

TrendView recorders - Installation Instruction

Battery Replacement

This Installation Instruction sheet is intended as a guide for replacing or installing hardware and for setting up functionality in the recorder. Refer to the User manual for detailed operational requirements.

X-Series and GR-Series recorders are collectively referred to as TrendView recorders.
The DR Graphic is part of the GR-Series only.

TrendView recorders are designed for ease of assembly with minimal disturbance to the rest of the unit. If unsure, please return the unit to your supplier for repair or upgrade.
Removing the case and opening the back of the recorder should only be performed under the following circumstances:
When an item of hardware requires individual replacement.
When an item of hardware is to be retrospectively fitted.
In all other instances it is recommended that the complete unit be returned to an authorised agent or service centre.
For Agency Approved recorders the product needs to be upgraded or repaired by an Authorized Repair facility

WARNING

HAZARDOUS VOLTAGES

Disconnect all power to the recorder before removing the case and attempting any maintenance procedures.
For DR Graphic Recorders: Disconnect all the power, CJs and IO cabling to the recorder before removing the IO cards chassis or power supply chassis and attempting any maintenance procedures.

SAFETY TESTS

Upon completion of service procedures detailed in this manual two basic safety tests should be performed in order to ensure continued safe operation of the instrument.

Failure to comply with these instructions could result in death or serious injury

CAUTION

OBSERVE ANTI-STATIC PRECAUTIONS

Refer to BS EN61340-5-1: 2001. Basic specification. Protection of electrostatic sensitive devices.
Full anti-static precautions MUST be observed when in contact with the electronics of your recorder.

SAVE DATA, SETUPS AND LAYOUTS

Removal of PCBs and battery back-up will result in the loss of all non-volatile data.
Ensure all data and set-ups are saved.

Failure to comply with these instructions may result in product damage.

Before attempting to repair or upgrade a recorder, it is advisable to clear a sufficient work space so components such as the front panel can be rested on the work surface without getting scratched or damaged.

If adding a new piece of hardware to your recorder please be aware that if you are running Trend Manager PC software that the "Hardware Wizard" will require updating to accommodate the hardware changes.

All TrendView Recorders

For [DR Graphic Recorder](#) see page 5.

Panel Mounting

The batteries can be removed and replaced without removing the recorder from its mounting panel. If you require the recorder to be removed from the panel, loosen the mounting clamp screws, slide the clamp towards the rear of the recorder and remove the clamps and the recorder.

Note: Removing the battery will result in the real time clock losing its setting, and any data or setups in SRAM will be lost. Ensure all data is exported and setups and layouts saved before removing the battery. These can be loaded again once the new battery is fitted.

Replacing the battery

Removal of the rear panel is necessary for replacement of the battery.

To remove the rear panel of the recorder, loosen and remove the two screws at the top corners of the rear panel, taking care to retain both the shake-proof washer and the screw.

To get access to the battery it may be necessary to remove some or all of the I/O boards, depending on the build standard of individual units. Ensure a record is kept of the exact slot each board was removed from so that they can be refitted in the correct order.

To remove any I/O boards loosen the M3 screw on the side of the case and withdraw the board from the back.

The procedure for replacing the battery is the same for all the recorders, except the DR Graphic recorder. See Figure 1, 2 & 3 for the location of the battery in each type of recorder. See Figure 10 for battery location on the DR Graphic recorder.



Figure 1

QX recorder
battery
position



Figure 2

SX recorder
battery position



Figure 3

QXe recorder
battery position

Remove the battery from under the clip.

DO NOT use any metal tools to remove or fit the battery. Shorting out of the top and bottom faces of the battery will immediately discharge and may cause damage to the recorder.

Dispose or recycle the old battery in accordance with local regulations.

