Videolarm

for TOSHIBA

PRODUCT INSTRUCTIONS

	Specification Number	Catalog Section
INSTRUCTIONS	5240	2C
MODEL: Pan/Tilt Controller		
VLC485		

A NOTE BEFORE BEGINNING

Each camera controlled by the VLC485 must have a unique address. The default address for most cameras is "1". See the instructions for your camera for steps to change the address.

1.0 TABLE OF CONTENTS

1.1 GENERAL DESCRIPTION

The VLC485 is a pan/tilt controller that ties together the major elements of an integrated system and provides a single human interface for the system. As such, the VLC485 can control pan/tilt units, interface to multiplexers, and communicate with a personal computer for computer-controlled operation.

The LCD is used to display current status as well as to provide a menu system for setting operational parameters.

The VLC485 is designed for desktop operation; all connectors are located in the rear of the unit so that all cables can be routed from the back of the unit.
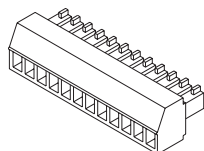
1.2 SPECIFICATIONS

Power Source	5v DC 250 ma.
Data Connections	4-pin compression connector: RS485/422 Pan/Tilt control network. 9-pin d-sub connector: RS232 multiplexer port. 9-pin d-sub connector: RS232 external serial communications port.
Pan/Tilt Control	Maximum number of pan/tilts: 99. Protocols: Videolarm, Sensormatic, Pelco, and Kalatel. Manual control: pan, tilt via joystick. Speed: Variable. Presets: go to, set, clear. Autotour (Videolarm protocol): on, off, set dwell, set speed.
Camera Control	Manual control: Zoom, focus, iris. Auto: focus, iris (where supported by camera).
Multiplexer Control	Protocols: TBD. Number of channels: up to 32.
Alarms	Eight external alarm inputs and one relay contact alarm output.
Configuration	Menu driven, access controlled by optional passcode.
Display	LCD, 20 character x 2 lines.
External Serial Communications Port	9600 baud, 8 bits, 1 start, 1stop, no parity Protocols: Videolarm, Pelco P.
Operating Environment	Temperature: 0° C – 50° C. Humidity: 90% maximum (non-condensing). Altitude: 10,000 ft. maximum.

1.3 INCLUDED ACCESSORIES
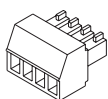
(1) Control Output Connector

(1) Alarm Output Connector
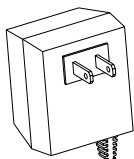
(1) 5 VDC AC Adapter

1.4 LOCATION AND DESCRIPTION OF CONTROLS

Auxiliary (for future use)

Function (for future use)

Sequence

Alarm

Camera

Monitor (for future use)

Presets

Menu

1, 2, 3...

F

1   2   3

4   5   6

7   8   9

*   0   #

Auto Tour

Zoom Out / Zoom In

Focus Far / Focus Near

Iris Close / Iris Open
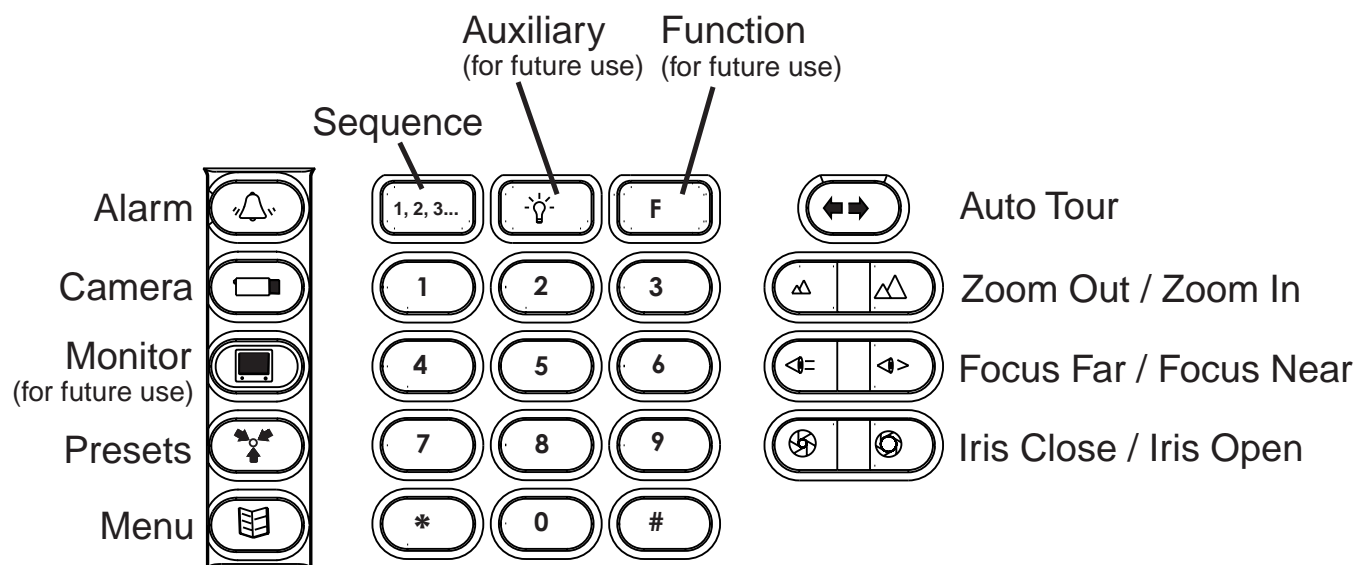
1.5 LOCATION OF INPUT/OUTPUT CONNECTORS

