Guardall
A UTC Fire & Security Company

www.guardall.com | +1 877.249.9993

Guardall
5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1

salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

21-0428 rev1.0   **Embedded DVR Network Keyboard Installation Instructions**   **4 / 2009**
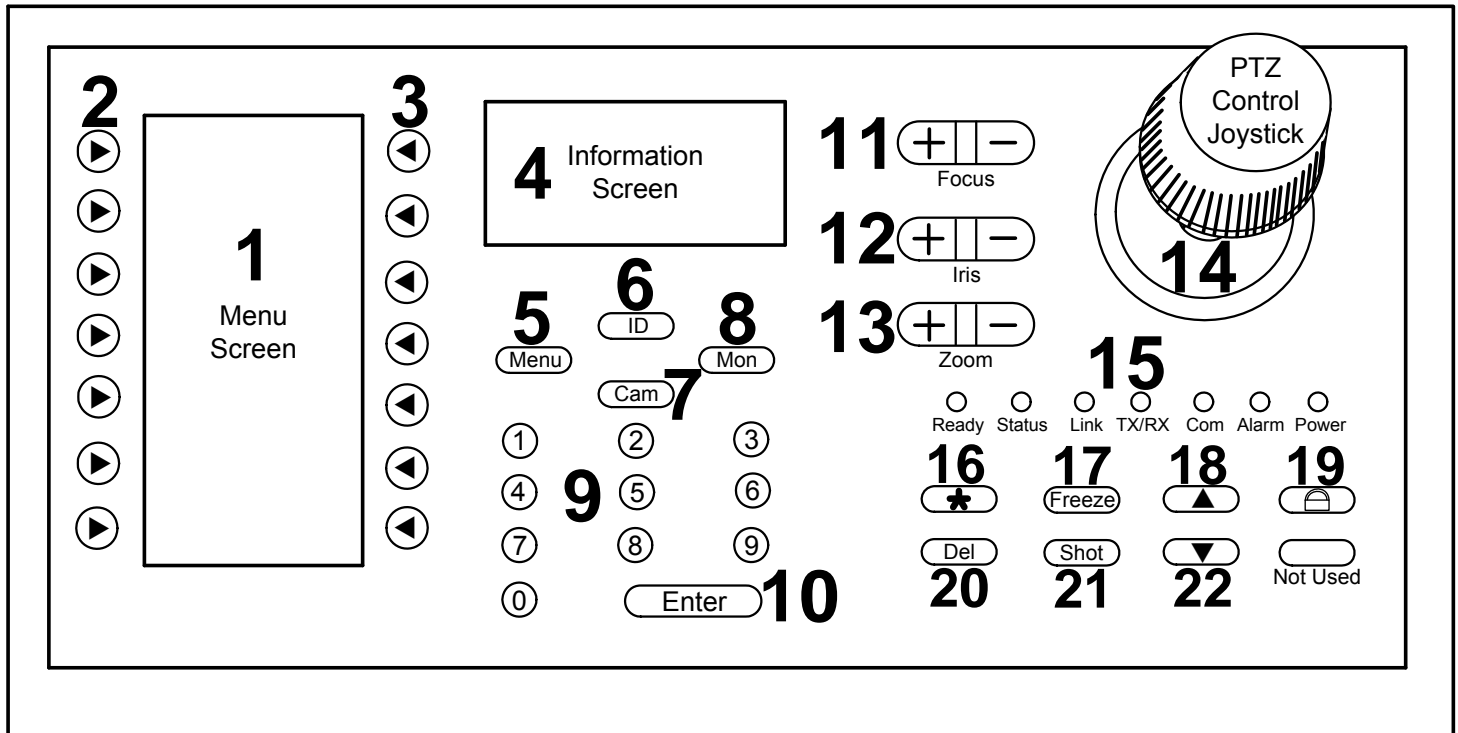
Introduction

The Network Keyboard is used with the Embedded DVR. It provides configuration and control of multiple DVRs. The keyboard features the following abilities:

- Supports cascading DVRs:
  - 1 keyboard can control a maximum of 99 DVRs on a Network.
  - 1 keyboard can control a maximum of 32 DVRs using the RS485 bus.
- Supports full-duplex or half-duplex in RS485 bus mode.
- Uses 2 display screens: When the "Menu" button is pressed for more than 2 seconds, this screen enters into the configuration menu.
  - The left screen displays the controlling and configuring menu. When the "Menu" button is pressed for less than 2 seconds, this screen enters into the control menu. When the "Menu" button is pressed for more than 2 seconds, this screen enters into the configuration menu.
  - The right screen displays information for a user, the present login state, alarm information etc.
- Keyboard users are divided into Administrator and Operator.
  - An Administrator can operate both the controlling and configuring menu.
  - An Operator can only operate the controlling menu.
- The keyboard can be locked by pressing the "lock" icon button and unlocked by entering a correct password.
- Both the Administrator and Operator can use the keyboard controlling menu to perform DVR configuration, video playback, manual record, PTZ control, DVR local preview and other functions.
- Only the Administrator can use the keyboard configuring menu to program the keyboard IP address, user ID number, keyboard communication type, keyboard password management etc.
- The keyboard can control all DVRs it is communicating with by using an authorized login.
- The keyboard has a joystick for PTZ camera control.
- The keyboard will display alarms from the DVRs in communication with it. By selecting the alarm response type in the keyboard controlling menu, "Arm" can be set to receive the alarm or "Disarm" can be set not to receive the alarm. The keyboard can receive alarms from a maximum of 10 DVRs at a time.
- The keyboard has 4 hardware alarm outputs that can be wired to trigger warning devices.

NOTE: The keyboard is compatible with DVR firmware 1.4 or greater.

