



Instruction Manual

KB-1000/JS

JOYSTICK CONTROLLER

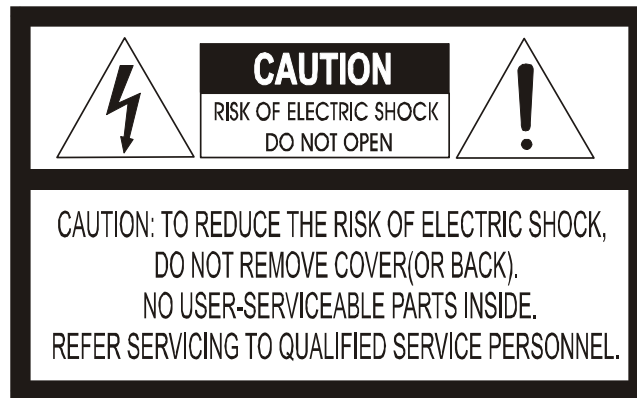
Please read this manual thoroughly before use and keep it handy for future reference.

WARNING AND CAUTION

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "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 the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

FCC COMPLIANCE STATEMENT

FCC INFORMATION: 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 WHEN THE EQUIPMENT IS OPERATED 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 COMMUNICATIONS. 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 MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

CE COMPLIANCE STATEMENT

WARNING

THIS IS A CLASS A PRODUCT. IN A DOMESTIC ENVIRONMENT THIS PRODUCT MAY CAUSE RADIO INTERFERENCE IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

IMPORTANT SAFEGUARDS

1. Read these instructions.
2. Keep these instructions in a safe place for future reference.
3. Heed all cautions and warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that product heat.
9. Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on, or pinched, particularly at plugs, convenience receptacles, and the point where it exits from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. CAUTION - THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.
15. Use Certified/Listed Class 2 power supply transformer only.

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Appendix A SPECIFICATION


Chapter 1

INTRODUCITON

1.1 Features

This joystick controller is designed to control 64 dome cameras. It is expandable to 255 dome cameras in simplex control mode. Roll over key functions make it capable of controlling a variety of external switching devices such as Multiplexers and/or Digital Video Recorders.

The joystick controller features:

- The capability of controlling a camera's panning and tilting movement with variable speed from 0.1 °/sec to 90°/sec (64 speed steps). It has manual override capability of the auto focus and auto iris functions of a zoom camera. Speed is inversely proportional to the zoom ratio. With the  key pressed the maximum speed goes up to 360°/second (turbo speed mode).
- The ability to define and recall up to 248 **presets**, which are immediate camera call-ups of preset position views, with automatic zoom and focus.
- Program 8 **patterns**, which comprise a sequential series of pan, tilt, zoom, and focus movements from a single camera.
- One define (continuous rotation) with 16 **scans**.
- 8 tours consisting of 64 of the presets, patterns, scan and tour is expandable to over 400 functions with nested tours.
- **Global preset** recalls the preset of all dome cameras.
- Manual override mode of auto focus or auto iris is switched to Auto Iris/Focus mode by slight moving of the joystick handle.
- Programmable user preferences (alarm, preset, title, etc.).
- Two levels of password, administrator and user, are supported for higher security.
- One Master and multiple slave Keyboards are supported for distributed control.
- DVR system (Maximum 99) can be controlled remotely.
- Up to two data programs data from the dome cameras can be downloaded to non volatile memory space in the joystick controller for the purpose of programming new dome cameras.

1.2 Unpacking

Unpack the equipment and make sure all listed items are included in the box.

Contents of Joystick Controller box

Joystick Controller -----	1
Junction Box -----	optional
3m Cable -----	optional
M4 Self Tapping Screws -----	optional
Instruction Manual -----	1
12VDC SMPS -----	1

