

IQ-791A / CE-131T

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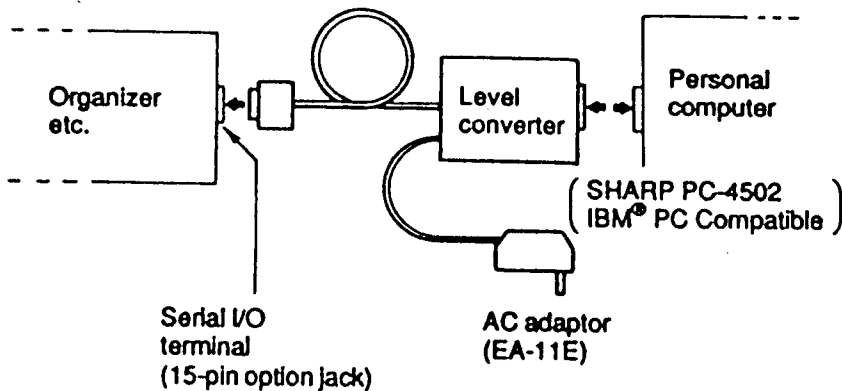
## NOTICE

- SHARP strongly recommends that separate permanent written records be kept of all important data. Data may be lost or altered in virtually any electronic memory product under certain circumstances. Therefore, Sharp assumes no responsibility for data lost or otherwise rendered unusable whether as a result of improper use, repairs, defects, battery replacement, use after the specified battery life has expired, or any other cause.
- SHARP assumes no responsibility, directly or indirectly, for financial losses or claims from third persons resulting from the use of this product and all of its functions, such as stolen credit card numbers, the loss of or alteration of stored data, etc.

# INTRODUCTION

Congratulations on your purchase of this SHARP level converter.

By connecting this level converter between the Organizer with a serial I/O function and a personal computer or peripheral device with an RS-232C level converter, information can be interchanged between the Organizer and the personal computer. Except for the input and output levels, the serial I/O functions of the Organizers conform to the RS-232C standard. This level converter adjusts the input and output levels to the RS-232C standard.



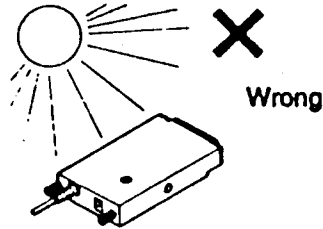
IBM is a registered trademark of International Business Machines Corporation.

- The information provided in this manual is subject to change without notice.
- Do not use any level converter other than the level converter supplied.

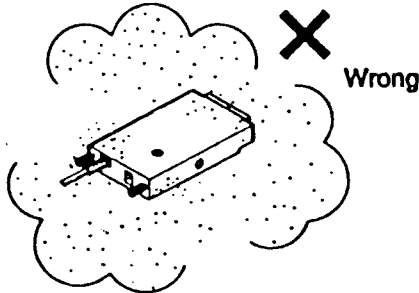
## SPECIAL NOTICE

- The level converter is designed to comply with the EIA (Electronic Industries Association) standard. However, we can not guarantee that the level converter will work with all so-called "RS-232C compatible" devices. Carefully study this manual together with the Organizer operation manual and the manual for the other device you wish to communicate with until you are fully acquainted with the protocols and specifications of all these devices.

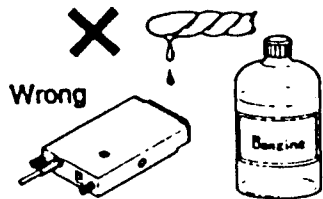
# PRECAUTIONS



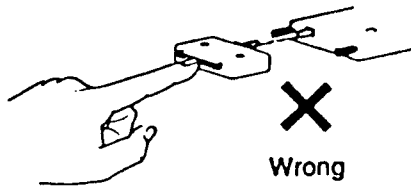
- Do not expose the level converter to high temperatures. The level converter should not be placed in direct sunlight or in a closed vehicle, nor should it be placed near heaters or other sources of heat.



- Do not leave or store the level converter for extended periods in places subject to high humidity or dust.

