



EKB500

UNIVERSAL KEYBOARD



SAFETY WARNINGS

- Do not place the device near to heaters, furnaces, other heat sources or under direct solar irradiation.
- Operate the device only in locations providing the tolerable operating temperature range 0°C~40°C.
- For cleaning, make sure the device is plugged off and only use a damp cloth without acid detergent.
- Install the device only in dry and dustproof surroundings. Protect the device against any liquid's penetration.
- Avoid the penetration of any artefacts, e.g. through ventilation slots.
- Do not open the device yourself. In case of malfunction, contact your local installer or dealer. Unauthorized opening of the device will annul the warranty claim!
- Use the device only for purposes described in this manual.
- Operate the device only with the power source indicated in the technical data.

 	<p>Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.</p> <p>Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product.</p> <p>Please, help us to conserve the environment we live in!</p>	<p>Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können.</p> <p>Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen.</p> <p>Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.</p> <p>Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben!</p>
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ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

The information in this manual was current upon publication. The manufacturer reserves the right to revise and improve his products. Therefore, all specifications are subject to change without prior notice. Misprints reserved.

Please read this manual carefully before installing and using this unit. Be sure to keep it handy for later reference.

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1. INTRODUCTION

The EKB 500 universal keyboard was developed for both DVR remote control and telemetry control of speed domes and telemetry receivers.

Ergonomic key alignment and the integrated jog/shuttle allow the convenient EverFocus DVR operation. 2 independent RS-485 interfaces enable installations with different telemetry protocols.

2. FEATURES

- 2 independent loop-through RS-485 ports, programmable with different protocols
- Protocol types: EverFocus, ED2200/2250 (Samsung Electr.), Pelco-D, Pelco-P
- 3-axis joystick for convenient pan / tilt / zoom control
- Jog/Shuttle and separate keypad for DVR control
- Housing allows countersunk installation
- Integrated doublespaced LCD display

3. COMPATIBLE DEVICES

Digital video recorders:

EverFocus EDR410 / 810 / 910 / 920 / 1610/ 1640

EverFocus EDSR100H / 100M / 400 / 600 / 900 /1600

Speed dome cameras:

EverFocus EPTZ500 / 1000 / 3000 / 3500

EverFocus ED2200 / 2250

Samsung Electronics SCC641 / 643 / 6405

VProtect VPTZ series

Pelco-D compatible devices

Pelco-P compatible devices

4. DELIVERY SCOPE

1 x EKB-500 universal keyboard

1 x 12 VDC power supply

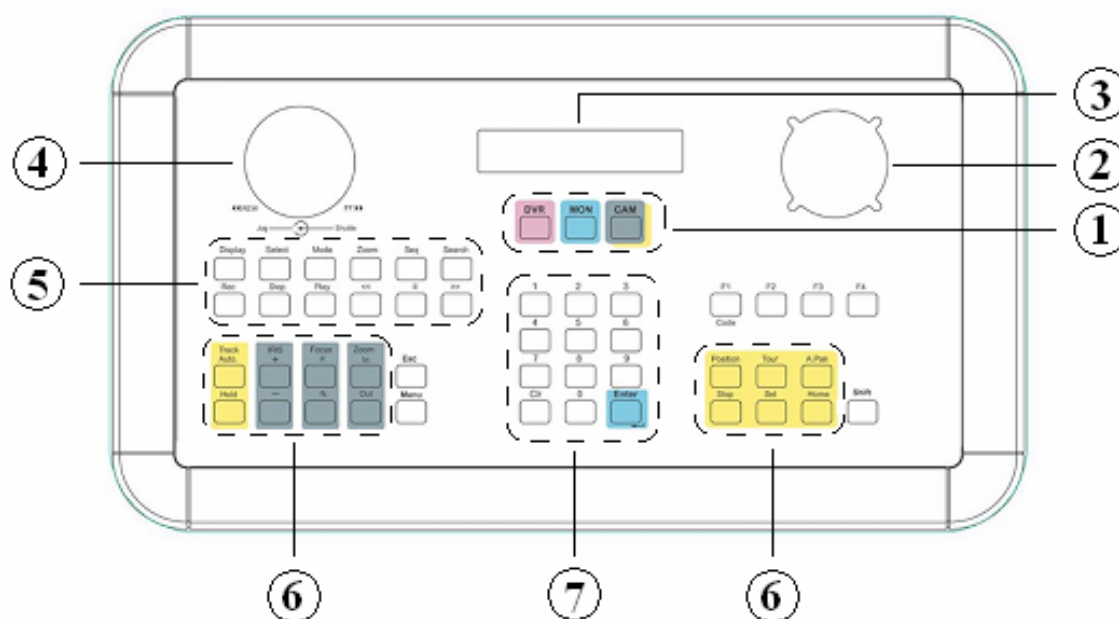
1 x RJ-45 connector, 120 Ohm terminated

1 x RS-485 connection kit incl. connector box and 1 m connection cable

1 x manual

1 x packaging

5. OPERATING ELEMENTS



1. DVR, MON, CAM

Operation mode toggle key:

DVR: DVR and DVR main monitor control

MON: DVR call and matrix monitor control

CAM: Camera control on call and matrix monitors, telemetry control switching

2. 3-axis joystick

Joystick for speed dome and telemetry receiver control

3. LCD display

Doublespaced LCD display for status message display

4. Jog / Shuttle

Operating facility for playback and DVR menu control.

5. DVR control keys

6. Speed dome and telemetry receiver control keys

7. Numeric keypad, CLR, ENTER

0 ~ 9: Numeric keypad for numeric entries

Clr: Toggle key for speed dome menu termination

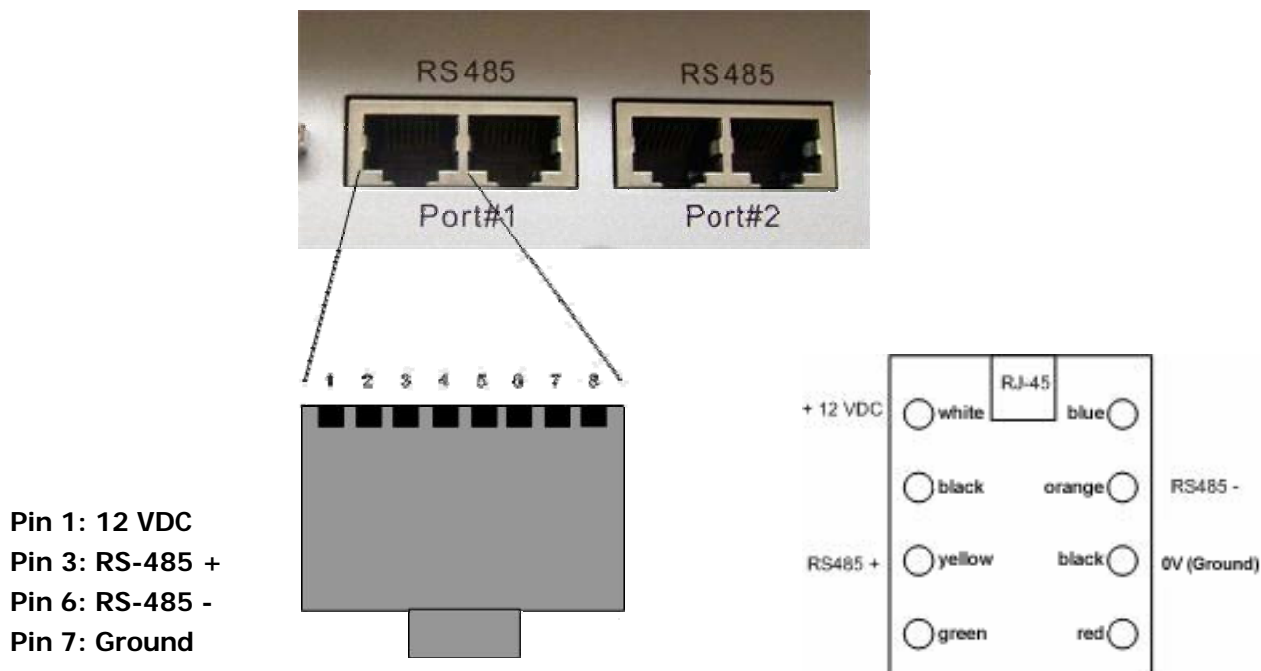
Enter: Enter key for input confirmation.

