RSI Panel and Device Battery Replacement

RSI Videofied panels and devices run on batteries, this means that an **EXTREMELY IMPORTANT** aspect of maintenance of the system is **REGULAR BATTERY REPLACEMENTS**.

If the batteries are not maintained properly, the panel will **NOT** be able to send battery low signals, it will also mean that devices may start sending lower percentages of videos, or in the worst case, not activate at all.

Problems caused by low batteries or incorrect replacement procedures:

Low battery signals:
The panel may begin to send sporadic low battery signals; this is because the batteries are lithium, which means that the voltage will never drop until the battery is fully dead. The panel works out when the batteries should be low using an algorithm that takes into account the number of activations and time the device has been alive. If the batteries are replaced in the device without following the correct procedure, the panel will **NOT** reset the algorithm and low battery alarms may not be sent correctly.

Videos not fully downloading:
Devices that are beginning to run low on batteries will start sending lower percentages of videos, dropping until eventually no video is sent at all. The devices work on radio communication that uses power to communicate with the panel, if the batteries are getting low the signal strength of the camera will drop as it demands power from the batteries that they cannot provide, meaning that the video may cut off as the batteries cannot maintain the correct power required by the camera during video transmission to the panel.

GPRS connection problems:
The panel uses a modem to connect and send alarms; the modem is powered off until an activation causes the panel to connect, this modem then relies on power from the batteries to connect. If the batteries are running low the modem may lose power during transmission of an alarm as the batteries cannot sustain the extra power required when connecting. Or, the modem may never power up at all and remain in idle state as the batteries do not have enough power. If the modem loses power, videos will be lost as the panel does not store them once a connection session has ended.

Reasons why the batteries become low:

Activations and use:
When devices activate, or are used, battery power is consumed. If a keypad is used to arm/disarm the system several times a day, the keypad batteries will run low faster than a site that arms/disarms once a day. The same logic applies to a camera, if a camera activates 10 times each week, the camera batteries will run low faster than a camera that activates 2 times each week, as the camera is consuming more power to send the extra activations. The panel battery power is also consumed by receiving activations/commands from devices, as the keypad communicates with the panel to arm/disarm the system and the camera communicates the alarm video, this means the panel is also using more power each time a device communicates with it.

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The correct procedure to replace batteries:

Obtain the keypad and press the right arrow key, this will wake the keypad up. Scroll right until you see "Access level 1" or "Access level 3" then press "YES" and scroll right until you see "Access level 4" and then press "YES". The keypad will now ask you for a badge or code, enter your installer code and press "YES", if the keypad now asks for a badge or code that is level 3, enter your arming/disarming code and press "YES". You should now see "Access level 4" on your keypad, scroll right until you see "Maintenance" and press "YES".

You are now in the maintenance screen and should see "Modifying Date/Time", scroll right until you see "Maintenance Replace Battery". Press "YES" and enter your installer code, you will now see "Maintenance Devices", and if you scroll right you will see "Maintenance Control Panel". "Maintenance Devices" refers to all paired devices to the panel that require batteries; "Maintenance Control Panel" refers to replacing the batteries in the panel. Please highlight the correct option and follow the instructions below specific to the option chosen.

"Maintenance Control Panel":
Before pressing "YES", ensure you are next to the panel and ready to remove the screws, as you have 1 minute to remove the panel lid.
Once ready, press "YES", the keypad will display "1 minute to open the panel", you can now unscrew and remove the panel lid. Wait for the keypad to display "System Disabled 5 Min. (End = Yes)", you can now remove and replace the panel batteries. Once done, replace the panel lid and press "YES", the keypad will inform you that panel tamper is enabled. Press "YES" to return to "Maintenance Replace Battery". Then press "ESC/NO" for 5 seconds to return to the time and date screen.

"Maintenance Devices":
Before pressing "YES", ensure you have all the devices required to change the batteries, unscrewed but not removed from the housing as you have 5 minutes to replace the batteries. If you have a lot of devices and cannot complete within 5 minutes split the devices into manageable blocks.
Once ready, press "YES", the keypad will display "System Disabled 5 Min. (End = Yes)", you may now start replacing the batteries in your devices, once finished press "YES", the system will now say "Operation Completed?" press "YES" and it will now perform a system check, any problems will be displayed so you can resolve them, if not, you will return to "Maintenance Replace Battery" where you can hold "ESC/NO" to return to the date and time.

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