SKYROUTE™ CL3050 ver 1.2

Universal Wireless Communicator

Compatible with all PowerSeries keypads

Installation & Programming Guide

See Quick Start on Page 3

WARNING: This manual contains information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer. Read the entire manual carefully.

For Your Records

Location _____

Test Time & Day _____

Additional Notes

_____

_____

_____

_____

_____

CONNECT 24™ Enrollment Information

Note: Only authorized dealers can enroll a wireless system to **Connect 24.** Dealer application forms and additional information on the Connect 24 Voice Response Unit can be found at the Connect 24 web site.

http://www.connect24.com/dealer.htm

The information required for activation is listed below. Ensure that all information is available before calling the Connect 24 Voice Response Unit.

USA 1-888-251-7458 **CAN 1-888-955-5583**

Profile Number ..... 5 digits I___I___I___I___I___I

The profile number provides Central Station Receiver information.

Installer ID Number ..... 8-9 digits I___I___I___I___I___I___I___I___I

An Installer ID number was provided for each installer listed on the ***Dealer Enrollment Form***. This number can be found on the authorized ***Installer Card*** sent with the ***Dealer Confirmation Form.***

Installer PIN Number ..... 4 digits I___I___I___I___I

Each Installer provided a 4 digit PIN number on the ***Dealer Enrollment Form***. If you have forgotten your PIN Number contact ***Connect 24.***

Central Station Account number ..... 2-6 digits I___I___I___I___I___I___I

This is the Account Number that will be sent to the Central Station.
NOTE: 4-digits maximum for ***Contact ID*** format.

Skyroute MIN..... 10 digits I___I___I___I___I___I___I___I___I___I___I___I

The Skyroute **Mobile Identification Number** identifies the Skyroute transmitter. The 10-digit MIN is located on the label affixed to your Skyroute Transmitter.

System ID Number (SID)..... 5 digits I___I___I___I___I___I

The **System ID Number** informs Connect 24 and the cellular network the **home area** that your transmitter is installed in. When this number is programmed into an alarm panel it is entered in **HEX format.** When entering this number into the Connect 24 Voice Response Unit, it is entered in **Decimal Format.**

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NOTE:

Section 1: Introduction

The Skyroute CL3050 is a standalone wireless communicator that sends alarm system information to **Connect 24**. Connect 24 then forwards this information to the central station. The Skyroute CL3050 has four modes of operation. It can operate in one of three operational modes or; if it is connected to a keypad, in the programming mode. The Skyroute CL3050 is pre-programmed with the most commonly used settings for quick installation. If required the default options can be custom programmed.

NOTE: *For UL Installations, use mode 2 or 3 ONLY.*

Mode 1: Bell Follower

In Mode 1, the Skyroute CL3050 monitors the **Bell Output** of the control panel. The system identifies the Bell Output cadence and transmits the corresponding Fire or Burglar alarm reporting code to **Connect 24**.

Refer to the appropriate *control panel Installation Manual.*

NOTE: *Not for UL Listed installations.*

Mode 2: 2-Zone Panel

In Mode 2, the system will configure itself for 2 zone, stand alone operation.

NOTE: *UL Listed for residential burglary installations ONLY.*

Mode 3: 8-Zone Panel

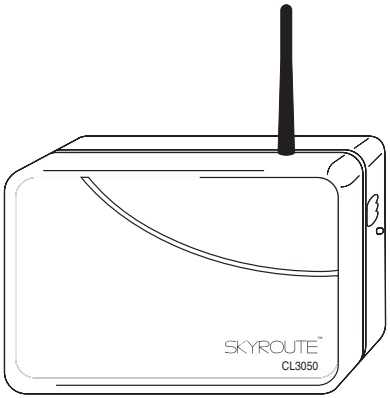
If the Skyroute CL3050 detects a PC5108 expander card on power up it will automatically configure itself for 8-zone standalone operation with normally closed loops.

NOTE: *Standalone operation is intended for household fire and burglary and it is considered ancillary operation for commercial fire and burglary installations.*

Programming Mode

If the Skyroute CL3050 detects a keypad on power up it will go into the programming mode. Programming mode allows the installer to custom program system options. Refer to Section 5, Programming Descriptions; and Section 6, Programming Worksheets for programming options and default settings.

Figure 1



1.1 Specifications

- *Power Supply Ratings*
  - *Voltage: 10.6-14 VAC or VDC*
  - *Current: 500 mA (Max)*
  - *Low DC Trouble: 8.8 VDC*
  - *Low DC Restore: 9.0 VDC*
  - *Low AC Trouble: 7.5 VAC*
  - *Low AC Restore: 8.0 VAC*
- *Current Drain*
  - *Standby: 100 mA*
  - *Receiving: 150 mA*
  - *Transmitting: 850 mA (350 mA from external power supply)*
- *RF Power Output: 600 mW*
- *Antenna Gain: 0 db*
- *Battery*
  - *Charging Voltage: 6.87 VDC*
  - *Low Battery Restore: 5.87 VDC*
  - *Low Battery Trouble: 5.72 VDC*
  - *Critical Shutdown: 5.0 VDC*
- *Operating Modes*
  - *Bell Follower*
  - *2-24Hr Zones*
  - *8-24Hr zones (with PC5108)*
- *Event Buffer (communications): 32 Events (not viewable)*
- *Dimensions: 5 1/8" x 7 3/4" x 2"*
- *Weight: 0.5 lbs. (0.2Kg)*
- *EEPROM Memory*
- *Programmable by all PowerSeries Keypads*
  - *PC5508/KP5508Z: 8 Zone LED keypad*
  - *PC5516Z/KP5516Z: 16 Zone LED keypad*
  - *PC5532Z/KP5532Z: 32 Zone LED keypad*
  - *LCD5500Z/KPL5500Z: Programmable Message LCD Keypad*
  - *LCD5501Z/KP5501Z: Fixed Message LCD Keypad*

1.2 Unpacking

Verify that the following items have been included.

1	*Skyroute CL3050 (rechargeable battery included)*
1	*Installation & Programming Guide*
1	*Antenna*
4	*Mounting screws*
4	*5.6KΩ resistors*
1	*Enclosure screw*

Remove antenna from protective bubble pack and install in unit.

