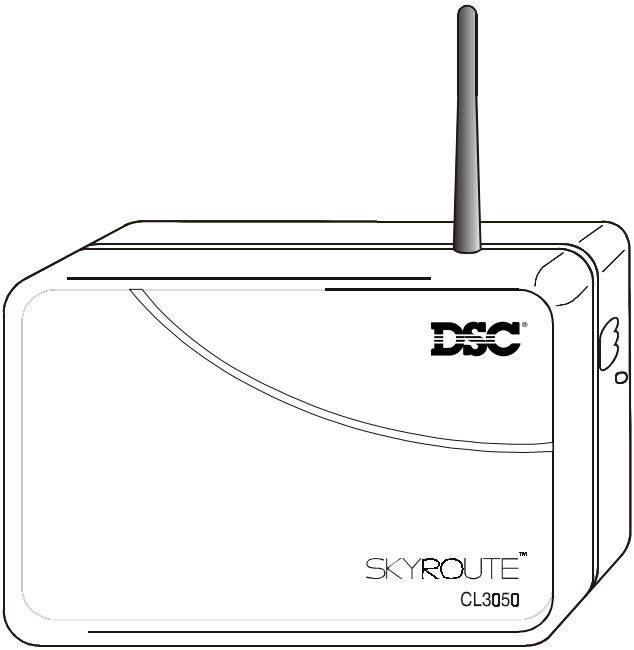
SKYROUTE™ CL3050

Standalone Wireless Communicator

Compatible with all PowerSeries keypads

Installation & Programming Guide



DRAFT

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.

Skyroute CL3050 Quick Start:

Note: *Before you start, you must be enrolled with CONNECT 24 as an authorized installer to activate a Skyroute transceiver. Enrollment is Free! If you are not already enrolled, call 1-888-955-5583 in Canada or 1-888-251-7458 in the U.S. at least 24 hours before your first activation.*

STEP 1 - SELECT BEST LOCATION *(See Section 2.1)*

Connect the Skyroute transceiver to a 7 Ah battery, as described in Section 2.1. Determine the best location for signal strength. If adequate signal strength cannot be found, relocation may be required.

STEP 2 - CONNECT NECESSARY WIRING *(See Section 6)*

Mount the Skyroute, determine the desired mode of operation and connect the appropriate control panel, zone or Keybus wiring as detailed in Section 6.

STEP 3 - PROGRAM *(See Section 5)*

If the default programming must be changed, connect a PowerSeries keypad as shown in Section 5 and make the desired changes.

STEP 4 - ACTIVATE *(See Section 2.1)*

Call the Connect 24 Voice Response Unit (VRU) at the toll free number provided with your Dealer Confirmation.

STEP 5 - TEST *(See Section 2.2)*

Once activated, send two signals to your central station to confirm proper operation.

YOUR SKYROUTE INSTALLATION IS NOW COMPLETE.

ALL OTHER PROGRAMMING SECTIONS IN THIS MANUAL ARE OPTIONAL.

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___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 them Connect 24 Voice Response Unit, it is entered in **Decimal Format.**

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.

Important!

Test results are only valid at the time of testing. Results may vary with but are not limited to environmental and structural changes. Electrical equipment operating in the immediate area may cause interference.

Table of Contents

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 automatically configures itself on power up to 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.

Mode 1: Bell Follower

If the Skyroute CL3050 does not detect a keypad or PC5108 expander card during the first 15 seconds of power up, then mode 1 or 2 can be selected by pressing the enroll button. The red LED indicates Mode 1 and the yellow LED indicates mode 2. 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*.

Mode 2: 2-Zone Panel

If Mode 2 is selected during power up the system will configure itself for 2 zone, stand alone operation with normally closed loops.