RS-485 Control

Alarm Inputs

PC Port

5VDC

R   R   T   T
A   B   A   B

OUT   IN
C   N   N   C 8 7 6 5 4 3 2 1
    O   C

Power Input

Alarm Outputs

MUX Port
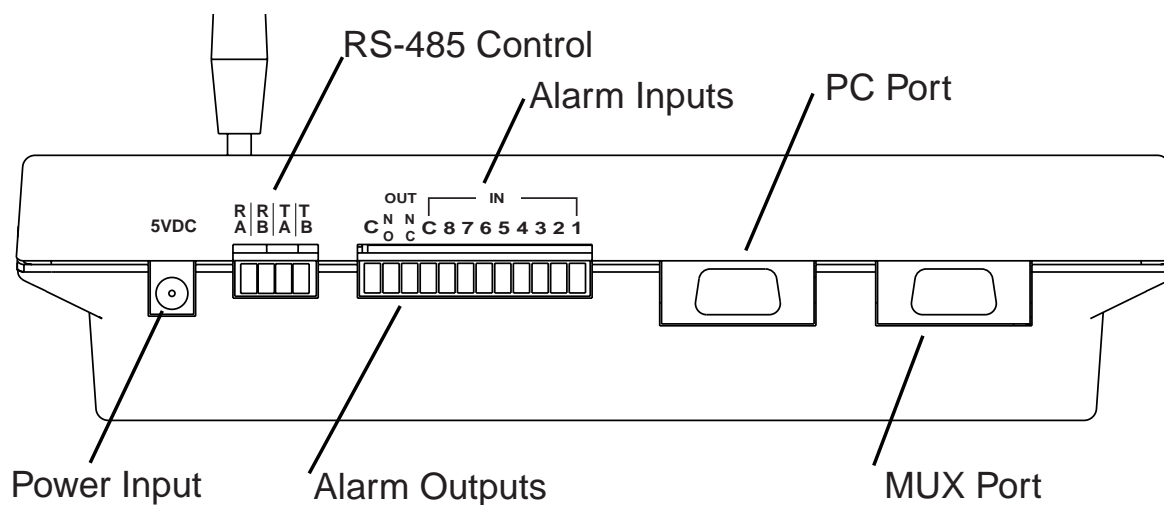
1.6 CONNECTIONS

There are five connectors on the VLC485 Controller. These connectors are a 9-pin connector for RS232 connections to a PC, a 9-pin connector for RS232 connections to an external device, a 4-pin compression connector for the RS485/422 pan/tilt network, and a 9-pin terminal for alarm inputs. The RS232 ports are configured as data communication equipment (DCE) ports.