Guardall
A UTC Fire & Security Company

www.guardall.com | +1 877.249.9993

Guardall
5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1

salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

21-0428 rev1.0   Embedded DVR Network Keyboard Installation Instructions   4 / 2009

Keyboard Overview

Detail	Control	Description
1	Menu Screen	Displays the controlling and configuring menu.
2	Menu Left Arrow Keys	Key selections for the left side of the Menu Screen.
3	Menu Right Arrow Keys	Key selections for the right side of the Menu Screen.
4	Information Screen	Displays the communication type, input, DVR, alarm information.
5	Menu Button	Pressed for less then 2 seconds, the Menu Screen displays the Control Menu. Pressed for more than 2 seconds, the Menu Screen displays the Configuration Menu.
6	ID Button	Press to enter a user ID to select and control a DVR
7	Cam Button	Press for a Camera ID number corresponding with a DVR channel number.
8	Mon Button	Monitor ID Key (future use)
9	Keypad	Number and character keys to type in selections.
10	Enter Button	Confirmation button
11	Focus	Plus/increase or minus/decrease PTZ focus function.
12	Iris	Plus/increase or minus/decrease PTZ iris function.
13	Zoom	Plus/increase or minus/decrease PTZ iris function.
14	PTZ Control Joystick	Move a PTZ camera around by using this hand control.
15	Status Lights	Ready, Status, Link, Tx (transmit)/Rx (receive), Com, Alarm, Power.
16	"Star/Asterisk" Button	Input button to select an upper or lower case character or number.
17	Freeze Button	(future use)
18	Up Arrow Button	Page Up button in the Information Screen. When an IP address is inputted, it can be used as a delete key.
19	Lock Button	Keyboard lock button.
20	Del Button	Delete Button
21	Shot Button	Press to adjust the PTZ preset.
22	Down Arrow Button	Page Down button in the Information Screen. When an IP address is inputted, it can be used as a space key.

Guardall
www.guardall.com | +1 877.249.9993
5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

| 21-0428 rev1.0 | Embedded DVR Network Keyboard Installation Instructions | 4 / 2009 |

Switches/Connections on Back of Keyboard
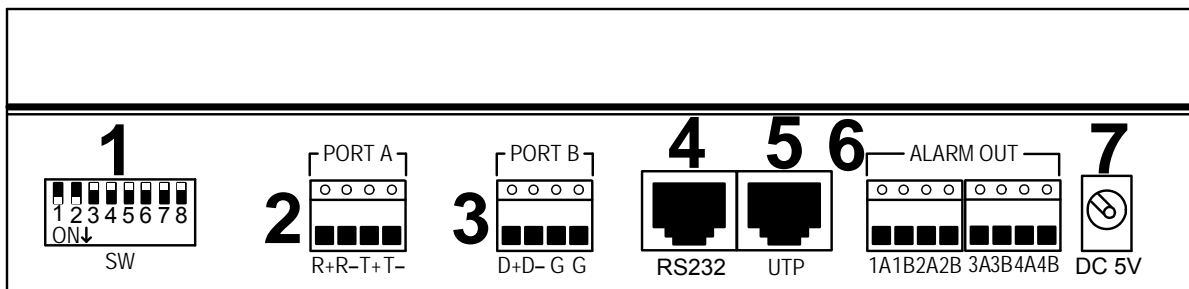
Detail	Switches/Connections	Description
1	SW (switches)	Switch 1 and 2 ON: (default) "Port A" is 485 half-duplex. Switch 1 and 2 OFF: "Port A" is 485 full-duplex.
		Switch 3 OFF (default). ON: a matching resistance of 120ohm is added to R+ (receive positive) and R– (receive negative) on "Port A".
		Switch 4 OFF (default). ON: a matching resistance of 120ohm is added to T+ (transmit positive) and T– (transmit negative) on "Port A".
		Switch 5 OFF (default). ON: a matching resistance of 120ohm is added to D+ and D– on "Port B".
		Switch 6 OFF (default) Not Used.
		Switch 7 OFF (default) Not Used.
		Switch 8 OFF (default) Not Used.
2	PORT A	RS485 Bus connection to the Keyboard connection on a DVR.
3	PORT B	RS485 Bus connection.
4	RS232	Connect RS232 devices.
5	UTP	RJ45 Network Interface connection.
6	ALARM OUT	Alarm output interface. 4 switches: 1A, 1B return/2A, 2B return/3A, 3B return/4A, 4B return. Normally closed. Open on an alarm condition.
7	DC 5V	5 volt DC socket.

Keyboard Connection to DVRs

Network Connection
- For a Network connection to control DVRs with the keyboard, connect the keyboard UTP port to a network switch or hub.
- In the keyboard SysCfg (System Configuration) menu, program one IP address for the keyboard and select the "Net" mode. Refer to Keyboard Configurations for instructions to make this selection.

RS485 Connection
- For a RS-485 keyboard bus to DVR connection, use the R+, R- pins on Port A. Connect R+ to K+ and R- to B-on a 8 or 16 camera DVR. This connection on the DVR can be interconnected to other DVRs paralleling their K+ and B- connections. On a 4 camera DVR, connect keyboard R+ and R- to the DVR R+ and R- in parallel. To interconnect other 4 camera DVRs, use the 2 RJ45 connectors marked "KEYBOARD" to go from the keyboard connected 4 camera DVR out of one of its KEYBOARD RJ45 connections to the next 4 camera DVR and into one of its KEYBOARD RJ45 connections. To connect another 4 camera DVR, go out of this second in line 4 camera DVR KEYBOARD RJ45 connection to the next 4 camera DVR KEYBOARD RJ45 connection and so on.
- In the keyboard SysCfg (System Configuration) menu, program the keyboard for "Bus" control. Refer to Keyboard Configurations for instructions to make this selection.