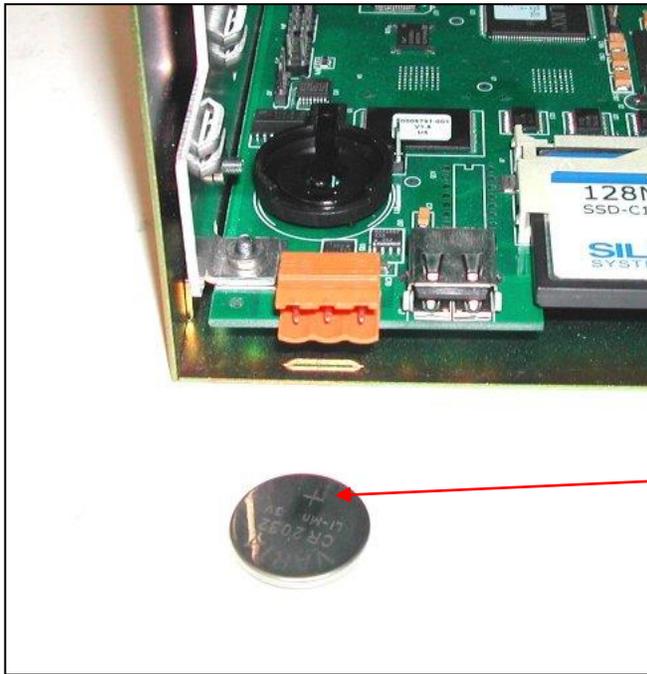


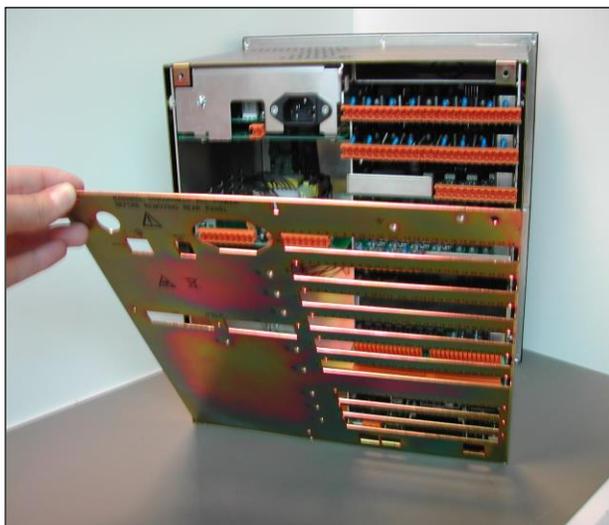
Figure 4

“+” must be uppermost

Fit the new battery ensuring that the face marked with a “+” is uppermost. Avoid touching the battery with fingers as much as possible. A finger mark between positive and negative could cause premature discharging.

Refit any I/O boards that were removed in the same slots they came out of.

Re-assembling the Unit



To replace the rear panel, angle the rear panel as shown to line up two location points with the floor of the recorder's case.

Reposition the shake-proof washers and replace and tighten two screws (QX and QXe = M3 x 6, SX = M4 x 8) at the top corners of the rear panel.

If the recorder has been removed from the panel, refit the mounting clamps to the case in two opposite positions (Nema 4 positions) and secure into the panel.

QX and QXe torque setting should be 0.5 - 0.75Nm/4.4 - 6.6lbf-in

SX torque setting should be 0.5 - 0.70Nm/4.4 - 6.2lbf-in

Figure 5 - SX recorder

Figure 2 QX recorder

When the recorder is powered up again the time and date will be wrong. These should be set up as described in the User Manual. Setups and layouts can be reloaded.

DR Graphic Recorder (GR-Series)

Panel Mounting

IO cards can be removed, replaced or added to the recorder without removing it from its mounting panel. If you require the recorder to be removed from the panel, loosen the mounting bracket screws and remove the recorder.

Removing the IO Card Chassis front panel

Removal of the IO Card Chassis front panel is necessary for replacement or fitting any of the PC cards. To remove the IO Cards Chassis front panel use following procedure.

