

Installation Manual



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DSC[®]
PowerSeries[™]

Please refer to the System Installation Manual for information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer.

PC51O8L v1.1

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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.

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.

[60] Camera Test Configuration

Default	ON	OFF
ON	<input type="checkbox"/> 1	Camera 1 Test Disabled
ON	<input type="checkbox"/> 2	Camera 2 Test Disabled
ON	<input type="checkbox"/> 3	Camera 3 Test Disabled
ON	<input type="checkbox"/> 4	Camera 4 Test Disabled
ON	<input type="checkbox"/> 5	Camera 5 Test Disabled
ON	<input type="checkbox"/> 6	Camera 6 Test Disabled
ON	<input type="checkbox"/> 7	Camera 7 Test Disabled
ON	<input type="checkbox"/> 8	Camera 8 Test Disabled

[99] Restore Module Factory Default Programming

Enter [55] in this section to restore the PC5108L to its factory default settings.

	T	C	T	C	T	C	T	C
[27] Zone 27	<input type="checkbox"/>							
[28] Zone 28	<input type="checkbox"/>							
[29] Zone 29	<input type="checkbox"/>							
[30] Zone 30	<input type="checkbox"/>							
[31] Zone 31	<input type="checkbox"/>							
[32] Zone 32	<input type="checkbox"/>							
[33] Keypad Alarms	<input type="checkbox"/>							
[34] Closings	<input type="checkbox"/>							
[35] Openings	<input type="checkbox"/>							
[36] Periodic Test TX	<input type="checkbox"/>							
[37] Gen Sys Tamp	<input type="checkbox"/>							
[38] System Test	<input type="checkbox"/>							
[40] Pre-Trigger	<input type="checkbox"/>							
[41] Remote Trigger	<input type="checkbox"/>							

[50] PC5108L 1st Control Options

Default	ON	OFF
OFF <input type="checkbox"/>	1 Camera Monitor When Disarmed	Pre-Trigger When Disarmed
OFF <input type="checkbox"/>	2 Camera Monitor When "Away"	Pre-Trigger When "Away"
OFF <input type="checkbox"/>	3 Camera Monitor When "Stay"	Pre-Trigger When "Stay"
OFF <input type="checkbox"/>	4 External Dwell Control (SYNC)	Internal Dwell Control
OFF <input type="checkbox"/>	5 Fast Dwell Time (3s)	Slow Dwell Time (6s)
OFF <input type="checkbox"/>	6 Sync Input Is Inverted	Sync Input Is Normal
OFF <input type="checkbox"/>	7 Images Can Be Overwritten	Images Cannot Be Overwr.
OFF <input type="checkbox"/>	8 DLM-4L Not Used	DLM-4L is connected

[51] PC5108L 2nd Control Options

Default	ON	OFF
OFF <input type="checkbox"/>	1 New Events Do Not Abort Active Video Session	New Events Abort Active Video Session
OFF <input type="checkbox"/>	2-8 For Future Use	

Introduction

S E C T I O N 1

1.1 Features

The PC5108L serves three purposes:

- To expand the PC5015 v2.2 alarm control panel's zone capability by adding eight fully programmable zone inputs

! Zone expansion using this module is not available on the PC5020 v3.0 and above.

- To act as an interface between the DLM-4L v1.0L Video Transmission module and the PC5015 v2.2 and PC5020 v3.0 and above alarm control panel
- To function as a video switcher

1.2 Specifications

- Current rating: 60mA
- Eight fully programmable zones (PC5015 v2.2 only)
- Maximum of eight video cameras
- VAUX+ rating: 12 VDC, fused @ 250mA

1.3 Additional Equipment

- Control panel compatibility: PC5015 v2.2, PC5020 v3.0 and above
- Downlook module compatibility: DLM-4L v1.0L
- Keypad compatibility (for Active Camera Monitor Selection function key): LCD5500Z v2.X and above and PC55XX v2.X
- Downloading software: DLS-3 v1.2 and above
- Local downloading: PC-Link
- Compatible cabinets:
PC4002C – space for PC5108L plus two other modules of same dimension

Installation

S E C T I O N 2

2.1 Unpacking the PC5108L

The PC5108L product should include the following items:

- one PC5108L module
- five plastic stand-offs

2.2 Mounting the Unit

The PC5108L should be located inside a compatible metal cabinet, mounted in a dry, secure location. Preferably, it should be placed close to the control panel and at a convenient distance from the connected devices.

