TABLE OF CONTENTS

OPERATIONS MANUAL

DATA BROADCAST UNIT

DBU-2328

January 30, 2001

SAFETY WARNING

Always observe standard safety precautions during installation, operation and maintenance of this product. To avoid the possibility of electrical shock, be sure to disconnect the power cord from the power source before you remove the IEC power fuses or perform any repairs.

PROPRIETARY NOTICE

The information contained herein is proprietary to East Coast Datacom, Inc. Any reproduction or redistribution of this publication, in whole or in part, is expressly prohibited unless written authorization is provided by East Coast Datacom, Inc.

WARRANTY NOTICE

WARRANTIES: East Coast Datacom, Inc. (hereafter referred to as E.C.D.) warrants that its equipment is free from any defects in materials and workmanship. The warranty period shall be three (3) years from the date of shipment. E.C.D.'s sole obligation under its warranty is limited to the repair or replacement of defective equipment, provided it is returned to E.C.D., transportation prepaid, within a reasonable period. This warranty will not extend to equipment subjected to accident, misuse, alterations or repair not made by E.C.D. or authorized by E.C.D. in writing.

PUBLICATION NOTICE

This manual has been compiled and checked for accuracy. The information in this manual does not constitute a warranty of performance. E.C.D. reserves the right to revise this publication and make changes from time to time in the content thereof. E.C.D. assumes no liability for losses incurred as a result of out-of-date or incorrect information contained in this manual.

EMISSIONS REQUIREMENTS

FCC CLASS A

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING: Charges of modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADIAN EMISSIONS

This digital apparatus does not exceed the Class A limits for noise emissions from a digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits redioelectriqes depassant les limites applicables aux appareils numeriques de la Class A prescites dans le Reglement sur le brouillage redioelectrique edicte par le ministere des Communications du Canada.

CHAPTER 1 - DESCRIPTION

The East Coast Datacom DBU-2328 is designed for use in RS-232 receive only data broadcast applications. Examples of typical data broadcast applications are; Continuously updated public data displays and distribution of continuous data to Routers, PC's or receive only printers.

The expanding role of V-SAT systems in receive only applications for real time data distribution is expected to increase dramatically over the next several years. The DBU-2328 is an excellent choice for applications of this type or any RS-232 simplex data distribution.

The DBU-2328 utilizes an RS-232 interface with data rate capabilities up to 128Kbps. The unit supports up to eight receive only terminals simultaneously. Surge protection is provided for all RS-232 data interfaces and the power supply input.

The DBU-2328 continuously broadcasts receive data, receive timing and an optional control signal(DCD) from the data source to the eight output terminal ports. Each data port has independent drivers and receivers for transmission.

The DBU-2328 supports cascading multiple units together from a single data source for multiple outputs. The unit has a redundant cascade port that utilizes positive latching relays. If a single unit looses power, all remaining units will continue to function without error.

The DBU-2328 is housed in a sturdy aluminum enclosure and is supplied with an internal linear power supply. The unit has a 110/120 VAC rotary select switch located on the rear of the housing. The unit can operate on standard power found in all countries.

The DBU-2328 has a three year warranty and a 24 hour turnaround on warranty repairs.
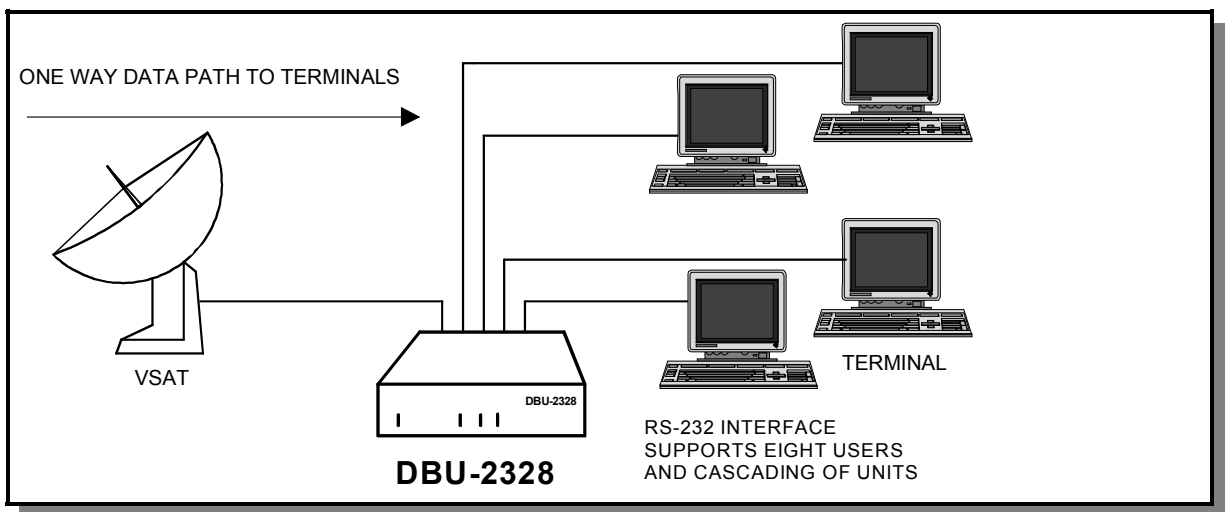
TYPICAL APPLICATION

1-1

CHAPTER 2 - BASIC OPERATION

Operation of the DBU-2328 is as simple as plugging a male DB-25 cable into the female DB-25 **RS-232 INPUT** port on the back panel and plugging up to eight RS-232 male DB-25 cables into **PORTS 1 - 8**. Data, Clock and Data Carrier Detect are received on the **RS-232 INPUT** port and are broadcast out simultaneously on **PORTS 1 - 8**. The following table shows the pin-out for the Master and sub-channel ports.