1. Multiplexer Connector: (Not Supplied)

Pin	DCE Function
1	
2	Transmit data (to main multiplexer)
3	Receive data (from main multiplexer)
4	
5	Signal Ground
6	
7	
8	Signal Ground
9	Transmit data (to expansion multiplexer)

2. PC Connector: (Not Supplied)

Pin	DCE Function
1	
2	Transmit (to PC)
3	Receive (from PC)
4	
5	Signal Ground
6	
7	
8	
9	

3. Multiplexer Connector: (Included)

Pin	Function
1	Alarm 1 input
2	Alarm 2 input
3	Alarm 3 input
4	Alarm 4 input
5	Alarm 5 input
6	Alarm 6 input
7	Alarm 7 input
8	Alarm 8 input
9	Alarm Common
10	Alarm Output NO Contact
11	Alarm Output NO Contact
12	Alarm Output Common

4. Pan/Tilt Network Connector: (Included)

Pin	Function
1	TXA to pan/tilts
2	TXB to pan/tilts
3	RXA from pan/tilts
4	RXB from pan/tilts

5. Power 5VDC: (Included)

1	Center Contact	+ (Plus)
2	Outside Contact	- (Minus)

2.0 CONTROL OF THE BASIC FUNCTIONS
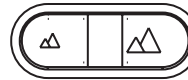
2.1 CAMERA SELECTION

In order to view or control a camera and the pan/tilt, the camera must be selected. To do this, enter the camera number using the keypad and press the **CAMERA** button. The LCD should show the following:

```
CAM 01
```

2.2 PAN/TILT MOVEMENT

Pan/tilt movement is controlled by the joystick. If the selected pan/tilt supports variable speed operation the speed of the pan/tilt will be increased as the joystick is moved away from the center position.
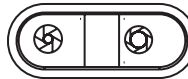
2.3 CAMERA ZOOM/FOCUS/IRIS FUNCTIONS

Use the **ZOOM OUT/ZOOM IN** key to operate the zoom function of a selected camera. **NOTE:** Whenever the camera zoom is changed, the controller places the camera into auto focus and auto iris mode if these modes are available.
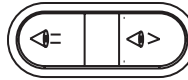
If you want to focus a camera manually press the **FOCUS FAR/FOCUS NEAR** keys.

The **IRIS CLOSED/IRIS OPEN** keys will allow you to change the iris setting of a camera. **NOTE:** Some cameras provide continuous iris function as the keys are held down; others may require repetitive key presses.

2.4 PRESETS

For pan/tilts that support presets, up to 99 can be programmed on the VLC485. To LOCKOUT presets, see Menu Section, Item 3.3.

TO SET A PRESET:

```
CAM 01
```
Select a camera and position it to the desired location.

```
CAM 01
07
```
Enter the preset number (1 - 99) on the keyboard.

```
CAM 01        PRESET  07
```
Press the **POUND (#)** key, then press the PRESETS key.

For errors or to change the preset number repeat the procedure.

TO GO TO A PRESET: Select the camera as noted above. Enter the preset number. Press the **PRESET** button and the camera will go to the preset location. The LCD will show the camera number and preset number as shown above.

TO CLEAR A SINGLE PRESET: Select the camera as noted above. Enter the preset number, press the **STAR (*)** key, then press the **PRESET** button.

TO CLEAR ALL PRESETS: Select the camera as noted above. Press the **STAR (*)** key, then press the **PRESET** button. A "?" will appear. Press PRESET again and all presets for that camera will be cleared. To cancel this function, press the **STAR (*)** key.
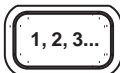
2.5 AUTO TOUR

The VLC485 can accommodate pan/tilts that support Auto tour functions. To start a pan/tilt on an Autotour, press the **AUTO TOUR** button. For Toshiba domes, enter 70 and press the PRESETbutton.

```
CAM 01
AUTO
```

To stop the Auto tour, press the AUTO TOUR button or move the joystick. To SET AUTO TOUR DWELL, see Menu Section, Item 3.4.

2.6 SEQUENCING 1, 2, 3...

In conjunction with a multiplexer the VLC485 will sequence through a predetermined list of up to 16 cameras. To start sequencing press the **SEQUENCE** button. The camera number will show the currently active camera in the sequence and a camera select command for the camera will be sent to the multiplexer.

```
CAM 01    SEQUENCING
```

To stop the sequence, press the **SEQUENCE** button or move the joystick. For SEQUENCING OPTIONS, see Menu Section, Item 3.6.

2.7 ALARMS

Up to 8 alarms can be programmed into the VLC485. When an alarm occurs, the ALARM message shows in the display window.

```
CAM 06        ALARM 07
```

The VLC485 sends a command to that camera telling it to go to the preset point. When an alarm occurs at that position, the VLC485 will display that camera and alarm. A beep also sounds from the unit.

