control procedures when servicing the unit to avoid damaging the circuits.

### 4.2 RETURN OF UNITS

Field repair of defective assemblies to the component level is not recommended. The major objective of effective maintenance is to restore the system to operational status as soon as possible. Therefore, it is recommended that faulty equipment be entirely replaced with a spare unit. Defective units must be returned to:

Codex Corporation  
Department ERR  
100 Hampshire Street  
Mansfield, Massachusetts 02048

An equipment repair tag, indicating the type of failure, part number, etc. should be attached to each returned unit (see Figure 4-1).

---

		<b>EQUIPMENT REPAIR TAG</b>	
CUSTOMER _____			
PART DESCRIPTION _____		REV. _____	I.D. NUMBER _____
DATE ____/____/____	P.S.O. _____		ENG. EVALUATION _____
<input type="radio"/>	FAILURE SYMPTOMS _____		
_____			
FIELD SERVICE ENG. _____			
EQUIPMENT ORDER _____		TYPE _____	NUMBER _____
DEFECT _____			
DATE ____/____/____	TECHNICIAN _____		
<b>C206 6-78 10M SB</b>			

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**Figure 4-1**  
**Equipment Repair Tag**

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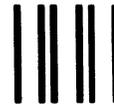
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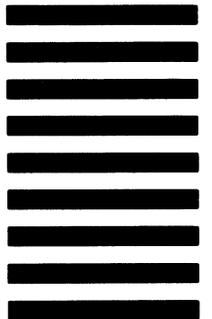
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