Perform the following steps to mount the unit:

1. Press the four plastic stand-offs through the circuit board mounting holes at back of the cabinet.
2. Secure the cabinet to the wall in the desired location. Use appropriate wall anchors when securing the cabinet to drywall, plaster, concrete, brick or other surfaces.
3. Press the PC5108L board into the four plastic stand-offs to secure the module to the cabinet.

Once the unit is mounted, wiring may be completed.

2.3 Wiring the Unit

Before beginning to wire the unit, ensure that the power (AC transformer and battery) is disconnected from the control panel.

Perform the following steps to complete wiring:

1. Connect the four Keybus wires to the PC5108L. Connect the red, black, yellow and green Keybus wires to the RED, BLK, YEL and GRN terminals, respectively.
2. Connect the DLM-4L module (if used) to the PC5108L. A 75 ohm coaxial cable is required for this connection. For more information, see the DLM-4L Installation Instructions.
3. Connect the cameras to the PC5108L using RG-59 75 ohm coaxial cable.
4. Connect the external tamper switch to the PC5108L, if used. If not used, run a wire from TAMP to any COM terminal.
5. Complete all zone wiring to the PC5108L. Refer to the Control Panel Installation Manual for information on zone wiring configurations.

Programming Worksheets

S E C T I O N 6

[806] PC5108L Module Programming

[00] Module Zone Group Assignment

Default = 00

First digit = Zones on terminals Z1-Z4 (Group 1)

Second digit = Zones on terminals Z5-Z8 (Group 2)

0 = Group Not Used

1 = Group Not Used

2 = Zones 9-12

3 = Zones 13-16

4 = Zones 17-20

5 = Zones 21-24

6 = Zones 25-28

7 = Zones 29-32

! *This option is only available when the PC5108L is used with the PC5015 control panel.*

Timing and Camera Programming

All Entries are 00 by Default [01]-[32] Zone X Alarm/Tamper/Fault

	T	C	T	C	T	C	T	C
[01] Zone 1	<input type="text"/>							
[02] Zone 2	<input type="text"/>							
[03] Zone 3	<input type="text"/>							
[04] Zone 4	<input type="text"/>							
[05] Zone 5	<input type="text"/>							
[06] Zone 6	<input type="text"/>							
[07] Zone 7	<input type="text"/>							
[08] Zone 8	<input type="text"/>							
[09] Zone 9	<input type="text"/>							
[10] Zone 10	<input type="text"/>							
[11] Zone 11	<input type="text"/>							
[12] Zone 12	<input type="text"/>							
[13] Zone 13	<input type="text"/>							
[14] Zone 14	<input type="text"/>							
[15] Zone 15	<input type="text"/>							
[16] Zone 16	<input type="text"/>							
[17] Zone 17	<input type="text"/>							
[18] Zone 18	<input type="text"/>							
[19] Zone 19	<input type="text"/>							
[20] Zone 20	<input type="text"/>							
[21] Zone 21	<input type="text"/>							
[22] Zone 22	<input type="text"/>							
[23] Zone 23	<input type="text"/>							
[24] Zone 24	<input type="text"/>							
[25] Zone 25	<input type="text"/>							
[26] Zone 26	<input type="text"/>							

Testing and Troubleshooting

S E C T I O N 5

5.1 Camera Testing

Cameras connected to the PC5108L can be tested on a regular basis. The DLM-4L must be connected in order to use the testing feature.

Each camera must be enabled for testing. There is one **Camera X Test Enable/Disable** option for each camera. Not all cameras must be selected for testing. By default, the test feature is enabled for each camera.

If **Periodic Camera Test Enable/Disable** is ON, a camera test will occur every 30 minutes. When OFF, there are camera tests:

1. Upon a system test: This test is user-initiated. See the control panel Instruction Manual for testing instructions.
2. Upon exiting Installer's Programming.

The test will take up to five seconds to perform. If the camera test result is successful, normal system operation will continue. If the camera test produces bad results from any of the cameras, a system trouble will be initiated. The message "Camera X Trouble" will be logged to the event buffer. When the trouble condition has cleared, the message "Camera X Trouble Restore" will be logged.

A bad camera test result could be due to a number of factors, including bad camera wiring, loss of power to the camera or a faulty unit.

To test the **Downlook Remote Trigger** feature, perform the following:

1. Enter [*][8][Installer's Code][906].
2. Press number keys [1]-[4] to transmit remote trigger script via the appropriate path:
 - [1] telephone number 1 via landline
 - [2] telephone number 2 via landline
 - [3] telephone number 1 via LINKS
 - [4] telephone number 2 via LINKS

.....

