Lyric[™] Communicators

Lyric-3G/Lyric-3GC & Lyric-CDMA Installation Instructions

General Information

The Lyric-3G/Lyric-3GC and Lyric-CDMA Communication Modules allow the Lyric Controller to communicate with the Central Station via the cellular radio network.

NOTE: The Lyric-CDMA Communications Module is available only in the continental United States, Alaska and Hawaii.

IMPORTANT: Before installing the communication module, make sure power (both AC and battery) is removed from the controller or use the "Install Cellular Module" mode described in the Communicator Module Replacement section below.

Installing the Module

- 1. Install the provided FCC/IC label on the control's case back. (Lyric-3G/3GC: P/N 800-19687; Lyric-CDMA: P/N 800-19688)
- Remove bezel from right-hand side of control to expose the communication module slot. To remove the bezel, push upward then slide it out.
- 3. Insert the module into the slot. Push firmly to mate the edge connector. Install the securing screw to ensure proper connection and operation.
- 4. Replace the bezel.
- 5. After all other connections are made, power up the controller.
- 6. Program and register the module during the controller's initial association with its AlarmNet 360[™] account. Refer to the controller's Programming Guide for details.
- 7. Check the signal strength before permanently locating the Lyric Controller. See Checking Signal Strength section.





Typical FCC/IC Label Location



Removing the Bezel

Checking Signal Strength

When choosing a suitable mounting location, check the communicator's signal strength to ensure proper operation. For most installations, using the module's internal antenna, mounting the Lyric controller as high as practical, and avoiding large metal components provides adequate signal strength.

Use the Lyric Controller "Cellular Information" screen to display signal strength (in dBm):

Security - Tools - [installer code] - Program - Comm. Diagnostics -Cellular Information

Lyric-3G/3GC: Compare the RSCP (received signal code power [3G]) or RSSI (received signal strength indicator [2G]) number displayed to the Signal Strength Guide at right to ensure adequate signal strength.

Lyric-CDMA: Compare the RSSI (received signal strength indicator) number displayed to the Signal Strength Guide at right to ensure adequate signal strength.

If necessary, relocate the Controller to obtain better signal

Signal Strength Guide – Lyric 3G

F	RSCP (3G) - if module is using the 3G Network
(Good20 to -90 dBm
(OK91 to -100 dBm
١	Marginal101 to -106 dBm
E	Bad107 to -120 dBm
<u>F</u> () () () () () () () () () () () () ()	RSSI (2G) – if module is using the 2G Network Good20 to -89 dBm OK90 to -98 dBm Marginal99 to -104 dBm Bad105 to -120 dBm

Signal Strength Guide - Lyric-CDMA

<u>RSSI:</u>	
Good20 to -90 dBm	
OK91 to -100 dBm	
Marginal101 to -106 dBm	
Bad107 to -120 dBm	

strength (press **Cellular Information** again to refresh the reading). If adequate signal strength cannot be achieved, an external antenna should be used. See **Using an External Antenna** section on other side.

Communicator Module Replacement

In the event the module needs to be replaced, the Lyric Controller must first be put in module replacement mode ("Install Cellular Module") to avoid causing a tamper alarm or damaging the module. Module replacement mode deactivates tamper protection and removes power from the module connector for about 15 minutes.

- Select the Install Cellular Module button. <u>End User</u>: Security -Tools - [master code] - Advanced <u>Installer</u>: Security - Tools - [installer code] -Test
 - a. Select **Yes** at the prompt to continue.
 - b. A popup window displays steps for module replacement. Keep this window open until replacement is completed
- 2. Remove the side bezel. See diagram at right.
- 3. Remove the screw that secures the module.
- 4. Remove the communication module from its connection slot by using the pull tab.
- 5. Insert the new module into the slot. Push firmly to mate the edge connector. Replace the screw.
- 6. Replace the bezel.
- 7. When installation is complete, press **OK** at the replacement steps window. Confirmation of proper installation appears. Press **OK** to exit.



Using an External Antenna

If adequate signal strength cannot be achieved, use external antenna kit model: Cell-ANTST.



Connecting an External Antenna

RF EXPOSURE WARNING

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 7.8 in (20 cm) from all persons and must not be co-located or operated in conjunction with any other transmitter except in accordance with FCC multi-transmitter product procedures.

Mise en Garde

Exposition aux Fréquences Radio: L'antenne (s) utilisée pour cet émetteur doit être installée à une distance de séparation d'au moins 7,8 pouces (20 cm) de toutes les personnes.

IMPORTANT NOTE ABOUT EXTERNAL ANTENNAS If an external cellular radio antenna is used, the antenna may

be installed or replaced ONLY by a professional installer.

TO THE INSTALLER - Lyric-3G

The external antenna must not exceed a maximum directional gain (including cable loss) of 3.2 dBi at 850 MHz and 2.3 dBi at 1900 MHz.

TO THE INSTALLER – Lyric-CDMA

The external antenna must not exceed a maximum directional gain (including cable loss) of 9.3 dBi at 850 MHz and 8.2 dBi at 1900 MHz.

Specifications

Dimensions: 2-5/8"W x 3-1/8"L x 1/2"D Voltage Input .. 5V (provided by the controller)

Current Lyric-3G/3GC

Idle 60mA, standby Transmit 500mA

Lyric-CDMA

Idle75mA, standby Transmit 500mA

Environmental

Operating temperature: -20ºC to +55ºC,

(for compliance agency: 0ºC to +49ºC)

Storage temperature: -40° to +70°C Humidity: 0 to 95% relative humidity, non-condensing (for compliance agency 0% to 85%)

Lyric-3G/3GC Frequency Bands

- 2G GSM/GPRS/EDGE Quad Band 850/900/1800/1900 MHz
- 3G UMTS Band V, Band II 850/1900MHz WCDMA HSUPA
 - HSDPA

Lyric-CDMA RF Features

- Dual-band support for both the 800MHz cellular and 1.9GHz PCS bands.
- Adheres to CDMA authentication as specified in CDMA 1X.
- Support for IS-95A/B and CDMA 1X Release 0/A.

External Antenna Kit: Cell-ANTST

FEDERAL COMMUNICATIONS COMMISSION (FCC) & INDUSTRY CANADA (IC) STATEMENTS

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

FCC CLASS B STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

INDUSTRY CANADA CLASS B STATEMENT

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

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

FCC / IC STATEMENT

This device complies with Part 15 of the FCC Rules, and RSS-210 of IC. Operation is subject to the following two conditions: (1) This device may not cause harmful interference (2) This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la partie 15 des règles de la FCC & de RSS-210 des Industries Canada. Son fonctionnement est soumis aux conditions suivantes: (1) Cet appareil ne doit pas causer d' interférences nuisibles. (2) Cet appareil doit accepter toute interférence reçue y compris les interférences causant une réception indésirable.







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