To clear an alarm, press the **ALARM** button.

3.0 CONTROL OF THE MENU ITEMS

3.1 CAMERA SELECTION

Additional functions are available through the menu on the VLC485. To access the menu, press the **MENU** button.

To scroll through the various menu items press the **STAR (#)** key on the key pad. When you're finished with your selections and want to leave menu mode, simply press the **MENU** button again.

Access to the menu can be protected with a 4-digit password. See 3.9 PASSCODE to enable the password function.

Here are the selectable settings in the menu mode:

1) Dome Type Selection
2) Multiplexer Selection
3) Preset Enable
4) Autotour Dwell
5) Set Beep
6) Sequence of Camera (when used with a multiplexer)
7) Sequence Dwell
8) Alarm Set
9) Pass Code Enable

3.1 DOME TYPE SELECTION

Videolarm designed the VLC485 to support RS485/422 control protocols from a number of manufacturers. Dome type selection is independent of the camera position, which means that you can build a system using multiple dome types. For Toshiba domes, select Pelco P.

TO CHANGE CAMERA PROTOCOL:

```
CAM 04
```
Select a camera.

Press the **MENU** button. Enter password if necessary.

```
DOME TYPE
VIDEOLARM
```
The current pan/tilt type will display. To select a different type press the **STAR (*)** key until the desired type is displayed.

```
DOME TYPE
SENSORMATIC
```
Press the **POUND (#)** key to enter the selection. Press **MENU** to exit the menu mode.

3.2 MULTIPLEXER SELECTION

The VLC485 can also support multiplexers from a number of manufacturers to allow the unit to control even more cameras.

TO SELECT A MULTIPLEXER TYPE:

Press the **MENU** button. Enter password if necessary.

```
MUX TYPE
ATV
```
Use the **POUND (#)** key to scroll to the Multiplexer Type. The current type will be displayed.

```
DOME TYPE
HITRON
```
Press the **STAR (*)** key until the desired type is displayed. Press the **POUND (#)** key to select. Press **MENU** to exit the menu mode.

The VLC485 can connect to one main multiplexer and an additional expansion multiplexer if this feature is supported by the multiplexer. The main multiplexer is used to handle camera numbers 1 through 16 while the expansion multiplexer is used to handle camera numbers 17 through 32.

3.3 PRESET LOCKOUT

TO LOCKOUT THE ABILITY TO SET OR CLEAR PRESETS:

Press the **MENU** button. Enter password if necessary.

```
PRESET ENABLE
YES
```
Use the **POUND (#)** key to scroll to Preset Enable. The current setting will be displayed.

```
PRESET ENABLE
NO
```
Press the **STAR (*)** key to change the setting. Press the **POUND (#)** key to select. Press **MENU** to exit the menu mode.

3.4 AUTO TOUR DWELL

Auto tour Dwell defines how long the pan/tilt will stay at each preset in the auto tour. This parameter is preset in the pan/tilt, but the VLC485 allows you to override that setting via the menu if this feature is supported by the pan/tilt. A range from 3 to 99 seconds can be set.

Press the **MENU** button. Enter password if necessary.

SET AUTOTOUR DWELL:

Use the **POUND (#)** key to scroll to Set Auto tour Dwell mode.

SET AUTOTOUR DWELL:
30

Use the keypad to enter the desired dwell time. Press the **POUND (#)** key to select. Press **MENU** to exit the menu mode.

3.5 BEEP ENABLE

Also, if enabled, a brief beep will sound when each button is pressed. To prevent damage to the joy stick, a beep sound is activated whenever the joystick is at its maximum position. This function can be disabled in the Menu Mode.

Press the **MENU** button. Enter password if necessary.

BEEP ENABLE
YES

Use the **POUND (#)** key to scroll to Beep Enable. The current setting will be displayed.

BEEP ENABLE
NO

Press the **STAR (*)** key to change the setting. Press the **POUND (#)** key to select. Press **MENU** to exit the menu mode.

3.6 SEQUENCING

Sequencing allows you to view up to 16 cameras in a specific order. The sequence can be set and reviewed and cameras can be added or subtracted using the Menu Mode.

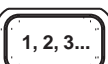Press the **MENU** button. Enter password if necessary.