Chapter 2 INSTALLATION

2.1 Connection Diagram

2.1.1 Basic Installation Diagram

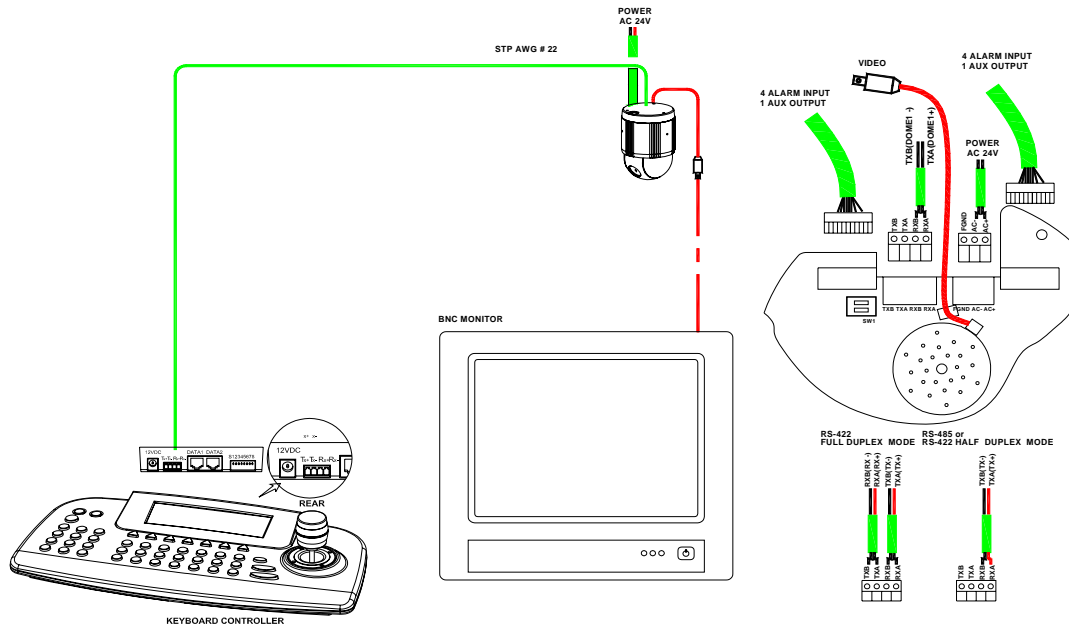


Figure 1 – Basic Installation Diagram

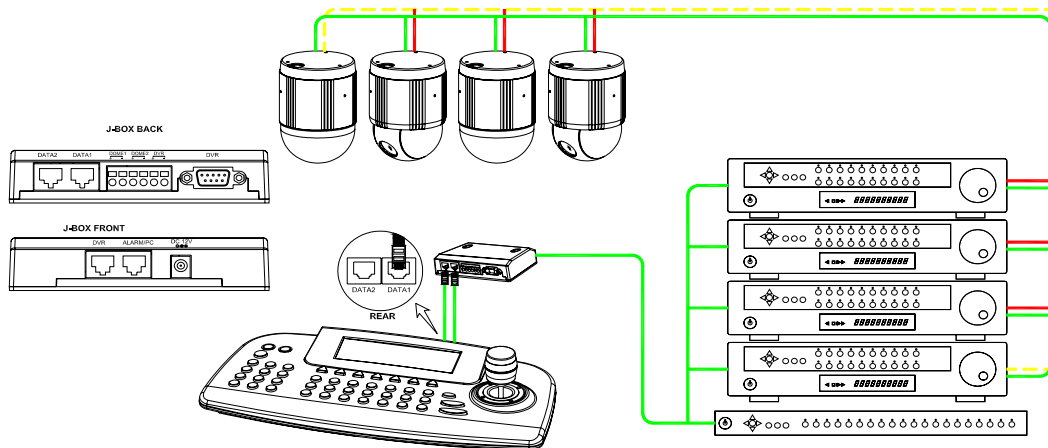


Figure 2 – Basic Installation Diagram with J-Box

2.1.2 Single DVR Configuration

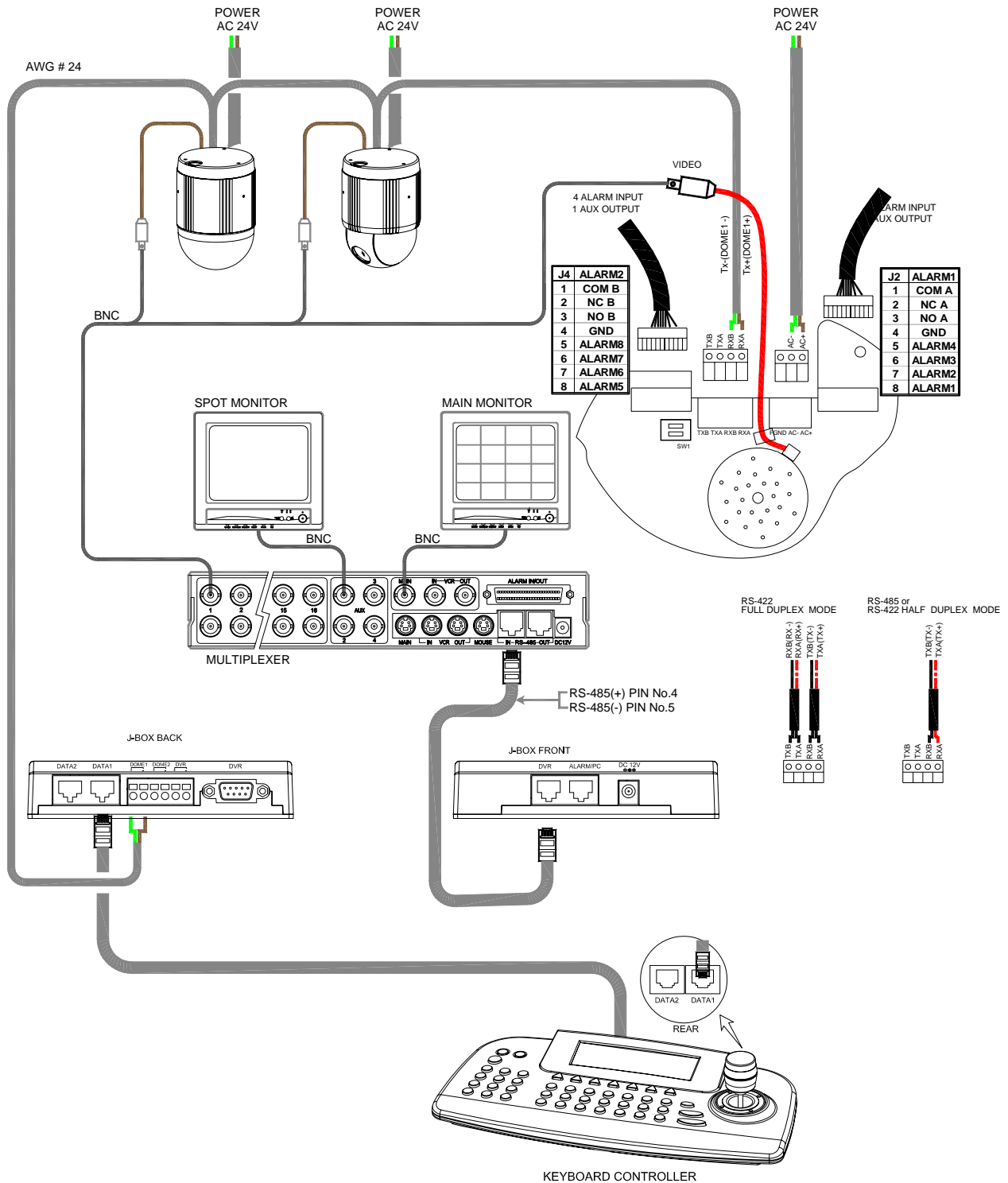


Figure 3 – Single DVR

2.1.3 Single User with Two DVR Configuration

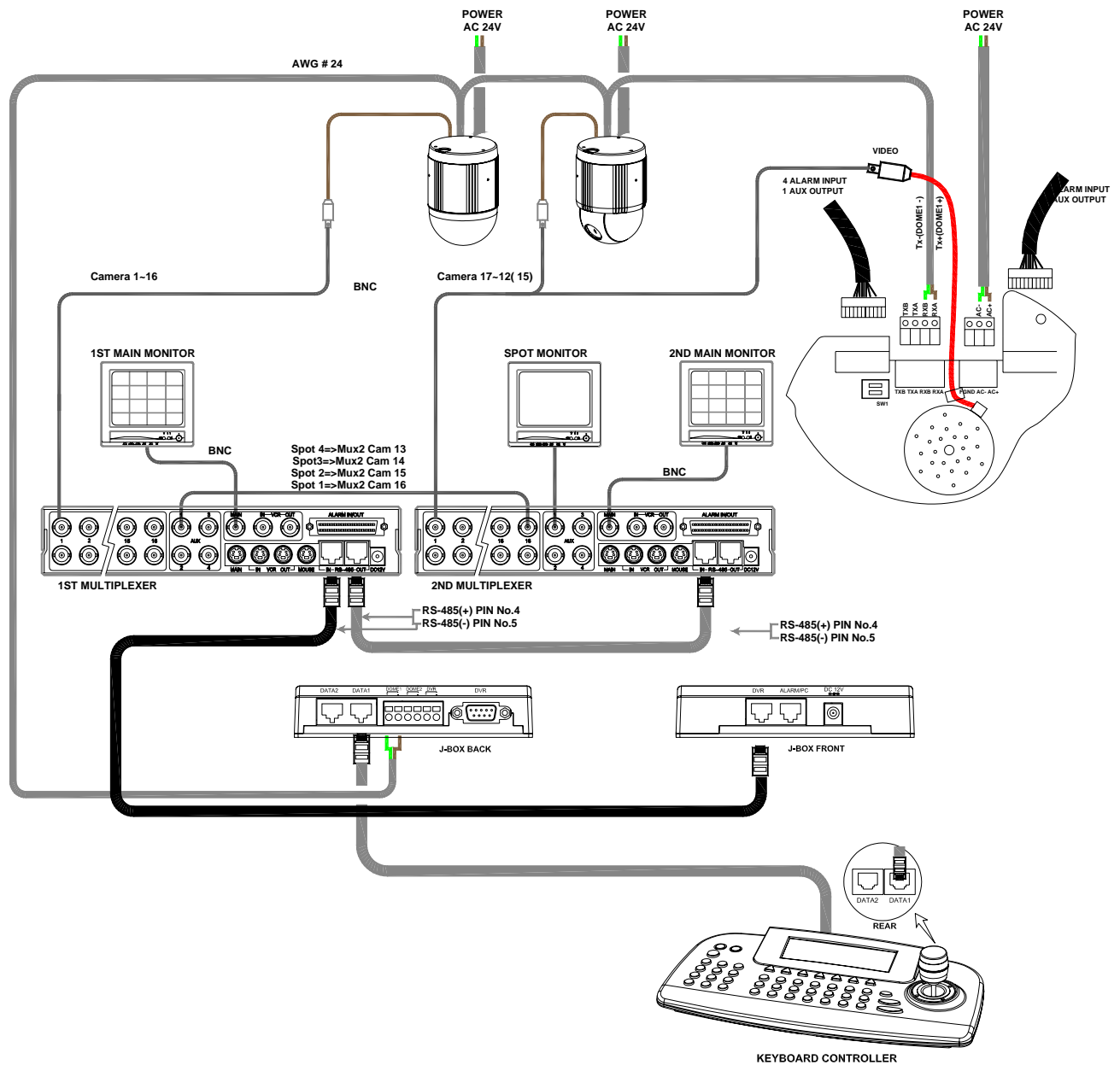


Figure 4 – Two DVR

2.1.4 Two DVR with Slave Controller

