Praesideo Release 4.43 | Release Notes

en │Release Notes

BOSCH

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1 Introduction

1.1 History of the Release Notes 4.4x

17-04-2019	Initial version at release 4.40
11-09-2019	Update of section 4.1
04-12-2019	Section 3.2 added
10-07-2020	Update at release 4.42
18-08-2020	Update of section 4.2
20-04-2021	Update at release 4.43

1.2 Scope

These release notes give an overview of new functionality in the 4.4x Praesideo software releases. It also describes the known limitations. Whenever a workaround for one of these problems is available it will be provided in this document.

1.3 Definitions, acronyms and abbreviations

AEX	Analogue Audio Expander
AVC	Automatic Volume Control
BAM	Basic Amplifier
BGM	Back Ground Music
CF	Compact Flash (Card)
CIN	CobraNet Interface
CST	Call Station
ESD	Electrostatic Discharge
FIN	Fiber Interface
FTA	File Transfer Application
HW	Hardware
LCD	Liquid Crystal Display
LED	Light Emitting Diode
MCI	Multi-channel Interface
MTBF	Mean Time Between Failures
NCO	Network Controller
NSP	Network Splitter
OI	Open Interface (of NCO)
OMI	OMNEO interface
PAM	Power Amplifier
PCB	Printed Circuit Board
PDF	Portable Document Format
PTT	Press-to-talk
SOLAS	Safety of Life at Sea
SW	Software
TCP/IP	Transmission Control Protocol / Internet Protocol
VPN	Virtual Private Network

2 Hardware/Software information

2.1 Supported platforms

The Praesideo software requires Microsoft Windows 10 as operating systems.
Using the Praesideo software on older Windows versions may work, but is not guaranteed or tested.

2.2 Hardware requirements

The following hardware is required to install the Praesideo software on your PC
- Physical memory: 1 GB or more
- Free disk space: 100 MB or more
- Network interface: 100 Mbps or faster

2.3 Software requirements

The following software is required for running the Configuration Software (CS).
- Internet browser, e.g.
  - Microsoft Internet Explorer 7.0 or higher
  - Firefox 3.0 or higher
- Adobe SVG Viewer 3.0
  - Available in installation package.
  - Not required for Firefox 3.0 or higher or Internet Explorer 11 or higher, as they have built-in SVG-support.

3　Hardware/software compatibility

3.1　SW support of Praesideo units

The following compatibility table shows for all the released software versions of Praesideo which Praesideo hardware components are supported. In general new software versions are backwards compatible and support previous version hardware products, except for previous versions of the network controller.

Software version	Network controller	Amplifiers	Call stations	Keypads	Call stacker	Audio expander	CobraNet interface	OMNEO interface	Line/Lsp supervision	PC call station
1.00 – 1.30	LBB4401/00	LBB4421/00 LBB4422/00 LBB4424/00	LBB4430/00 LBB4433/00	LBB4432/00 LBB4434/00		LBB4402/00			LBB4442/00	
2.00		+								
2.10		LBB4428/00					LBB4404/00			
2.20		+								
2.30 – 2.36		LBB4421/10 LBB4422/10 LBB4424/10 PRS-1P500** PRS-2P250** PRS-4P125**	+ LBB4437/00 LBB4438/00 LBB4439/00						+ LBB4440/00 LBB4441/00 LBB4443/00	
3.0x	PRS-NCO-B***	+ PRS-16MCI PRS-1B500 PRS-2B250								
3.10		+ PRS-4B125 PRS-8B060	PRS-CSI PRS-CSR PRS-CSRK	+ PRS-CSNKP	PRS-CRF					PRS-SWCS PRS-SWCSL PRS-CSC
3.20 – 3.64*										+ PRS-TIC
4.00	PRS-NCO3									
4.10						+ PRS-4AEX4*				
4.30 – 4.43			+ PRS-CSM PRS-CSRM	+ PRS-CSKPM				PRS-4OMI4		

*　　Software versions 3.61 – 3.64 also include support for the PRS-4AEX4.
**　 PRS-1P500, PRS-2P250 and PRS-4P125 with HW release 5.0 or higher need software version 3.40 or higher.
***　PRS-NCO-B with HW release 21/01 or higher needs software version 3.50 or higher.