1. Open the door (Bezel side) of the unit by unlocking the latch.
2. There are 7x No. 4/40 screws as shown in red circle and 2x captive screws shown in green circle in Figure 6. Remove all the 4/40 screws and loosen the captive screws.



Figure 6
Removing slant
chassis

3. Lift the IO card chassis from the front side and park it on the bottom stand.
4. Unplug the USB wire from the front side of the IO card chassis.



Figure 7
IO Card chassis
parked on stand

5. Remove all 4 screws shown in Figure 8 by red circle. Also remove one side screw on the other side of the IO card chassis front panel.

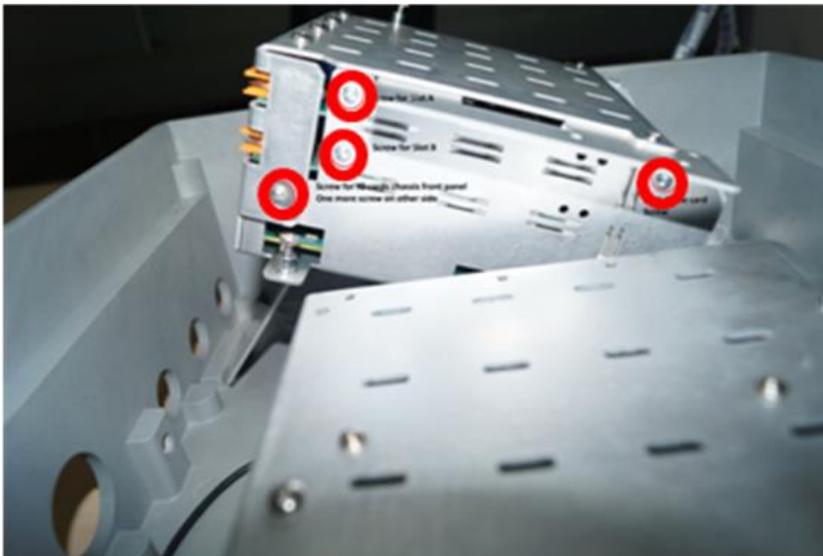


Figure 8
IO cards slot positions
and screws positions
on IO cards chassis
sides

6. Remove all of the IO cards from Slot A and Slot B.



Figure 9
Inside the IO
Cards Chassis

7. Figure 10 shows the location of battery on the processor card as well as '+' terminal of the battery.
8. Remove the battery from under the clip.
Note: DO NOT use any metal tools to remove or fit the battery. Shorting out of the top and bottom faces of the battery will immediately discharge the battery and may cause damage to the recorder.



Figure 10
Battery location on
processor board

9. Dispose of the old battery.
10. Fit the new battery ensuring that the face marked with a "+" (Positive terminal) is facing up. Avoid touching the battery with fingers as much as possible. A finger marks between the positive and negative sides of the battery could cause premature discharging.

Re-assembling the Unit

After the battery is replaced; use the following procedure to re-assemble the unit.

1. Reconnect all of the IO cards from Slot A and Slot B as per requirement.



Figure 11
Reconnect IO
Cards

2. Make sure to secure all the IO cards and backplane card tightly with the earth bracket using M3 X 8 screws, marked in the circles below, from the side of the IO card chassis as shown in Figure 12.

