



VIDEOJET decoder 3000

VJD-3000



BOSCH

en Installation Manual

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1 Safety

1.1 Electric shock hazard

- Never attempt to connect the unit to any power network other than the type for which it is intended.
- Use only the power supply provided or power supply units with UL approval and a power output according to LPS or NEC Class 2.
- Connect the unit to an earthed mains socket-outlet.
- Never open the housing.
- Never open the housing of the power supply unit.
- If a fault occurs, disconnect the power supply unit from the power supply and from all other units.
- Install the power supply and the unit only in a dry, weather-protected location.
- When installing in a switch cabinet, ensure that the unit and the power supply units have sufficient grounding.
- If safe operation of the unit cannot be ensured, remove it from service and secure it to prevent unauthorized operation. In such cases, have the unit checked by Bosch Security Systems.

Safe operation is no longer possible in the following cases:

- if there is visible damage to the unit or power cables,
- if the unit no longer operates correctly,
- if the unit has been exposed to rain or moisture,
- if foreign bodies have penetrated the unit,
- after long storage under adverse conditions, or
- after exposure to extreme stress in transit.

1.2 Installation and operation

- The relevant electrical engineering regulations and guidelines must be complied with at all times during installation.
- Relevant knowledge of network technology is required to install the unit.
- Before installing or operating the unit, make sure you have read and understood the documentation for the other equipment connected to it, such as monitors. The documentation contains important safety instructions and information about permitted uses.
- Perform only the installation and operation steps described in this manual. Any other actions may lead to personal injury, damage to property or damage to the equipment.

Please ensure the following installation conditions:

- Do not install the unit or the power supply unit close to heaters or other heat sources. Avoid locations exposed to direct sunlight.
- Allow sufficient space for running cables.
- Ensure that both the unit and the power supply unit have adequate ventilation. Bear the total heat output in mind, particularly when installing multiple units in a switch cabinet.
- When making connections, use only the cables supplied or use appropriate cables immune to electromagnetic interference.
- Position and run all cables so that they are protected from damage, and provide adequate cable strain relief where needed.
- When installing in a switch cabinet, ensure that the screw joints are free of tension and subject to as little mechanical stress as possible. Ensure that the unit and the power supply unit have sufficient grounding.

- Avoid impacts, blows, and severe vibrations that exceed the specification limits, as these can irreparably damage the unit.

1.3 Maintenance and repair

- Never open the housing of the unit. The unit does not contain any user-serviceable parts.
- Never open the housing of the power supply unit. The power supply unit does not contain any user-serviceable parts.
- Ensure that all maintenance or repair work is carried out only by qualified personnel (electrical engineers or network technology specialists). In case of doubt, contact your dealer's technical service center.

2 Short information

2.1 About this manual

This manual is intended for persons responsible for the installation and operation of a VIDEOJET decoder 3000 unit. International, national and any regional electrical engineering regulations must be followed at all times. Relevant knowledge of network technology is required. The manual describes the installation of the unit.

2.2 Conventions in this manual

In this manual, the following symbols and notations are used to draw attention to special situations:



Caution!

This symbol indicates that failure to follow the safety instructions described may endanger persons and cause damage to the unit or other equipment. It is associated with immediate, direct hazards.



Notice!

This symbol refers to features and indicates tips and information for easier, more convenient use of the unit.

2.3 Intended use

VIDEOJET decoder 3000 receives and decodes video signals over data networks (Ethernet LAN, Internet). The unit is intended for use with CCTV systems. Various functions can be triggered automatically by incorporating external alarm sensors. Other applications are not permitted.

In the event of questions concerning the use of the unit which are not answered in this manual, please contact your sales partner or:

Bosch Sicherheitssysteme GmbH

Robert-Bosch-Ring 5

85630 Grasbrunn

Germany

www.boschsecurity.com

2.4 EU Directives

VIDEOJET decoder 3000 complies with the requirements of EU Directives 89/336 (Electromagnetic Compatibility) and 73/23, amended by 93/68 (Low Voltage Directive).

2.5 Rating plate

For exact identification, the model name and serial number are inscribed on the bottom of the housing. Please make a note of this information before installation, if necessary, so as to have it to hand in case of questions or when ordering spare parts.

3 System overview

3.1 Parts included

- 1 VIDEOJET decoder 3000 video decoder
- 2 terminal blocks (6-pin, 8-pin)
- 4 self-adhesive elastic bumpers
- 1 wall-mounting panel
- 2 screws
- 2 wall plugs
- 1 power supply unit with 3 primary adapters (EU, US, UK)
- 1 Installation Manual



Notice!

Check that the delivery is complete and in perfect condition. Arrange for the unit to be checked by Bosch Security Systems if you find any damage.

3.2 System requirements

General requirements

- Computer with Windows XP or Windows 7 operating system
- Network access (Intranet or Internet)
- Screen resolution at least 1,024 × 768 pixels
- 16- or 32-bit color depth
- Installed Oracle JVM



Notice!

The Web browser must be configured to enable cookies to be set from the IP address of the unit.

In Windows 7, deactivate protected mode on the **Security** tab under **Internet Options**.

You can find notes on using Microsoft Internet Explorer in the online Help in Internet Explorer.

Additional configuration and operational requirements

You find the information on additional configuration and operational requirements in the **Releaseletter** document for the respective firmware.

For the latest version of the firmware, required programs and controls, and the current version of the Bosch Video Client management software, access your Bosch product catalog on the Internet.

3.3 Overview of functions

High Definition video decoder

VIDEOJET decoder 3000 displays H.264 encoded video at up to 60 images per second from PAL, NTSC, or HD sources over IP networks.

Establish the video connections automatically from the camera, encoder, decoder, or the comprehensive video management system from Bosch. The decoder is capable of decoding a single HD video stream, or up to four SD video streams at the same time in quad-mode.

Control the viewing mode remotely via a management system. It can drive an HD monitor via HDMI directly, thus is ideally suited for applications like flat-screen monitor walls.

Alternatively, it can connect to an analogue monitor using its composite video BNC output.

VIDEOJET decoder 3000 provides one-channel bidirectional audio communication in parallel to video.

Ultra-compact in size, VIDEOJET decoder 3000 is perfect for any application that depends on space-saving solutions.

Access security

VIDEOJET decoder 3000 offers various security levels for accessing the network, the unit, and the data channels. As well as password protection with two levels, it supports 802.1x authentication using a RADIUS server for identification. You can secure Web browser access by HTTPS using a SSL certificate that is stored in the unit, providing total data protection with AES or 3DES encryption, according to the client's encryption capabilities. Alternatively, each communication channel—video, audio, or serial I/O—can be independently AES encrypted with 128-bit keys, once the encryption site license has been applied.

High performance

Transmit IP video to the high-performance decoder and present it with ultimate clarity on an analog CCTV monitor or on a large, flat-screen display.

VIDEOJET decoder 3000 can handle up to four SD H.264 video streams with full resolution and frame rate and display them in quad-view. When in single-view, it can display an HD video stream up to 1080p30 or 720p60.

Flexibility

With its connection page in the web browser, the optional IP Matrix license, the support of IntuiKey keyboard and integration into video clients and video management systems, VIDEOJET decoder 3000 enables solutions in varieties from the smallest stand-alone up to large or distributed but centrally controlled applications.

Easy upgrade

Remotely upgrade the unit whenever new firmware becomes available. This ensures up-to-date products, thus protecting investment with little effort.

Summary

VIDEOJET decoder 3000 provides the following main functions:

- Video, audio, and data reception over IP data networks
- Quad view function with simultaneous decoding of four video streams
- 1 BNC composite video output (PAL/NTSC) for connecting an analog monitor
- 1 HDMI interface to display digital video on flat-screen monitors or the like
- Video decoding according to international standard H.264
- Integrated Ethernet port (10/100 Base-T)
- Transparent, bidirectional data channel via RS-232/RS-422/RS-485 serial interface
- Configuration and remote control of all internal functions via TCP/IP, also secured via HTTPS
- Password protection to prevent unauthorized connection or configuration changes
- 4 alarm inputs for external sensors (such as door contacts)
- 1 relay output for switching external units (such as lamps or sirens)
- Event-controlled automatic connection
- Convenient maintenance via uploads
- Flexible encryption of control and data channels
- Authentication according to international standard 802.1x
- Bidirectional audio (mono) for line connections
- Audio encoding according to international standards G.711 and L16

3.4 Connections, controls and displays

3.4.1 Front view



- 1 HDMI** monitor socket
for connecting a computer monitor via HDMI cable
- 2 VIDEO OUT** video output
BNC socket for connecting a video monitor
- 3 AUDIO IN** audio connection (mono)
3.5 mm (1/8 in) stereo socket audio in for connecting two audio sources
- 4 AUDIO OUT** audio connection (mono)
3.5 mm (1/8 in) stereo socket line-out for connecting one audio connection

3.4.2

Rear view



- 1 **ETH** RJ45 socket
for connecting to an Ethernet LAN (local network), 10/100 MBit Base-T
- 2 LED **LINK**
lights up when the unit is connected to the network
- 3 LED **CONNECT**
lights up when supplied with power and during data transmission
- 4 Factory reset button
to restore factory default settings
- 5 LED **DISPLAY**
indicates use of monitor ports
- 6 Terminal block
for alarm inputs, relay output and serial interface
- 7 **12V DC** power connector
for connecting the power supply unit

See also

- *LEDs*, page 24
- *Terminal block*, page 25

4 Installation

4.1 Preparations

VIDEOJET decoder 3000 and the power supply unit are both intended for use indoors or in housings. Select a suitable location for installation that guarantees to meet the environmental conditions.

You may use the unit as a desktop device or wall-mounted using the mounting material supplied. For installation in a switch cabinet, you can obtain a rack mount kit for up to three units. For more information access your Bosch product catalog on the Internet.

Caution!



The ambient temperature for the delivered power supply unit must be between 0 and +40 °C (+32 and +104 °F). The relative humidity must be between 20% and 80%. The ambient temperature for the unit must be between 0 and +50 °C (+32 and +122 °F). The relative humidity must not exceed 90%.

The unit and the power supply unit generate heat during operation, so you should ensure that there is adequate ventilation and enough clearance between both units and heat-sensitive objects or equipment. Please note the maximum heat value of 31 BTU/h per unit without the power supply.

Please ensure the following installation conditions:

- Do not install the unit or the power supply unit close to heaters or other heat sources. Avoid locations exposed to direct sunlight.
- Allow sufficient space for running cables.
- Ensure that both the unit and the power supply unit have adequate ventilation. Bear the total heat output in mind, particularly when installing multiple units in a switch cabinet.
- When making connections, use only the cables supplied or use appropriate cables immune to electromagnetic interference.
- Position and run all cables so that they are protected from damage, and provide adequate cable strain relief where needed.
- When installing in a switch cabinet, ensure that the screw joints are free of tension and subject to as little mechanical stress as possible. Ensure that the unit and the power supply unit have sufficient grounding.
- Avoid impacts, blows, and severe vibrations that exceed the specification limits, as these can irreparably damage the unit.

4.2 Mounting

You can secure the unit to walls, below ceilings or any other load-bearing locations using the wall-mounting panel, in either a vertical or a horizontal position.



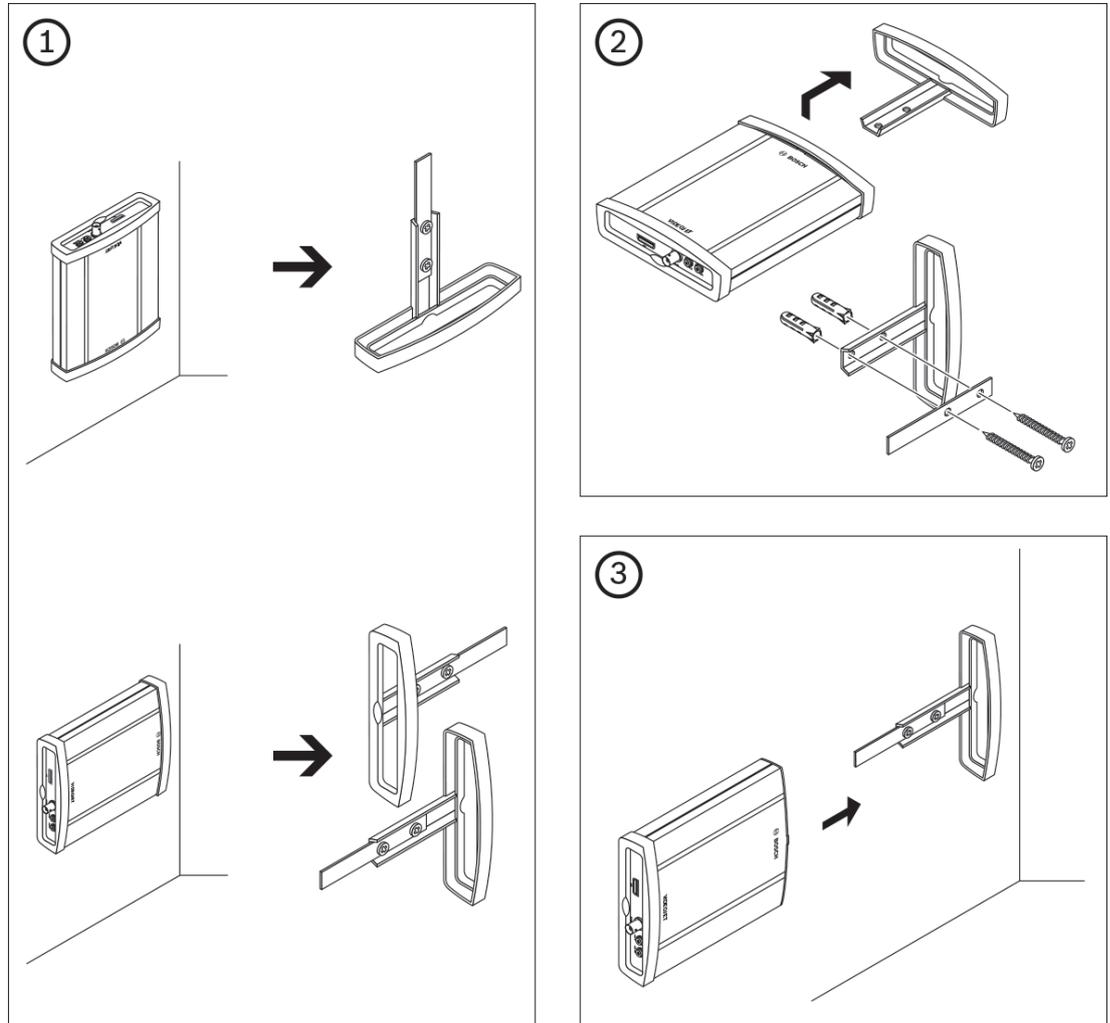
Caution!

The mounting location must be able to reliably hold the unit. The load-bearing capacity must be adequate for four times the weight of the unit.

If mounting the unit in a vertical position, you will need to use the lower plastic frame and then place the unit onto the frame from above. If mounting the unit in a horizontal position, you can use either of the two frames.

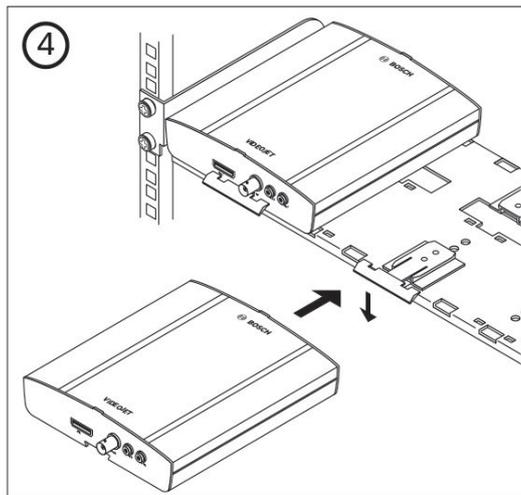
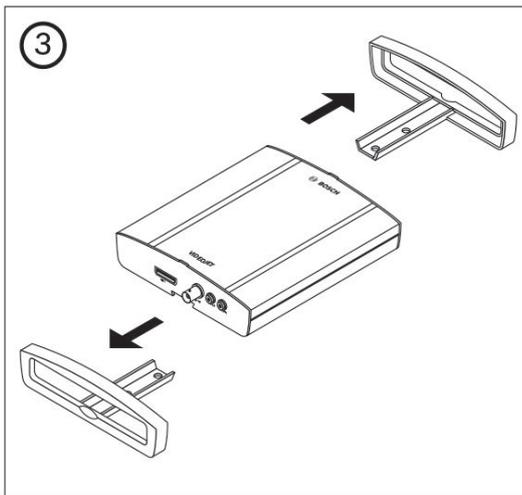
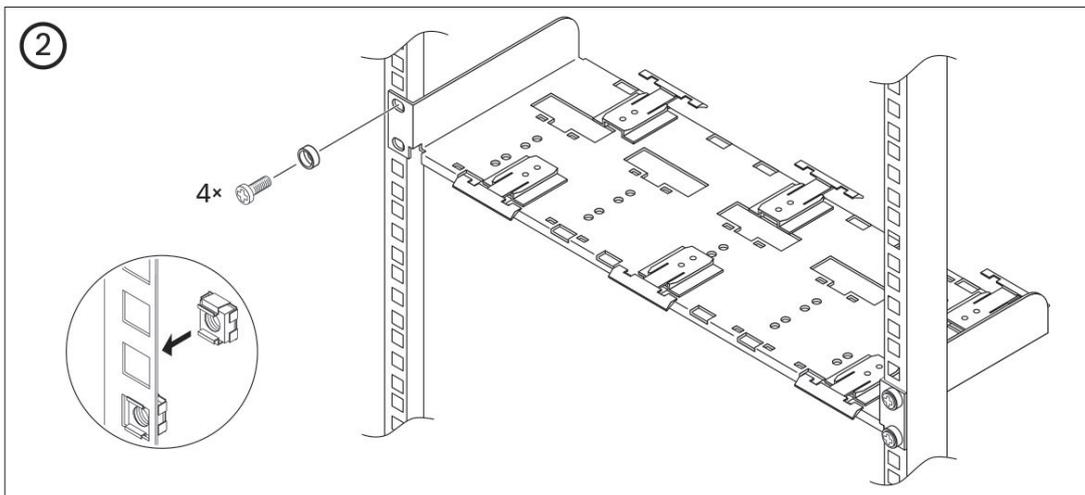
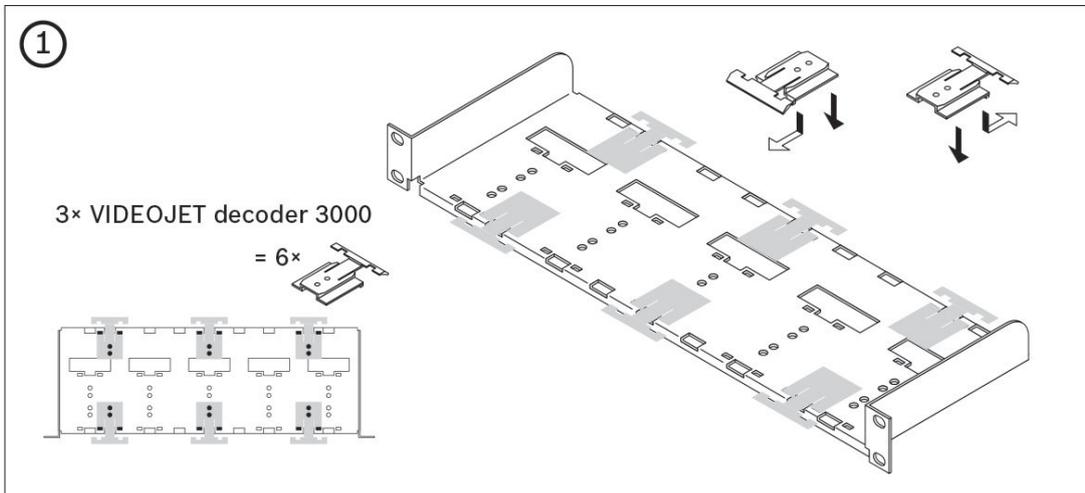
1. Lift the plastic frame on one side of the housing and carefully remove it from the unit.
2. Screw the plastic frame in the required position together with the wall-mounting panel.

3. Check that the plastic frame is secure.
4. Place the unit on the wall-mounting panel, with the panel positioned between the housing and the second plastic frame.
5. Slide the unit into the plastic frame until you feel it lock securely into place.
6. Finally, check that the unit is securely attached in the installation location.



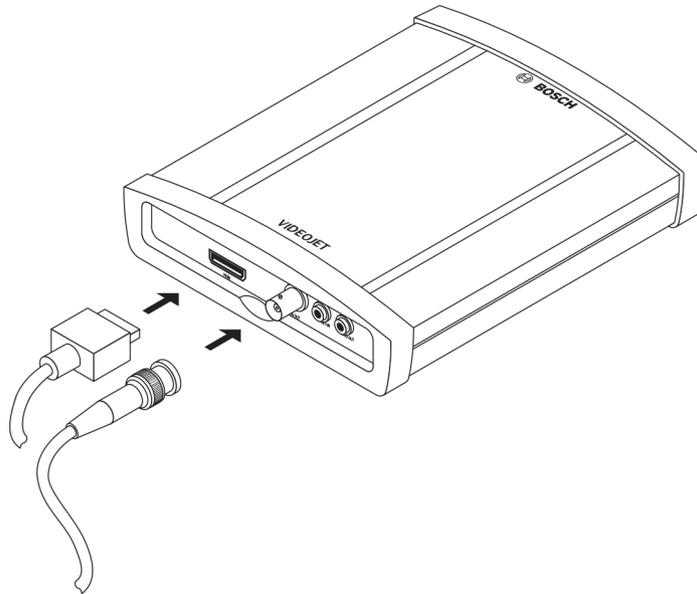
4.3 Installing in a switch cabinet

1. Install the required number of fixing plates, two for each unit.
2. Prepare the switch cabinet in such a manner that you are easily able to insert the rack mount frame directly at the installation point.
3. Place the cage nuts in the corresponding drillings or spaces in the switch cabinet frame.
4. Lift the empty rack mount frame into the switch cabinet frame and insert the fastening screws together with the washers.
5. Tighten the screws one after the other and then check once more that all the screws are tight.
6. Remove the plastic frames from both sides of each unit to be installed.
7. Slide each unit onto the corresponding fixing plates until you feel it lock securely into place.



5 Connection

5.1 Connecting monitors



You must connect a suitable monitor to the decoder. The unit provides two monitor outputs. Simultaneous use of both outputs is possible once you have set the video standard to **PAL** or **NTSC**.



Notice!

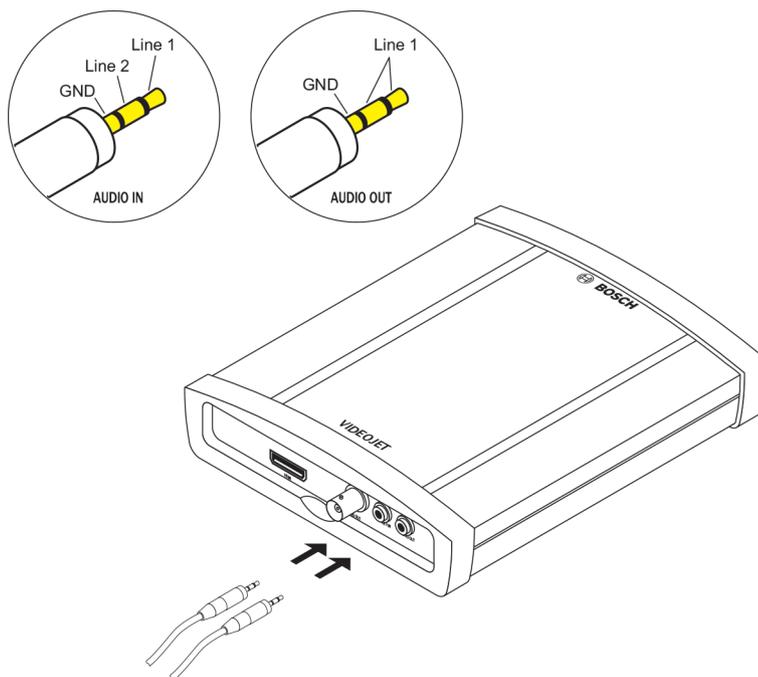
The default setting for the video standard is **PAL**. Display may not work properly if you connect other than PAL monitors without adapting the corresponding setting.

Make sure that the cables used do not exceed the maximum length of 30 m (98 ft).

1. Connect an analog video monitor (PAL/NTSC) to the BNC socket **VIDEO OUT** using a video cable (75 ohm, BNC plug).
2. Connect an HDMI-compatible computer monitor to the **HDMI** socket using an HDMI cable.
Note: No audio is supported via the HDMI connection. Use the audio ports if you need audio transmission.

Using an HDMI-DVI adapter, you can also connect a DVI monitor via the **HDMI** socket.

5.2 Connecting audio



The unit has two audio ports for audio line signals. The audio signals are transmitted two-way and in sync with the video signals. The following specifications should be complied with in all cases.

2 × audio in:	Impedance 9 kohm typ., 5.5 V _{p-p} max. input voltage
1 × line out:	3.0 V _{p-p} typ. output voltage at 10 kohm impedance

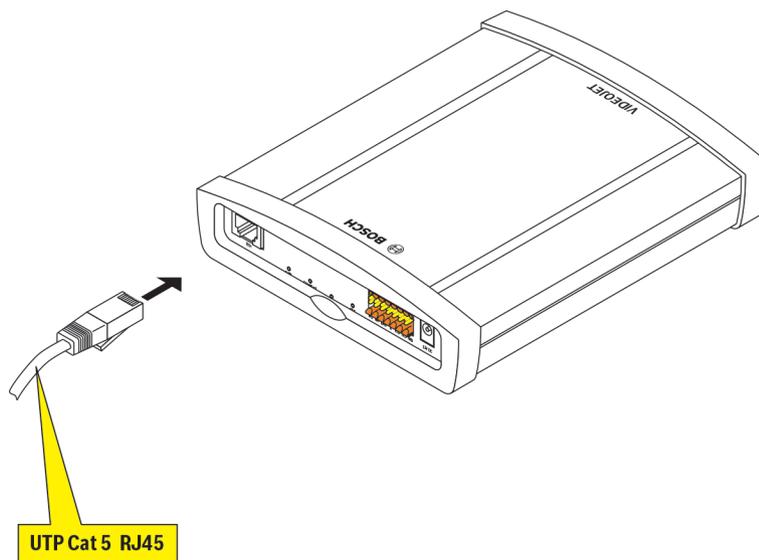
The stereo plug must be connected as follows:

Contact	AUDIO IN	AUDIO OUT
Tip	Channel 1	Channel 1
Middle ring	Channel 2	—
Lower ring	Ground	Ground

1. Connect an audio source to the **AUDIO IN** socket with a 3.5 mm (1/8 in) stereo plug.
2. Connect an audio receiver with line-in connection to the **AUDIO OUT** socket with a 3.5 mm (1/8 in) stereo plug.

Note that the audio function is not activated by default. To use audio connections activate the corresponding setting when configuring the unit.

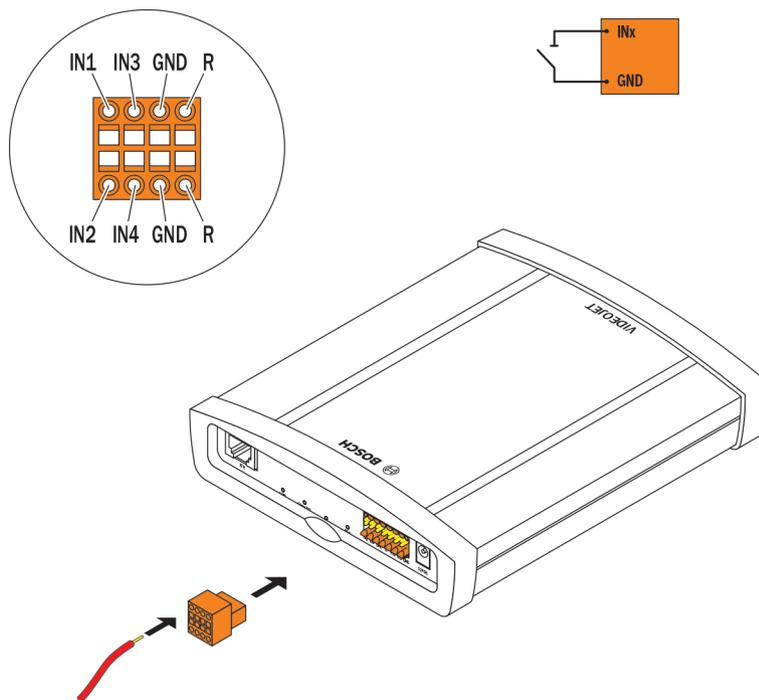
5.3 Establishing the network connection



You can connect the unit to a 10/100 Base-T network using a standard UTP category 5 cable with RJ45 plugs.

- ▶ Connect the unit to the network via the **ETH** socket.

5.4 Connecting alarm inputs and relay output



Alarm inputs

The unit has 4 alarm inputs on the terminal block. The alarm inputs are used to connect to external alarm devices such as door contacts or sensors. With the appropriate configuration, an alarm sensor can automatically connect the unit to a remote location, for example. A zero potential closing contact or switch can be used as the actuator. If possible, use a bounce-free contact system as the actuator.

**Caution!**

Please observe the labeling on the unit.

1. Connect the lines to the appropriate terminals on the terminal block (**IN1** to **IN4**) and check that the connections are secure.
2. Connect each alarm input to a ground contact (**GND**).

Relay output

The unit has one relay output for switching external units such as lamps or alarm sirens. You can operate the relay output manually while there is an active connection to the unit. The output can also be configured to automatically activate sirens or other alarm units in response to an alarm signal. The relay output is also located on the terminal block.

**Caution!**

Please observe the labeling on the unit.

A maximum load of 30 V_{p-p} (SELV) and 200 mA may be applied to the relay contacts.

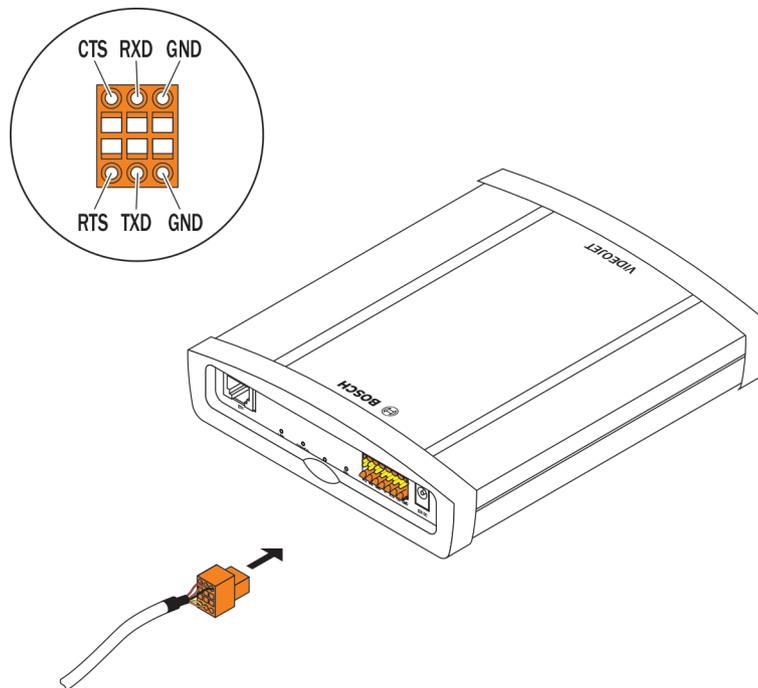
1. Connect the lines to the appropriate terminals **R** on the terminal block and check that the connections are secure.
2. Connect the terminal block to the socket on the unit observing the labeling.

See also

– *Terminal block, page 25*

5.5

Creating a serial connection



The bidirectional data interface is used to control units connected to the decoder, such as a control panel for a dome cameras with motorized lens. The connection supports the RS-232, RS-422, and RS-485 transmission standards. A video connection is necessary to transmit transparent data.

The serial interface is also located on the terminal block.

The range of controllable equipment is expanding constantly. The manufacturers of the relevant equipment provide specific information on installation and control. Please take note of the appropriate documentation when installing and operating the peripheral to be controlled. The documentation contains important safety instructions and information about permitted uses.

**Caution!**

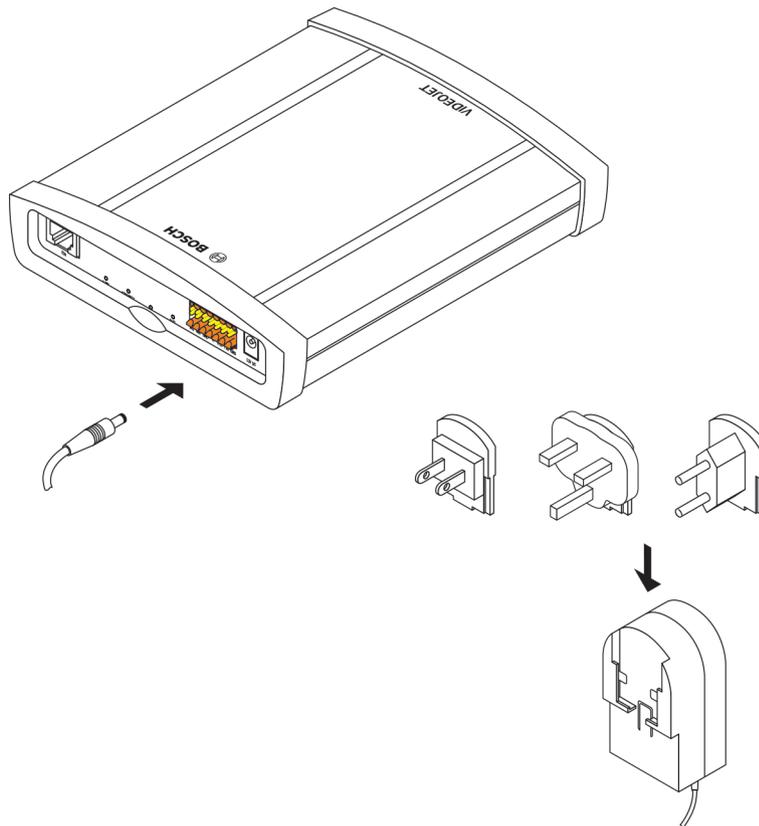
Please observe the labeling on the unit.

1. If you require a serial connection to the unit, connect the relevant cables to the terminal block and check that the connections are secure.
2. Connect the terminal block to the socket on the unit observing the labeling.

See also

– *Terminal block, page 25*

5.6 Connecting the power supply



VIDEOJET decoder 3000 comes with a plug-in power supply unit with three primary adapters. It does not have a power switch. The unit is ready for operation as soon as it is connected to the mains.

**Caution!**

Make sure to use the power supply unit provided only with the correct primary adapter for your power outlet or use another power supply unit with UL approval and a power output according to LPS or NEC Class 2.

Where necessary, use suitable equipment to ensure that the power supply is free from interference such as voltage surges, spikes or voltage drops.

Do not connect the decoder to the power supply until all other connections have been made.

1. Connect the power supply unit to the **12V DC** socket.
2. Ensure that the correct primary adapter is attached to the power supply unit and that a suitable power outlet is available.
3. Plug the power supply unit into the grounded power outlet. The unit is ready for use as soon as the **CONNECT** LED changes from a red light, indicating the start-up procedure, to a green light.

Provided the network connection has been correctly made, the green **LINK** LED also lights up. The flashing green **CONNECT** LED signals that data packets are being transmitted via the network.

See also

- *LEDs, page 24*

6 Configuration

6.1 Setup

Before you can operate the unit within your network, it must have a valid IP address for your network and a compatible subnet mask.



Notice!

As a default DHCP is enabled in the unit's network settings.

With an active DHCP server in the network you must know the IP address assigned by the DHCP server to operate the unit.

The following default address is preset at the factory: 192.168.0.1

The setup procedure is carried out via our Video Client software or other management systems. All information regarding the configuration can be found in the relevant documentation of the video management system in use.

6.2 Setup using Bosch Video Client

For the current version of our Video Client management software, access your Bosch product catalog on the Internet. This program allows you to implement and set up the unit in the network quickly and conveniently.

Installing the program

1. Download Video Client from the Bosch product catalog on the Internet.
2. Unzip the file.
3. Double-click the installer file.
4. Follow the instructions on the screen to complete the installation.

Configuring the unit

You can start Video Client immediately after installation.



1. Double-click the  icon on the desktop to start the program. Alternatively, start the application via the **Start** button and the **Programs** menu (path: Start/Programs/Bosch Video Client/Bosch Video Client).
2. When the program is started for the first time, a wizard opens to help you detect and configure devices on the network.
3. If the wizard does not start automatically, click  to open the Configuration Manager application. Then, click **Configuration Wizard...** on the **Tools** menu.
4. Follow the instructions given in the **Configuration Wizard** window.



Additional parameters

You can check and set additional parameters with the assistance of the Configuration Manager application in Bosch Video Client. You can find detailed information on this in the documentation for these applications.

Note that the audio function is not activated by default. To use audio connections activate the corresponding setting when configuring the unit.

7 Troubleshooting

7.1 Contact

If you are unable to resolve a malfunction, please contact your supplier or systems integrator, or go directly to Bosch Security Systems Customer Service.

The following tables are intended to help you identify the causes of malfunctions and correct them where possible.

7.2 General malfunctions

Malfunction	Possible causes	Recommended solution
No image on the monitor.	Monitor error.	Connect local camera or other video source to the monitor and check the monitor function.
	Faulty cable connections.	Check all cables, plugs, contacts and connections.
	Monitor fault.	Connect another monitor to the unit or use another monitor connection.
	Incorrect configuration.	Check video standard settings to match the monitor.
No connection established, no image transmission.	The unit's configuration.	Check all configuration parameters.
	Faulty installation.	Check all cables, plugs, contacts and connections.
	Wrong IP address.	Check the IP addresses.
	Faulty data transmission within the LAN.	Check the data transmission with e.g. ping .
	The maximum number of connections has been reached.	Wait until there is a free connection and then call the sender again.
No audio transmission to remote station.	Hardware fault.	Check that all connected audio units are operating correctly.
	Faulty cable connections.	Check all cables, plugs, contacts and connections.
	Incorrect configuration.	Check audio parameters.
	The audio connection is already in use by another receiver.	Wait until the connection is free and then call the unit again.
The unit does not report an alarm.	Alarm source is not selected.	Check alarm source settings.

Malfunction	Possible causes	Recommended solution
	No alarm response specified.	Specify the desired alarm response, change the IP address, if necessary.
Control of cameras or other units is not possible.	The cable connection between the serial interface and the connected unit is not correct.	Check all cable connections and ensure all plugs are properly fitted.
	The interface parameters do not match those of the other unit connected.	Make sure that the settings of all units involved are compatible.
The unit is not operational after a firmware upload.	Power failure during programming by firmware file.	Have the unit checked by Customer Service and replace it, if necessary.
	Incorrect firmware file.	Enter the IP address of the unit followed by /main.htm in your Web browser and repeat the upload.
Placeholder with a red cross instead of the ActiveX components.	JVM not installed on your computer or not activated.	Install Oracle JVM from the Bosch product catalog on the Internet.
Web browser contains empty fields.	Active proxy server in network.	Create a rule in the local computer's proxy settings to exclude local IP addresses.
If a sender is connected to the decoder, the first connection remains.	Auto-connect configured.	Deactivate auto-connect.

7.3

LEDs

The unit has LEDs on its rear panel that show the operating status and can give indications of possible malfunctions:

LINK LED

Lights up green: Network connection established.

CONNECT LED

Does not light up: The unit is switched off.

Lights up green: The unit is switched on and startup completed.

Lights up red: Startup in progress.

Flashes green: Data packet transmission via network.

Flashes red: The unit is faulty, for example following failed firmware upload.

DISPLAY LED

Flashes green: Both analog and digital video can be connected.

Lights up green: Only digital video available.

7.4 Processor load

If the unit is accessed via the Web browser, you will see the processor load indicator bar in the top right of the window next to the information icon .



You can obtain additional information to help you when troubleshooting or fine tuning the unit. The values indicate the proportions of the individual functions on the coder load, shown as percentages.

- ▶ Move the cursor over the graphic indicator. Some additional numerical values are also displayed.

7.5 Network connections



You can display information about the network connection. To do this, move the cursor over .

- Link Ethernet link type
- UL Uplink, speed of the outgoing data traffic
- DL Downlink, speed of the incoming data traffic

7.6 Terminal block

The terminal block has several contacts for:

- Serial data transmission
- 4 alarm inputs
- 1 relay output

Pin assignment serial interface

Options for using the serial interface include transferring transparent data, controlling connected units or operating the unit with a terminal program.

The serial interface supports the RS-232, RS-422 and RS-485 transmission standards. The mode used depends on the current configuration.

The pin assignment of the serial interface depends on the interface mode used:

Contact	RS-232 mode	RS-422 mode	RS-485 mode
CTS	—	RxD- (receive data minus)	—
TXD	TxD (transmit data)	TxD- (transmit data minus)	Data-
RTS	—	TxD+ (transmit data plus)	Data+
RXD	RxD (receive data)	RxD+ (receive data plus)	—
GND	GND (ground)	—	—

Pin assignment I/O

Contact	Function
IN1	Input alarm 1
IN2	Input alarm 2
IN3	Input alarm 3
IN4	Input alarm 4
GND	Ground
R	Relay output

Connect each alarm input to a ground contact (**GND**).

7.7**Copyrights**

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Fonts

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Software

This software is based in part on the work of the Independent JPEG Group.

8 Maintenance

8.1 Updates

Firmware updates are carried out via our Video Client software or other management systems in use. Please refer to the relevant documentation.

8.2 Factory reset

You can use the factory reset button to restore the unit to its original settings. Any changes to the settings are overwritten by the factory defaults. A reset may be necessary, for example, if the unit has invalid settings that prevent it from functioning as desired.

1. Using a pointed object, press the factory reset button located on the rear panel until the **CONNECT** LED flashes red. All settings will revert to their defaults.
2. The unit is ready for use as soon as the **CONNECT** LED lights up green.
 - ✓ The unit can now only be addressed via the factory default IP 192.168.0.1: reconfigure it to your needs.

8.3 Repairs

- Never open the housing of the unit. The unit does not contain any user-serviceable parts.
- Never open the housing of the power supply unit. The power supply unit does not contain any user-serviceable parts.
- Ensure that all maintenance or repair work is carried out only by qualified personnel (electrical engineers or network technology specialists). In case of doubt, contact your dealer's technical service center.

9 Decommissioning

9.1 Transfer

VIDEOJET decoder 3000 should only be passed on together with this installation manual.

9.2 Disposal

Your Bosch 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.

In the European Union, there are separate collection systems for used electrical and electronic products. Please dispose of this equipment at your local community waste collection/recycling center.

10 Technical data

10.1 Electrical

Input voltage	12 V DC
Input current	0.75 A
Power consumption	9 W

10.2 Mechanical

Dimensions (H × W × D)	38 × 146 × 178 mm (1.5 × 5.7 × 7.0 in), without brackets including BNC sockets
Weight	Approx. 0.6 kg (1.3 lb)
Video	1 × BNC socket, 75 ohm, terminated Analog composite, 1 V _{p-p} , NTSC or PAL 1 × HDMI Type A socket, digital
Audio	2 × 3.5 mm (1/8 in) stereo socket (2 × mono line in; 1 × mono line out)
Signal line in	9 kohm typical, 5.5 V _{p-p} max
Signal line out	3.0 V _{p-p} at 10 kohm typical
Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45
COM port	1 × RS-232/RS-422/RS-485, bidirectional, push-in terminal
Alarm	4 × input, push-in terminal (non-isolated closing contact), activation resistance 10 ohm max
Relay	1 × output, push-in terminal 30 V _{p-p} (SELV), 200 mA
Display	3 × LED (LINK, CONNECT, DISPLAY) on the rear panel

10.3 Environmental conditions

VIDEOJET decoder 3000

Operating temperature	0 °C to +50 °C (+32 °F to +122 °F)
Storage temperature	0 °C to +50 °C (+32 °F to +122 °F)
Relative humidity	0 to 90% atmospheric humidity, non-condensing
Thermal value	31 BTU/h max

Power supply unit

Operating temperature	0 °C to +40 °C (+32 °F to +104 °F)
Storage temperature	0 °C to +40 °C (+32 °F to +104 °F)
Relative humidity	20 to 80% atmospheric humidity, non-condensing

10.4

Standards

Video standards	PAL, NTSC, HDMI
Video coding protocols	H.264 High Profile, H.264 Main Profile, H.264 Baseline Profile (ISO/IEC 14496-10) M-JPEG, JPEG
Video data rates	9.6 kbps to 10 Mbps per channel
Image resolutions	
PAL/NTSC	4CIF (704 × 576/480)
HDMI	Max. 1080p (1920 × 1080)
GOP structure	I, IP
Total delay	300 ms max
Frame rate	
PAL/NTSC	1 to 25/30 ips
HDMI	60 ips max
Audio standards	G.711, L16
Audio frequency rate	G.711: 300 Hz to 3.4 kHz L16: 300 Hz to 6.4 kHz
Audio sampling rate	G.711: 8 kHz L16: 16 kHz
Audio data rate	G.711: 80 kbps L16: 640 kbps
Signal-to-noise ratio	> 50 dB
Network protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, Telnet, ARP, DHCP, SNMP, SNMP (V1, MIB-II), 802.1x, DNS, DNSv6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, digest authentication
Encryption	TLS 1.0, SSL, DES, 3DES, AES

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