Guardall
A UTC Fire & Security Company

www.guardall.com | +1 877.249.9993
Guardall
5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

21-0428 rev1.0   **Embedded DVR Network Keyboard Installation Instructions**   **4 / 2009**

Keyboard Operation

Getting Started

Menu Screen

Advanced KBD

(V X.X)

Information Screen

Password

—
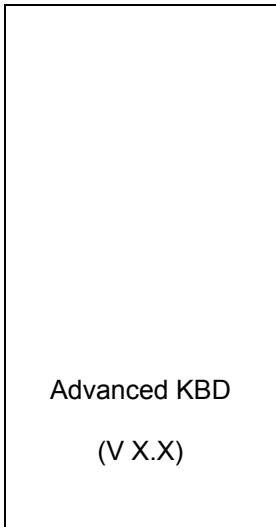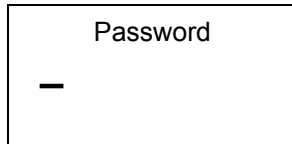
- When the Keyboard is first powered, these messages will appear in the display screens.
- Type in the password in the Information Screen. **The default Administrator password is: 111 and the default Operator password is 222.**

> **WARNING:** It is extremely important that default Usernames and default Passwords are changed at the time of installation as a security precaution.

Press the "Enter" button for the following Start Screens to appear:

Menu Screen

- ▶ DVRCfg ◀
- ▶ Play ◀
- ▶ Record ◀
- ▶ PTZ ◀
- ▶ Preview ◀
- ▶ ◀
- ▶ DealAlm ◀

Master
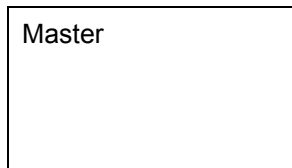
- The keyboard can control the DVR by either a network or RS485 Bus direct connection.
- The following description will mainly involve the network version. It is basically the same description if the RS485 Bus type were used.
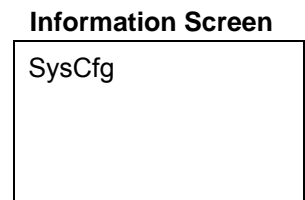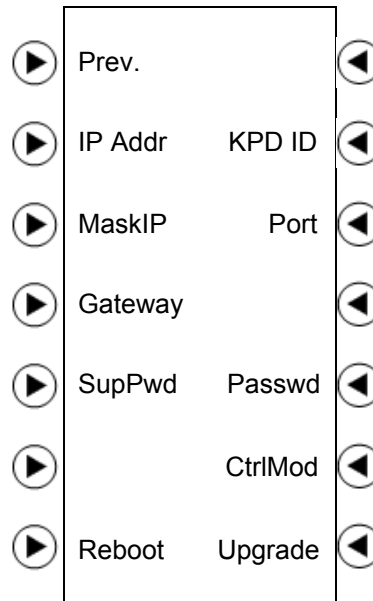
Keyboard Configuration

- Configure the keyboard first to include system, user and alarm configuration. Press the "Menu" button longer than 2 seconds to open the keyboard configurations. Use the Administrator password to login. "Master" will appear in the Information Screen.
- The menu screen will display "SysCfg" (Keyboard System Configuration), UserCfg (User Configuration) and ArmCfg (Alarm Configuration).

System Configuration

- ▶ SysCfg ◀
- ▶ UserCfg ◀
- ▶ ArmCfg ◀
- ▶ ◀
- ▶ ◀
- ▶ ◀
- ▶ ◀
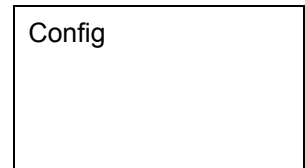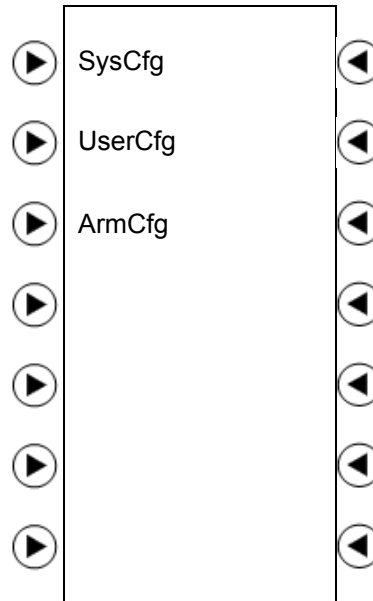
Config

- Press the button on the left of "SysCfg" to open the System Configurations.

Menu Screen

- ▶ Prev. ◀
- ▶ IP Addr   KPD ID ◀
- ▶ MaskIP   Port ◀
- ▶ Gateway ◀
- ▶ SupPwd   Passwd ◀
- ▶   CtrlMod ◀
- ▶ Reboot   Upgrade ◀
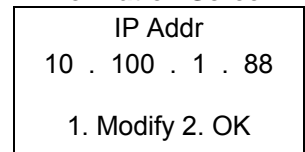
Information Screen

SysCfg

- In SysCfg, keyboard operating characteristics are selected like the Keyboard network IP, Keyboard ID, port number, super (master) password, operator password and controlling methods.
- The Menu Screen displays these selections.

Press the button that is next to the selection on either the left or right side of the screen to make the following choices that will appear in the Information Screen:
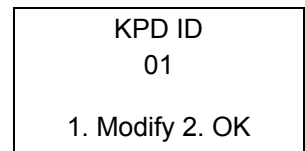
- **Prev.**: Return to the Previous menu.

- **IP Addr**: Enter the IP address of the keyboard.
  - Press 1 to change it and 2 to Save the new changes.

Information Screen

IP Addr
10 . 100 . 1 . 88

1. Modify 2. OK

- **KPD ID**: Keyboard number.
  - Type in the keyboard number and press the "Enter" button to save it.