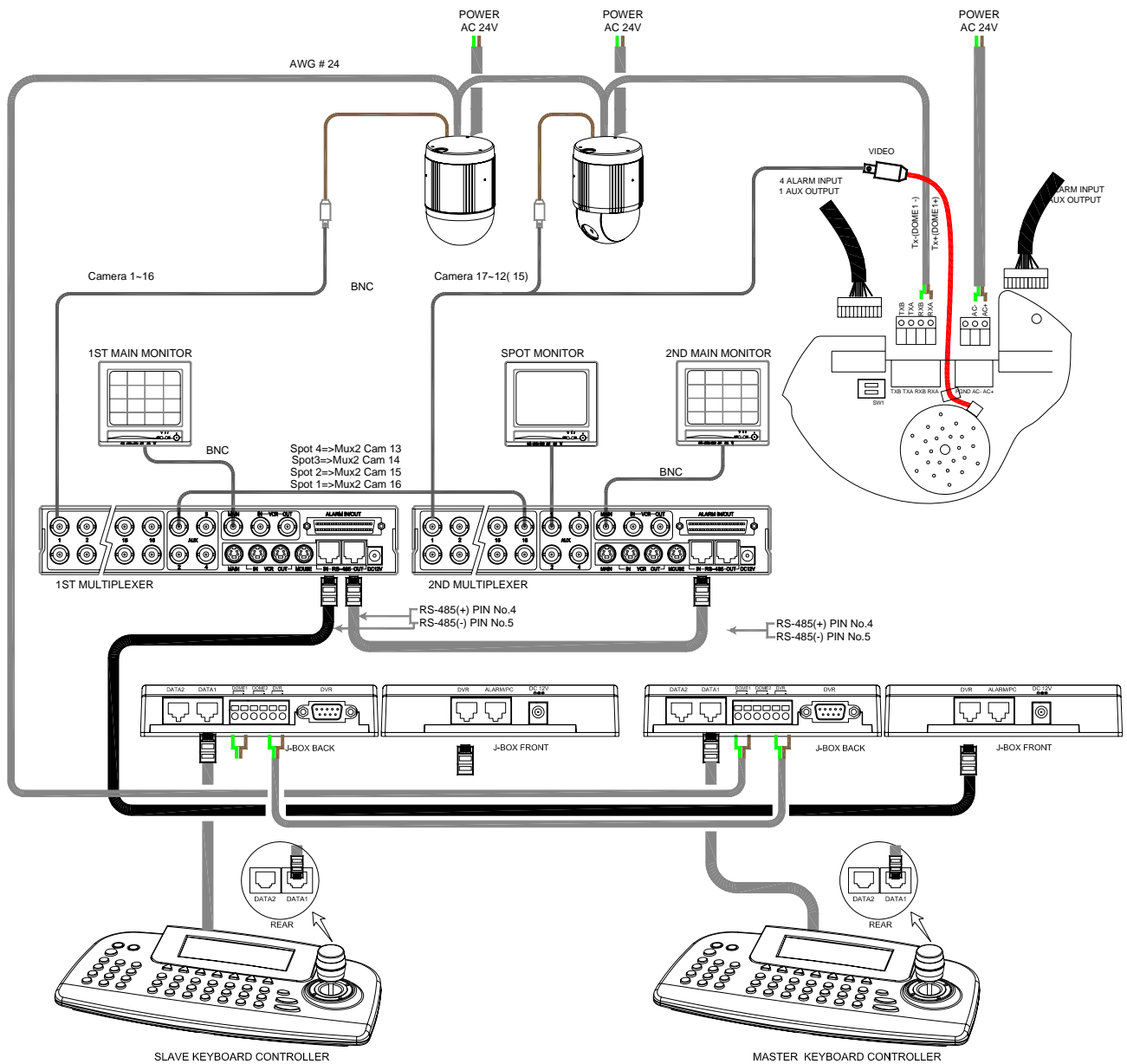


Figure 5 – Two DVR with Slave Controller

2.2 Termination & Dip Switch Settings

The first and last devices in an installation (dome and keyboard controller) must have the data line terminated by setting the DIP switch. Without proper termination, there is potential for control signal errors. Total cable length for communication should not exceed 1.2Km

Refer to Figure 7 for setting the dome camera and keyboard controller termination.