6. KEYBOARD CONNECTORS

RS-485 ports

EKB-500 provides two independent RS-485 ports with 2 RJ-45 plugs each (loop-through).

Pin assignment:



Pin assignment RJ-45 connector
connector box

Delivery comprises a connector box for RS-485 and 12 VDC power supply connection enabling power supply connection either directly to the EKB 500 keyboard or through the connector box.

RS-232 connector

The 9-pin Sub-D connector is used for service purposes, e.g. keyboard update with new firmware.

POWER CONNECTOR

Use the 5,5 mm socket for connecting the 12 VDC power supply. The power supply may be installed either through this socket or through the included connector box.

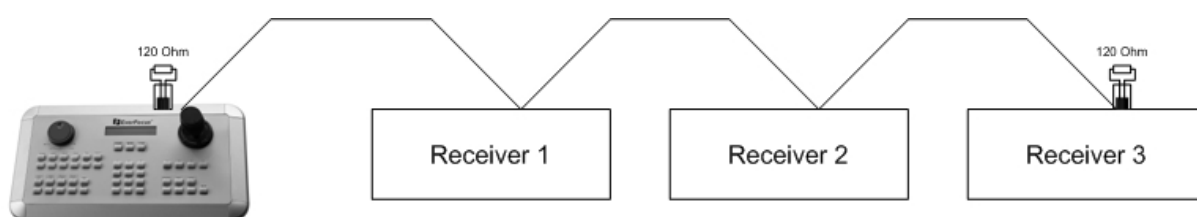
7. INSTALLATION

7.1. General RS-485 bus installation

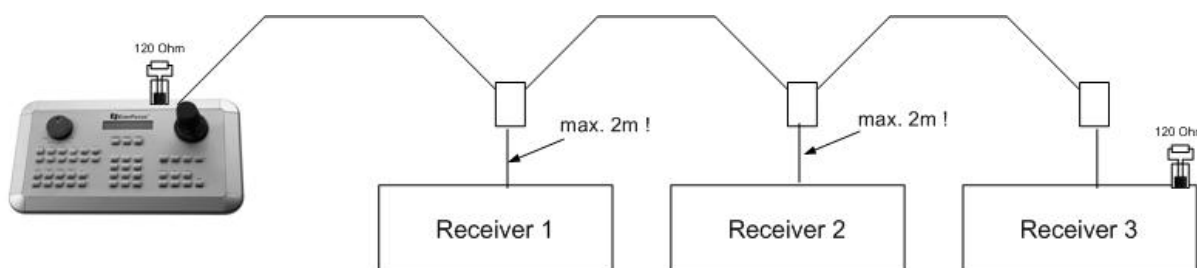
EKB 500 uses an RS-485 simplex wiring; the signal is transferred via a single twisted pair line. CAT5 network cable is recommended, UTP version (unshielded) is sufficient for normal application. A shielded cable should be used if the installed cables are expected to be highly susceptible to interferences.

The number of devices installed in one bus is limited to 32 (expandable through signal distributors), while max. 8 EKB 500 keyboards may be installed in one system.

Basically, the bus should be created by serial wiring.

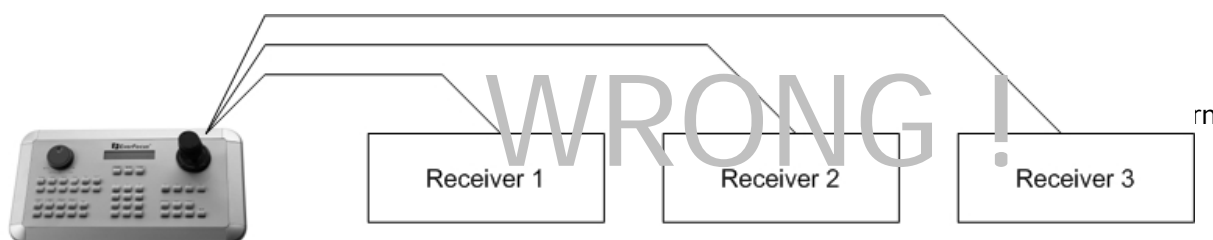


Maximum RS-485 bus cable length is 1200 m.



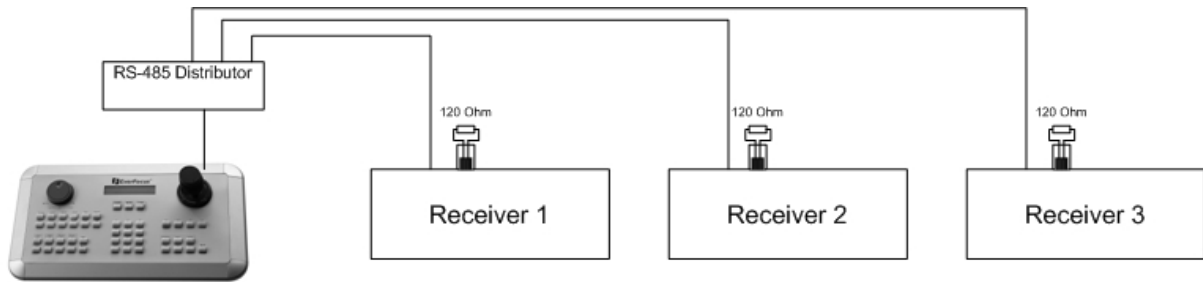
Maximum cable length from box to device is 2m using connector boxes (e.g. EDA-998).

Star wiring is permitted only with signal distributors.



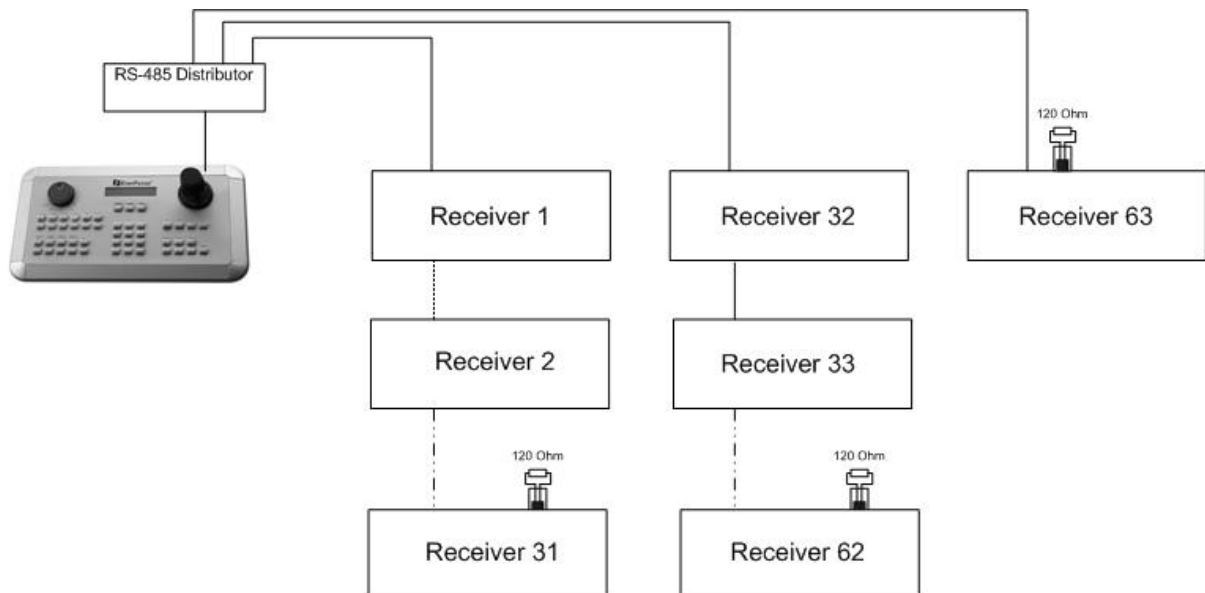
RS-485 signal distributors EDA-997A may be used for star wiring. The maximum system cable length can

also be expanded by using these distributors, physically providing a new RS-485 bus with 1200 m cable length each at every distributor output.