KPD ID
01

1. Modify 2. OK

Guardall A UTC Fire & Security Company

www.guardall.com | +1 877.249.9993
salesna@guardall.com +1 905.206.8434 |

Guardall
5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

| 21-0428 rev1.0 | Embedded DVR Network Keyboard Installation Instructions | 4 / 2009 |

Information Screen

- **Mask IP**: Enter the Subnet Mask of the keyboard.
  - The default is 255.255.255.0
  - Press 2 to confirm it.
  - Press 1 to change it.
  - Press the Enter button to Save a new Mask IP.

```
MaskIP
255 . 255 . 255 . 0

1. Modify 2. OK
```

- **Port**: The Network Port.
  - The default is 8000.
  - Press 2 to confirm it.
  - Press 1 to change it.
  - Press the Enter button to Save a new Port ID.

```
Port
8000

1. Modify 2. OK
```

- **Gateway**: Enter the Gateway of the keyboard.
  - Press 2 to confirm it.
  - Press 1 to change it.
  - Press the Enter button to Save a new Mask IP.

```
Gateway
XX . XXX . X . X

1. Modify 2. OK
```

- **SupPwd**: (Super Password) Enter a new Administrator or Master password.
  - The default is 111.
  - Type in the new password.
  - Press the Enter button to confirm the new password.

```
New
—
```

```
Verify

XXXXX_
```

- **Passwd**: This is the password for the Operator.
  - Follow the same procedure as entering a new password for an Administrator.

- **CtrlMod**: (Control Mode) Keyboard DVR communication type.
  - Press 1 to select the RS485 Bus or 2 for a Network connection.

```
CtrlMod

1. Bus Mode
2. Net Mode
```

- **Reboot**: Restart the keyboard.

- **Upgrade**: The keyboard firmware can be upgraded over a network. Locate the new firmware in an FTP server. Type in the FTP server IP address in this screen. The keyboard will connect with the FTP server and download the new firmware over the network.
  Refer to the "FTP Server Setup" section later in these instructions for details to upgrade the keyboard firmware.

User Configuration

Menu Screen

```
▶ Prev.                    ◀

▶ New          Modify      ◀

▶ Delete       Query       ◀

▶ DelAll                   ◀

▶                          ◀

▶                          ◀

▶                          ◀
```

Information Screen

```
UserCfg
```

- Press the Prev. button from the System Configuration screen to get back to the Configurations Screen to select the UserCfg or log on and select it from the Configurations screen.

- A single user is created to control one DVR. After the user is assigned to a DVR, the user name can be used to login to the corresponding DVR and control it with the keyboard.

- In the User Configuration menu, users and related DVRs can be added, deleted, modified or queried (examined).

Add a New User

- Add a New User to control a DVR with the keyboard over a Network.
  - Press the button to the left of "New" on the Menu Screen.

Information Screen

```
User
—
(Num)          New
```

- The New User screen will open in the Information Screen.
  - Type in the new user name.
  - Press the Star Button to shift from lower, upper or number alphanumeric characters.

```
User
—
(Lower)        New
```

```
User
—
(Upper)        New
```

- Example of a user assigned to a DVR:
  - "01" is entered as the User Name. Press the Enter button to confirm it.

```
User
01
(Num)          New
```

- Next select the device type:
  - Press "1" for a DVR

```
Dev Type
1. DVR

               New
```

Guardall
www.guardall.com | +1 877.249.9993   5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

| 21-0428 rev1.0 | Embedded DVR Network Keyboard Installation Instructions | 4 / 2009 |

Information Screen

- Next enter the device (DVR) User name:

> Dev User
> admin
>
> (Lower)   New

- Next enter the Password:
  – The keyboard must use this user name and password to login to this DVR.

> Password
> XXXXX
>
>   New

- Next enter the device (DVR) ID:

> Dev ID
> 01
>
>   New

- Then enter the device (DVR) IP address:

> Password
> 10 . 100 . 1 . 88
>
>   New

- Enter the device (DVR) Port:

> Dev Port
> 01
>
>   New

- Press Save to keep the entry or Exit to cancel it.

> New
>
> 1. Save   2. Exit

Modify

- Press the button to the right of "Modify" in the User Configuration Menu Screen.
- This selection allows changes to be made to an existing user and the DVR they control.
- Enter the User Name to modify or change.
  – In this example, username: "01" is entered.
  – Press the Enter button.

> User
> 01
>
> (Num)   Modify

- Configurations for this user and DVR are displayed to change.
  – The first item for changing is the Device (DVR) Type.
  – Press 1 to change it or 2 if its OK.

> Dev Type
> DVR
>
> 1. Modify 2. OK

Continue through the following screens to modify or accept them as OK:
- Device (DVR) Username
- Device Password
- Device ID
- Device IP Address
- Device Port

When all the Modify selections have been made, the last screen will display "Modify", 1. Save, 2. Exit.
Press the appropriate selection.

Delete User

- Press the button to the left of "Delete" in the User Configuration Menu Screen.
- This selection deletes an existing user.
- Type in the user to be deleted. In this case "01" is used:
  – Press the enter button.

> User
> 01
>
> (Num)   Delete

- Press 1 to Delete or 2 to Exit and stop the change:
  – A Network connection will display the DVR IP address.
  – An RS485 direct connection will display the Dev ID (Device or DVR ID).

> User: 01
> Type: DVR
>   10 . 100 . 1 . 88
>   1. Del   2. Exit

Query

- Press the button to the right of "Query" in the User Configuration Menu Screen.
- This selection shows user information.
- A Network connection will display the DVR IP address. An RS485 direct connection will display the Dev ID (Device or DVR ID).
- Press the down ▼ arrow button to display the next information.

> User: 01
> Type: DVR
>   10 . 100 . 1 . 88
>   ↓Next

- Press the up ▲ arrow button to display the previous information.

> User: 02
> Type: DVR
>   10 . 100 . 1 . 89
>   ↑Prev   ↓Next

- An un-programmed user will display that the user does not exist.

Delete All

- Press the button to the right of "DelAll" in the User Configuration Menu Screen.

CAUTION This selection will delete all the users.

- Press 1 to delete all the users or 2 to exit and cancel this selection.

> DelAll
>
> 1. Del   2. Exit

Guardall
www.guardall.com | +1 877.249.9993
5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

| 21-0428 rev1.0 | Embedded DVR Network Keyboard Installation Instructions | 4 / 2009 |

Defense (Alarm) Configuration

Menu Screen

▶	SysCfg	◀
▶	UserCfg	◀
▶	ArmCfg	◀
▶		◀
▶		◀
▶		◀
▶		◀

Information Screen

UserCfg

- Press the Prev. button from the User Configuration screen to go back to the Configurations Screen to select the ArmCfg (Arming Configuration) or log on and select it from the Configurations screen.
- The ArmCfg selection enables a DVR to report alarm conditions.