SEQUENCE - ADD CAM:
05

Use the **POUND (#)** key to scroll to Sequence. If a sequence is already set the first camera in the sequence will be displayed.

3.6.1 TO REVIEW A SEQUENCE

Press the **MENU** button. Enter password if necessary. Use the **POUND (#)** key to scroll to Sequence.

1, 2, 3...

You can review the existing sequence by pressing the **SEQUENCE** button. Each time you press it the next camera will be displayed. When a blank appears, that will be the end of the sequence.

3.6.2 TO ADD A CAMERA TO A SEQUENCE

A sequence may contain up to 16 camera entries. If you have not filled a sequence and would like to add cameras to it, do the following.

Press the **MENU** button. Enter password if necessary. Use the **POUND (#)** key to scroll to Sequence.
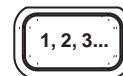
SEQUENCE - ADD CAM:

A blank space will appear after the last camera of the current sequence.

SEQUENCE - ADD CAM:
21

To add a camera to the existing sequence enter the camera number on the key pad.

1, 2, 3...

Press the **STAR (*)** key, then press the **SEQUENCE** button. At that point another blank space will appear. You may add another camera to the sequence at this time (up to a total of 16), or press the **SEQUENCE** button again to review your entries.

3.6.3 TO CHANGE A CAMERA IN A SEQUENCE

You may change any entry in a sequence at any time. Remember that these changes overwrite your existing sequence.

Press the **MENU** button. Enter password if necessary. Use the **POUND (#)** key to scroll to Sequence.

1, 2, 3...
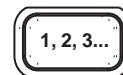
SEQUENCE - ADD CAM:
17

Usiing the **SEQUENCE** button, scroll through the sequence until you reach the camera you want to change.

SEQUENCE - ADD CAM:
08

Using the keypad, enter the number of the camera you want to use.

1, 2, 3...

Press the **STAR (*)** key, then press the **SEQUENCE** button. The number of the next camerea in the sequence will appear. Press the **SEQUENCE** button again to continue to review your entries.

3.6.4 TO CLEAR THE SEQUENCE

Press the **MENU** button. Enter password if necessary. Use the **POUND (#)** key to scroll to Sequence.

SEQUENCE - ADD CAM:

Using the key pad, enter 00. Press the **STAR (*)** key, then press the **SEQUENCE** button. The sequence will be blank.

3.7 SEQUENCE DWELL

The sequence dwell interval defines how long the camera will stay active in the sequence. The factory default dwell time is 3 seconds, but this may be changed to any time between 1 and 99 seconds.

 Press the **MENU** button. Enter password if necessary.

| SEQUENCE - ADD CAM: 03 | Use the **POUND (#)** key to scroll to Set Sequence Dwell. The current dwell time will be displayed. |

| SEQUENCE - ADD CAM: 03 | Using the key pad, enter the new dwell time. Press the **STAR (*)** key to set the time. Press **MENU** to exit the menu mode. |

3.8 CONTROLLER ALARMS

The VLC485 responds to alarms from its alarm inputs. When an alarm occurs, a "go to preset" command will be sent to a predetermined pan/tilt. For example, alarm 3 may select preset 23 of camera 7 to be displayed. The preset number and pan/tilt number are preselected by using the alarm setup function.

 Press the **MENU** button. Enter password if necessary.

| ALARM 1   CAM 01   PRESET 03 | To set up an alarm, enter the menu mode and scroll down to the "ALARM:" entry. Press the |

STAR (*) button to scroll to the desired alarm number. The display will show the camera number and preset associated with the alarm. Use the keypad to enter or change the camera number and press the **CAMERA** button. Use the keypad to enter or change the preset number and press the **PRESET** button. Press STAR (*) to select another alarm, or exit the menu by pressing the **MENU** button.

| CAM 03   ALARM 1 | When an alarm occurs, **ALARM** appears onscreen. The alarm message can only be cleared by pressing the **ALARM** button. |

3.9 PASSCODE ENABLE/SET/CHANGE

You can protect your controller from unauthorized alterations by enabling the passcode function. This means that the menu cannot be accessed without the proper 4-digit. The VLC485 is factory set with PASSCODE disabled. To enable and set the passcode:

 Press the **MENU** button.

| PASSCODE ENABLE: NO | Use the **POUND (#)** key to scroll to Passcode Enable. |

| PASSCODE ENABLE: YES | Press **STAR (*)** to toggle between YES to enable and NO to disable. Pressthe **POUND (#)** key to enable the selection. |

| SET PASSCODE: 1234 | On selecting YES, the default passcode will display. Change by entering a new 4-digit code |

on the key pad. Press **STAR (*)**, **POUND (#)** or the **MENU** button to enable the passcode and automatically exit the menu mode.