CAUTION: *Install antenna before connecting battery or power leads to this unit. Transmission without an antenna can cause permanent damage.*
When removing cover of this unit ***DO NOT*** *touch or handle exposed electrical devices and components. Electrostatic discharge (ESD) can permanently damage this unit or reduce the reliability and life expectancy of components.*

Section 2: Quick Start

2.1 Installation

1 Determine The Operating mode required

The operating mode (modes 1, 2, or 3) will determine how the unit is to be wired up. Refer to section 6, ***Programming Descriptions, section [10]*** for available options and for programming defaults. See section 4, ***Power up Sequence*** for selection of Operating and Programming modes.

NOTE: *For UL Installations, use only mode 2 or 3.*

2 Determine the Mounting Location

Select a mounting location in a dry, protected area. The mounting location should be positioned so that it is at least 30 cm. away from physical contact with any person.

NOTE: *Do Not exceed the following recommendations for wire run distances*

- Keybus and zone wiring should be run using minimum 22 gauge quad (0.5mm). Two pair twisted is preferred.
- a keypad, PC5108, or zone wiring can not exceed 1,000'/305m (in wire length) from the Skyroute CL3050.
- Shielded wire is not necessary unless wires are run in an area that may present excessive RF noise or interference.
- Refer to section 6, ***Programming Descriptions, section [10]*** for zone wiring details.

NOTE: *Generally, the higher the location and the closer that the Skyroute CL3050 is to an outside wall, the better the signal strength will be.*

3 *Checking Signal Strength*

- Remove front cover
- Connect Battery to the RED and BLK flying leads.
- Connect AC Power source or 12 VDC to RED & BLK terminals.
- Allow unit to power up

NOTE: *The unit does not need to be enrolled with* ***Connect 24*** *to check signal strength.*

- When the green LED stops flashing, press and release the enroll button.
- Ensure that Radio Signal Strength Indication (RSSI) is greater than the minimum acceptable level as indicated below. If the signal level is not acceptable, reposition and retest the Skyroute CL3050 until an acceptable signal strength is found.

Red LED	Yellow LED	Green LED	Signal Strength
On	On	On	>87%
On	On	Flash	69-87%
On	On	Off	*****52-68%
On	Flash	Off	34-51%
On	Off	Off	16-33%
Flash	Off	Off	0-15%

***Minimum recommended signal strength for enrollment**

4 Route Wiring to Mounting Location

Route wiring from the hardwired zones or control panel as required.

NOTE: *Route wiring through conduit to a junction box if possible. Mount the Skyroute Panel.*

5 Mount Unit

- Remove the front cover if required
- Disconnect flying leads from battery and power leads from the RED and BLK terminals (if connected).
- Remove two screws securing battery clamp. Remove battery
- Mount backplate of unit to wall or over electrical junction box using the four screws provided.

NOTE: DO NOT *connect the battery to the flying leads and AC or DC power to the terminal strip until all other wiring connections are completed.*

- Route wiring through the access holes provided and connect to terminal strip.
- Power up unit by connecting battery and power source.
- Front cover is to be securely fastened with screw provided.

6 Enroll Unit

Call Connect 24 and Enroll the Skyroute CL3050. Refer to ***back of Front Cover*** for contact information and a list of information required to complete the enrollment with the Connect 24 Voice Response Unit.

2.2 Testing

Program Mode: If you have wired the unit to power up in the programming mode. Follow the steps outlined in ***Section 6, Programming Descriptions*** and record the program settings in ***Section 7, Programming Worksheets.***

Test Transmission - Pressing and holding the enroll button for 2 seconds will send a test transmission to the central station via **Connect 24.** Refer to ***Enroll Button*** in ***Section 3, Controls and indicators*** for test transmission details.

Mode 1: Disable the telephone line connected to the control panel. Simulate Burglar and Fire Zone violation. Verify that the Skyroute CL3050 transmits the events to the central station.

Mode 2 & 3: Simulate Faults, Tampers, and Zone violations in accordance with the settings outlined in ***Sections 6, Programming Descriptions***. Verify that the Skyroute CL3050 transmits the events to the central station.

2.3 Resetting to Factory Defaults

NOTE: *Resetting to factory defaults is required to change mode of operation.*

- Remove Power from the Skyroute CL3050; disconnect battery and control panel if applicable (mode 1).
- Disconnect all wiring from the YEL and GRN terminals.
- Connect a jumper wire between the YEL and GRN terminals.
- Apply power to the system.

NOTE: *When the hardware default has been completed; the yellow, green and red LEDs will flash on and off continuously.*

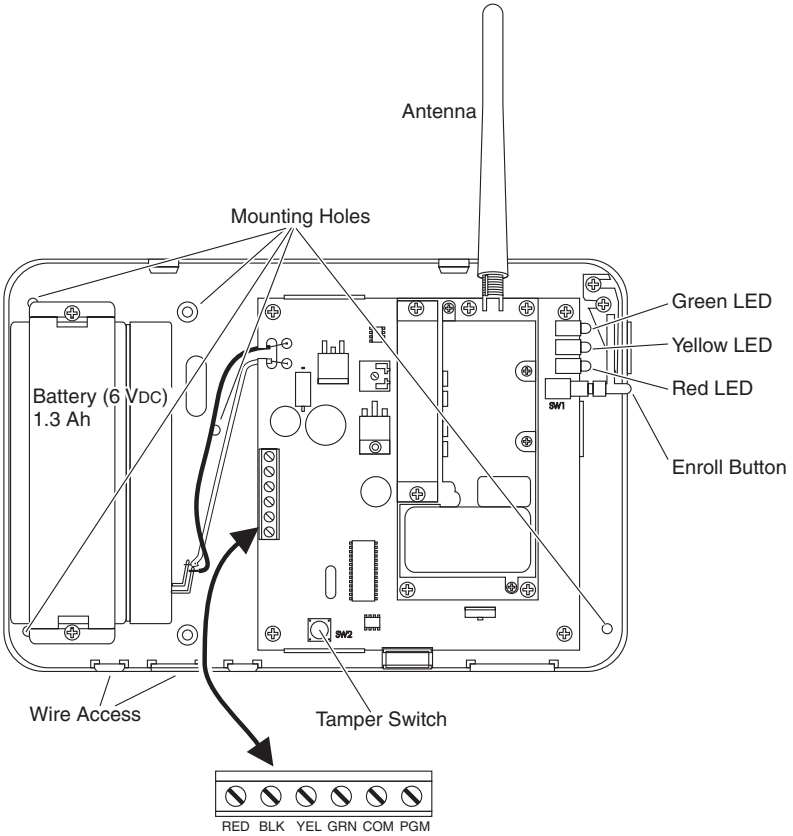
- Remove power from the system.

NOTE: *To resume communications with* ***Connect 24, Section [11], Option 6*** *must be set to ON. To do this; the system must be powered up in programming mode. Refer to* ***Section 5 System Programming.***

- Reconnect all original wiring and reapply power to the system.
- Test System - Refer to ***Section 2.2***

Section 3: Controls and Indicators

Figure 2



3.1 LED Indicators (see figure 2)

Yellow LED

During normal operation, the yellow LED will indicate the system status with a series of flashes as indicated below.

No. of Flashes	Indication
1	No trouble conditions present
2	Low battery
3	Input supply failure
4	Not enrolled at **Connect 24**
5	No service available
6	Radio failure
7	PC5108 failure
8	Failure to communicate
9	Zone tamper/fault trouble

NOTE: *Multiple trouble conditions are displayed (flashed) in sequence.*

Red LED

The red LED will flash to provide event transmission status for the following events:

1 Flash	Enroll button held down for 2 seconds
1 Flash	Event transmitted to cellular network
2 Flashes	Event acknowledged by **Connect 24**.

Green LED

The green LED will light continuously if the (RSSI) signal is acceptable. If signal strength is not acceptable the LED will turn OFF. Detailed information on signal strength can be accessed by momentarily pressing and releasing the enroll button. The green, yellow and red LEDs will light to indicate the range of signal strength. Refer to ***Section 2 Step 3.***

3.2 Enroll Button (see figure 2)

The Skyroute CL3050 Enroll button is located on the outside of the plastic housing directly below the status LEDs. The enroll button performs three functions.

- Pressing and releasing this button momentarily during the first 15 seconds of power up will toggle between Mode 1 and Mode 2 to enable mode selection.
- Pressing and releasing this button momentarily at any time after the power up sequence will display the detailed RSSI status indicated above.
- Holding this button down for a period of 2 seconds continuously will cause the Skyroute CL3050 to send a test transmission to **Connect 24**, this long debounce will be indicated by the red LED flashing once.

3.3 Terminal Connections (see figure 2)

RED 10.6-14VDC Positive Input or 10.6-14VAC

NOTE: *12VDC is required for programming or for operation with a PC5108 zone expander. Mode 1 and Mode 2 may be operated with an AC Supply.*

BLK 10.6-14VDC Ground or 10.6-14VAC

YEL **Mode 1*** - The YEL terminal functions as the Bell input.
Mode 2 - This terminal functions as the zone 1 input.
Mode 3 - This terminal connects to the YEL Keybus terminal when using a PC5108 zone expander or PowerSeries keypad.

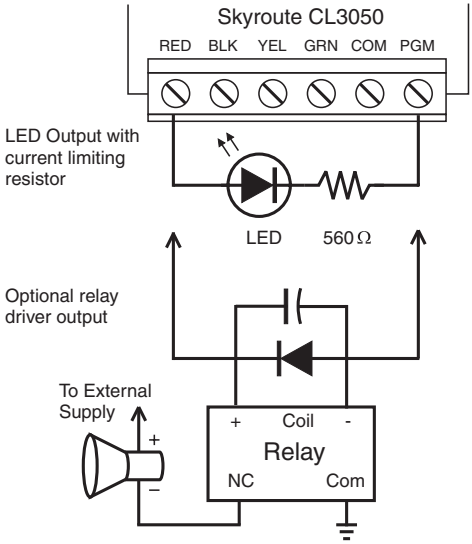
GRN **Mode 1*** - The GRN terminal functions as the TLM Trouble input.
Mode 2 - This terminal functions as the zone 2 input.
Mode 3 - This terminal connects to the GRN Keybus terminal when using a PC5108 zone expander or PowerSeries keypad.

COM **Mode 1*** - This terminal functions as the common terminal for the Bell Input on the YEL terminal, the TLM trouble input on the GRN terminal and the Trouble Output on the PGM terminal.
Mode 2 - This terminal functions as the common terminal for zone 1 (YEL) and zone 2 (GRN).
Mode 3 - This terminal functions as the common terminal for the Trouble Output

NOTE: *Mode 1 is not intended for UL Installations.*

PGM - The PGM output is dedicated for Skyroute CL3050 trouble indications. If a control panel is not monitoring the Skyroute CL3050, an LED or a buzzer can be connected between this terminal and the RED terminal for trouble indication. The PGM terminal switches low from an open-collector state. Connect to the control panel using a Single EOL configuration as shown in ***6 Programming Descriptions Section [13] on page 11.***

NOTES: *The PGM output can sink 50 mA (maximum). For UL Installations, use DSC RM-1 Relay Module.*



Section 4: Power up Sequence

On first-time power up, the Skyroute CL3050 will generate a random test transmission time and random day of the week to send it. The installer can then change this information if required.

During power up, the Skyroute CL3050 will look for a keypad on the Keybus, if one is found, it will go into the programming mode. If no keypad is found, it will look for a PC5108 zone expander module. If a zone expander is found, it will automatically configure itself for mode 3. If no Keybus modules are present, the Skyroute CL3050 will power up in mode 1. During the first 15 seconds of power up, any zone scanning will be shunted. During this time the installer can momentarily press the enroll button on the Skyroute CL3050 to toggle between mode 1 and mode 2. Upon power up the green LED will be flashing on and off. This will indicate to the installer that he/she can change the mode to 1 or 2. The red LED will indicate mode 1 and the yellow LED will indicate mode 2. If neither red or yellow LED is lit, then the Skyroute CL3050 has detected a PC5108 module, the mode cannot be changed by pressing the enroll button if a PC5108 module is connected to the Skyroute CL3050.

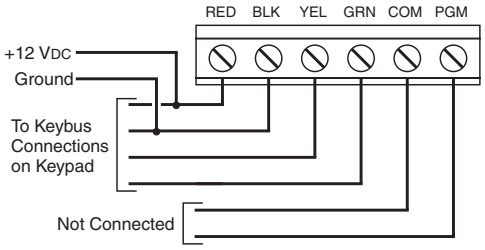
If a *keypad* is detected on Keybus, the green LED will stop flashing, and the red LED will begin flashing to indicate that programming mode is active.

Section 5: System Programming

The Skyroute CL3050 is programmed using any PowerSeries keypad. Refer to ***Section 1.1 Specifications.***

NOTE: *Power down the Skyroute CL3050 when connecting or removing other Keybus modules from the system. If the Skyroute CL3050 is connected to a control panel (mode 1), the control panel must also be powered down.*

1. Connect keypad Keybus connections to the RED, BLK, YEL and GRN terminals of the Skyroute CL3050.



2. Connect a +12VDC supply across the RED and BLK terminals. Upon detecting the keypad on power up, the Skyroute CL3050 will begin driving Keybus and will blank the keypad with all LEDs and icons off.

NOTE: *The red LED on the Skyroute CL3050 will flash continuously if a keypad is detected.*

3. Press the star [*] key to gain access to the programming section. Programming is done with a 2-digit section entry. When programming is complete, power down the Skyroute CL3050 and remove the keypad.

Section 6: Programming Descriptions

[01] Zone 1, 2 Definitions

Modes 2, 3

When the Skyroute CL3050 is in Mode 2 or 3, there are 14 options that can be programmed as zone types. All of the zone types with the exception of 00 (null zone), 13 (CL3050 communications zone) and 14 (trouble zone) are straightforward. Since all the zones are 24-hour type zones, selecting any listed zone type will simply select which identifier should be used for reporting the alarm. Programming a zone as 00 (null zone) will disable the zone input on the Skyroute CL3050 or PC5108 hardware. Programming any zone as type 13 (CL3050 communications zone) will disable all communications unless that zone input is closed (short condition). Programming a zone as 14 (trouble zone) will enable an additional reporting code to be sent with the daily/weekly test transmission (if enabled). If all zones are restored and there are no trouble conditions present on the Skyroute CL3050, a periodic test transmission code (RP00) will be sent. otherwise a periodic test off-normal code (RY00) will be sent instead.

NOTE: *Do* ***NOT*** *program more than 1 CL3050 communications zone or trouble zone on the Skyroute CL3050.*

Default - [01] zones 1 & 2

[02] Zone 3 - 8 Definitions

Mode 3

This allows programming of the six additional zone definitions when operating in mode 3 with a PC5108 zone expander. See section [01] for details
Default - [01] zones 3 - 8

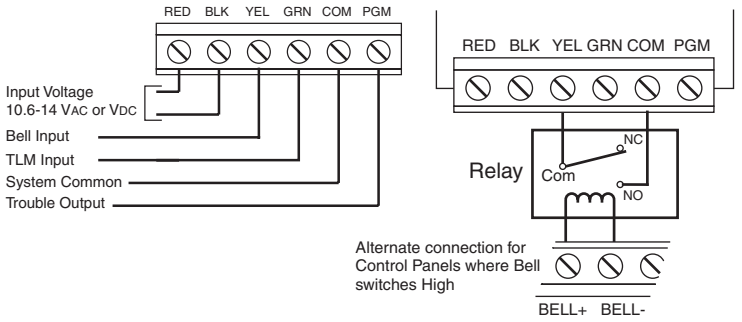
[03] Zone 1, 2 Loop Response

Modes 2

This entry determines how quickly a zone will respond to changes in state.
NOTE: *This does not affect zones on a PC5108 zone expander card.*
Default - 05 (0.5 seconds) 01-FF Hex x 0.1 seconds.

[10] Skyroute CL3050 Mode of Operation

[01] Mode 1 - Bell Follower Operation



In this mode, the YEL terminal is connected to the bell output of a control panel. The Skyroute CL3050 monitors the output for burglary and fire cadences and transmits the appropriate events. For any type of pulsed cadence, the Skyroute CL3050 will send a generic Fire event, for any steady bell the Skyroute CL3050 will send a generic Burglary event. The GRN terminal is a trouble input which can be connected to a system output to alert the Skyroute CL3050 of a system TLM fault. This will enables the Skyroute CL3050 to be used as a back-up communicator only. **If not used, this input must to connected to COM**. The bell cadence will be determined as follows:

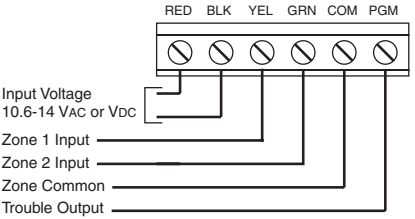
- *Bell must be on for longer then 300mS to be considered a "pulse"*
- *Bell must be on for 3 seconds continuous to be considered "steady"*
- *Bell must be off for 3 seconds continuous to be considered "silenced"*
- *Bell must pulse on and off 3 times to be considered "pulsed", 3rd off-time will trigger event*

Bell	Report Code	Group
Pulsed	**FA98**	**Fire**
Steady	**BA98**	**Burglary**

NOTE: *Mode 1 is not intended for UL Installations.*

[02] Mode 2 - (2) 24-Hour Zones

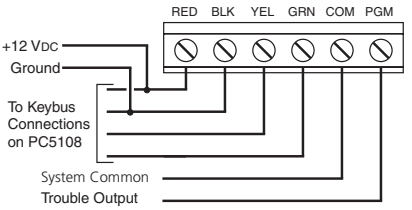
In this mode, the YEL and GRN terminals on the Skyroute CL3050 will be used as zone inputs. These zones will support the DSC standard EOL configuration and loop response. Programming sections will allow the installer to change the default zone types and attributes. The Skyroute CL3050 will continuously monitor these zones and transmit any alarms that occur to the central station.



NOTE: *Use Mode 2 for UL residential burglary installations.*

[03] Mode 3 - (8) 24-Hour Zones

In this mode, the Skyroute CL3050 is connected to a PC5108 zone expander using the corresponding RED, BLK, YEL and GRN terminals. The Skyroute CL3050 will drive the Keybus to communicate with the PC5108. A +12VDC supply connected to the RED and BLK terminals is required when using this mode. The Programming sections allow the installer to change the default zone types and attributes. The Skyroute CL3050 continuously monitors these zones and transmits any alarms that occur to the central station.



NOTES: *This configuration can not be used with an AC supply.*
Jumpers on the PC5108 must be set as follows:

J1	**ON**	**J4**	**OFF**
J2	**OFF**	**J5**	**OFF**
J3	**ON**	**J6**	**ON**

Default - [01 -03] dependant on start up configuration.

NOTES: *Use Mode 3 for UL Installations.*
PC5108 must be installed in its own enclosure or in the same cabinet as the control panel.
All connections are power limited.

[11] Skyroute CL3050 Configuration Options 1

Option 1 - A Channel Selected/ B Channel Selected. ***All Modes***

This Option determines whether cellular channel ***"B"*** *or channel* ***"A"*** *is used*. In Canada, Channel B is used (Default). In the USA refer to the SID list for the channel of the cellular service provider in your area. ***Default -*** Channel B

Option 2 - Normally Closed Loops/ End-of-line Resistors ***Mode 2, 3***

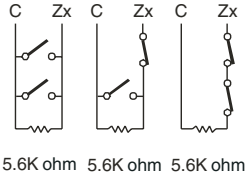
Normally Closed Loops can be wired as shown. Multiple Normally Closed contacts can be wired in series. For Double or Single EOL resistors this option must be set to **OFF**. ***Default -*** Normally Closed (N/C) Loops.

NOTE: *Option must be OFF for UL Installations.*

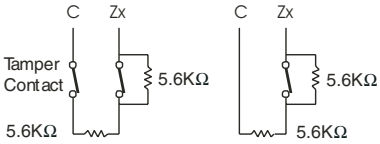
Option 3 - Double EOL Resistors/Single EOL Resistors ***Mode 2, 3***

This option selects Double EOL resistors (ON) or Single EOL resistors (OFF) wired as indicated

Single EOL resistors allows the use of N/C and/or Normally Open contacts.



Double EOL resistors allows the zone to be monitored for fault, tamper, secure and violated conditions. Only Normally Closed contacts can be used in this configuration



NOTES: *Option 2 must be set to* ***OFF*** *to enable these options.* ***Default -*** *OFF Option must be ON for UL Installations.*

Option 4 - Test Once a Day Enabled/Disabled ***All Modes***

Allows transmission test daily. ***Default -*** Disabled.

NOTE: *Option must be ON for UL Installations.*

Option 5 - Test Once a Week Enabled/Disabled ***All Modes***

Allows transmission test weekly. ***Default*** *- Enabled*

NOTE: *This option will be overridden If option 4 is set for daily test transmissions. Option must be OFF for UL Installations.*

Option 6 - Enrolled with Connect 24 /Not Enrolled ***All Modes***

This option is set automatically during the enrollment procedure with Connect 24. IF the Skyroute CL3050 is reset to the default settings this option must be set to **ON** for the Skyroute CL3050 to resume communications.
Default - Not Enrolled.

Options 7, 8 - System Use ***All Modes***

CAUTION: *Do NOT change these settings unless it is requested by DSC technical support personnel.* ***Default*** *- OFF.*

[12] Skyroute CL3050 Configuration Options 2

Option 1 - Swinger Shutdown Enabled/Disabled ***Modes 2, 3***

This option limits the number of alarm events transmitted per zone to 8 until the counter has been reset (counter automatically resets at midnight), then event transmissions will resume. ***Default -*** Enabled

NOTES: *Tampers and Faults will be counted unless they are disabled in section [20]. Option must be OFF for UL Installations.*

Options 2 - 8 Future Use

[13] Skyroute CL3050 Trouble Output mask ***All Modes***

The PGM output is dedicated for trouble indications. If a control panel is not monitoring the Skyroute CL3050, an LED or a buzzer can be connected between this terminal and the RED terminal for a trouble indication. The PGM terminal switches low from an open-collector state. Connect to the control panel using a single EOL resistor configuration.

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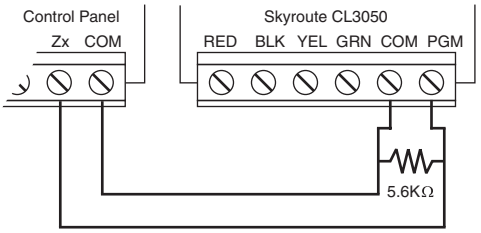

NOTE: *A relay may be required for proper operation in other configurations.* See paragraph 3.3 Terminal Connections.

Option 1 - Low battery ***All Modes***

If the battery voltage drops below 5.72VDC a trouble will be indicated until the battery voltage rises to 5.87VDC. ***Default -*** ON

Option 2 - Input Supply Failure ***All Modes***

If AC power is absent or if DC power drops below 8.8VDC on the RED and BLK terminals, this trouble is indicated. Default **-** ON

Option 3 - Zone Fault/Tamper (DEOL Only) ***Modes 2, 3***

A trouble will be indicated if any zone reports a fault or tamper condition. In Section [11], Option [2] must be set to **OFF** and Option [3] must be set to **ON** for this option to be enabled. ***Default -*** **OFF**

Option 4 - No Service Available ***All Modes***

This trouble is indicated If the system is unable to detect cellular service.
Default - ON

Option 5 - Radio Failure ***All Modes***

This trouble is indicated if there is an internal fault with the cellular radio. ***Default -*** ON

Option 6 - PC5108 Failure ***Mode 3***

This trouble is indicated if a PC5108 supervisory or Keybus fault occurs.

NOTE: *The PC5108 tamper is communicated only, therefore it can only be enabled by turning on section 20 option 7 and section 21 option 5. There is no local annunciation for this event.* ***Default -*** *ON*

Option 7 - Failure to Communicate (FTC) ***All Modes***

This trouble will be indicated if no acknowledgement has been received from **Connect 24** after three attempts. ***Default -*** ON

Option 8 - Skyroute CL3050 Tamper ***All Modes***

This trouble will be indicated if the cover is removed from the Skyroute CL3050 activating the on-board tamper switch. ***Default -*** OFF

[15] System Time ***All Modes***

When the time and day have been programmed, the values are saved and are used as the current time and day whenever the Skyroute CL3050 does a power up. Time and day programming is only required if the installer desires the Skyroute CL3050 to test transmit at a specific time and/or day. There is no "loss of time" trouble on the Skyroute CL3050.
Default - 0000 - 2359

NOTE: *If AC Power is detected, it will be used to provide the time base for the internal clock. If AC power is not detected the internal clock will automatically use the crystal time base.*

[16] System Day of the Week

All Modes

See section [15].
Option 1. (Sunday) ***Default -*** ON
Option 2 - 8. (Monday - Saturday) ***Default -*** OFF

[17] Test Transmission Time

All Modes

When the Skyroute CL3050 is powered up for the first time, or after a default reset; it will check if the test transmission time and day are programmed. If they are not, a random time (0000 - 2359) will be programmed into this location. The Skyroute CL3050 will randomly generate this value.

NOTE: *Due to traffic volume, when selecting test transmission times, select a time that is not on the :30 minute mark (e.g., 02:24, 04:07)***.**

[18] Test Transmission Day

All Modes

When the Skyroute CL3050 is powered up for the first time, or after a default, it will check if the test transmission time and day are programmed. If they are not, a random day (Sunday-Saturday) will be programmed into this location. The Skyroute CL3050 will randomly generate this value. Because one test transmission weekly is the most common configuration, this will allow the installer to setup the Skyroute CL3050 without keypad programming.
Option 1-8. ***Default -*** [Random] - *One only will be enabled.*

[20] Transmission Options

All Modes

When the following options are enabled the reporting codes listed in Appendix A are sent to **Connect 24**.

Options 1, 2 - Zone Alarm/Zone Alarm Restores ***Modes 2, 3***

When a zone is violated or restored, the reporting codes listed in Appendix A will be sent.

NOTES: *If generic reporting is enabled and multiple alarms occur during the delay programmed in Section [23], only one alarm reporting code will be sent. Zone alarm restorals enabled with generic zone reporting enabled can cause unpaired events to be sent to Connect 24.*

Option 1. ***Default -*** ON, Option 2. ***Default -*** OFF

Options 3, 4 - Zone Fault, Zone Fault Restores ***Modes 2, 3***

When the system sees a short circuit across any zone, a zone fault is generated. DEOL resistors are required for zone fault reporting. In Section [11], Option [2] must be set to OFF and Option [3] must be set to ON; In Section [13], Option 3 must be set to ON and the Skyroute CL3050 must be operating in mode 2 or 3.
Option 3. ***Default -*** OFF, Option 4. ***Default -*** OFF

Options 5, 6 - Zone Tamper, Zone Tamper Restores ***Modes 2, 3***

When the system sees an open circuit across any zone a zone tamper is generated. DEOL resistors are required for zone tamper reporting. In Section [11], Option [2] must be set to OFF and Option [3] must be set to ON. In Section [13], Option [3] must be set to ON and the Skyroute CL3050 must be operating in mode 2 or 3.
Option 5. ***Default -*** OFF, Option 6. ***Default -*** OFF

Option 7 - System Maintenance Events ***All Modes***

When this option is enabled, the maintenance events enabled in Section [21] are transmitted using the codes listed in appendix A.
Default - ON,

Option 8 - Generic Zones ***Modes 2, 3***

The Skyroute CL3050 supports generic and detailed zone alarm reporting. By default, the Skyroute CL3050 will be in generic zone reporting mode. When in this mode, all zone types are divided into four reporting groups; BA Burg, FA Fire, PA Panic, UA Technical. If any zone from this group initiates a transmission, the generic reporting code for this event is sent, additional violations from other zones from the same group will be ignored until that group's timer has expired. See table below for zone type grouping.

Zone Type	Detailed Reporting Code	Generic Reporting Code
Null	-	-
Burglary	BA	BA
Fire	FA	FA
Panic	PA	PA
Technical	UA	UA
Gas*	GA	UA
Heat*	KA	FA
Medical*	MA	PA
Emergency	QA	PA
Water*	WA	UA
Freezer*	ZA	UA
Sprinkler*	SA	UA
Hold-up	HA	PA

**** Not for UL Listed Installations.***
Each zone group has it's own timer. The default time is 5 minutes and is programmed in Section [23]. If any zone in a group initiates an event, the timer will start running and the generic event will be sent. If any additional zones from the same group initiate an event before that group's timer expires, the event will be ignored. This generic zone reporting mode only applies to zone alarms. Alarm restorals, tamper/tamper restorals and fault/fault restorals are not grouped together into generic reporting groups.
The generic identifier will be sent with 98 as it's zone number, this is a special combination recognized by **Connect 24** as a generic event. When the generic zone reporting toggle is disabled, each zone alarm for each zone type will then send it's own identifier. ***Default -*** ON.
NOTE: *The CL3050 communication zone and trouble zone will always send detailed reporting codes.*

[21] System Event Communication Options

NOTE: *Section [20], Option [7] must be enabled for these events to be communicated.*

Option 1 - Input Supply Failure ***All Modes***

If AC power is absent or if DC power drops below 8.8VDC on the RED and BLK terminals, a trouble will be sent after the delay programmed in section **[22]** has expired. ***Default -*** ON,

Option 2 - Low Battery ***All Modes***

If the battery voltage drops below 5.72VDC a trouble will be sent to **Connect 24**. When the battery voltage rises to 5.87VDC the system will send a restore.
Default - ON.

Option 3 - Skyroute CL3050 Tamper ***All Modes***

Removing the cover on the Skyroute CL3050 will send a tamper reporting code to **Connect 24**. ***Default -*** OFF.

Option 4 - PC5108 Module Fault ***Mode 3***

Indicates a Keybus communications fault condition. ***Default*** - OFF.

Option 5 - PC5108 Tamper ***Mode 3***

Removing the cover on the PC5108 will send a tamper reporting code to Connect 24. ***Default*** - OFF.

Option 6 - TLM Trouble Report ***All Modes***

Indicates a telephone line trouble if a CL3050 communications zone is violated. ***Default*** - OFF.

[22] Input Supply Fail TX Delay ***All Modes***

This value determines the delay (default 0700 = 7 hrs) before an input supply failure reporting code is sent if programmed. See Section [21]**,** Option [1] and Section [20], Option [2]. ***Default -*** 0700 (=7 hrs)

[23] Generic Zone Reporting Timer ***Modes 2, 3***

This hex value determines the delay before a generic zone reporting code is sent, if programmed in Section 20 Option 8.
NOTE: *There are four separate timers for Burglary, Fire, Panic and Supervisory; the delay programmed is the same for each timer.*
Default - 1E (300 seconds / 5 minutes) Range equals 01-FF Hex seconds x 10

[24] Number of Attempts ***All Modes***

This value determines how many attempts are made to send an event to Connect 24. ***Default -*** 03
NOTES: *For UL Installations in Mode 2, minimum 5, maximum 10 attempts required.*
For UL Installations in Mode 3, the combination of attempts between DACT and Skyroute shall be minimum 5 and maximum 10.

[25] Response Wait Time ***All Modes***

This value determines how long the Skyroute CL3050 will wait for a response from Conect 24 before attempting to resend the same event.
Default - FA (250 seconds) range equals 01-FF Hex seconds.
NOTE: *For UL Installations this must be 90 seconds (5A).*

Section 7: Programming Worksheets

Zone Definitions (For Sections [01] -[02])

00 Null Zone (Not Used)
01 Burglary
02 Fire
03 Panic
04 Technical
05 Gas*
06 High Temp*
07 Medical*
08 Emergency
09 Water Level*
10 Low Temp*
11 Sprinkler*
12 Hold-up
13 CL3050 Communications Zone (1 zone max.)
14 Trouble Zone (1 zone max.)

** Not for use in UL Installations.*

[01] Zone 1-2 Definitions

Default		*Default*	
01	I___I___I Zone 1	**01**	I___I___I Zone 2

[02] Zone 3-8 Definitions

Default		*Default*	
01	I___I___I Zone 3	**01**	I___I___I Zone 4
01	I___I___I Zone 5	**01**	I___I___I Zone 6
01	I___I___I Zone 7	**01**	I___I___I Zone 8

[03] Zone 1-2 Loop Response 01-FF (Hex 0.1 second increments), mode 2 only

Default		*Default*	
05	I___I___I Zone 1	**05**	I___I___I Zone 2

[10] Skyroute CL3050 Mode of Operation

Default		*Default*
01	I___I___I **01** - Bell Follower, **02** - 2 Zone, **03** - 8 zone (PC5108)	

NOTE: *Use modes 2 and 3 for UL Installations.*

[11] Skyroute CL3050 Configuration Options 1

Default	*Opt*		*Option On*	*Option Off*
OFF	I___I	**1**	A Channel selected	B Channel selected
ON	I___I	**2**	Normally Closed Loops	End-of-Line Resistors*
OFF	I___I	**3**	Double End-of-Line Resistors	Single End-of-Line Resistors**
OFF	I___I	**4**	Test Once a Day Enabled	Disabled**
ON	I___I	**5**	Test Once a Week Enabled	Disabled*
OFF	I___I	**6**	Enrolled with **Connect 24**	Not Enrolled with **Connect 24**
OFF	I___I	**7**	**System Use** - ***Caution: Do not change***	
OFF	I___I	**8**	**System Use - *Caution: Do not change***	

* Option must be OFF for UL Installations.

** Option must be ON for UL Installations.

[12] Skyroute CL3050 Configuration Options 2

Default	*Opt*		*Option On*	*Option Off*
ON	I___I	1	Swinger Shutdown Enabled	Swinger Shutdown Disabled
OFF	I___I	2-8 For Future Use		

NOTE: *Option must be disabled for UL Installations.*

[13] Skyroute CL3050 Trouble Mask

Default		*Opt*	*Option On*	*Option Off*
ON	I___I	**1**	Low Battery	Disabled
ON	I___I	**2**	Input Supply Failure	Disabled
OFF	I___I	**3**	Zone Fault/Tamper (DEOL only)	Disabled
ON	I___I	**4**	No Service Available	Disabled
ON	I___I	**5**	Radio Failure	Disabled
ON	I___I	**6**	PC5108 Failure	Disabled
ON	I___I	**7**	Failure to Communicate	Disabled
OFF	I___I	**8**	Skyroute CL3050 Tamper	Disabled**

[15] System Time

Default	*Range*	
0000 I___I___I___I___I	0000-2359	Hrs/Mins

[16] System Day

Default	*Opt*		*Option On*	*Option Off*
ON	I___I	**1**	Sunday	Disabled
OFF	I___I	**2**	Monday	Disabled
OFF	I___I	**3**	Tuesday	Disabled
OFF	I___I	**4**	Wednesday	Disabled
OFF	I___I	**5**	Thursday	Disabled
OFF	I___I	**6**	Friday	Disabled
OFF	I___I	**7**	Saturday	Disabled
OFF	I___I	**8**	**For Future Use**	

[17] Test Transmission Time

Default	*Range*	
Random I___I___I___I___I	0000-2359	Random on power up unless programmed

[18] Test Transmission Day ***Selected at random on power up**

Default	*Opt*		*Option On*	*Option Off*
*	I___I	**1**	Sunday	Disabled
*	I___I	**2**	Monday	Disabled
*	I___I	**3**	Tuesday	Disabled
*	I___I	**4**	Wednesday	Disabled
*	I___I	**5**	Thursday	Disabled
*	I___I	**6**	Friday	Disabled
*	I___I	**7**	Saturday	Disabled
*	I___I	**8**	For Future Use	

[20] Transmission Options

Default	*Opt*		*Option On*	*Option Off*
ON	I___I	**1**	Zone Alarms	Disabled
OFF	I___I	**2**	Zone Alarm Restores	Disabled**
OFF	I___I	**3**	Zone Fault	Disabled**
OFF	I___I	**4**	Zone Fault Restores	Disabled**
OFF	I___I	**5**	Zone Tamper	Disabled**
OFF	I___I	**6**	Zone Tamper Restores	Disabled**
ON	I___I	**7**	System Maintenance Events	Disabled**
ON	I___I	**8**	Generic Zone Reporting	Detailed Zone Reporting**

[21] System Event Communication Options

Default	*Opt*		*Option On*	*Option Off*
ON	I___I	**1**	Input Supply Failure	Disabled
ON	I___I	**2**	Low Battery	Disabled
OFF	I___I	**3**	Skyroute CL3050 Tamper	Disabled**
OFF	I___I	**4**	PC5108 Module Fault	Disabled**
OFF	I___I	**5**	PC5108 Tamper	Disabled**
OFF	I___I	**6**	TLM Trouble Report	Disabled**

[22] Input Supply Fail TX Delay

Default		*Range*	
0700	I___I___I___I___I	0000-2359	Hrs/Mins

[23] Generic Zone Reporting Timer

Default		*Range*	
1E	I___I___I	01-FF	(Hex seconds ×10)

** Option must be ON for UL Installations.

[24] Number of Attempts

Default		*Range*	
03	I___I___I	01-FF	(Hex)

[25] Response Wait Time

Default		*Range*	
FA	I___I___I	01-FF	(Hex seconds)

For UL Installations program 5A.

Glossary of Terms

Cellemetry A network allowing short data packets to be sent on cellular control channels.

Connect 24 Connect 24 is the service provider that provides the Skyroute service to the security industry and links the Skyroute cellemetry communicator to the central station.

RSSI Radio Signal Strength Indication - This value is transmitted to **Connect 24** during the periodic test transmission and can be viewed after power up by pressing the enroll button.