- Once the ArmCfg button has been pressed, the first user will display whether the related DVR is armed or not.
  - In this example, the DVR is Communicated to by the keyboard over a network and the DVR IP Address is displayed.
  - If the DVR was connected to the keyboard using the RS485 bus direct connect, the DVR ID would display instead.
  - Press 1 to Arm the DVR or 2 to go to the Next User.

```
User: 01
Type: DVR
  10 . 100 . 1 . 88
    1.Arm    2.Next
```

- If a User/DVR is Armed, "Arm" will appear and pressing 1 will Disarm or turn the protection off for that DVR.
  - Pressing "Next" in all the configured screens will eventually reach the last configured User/DVR and pressing "2. Exit" will leave the ArmCfg and the keyboard will return to the Configurations Screen

```
User: 08
Type: DVR        Arm
  10 . 100 . 1 . 89
    1.Disarm 2.Exit
```

Enable Main Alarm Response in the Control Menu

- After the Defense Configuration is completed, press the Menu button for less then 2 seconds to enter into the DVR Control Menu

Menu Screen

▶	DVRCfg.	◀
▶	Play	◀
▶	Record	◀
▶	PTZ	◀
▶	Preview	◀
▶		◀
▶	DealAlm	◀

Information Screen

Master

- Select DealAlm which will transfer the displays into the Alarm Response Menu:

Menu Screen

▶	Prev.		◀
▶	Arm	Disarm	◀
▶			◀
▶	AlmOut1	ClrAm1	◀
▶	AlmOut2	ClrAm2	◀
▶	AlmOut3	ClrAm3	◀
▶	AlmOut4	ClrAm4	◀

Information Screen

DealAlm

- In the previous Defense (Alarm) Configuration, if Arm is assigned to any DVRs and in this Alarm Response menu, if Arm is enabled, then the keyboard will sense and report alarm information from the Armed DVRs.
- Alarm information includes: view tampering, motion detection, video loss and external sensor alarm.

NOTE: At the DVR in its programming, enable the "Upload to Center" option so the DVR will send its alarm information to the keyboard and the keyboard will display it in its Information Screen.
Refer to the DVR User Guide to locate the Upload to Center option for the DVR and enable it.

Guardall
A UTC Fire & Security Company

www.guardall.com | +1 877.249.9993

Guardall
5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1

salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

21-0428 rev1.0   **Embedded DVR Network Keyboard Installation Instructions**   **4 / 2009**

- The keyboard will receive alarm information from 10 DVRs at a time.
- An example of alarm information is the following:
  - User: 01 is the DVR that is transmitting the alarm.
  - The alarm condition is an External Alarm Input.
  - 16 segments appearing indicate that all 16 sensors detected the alarm condition.

Information Screen

User: 01

ExternalAlarmIn

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

- Another example of alarm information is the following:
  - User: 08 is the DVR that is transmitting the alarm.
  - The alarm condition is a Video Loss.
  - Segments 2, 6 and 9 are displaying that these channels connected to the DVR lost video.

User: 08

Video Loss

■ ☐ ■ ■ ■ ☐ ■ ■ ☐ ■ ■

- The lower selections on the DealAlm menu screen can be pressed to turn on and reset the keyboard output connections.
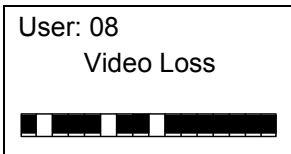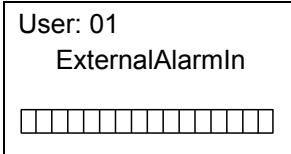
Controlling a DVR with the Keyboard

NOTE: A DVR can only be controlled by the keyboard or another source like the DVR front panel controls but not both at the same time.

Login to a DVR

- The following requirements are necessary for the DVR that will be logged into by the keyboard:
  - The DVR is in the local preview status. This means that the DVR is not being controlled by its front panel controls or other keyboards.
  - The keyboard connection is in order and should function properly.
- Press the keyboard ID button to open the following menu:

Menu Screen

▶ DVRCfg.   ◀
▶ Play   ◀
▶ Record   ◀
▶ PTZ   ◀
▶ Preview   ◀
▶   ◀
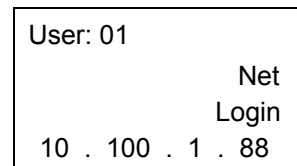▶ DealAlm   ◀

Information Screen

User

—

(Num)
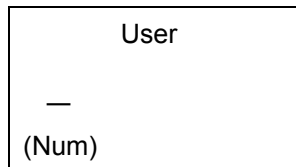
- Press the Keyboard "Star" button to shift the login style from numeral (Num) to lower case letters (Lower) to upper case letters (Upper).

- After the User name has been typed in, press the keyboard Enter button.
- The DVR that corresponds to the User name that was used to login to it should be displayed in the Information Screen:

Menu Screen

▶ DVRCfg.   ◀
▶ Play   ◀
▶ Record   ◀
▶ PTZ   ◀
▶ Preview   ◀
▶   ◀
▶ DealAlm   ◀

Information Screen

User: 01

Net

Login

10 . 100 . 1 . 88

- When the DVR has been logged into on a Network, the DVR IP Address will be displayed. When it has been logged into using the RS485 bus direct connection, the DVR ID number will display.
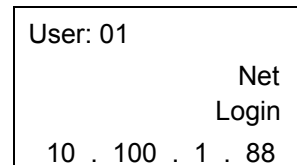
Configure a DVR

- Select "DVRCfg" from the DVR logged in screen to open configurations for the DVR that a connection was made with.