Mode 3: 8-Zone Panel

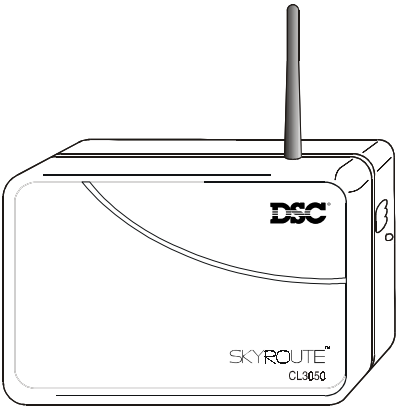
If the Skyroute CL3050 detects a PC5108 expander card on power up it will automatically configure itself for 8-zone standalone operation with normally closed loops.

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.

Note: *The only method of entering the Programming Mode is to power-down the unit, connect a PowerSeries keypad to the Keybus terminals, then reapply power to the Skyroute CL3050.*

Figure 1



1.1 Specifications

- *Power Supply*
  - *Voltage ..... 9-12 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*
- *RF Power Output ..... 600 mW*
- *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 5.6 kΩ resistors

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.*

Caution: *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.*

2 Installation, Testing & Factory Defaults

2.1 Installation

1 Determine The Operating mode required (see section [03])

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.

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.

6 Enroll Unit

Call Connect 24 and Enroll the Skyroute CL3050. Refer to ***page (ii)*** 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 ***Enrol 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.*

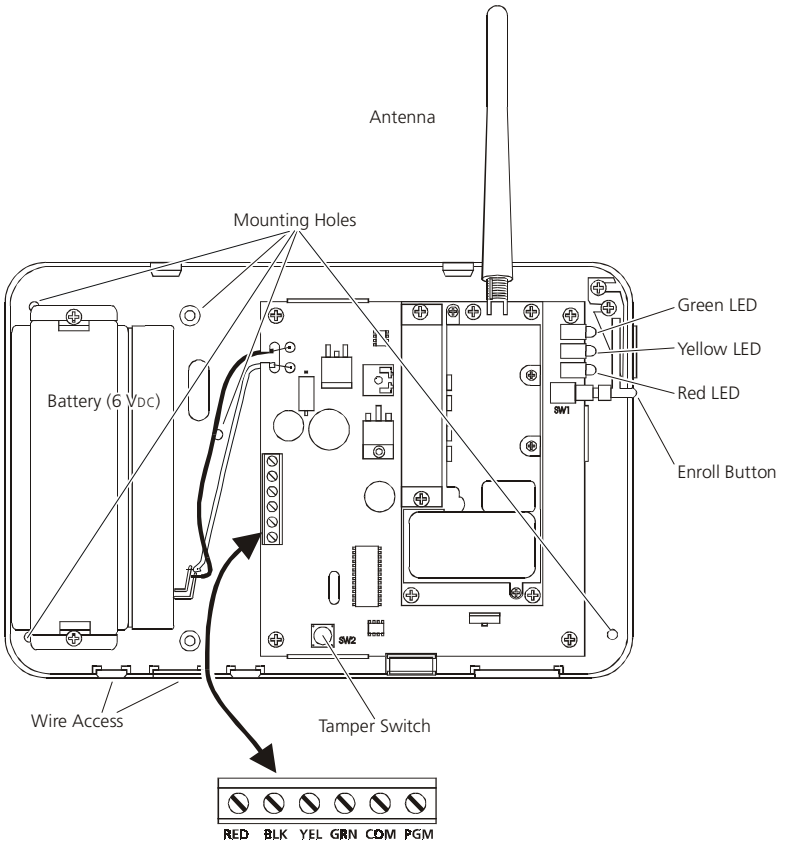
- Remove power from the system.

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***

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 this button 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 to the user by the red LED flashing once.