Camera X Test Enable/Disable Subsection [60]
 Periodic Camera Test Enable/Disable Section [017] Option [7]
 Local Test of Downlook Remote Trigger Section [906]

.....

5.3 Software Default

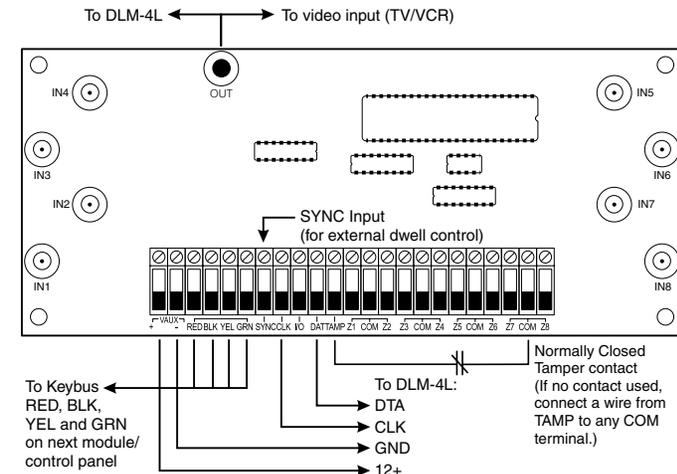
To restore the PC5108L programming to the factory default settings, perform the following:

1. Enter PC5108L module programming by pressing [*][8][Installer's Code][806].
2. Enter programming subsection [99].
3. Enter [55]. Once [55] is entered, the module's default programming will be restored.

For instructions on restoring the default programming of the main panel or any other connected module, see the control panel Installation Manual.

I N S T A L L A T I O N

Consult the following wiring diagram for further information:



NOTE: If a TV or VCR is used in combination with the DLM-4L, make sure that the jumper J102 on the DLM-4L is removed and the TV/VCR video input is set to 75 ohms.

2.4 Applying Power

After all wiring is completed, apply power to the control panel. Connect the battery leads to the battery, then connect the AC transformer. For more information on control panel power specifications, refer to the appropriate control panel Installation Manual.

! Do not connect the power until all wiring is complete.

How to Program

S E C T I O N 3

3.1 Programming via Keypad

The PC5108L can be programmed from a system keypad. To program the module, perform the following:

1. Enter [*][8] followed by your Installer's Code.
2. Enter [806] to access PC5108L module programming.
3. Enter a 2-digit number corresponding to the PC5108L programming section you wish to program. For example, to program the Module Zone Group Assignment, enter [00].
4. Enter the required data for the selected section. The keypad will only accept the number of digits required for that section. For example, Section [00] will accept two digits. The keypad will confirm a correct entry by sounding two short beeps.

For more information regarding programming the system through Installer's Programming, refer to the "How to Program" section in your control panel Installation Manual.

3.2 Programming via Downloading

The PC5108L can be programmed via downloading using either of the following methods:

1. By connecting to the control panel remotely using a modem.
2. By connecting to the control panel directly using the PC-Link.

Both cases require the use of DLS-3 v1.2. For instructions on downloading using either of these methods, see the Downloading Manual.

M O D U L E O P E R A T I O N A N D P R O G R A M M I N G

4.4 External Dwell Control (SYNC Input)

By default, the module is programmed to use an internal dwell time to control the video switcher. To select the SYNC input for video switcher timing, the **External Dwell Control** option must be enabled.

Depending on the type of device connected, the SYNC input must be programmed for Normal or Inverted operation. If normal operation is selected (default), the PC5108L will switch cameras on a low to high transition (rising edge). If the inverted option is selected, the PC5108L will switch cameras on a high to low transition (falling edge).

.....
External/Internal Dwell Control Subsection [50] Option [4]
SYNC Input Inverted/Normal Subsection [50] Option [6]
.....

4.5 Module Supervision

The control panel only supervises the PC5108L when the Module Zone Group Assignment section is programmed. When the control panel programming section [903] **Module Supervision Field** is entered, the zone lights corresponding to the zone group assignments will represent the PC5108L.

The DLM-4L is supervised when the **DLM-4L Is Connected** option is enabled. This option must be enabled when using the DLM-4L. When section [903] Module Supervision Field is entered, the DLM-4L will be represented by zone light [23].

A **Downlook Supervisory Trouble** is generated when the panel no longer detects the DLM-4L on the system. To clear this trouble, enter Section [902] **Supervision Reset**. A Downlook Supervisory trouble restoral will be logged to the event buffer when the trouble is cleared.