Some examples show how to read this table:
- The LBB4401/00 network controller can be used with software version 1.00 – 2.36, the PRS-NCO-B with software versions 3.00 – 3.63, the PRS-NCO3 with versions 4.00 and higher.
- The audio expander LBB4402/00 works with all software versions from 1.00 onwards. Its successor, the PRS-4AEX4, needs version 4.10 or higher, although also version 3.61 – 3.63 will do. These later software versions continue to support the older LBB4402/00.
- The PRS-NCO-B, the PRS-16MCI and the basic amplifiers PRS-1B500 and PRS-2B250 only work with software version 3.00 or higher. The other basic amplifiers PRS-4B125 and PRS-8B060 even need version 3.10 or higher.
- With version 3.10 also support for the PRS-CSI, PRS-CSR, PRS-CSRK, PRS-CSNKP, PRS-CRF, PRS-SWCS, PRS-SWCSL and PRS-CSC was added.
- To be able to use the PRS-4OMI4, a PRS-NCO3 is needed with at least version 4.30.

3.2 Extension of the EN 54-16 certified product range

After recertification, the following products have been added to the Certificate of Constancy of Performance, number 0560-CPR-10219002. They can now be used as part of an EN 54-16 compliant Praesideo system.

LBB9081/00 Handheld emergency microphone
This microphone is intended for use with the PRS-CSM and PRS-CSRM call station modules. It has a built-in press-to-talk switch to activate a call. The microphone connections and the press-to-talk switch connections are both supervised by the call station module. The Praesideo Installation and User Instructions describe how this microphone must be connected to one of these call station modules.

PRA-ES8P2S Ethernet switch
This is a compact DIN-rail mounted Ethernet switch with eight Gigabit copper ports, supporting Power over Ethernet (PoE) and two Gigabit SFP combo ports. This Ethernet switch is an OEM switch, made for Bosch by Advantech for use in Bosch Public Address and Voice Alarm systems. It is a preconfigured version of the EKI-7710G-2CPI-AE switch, optimized for PRAESENSA, but it can also be used with Praesideo without changes to the default configuration. The PRA-ES8P2S is now certified for EN 54-16 in combination with Praesideo systems. The switch also has two SFP ports for long distance interconnections on glass fiber. This requires the use of the PRA-SFPLX or PRA-SFPSX fiber transceivers.

Functions
- Intended for PA/VA systems
  - Managed industrial Gigabit Ethernet switch with convection cooling and DIN-rail mounting, designed for long term continuous operation.
  - Redundant wide range DC power input.
  - Protected against overloads and short circuits.
  - Comes with pre-installed and pre-configured firmware for quick installation and optimum performance.
  - Certified for EN 54-16 in combination with Bosch Praesideo systems.
  - The switch can be used to connect one or more PRS-NCO3 network controllers to an Ethernet network, together with one or more PRS-4OMI4 OMNEO interfaces or LBB4404/00 CobraNet interfaces and one or more PCs for configuration, logging or PC call stations. In this way multiple Praesideo subsystems can be interconnected. Make sure that a PC call station is not the only fire alarm interface of the system. A PC may not be used for emergency functions in an EN54-16 compliant system.
- Advanced features
  - Managed switch, configurable via web browser, with eight Gigabit copper ports with PoE and two SFP combo ports for PRA-SFPLX single mode and/or PRA-SFPSX multimode fiber transceiver modules.
  - Deactivated Energy Efficient Ethernet (EEE) mode on all ports to avoid problems in combination with audio clock synchronization (IEEE 1588) in combination with OMNEO, Dante and AES67.
  - Wire speed switching in hardware to avoid variable latency that may cause audio streaming problems.
  - Full Quality of Service (QoS) through differentiated services (DiffServ) on all ports, compatible with OMNEO Docent diagnostic tool.
  - Support for Rapid Spanning Tree Protocol (RSTP) according to IEEE 802.1d to create redundant loops.
  - Fault output relay for fault reporting into a PA/VA system.
  - Large MAC-address table (8k-addresses) for large system broadcasting.
  - Support for Simple Network Management Protocol (SNMP) and Link Layer Discovery Protocol (LLDP).
  - All copper ports provide PoE (IEEE 802.3 af/at).
- Fault tolerance
  - All ports support RSTP for loop connections to adjacent devices with recovery from a broken link.
  - Dual redundant 24 to 48 V DC-inputs.

