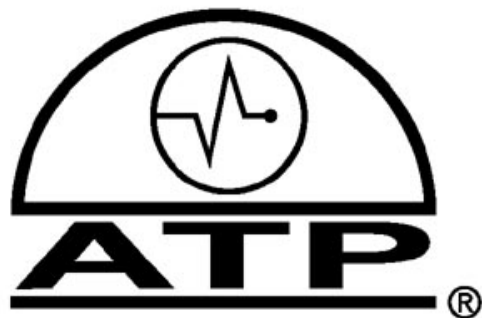


# **20 Metre Pipe Inspection Camera System**

**Model No. AVB-710**

**Instructions for Use.**



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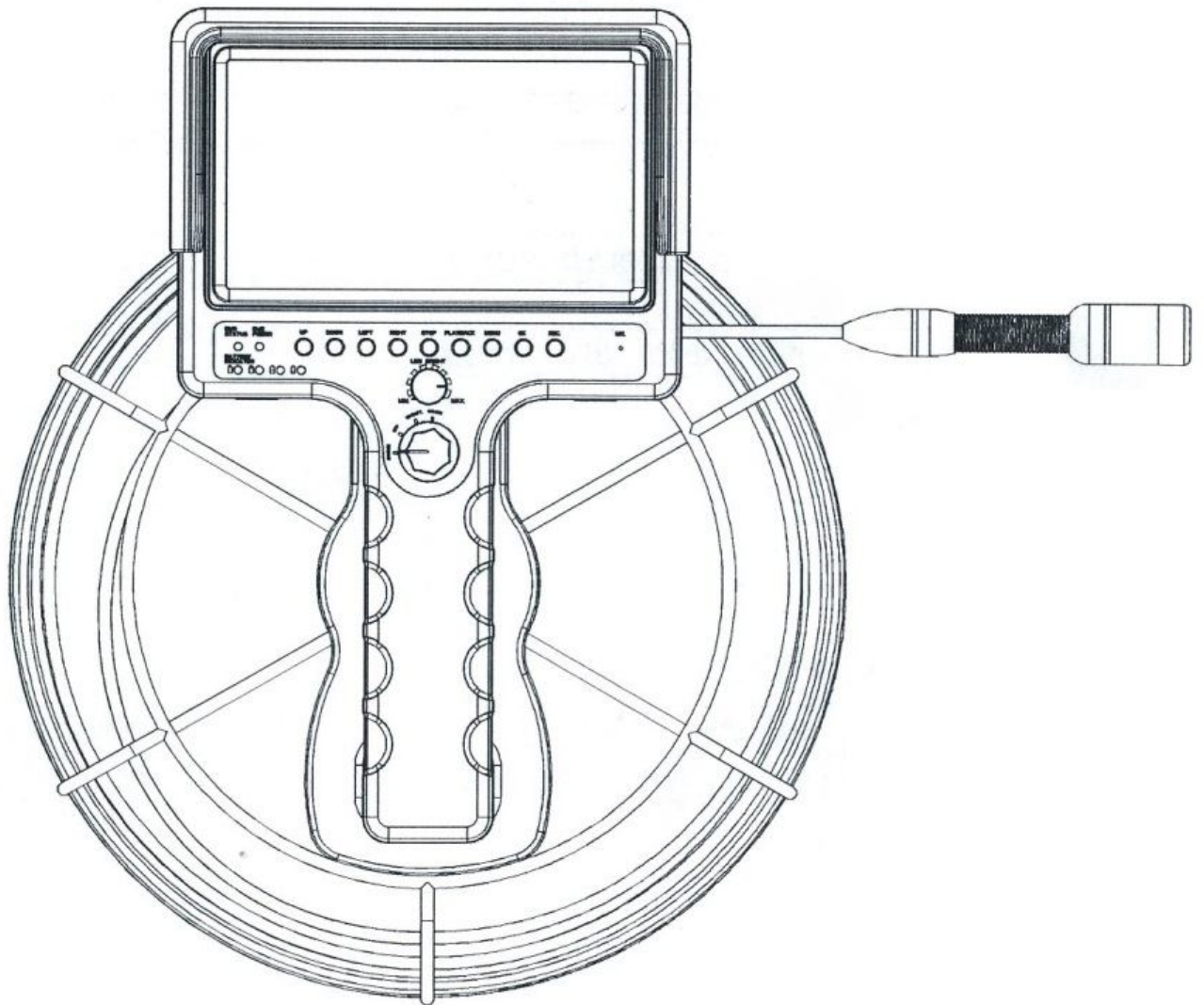
**[www.atp-instrumentation.co.uk](http://www.atp-instrumentation.co.uk)**