4.0 PC PORT

The VLC485 uses the PC port to communicate with the serial communications port of a PC or modem. The PC or other connected device uses a protocol to control either the VLC485 or other devices connected to the VLC485, such as the pan/tilt units. In addition, all controller activities, including joystick movements, are transmitted to the PC port. This enables the controller to become a "peripheral" to a PC and act as the man/machine interface for a system. Following are the VLC485 protocols.

4.1 PC PORT COMMANDS

> VLC485 RS232 COMMUNICATION PROTOCOL
> *(NOTE: This applies to software version 2.50 and later)*

These messages are used to send and receive control messages from the PC.

4.2 GENERAL COMMAND MESSAGE FORMAT

Data is transmitted at 9600 baud, 1 start bit, 1 stop bit, 8 data bits (lsb first), no parity.

BYTE	DATA	DESCRIPTION
1	0x7e	Start character "~"
2 - n	Data	All data characters are 8-bit characters
n+1	0x0d	"Carriage return" character
n+2	0x0a	"Line feed" character

4.3 MOTION COMMAND MESSAGES

These commands control the basic motion of the pan/tilt platform and the lens movement of the camera system. The messages all comprise 5 bytes; the Data is contained in bytes 2 and 3 as described in the following table. Messages that are transmitted from the controller are indicated by a "T" in the direction column, D; messages that are received and processed by the controller are indicated by a "R" in the direction column.

FUNCTION	D	BYTE #2	BYTE #3	DESCRIPTION
Pan left at speed "x"	T/R	"1"	"0" - "?"	Pan left at speed index 0 - 15
Pan right at speed "x"	T/R	"r"	"0" - "?"	Pan right at speed index 0 - 15
Pan stop	T/R	"P"	"S"	
Tilt up at speed "x"	T/R	"u"	"0" - "?"	Tilt up at speed index 0 - 15
Tilt down at speed "x"	T/R	"d"	"0" - "?"	Tilt down at speed index 0 - 15
Tilt stop	T/R	"T"	"S"	
Zoom in	T/R	"Z"	"I"	
Zoom out	T/R	"Z"	"O"	Zoom in (Telephoto)
Zoom stop	T/R	"Z"	"S"	Zoom out (Wide angle)
Focus near	T/R	"F"	"N"	
Focus far	T/R	"F"	"F"	Focus on nearby
Focus stop	T/R	"F"	"S"	objects
Iris open	T/R	"I"	"O"	Focus on distant object
Iris close	T/R	"I"	"C"	
Iris stop	T/R	"I"	"S"	

4.4 PRESET AND DOME PARAMETER MESSAGES

These commands control the position presets and some of the operational parameters of the pan/tilt platform. These messages all comprise 5 bytes; the Data is contained in bytes 2 and 3 as described in the following table. Messages that are transmitted from the controller are indicated by a "T" in the direction column, D; messages that are received and processed by the controller are indicated by an "R" in the direction column.

FUNCTION	D	BYTE #2	BYTE #3	DESCRIPTION
Goto preset position presets 1 - 63	T/R	"H"	0x01 - 0x3f	Goto preset position
Store preset position presets 1 - 63	T/R	"P"	0x01 - 0x3f	Store preset position
Clear presets	T/R	"P"	"C"	Clears all presets from memory
Toggle auto tour	T/R	"L"	"a"	Toggles autotour operation on and off
Set dwell time	T/R	"t"	"0" - "9"	Set dwell time in autotour mode to 1 - 10 seconds

4.5 CONTROLLER PARAMETER MESSAGES

These messages contain information about the controller status. These messages all comprise 5 bytes; the Data is contained in bytes 2 and 3 as described in the following table. Messages that are transmitted from the controller are indicated by a "T" in the direction column, D; messages that are received and processed by the controller are indicated by a "R" in the direction column.

