PC-LC2 CONSOLE

SOFTWARE PACKAGE

**SG SECURITY
COMMUNICATIONS**

™

A Division of Sur-Gard Security Systems Ltd.

Instruction Manual

Version 1.0

Industry Canada NOTICE

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. Industry Canada does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorised Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

User should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Load Number assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on an interface may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100.

Ringer Equivalence Number: 01

AVIS: L'étiquette de l'Industrie Canada identifie le matériel homologué. Cette étiquette certifie que le matériel est conforme à certaines normes de protection, d'exploitation et de sécurité des réseaux de télécommunications. Industrie Canada n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêchent pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être effectuées par un centre d'entretien canadien autorisé désigné par le fournisseur. La compagnie de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, les lignes téléphoniques et les canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

AVERTISSEMENT: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

L'indice de charge (IC) assigné à chaque dispositif terminal indique, pour éviter toute surcharge, le pourcentage de la charge totale qui peut être reccordée à un circuit té;éphonique bouclé utilisé par ce dispositif. La terminaison deu circuit bouclé peut être constituée de n'importe quelle combinaison de dispositifs, pourvu que la somme des indices de charge de l'ensemble des dispositifs ne dépasse pas 100.

Indices d'equivalence de la sonnerie: 01

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION: Changes or modification not expressly approved by Sur-Gard Security Systems Ltd. could void the user's authority to operate the equipment.

Important Information

This equipment complies with Part 68 of the FCC Rules. On the back of this equipment is a label that contains among other information, the FCC registration number of this equipment.

Notification to Telephone Company

Upon request, the customer shall notify the telephone company of the particular line to which the connection will be made, and provide the FCC registration number and the ringer equivalence of the protective circuit.

FCC Registration Number: 1VDCAN-35163-AL-N

Ringer Equivalence Number: 01A

Telephone Connection Requirements

Except for the telephone company provided ringers, all connections to the telephone network shall be made through standard plugs and telephone company provided jacks, or equivalent, in such a manner as to allow for easy, immediate disconnection of the terminal equipment. Standard jacks shall be so arranged that, if the plug connected thereto is withdrawn, no interference to the operation of the equipment at the customer's premises which remains connected to the telephone network shall occur by reason of such withdrawal.

Incidence of Harm

Should terminal equipment or protective circuitry cause harm to the telephone network, the telephone company shall, where practicable, notify the customer that temporary disconnection of service may be required; however, where prior notice is not practicable, the telephone company may temporarily discontinue service if such action is deemed reasonable in the circumstances. In the case of such temporary discontinuance, the telephone company shall promptly notify the customer and will be given the opportunity to correct the situation.

Changes in Telephone Company Equipment or Facilities

The telephone company may make changes in its communications facilities, equipment, operations or procedures, where such actions are reasonably required and proper in its business. Should any such changes render the customer's terminal equipment incompatible with the telephone company facilities, the customer shall be given adequate notice to effect the modifications to maintain uninterrupted service.

General

This equipment should not be used on coin telephone lines. Connection to party line service is subject to state tariffs.

Ringer Equivalence Number (REN)

The REN is useful to determine the quantity of devices that you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5). To be certain of the number of devices that you may connect to your line, you may want to contact your local telephone company.

Equipment Maintenance Facility

If you experience trouble with this telephone equipment, please contact the facility indicated below for information on obtaining service or repairs. The telephone company may ask you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

U.S. Point of Contact
Digital Security Controls Ltd.
160 Washburn St.
Lockport, NY 14094

TABLE OF CONTENTS

INTRODUCTION

This document will describe the operation, features and use of the PC-LC2 Console v1.0 software. This document also includes examples and pictures taken directly from the Console program itself.

The following sections will describe how to:
·   Program PC-LC2 card options
·   How to upload updated code to the cards

CONSOLE FEATURES

LIST OF INCLUDED FEATURES
·   Full Windows 95/98/NT 4.0 (or higher) integration.
·   Provides the capability to read the options, as well as change the options.
·   Support for the storage and programming of the PC-LC2 options.