3.3 Terminal Connections (see figure 2)

RED 9-12VDC Positive Input or 9-12VAC
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.*

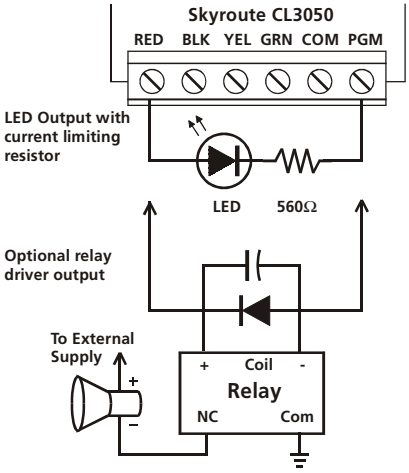
BLK 9-12VDC Ground or 9-12VAC

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

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
Note: *The PGM output can sink 50 mA (maximum).*



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 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.

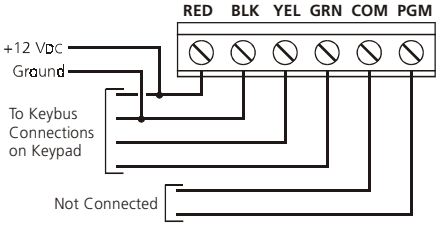
If a *keypad* is detected on Keybus, the green LED will stop flashing, and the red LED will begin flashing to indicate that programming mode is active.

5 System Programming

The Skyroute CL3050 is programmed using a 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.
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.

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) and 13 (TLM monitor) 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 will disable all communications unless that zone input is closed (short condition).

Note: *Do **NOT** program more than 1 TLM zone type 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

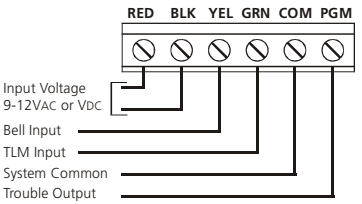
This entry determines how quickly a zone will respond to changes in state.

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

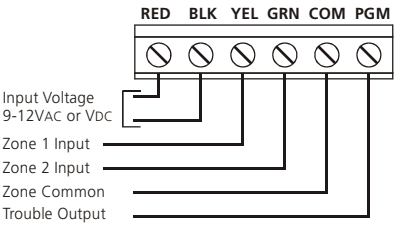


In this mode, the YEL terminal is connected to the bell output of a control panel. The Skyroute CL3050 monitors the output for burglary and fire cadences and transmits the appropriate events. For any type of pulsed cadence, the Skyroute CL3050 will send a generic Fire event, for any steady bell the Skyroute 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*

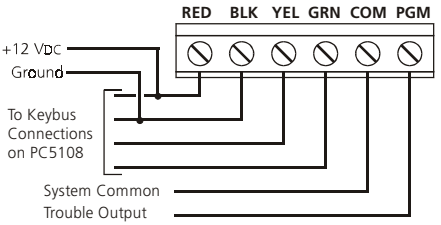
Bell	Report Code	Group
Pulsed	**FA98**	**Fire**
Steady	**BA98**	**Burglary**

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



In this mode, both 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.

[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 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: *This configuration can not be used with an AC supply.*
Note: *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

[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

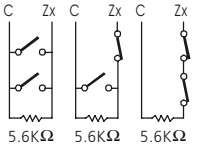
Option 2 - Normally Closed Loops/ End-of-line Resistors ***Mode 2, 3***

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.

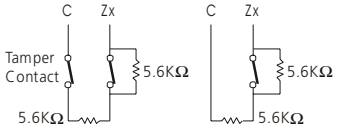
Option 3 - Double EOL Resistors/Single EOL Resistors ***Mode 2, 3***

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



Note: Option 2 must be set to **OFF** to enable these options.
Default - OFF

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

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

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

Allows transmission test weekly.
Note: This option will be overridden If option 4 is set for daily test transmissions.
Default - Enabled.

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***

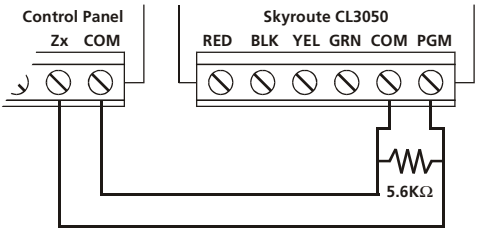
This option limits the number of alarm events transmitted per zone to 8 until the counter has been reset (counter automatically resets at midnight), then event transmissions will resume. ***Default -*** Enabled

Note: *Tampers and Faults will be counted unless they are disabled in section [20].*

[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.

.



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. ***Default -*** ON
Option 2 - 8. ***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.

Note: *If generic reporting is enabled and multiple alarms occur during the delay programmed in Section [23], only one alarm reporting code will be sent.*

Note: *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

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.

[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.

[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

7 Programming Worksheets

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

00 Null Zone (Not Used)	07 Medical
01 Burglary	08 Emergency
02 Fire	09 Water
03 Panic	10 Freeze
04 Technical	11 Sprinkler
05 Gas	12 Hold-up
06 Heat	13 TLM Monitor (1 zone max.)

[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

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

[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***	

[12] Skyroute CL3050 Configuration Options 2

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

[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

[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	**6-8**	For Future Use	

[22] Input Supply Fail TX Delay

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

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
Heat Zone	KAXX	E158
Medical Zone	MAXX	E100
Emergency Zone	QAXX	E120
Water Zone	WAXX	E154
Freezer Zone	ZAXX	E140
Sprinkler Zone	SAXX	E110
Hold-up Zone	HAXX	E122
Zone Fault Alarms		
Burglary Zone	UTXX	E300
Fire Zone	FTXX	E373
Panic Zone	UTXX	E300
Technical Zone	UTXX	E300
Gas Zone	UTXX	E300
Heat Zone	UTXX	E300
Medical Zone	UTXX	E300
Emergency Zone	UTXX	E300
Water Zone	UTXX	E300
Freezer Zone	UTXX	E300
Sprinkler Zone	STXX	E200
Hold-up Zone	UTXX	E300

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
Heat Zone	KHXX	R158
Medical Zone	MHXX	R100
Emergency Zone	QHXX	R120
Water Zone	WHXX	R154
Freezer Zone	ZHXX	R140
Sprinkler Zone	SHXX	R110
Hold-up Zone	HHXX	R122
Zone Fault Restores		
Burglary Zone	UJXX	R300
Fire Zone	FJXX	R373
Panic Zone	UJXX	R300
Technical Zone	UJXX	R300
Gas Zone	UJXX	R300
Heat Zone	UJXX	R300
Medical Zone	UJXX	R300
Emergency Zone	UJXX	R300
Water Zone	UJXX	R300
Freezer Zone	UJXX	R300
Sprinkler Zone	SJXX	R200
Hold-up Zone	UJXX	R300

Event	Reporting Code	
	SIA	Contact ID
Zone Tamper Alarms		
Burglary Zone	TAXX	E137
Fire Zone	FTXX	E373
Panic Zone	TAXX	E137
Technical Zone	TAXX	E137
Gas Zone	TAXX	E137
Heat Zone	TAXX	E137
Medical Zone	TAXX	E137
Emergency Zone	TAXX	E137
Water Zone	TAXX	E137
Freezer Zone	TAXX	E137
Sprinkler Zone	STXX	E200
Hold-up Zone	TAXX	E137
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	TRXX	R137
Fire Zone	FJXX	R373
Panic Zone	TRXX	R137
Technical Zone	TRXX	R137
Gas Zone	TRXX	R137
Heat Zone	TRXX	R137
Medical Zone	TRXX	R137
Emergency Zone	TRXX	R137
Water Zone	TRXX	R137
Freezer Zone	TRXX	R137
Sprinkler Zone	SJXX	R200
Hold-up Zone	TRXX	R137
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	TA00	E330
PC5108 Tamper Restore	TR00	R330
PC5108 Supervisory Trouble	ET00	E330
PC5108 Supervisory Restore	ER00	R330
Periodic Test Transmission	TXZZ	E603

Toronto • Canada • 1-800-387-3630
www.dsc.com
Printed in Canada 29034531r001

Forward comments about this manual to: pubs@dsc.com