For information on module supervision, see the control panel Installation Manual (see the 'Enable Supervision' section).

.....
Supervision Reset Section[902]
Module Supervision Field Section [903]
DLM-4L Is Connected Subsection [50] Option [8]
.....

4.6 New Events Don't Abort Active Video Session

When the "New Events Don't Abort Active Video Session" is enabled (sub-section [51] option 1 ON), the system will complete any active video transmission to the monitoring station even when the system has new events to communicate. When the feature is enabled, the UL listing is no longer valid because UL states that an active video transmission must be terminated when new events need to communicate.

4.3 Video Switching

The PC5108L can be used to connect each of the eight cameras one at a time to a monitor/video recorder. See Section 2.3 "Wiring the Unit" for wiring instructions.

By default, the module is programmed to use an internal dwell time to control the video switcher. The dwell time is the amount of time the PC5108L will wait before switching to the next camera. By default, the PC5108L will wait six seconds before switching cameras. To shorten the dwell time to three seconds, enable the **Fast Dwell Time** option.

Selecting Cameras for Video Switching

Only the Active Camera Monitor Selection function key can select cameras for video switching. This function key option [22] is available for LCD5500Z/PC55XX v2.X and above keypads. For instructions on function key programming, see the PC5015 Installation Manual.

To select cameras for video switching, perform the following:

1. Press and hold the Active Camera Monitor Selection function key for two seconds.
2. Enter a valid access code.
3. Toggle each camera on or off by pressing the corresponding number key. On an LED keypad, the corresponding zone light will illuminate when the camera is activated. On an LCD keypad, the "-" will be replaced by the corresponding number when the camera is activated.
4. When the desired cameras have been selected, press [#].

Video Switching Options

Video switching can occur under some or all of the following conditions:

- Camera monitor while disarmed
- Camera monitor while Away armed
- Camera monitor while Stay armed

! *If the Downlook pre-trigger feature is being used, the camera monitoring options must be disabled.*

Fast/Slow Dwell Time	Subsection [50] Option [5]
Keypad Programming	Section [000]
Camera Monitor While Disarmed	Subsection [50] Option [1]
Camera Monitor While Away Armed	Subsection [50] Option [2]
Camera Monitor While Stay Armed	Subsection [50] Option [3]

Module Operation & Programming

SECTION 4

4.1 Module Zone Group Assignment

In order to use the zone expansion portion of the module, you must select which system zones the expander will occupy.

Subsection [00] **Module Zone Group Assignment** will accept two digits. The first corresponds to zone terminals 1-4 on the module (Group A). The second digit corresponds to zone terminals 5-8 (Group B). Select which system zones these two groups will occupy by entering the corresponding digit:

- | | |
|--------------------|-----------------|
| 0 = Group Not Used | 4 = Zones 17-20 |
| 1 = Group Not Used | 5 = Zones 21-24 |
| 2 = Zones 9-12 | 6 = Zones 25-28 |
| 3 = Zones 13-16 | 7 = Zones 29-32 |

For example, to have Group A (Z1-Z4) occupy system zones 9-12, and Group B (Z5-Z8) occupy zones 13-16, enter [23].

If using Downlook as well as zone expansion, consider the following: Using zones connected to the PC5108L for Downlook triggering means that the execution of the preprogrammed scripts will start 25ms after an event has occurred. See Section 4.2 "Downlook Operation (DLM-4L)" for more information. Fire zones should not be used on PC5108L zones.

! *This option is only available when the PC5108L is used with the PC5015 control panel.*

.....
Module Zone Group Assignment	Subsection [00]

4.2 Downlook Operation (DLM-4L)

When Downlook is initiated, the DLM-4L will store up to four images from the programmed camera(s). Once the images are stored, the Downlook module will seize the telephone line to transmit the images to the central station. The images will be sent after the panel has communicated the event.

When a Downlook module is connected to the PC5108L, the **DLM-4L Is Connected** option must be enabled. In addition, the Local Mode Enabled/Disabled option (control panel section [381] option [8]) should be OFF (default setting) if there is a DLM-4L present. If there is no DLM-4L present on the system, this option should be ON.

Downlook can be initiated according to the following methods:

- Event-initiated Downlook
- Pre-trigger
- Remote trigger

All methods require similar programming. For each event/trigger, both the Timing and Camera numbers for the transmissions must be programmed. The 2-digit **Timing** entry is the "dwell" time between pictures. That is, when a camera is selected the PC5108L will freeze on that camera for the length of time specified in the Timing entry before the picture is taken. The value for this entry refers to 100's of ms. The 2-digit **Camera** entry corresponds to the camera that will take the image.