SID System Identification Number - ID Number of the Cellular provider

MIN Mobile Identification Number - The 10 digit decimal number used for registrations and pages (the phone number of the Skyroute CL3050).

Page A transmission that is sent from the Cellemetry Gateway to the Cellemetry Radio

Registration A transmission that is sent from the Cellemetry Radio to the Cellemetry Gateway

Appendix A: Reporting Codes

Events	Reporting Codes	
	SIA	Contact ID
Zone Alarms		
Burglary Zone	BAXX	E130
Fire Zone	FAXX	E110
Panic Zone	PAXX	E120
Technical Zone	UAXX	E140
Gas Zone*	GAXX	E151
High Temp Zone*	KAXX	E158
Medical Zone*	MAXX	E100
Emergency Zone	QAXX	E120
Water Level Zone*	WAXX	E154
Low Temp Zone*	ZAXX	E140
Sprinkler Zone*	SAXX	E110
Hold-up Zone	HAXX	E122
Trouble Zone	YX00	E300
Zone Fault Alarms		
Burglary Zone	UTXX	E300
Fire Zone	FTXX	E373
Panic Zone	UTXX	E300
Technical Zone	UTXX	E300
Gas Zone*	UTXX	E300
High Temp Zone*	UTXX	E300
Medical Zone*	UTXX	E300
Emergency Zone	UTXX	E300
Water Level Zone*	UTXX	E300
Low Temp Zone*	UTXX	E300
Sprinkler Zone*	STXX	E200
Hold-up Zone	UTXX	E300
Trouble Zone	UT00	E380

Events	Reporting Codes	
	SIA	Contact ID
Zone Restores		
Burglary Zone	BHXX	R130
Fire Zone	FHXX	R110
Panic Zone	PHXX	R120
Technical Zone	UHXX	R140
Gas Zone*	GHXX	R151
High Temp Zone*	KHXX	R158
Medical Zone*	MHXX	R100
Emergency Zone	QHXX	R120
Water Level Zone*	WHXX	R154
Low Temp Zone*	ZHXX	R140
Sprinkler Zone*	SHXX	R110
Hold-up Zone	HHXX	R122
Trouble Zone	YZ00	R300
Zone Fault Restores		
Burglary Zone	UJXX	R300
Fire Zone	FJXX	R373
Panic Zone	UJXX	R300
Technical Zone	UJXX	R300
Gas Zone*	UJXX	R300
High Temp Zone*	UJXX	R300
Medical Zone*	UJXX	R300
Emergency Zone	UJXX	R300
Water Level Zone*	UJXX	R300
Low Temp Zone*	UJXX	R300
Sprinkler Zone*	SJXX	R200
Hold-up Zone	UJXX	R300
Trouble Zone	UJ00	R380

** Not for use in UL Installations.*

Event	Reporting Code	
	SIA	Contact ID
Zone Tamper Alarms		
Burglary Zone	BTXX	E380
Fire Zone	FTXX	E373
Panic Zone	PTXX	E380
Technical Zone	UTXX	E380
Gas Zone*	GTXX	E380
High Temp Zone*	KTXX	E380
Medical Zone*	MTXX	E380
Emergency Zone	QTXX	E380
Water Level Zone*	WTXX	E380
Low Temp Zone*	ZTXX	E380
Sprinkler Zone*	STXX	E373
Hold-up Zone	HTXX	E380
Trouble Zone	UTXX	E380
Generic Zone Events		
Generic Burglary	BA98	E130 98
Generic Fire	FA98	E110 98
Generic Panic Zone	PA98	E120 98
Generic Supervisory	UA98	E140 98

Event	Reporting Code	
	SIA	Contact ID
Zone Tamper Restores		
Burglary Zone	BJXX	R380
Fire Zone	FJXX	R373
Panic Zone	PJXX	R380
Technical Zone	UJXX	R380
Gas Zone*	GJXX	R380
High Temp Zone*	KJXX	R380
Medical Zone*	MJXX	R380
Emergency Zone	QJXX	R380
Water Level Zone*	WJXX	R380
Low Temp Zone*	ZJXX	R380
Sprinkler Zone*	SJXX	R373
Hold-up Zone	HJXX	R380
Trouble Zone	UJXX	R380
System Events		
Input Supply Fail Trouble	YP00	E312
Input Supply Fail Restore	YQ00	R312
Low Battery Trouble	YT00	E302
Low Battery Restore	YR00	R302
Skyroute CL3050 Tamper Alarm	TA00	E137
Skyroute CL3050 Tamper Restore	TR00	R137
PC5108 Tamper Alarm	ES00	E330
PC5108 Tamper Restore	EJ00	R330
PC5108 Supervisory Trouble	ET00	E330
PC5108 Supervisory Restore	ER00	R330
Periodic Test Transmission	TXZZ	E603
Periodic Test**	RP00	E602
Periodic Test with Trouble**	RY00	E608
TLM Trouble	LT01	E351
TLM Restore	LR01	R351

** Not for use in UL Installations.*
*** Only sent if a trouble zone is programmed.*

FCC COMPLIANCE STATEMENT

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment generates and uses radio frequency energy and if not installed and used properly, 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 Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio 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:

- Re-orient the receiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve Radio/ Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock # 004-000-00345-4.

***WARNING:** To satisfy FCC RF exposure requirements for mobile transmitting devices, a separation distance of 30 cm or more must be maintained between the antenna of this device and persons during device operation.*

Industry Canada COMPLIANCE STATEMENT

This Class B digital apparatus meets all requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences de règlement sur le matériel brouilleur du Canada.

IC:160A - CL3050

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

Limited Warranty

DSC warrants that for a period of one year from the date of purchase, the product shall be free of defects in material and workmanship under normal use and that in fulfillment of any breach of such warranty, DSC shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in materials and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of DSC, such as lightning, excessive voltage, mechanical shock, water damage or damage arising out of abuse, alteration or improper application of the product.

The foregoing warranty shall apply only to the original purchaser, and shall be in lieu of any and all other warranties, whether expressed or implied and of all other obligations or liabilities on the part of DSC. This warranty contains the entire warranty. DSC neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor assume for it any other warranty or liability concerning this product.

In no event shall DSC be liable for any direct, indirect or consequential damages, loss of anticipated profits, loss of time or any other losses incurred by the purchaser in connection with the purchase, installation or operation or failure of this product.

Note:

The reference to "Skyroute Max" throughout this manual is applicable to the following model numbers:
Skyroute Max and Skyroute Max (A).

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