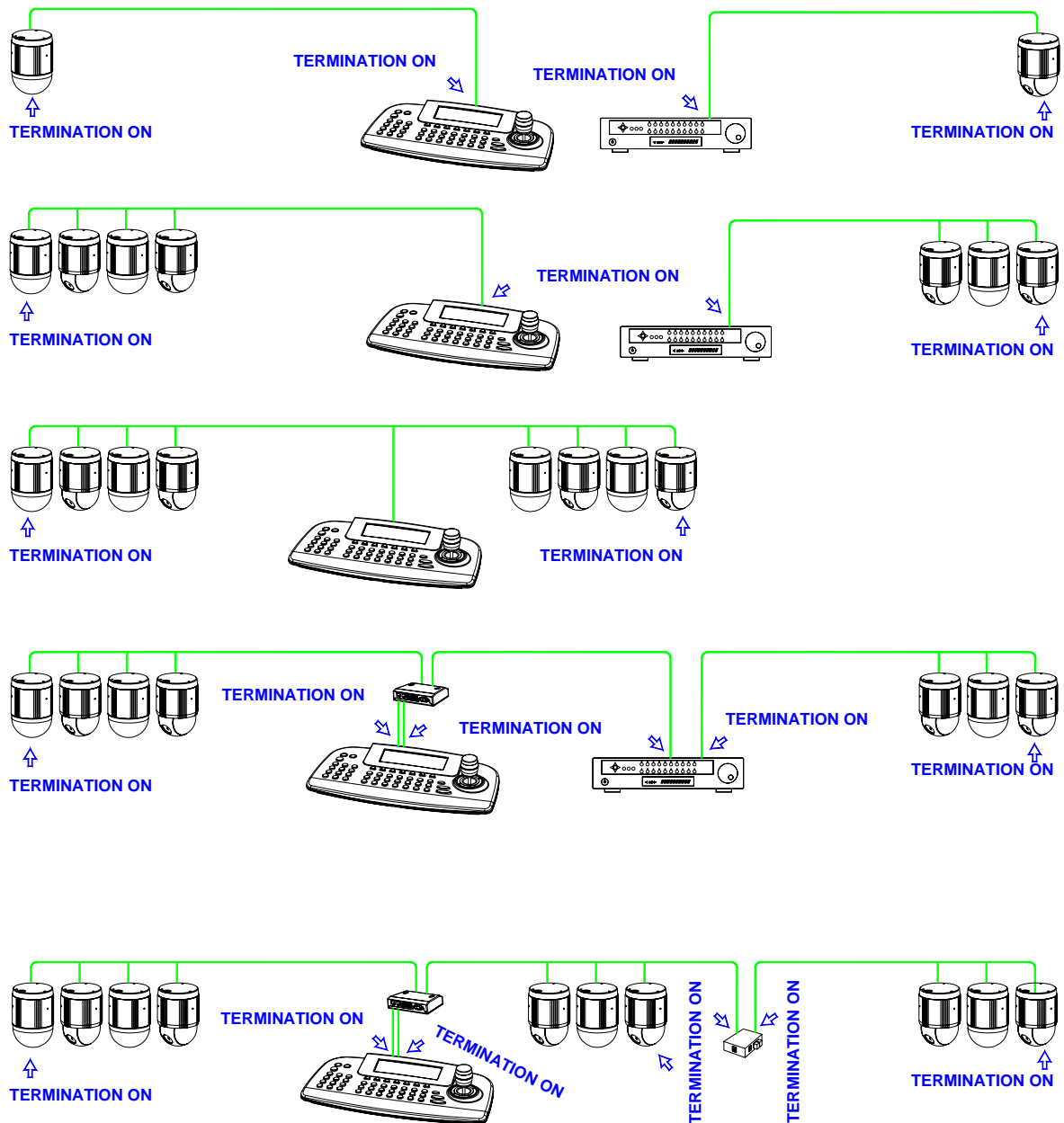


Figure 6 – Basic Installation Diagram

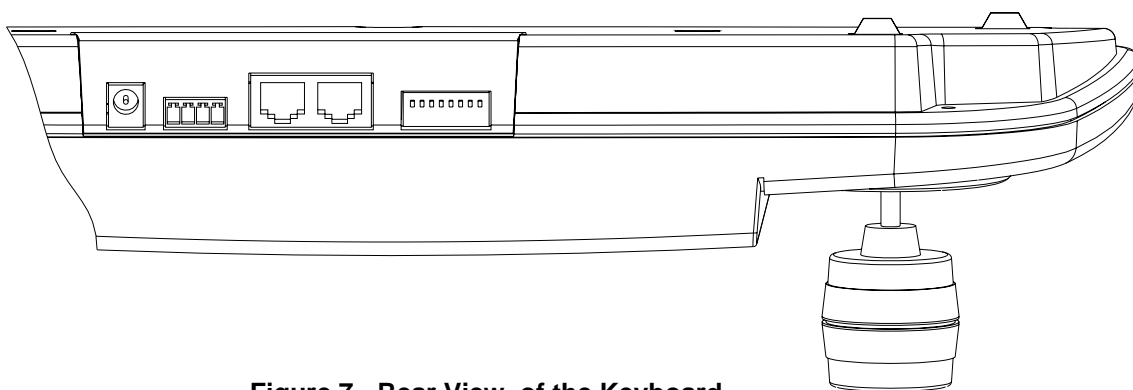


Figure 7 - Rear View of the Keyboard.

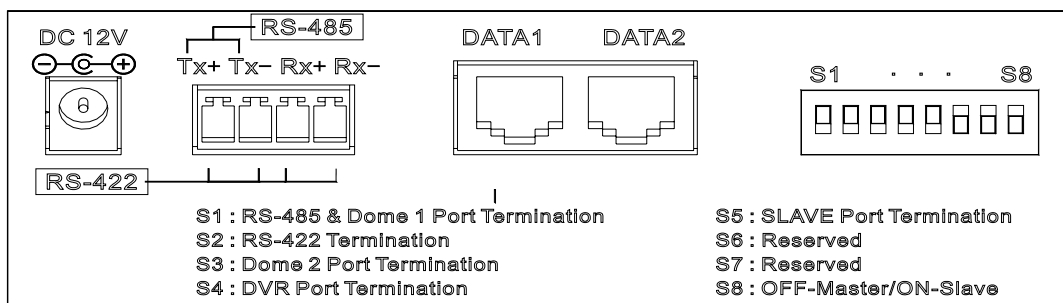
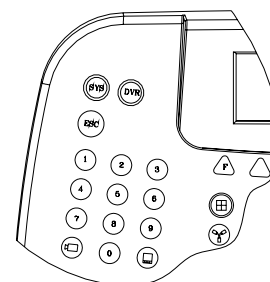
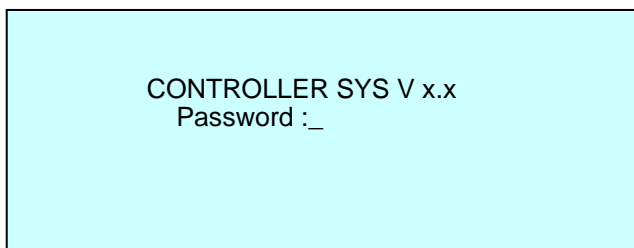


Figure 7 – Termination and ID Switches.

2.3 Basic Operation

The joystick controller shows the following screens in selected modes and menus.
When the keyboard controller is powered on, a password is needed to access the keyboard controls.



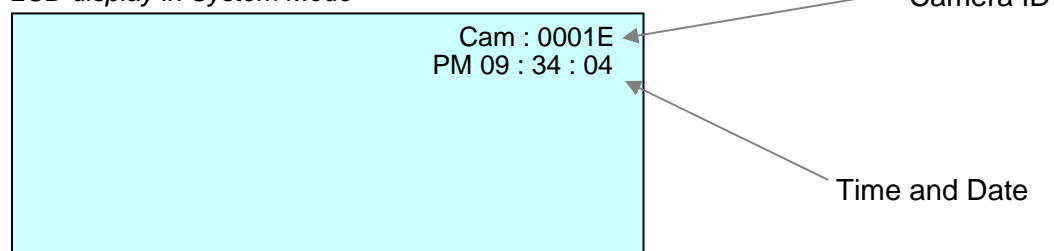
Unless the password has been changed, 9999+Enter is the default administrator's password and 1111 for user. If you forget your own password, contact your distributor.