UPLOADING SUPPORT

The Console software provides the main support route for the System code uploading.

SYSTEM REQUIREMENTS

The following are the minimum requirements to run the console, please ensure that these requirements are met:
•   Pentium Class Processor at 166MHz with 32MB of Ram and a 1.0GB hard-drive
•   Serial Communications Port, set to 9.6 kbps, 8 data bits, 1 stop bit, no parity, and no hardware flow control
•   Microsoft Windows 95/98/NT 4.0 (or higher) operating system
•   A video card and monitor configured to use a minimum screen resolution of 800x600 pixels, 256 colors

For suggested requirements, the following should be met:
•   PentiumII Class 233MHz CPU, 64MB of Ram with a 4.0GB hard-drive.
•   A larger monitor and video card capable of 1024X768 and 16 Bit (High) Color. This will enable more viewing space for the message windows and better color representation of the Console's Graphics.

INSTALLATION

Please refer to the PC-LC2/The Reporter Quick Installation Guide.

THE GRAPHICAL USER INTERFACE

THE SCREENS AND WINDOWS OF THE CONSOLE SOFTWARE

The following sections will describe each of the different screens and commands that are contained in the Console.
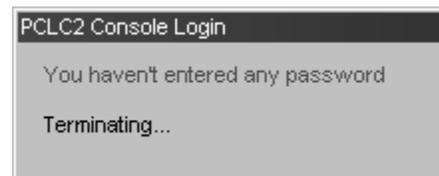
The Login Screen:

This user-input box is the first element of the Console that is displayed at start-up. The Console will give the user three chances to enter a valid password.

After this is displayed, it will return to the first screen for the next attempt.

If a valid password is not entered after the third attempt, the Console will terminate itself and shutdown. The Console has two passwords built into it for distribution. The main password that is distributed with the Console install files is encrypted in the "console.ini" file. This password is "cafelatte". A hard-coded user password that is distributed with the Console software, "cafeteria", can be used as a back door in the event the main password is forgotten. This has the same access rights as the soft-coded "cafelatte" password.

NOTE: All passwords are case sensitive and must be entered exactly as described.

THE MAIN INTERFACE SCREEN

NOTE: All portions of the Main Interface Screen are explained in the following sections.

CONNECT BUTTON

Pressing the connect button establishes the serial connection to the MASTER PC-LC2 card. The same button turns into the "Disconnect" button once the connection is established.

CONFIGURE BUTTON

Pressing the configure button opens another window which allows you to change the serial port settings, (Eg. Com Port, Parity, Data Bits etc), along with which card is the MASTER PC-LC2 card.

The Com Port Settings are broken down into three tabbed sections. The first section is the Base Settings.
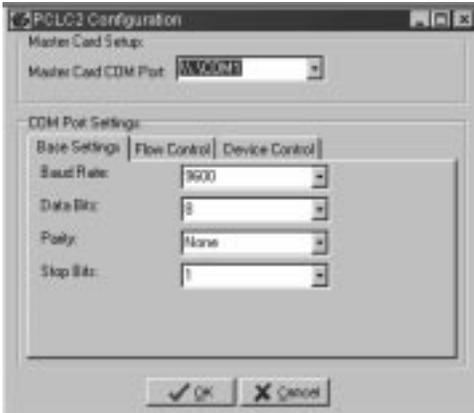
Here the user can select:
- Com Port (serial port being used by the PC for communication to the PC-LC2)
- Speed of communication (Baud Rate)
- Number of Data Bits being sent by the receiver
- Parity (used for error checking of data bits sent)
- Stop Bits (used to determine where one round of data stops and the next one starts)