Menu Screen

▶ Prev.   Power   ◀
▶ Menu   A   ◀
▶ Esc   Edit   ◀
▶ Info   Voice   ◀
▶ F1   F2   ◀
▶ Up   Down   ◀
▶ Left   Right   ◀

Information Screen

User: 01

Net

Login

10 . 100 . 1 . 88

- Selections in the Menu Screen will function similar to the controls on the front panel of the DVR that has been connected to.
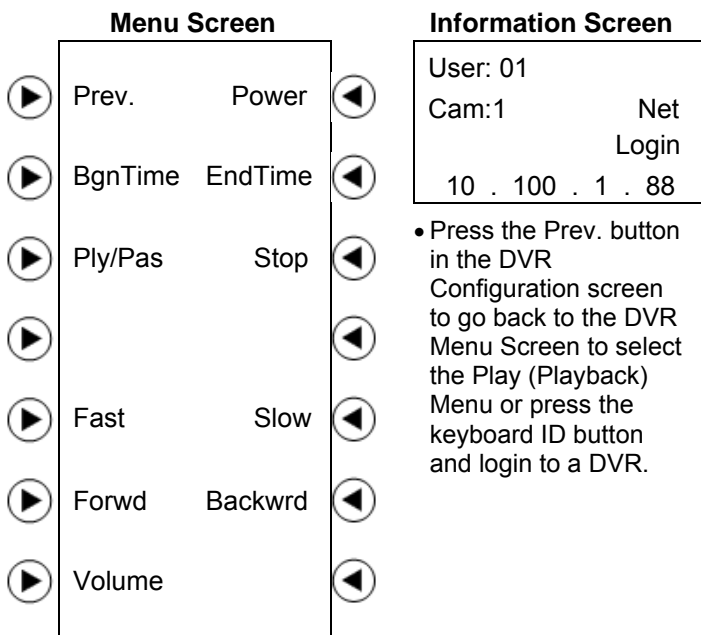
The following list identifies the selections in the Menu Screen:

- **Prev.**: Return to the Previous menu.
- **Power**: The DVR power switch.
- **Menu**: Change the DVR menu. Controls the wiper in the PTZ state.

Guardall

www.guardall.com | +1 877.249.9993   5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

| 21-0428 rev1.0 | Embedded DVR Network Keyboard Installation Instructions | 4 / 2009 |

- **A**: Shift the typing style to numeral, lower case lettering, upper case lettering and symbol characters.
- **Esc**: Cancel the present operation and return to the previous DVR menu.
- **Edit**: Press to delete a typing error. When the DVR is in the preview camera viewing idle state, press to change the camera channel.
- **Info**: Display the DVR information (future use).
- **Voice**: Turn on a voice talking function (future use).
- **F1**: Turn the sound on or off in playback. Turn the light on or off in the PTZ state (future use).
- **F2**: Control the Auxiliary functions in the PTZ state (future use).
- **Up**: Move up items in the menu.
- **Down**: Move down items in the menu.
- **Left**: Move left in the items in the menu.
- **Right**: Move right in the items in the menu.

Video Playback

Menu Screen

```
   ▶  Prev.         Power   ◀

   ▶  BgnTime    EndTime    ◀

   ▶  Ply/Pas       Stop    ◀

   ▶                        ◀

   ▶  Fast          Slow    ◀

   ▶  Forwd      Backwrd    ◀

   ▶  Volume               ◀
```

Information Screen

```
User: 01
Cam:1              Net
                 Login
  10 . 100 . 1 . 88
```

- Press the Prev. button in the DVR Configuration screen to go back to the DVR Menu Screen to select the Play (Playback) Menu or press the keyboard ID button and login to a DVR.

- Select the Bgn (Begin) Time and the End Time to search for a video to playback.

Information Screen

- Press "BgnTime" to enter the Date and Time when the video starts:

```
   BgnTime
Date _ /  /
```

- Enter the date as Year/Month/Day:
  – Start a single number entry with a "0".
  – Press the keyboard Enter button to confirm the date entry and display the time entry.

```
   BgnTime
Date 08 / 02 / 04
```

- Enter the time as hour, minute, second:
  – Start a single number entry with a "0". Hours of the day are in "100 hours or Military Time".
  – Press the keyboard Enter button to confirm the date/time entry.

```
   BgnTime
Date 08 / 02 / 04
Time 08 : 30 : 00
```

- Enter the Date and Time in the same way to search for the video end time:
  – Start a single number entry with a "0".

```
   EndTime
Date 08 / 10 / 14
Time 20 : 30 : 00
```

- After the Start and end time has been set, press the keyboard Enter button to search and list the matching video files.
- Press the menu screen Prev. button to return to the DVR login screen and select DVRCfg to use the Up and Down button to go up and down in the selected video file list to choose a file.
- After a video file has been selected, press the keyboard Enter button. The DVR will start playing the selected file.
- Press the Prev. button in the DVRCfg screen to return to the DVR login screen and select the Play button again.
- In the Play Menu, select the controls to Play/Pause (Ply/Pas. Press the arrow button to the left of this selection to Play the video. Press it again to Pause the video.). Stop the video. Play the video Fast or Slow. Play the video Forward (Forwd) or Backward (Backwrd) and adjust the Volume.
- Each time the Fast or Slow buttons are pressed, the video will increase or reduce its speed in increments. The maximum speed is 16 times and the minimum speed is 1/16 time.
- Pressing the Forward or Backward buttons will cause the video to play in that direction in 30 second intervals.
- Press the numeral keys or the keyboard Cam (Camera) button to change the Camera Channel on the logged in DVR.

Guardall
www.guardall.com | +1 877.249.9993   5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

| 21-0428 rev1.0 | Embedded DVR Network Keyboard Installation Instructions | 4 / 2009 |

A UTC Fire & Security Company

Manual Video Recording

- Press the Prev. button in the Playback screen to return to the DVR logged in screen and select Record or press the keyboard ID button and login to a DVR.

Menu Screen

- ▶ Prev.   ◀
- ▶ StarRec   StopRec   ◀
- ▶ StarAll   StopAll   ◀
- ▶   ◀
- ▶   ◀
- ▶   ◀
- ▶   ◀

Information Screen

User: 01
Cam:1   Net
                            Login
  10 . 100 . 1 . 88

- Press the controls to Start Recording (StarRec) or Stop Recording (StopRec) for the camera number appearing in the Information Screen. Press the numeral keys or the keyboard Cam (Camera) button to change the Camera Channels. Press StarAll to start all the cameras on the DVR recording or StopAll for all the DVR cameras to stop recording.