Press **9**.**9**.**9**.**9** and then **Enter** consecutively (**9999**+**Enter**).

The joystick controller displays the following screen and is ready to control the dome camera.

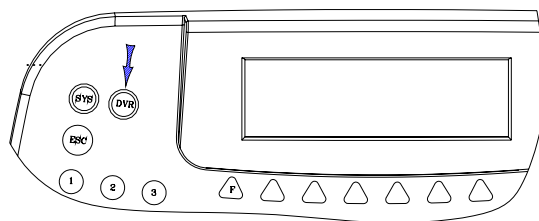
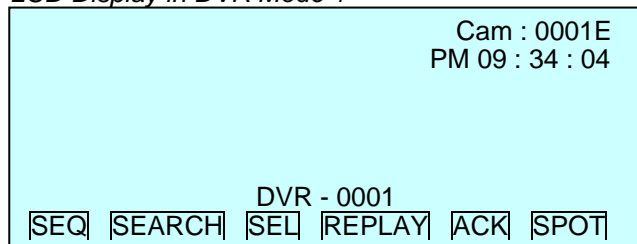
Press **SYS** key to get back to system mode from DVR control mode.

LCD display in System Mode

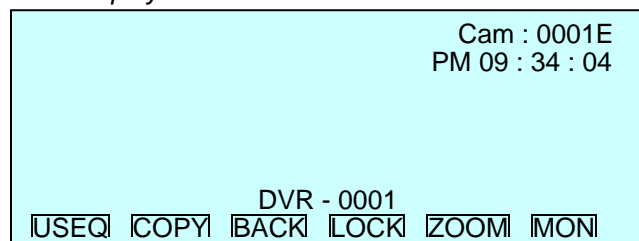


When you need to control the DVR, press  key. The LCD screen shows the following DVR modes.

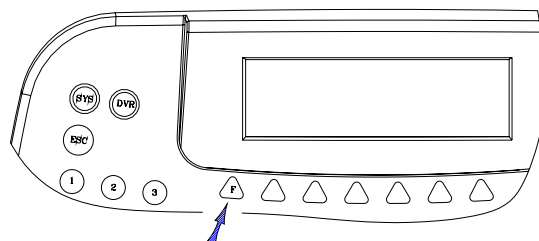
LCD Display in DVR Mode 1



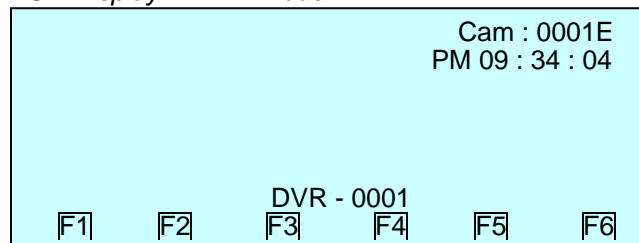
LCD Display in DVR Mode 2





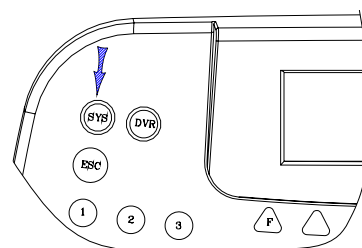
Press  key and DVR mode 2 is displayed.



LCD Display in DVR Mode 3





Press  key again and DVR mode 3 is displayed. Pressing the  key causes the DVR mode to be cycled.

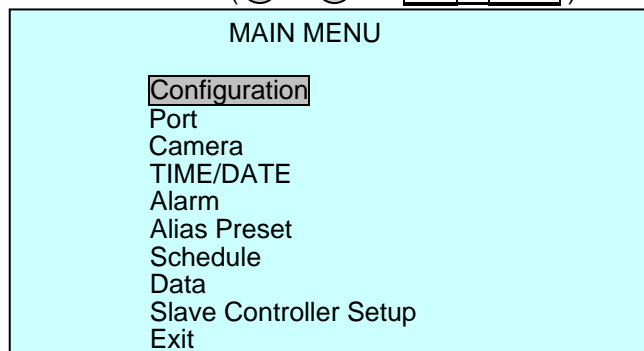








Press  key to go back to system mode from DVR control mode.

2.4 Configuring the Controller

If a user needs to setup the network, passwords or perform special tasks, such as uploading and downloading programmed data from the dome cameras, hold down the  key, and then press  key (**Shift + Menu**). The following menu is displayed. Joystick Up/Down scrolls menu items, push the stick to the right to enter a sub-menu.

MAIN MENU (+ = **Shift + Menu**)




-  : Joystick push up and pull down Navigate menu items.
-  : Push the Joystick to the right to enter a sub menu.
-  : Rotate CW or CCW to increase or decrease the value for a menu item.
-  : Same effect as zoom handle rotation
- +** : Press and hold the  key then press  key.
- ,** : Press first key and then second key consecutively .

CONFIGURATION (Shift + Menu → CONFIGURATION)

CONFIGURATION	
Key Beep	: ON / OFF
Log_Out	: NO / 1Min ~30Min
User Password	
Admin Password	
Save and Exit	

- Key Beep : ON - Enable key beep sound,
OFF - Disable beep sound.
- Log_Out : OFF~ 30Min - After elapsed setup time, keyboard locks automatically.
OFF - Disable Auto Key-Lock function.
User needs the login password to operate the Keyboard again.
- User Password - Simple operation (cannot change setup or program)
 - Password : Enter 4 digit current user password.
 - New Password : Enter new 4 digit password.
 - Confirm Password : Confirm new 4 digit password.
- Admin Password - Fully accessible menu and changing of setup and programs
 - Password : Enter 4 digit current user's password.
 - New Password : Enter new 4 digit password.
 - Confirm Password : Confirm new 4 digit password.

**Note: Factory default Administrator's password is 9999+Enter and User password is 1111+Enter.
If you forget your own password, contact your distributor.**


- Save and Exit Save the programmed data and return to the previous Menu
(exit without save if the  key is pressed)

PORT (Shift + Menu → PORT SETUP MENU)

PORT SETUP MENU	
Cam1	
Cam2	
Slave KBD	
DVR	
Alarm	
Exit	

Cam1 (Shift + Menu → PORT SETUP MENU → Cam1)

CAM1 PORT SETUP MENU	
Port Type	: RS-485 / RS-422
Device	: Camera / DVR / None
Baud Rate	: 9600 / 2400~230K
Save and Exit	

Port Type : Configure Port as **RS-485** or RS-422
Device : Select Device to be controlled (**Camera** / DVR / None)
Baud Rate : Communication speed (2400/ 4800/ **9600**/19200/ 38400/ 57600/ 11.5K /230K)
Save and Exit Press  key to exit without saving the data.