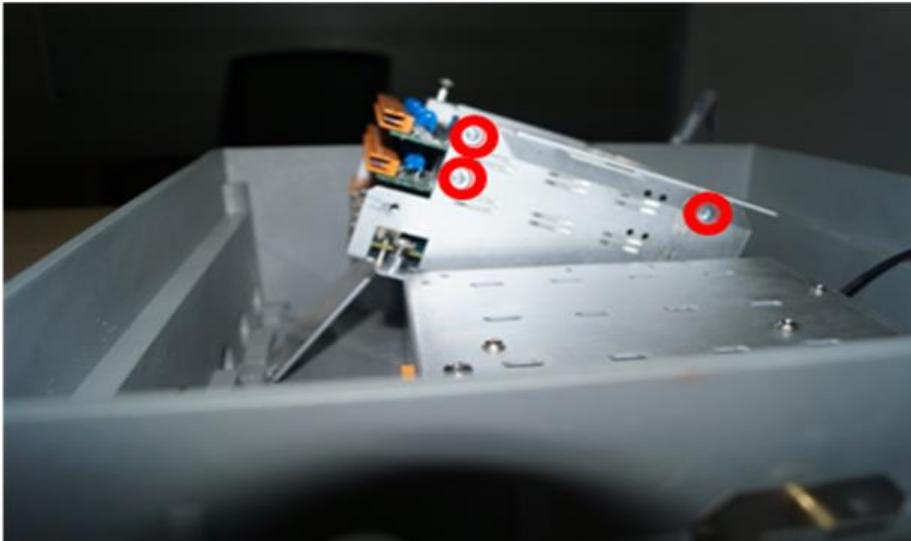


Figure 12
Screw positions
for IO cards and
motherboard

3. Reconnect the IO card chassis front panel back to its position and fit 2x screws on the top side using 4/40 screws, marked in the circles below. Then fit 2x No. 4/40 screws on both the sides of the IO card chassis front panel.

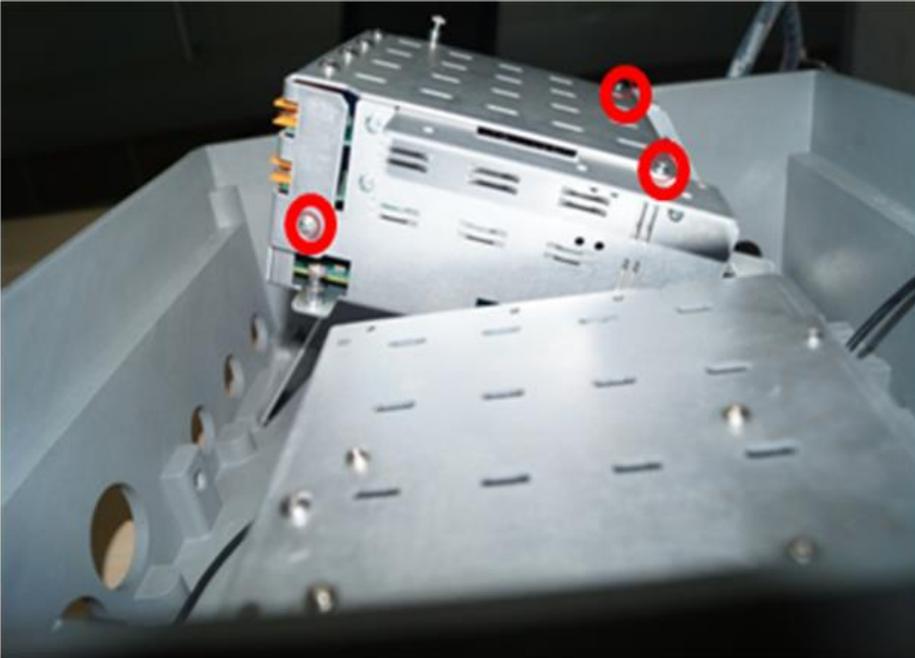


Figure 13
Reconnecting IO card
chassis front panel

4. Lift the IO card chassis; fold back the bottom stand inside and lower the IO card chassis back into the case.

5. Replace the slanted chassis plate and fit it back along with the earth braid using 2x No. 4/40 screws, marked in the circles below in Figure 14.



Figure 14
Reconnecting slant
chassis

6. Make sure all the screws shown in Figure 15 in red and green colour circles are connected back.



Figure 15
Reconnecting the IO
cards chassis

7. Reconnect the CJs, IO cabling and Power cable as required.
8. Close the door.
9. If the recorder has been removed from the panel, secure it back into the panel using the mounting brackets.

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