FUNCTION	D	BYTE #2	BYTE #3	DESCRIPTION
Camera select	T/R	"C"	0x01 - 0x63	Current camera number
Monitor select	T/R	"M"	0x01 - 0x63	Current monitor number
Sequence status	T	"S"	0x00	Sequence off
Sequence status	T	"S"	0x01	Sequence on
Alarm active	T	"A"	0x01 - 0x0a	Active alarm number. Alarm has been detected on alarm input
Alarm kill	T/R	"A"	"K"	Acknowledge all alarms
Aux function aux01 - aux99	T	"X"	0x01 - 0x6c	Toggles aux 1 output
Information key	T	"B"	"B"	Information key pressed
Menu active	T	"M"	"A"	Contoller is in the menu mode
Menu inactive	T	"M"	"I"	Controller is not in the menu mode

4.6 CUSTOM CONTROLLER LCD MESSAGES

If needed, you can write custom messages from your PC for display on the VLC485. Any information goes only to the controller LCD.

LCD CAPTURE MESSAGE

The display character string message will override any messages displaying on the VLC485, in essence "capturing" the display.

BYTE	DATA	DESCRIPTION
1	"~"	Start character
2	"D"	"D" indicates a character string is to be displayed
3	"0" or "1"	This is the LCD line number, either 0 or 1
4 - 23	ASCII characters	This is the message string to be displayed
24	0x0d	"Carriage return" character
25	0x0a	"Line feed" character (optional, ignored)

LCD RELEASE MESSAGE

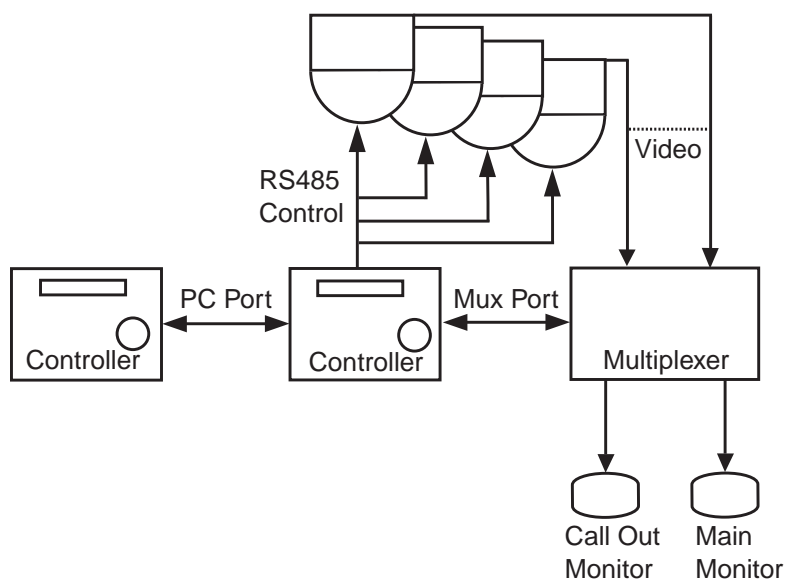The display release message will clear the LCD display and allow its use by the VLC485.

BYTE	DATA	DESCRIPTION
1	"~"	Start character
2	"D"	
3	"R"	
4	0x0d	"Carriage return" character
5	0x0a	"Line feed" character (optional, ignored)

A message sent to the VLC485 can be cleared at the controller by pressing the **Information** button.
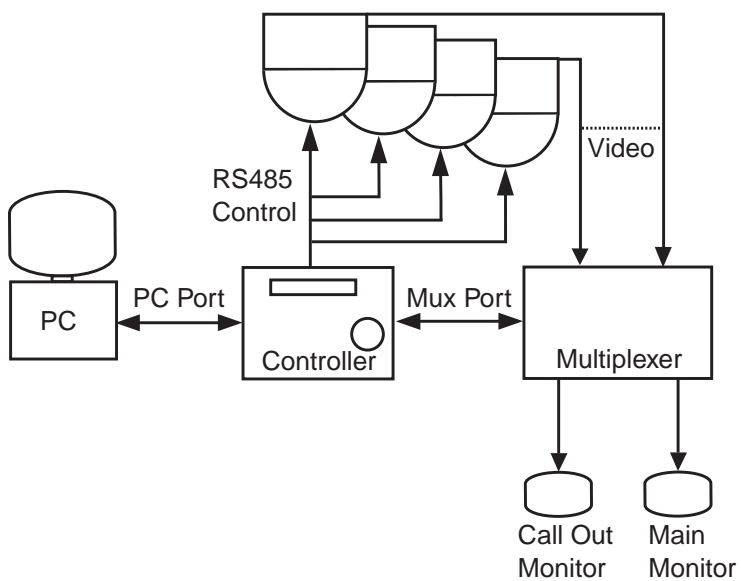
The VLC485 can be used in as a stand-alone unit or as part of a
system. As part of a system, the unit may be used with another
VLC485 or with a PC. Below are diagrams for these types of systems.