Power supply connection
This Ethernet switch has dual redundant 24 to 48 V DC-inputs. In case no battery backup is required, it can be powered from a PRA-PSM24 or PRA-PSM48 power supply. In case the switch is used in a Voice Alarm system, compliant to EN54-16, the switch must be powered from an EN54-4 certified power supply like the PRS-48CH12.

Fault relay connection
The switch has a fault relay output to report faults. This relay can be connected to one of the control inputs of Praesideo, configured as 'External fault input', to transfer switch faults to the Praesideo network controller.

Installation
Mounting instructions are packed with the device.

Security
For security reasons, change the default password of the switch. Access the switch via its preconfigured IP-address, using a browser to setup a secure connection to https://169.254.255.1.
The PRA-ES8P2S is factory configured with the following default credentials:
> User: Bosch
> Password: mLqAMhQ0GU5NGUK

Now the password can be changed. Safe the password for future access.

Open Source Software
Open Source Software license agreements are accessible as download from the device itself. Access the device via https://169.254.255.1. No user credentials are needed for this.

PRA-SFPLX and PRA-SFPSX Fiber transceivers
The PRA-SFPSX and PRA-SFPLX are compact SFP fiber transceivers. The PRA-SFPSX is for use with multi-mode fibers, covering distances up to 550 m. The PRA-SFPLX is for use with single mode fibers, covering distances up to 10 km. These are OEM transceivers, made for Bosch by Advantech for use in Bosch Public Address and Voice Alarm systems. An SFP transceiver locks into the SFP socket of the PRAESENSA multifunction power supply and Ethernet switch. It is compliant with IEEE 802.3z Gigabit Ethernet standards for maximum performance, reliability and flexibility. Both transceivers are certified for EN 54-16 in combination with Praesideo systems.

Functions
- Features a duplex LC connector; one connection for transmit and the other for receive.
- The PRA-SFPSX supports multi-mode fiber for distances up to 550 m.
- The PRA-SFPLX supports single-mode fiber for distances up to 10 km.
- Wide temperature range for maximum reliability.

Application
Fiber transceivers are especially beneficial in environments where high levels of electromagnetic interference (EMI) is a common phenomenon, like industrial plants. This interference can cause data corruption over copper-based Ethernet links. However, data transmitted over fiber optic cable is completely immune to this type of noise, ensuring optimal data transmission across the plant floor. For short distance transmissions multi-mode fibers can be used using light with a wavelength of 850 nm, while single-mode fibers typically support distances up to 10 km, using light with a wavelength of 1310 nm. Some third party dedicated SFP fiber transceivers can even cover distances up to 40 km, using light with a wavelength of 1550 nm for lowest attenuation of light. However, for EN54-16 compliant PRAESENSA systems only the PRA-SFPLX and PRA-SFPSX are certified for use. Make sure to use the correct combination of fiber and connector for both sides of the cable, matching the fiber transceivers. A connection between a multi-mode fiber transceiver on one end and a single-mode fiber transceiver on the other end will not work, because the wavelength of the light that is produced by the transmitter does not match the wavelength of the light the receiver is sensitive to.
Fiber optic cables are exceptionally vulnerable. Dust, dirt or tampering might cause physical damage. To avoid physical damage, avoid extreme bends in fiber optic cables when storing them and put dust-caps on the cable ends after disconnection.

Caution!
Risk of eye injury. When inspecting a connector, ensure that light sources are off. The light source in fiber optic cables may cause eye injury. SX and LX fiber connections use invisible IR light.

Installation of fiber transceiver
The fiber transceiver fits and locks into the SFP socket of the PRA-ES8P2S. The transceiver receives power from the host device.
To install an SFP transceiver, follow the procedure below:
1. An SFP transceiver can be damaged by static electricity. Be sure to observe all standard electrostatic discharge (ESD) precautions, such as wearing an antistatic wrist strap, to avoid damaging the transceiver.
2. Remove the transceiver from its packaging.
3. Position the SFP transceiver with the label facing up. The transceiver can be hot-swapped; there is no need to power-off the host device to install a transceiver.
4. With the handle on the transceiver oriented towards the host device, slide the transceiver into the SFP socket and push until it clicks into place.
5. Verify that the handle on the transceiver is in the position that secures the transceiver and prevents it from being dislodged from the socket.