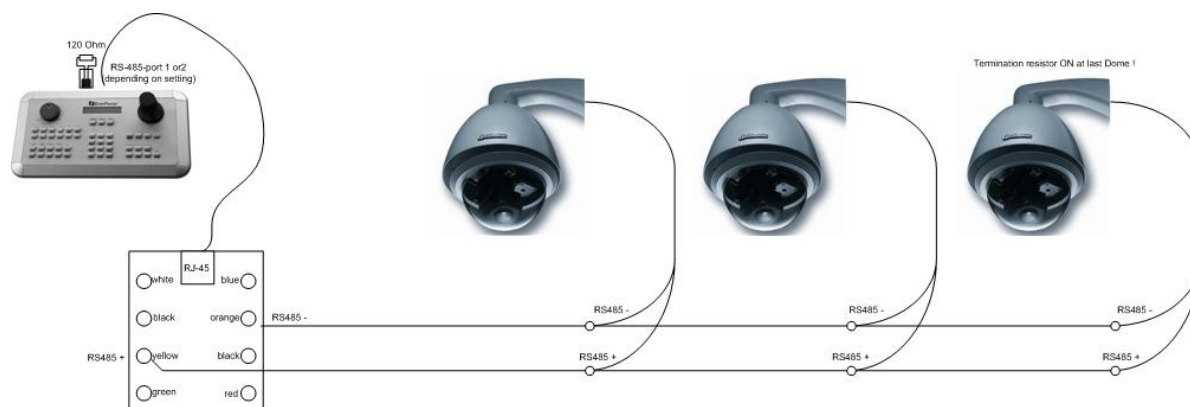
In case the maximum number of 32 bus participants is exceeded, the number of connected devices can be increased by using RS-485 distributors. Each distributor output physically provides one RS-485 bus which enables the additional connection of 31 further devices (the distributor output represents one bus participant itself).

The maximum system expandability depends on the RS-485 address range of the installed devices.



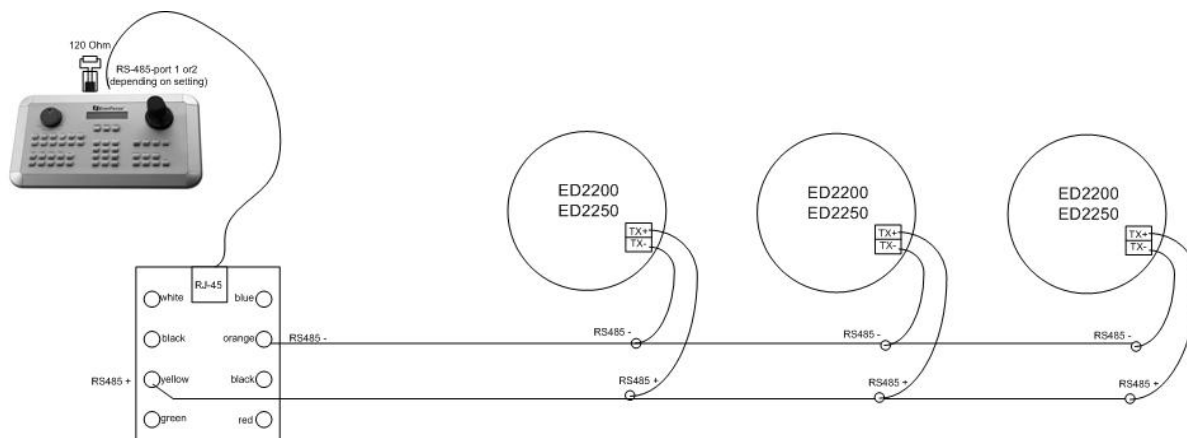
Attention: The RS-485 signal distributor EDA997A is unidirectional! This means that the signal only flows from the input towards the outputs. Therefore, e.g. the interconnection of several EKB 500 keyboards is not possible with this signal distributor!

7.2. EPTZ 500 / 1000 / 3000 / 3500 Speed dome camera connection



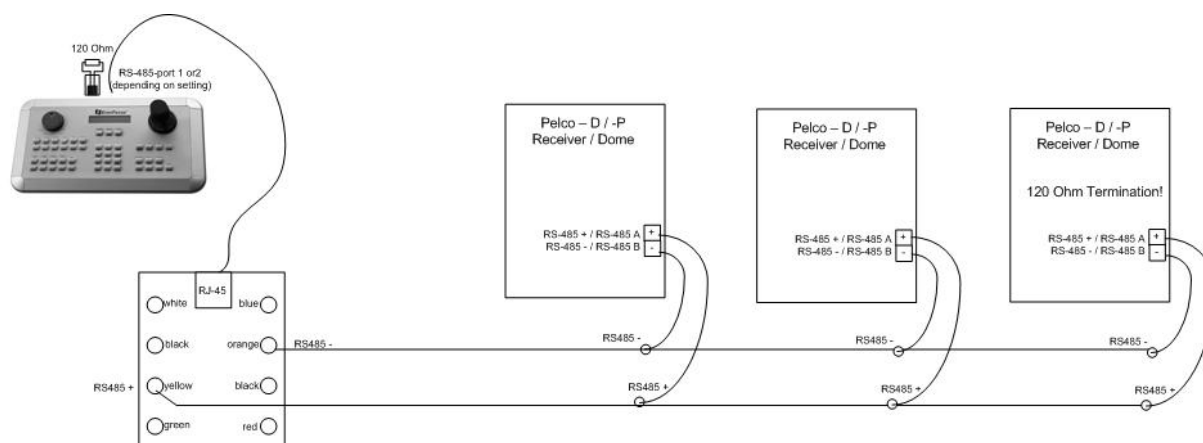
Applied protocol type: EVF2 (standard)

7.3 ED-2200, ED-2250, Samsung SCC-641, SCC-643 , SCC-6405 connection



Applied protocol type: A-Type

7.4. Connection of Pelco-D / -P protocol-compatible devices



Basic functions of speed domes and telemetry receivers compatible to Pelco-D / -P protocol can be controlled with the EKB 500 keyboard if a simplex RS-485 connection option is provided. For general connection, please refer to the chart illustrated above.

Applied protocol type: Pelco-D / Pelco-P (in accordance with dome / receiver)

ATTENTION: Some Pelco-D / -P protocol domes and receivers require an address offset of -1 at the keyboard, i.e. the address assigned to the dome / receiver in the EKB 500 menu must be 1 below the address set in the dome / receiver itself!

7.5 EDSR / EDR series' DVR connection

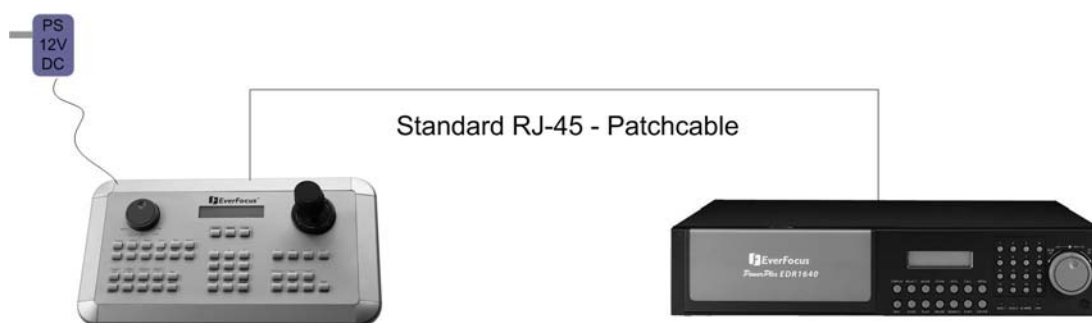
The EKB 500 keyboard can control the following digital video recorders:

EDSR series (despite EDSR100 19" model)

EDR-410/810/920/1640 (MPEG-4 series)