Cam2 (Shift + Menu) → PORT SETUP MENU → Cam2)

CAM2 PORT SETUP MENU

Device : Camera / None

Baud Rate : 9600 / 2400~230K

Save and Exit

Device : Select Device to be controlled (**Camera** / None)
Baud Rate : Communication speed (2400/ 4800/ **9600**/19200/ 38400/ 57600/ 11.5K /230K)
Save and Exit Press (ESC) key to exit without saving the data.

Slave (Shift + Menu) → PORT SETUP MENU → Slave KBD)

SLAVE SETUP MENU

Device : Controller / None

Baud Rate : 9600 / 2400~230K

Save and Exit

Device : Select Device to be controlled (**Controller** / None)
Baud Rate : Communication speed (2400/ 4800/ **9600**/19200/ 38400/ 57600/ 11.5K /230K)
Save and Exit Press (ESC) key to exit without saving the data.

DVR SETUP MENU (Shift + Menu) → PORT SETUP MENU → DVR)

DVR SETUP MENU

Device : DVR / Alarm / AUX IN/ IO /None

Baud Rate : 9600 / 2400~230K

Save and Exit

Device : Select Device to be controlled (**DVR** / Alarm / AUX IN / AUX IO /None)
Baud Rate : Communication speed (2400/ 4800/ **9600**/19200/ 38400/ 57600/ 11.5K /230K)
Save and Exit Press (ESC) key to exit without saving the data.

DVR SETUP MENU (Shift + Menu) → PORT SETUP MENU → DVR)

DVR SETUP MENU

Device : DVR / Alarm / AUX IN/ IO /None

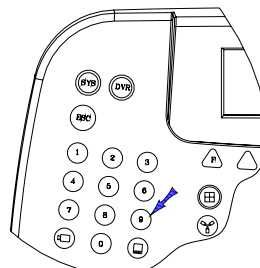
Baud Rate : 9600 / 2400~230K

Save and Exit

Device : Select Device to be controlled (DVR / **Alarm** / AUX IN / AUX IO /None)
 Baud Rate : Communication speed (2400/ 4800/ 9600/19200/ 38400/ 57600/ 11.5K /230K)
 Save and Exit Press **ESC** key to exit **without** saving the data.

Camera (**Shift** + **Menu** → Camera)

CAMERA SETUP					PAGE : 001
Cam	Protocol	Port	B_rate	Alarm	
0001	RVT	PORT 1	9600	OFF	
0002	RVT	PORT 1	9600	OFF	
0009	- -	- -	9600	OFF	
----	- -	- -	9600	OFF	
3999	RVT	PORT 1	9600	OFF	
OFF :del ENTER : save & exit ESC : cancel					



Press **No.** key or twist zoom handle on the first column to enter setup mode.
 Input camera ID using numeric keys or twist the zoom handle to increase/ decrease the camera ID.
 Push the joystick to the **Right/ Left** to select next/ previous item and select the protocol to be used by twisting zoom handle. (RVT/ S/ S2e/ P/ D)
 Push the stick to right and set the baud rate by twisting zoom handle.
 Select whether receive alarm from the dome or not.
 (Alarm OFF : simplex, Alarm ON : half-duplex)
 Press **OFF** key to delete the dome ID. **ENTER** key to save & exit.
 Press **ESC** key to exit without saving.

Time/Date (**Shift** + **Menu** → Time/Date)

TIME / DATE Setup	
Display	: ON / OFF
Date Format	: Asia / US/ EURO 2005/JAN /18
Time Format	: 12 / 24 08: 59 : 04
Day Light Saving	: ON/ OFF
Day Light Saving	
Save and Exit	

Day Light Saving (**Shift** + **Menu** → Time/Date → Day light Saving)

Day Light Saving Setup		
Display	: ON / OFF	
	Date	Time
Start	: 01 / 01	00 : 00
END	: 01 / 01	00 : 00
Save and Exit		

Select Day Light Saving item and program the start and end date.
 Push the joystick to Right/ Left to select item and twist the zoom handle to increase/decrease the date and time.

Alarm Menu (**Shift** + **Menu** → Alarm)

ALARM MENU	
Alarm Beep	: ON / OFF
Alarm Dwell	: OFF / 1sec~200sec
Alarm Action	
Alarm History	
Save and Exit	

Alarm Beep -- Enable or disable the beep sound when an alarm is activated.

Alarm Dwell – The time the alarm is extended to, until returning to programmed time.

Alarm Schedule (**Shift** + **Menu** → Alarm → Alarm Action)

ALARM	SCHEDULE				page : 001
DOME	1	2	3	Alarm	OUT
0001	1	2	3	-- 6 7 8	001
----	-	-	-	-	-
----	-	-	-	-	-
----	-	-	-	-	-
----	-	-	-	-	-
ON : ins	OFF : del	ENTR : save		ESC :cancel	

DOME : ID of the dome to be programmed.

Ex) 0001

Alarm : 8 Alarm inputs of dome.

Alarm 4, 5 is not used for

OUT : 999 external dry contact outputs.

Alias : 999 alias presets. See Alias Preset menu.

:

If there is an alarm from the programmed dome, a signal can be output to one of 999 external outputs.

Also, it can be combined with multiple dome presets, if programmed.

500 alarm schedules can be stored in this joystick controller.

Pushing Up/ Down on the joystick scrolls to the previous/ next page on the first/ last row.

Twist the zoom handle on the camera ID field to enter program mode and select ID. Rotating the handle causes the programmed IDs (programmed in camera setup menu) , to be scrolled.

Push the joystick to the right to setup alarm field. Activate or deactivate specific alarm inputs by rotating the zoom handle. And then program the remaining parts (Alarm Input and Output and Alias).

Alarm History (**Shift** + **Menu** → Alarm → Alarm History)

ALARM	HISTORY		page : 0001
CAM	Alarm	Date	Time
----	-----	-----	-----
----	-----	-----	-----
----	-----	-----	-----
----	-----	-----	-----
----	-----	-----	-----
OFF : clear history	ESC: exit		

This screen shows the alarm history: up to 5000 previously activated.

Alias Preset Menu (**Shift** + **Menu** → Alias Preset)

Alias	Preset	Menu	page : 0001
No.	Dome 1	Dome 2	Dome
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
----	----	----	----
OFF : del	Alarm : exe	ESC: exit	

Schedule Setup (**Shift** + **Menu** , V, V, V → Schedule)

SCHDULE	SETUP
Night Shot	
Exit	

V V V : Push down the joystick until Schedule appears, then push to the right to enter the SCHEDULE setup menu.

(See page 14 **MAIN MENU** screen)

Night Shot Setup (**Shift** + **Menu** → Schedule → Night Shot)

Night Shot Setup	
Night Shot	: OFF / ON
On Time	: 00 00
Off Time	: 00 00
Save and Exit	



Night shot option is enabled/disable (ON) by .
On time and Off time can be setup using .

Night shot enable option changes low light sensitivity by removing the IR cut filter from the camera lens. If the option is enabled, controller sends control command to all the cameras attached on the control line. It is same effect as sending 999/888+ (888+Global : Night shot off. 999+Global).

Data Select Bank (**Shift** + **Menu** , V ,V, V → Data)

SELECT DATA BANK	
	ID Saved Date
Data Bank	: --- -- -- --
Exit	




Slave Controller Setup (**Shift** + **Menu** , V ,V, V → Slave Controller Setup)

Slave Controller Setup	
No. of Controller	: 0 / 1~8
DVR Control	: Enable / Disable
Camera Menu Access	: Enable / Disable
Clear saved Data	
Exit	

No. of Controller : 0,1~8 – total no. of slave controllers
DVR Control : Allow DVR control in the Slave controller.
Camera Menu Access : Allow camera menu in the Slave controller.
Clear saved Data : Clear all data in the Slave controller.

2.5 Operating the Controller

2.5.1 Selection of the dome camera (ID of the Dome Camera)



There are three ways of dome camera selection (1) .  and  **Next**) or **Prev**  . With these selections, the keyboard controller has full control of the selected dome camera.

2.5.1 Selection of the DVR (ID of the DVR)

DVR must be selected before being controlled by the joystick controller.

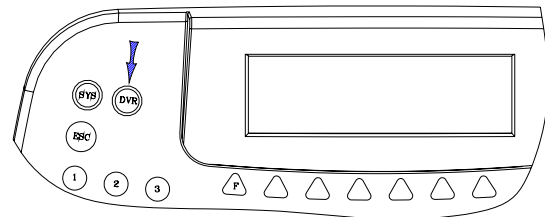
Press Numeric button, then  button to change DVR ID to be controlled.

<ex 1> Select DVR ID #3

Press numeric  then  button on the controller, DVR-003 is displayed on the LCD window.

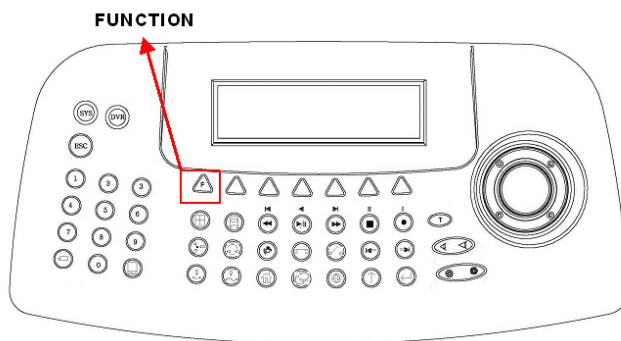
<ex 2> Select DVR ID # 73

Press  and  then  button, DVR-073 is displayed on the LCD window.



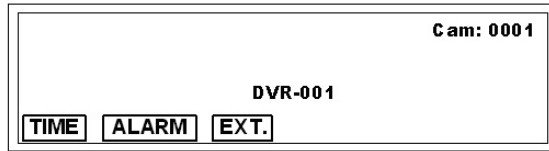
2.5.2 How to Control On-Screen Menu

Press Function Key to display sub menu.



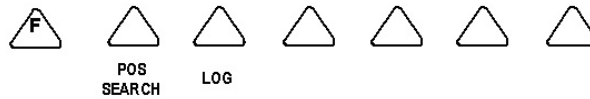
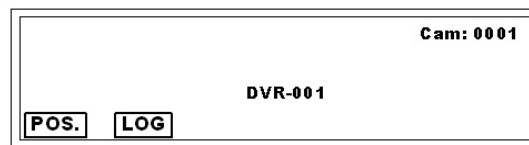
Note: Press numeric button while pressing the <SHIFT> key to enter password.

(1) The first time that Function Key is pressed a Search menu is displayed, as below.

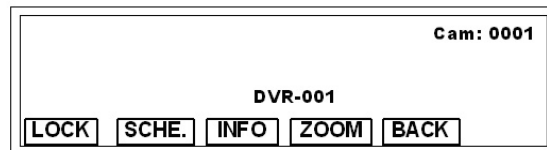


* **Note:** External Search menu is used for Mpeg DVR.