The second section is the Flow Control:
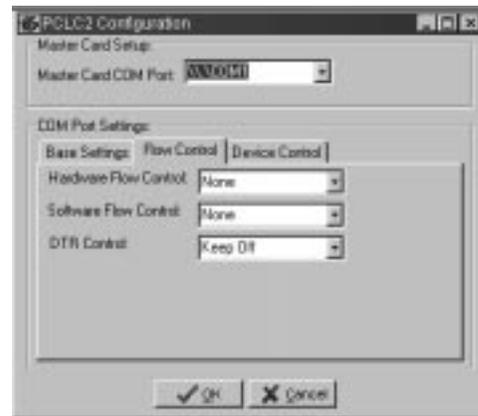
Here the user can select:
- Hardware Flow Control (handshaking between the Data Terminal and the Computer Terminal using signal lines)
- Software Flow Control (handshaking between the Data Terminal and the Computer Terminal using ASCII characters)
- DTR Control (the PC and the data terminal 'shake hands' first to assure they are both present)

The third section is the Device Control:
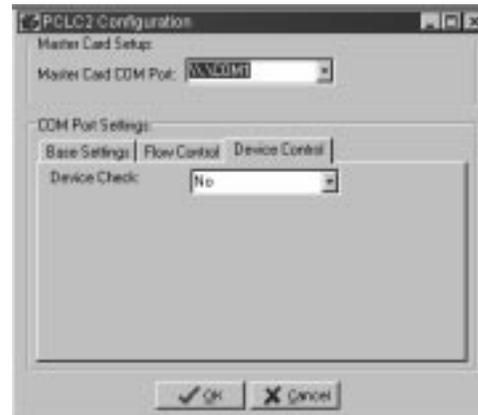

Here the user can select:
- Device Check (checks signal lines for recipient on other end before sending/receiving data)

NOTE: the Serial configuration options are defaulted to the proper settings the 1st time the program is loaded. The only setting that should be changed in this section is the PC-LC2 Master card, if not on COM3 (default).

REFRESH BUTTON

The refresh button is used to manually "POLL" all PC-LC2 cards in order to display to the user which cards are currently present in the PC system.
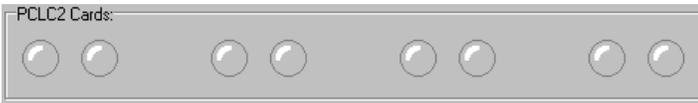
Above is the PC-LC2 Cards display. Each group of 2 LED's represents 1 PC-LC2 card. The 1st LED of each pair is Channel A of the card, and the 2nd LED is Channel B. When the Refresh button is pressed, the console attempts to talk to each Channel of each Card. If the PC-LC2 Channel talks to the Console program successfully, the Console will then wait for the heartbeat from the Master PC-LC2 card to be received. Once received, the console will use the Serial status and PBUS status of each PC-LC2 channel to determine the status and will change the LED color to reflect this.

LED COLOR TABLE

GREY	Channel Not Installed
GREEN	PBUS/Serial Comm. To Channel Working
YELLOW	No PBUS Communication
RED	No Serial Communication
ORANGE	All Comm. To Channel Lost
BLUE	Downloading To Channel

If the Channel status is GREY, RED or ORANGE and you right click over the LED, a popup menu will appear with options you can select from (see below).

Refresh: The refresh option works similar to the Manual Refresh option, except it will only request the Status of the selected PC-LC2 Channel.

AUTOMATIC REFRESH

The Automatic Refresh works similar to the Manual Refresh button, except that it will automatically refresh the PC-LC2 channels status every 30 seconds.

COM Select: The COM Select item allows you to select which COMPORT the PC-LC2 Channel is setup to communicate through. Valid selections for this are COM1 to COM16.
NOTE: The 1st LED should be set to the COM Port assigned to the master PC-LC2.

Change Options: The change options item allows you to change the current option settings on the PC-LC2 Channel. See Appendix A.
NOTE: Options can only be set (programmed) when channel Status Indicators (LEDs) are green.

If the Channel status is GREEN or YELLOW and you right click over the LED, a popup menu will appear with options you can select from. (See below)


Upload: This option allows you to update your PC-LC2 Channel to another version of the PC-LC2 Code.

Test Number: Selecting this option will cause the Console to ask the PC-LC2 Channel to send it's current test number. This is useful for determining if you are running the most recent code for the PC-LC2.