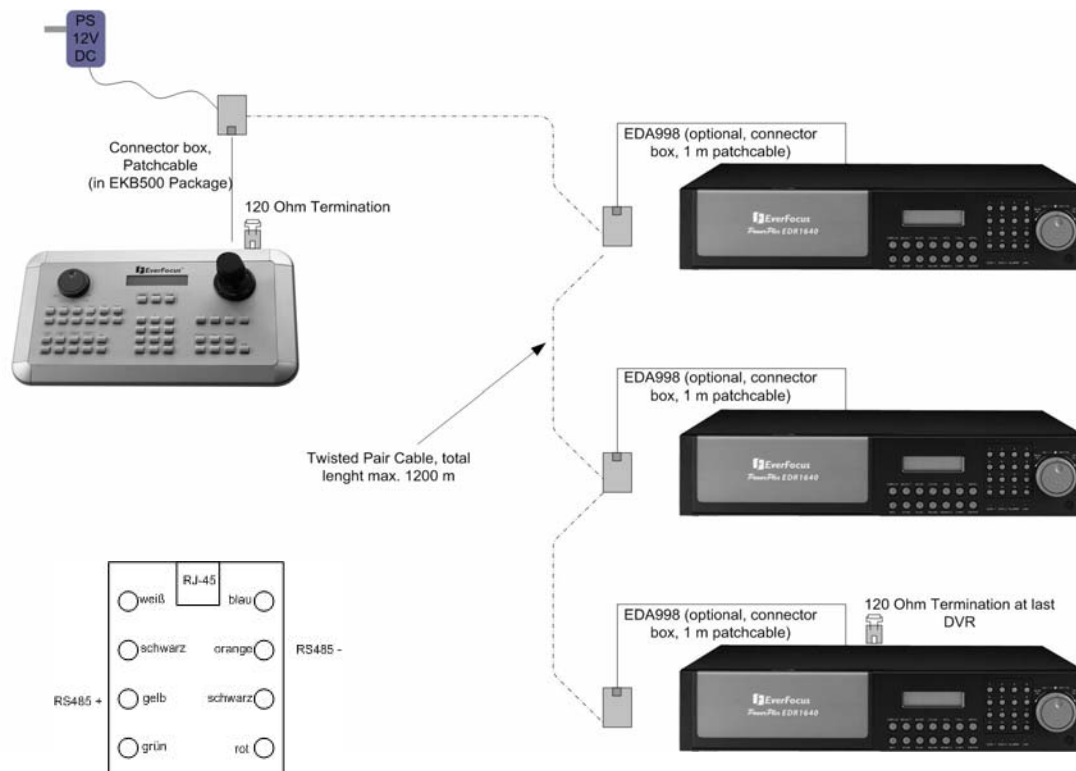
Installation with standard network cable:

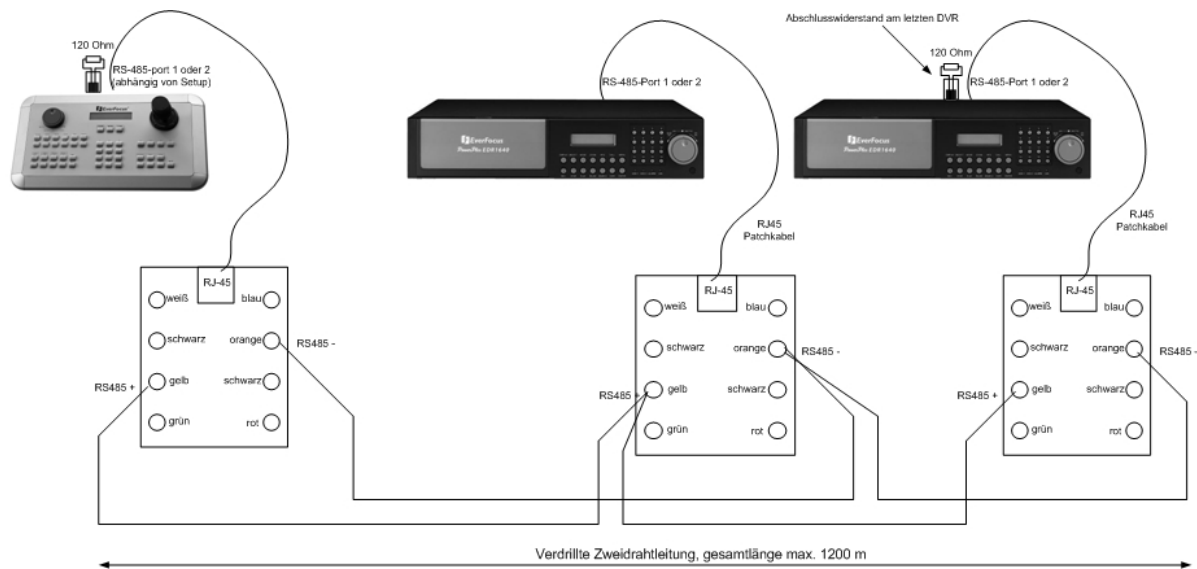
For short distances, EKB 500 can directly be connected using a standard network cable (patch cable, uncrossed!).



Connection with EDA998 connector kit:

Place the EDA998 connector kit at the RS-485 bus for easy DVR installation.





System settings required for startup:

DVR:

MENU > RS232/RS485:

RS485

BAUDRATE	9600 BPS	>	Baudrate must be the same as baudrate of the respective EKB 500 port (default setting for both keyboard and DVR is 9600)
----------	----------	---	--

STOPBIT	1
---------	---

PARITY	NONE
--------	------

DATABIT	8
---------	---

RS232/RS485 ID	1	>	RS-485 address must correspond to DVR setting in EKB 500 menu
----------------	---	---	---

EKB-500: (for details, please refer to "8. Menu settings")

DVR setting:

MENÜ ("SHIFT" + "MENU" key) > DEVICE SETTING > DVR SETTING:

DVR NAME: Selectable DVR number (independent of RS-485 address)

RS485 CONNECTED TO PORT: _ : RS-485 port to which the DVR is connected (1 or 2)

RS485 Adress: DVR RS-485 address

(complies with DVR menu "RS232/RS485 ID")

Must be in accordance with DVR setting

DVR xxxx changed

Press **ENTER** key to confirm the settings

[ENT] to save

MENÜ > COM PORT SETTING:

Port:_ (1 or 2)

Enter the RS-485 port to which the DVR is connected (1 or 2)

Input the Port

BAUD: 9600<

Baudrate setting (according to DVR)

Protocol: EFV1

Protocol type, setting irrelevant for DVR control > **ENTER**

Port: 1 Changed

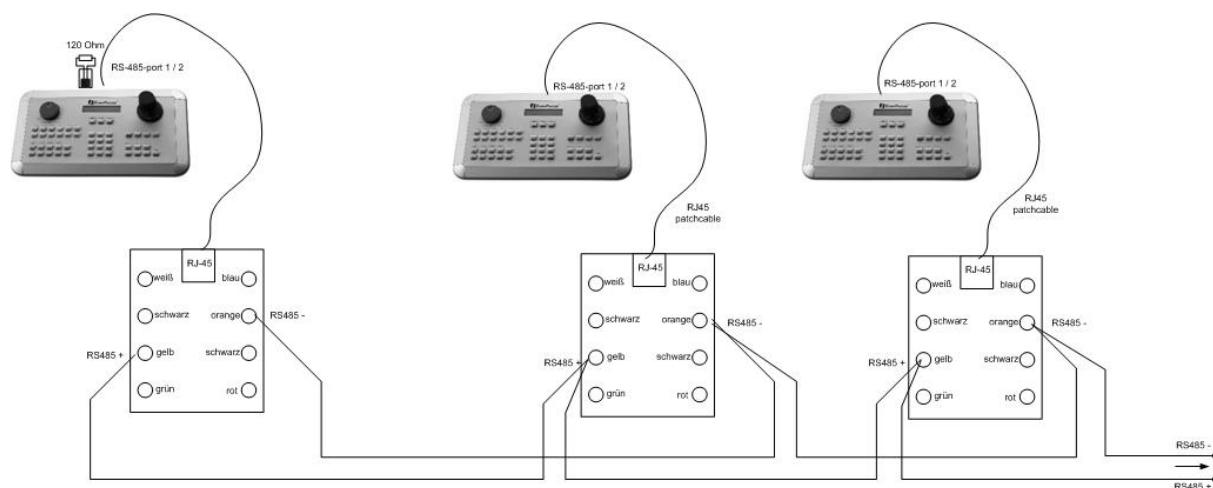
Press **ENTER** key to confirm the settings

[ENT] to save

For details and further settings (e.g. matrix monitor setup), please refer to menu description.