PTZ Control

- Press the Prev. button in the Record screen to return to the DVR logged in screen and select PTZ or press the keyboard ID button and login to a DVR.

Menu Screen

- ▶ Prev.   ◀
- ▶ AutoPan   ◀
- ▶ WipeOn   WipeOff   ◀
- ▶ LampOn   LampOff   ◀
- ▶ AuxOn   AuxOff   ◀
- ▶   ◀
- ▶ PsetCfg   DelPset   ◀

Information Screen

User: 01
Cam:1   Net
                            Login
  10 . 100 . 1 . 88

- Select the PTZ camera controls on the PTZ Menu Screen as required. Use the keyboard (+) increase or (−) decrease PTZ Focus, Iris, Zoom buttons and the keyboard Shot button used to select a preset PTZ value (i.e., Pressing "Shot" and then 001 would send the PTZ camera to Preset #1).along with the keyboard PTZ Joy Stick to control a PTZ camera.

- Press the numeral keys or the keyboard Cam (Camera) button to change the camera channel.

- Select PsetCfg (Preset Configuration), type in the preset number and press the keyboard Enter button to save the PTZ preset.
- Select DelPset (Delete Preset), type in the preset number and press the keyboard Enter button to delete the PTZ preset.

Preview

- Press the Prev. button in the PTZ screen to return to the DVR logged in screen and select Preview or press the keyboard ID button and login to a DVR.

Menu Screen

- ▶ Prev.   ◀
- ▶ 1 Scrn   4 Scrn   ◀
- ▶ 9 Scrn   16 Scrn   ◀
- ▶   ◀
- ▶ StarCyl   StopCyl   ◀
- ▶   ◀
- ▶   ◀

Information Screen

User: 01
Cam:1   Net
                            Login
  10 . 100 . 1 . 88

- Preview is the screen that appears on the DVR when the DVR is idle and displaying camera views.
- There are 4 preview screens. Press the related Menu Screen buttons to view a 1, 4, 9 or 16 DVR camera preview screen.
- In the single or 1 camera preview screen, press the keyboard Cam (Camera) button or type in the Camera number and press the keyboard Enter button to change the camera channel.

- Select StarCyl (Start Cycle) for the DVR to start cycling through the camera views according to the camera preview sequence and switching time interval. Refer to the **DVR User Guide** to review and configure the camera preview sequence and switching time interval.
- Press the arrow button to the right of StopCyl (Stop Cycle) to stop cycling through the DVR camera views.

Keyboard Locking

**Information Screen**

Locked

Password
—

- Press the button on the keyboard that looks like an icon of a padlock. The keyboard will be locked and can not be operated.
- Pressing any keyboard key will cause "Password" to display:
  – Type in the correct password to unlock the keyboard.
 – The Unlock Password is the same as the login password.

FTP Server Setup

- FTP Server Software will enable upgrading the keyboard firmware.
- FTP Server Software can be downloaded from the Internet. In this example, "wftpd32.exe" FTP Server Software is used.
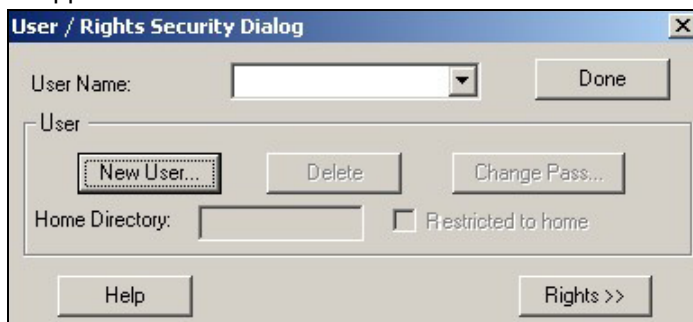
1. Start "wftpd32.exe" FTP Server Software:
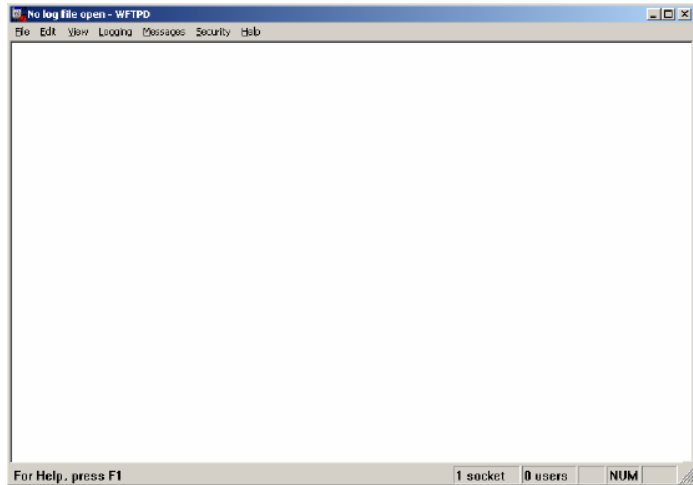
2. Select "Logging" in the top menu. Then "Log Options" in the sub menu and select the following:
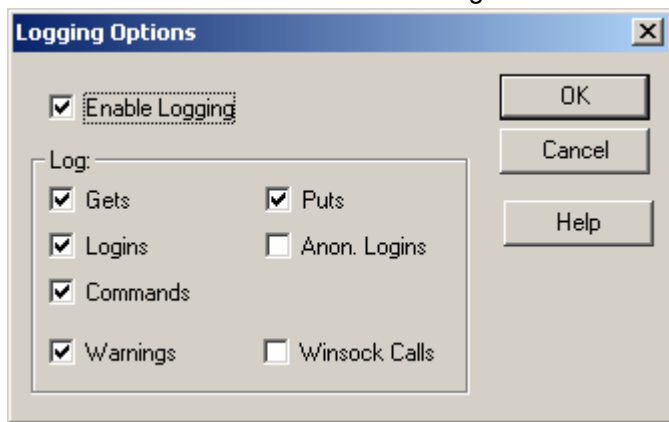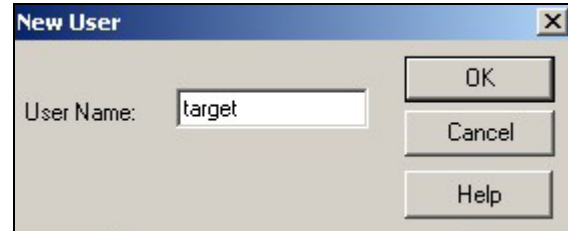