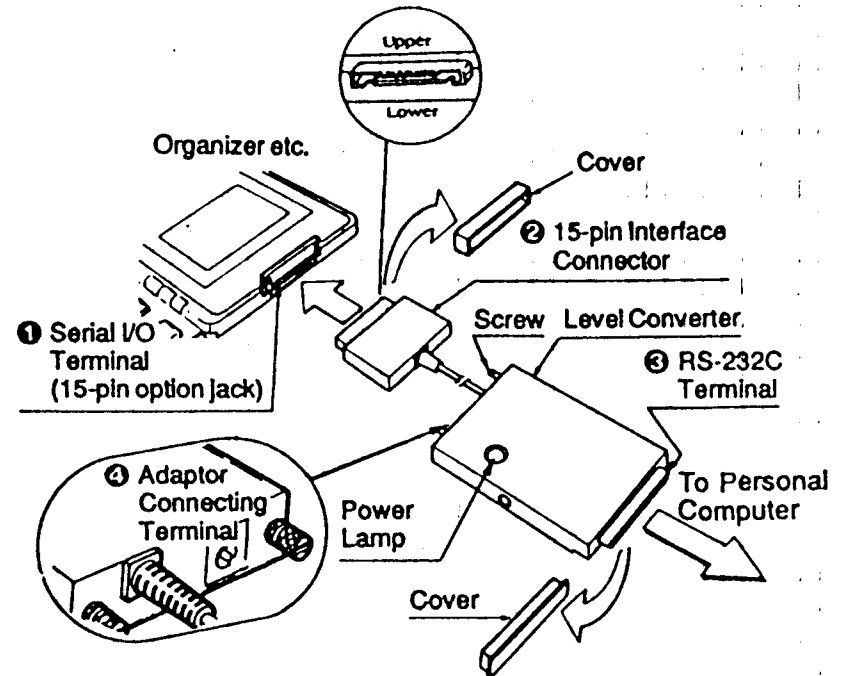


- Use a soft, dry cloth to clean the level converter. Do not use solvents or a wet cloth.



- Do not touch the connector pin contacts as static electricity may damage the internal parts of the level converter.

# CONNECTIONS



**NOTE:** Remove two covers before connection and replace them after disconnection.

- (1) Turn off the power to all devices to be connected. Also, be sure to disconnect the AC adaptor.
- (2) Reveal the 15-pin interface connector ② and the serial I/O terminal ①
- (3) Connect the 15-pin interface connector to the serial I/O terminal on the Organizer. Connect the RS-232C terminal ③ to the RS-232C connector on the personal computer. (Secure the screws on the RS-232C terminal.)

# SPECIFICATIONS

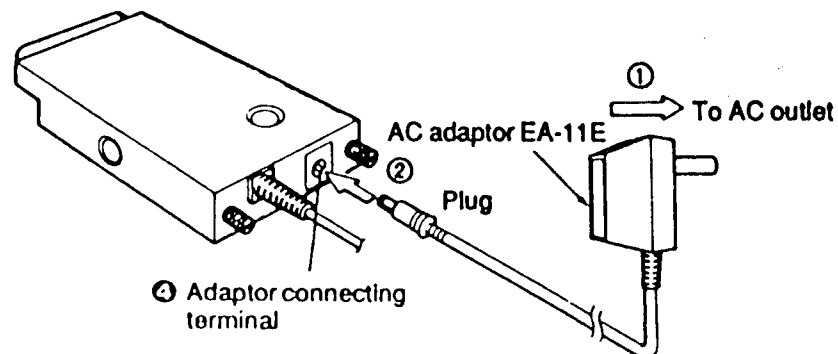
(4) Connect the AC adaptor to the AC outlet first, then connect it to the adaptor connecting terminal ④ of the level converter. When this procedure is completed, the power lamp will go on.

(5) Turn on the power to all connected devices.

**NOTE:** • When connecting or disconnecting the level converter and a device, make sure to turn off the power to all of the devices involved. If the power is left on, the Organizer, the personal computer, or the device may stop functioning. If this should happen, refer to the operation manual of the nonfunctioning device.

- Do not connect or disconnect the AC adaptor while the personal computer is executing a program; an error in program execution may occur.
- When not using the level converter, be sure to disconnect the 15-pin interface connector ② from the Organizer.

## Connecting the AC adaptor



Product name: RS-232C level converter  
 Applicable standard: EIA RS-232C  
 Connectors used: 15-pin male connector for connection with the Organizer etc.  
 25-pin female connector, DB-25W, for connection with a personal computer.  
 Power source: AC 120V 60Hz  
 Power consumption: 6V (DC) 0.55W  
 Input/Output signals:

	*Input/Output signals 15-pin terminal (serial I/O)	Output signals 25-pin terminal (RS-232C)
High level	+4.5 to +5.5V (CMOS level)	+5 to +10V (3 to 7 kohms load)
Low level	0 to +0.4V (CMOS level)	-5 to -10V (3 to 7 kohms load)

\*Each output is capable of driving one C-MOS load.

Dimensions: 55 (W) × 99 (D) × 185 (H) mm  
 (2-5/32" (W) × 3-29/32" (D) ×  
 7-9/32" (H))

Weight: Approx. 245g (0.54 lb.)

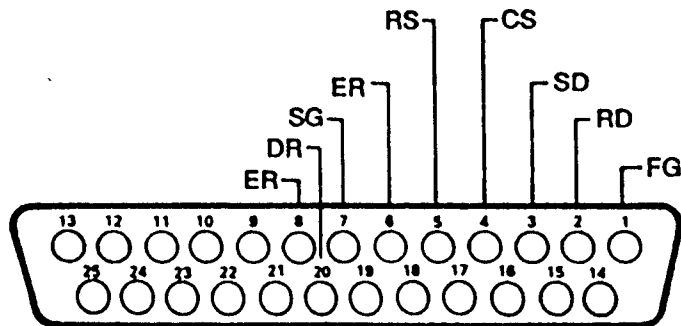
Accessories: Connector covers (2; RS-232C terminal and 15-pin interface connector), AC adaptor (1; EA-11E), Operation manual (1)

# SIGNALS USED IN THE RS-232C LEVEL CONVERTER

## RS-232C

The RS-232C is the standard established by EIA (Electronics Industries Association) specifying the interfacing requirements between a data terminal equipment (DTE) and the data communication equipment (DCE).

### Functions of level converter signals Connector signal configuration (DB-25W)



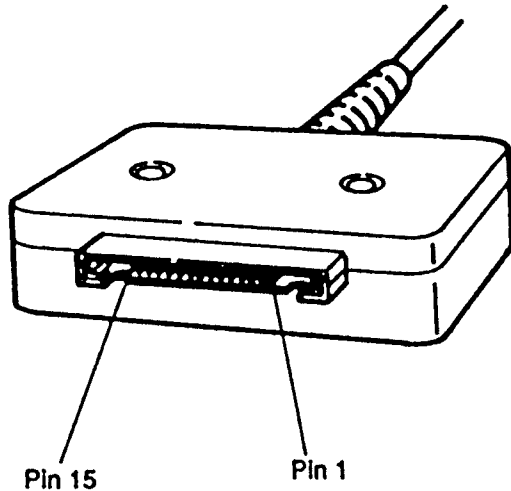
- Different signal connection may be required depending on the signals used by the connected device.

### Pin assignment (25-pin)

Pin	Name	Symbol	I/O	Function
1	Frame Ground	FG	—	Protective ground
2	Receive Data	RD	i	Input signal
3	Transmit Data	SD	o	Output signal
4	Clear To Send	CS	i	Data transmission enable
5	Request To Send	RS	o	Carrier
6	Data Terminal Ready	ER	o	Local terminal ready
7	Signal Ground	SG	—	Reference ground (0V) for all signals
8	Data Terminal Ready	ER	o	Local terminal ready
20	Data Set Ready	DR	i	External device ready to receive

# SIGNALS USED IN THE SERIAL I/O TERMINAL

The level converter is equipped with a 15-pin interface connector (serial I/O terminal), used for connecting to the Organizer.  
The pins used and their signals are described below.



## Pin assignment (15-pin)

Pin	Name	Symbol	I/O	Function
1	Frame Ground	FG	—	Protective ground
2	Transmit Data	SD	i	Input signal
3	Receive Data	RD	o	Output signal
4	Request Data	RS	i	Carrier
5	Clear To Send	CS	o	Data transmission enable
6	Data Set Ready	DR	o	External device ready
7	Signal Ground	SG	—	Reference ground (0V) for all signals
10		VC	—	Power supply
14	Data Terminal Ready	ER	i	Local terminal ready

**Note:** A high level has the voltage value VC, while a low level has the voltage value SG.