Installation of fiber cable
To insert a fiber cable with LC connector, follow the procedure below:
1. Verify that the type of cable is appropriate for the SFP transceiver that is installed.
2. The SFP transceiver has two connectors. Each connector connects to a separate fiber strand. One is for receiving data and the other is for transmitting data. When connecting a fiber optic cable to the SFP module, be sure that the receive fiber connector is connected to the transmitter connector on the remote end-node device, and the transmit fiber connector is connected to the receiver connector on the remote node.
3. Remove the dust plugs from the LC fiber cable and save the dust plugs for future use. Then inspect and clean the cable end-face.
4. Remove the dust plugs from the SFP transceiver optical bores. Immediately attach the LC fiber cable to the SFP transceiver.

4   New functions in this release and previous releases

4.1   Added functionality Release 4.43

- A bug fix has been implemented to solve the issue that in a large system a failing device in some situations could cause temporary disconnection of other devices (with automatic return).
- The latest version 4.3.2.0 of the OPC server has been added again to the distribution package. It was erroneously replaced by an older version in release 4.42.

4.2   Added functionality Release 4.42

- Fixes have been applied to the following security vulnerabilities of the configuration web interface. These changes only affect the web interface which is only used during configuration of the system. Apart from that, no functional changes have been implemented in this release.
  - o In the web configuration of the network controller PRS-NCO3 a Cross-Site Request Forgery (CSRF) vulnerability has been found. This has been solved by adding verification data to the web pages. Additionally, the time-out period of a configuration session has been decreased to limit the window of opportunity.
  - o In the web configuration of the Network Controller a Cross-site Scripting (XSS) vulnerability has been found. This has been solved by sanitizing the data that is received from the web pages better to avoid that script data is fed back to the browser.
  - o Additional HTTP headers are added to the web pages giving instructions to the browser in helping to avoid cross-site attacks.

4.3   Added functionality Release 4.41

- For compliance with the 'California connected devices security act' (California Senate Bill 327 chapter 886), the insecure OCA communication protocol on the Ethernet side of the OMNEO interface PRS-4OMI4 has been disabled. As from this release only secure OCA communication and Dante based communication is allowed.
  This means that OMNEO Control cannot be used anymore to configure the audio connections of the PRS-4OMI4, instead Dante Controller must be used and a PIN must be set on the configuration.
- The new firmware for the PRS-4OMI4, that is introduced with this Praesideo release version 4.41, includes new Dante firmware (>4.0) to deliver critical support for Dante Domain Manager (DDM) to allow for audio routing between subnets.

- A new version of the FWUT is delivered, V6.50, to change the firmware of the device to select between support for RSTP or not. This is done via uploading the appropriate firmware file.
  The factory installed firmware file has RSTP disabled. Also in the Firmware Upload Tool (FWUT) only a secure connection can be used; mark the checkbox "Use secure connection" and username "default".
- To install the new FWUT, any previous version of the FWUT must be uninstalled from the configuration PC.
- An older FWUT V5.10 is also delivered with this release. This version of the FWUT can be used to restore an older version of the PRS-4OMI4 firmware. Uninstall the previously installed FWUT first.
  Again select "Use secure connection", otherwise the PRS-4OMI4 is not shown.

4.4   Added functionality Release 4.40

- An automatic restart of a call, after it was overruled by a higher priority call, can now be configured in its call macro.
  Previously, only an emergency call without live speech would be restarted automatically. A typical use case is a call with a repeating alarm tone. After being overruled by a live speech announcement, this alarm tone is restarted automatically after the live speech call has finished.
  Now, the restart function is selectable in the call macro, so also business calls and calls with live speech can be restarted automatically.
  After an upgrade to this release, the default setting of this function for existing call macros will correspond to their previous behavior, i.e. the restart function is activated for calls with an emergency priority and no live speech. It is important that this behavior for calls with emergency priority is preserved for systems that are compliant to EN54-16 or ISO 7240-16.
- It is now possible to remotely disable a call station, e.g. to prevent unauthorized access for security reasons. When a call station is disabled, all running calls from that call station will be aborted, irrespective of their priorities.
  A new action 'Disable call station(s)' can be configured for a control input or a keypad key. It is possible to disable multiple call stations simultaneously via one input. Also, the same call station can be disabled from multiple other call stations or control inputs; in that case all disablement actions must be cancelled before such a call station is enabled again.
  Disablement is based on the selected device name only, ignoring priority levels.
  The yellow LED of a keypad key, configured for this function, will light up when this function is active.