Set Time&Date: This option allows the user to set the Time and Date on the PC-LC2 Channel to that currently set on the PC.
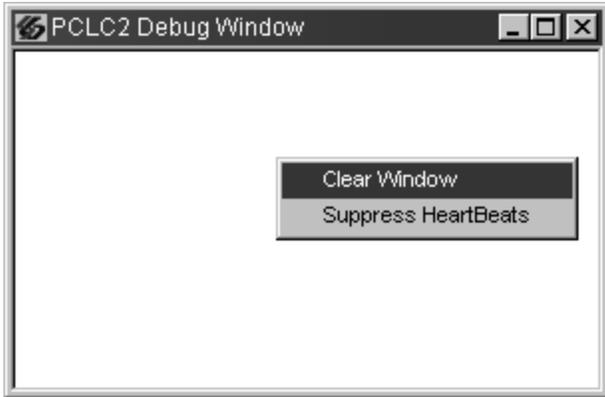
DEBUG OPTION

Pressing this button opens a debug window, which will display messages as to what the program is doing. E.g. report when refreshing PC-LC2 cards, heartbeat received, etc.
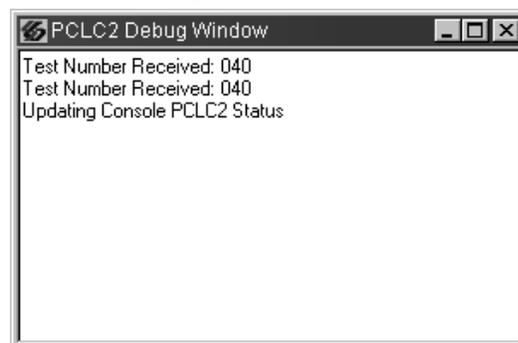
Within the Debug window, if you right click on the mouse, a popup menu will appear as shown below. On this menu there are 2 choices. Clear Window and Suppress Heartbeats. The **Clear Window** command will clear everything currently displayed in the debug window if it becomes cluttered.

The Suppress Heartbeats option when turned on will disable the "Heartbeat Received" message from being displayed. If the console is connected for long periods of time, the debug window will fill up with several of these messages. Therefore, enabling this option decrease the Debug traffic.


ABOUT BUTTON

Pressing this button brings up the Help About screen. The E-mail and Web addresses displayed on this form are live hyper-links and will open the user's default respective application. In the case of the e-mail link, the default mail program will open a new message with the address pre-entered and ready for the user to compose their message. The Console will open the user's default Internet browser and connect with the Sur-Gard web-site when the web hyper-link is clicked.

EXIT BUTTON

Pressing the Exit button will force the Console to disconnect any active serial connection to the PC-LC2 and then shutdown the Console program itself.

CHANGE PASSWORD

Pressing the Change Password button will open another window, which will allow you to change the soft-coded password.

The password must be at least 8 characters, and must be different from the current password, or the password change will not work.

MISCELLANEOUS

CHANGING OPTIONS

Changing the PC-LC2 Cards options through the Console is very easy. Once you select this option, a new window will open and display all the options available to change on the PC-LC2 (see below).
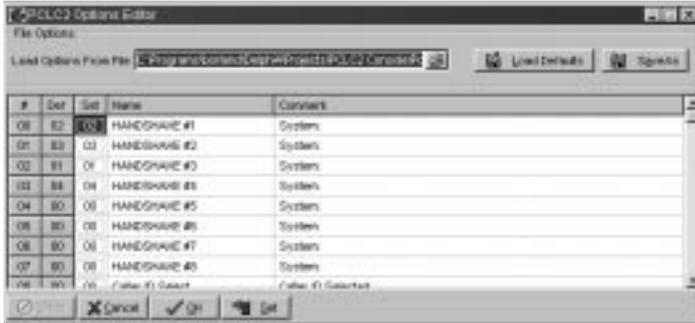
Each PC-LC2 Channel can have it's own saved options file or even many different saved options files. Through the file options section, selecting different options files for the PC-LC2 Channel is easy. Here is displayed the last options file edited by the user. This file may be changed by pressing the folder icon to the right hand side of the filename box.