DB-25 FEMALE, RS-232 PORT PIN OUTS

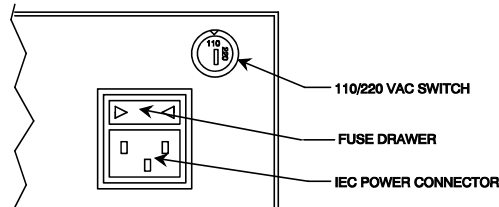| DB-25 FEMALE CONNECTORS	
PIN NUMBER	**PIN NAME**
1	CHASSIS GROUND
3	RECEIVE DATA(RXD)
7	SIGNAL GROUND
8	DATA CARRIER DETECT(DCD)
17	SIGNAL TIMING(CLK)
** 5 and 6	LOOPED W/470 Ohm Res.

*** SUBCHANNEL PORTS 1 - 8*

FRONT PANEL LED INDICATORS

Located on the front of the DBU-2328 are four green LED's. The Power indicator, marked **PWR** illuminates when AC voltage is applied to the box. Three adjacent LED indicators illuminate in conjunction with *Receive Data* (**RXD**), *Receive Clock* (**CLK**) and the optional control signal Data Carrier Detect (**DCD**). The *DATA* and *CLOCK* LED's will flash on and off at a constant rate regardless of the user's clock and data rate. The *DCD* indicator will be illuminated when and if DCD is present.

CHAPTER 3 - SETUP AND INSTALLATION

POWER CONNECTION

It is **very** important to check that the unit is set to the correct voltage setting for your application before applying AC power. Located on the rear of the unit you will find a rotary 110/220 VAC switch. Using a coin or small screwdriver, *gently* turn the switch to the appropriate power position as required for your installation (110 or 220 VAC).

INSTALLATION

Connect the main input data feed source into the **RS-232 INPUT** port DB-25 female connector. The output ports are marked **PORT 1** through **PORT 8**. Connect from one to eight DTE RS-232 compliant devices into the sub-channels ports on the back of the DBU-2328.

CASCADING

The DBU-2328 has the ability to connect multiple units together by utilizing the **CASCADE** port located on the rear panel above the *RS-232 INPUT* port. This feature allows an unlimited amount of DBU-2328 units to be chained together for mutiple outputs without lossing the ability to utilize *PORT 1 - 8*. The cabling should be straight through male-to-male DB-25's and no longer than 25 feet.

EQUIPMENT GROUNDING

Jumper **JP1** provides for grounding interconnection in those systems requiring a connection between Pin #1 (*frame ground*) and Pin # 8 (*signal ground*). Please reference the PCB for further strapping details.

DIP SWITCH SETTINGS

The DBU-2328 has an internal 4-position **DIP SWITCH** marked **S1** on the printed circuit card. The settings allow the user to control the Receive Clock(CLK) and Data Carrier Detect(DCD) control signal. The Receive Clock control signal may be broadcast for Sync operation or turned off for Async operation to prevent cross talk on long cable runs. The Data Carrier Detect(DCD) Signal may be broadcast when received on the RS-232 INPUT port or may be forced high to the output ports if the RS-232 INPUT device does not transmit DCD. This facilitates DTE devices that may require DCD to be present for operation.

DIP Switch S1 definition for DBU-2328

Position 1	Position 2	
ON	OFF	Receive clock (Pin 17) from **Input** Port is *broadcast* to Ports 1 - 8
OFF	ON	Receive clock (Pin 17) from **Input** Port is *forced off* to Ports 1 - 8

Position 3	Position 4	
ON	OFF	Carrier Detect (Pin 8) from **Input** Port is *broadcast* to Ports 1 - 8
OFF	ON	Carrier Detect (Pin 8) from **Input** Port is *forced on* to Ports 1 - 8

TECHNICAL SPECIFICATIONS

Application
Multiple Sync or Async Broadcasting of Data, Clock and a optional Control Signal

Capacity
One Input Port for DCE connection
Eight Output Ports for DTE connection
One Cascade Port(any number of units may be cascaded)

Interface
EIA RS-232 with Surge Protection

Data Rates
Up to 128Kbps

Data Format
Data transparent at all data rates

Port Connections
DB-25 female connectors

Front Panel Indicators
Power(PWR), Receive Data(RXD), ReceiveTiming(CLK) and Data Carrier Detect(DCD)

Power Source
100-120 to 200-220VAC @10%, 50/60Hz, 0.16/0.08A, external 110/220 volt select switch, IEC Power Inlet, (2) 5mm Fuses

Environmental
Operating Temperature....32º to 122º F (0º to 50º C)
Relative Humidity.............5 to 95% Non-Condensing
Altitude...........................0 to 10,000 feet

Dimensions
Height .... 1.75 inches (4.44 cm)
Width .... 13.35 inches (33.09 cm)
Length .... 9.00 inches (22.86 cm)

Weight
4.5 pounds (2.1 Kg)

Warranty
Three Years, Return To Factory

ORDERING INFORMATION
Part Number: 115000
Model: DBU-2328
Description: 8 Port, RS-232 Data Broadcast Unit

INCLUDED WITH EACH UNIT:
1) Operations Manual
2) Power Cord

OTHER EAST COAST DATACOM PRODUCTS

MODEM AND PORT SHARING DEVICES
LINE DRIVERS
VDSL MUX
INTERFACE CONVERTERS
RATE ADAPTERS

EAST COAST DATACOM DESIGNS AND MANUFACTURES DATA COMMUNICATION EQUIPMENT FOR YOUR NETWORK REQUIREMENTS.

NOTES: