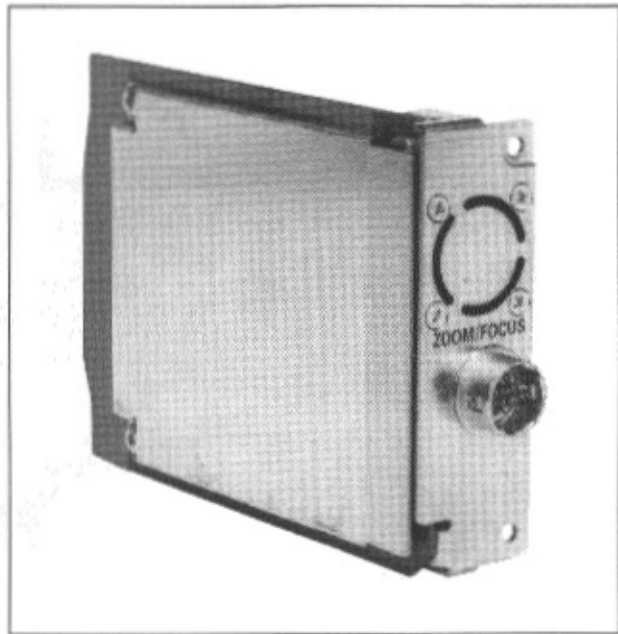


# Operating Instructions

**Panasonic®**

High-sensitivity Card

Model No. **AW-PB303**



Before attempting to connect or operate this product,  
please read these instructions completely  
and save this manual for future use.



SA 1965

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



SA 1966

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:**

**TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

For U.S.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 the 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.

For CANADA

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

The information marking of this product may be found on the bottom of the unit.

The serial number of this product may be found on the bottom of the unit.

You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

# CONTENTS

WARNING/CAUTION FOR SAFETY .....	4
PREFACE .....	5
PRECAUTIONS .....	5
MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS .....	6
MOUNTING .....	7
CONNECTION .....	9
OPERATING PROCEDURES .....	11
MENU ITEM SETTING .....	12
APPEARANCE .....	16
SPECIFICATIONS .....	17
STANDARD ACCESSORIES .....	17

# WARNING/CAUTION FOR SAFETY



## WARNING

- **Refer all servicing to qualified personnel**

To reduce the risk of electric shock, don't remove cover or back, unless you are a qualified personnel. Refer all mountings, connections, servicing to qualified service personnel.

- **No water or moisture inside**

Do not let water or moisture into the product, or expose it to moisture, to prevent a fire and electric shock.

- If you see smoke or smell an odor from the product, if water or other foreign matter gets inside, if it is damaged by dropping, or if you find anything wrong with it, immediately stop using it.

- **Do not disassemble or modify the product to prevent a fire and electric shock.**



## CAUTION

- Do not drop the product, do not expose it to strong shock, or do not step on it, to prevent a fire and injuries.
- Do not install the product at a place full of moisture and dust, which may cause a fire and electric shock.
- Do not cover the port or otherwise block ventilation during operation. Internal heat buildup can cause a fire.

## PREFACE

Camera sensitivity can be increased by up to 100 times by inserting the high-sensitivity card AW-PB303 into a convertible camera, AW-E300, for example, because its CCD storage (slow shutter) raises camera sensitivity.

The card also permits zoom and focus control from a remote control box, WV-CB550, for example.

## PRECAUTIONS

- **Power Off Before Connecting or Disconnecting Cables**

Before plugging or unplugging the cables, be sure to switch power off.

- **Handle Carefully.**

Do not drop the product, or subject it to strong shock or vibration. This is important to prevent trouble.

- **Avoid Humidity and Dust.**

Avoid using the product at a humid, dusty place because much humidity and dust will cause damage to the parts inside.

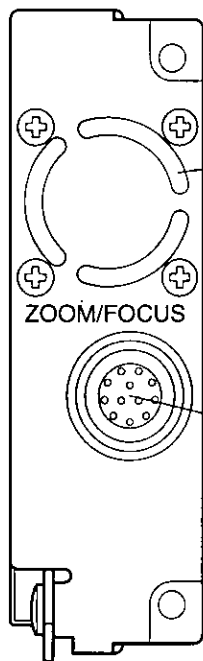
- **Operating Temperature Range**

Avoid using the product at a cold place below  $-10^{\circ}\text{C}$  or at a hot place above  $+45^{\circ}\text{C}$  because extremely low or high temperature will adversely affect the parts inside.

- **Cooling fan**

There is a cooling fan in the card. It is an expendable part, and should be replaced with a new one about every 50,000 hours. (Whenever fan replacement is necessary, be sure to ask the store where you purchased the card to do it for you.)

# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS



Cooling fan (internal) ventilating port

- Do not cover the port or otherwise block ventilation during operation. Internal heat buildup can cause a fire.
- The fan has a service life of about 50,000 hours. (at a room temperature of 25°C) Replace the fan that has come to the end of its service life. (If the fan is used at a room temperature of 35°C, replace it about 30% sooner.) Whenever fan replacement is necessary, be sure to ask the store where you purchased the set.

ZOOM/FOCUS connector

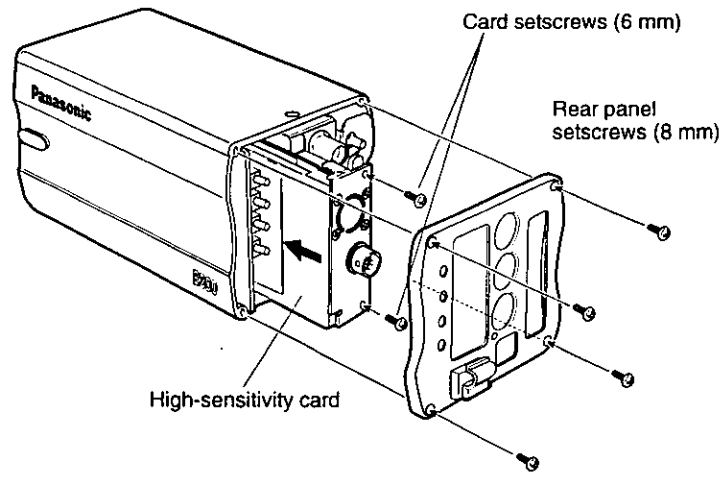
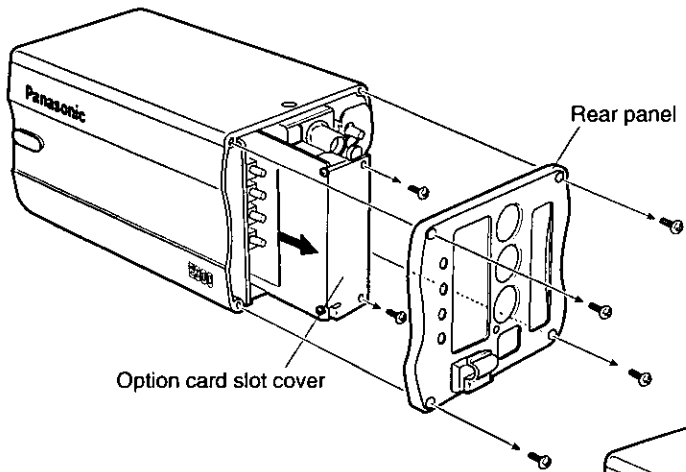
This is a standard lens input terminal with a zoom/focus remote function. If you are using a Panasonic pan/tilt head (AW-PH300), connect the remote cable to the LENS I/F connector on the pan/tilt head, not to the ZOOM/FOCUS connector.

# MOUNTING

## CAUTION

- Be sure to ask your store, where you purchased the product, for mounting.
- Disconnect the camera power connector before mounting.
- Before handling the card, touch a metal part of the camera to discharge the static from the human body.  
An anti-static wrist strap is recommended for added safety.  
If you touch the card while you are still charged with static, it may cause trouble.
- Keep the metal parts of the card free of contact with other metal parts.

- (1) Switch the camera off, and disconnect the power connector and other cables from the camera.
- (2) Loosen the four screws on the rear of the camera and remove the rear panel.
- (3) Loosen the two screws for the option card slot and remove the cover.
- (4) Insert the High-sensitivity card along the guide rail at the bottom of the camera and the tab above. Insert it securely all the way.
- (5) Tighten the two card setscrews securely.  
If you have lost the screws, use the screws (6 mm long) supplied as accessories.
- (6) Fasten the rear panel with the four screws.  
If you have lost the screws, use the screws (8 mm long) supplied as accessories.
- (7) Plug the cables back as necessary, connect the power connector, then switch power on.





# CONNECTION

- Before cable connection, switch power off.
- Use the AC adaptor AW-PS505 for power supply.
- For details on connecting individual devices, refer to the respective operating instructions.

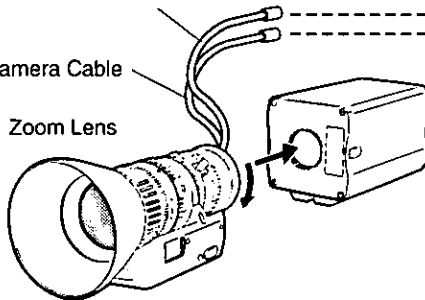
Remote Cable (for ZOOM/FOCUS control)

(When using a pan/tilt head, connect the remote cable to the pan/tilt head.)

To ZOOM/FOCUS connector on the card AW-PB303 or to LENS I/F connector on pan/tilt head

Camera Cable

Zoom Lens



Camera

Video monitor/  
VTR etc.



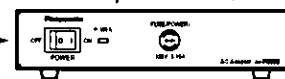
Coaxial cable

To IRIS connector

To ZOOM/FOCUS connector

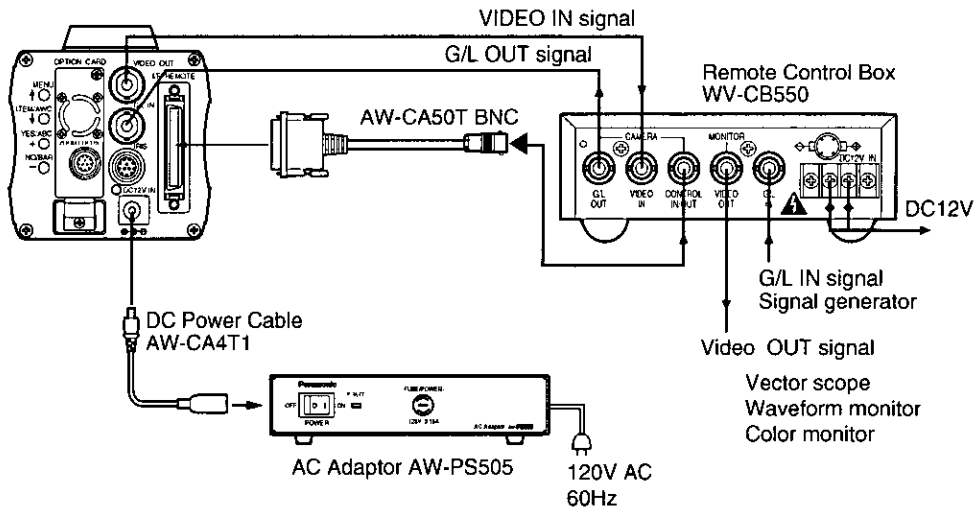
DC Power Cable  
AW-CA4T1

AC Adaptor AW-PS505



120V AC  
60Hz

- In case of using a remote control box WV-CB550
- Connect the remote control box to the camera with three coaxial cables (video signal, G/L signal, control signal) (5C-2V or equivalent, 300 m in maximum extension length).



# OPERATING PROCEDURES

For details on operation and adjustment, refer to the operating instructions for the camera.

## **(1) Switch on the individual devices.**

### **(2) Adjust lens flange-back.**

- Flange-back adjustment is necessary if you are using the camera for the first time, or if the lens has been changed.
- A long charge time makes adjustment difficult. It is recommended, therefore, that you adjust it after setting the charge time to OFF in a bright place (See page 13.).

### **(3) Set the charge time according to the intensity of illumination of the object you are shooting. (See page 13.)**

### **(4) Adjust the lens iris and focus.**

### **(5) Adjust the white balance.**

- It is necessary if you are using the camera for the first time, or if you haven't used it for a long time.
- It is also necessary if a change has been made in the lighting conditions or light intensity.

- Once adjusted, the white balance does not need to be adjusted again unless the conditions of use are changed.

### **(6) Adjust the black balance.**

- It is necessary if you are using the camera for the first time, or if you haven't used it for a long time.
- It is also necessary if the ambient temperature has considerably changed or at the turn of a season.
- Once adjusted, the black balance does not need to be adjusted again unless the conditions of use are changed.
- After inserting the card AW-PB303, it takes a longer time for black balance adjustment because of the black balance correction that takes place during storage operation.

### **(7) Shoot the object.**

(After using the camera, switch off the individual devices.)

- To change the camera settings according to the use and conditions, refer to the operating instructions for the camera.
- To change the charge time set, see page 13.

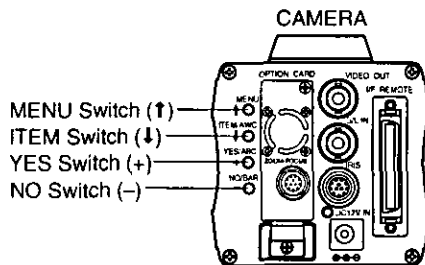
# MENU ITEM SETTING

A convertible camera, for example, AW-E300, can be set using the menu as suited to the system and shooting conditions. For details, refer to the operation manual for the camera.

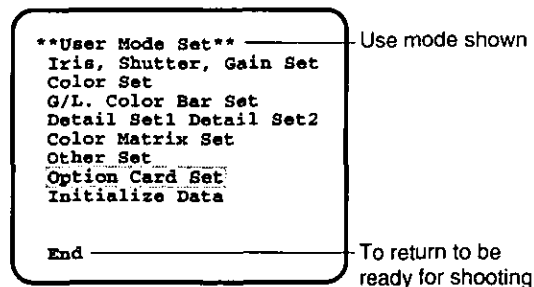
## ■ Setup Procedures

- (1) Keep the MENU switch depressed for longer than 5 seconds to call the main menu.
- (2) The setting item (flashing) changes each time the MENU switch, ITEM switch, or NO switch is pressed.  
Select [Option Card Set] and press the YES switch to display the [Option Card Set] submenu.
- (3) Select an item to set using the MENU switch and ITEM switch.
- (4) Change the settings using the YES and NO switches.
- (5) Select [Return] with the MENU switch and ITEM switch, and press the YES switch to return to the main menu.

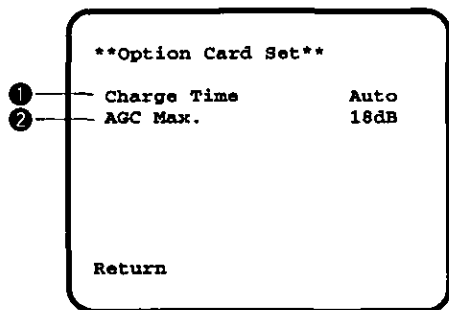
- (6) Return to be ready for shooting.  
Select [End] with the MENU switch or ITEM switch, and press the YES switch.  
Then, the camera will operate as set.



Main Menu of User Mode



## ■ Option Card Set Submenu



### ① Charge time setting (Set CCD storage time.)

- CCD reading field storage

Setting : Auto→OFF→1/30→1/15→1/8→1/4→  
1/2→1→2

Auto : Camera automatically adjusts light quantity in the order of ALC→AGC→Storage.

OFF : No storage. Ordinary read

1/30 : Storage for 1/30 second. Sensitivity is about twice as high as that when OFF is set.

1/15 : Storage for 1/15 second. Sensitivity is about twice as high as that when 1/30 second is set.

1/8 : Storage for 1/8 second. Sensitivity is about twice as high as that when 1/15 second is set.

1/4 : Storage for 1/4 second. Sensitivity is about twice as high as that when 1/8 second is set.

1/2 : Storage for 1/2 second. Sensitivity is about twice as high as that when 1/4 second is set.

1 : Storage for 1 second. Sensitivity is about twice as high as that when 1/2 second is set.

2 : Storage for 2 second. Sensitivity is about twice as high as that when 1 second is set.

- CCD reading frame storage

Setting : Auto→OFF→1/15→1/8→1/4→1/2→1→2

Auto : Camera automatically adjusts light quantity in the order of ALC→AGC→Storage.

OFF : No storage. Ordinary read

1/15 : Storage for 1/15 second. Sensitivity is about twice as high as that when OFF is set.

1/8 : Storage for 1/8 second. Sensitivity is about twice as high as that when 1/15 second is set.

- 1/4 : Storage for 1/4 second. Sensitivity is about twice as high as that when 1/8 second is set.
- 1/2 : Storage for 1/2 second. Sensitivity is about twice as high as that when 1/4 second is set.
- 1 : Storage for 1 second. Sensitivity is about twice as high as that when 1/2 second is set.
- 2 : Storage for 2 second. Sensitivity is about twice as high as that when 1 second is set.

**Note 1:** Field storage and frame storage (For details, refer to the operating instructions for the camera.)

There are two ways of CCD read: field storage read and frame storage read. In case of storage operation using the high-sensitivity card, frame read increases the vertical resolution over field read, and produces pictures of higher definition, but lowers the sensitivity by half. If frame read is set, therefore, the minimum intensity of illumination will be about one half the specified value.

**Note 2:** Electronic shutter operation (For details, refer to the operating instructions for the camera.)

- **The electronic shutter does not work during storage operation (other than when Auto or OFF is set).**

Under halogen lights or fluorescent lights, or in outdoor mode

- [AUTO ND (ELC)] selection is inhibited. (Unselectable)
- If [Fine] is chosen in [V Resolution] selection, the electronic shutter only will be off.

In user mode

- [Shutter mode] selection is inhibited. (Unselectable)
- If [Frame 2] is chosen in [Field/Frame] selection, the electronic shutter only will be off. When [Frame 1] or [Frame 2] is selected, display will be in [Frame]. Operation is the same as when [Frame 1] is selected.

- **Neither step nor synchro scan is valid in Auto mode.**

The ELC (AUTO ND) function only can be turned on or off.

When the ELC (AUTO ND) function is turned on, light quantity is automatically adjusted in the order of ELC→ALC→AGC→Storage.

- **Operation with this function turned OFF is the same as normal camera operation.**

## ② **AGC Max. setting**

The upper limit of AGC in Auto mode can be set as follows:

### **With AW-E300**

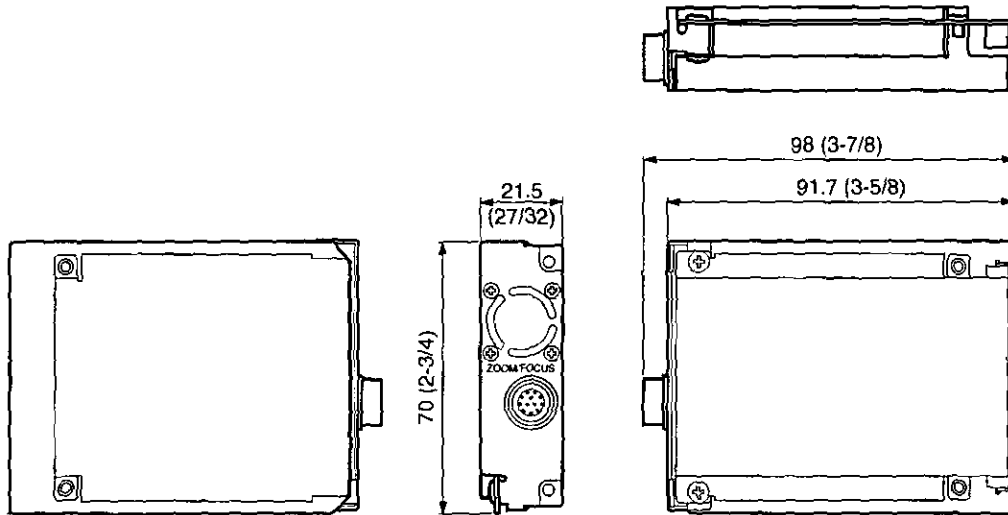
Setting: OFF→6 dB→12 dB→18 dB→24 dB→  
30 dB→Night eye

### **With AW-E600**

Setting: OFF→6 dB→12 dB→18 dB→24 dB→  
30 dB→Night eye L→Night eye H

# APPEARANCE

Unit: mm (inch)





## SPECIFICATIONS

Source voltage:	12 V DC (supplied from camera)
Power consumption:	3.5 W
Operating temperature:	-10°C to +45°C (14°F to +113°F)
Operating humidity:	30 % to 90 %
Dimensions:	21.5 (W) x 70 (H) x 98 (D) mm [27/32" x 2-3/4" x 3-7/8"]
Weight:	80 g

Weight and dimensions indicated are approximate.  
Specifications are subject to change without notice.

## STANDARD ACCESSORIES

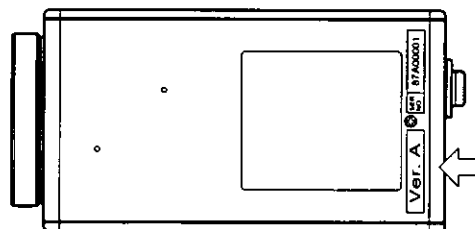
Screw (6 mm long) .....	2 pcs.
Screw (8 mm long) .....	4 pcs.

## Important! Combined Use of Convertible Camera and High-sensitivity Card

The high-sensitivity card AW-PB303 can be combined only with camera of the versions shown in the table below. Check the compatibility of your high-sensitivity card and camera, referring to the table. If your camera is not compatible with your high-sensitivity card, consult the store where you purchased it.

	AW-PB303
AW-E300	Compatible with Ver. A and later versions
AW-E600	Compatible with Ver. A and later versions

The camera version is shown on the bottom of the camera. Cameras of older than Ver. A have no seal showing their version number.



**Caution:** There are restrictions as follows in using cameras that have a built-in high-sensitivity card.

- It may take about a minute to adjust Automatic White Balance Control (AWC) or Automatic Black Balance Control (ABC).
- Black balance or white balance may not be able to be fully adjusted by the ABC, AWC, or Automatic Tracing White Balance Control (ATW) function while sensitivity is being raised by CCD storage.
- Loss of some CCD pixels, not visible during ordinary operation, will be seen due to the high level of sensitivity raised by the high-sensitivity card.

# Panasonic

PANASONIC BROADCAST & DIGITAL SYSTEMS COMPANY  
DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA

**Executive Office:** 3330 Cahuenga Blvd W., Los Angeles, CA 90068  
(323) 436-3500

**EASTERN ZONE:** One Panasonic Way 4E-7, Secaucus, NJ 07094 (201) 348-7621

**Mid-Atlantic:** One Panasonic Way 4E-7, Secaucus, NJ 07094 (201) 348-7621

**Southeast Region:** 1225 Northbrook Parkway, Ste 1-160 Suwanee, GA 30024  
(770) 338-6845

**Central Region:** 1707 N Randall Road E1-C-1, Elgin, IL 60123 (847) 468-5200

**WESTERN ZONE:** 3330 Cahuenga Blvd W., Los Angeles, CA 90068 (323) 436-3500

**Dallas Region:** 6226 Abington Way, Houston, TX 77008 (713) 802-2726

**Government Marketing Department:** 52 West Gude Drive, Rockville, MD 20850 (301) 738-3840

**PANASONIC CANADA INC.**

5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 (905) 238-2115

**PANASONIC SALES COMPANY**

**DIVISION OF MATSUSHITA ELECTRIC OF PUERTO RICO, INC.**

San Gabriel Industrial Park, 65th Infantry Ave., KM9.5 Carolina, Puerto Rico 00630 (809) 750-4300