Typical application

RS485
Control

Video

PC Port

Mux Port

Controller

Controller

Multiplexer

Call Out
Monitor

Main
Monitor

PC System

RS485
Control

Video

PC

PC Port

Mux Port

Controller

Multiplexer

Call Out
Monitor

Main
Monitor

IMPORTANT SAFEGUARDS

1. **Read Instructions -** All the safety and operating instructions should be read before the unit is operated.
2. **Retain Instructions -** The safety and operating instructions should be retained for future reference.
3. **Heed Warnings -** All warnings on the unit and in the operating instructions should be adhered to.
4. **Follow Instructions -** All operating and user instructions should be followed.
5. **Electrical Connections -** Only a qualified electrician should make electrical connections.
6. **Attachments -** Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. **Cable Runs -** All cable runs must be within permissible distance.
8. **Mounting -** This unit must be properly and securely mounted to a supporting structure capable of sustaining the weight of the unit. Accordingly:
   a. The installation should be made by a qualified installer.
   b. The installation should be in compliance with local codes.
   c. Care should be exercised to select suitable hardware to install the unit, taking into account both the composition of the mounting surface and the weight of the unit. Be sure to periodically examine the unit and the supporting structure to make sure that the integrity of the installation is intact. Failure to comply with the foregoing could result in the unit separating from the support structure and falling, with resultant damages or injury to anyone or anything struck by the falling unit.
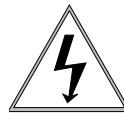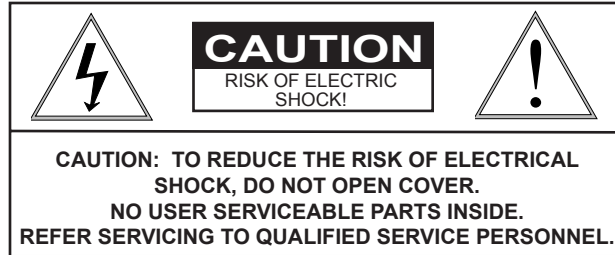
ONE-YEAR LIMITED WARRANTY

Videolarm, Incorporated warrants that products sold hereunder shall be fit for the ordinary purpose for which said products are intended and shall be free from defects in material and workmanship for a period of one year from date of sale to buyer. Note that all electrical components will be warranted for a period of 1 year from date of sale to buyer. Videolarm makes no other warranty of any kind with respect to this product, whether expressed or implied, including, without limitation, the implied warranty of fitness for a particular purpose.

In the event of a breach of the above warranty, Videolarm shall, at its option, repair or replace said product. This is Videolarm's sole obligation under this warranty. In no event shall Videolarm be liable for any incidental or consequential damages, as defined in section 2-715 of the Uniform Commercial Code by a breach of this warranty.

Videolarm shall repair or replace defective products upon shipment of products prepaid to Videolarm, Inc., 2525 Park Central Blvd., Decatur, GA 30035.

Repairs made necessary by reason of accident, misuse or normal wear shall be charged at Videolarm's standard rate. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SAFETY PRECAUTIONS

CAUTION
RISK OF ELECTRIC SHOCK!

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT OPEN COVER.
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

UNPACKING

Unpack carefully. Electronic components can be damaged if improperly handled or dropped. If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper.

Be sure to save:
1. The shipping carton and packaging material. They are the safest material in which to make future shipments of the equipment.
2. These Installation and Operating Instructions.

SERVICE

If the unit ever needs repair service, the customer should contact Videolarm (1-800-554-1124) for authorization to return and shipping instructions.

TECHNICAL SUPPORT

If technical support is needed, Videolarm has set-up a 24 hour technical support line for their customers.

24 HOUR TECHNICAL SUPPORT

1-800-554-1124