7.6. Connection of several keyboards

If several keyboards (max. 8) are used in a system, the RS-485 bus has to be looped through from keyboard to keyboard.



Using both RS-485 interfaces (port 1 and 2), the 2nd bus connection must be effected separately as illustrated above by means of EDA-998 connection kits.

Power supply can be installed either directly at the keyboard or with the included connection box.

7.7. Startup

After having finished the installation work, switch on the power.

During initialisation (approx. 3 sec.), the firmware version is displayed.

Keyboard
Version 1.13

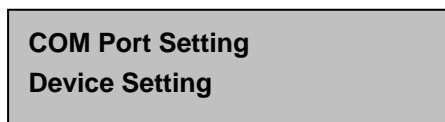
After initialisation, the following message is displayed:

CAM:0001 MON:0001
___ [CAM / MON / DVR]

8. MENU SETTINGS

After electrical installation and startup, both the connected devices and the keyboard itself have to be set up.

Hold the **Shift** key and press the **Menu** key to enter the keyboard menu.



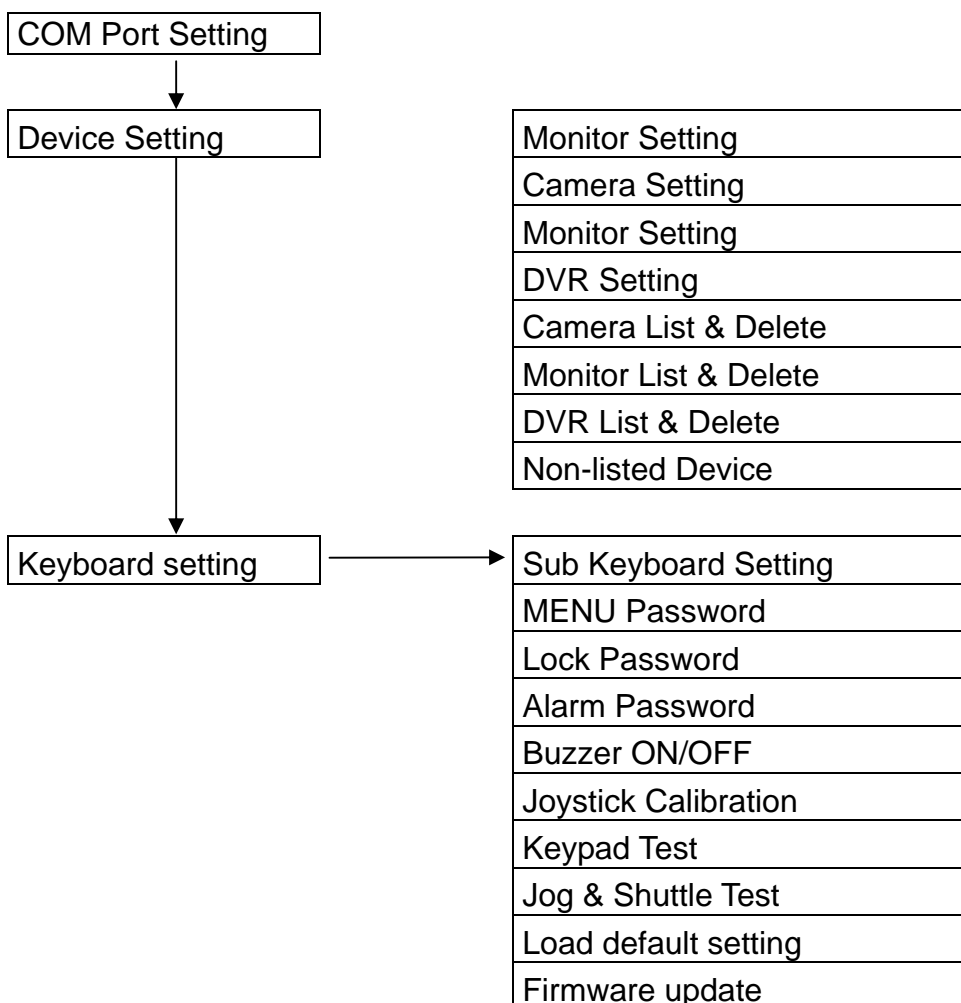
Use the joystick and the **Enter** key for menu navigation. Use the **Esc** key to leave the menu and return from submenus.

The "<" icon at the end of the second line indicated further settings to be effected in this menu. Use the joystick **↓** **↑** to switch between the lines.

Selected settings are displayed blinking. Press **Enter** to confirm the setting and **Esc** to return to the previous menu level.

8.1. Menu structure

The LCD display menu shows the following structure:



8.2. COM PORT SETTING - RS-485 interface setting

Define telemetry protocol type and transmission rate in this menu.

MENÜ > COM PORT SETTING > **Enter**
Select port 1 or 2 and confirm with **Enter**.

Port : _ (1 or 2)
Input the port.

Use the joystick **↑** **↓** to change the value.
Selection: 1200, 2400, 4800, 9600 Baud.
Press **Enter** to confirm the setting and **Esc** to cancel.

BAUD : 9600 <
[↑ ↓] to change

The next menu is used for telemetry protocol setting.

Use the joystick **↓** **↑** to change the value.

Selection: EVF-1: V-Protect Speed Dome
 EVF-2: EverFocus EPTZ series
 A-Type: EverFocus ED2200/2250,
 Samsung SCC-641/643/6405

 Pelco-D
 Pelco-P

Protocol : EVF-1
[↑ ↓] to change

ATTENTION: Protocol type setting is irrelevant for EverFocus DVR control; only baudrate setting is relevant!

Press **Enter** to confirm the selection and **Esc** to cancel.

Port : 1 Changed
[ENT] to save

8.3. DEVICE SETTING

Connection settings definition for controlled devices.

8.3.1. Camera setting

Use this menu to define telemetry cameras and cameras to be assigned to DVR call and matrix monitors. Cameras assigned to DVR main monitor do not require these settings.

MENÜ > DEVICE SETTING > CAMERA SETTING > **Enter**

Camera number 1 ~ 9999 (independent of RS-485 address!)

Press **Enter** to confirm the setting and **Esc** to cancel.

Telemetry camera RS-485 address setting.

Enter any idle address for fixed cameras (numeric entry is compulsory).

Press **Enter** to confirm the setting and **Esc** to cancel.

Camera Name : _ _ _ _

RS485 Address:
_ _ _ _

Setup of the RS-485 interface used for telemetry cameras, port 1 or 2.
 Enter any value for fixed cameras (numeric entry compulsory).
 Press **Enter** to confirm the setting and **Esc** to cancel.

RS485 Connected to
Port : _ [1 or 2]

Setup of DVR and video input to which the camera is connected (requires a DVR installation in the „DVR Setting“ menu)
 Enter any value if no DVR is connected (numeric entry compulsory).
 Press **Enter** to confirm the setting and **Esc** to cancel.

Video Connected to
DVR : _____ CH : _ _

8.3.2. Call and matrix monitor setting

Define the DVR call and matrix monitors to be controlled by the keyboard. These settings are irrelevant for main monitor camera management.

Call and matrix monitors can only be managed by EKB 500 after definition in this menu. By this, an administration of system access rights can be set up, as only monitors defined in this menu are available for access.

MENU > DEVICE SETTING > MONITOR SETTING > Enter

Monitor number, entry 1 ~ 9999 (independent of DVR monitor number).
 Press **Enter** to confirm the setting and **Esc** to cancel.

Monitor Name : _____

The following menu item allows the matrix monitor assignment to the respective DVR's call / monitor output.

Video Connected to
DVR : _____ Matrix : _ _

ATTENTION: EDR / EDSR series' monitor numbering:

- DVR > EKB-500 input
- CALL > Matrix: 1
- Matrix 1 > Matrix: 2
- Matrix 2 > Matrix: 3
- Matrix 3 > Matrix: 4
- Matrix 4 > Matrix: 6

Press **Enter** to confirm the setting and **Esc** to cancel.

Monitor : 0001 changed
[ENT] to save

8.3.3. DVR Setting

Define the digital video recorders to be controlled by the keyboard in this menu.

DVRs can only be managed by EKB 500 after definition in this menu. By this, an administration of system access rights can be set up, as only DVRs defined in this menu are available for access.

DVR number, entry 1 ~ 9999 (independent of DVR RS-485 address).

Press **Enter** to confirm the setting and **Esc** to cancel.

DVR Name : _ _ _ _ _

Setup of the RS-485 interface to which the DVR is connected, port 1 or 2.

Press **Enter** to confirm the setting and **Esc** to cancel.

RS485 Connected to Port : _ [1 or 2]

DVR RS-485 address (complies with the DVR menu RS-485 ID).

Press **Enter** to confirm the setting and **Esc** to cancel.

RS485 Address: _ _ _ _ _

DVR type selection; list of all DVR types supported by the keyboard.

Use the joystick **▼▲** to adjust the selection.

DVR Type : EDSR1600 <

Press **Enter** to confirm the selection and **Esc** to cancel.

DVR : 0000 set [ENT] to save

8.3.4. Camera List & Delete

This menu contains a list of all installed cameras as well as their settings. Furthermore, cameras can be deleted here.

MENÜ > DEVICE SETTING > CAMERA LIST & DELETE > Enter

Total 005 Cameras [ENT] to view list

After pressing the **Enter** key, the first camera is displayed.

Name RS485 DVR CH
0012 2- 0014 0002 03 <

Displays: RS-485: port number address

DVR: DVR to which the camera is connected

CH: DVR video input

Press **Enter** to delete the camera.

Press **Enter** again to confirm.

Press **Esc** to return to camera list.

Del Camera0000 [ENT] to confirm.

ATTENTION: There is no automatic return to the camera list after deleting a camera; pressing the **Enter** key again deletes the following camera.

Press **Esc** to return to camera list.

Use the joystick **▼▲** for camera switching.

Press **Esc** to cancel.

8.3.5. Monitor List & Delete

This menu contains a list of all installed monitors as well as their settings. Furthermore, monitors can be deleted here.

MENÜ > DEVICE SETTING >
MONITOR LIST & DELETE > **Enter**

Total 005 Monitors
[ENT] to view list

After pressing the **Enter** key, the first monitor is displayed.

Displays: Name: monitor number
DVR: DVR to which the monitor is connected.
CH: DVR monitor output

Name DVR CH
0012 0014 0002 <

Press **Enter** to delete the monitor.
Press **Enter** again to confirm.
Press **Esc** to return to monitor list.

Del Monitor0000
[ENT] to confirm.

ATTENTION: There is no automatic return to the monitor list after deleting a monitor; pressing the **Enter** key again deletes the following monitor.
Press **Esc** to return to monitor list.

Use the joystick **↓↑** for monitor switching.
Press **Esc** to cancel.

8.3.6. DVR List & Delete

This menu contains a list of all installed DVRs as well as their settings. Furthermore, DVRs can be deleted here.

MENÜ > DEVICE SETTING >
DVR LIST & DELETE > **Enter**

Total 005 DVRs
[ENT] to view list

After pressing the **Enter** key, the first DVR is displayed.

Displays: Name: DVR number
RS-485: RS-485 address port number

Name RS485
0012 1- 0010 <

Press **Enter** to delete the DVR.
Press **Enter** to confirm.
Press **Esc** to return to DVR list.

Del DVR : 0000
[ENT] to confirm.

ATTENTION: There is no automatic return to the DVR list after deleting a DVR; pressing the **Enter** key again deletes the following DVR.
Press **Esc** to return to DVR list.

Use the joystick **↓↑** for DVR switching.
Press **Esc** to cancel.

8.3.7. Non-listed devices

This function is currently not supported by RS-485 EEPBus.

Use this menu to approve / disapprove the control of devices not defined in the menu.

MENU > DEVICE SETTING > NON-LISTED-DEVICE > Enter

Keep the default setting "No Operation w/o list" at any time, as this function is reserved for future applications only.

**Allow Operation w/o
list [↑ ↓] to toggle**

**No Operation w/o
list [↑ ↓] to toggle**

8.4. KEYBOARD SETTING

This menu allows general keyboard and security settings.

8.4.1. Sub Keyboard Setting

This menu is reserved for future applications. Keep the default value "0" for keyboard ID and number of sub keyboards even in installations with several keyboards.

**This keyboard ID : 0
(0 – 7 , 0 for master)**

**MAX Subkeyboards :
0 – 7 supported**

8.4.2. MENU Password

The setup menu access can be protected by password.

MENU > KEYBOARD SETTING > MENU PASSWORD > Enter

Enter an 8-character password.
Press Enter to confirm.

Input new Password :

Repeat the password.
Press Enter to confirm.

Repeat Password :

For activating the password protection, use the Joystick **↓** **↑** to select "YES" and press Enter to confirm.

**Protect setup menu
NO < [↑ ↓] to change**

If password protection is activated, the setup menu access requires password entry.

**Setup menu password
set and enabled.**

8.4.3. Lock password

This menu item is reserved for future applications. Currently, the LOCK password is not available.

8.4.4. Alarm password

This menu item is reserved for future applications. Currently, the ALARM password is not available.

8.4.5. Buzzer ON/OFF

MENU > KEYBOARD SETTING > BUZZER ON/OFF > Enter

Activate / deactivate buzzer.

Use the joystick \downarrow \uparrow for selection and press Enter to confirm.

Buzzer Enabled
[\uparrow \downarrow] to toggle

Buzzer Disabled
[\uparrow \downarrow] to toggle

8.4.6. Joystick calibration

MENU > KEYBOARD SETTING > JOYSTICK CALIBRATION > Enter

Use this menu for joystick calibration test.

Keep the joystick in idle position and press the Enter key.

Release Joystick
and press [ENT]

Move the joystick towards all end stops including the third axis (left/right rotation).

Move joystick
to corners.

For all X, Y, Z displays, the end stop message must be "OK".

X+000 Y+000 Z+000
X-000 Y- OK Z-000

Press Esc to return to menu.

8.4.7. Keypad test

Use this menu for testing the keys' functionality.

MENU > KEYBOARD SETTING > KEYPAD TEST > Enter

Press the keys to be checked.

If the keys work correctly, the LCD display shows the key function in clear text.

Press Esc to return to menu.

[_____] Pressed
[Esc] to exit

8.4.8. Jog & Shuttle test

Use this menu for testing the jog/shuttle's functionality.

MENU > KEYBOARD SETTING > JOG&SHUTTLE TEST > Enter

Move the shuttle (outer ring) towards the left and right end stops. The display shows the 7 shuttle steps; reaching the end stop, the display shows >>>>7 (right end stop) resp. <<<<7 (left end stop).

Turn the jog to the left / right. If the jog works correctly, the display counts from 0 to 9999.

Press Esc to return to menu.

Shuttle : >>>> 5
Jog : 9934

8.4.9. Load default setting

Use this menu to reset the keyboard to default setting.

MENU > KEYBOARD SETTING > LOAD DEFAULT SETTING > Enter

Press Enter to confirm the default setting loading.

Load default setting
Press [ENT] to load.

A second security dialogue appears.

Enter the figures 1, 2, 3 and press Enter to confirm.

Press Esc to cancel and return to menu.

Input 123 to start
--- [ENT]

After confirmation, all settings are deleted and the keyboard is reset to default setting. A short buzzer blip confirms the reset.

8.4.10. Firmware update

This function allows the loading of new firmware upon availability. A PC with serial interface and an uncrossed RS-232 connection cable (pin 2, 3, 5 interconnected) is required.

MENU > KEYBOARD SETTING > FIRMWARE UPDATE > Enter

A second security dialogue appears.

Enter the figures 1, 2, 3 and press Enter to confirm.

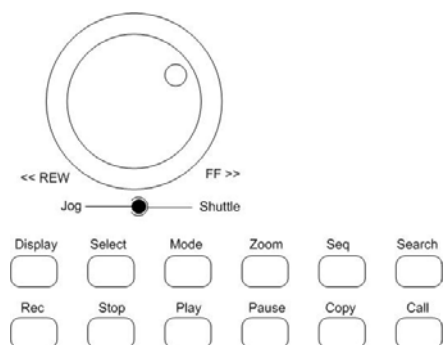
Press Esc to cancel and return to menu.

Input 123 to start
--- [ENT]

9. OPERATION

9.1. DVR operation

EKB-500 provides a separate keypad for DVR control. The keys correspond to the EverFocus DVR front panel keys as regard to labeling and functionality.



Besides these keys, further keys like **MENU** or **Enter** are required for different functions.

9.1.1. DVR selection

Press the **DVR** key. The display shows the last selected DVR (default setting: 1).

Press the **DVR** key again. The DVR number is blinking.

Enter the DVR number and press **Enter** to confirm.

The display changes to the selected DVR number; the DVR can be operated now.

DVR : 0001
[CAM / MON / DVR]

9.1.2. DVR main functions

The range of functions varies, depending on the DVR model and firmware version.

The essential functions are described below; for further details please refer to the DVR manual.

Please note that this description doesn't provide a full function description of the EverFocus DVRs.

Function	Keys / operation
DVR setup menu	MENU
Full screen	Input channel number; key 1 is delayed for approx. 1 second to enable input of channels 10~16
Electronical zoom	Zoom switches ON / OFF (in full screen mode)
Multiscreen display	Mode switches between the available multiscreen displays
Record	Rec starts the recording mode manually
Playback	Play starts the playback mode without search
Playback search	Search opens the search menu
Fast forward / reverse playback	Shuttle right (fast forward) resp. left (fast reverse) in 7 steps, depending on shuttle speed
Freeze image playback	Pause freezes the image playback
Freeze image forward / reverse	JOG left (reverse) resp. right (forward)
Stop playback / recording	Stop , first actuation stops the playback, second actuation stops the recording
Main monitor status display	Display switches between the available status displays
Sequence	Seq starts the automatic switching mode
Call & matrix monitor setting	Call enters the setup menu for call and matrix monitors
Multiscreen setup	Press SELECT to modify the individual camera screens within a multiscreen by entering the camera number
Video export	Copy opens the image export menu

9.1.3. Main monitor (MAIN) operation in DVR mode

The camera and monitor definition within the keyboard menu is irrelevant for the main monitor (MAIN) operation.

As the operation is effected in DVR mode, **CAM** resp. **MON** switching is not necessary.

Select the camera by entering the channel number (DVR video input) via the numeric keypad. Key 1 is delayed for approx. 1 second to enable input of channels 10~16.

All display options available for the respective DVR type are recallable through the keyboard (OSD, multiscreen displays).

ATTENTION: An additional camera switching by pressing **CAM** > camera number > **Enter** is required for camera pan / tilt / zoom control.

9.1.4. Call and matrix monitor operation in CAM-MON mode

ATTENTION: The call and matrix monitor operation requires the definition of monitors and cameras controlled by this keyboard in the keyboard menu. The keyboard only accepts camera-monitor combinations connected to one digital video recorder.

Camera switching from active DVR mode

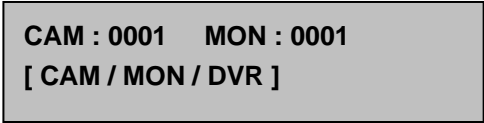
Press the **CAM** key, camera number is blinking.

Enter the camera number and press **Enter** to confirm.

Enter the monitor number and press **MON** for

Monitor selection.

Camera switching is effected.



CAM : 0001 MON : 0001
[CAM / MON / DVR]

Camera switching in active CAM-MON mode

If the keyboard already works in CAM-MON mode, a simplified operation is possible:

Syntax:

Camera number > **CAM**

Monitor number > **MON**

If the active camera (indicated in the display) shall also be displayed on other monitors, only the monitor must be entered:

Monitor number > **MON**

9.2. SPEED DOME / TELEMETRY RECEIVER OPERATION / SETUP

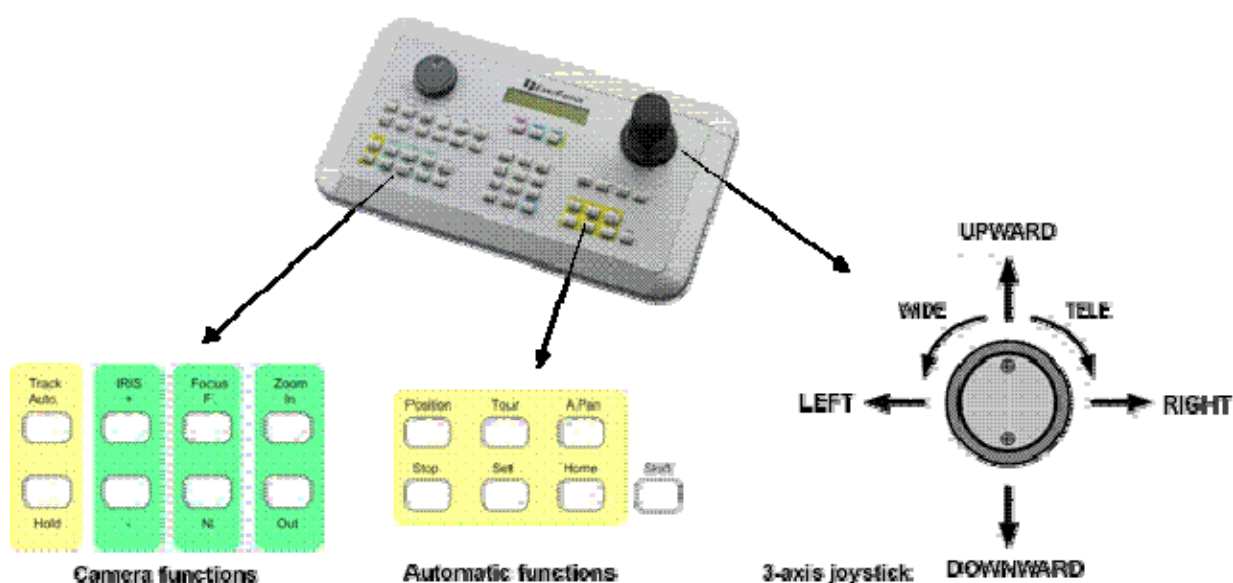
The operation of speed domes and telemetry receivers requires the setup of these devices in the EKB 500 menu. Settings within the following menus have to be adjusted:

MENU > COM PORT SETTING for interface and protocol type setting

MENU > DEVICE SETTING > CAMERA SETTING for speed dome / telemetry receiver connection settings

EKB 500 is optimised for EverFocus EPTZ series speed dome control. Furthermore, basic functions of other supported speed dome types can be operated.

The following operating elements are available for camera control:



General key description:

TRACK AUTO/HOLD: reserved for future applications

IRIS + / -: manual iris control, + opens iris, - closes iris

FOCUS F. / N.: manual focus, F. TELE; N. WIDE

ZOOM IN / OUT: Zoom keys, same function as joystick rotation, IN = TELE, OUT = WIDE

POSITION: start and save positions

TOUR: start and save preset tours

A.PAN: autopan, start and save automatic pan operation

STOP: function key for programming termination

SET: switch key for second key level (depending on function)

HOME: start and save home position

SHIFT: switch key for second key level (depending on function)

9.2.1. EverFocus EPTZ series

The following functions are available after camera selection in CAM-MON mode:

CAM : 0001 MON : 0001
[CAM / MON / DVR]

EPTZ dome operation outline

Function	Keys / operation
Open dome menu	Shift (hold) + MENU
Switch menu functions	Shift (hold) + JOYSTICK ↓↑
Change menu settings	Shift (hold) + JOYSTICK ←→
Leave dome menu	Clr (hold) + MENU or menu item EXIT > Enter
Pan – Tilt	Joystick ↓↑ ←→
Zoom TELE / WIDE	TELE: Zoom In or JOYSTICK rotation to the right WIDE: Zoom Out or JOYSTICK rotation to the left
Focus	TELE: Focus F. ; WIDE: Focus N.
Iris +/-	Open iris: IRIS + / close iris: IRIS - .
Start position (preset)	Preset number + Position / Position + preset number > Enter
Save position (preset)	Shift (hold) + Position > preset number > Enter
Preset parametres	Set (hold) + Position
Delete preset	Clr (hold) + Position
Tour mode 1 (one way)	Tour > number > Enter
Tour mode 2 (back and forth)	Shift (hold) + Tour > number > Enter
Setup tour	Set (hold) + Tour
Start autopan	A.Pan > speed 1 ~ 239 > Enter
360° autopan	Shift (hold) + A.Pan > speed 1 ~ 239 > Enter
Setup autopan	Set (hold) + A.Pan , enter start / end
Start home position	Home
Setup home position	Set (hold) + Home , enter position and time definition
Alarm – preset link	F1 , enter alarm contact / preset definition
Delete alarm – preset link	Clr (hold) + F1 > alarm 1~4 > Enter

9.2.1.1. EPTZ on-screen display

Start EPTZ menu:

Switch between the settings:

Change the settings:

Leave the menu:

MENU
Shift (hold) + **JOYSTICK** ↓↑
Shift (hold) + **JOYSTICK** ← →
Menu item **EXIT** > **Enter** or
Clr (hold) + **MENU**

9.2.1.2. Positions (presets)

Save presets

Shift (hold) + **POSITION**
> enter preset number > **Enter**

Camera:0001 Save to
Position:___[1-192]

Define preset parameters

Set (hold) + **POSITION**
> enter preset number > **Enter**

Set Camera:0001
Position:___[1-192]

Enter the preset dwell time within preset-tours
from 1~239 seconds

> **Enter**

Set Position:001
Dwell:___[1-239]

Preset travel speed from 1 ~ 239 seconds

> **Enter**

Set Position:001
Speed:___[1-239]

Enter a preset name (up to 20 characters)

JOYSTICK ↓↑ changes the characters
Enter switches to next character
Clr deletes the current character

Title for position

V

Delete preset

Clr (hold) + **POSITION**
> enter preset number > **Enter**

Camera:0001
Del Position:___

Start preset

POSITION > enter preset number > **Enter**

Camera:0001 go to
Position:___[1-192]

9.2.1.3. Home position

The home position is the position (preset) which is approached after a pre-defined duration upon last speed dome operation.

Set (hold) + **HOME**

> enter inactivity duration 1 ~ 999 minutes

> **Enter**

Back to home if no
action for ___Minute

Use the joystick to approach the requested position

> **Enter**

Move to home position
[ENT] to confirm

Use the **JOYSTICK** ↓ ↑ to activate the HOME function.

Auto Back Enabled
[↑↓] to toggle

9.2.1.4. Autopan

End stop definition

Set (hold) + **A.Pan**

Use the joystick to approach the requested position A,
enter the dwell time at this end stop in seconds

(1 ~ 239) > **Enter**

Position A
Dwell:___[1-239]

Use the joystick to approach the requested position B,
enter the dwell time at this end stop in seconds

(1 ~ 239) > **Enter**

Move to Position B
[ENT] to confirm

Position B
Dwell:___[1-239]

Activate A-B autopan

A.Pan > enter pan speed 1 ~ 239

> **Enter**

Speed:___[1-239]
[ENT] to start.

Activate 360° autopan

A continuous 360° pan operation is also possible.

Shift (hold) + **A.Pan**

> enter pan speed 1 ~ 239 > **ENTER**

Speed:___[1-239]
[ENT] to start.

9.2.1.5. Preset tours

The EPTZ series supports up to 16 programmable preset tours with up to 16 presets each.

For these tours, 2 operation modes are available:

1) **Mode 1** (One way): after approaching all programmed presets, the tour restarts at the first programmed preset.

Example: 1-2-3-4-5-6 > 1-2-3-4-5-6 > 1-2-3-4-5-....

2) **Mode 2** (back and forth) > after approaching all programmed presets, the speed dome returns to the presets in reverse order.

Example: 1-2-3-4-5-6 > 5-4-3-2-1 > 2-3-4-5-6 > 5-.....

Preset tour programming

Shift (hold) + **Tour**

> enter tour number 1 ~ 16 > **Enter**

Set Camera:0001
Tour:__[1-16]

Enter the presets in correct order (max. 16) .

Press **Enter** to save and add further preset tours.

Press **Stop** to finish preset tour programming.

Add Position#01:___
[ENT / STOP]

Tour:001 Pos#01:001<
[ENT] to save

Activation preset tour mode 1 (One way)

Tour > enter tour number > **Enter**

Camera:0001
Run Tour:__[1-16]

Activation preset tour mode 2 (back and forth)

Shift (hold) + **Tour** > enter tour number > **Enter**

Camera:0001
Run Tour:__[1-16]

9.2.1.6. Alarm contact settings

This function allows the EPTZ dome alarm contact assignment to presets or preset tours.

Program alarm / preset / tour link

F1 > enter alarm contact number 1 ~ 4

**Link Alarm:_[1-4] to
Position [↑↓]:____**

Use the **JOYSTICK**↓↑ to switch between preset
(position) and preset tour (tour)

**Link Alarm:_[1-4] to
Tour [↑↓]:____**

Delete alarm / preset / tour link

Clr + **F1** > enter alarm contact number 1 ~ 4
> **Enter**

**Del AlarmLink:_[1-4]
[ENT] to confirm**

9.2.2. EverFocus ED 2200/2250, Samsung EI. SCC-641/643/6405 operation

Required protocol type in "COM PORT SETTINGS": **A-TYPE**

9.2.2.1. On-screen display

Start menu:

MENU

Switch between the settings:

Shift (hold) + **JOYSTICK** ↓↑

Change the settings:

Shift (hold) + **JOYSTICK** ← →

Leave the menu:

Clr (hold) + **MENU**

9.2.2.2. Presets

Preset parameters are defined in the dome menu. Please refer to the manual of the respective model.

Save presets

Shift (hold) + **POSITION**
> enter preset number > **Enter**

Camera:0001 Save to
Position:___[1-192]

Delete preset

Clr (hold) + **POSITION**
> enter preset number > **Enter**

Camera:0001
Del Position:___

Start preset

POSITION > enter preset number > **Enter**

Camera:0001 go to
Position:___[1-192]

9.2.2.3. Home position

The home position is the position (preset) which is approached after a pre-defined duration upon last speed dome operation.

Define the home position within the speed dome's on-screen display. For further details, please refer to the manual of the respective model.

The manual home position start is effected by starting the preset programmed for this function in the dome menu.

The **HOME** key is inactive.

9.2.2.4. Autopan

End stop definition

Define both the end stops and the autopan speed in the speed dome's on-screen display. For further details, please refer to the manual of the respective model.

Start A-B autopan

A.Pan > enter pan speed 1 ~ 239
(any input, value is irrelevant due to speed being defined in the dome menu)
> **Enter**

Speed: __[1-239]
[ENT] to start.

9.2.2.5. Pattern tour

Define patterns (stored motion sequences of 30 seconds each) in the speed dome's on-screen display. For further details, please refer to the manual of the respective model.

Activate pattern

Tour > enter pattern number > **Enter**

Camera:0001
Run Tour: __[1-16]

9.2.3. Pelco-D / -P protocol compatible devices' operation

Required protocol type in "COM PORT SETTINGS": **Pelco-D / Pelco-P** (according to dome / receiver)

ATTENTION: Some Pelco-D / -P protocol domes and receivers require an address offset of -1 at the keyboard, i.e. the address assigned to the dome / receiver in the EKB 500 menu must be 1 below the address set in the dome / receiver itself!

Presets

Save presets

Shift (hold) + **POSITION**
> enter preset number > **Enter**

Camera:0001 Save to
Position: __[1-192]

Delete preset

Clr (hold) + **POSITION**
> enter preset number > **Enter**

Camera:0001
Del Position: __

Start preset

POSITION > enter preset number > **Enter**

Camera:0001 go to
Position: __[1-192]

10. TECHNICAL DATA

Keys	48
Joystick	3-axis
Display	2 lines with 20 characters each
RS-485	2 independent RS-485 ports with 2 RJ-45 sockets each
RS-232	1 x RS-232, Sub-D9 socket (service)
RS-485 protocols	EverFocus, ED2200/2250, Samsung Electr., Pelco-D, Pelco-P
Power source	12 VDC +-10%, via power supply 230 VAC
Power consumption	10 W max.
Ambient temperature	0°C ~ 40°C, non-condensing
Dimensions	360 (W) x 110 (H) x 200 (D) mm
Weight	1,5 Kg

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