(2) Second page

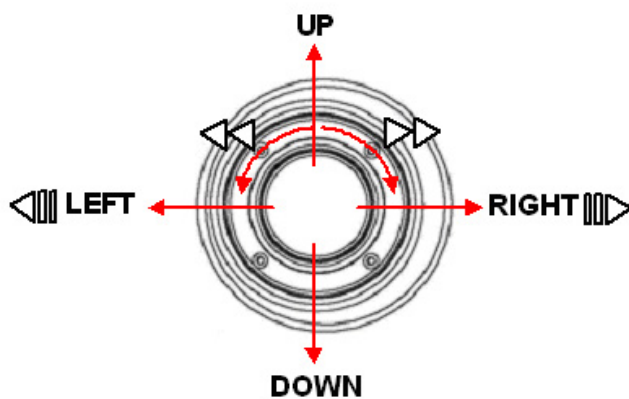


(3) 3rd page



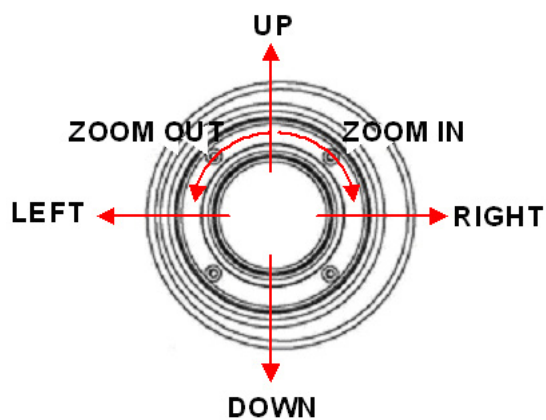
2.5.3 Joystick

(1) Menu Control

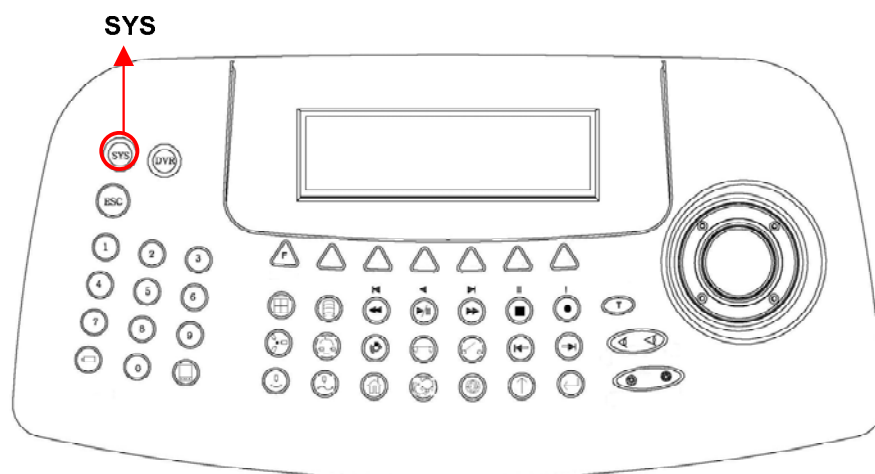


(2) Pan/Tilt/Zoom Control

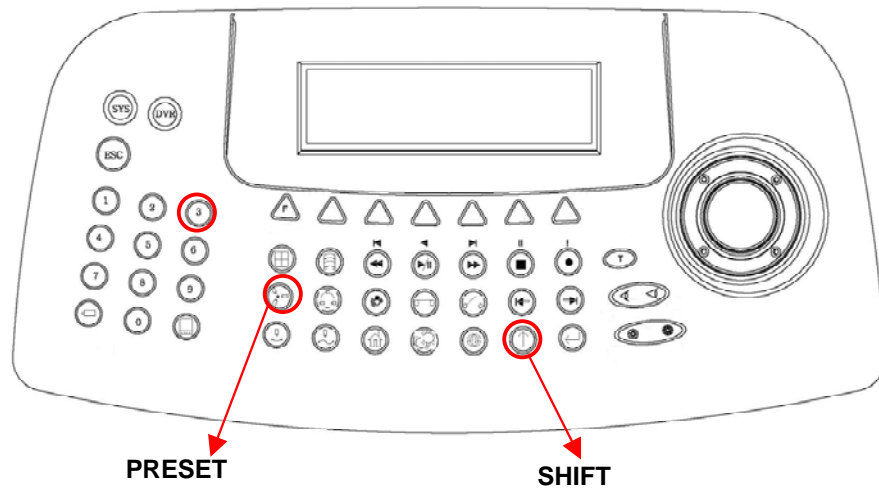
1)



2) Press [SYS] button to use "Preset or Tour"



- a. Preset: Press "SYS" button first, then select Preset No.
<ex> Preset No3: Move the camera to your desired area and then press "No3-> Shift-> Preset".


























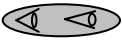
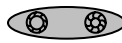



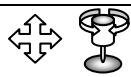
- b. Go to : To move preset position, press Number then Preset.
<ex> Preset No3 : Press "No3" then press "Preset" button

Chapter 3

KEY Descriptions

3.3.1 Key descriptions for the Controller

Function	Key Buttons	Descriptions
Numeric	  ~ 	Camera ID selection with Cam key. Function number selection with function keys. (e.g., 1+Cam , 3+Tour , 5+Scan , 6+Prst)
Camera		Displays the selected camera on the spot out of the multiplexer and allows the camera to be controlled by the keyboard controller, if the selected camera is a dome camera.
Monitor		Camera No. 1~16+Main displays the selected camera full screen
Cancel		Cancels current inputs. Exits from currently running functions or menu, error status, etc.
Alarm		Disregards all currently activated alarms and turns off the beep temporarily. If alarm is activated again within the programmed hold time, the timer will restart and beep again.
Relay ON		Relay No. 1~4+ ON activates the selected relay. CUSTOM ON:101+ON,102+ON,103+ ON(custom 1,2,3)
Relay OFF		Relay No. 1~4+ OFF disables the selected relay. CUSTOM OFF: 101+OFF,102+OFF,103+ OFF (custom 1,2,3)
Previous		x
Next		x
Home		Menu ESC
Global		Sends all cameras to preset (e.g., 1, 2... 55 + Enter/Glbl). 888+Enter/Glbl : Night shot mode, 999+Enter/Glbl : Normal mode
Call Preset position		Pressing Prst brings up the preset programming menu. Recalls preset; e.g.; 1, 2... 31... 240 + Prst In the preset or tour programming mode, the operator can review the existing preset (selected by cursor) by pressing this key.
Tour		Pressing Tour brings up the tour programming menu directly. Recalls programmed presets or functions sequentially. (e.g., 1 ~ 8+Tour)
Pattern		Pressing Ptrn brings up the pattern programming menu directly. Repeats the selected pattern of the current dome camera. (e.g., 1 ~ 4+Ptrn)
Auto Scan		Auto Pan Shift I+ this Auto Tilt
Menu	  	Enters programming menu. Ctrl+Menu invokes Keyboard set up menu
Shift/Control	 	No.+Shift+Prst stores current view as a preset directly. No.+Shift+Tour opens programming menu No.+Shift+Scan opens programming menu
		Ctrl+Joystick : In a programming mode (Preset, Pattern, Scan, Privacy....) the joystick operates as if in the normal control mode. While pressing and holding down the Ctrl key, all movements of the joystick will start recording when in the pattern programming menu. Ctrl+Joystick : In normal operation mode, manual speed of the joystick control will be operated in turbo mode. (Max. speed = 380° /sec)
Enter		Completes entering data for the password or title ENTER+Joystick : Direction key in DVR remote mode or Mux (PTZ, Mouse, Cursor)

Manual Focus		Overrides auto focus. Return to Auto Focus mode by manu.
Manual Iris		Overrides auto iris. Moving the joystick reactivates Auto Iris mode.
Function Scroll		Set of functions will be displayed each  key pressed.
Turbo Speed		Once pressed turbo key, manual control speed goes up to 360°/sec. To go back to normal speed, press the key once more. It is a toggle key.
Joystick		Pan, Tilt, Zoom controls in normal control mode. Navigate the menu items and increase/decrease the value in program mode.

Preset Save : Number + Shift + Preset
















Goto : Number + Preset

Pattern Run : Number Pattern

Tour : Number + Tour

3.3.2 Keys for DVR



Function	Key Buttons	Descriptions
Id Selection		DVR ID Selection. (e.g.:1 or 2+DVR).
Play/Pause		Play recorded data / Pause playing.
Rewind		Play video backward at high speed. Pressing the button again toggles the playback speed from  ,  and  .
Fast Forward		Play video forward at high speed. Pressing the button again toggles the playback speed from  ,  and  .
Stop/Preset Save		During Playback mode returns the DVR to the Live Monitoring mode.
Record/Preset Call		Set the DVR so that it is ready to record video.
Menu		Enter the Quick Setup screen. You will need to enter the administrator password to access the Quick Setup. Pressing the button also closes the current menu or setup dialog box.
Alarm		First, it will reset the DVR's outputs including the internal buzzer during an alarm. Second, it will display the event log when you are in the live monitoring mode unless there is an active alarm.
Display Mode		Toggle between different display formats. The available formats are: full, 4x4, 3x3, 2x2 and PIP.

Appendix A

SPECIFICATION

Power Consumption	12VDC, 0.5A
Control Method	RS-485, RS-232C
Baud Rates	2400~230K bps
Operating Temperature	0°C to 50°C (32°F to 140°F)
Humidity	0 to 90%RH (non-condensing)
Storage temperature	-20°C to 60°C (-40°F to 122°F)
Dimension	Professional Joystick : 390x190x65
Weight	Professional Joystick : 1.2kg
	Dome Connection : Max 64 (simplex 256)
Communication	DVR Connection : Max 100

(Design and Product specifications subject to change without notice)