



Universal Receiver

USER MANUAL

URC-830

DRAFT

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1 FOREWORD

The URC-830 should be an external powered device with battery backup, which is designed for use in areas covered by the 3M Resident Monitoring AMS system. The URC-830 will replace the existing method of hard wiring pull cords to corridor lights.

1.1 Device Selection for relay activation

The serial number of up to 5 devices (PB, PT, PC, FDU, and UTX) may be defined within the application to match a single relay in a Universal Receiver. When one or more of the 5 (maximum of 5 devices only) devices are activated, the radio frequency transmission is picked up by the Universal Receiver and its internal relay contact changes state to provide a 30VDC flow of power to illuminate the corridor light or to active other alert devices. A set of other 5 HF devices may activate the second relay of the same URC.

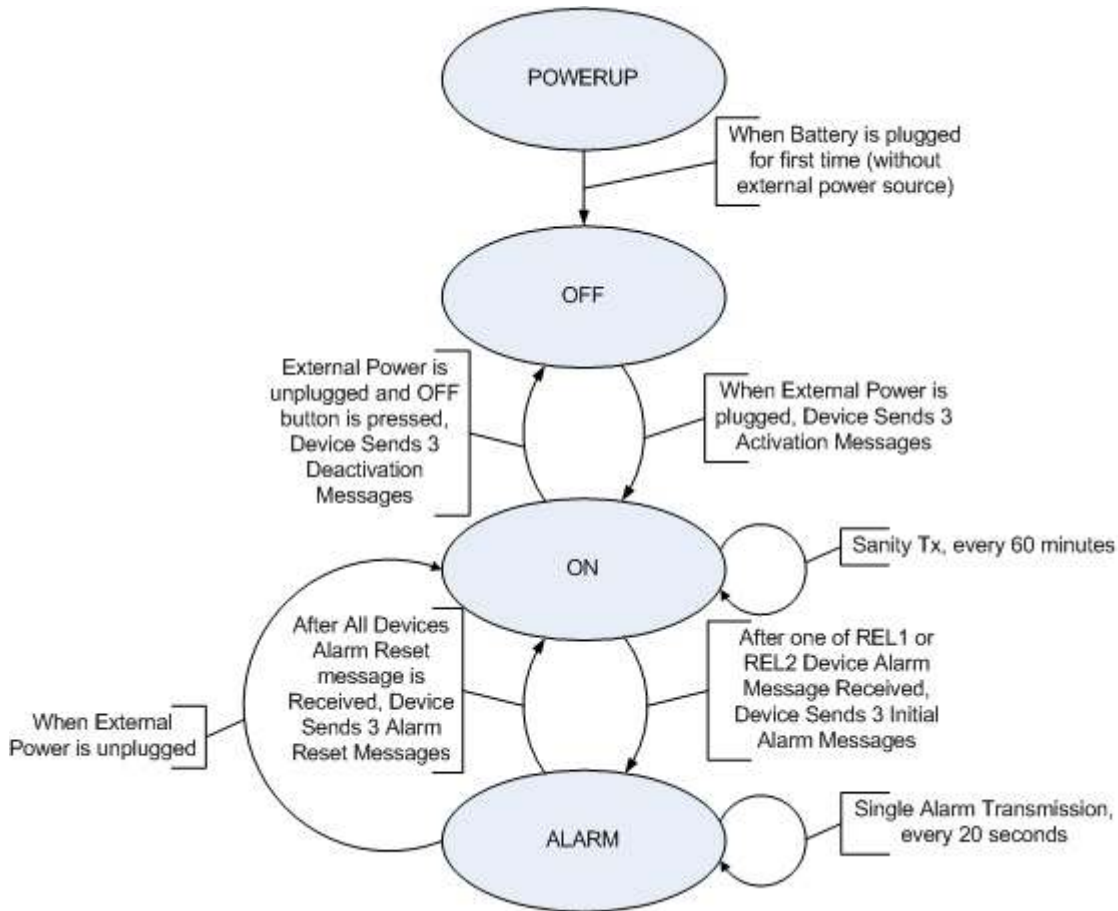
Inversely, when the all of PB, PT, PC, FDU, and UTX is reset, the Universal Receiver receives the Reset message and disengages the internal relay effectively dropping power from the corridor light / other alert devices and alarm reset message will be sent to the AMS system.

1.2 System is down command and message

Both of the URC-830 device relays can be configured to switching ON when "system is down" message is received. Each of relays can be configured individually or together with special command message to work like system is down relay. With the same command message can be set the system number and time-out for "system is down" alarm message. For the end of system is down alarm can be sent special reset command message, otherwise the "system is down" alarm will be cleared after the fixed time-out expired.

1.3 Main State Machine

The URC-830 have three main operation modes (see state machine diagram below):



1.3.1 Off Mode:

Following power up, the URC-830 shall enter to OFF mode until ON mode is initiated.

During OFF mode, the URC-830 do not transmits and receives any messages.

Following the external power supply plugging the device automatically goes from OFF to ON Mode.

Also when device goes to ON mode, it will read the configuration DIP Switch input states.

1.3.2 On Mode:

When the URC-830 is in ON mode, the device continuously receives an RF messages and monitors for the alarm status, of a dedicated relay devices. During ON mode, the unit transmits a sanity messages once every 60 minutes with:

1. Supervision
2. Battery Status
3. External Power Source Status

In ON mode, the external power supply status LED should lit continuously. The battery status LED can light continuously, when battery status is good, or can blink shortly, when has a low battery status. The data reception status LED lit shortly with each regular data reception. The data transmission LED lit shortly with each data transmission.

1.3.3 Alarm Mode

When one of the listed in the URC-830 device (up to 5 for each relay) sends the alarm transmission to the AMS system, then URC-830 should capture this alarm message and if corresponding device is in list of active devices, then URC-830 should activate corresponding relay, and after then should send three strong alarm activation messages within 1 second. After then URC-830 device starts to transmit strong alarm messages every 20 (18-22) seconds. TX status LED should light shortly with each alarm transmission

Alarm Reset

When all of active listed devices, for corresponding relay, restores their alarm states, then URC-830 device should transmit three strong alarm reset messages, and if there don't have other relay alarm activated, devices goes back to On mode.

If URC-830 device do not receives an alarm messages from devices in corresponding relay list, within 2 minutes alarm time-out interval, then the URC device should transmit three strong alarm reset messages for corresponding relay alarm, and if there don't have other relay alarm activated, devices goes back to On mode.

When device is in alarm mode and after then the external power source is removed, then device should transmit three strong alarm reset messages and directly goes back to On mode.

2 FCC NOTICES

This note is applicable to the American URC-830

NOTE

The Universal Receiver complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and*
- (2) This device must accept any interference received, including interference that may cause undesired operation.*

This device has been tested and found to comply with the limits of the Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

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