Next is the Load Defaults button, which allows you to easily revert back to the factory default settings for the PC-LC2 Channel. Once editing of a file is finished, you can click the SaveAs button to save the file to the hard drive of your PC for later editing.

In the Options listing window, there are 5 columns. The 1st column displays the Option Number, if you double click on this while the debug window is open, the console will request that the PC-LC2 Channel send what that Option is currently set to on the selected channel. The second column displays to the user what the Default Value for the option is. If you double click on this, you will set the Option to the default value.

NOTE: any changes to options will be displayed in LIGHT BLUE until the file is saved.

The next column is what the option is currently set to in the file you opened, these values may be changed by clicking in the box and typing a HEXADECIMAL value. Next is the Option Name; this is a quick description name as to what the option is. And lastly is a Comment, which describes the Option further.

Once you have decided on what your options should be set to, you should save your file (so you don't lose your changes) then press the SET button. Pressing the SET button will cause the console to program all the options on the PC-LC2 Channel that you selected for Options Editing.

If your Debug window is open, you will see the Console talking to the Selected PC-LC2 Channel. If you clicked on the Change Options item while the PC-LC2 Status LED was RED, GREY, or ORANGE, you will not be able to press the SET button. This is because the Serial Communications to the PC-LC2 Channel has been lost or is not working properly, therefore you cannot communicate to the Channel.

If you clicked on the Change Options item while the PC-LC2 Status LED was GREEN or YELLOW, the SET button will be available.

APPENDIX A: CONFIGURATION OPTIONS

00-07	Handshake #1-8	16	3/2 Format
08	Caller ID Select	17	4-1 Express
09	Printer	18	Online Delay
0D	COM Format	19-28	3-1, 4-1 Event #0-F
0E	COM ACK Wait	29-38	3-2, 4-2 Event #0-F
0F	COM Heartbeat	39-48	4-3 Event #0-F
10	Line Check	49	HS Duration
11	Buzzer	4A	SIA Level II
13	Library	4B	Slave Poll
14	Y/S Printer	4C	Channel Status
15	Reciever	4D	Equivalent Line

GLOSSARY OF TERMS

Console:
A Windows95/98/NT software package that uses serial connected ports between the host PC / workstation and the PC-LC2 to allow for monitoring and configuration interfaces.

ComPort:
An external or internal 9 pin port used for communication between the Console software package and PC-LC2.

Master PC-LC2 Card:
This is the main channel that controls the communication of the printer, computer, and PBUS operation.

Channel:
Every PC-LC2 card has two telephone line inputs/outputs that are designated as Channel A and channel B.

IRQ:
Interrupt request

COM:
Serial Communication Port

Limited Warranty

SG Security Communications warrants that for a period of one year from the date of purchase, the product shall be free of defects in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, SG Security Communications 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 parts and workmanship and not to damage incurred in shipping or handling, or damage due to causes beyond the control of SG Security Communications, such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

The foregoing warranty shall apply only to the original buyer, and is 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 SG Security Communications. This warranty contains the entire warranty. SG Security Communications neither assumes, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

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

Warning

SG Security Communications recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

How to Contact Us:

Sales

For information about additional products, please call our sales number: 1-800-418-7618, or e-mail us at sales@sur-gard.com.

Technical Support

If you have questions or problems when using Sur-Gard products, you can call technical support. If you are within the United States, Puerto Rico, the U.S. Virgin Islands or Canada, you can get support by dialing 1-800-503-5869 ext.1. If you are outside these areas, please call (416) 665-4494 ext.1, or e-mail us at support@sur-gard.com.

Internet

Visit our new Sur-Gard WWW site. You will be able to search the Sur-Gard technical information database and read information about new products. You will also be able to send us your questions. Our World Wide Web address is http://www.sur-gard.com.

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