# **IMPORTANT NOTICE**

Should this equipment ever need to be returned to ATP Instrumentation Ltd for any reason and based on the type of applications it is used for, please ensure that it is in a clean, hygienic condition (disinfected or sterilised where necessary). Any equipment returned in a dirty or suspect condition will be returned to the sender.

# ATP PIPE & DUCT CAMERA INSPECTION SYSTEM

## SET-UP & OPERATING INSTRUCTIONS



Read these instructions carefully before the operation of this system

Fully charge the battery before first use

## Technical Specification:

### Camera

Camera Size	Φ 23mm*120mm
Camera Housing Material	Stainless steel
Camera Lens Material	Sapphire glass
Sensor Size	1/4 inch
Total Pixels	PAL:720*576 NTSC:720*480
View Range	120 °
Illumination	12PCS white LEDS
Waterproof Level	IP68
Camera Work Current	100MA
Camera Power Supply	DC 12V
Operating Temperature	-28°C to +50°C

### Monitor

Monitor Size	7 inch TFT colour monitor + video output
Pixels	1440*234
OSD Language	English

### DVR

DVR Power Supply	12V
DVR Work Current	200MA
Media Storage	SD/SDHC card (max32G)
Digital Clock and Calendar	
Battery Level Display	
Total Pixels	720*567(D1)
Picture Snap and Video Record	
Movie Format	AVI
Microphone Audio Record	
Stereo Earphone Output	

### Cable Wheel

Cable Size	Φ325mm in reel
Wire Material	Fibreglass rod
Fibreglass Length	20m

Fibreglass Diameter

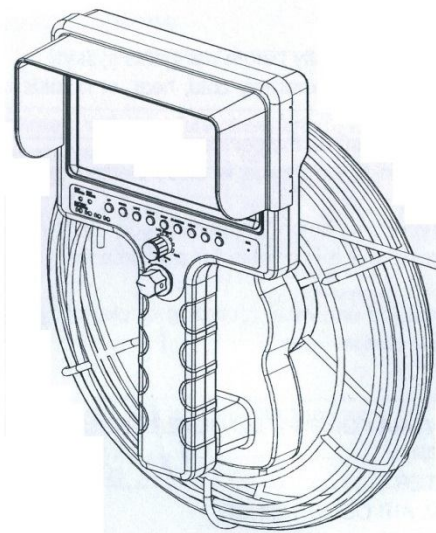
Φ4.8mm

Fibreglass Colour

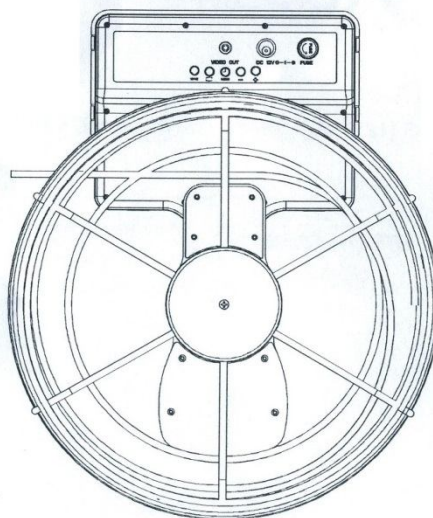
Yellow

### **WARNING!**

- Read this manual carefully before operating this system
- Avoid using the device in extreme humidity or temperatures as this may cause damage to the device
- Do not drop or press on the system as this may cause damage to the device
- The warranty becomes void if any physical damage is present or if the system is disassembled by the user
- Do not disconnect the SD card while recording or playing as this may damage the system and/or the SD card
- Remember to always back up the data on your SD card

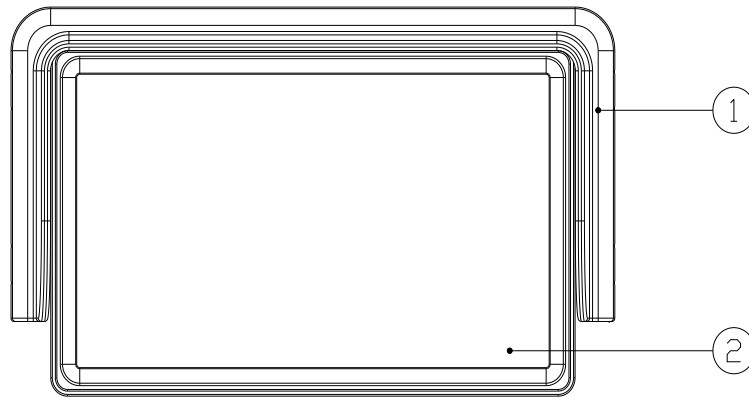


**ISOMETRIC VIEW**



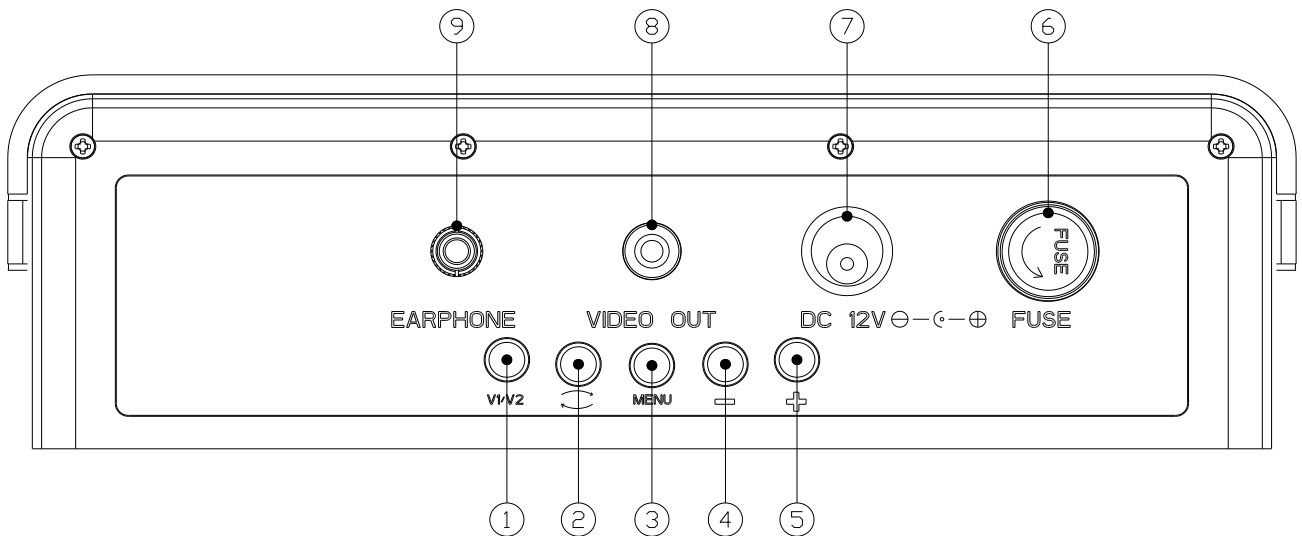
**BACK VIEW**

**Monitor:**



**1 – Sun shade**

**2 – 7" Monitor**



**1 – Video selector button**

**2 – Image rotation button**

**3 – Secondary menu button**

**4 – Secondary menu down**

**5 – Secondary menu up**

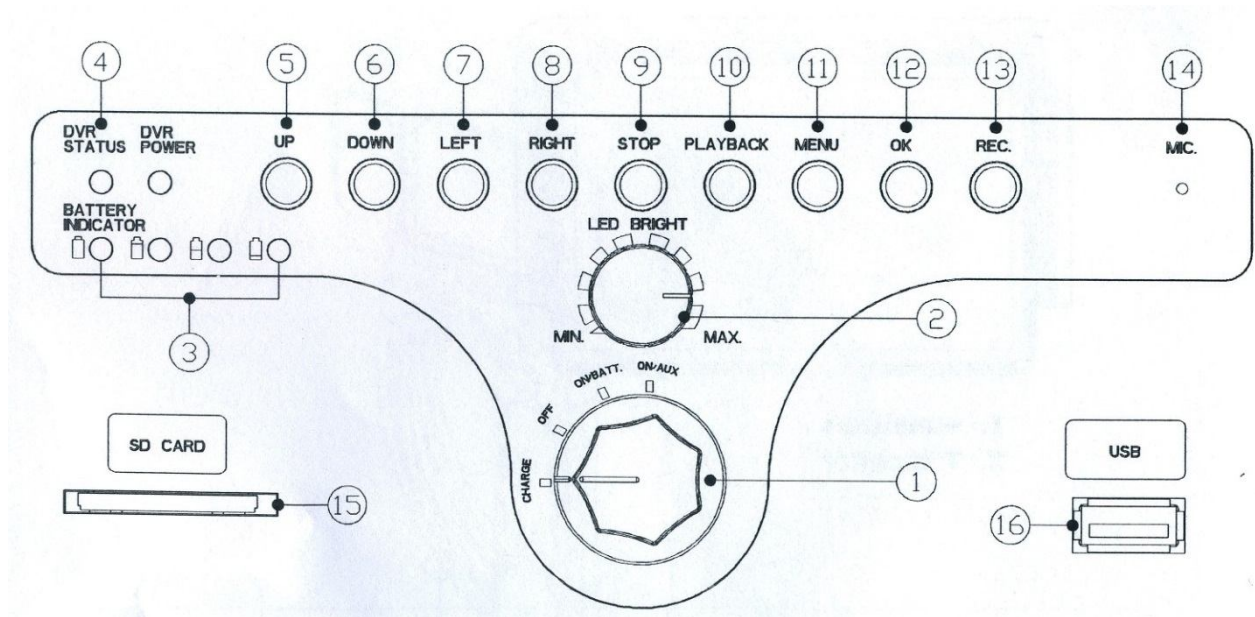
**6 – Fuse socket**

**7 – Charger port**

**8 – Video output connector**

**9 – Earphone output port**

## Controls:



- 1 – Power Controls
- 2 – LED brightness adjuster
- 3 – Battery level indicator
- 4 – DVR status indicators
- 5 – Menu up
- 6 – Menu down
- 7 – Menu left
- 8 – Menu right
- 9 – Playback stop/ Menu back
- 10 – Quick playback
- 11 – Menu
- 12 – Select/OK
- 13 – Record/ Stop recording
- 14 – Microphone
- 15 – SD card slot
- 16 – USB keyboard input

## Menu:

### Recorder setting:

#### 1 – Work mode:

Video – Record videos

Photo – Snapshot photos

Audio – Record audio

#### 2 – Motion detection:

Off – Stop the motion detection

On – Start the motion detection

#### 3 – Sensitivity:

High – Highest sensitivity

Medium – Standard sensitivity

Low – Lowest sensitivity

#### 4 – Resolution:

720 x 576

720 x 480

640 x 480

#### 5 – Video quality:

High – Highest quality

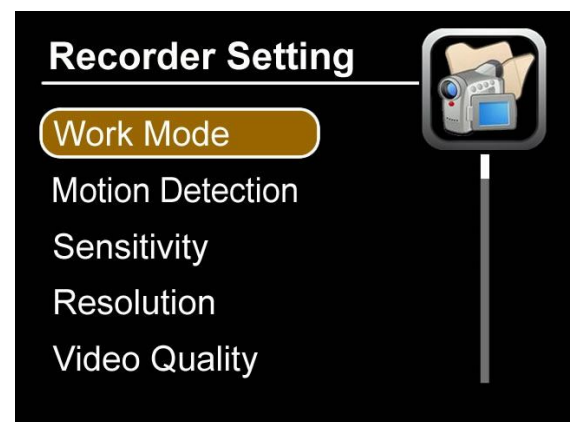
Medium – Standard quality

Low – Lowest quality

#### 6 – Time stamp:

Off – The time stamp will not be shown on the screen

On – The time stamp will be shown on the screen





7 – Video time:

Length of video recording

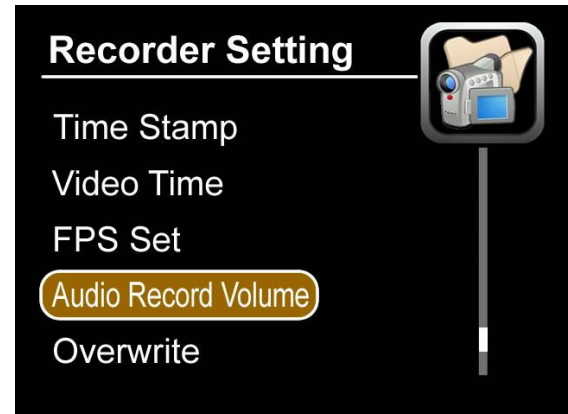
5 minutes

10 minutes

15 minutes

30 minutes

60 minutes



8 – FPS set:

15 FPS – 15 frames per second

30 FPS – 30 frames per second

9 – Audio record volume:

Sets the volume that audio records at from 1-10

10 – Overwrite:

Off – The recording will stop when the disk is full

On – The recording will overwrite old video files when the disk is full

**System setting:**

1 – Language:

Select the operating language

2 – Date Time:

Set the date and time, press OK to confirm

3 – Video output:

Choose wither PAL or NTSC mode to suit your monitor and TV video output

4 – Format:

No – The system will not format the SD card

Yes – The system will format the SD card (Please remember to back up your data)

5 – Firmware update:

No – The system will not update the firmware

Yes – The system will update the firmware

6 – Memory info:

All – The storage capacity of the SD card

Free – The storage capacity left on the SD card

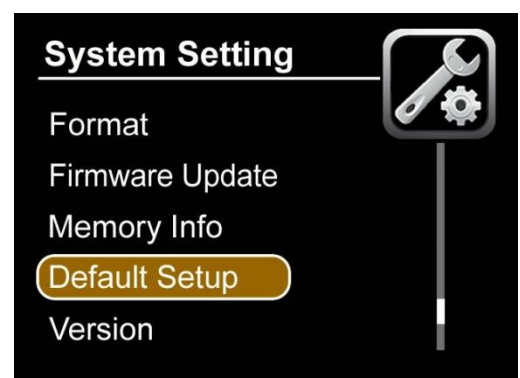
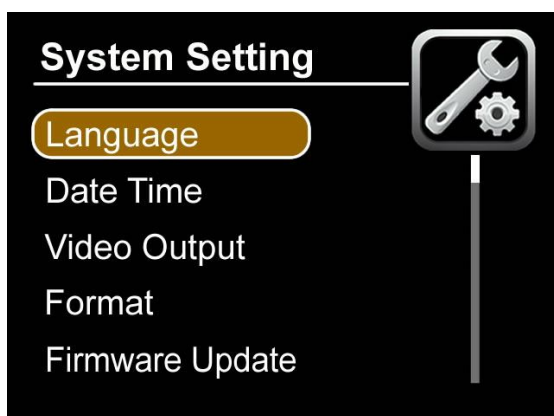
7 – Default setup:

No – Leaves set up as it is

Yes – Factory resets the system

8 – Version:

Systems software version



### **Event Playback:**

1 – Video files:

All videos stored on the system

2 – Photo files:

All photos stored on the system

3 – Audio files:

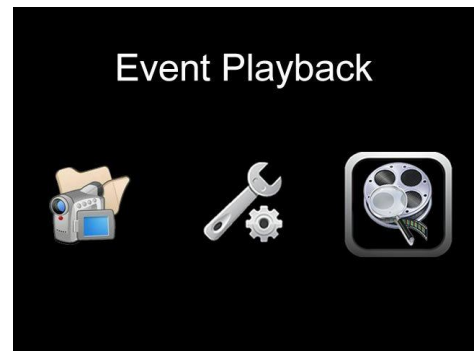
All audio recordings stored on the system

4 – All files:

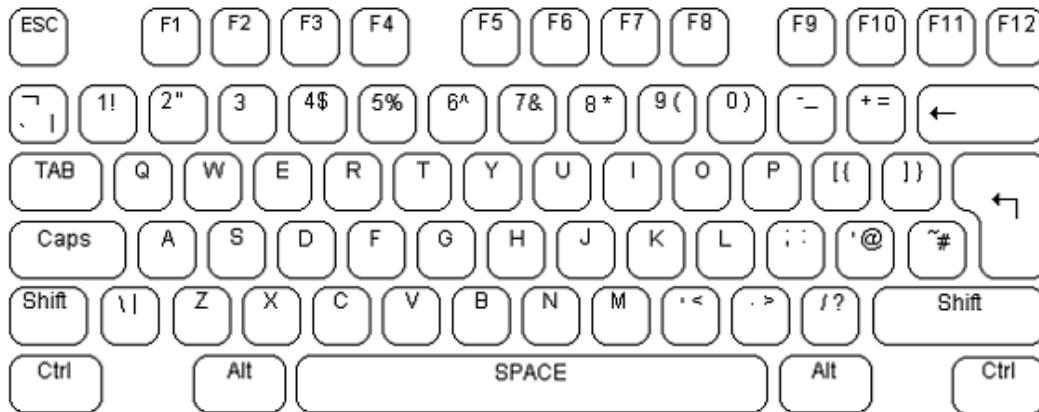
All file types on the system

### **File Deletion:**

Press the playback button to find the files, press the menu button on the file of your choice and then select which one or all depending on the amount of files you want to delete.



## Keyboard Overtyping:



The font and text size are fixed and cannot be changed.

The basic operation of the text overlay unit is straight forward. A flashing underscore cursor indicates the current screen position. This cursor can be moved around the screen by the keyboard cursor keys. The cursor will wrap around the screen left and right, top and bottom. If no key is pressed then the cursor will disappear after approximately ten seconds. The video text overlay unit uses the standard UK keyboard mapping.

The alphanumeric characters in the QWERTY section of the keyboard and the keys of the numeric keypad can be typed directly to the screen as would normally be expected. Each alphabetic character key is normally lowercase. Uppercase characters can be typed by holding down the shift key or pressing the CAPS LOCK key. The keyboard's LED indicators will be lit by the unit. To exit CAPS LOCK mode press the key again.

To remove a character from the screen use the backspace key and delete key. This will replace the character immediately to the left of the current cursor position with a blank space and move the cursor to that position. The Home and End keys move the cursor position to the left and right of the current line on the screen. The Return key moves the cursor to the beginning of the next line.

## **Downloading Files:**

Download of files from the system. Push the SD card in so it pops out. Put the SD card into the SD card reader (supplied) and plug this into a USB port on your computer

This will then open the folder with the files you have recorded. You can then transfer them to the Computer.

Once completed, push the SD card back into the monitor making sure it is secure.

You can then watch any videos, view any photos and listen to any audio recordings you have taken on your computer.

These files can then printed or saved as reports and sent via e-mail as attachments.

## **Basic Operation:**

**IMPORTANT!!** – When connecting the camera to the cable or the cable to the monitor the power must be off.

Connect the camera to the reel and connect the reel to the monitor.

Make sure the camera lens is clean.

Fully charge the battery.

Before reeling out, make sure fibreglass cable is securely in the split clip on the back of the monitor.

Turn the monitor on and the DVR will work after five seconds.

Fit the appropriate skids relative to the pipe size in order to centralise the camera head in a pipe or duct.

Insert the camera into a pipe or duct. Reel out the cable to gently push the cable to move the camera head in to the void. Avoid kinking the fibreglass cable as this may cause irreversible damage, do not bend it into sharp angles and do not twist the cable.

NEVER use the camera as an unclogging tool as this will cause damage to the camera.

Adjust the LED brightness level to suit.

Images can be stored as still images or recorder as video. In video mode the monitor incorporates a microphone which will record a voice over video.

Images can also be viewed on another screen. Connect to that screen with a video cable from the video output on the back of the monitor.

After use, turn the system off, carefully retract the camera and clean the reel whilst retracting it back into the holder. Disconnect all cables and place protective caps back on the connectors. Use a clean, dry cloth to clean the camera and cable before storing.

ALWAYS return the system back into its protective case when not in use.

NEVER close the case with wet/damp equipment inside as this increases the chance of corrosion to the electrical components.

CLEAN using a dry, clean cloth, never use solvents or abrasives to clean the system.



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