Since four images can be stored by the DLM-4L, four timing and camera entries can be set to each event. Entering 00 for the timing means that the picture will be taken without delay. Entering 00 for the camera means that no picture will be taken.

The programming sections resembles the following example (all entries by default are [00]):

[01] Zone 1 T C T C T C T C
 0 1 0 3 0 3 0 5 0 4 0 2 0 0 0 0

During the delay (dwell time) the PC5108L remains (dwells) on that camera until the time expires, after which the next camera in the script is selected. In the above example, when Zone 1 goes into alarm, tamper or fault, the DLM-4L will:

- immediately select Camera 3;
- when 100 ms expires, take a picture and switch to camera 5;
- when 300 ms expires, take a 2nd picture and switch to camera2;
- wait a further 400ms and take a 3rd picture before resuming in either Pre-Trigger monitoring or Camera select monitoring.

The DLM-4L will follow the programmed Timing and Camera settings for all events. By default, if another Downlook-initiating event occurs while there are pictures in memory (not yet transmitted), the DLM-4L will not overwrite the existing pictures.

If the **Pictures Can Be Overwritten** option is enabled, the DLM-4L will overwrite the pictures in memory when a new Downlook-initiating event occurs. For Delay type zones, timing and camera settings will be followed when the zone is violated. If the user disarms the system before the entry delay expires, the pictures will be erased. If the system is not disarmed, an alarm will occur and the stored pictures will be transmitted.

The various Downlook-initiating events/triggers are described below:

Event-initiated Downlook

The indicated events will initiate Downlook if the corresponding Timing and Camera entries are programmed. Some events are grouped under one heading. These events are the following:

- **Zone X Alarm/Tamper/Fault:** Downlook will be initiated when the corresponding zone exhibits an alarm, tamper or faulted condition. *This option is only available for zones 1-32.*
- **Keypad Events:** these events include Duress alarm, FAP alarms, Keypad Lockout and Auto-Arm Cancel/Postpone.
- **Closings:** these events include arming by user code and all special closings (DLS, auto-arm, keyswitch, quick arm or maintenance code). A Late To Close will cause the closing script to be run even if Auto-Arming is not enabled.
- **Openings:** these events include disarming by user code and all special openings (DLS, keyswitch, or maintenance code).

Unidentified Wireless Keys should not be used to initiate Downlook.

Pre-trigger

The pre-trigger section can be programmed to allow Downlook to activate while the system is idle. This will allow pictures to be taken constantly while the system is idle.

The DLM-4L will continually follow the programmed pattern until a Downlook-initiating event occurs. At this point, the pre-trigger sequence will be suspended until the appropriate transmissions for the Downlook-initiating events have been sent.

! Do not program video switching features when using Pre-Trigger.

Remote Trigger (for Escort5580(TC) v2.0 or greater)

The remote trigger can only be used for systems that have an Escort5580(TC) Audio Assistant installed. With remote trigger, the end user can initiate Downlook to verify the status of the premises while they are absent. When the remote trigger is activated, the panel will transmit a System Test reporting code. The programmed timing and camera settings will then elapse and the images will be transmitted to central station. The user can then call the central station to verify the sent images.

Two areas must be programmed for the remote trigger feature:

1. The Timing and Camera entries in Subsection [41] Remote Trigger
2. The access code must have the following attributes enabled:

Enable Attribute 4: Escort access
 Enable EITHER Attribute 5: Remote Trigger Phone 1
 OR Attribute 6: Remote Trigger Phone 2

For Attribute 5, the Downlook images will be sent to telephone number

1. For Attribute 6, the Downlook images will be sent to telephone number 2. **Do not enable both attributes on a single access code.**

To initiate Downlook via remote trigger, the user must perform the following:

1. Access the Escort5580(TC) remotely.
2. Enter [*][8] followed by a valid access code.

If an access code with the correct attributes has been entered, the Escort5580(TC) will announce "Goodbye" and will terminate the call. The panel will proceed to collect the Downlook images and transmit them to the central station.

For more information on the Escort module, see the Escort5580(TC) Installation and Instruction Manuals. For information on programming access codes, see the control panel Instruction Manual.

.....

DLM-4L Is Connected Subsection [50] Option [8]
 Pictures Can Be Overwritten Subsection [50] Option [7]
 Event-initiated Downlook Subsections [01]-[39]
 Pre-trigger Subsection [40]
 Remote trigger Subsection [41]