3. Press the OK button. In the software top menu screen, select "Security" and "Users/rights. The following will appear:
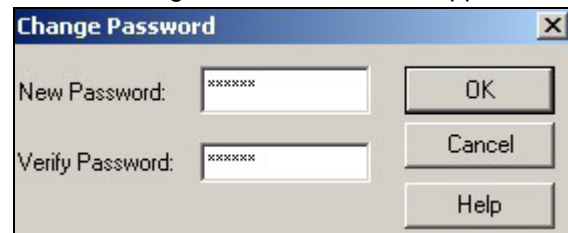

4. Select "New User".
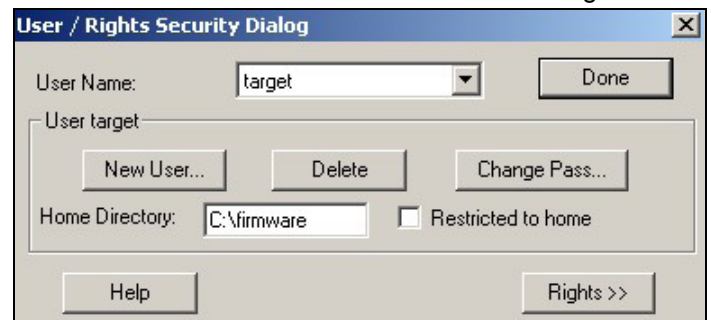
The New User box will appear:

Type in the User Name as: "target" and press the OK button.

5. The "Change Password" box will appear:

Type in the password as: "target" in the New Password and Verify Password entry boxes. Press the OK button.

6. Return to the "Security" and "Users/rights box. Drop down the User Name selection and select "target".

In the Home Directory box, type in the path where the firmware file (digicap) is located on the PC.

Leave this box open when upgrading the firmware from the keyboard. Refer to the next section for enabling firmware upgrade at the keyboard. Press the "Done" button to close the FTP Server Software application when an upgrade is completed.
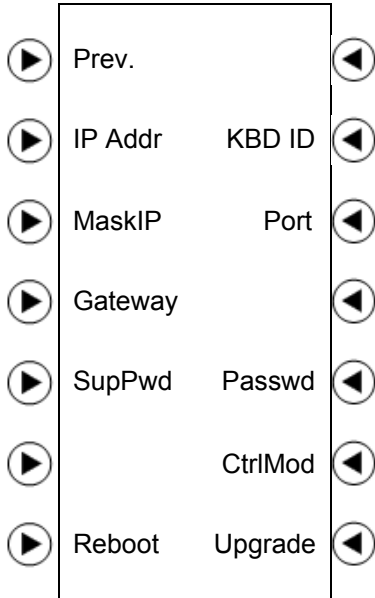
When the next keyboard firmware upgrade occurs, it will not be necessary to do the FTP Server Software setup again. Double click and open "wftpd32.exe" to upgrade the firmware. Change the old firmware in the PC location with the new firmware to upgrade.

Guardall
www.guardall.com | +1 877.249.9993   5201 Explorer Drive, Mississauga, Ont., Canada. L4W-4H1
salesna@guardall.com +1 905.206.8434 | supportna@guardall.com +1 905.206.8436 | Fax: +1 905.629.4970

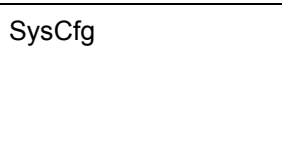| 21-0428 rev1.0 | Embedded DVR Network Keyboard Installation Instructions | 4 / 2009 |

Upgrade Firmware

- The keyboard and the PC that has the FTP Server Software must be on the same Network. Use a Ping command to check.
- Open the FTP Server Software on the PC that it is on. Refer to the previous section for FTP Server Software details. Ensure that the new firmware version is available on the PC for the keyboard to obtain it.

Menu Screen	Information Screen

Menu Screen

(▶) Prev.   (◀)

(▶) IP Addr   KBD ID (◀)

(▶) MaskIP   Port   (◀)

(▶) Gateway   (◀)

(▶) SupPwd   Passwd (◀)

(▶)   CtrlMod (◀)

(▶) Reboot   Upgrade (◀)

Information Screen

SysCfg

- Press the "Menu" button longer than 2 seconds to open the keyboard configurations. Use the Administrator password to login. "Master" will appear in the Information Screen.
- Press the arrow button on the left of SysCfg to open the System Configuration screen.

- Press the arrow button on the right of "Upgrade".
- Type in the IP Address for the PC that the FTP Server Software is on.
- The keyboard will attempt to connect to the PC, download the new firmware and upgrade its existing firmware.

Specifications

Control Mode	RS-485 bus mode (Port A) Network mode (UTP Port)
Communication Interface	1 RJ45 10M/100M UTP network port 1 RJ45 RS-232 port 2 RS-485 port (Port B is for future use)
Bus operating modes	1 set of switches for full-duplex or half-duplex selection: SW=00000000 is full-duplex mode SW=11000000 is half-duplex mode (default)
Relay output	4 output
Power supply	DC +5V/6A
Power rating	6W
Working Temperature	-10°C – +55°C (14°F – 131°F)
Working Humidity	10% – 90%
Size	360mm x 190mm x 55mm (14.2" x 7.5" x 2.2")
Weight	2.4Kg (5.3lb)