The default input behavior is toggle, but it can be set to momentary, e.g. to activate this function by a mechanical toggle switch that is connected to a control input.
Disabling and enabling a call station is logged as general event.

- A new action 'Abort calls and cancel selection' is available, which is an extension to the 'Cancel selection' action. In this case not only selections are cancelled, but also all running calls from PTT, Start and Call activation keys on the same call station are aborted, irrespective of their priorities. This action is only available for keypad keys, not for control inputs. Its behavior is single shot (i.e. press once to activate).

- The LBB4440/04 has been introduced, as a C-item and only in Europe. This product is a variant of the LBB4440/00 supervision master board and may replace it when long multi-wire or shielded cables are used for the loudspeaker connections. These types of cabling may result in a delayed fault reporting of wire cuts due to capacitive crosstalk and the LBB4440/04 is designed to compensate for that by skipping some rechecks in order to keep the fault reporting within the mandatory 100 s limit. This happens at the expense of a higher risk of false faults. The LBB4440/00 and LBB4440/04 differ only in factory loaded firmware.

- The 50-meter long LBB4416/50 system cable was made end-of-life because its light attenuation in the fibers was too close to the power budget of the optical connection between a transmitter and the receiver at the other side. In some cases this resulted in unstable interconnections. It has been replaced by the 40 m long LBB4416/40. The maximum length between nodes coupled through the Praesideo hybrid cable is now set to 40 m.

- A bug fix has been implemented to report connection faults of a remote call station via the Open Interface.

- The Installation and User Instructions were not updated, Praesideo 4.3 instructions are still valid. The new functions are covered in these Release Notes.

4.5 Added functionality Release 4.37

- Using OMNEO Control, the OMNEO interface PRS-4OMI4 can now be used to link Praesideo subsystem across multiple Ethernet subnets. OMNEO Control is a SW configuration tool to manage audio connections in a single or multi-subnet environment. It offers similar functionality as Dante Controller, but without the single subnet restriction. When PRS-4OMI4 devices are used in different subnets, also an ARNI-E G2 is required in one of the subnets. It acts as a DHCP (Dynamic Host Configuration Protocol) server for that subnet, as DNS (Domain Name System) server and PTP (Precision Time Protocol) extender.

For further information on this topic, see the OMNEO Control user manual, the ARNI G2 technical manual and the Application Note PRS-4OMI4 installation.

- A firmware version update for the PRS-4OMI4 to support OMNEO Control.

4.6 Added functionality Release 4.36

- A bug fix has been implemented to solve an issue that appeared in systems using a PRS-16MCI multi-channel interface that is powered from the network controller via the network, instead of being powered (in the default way) from the connected basic amplifiers.
When these amplifiers are not switched on simultaneously with the network controller, but at a later moment, the possibility exists that the PRS-16MCI has entered a diagnostic mode, searching for the missing amplifier channels. When the amplifiers are then switched on later, it could happen that the original volume settings of the amplifier channels are not properly restored in the PRS-16MCI, resulting in loss of audio for the affected zones.
Systems using the PRS-NCO3 network controller and a PRS-16MCI, powered from the Praesideo network, where the possibility exists that the connected basic amplifiers are switched on independently, must be upgraded to release 4.36. Similar systems using the older PRS-NCO-B network controller must be upgraded to release 3.64.
Alternatively, the PRS-16MCI must be set to get its power supplied from the basic amplifiers (jumper setting). Then no software update is needed.

4.7 Added functionality Release 4.35

- For compliancy to the Chinese GB16806 standard it is now possible to configure outputs of the PRS-CSKPM Call Station Keypad Module for the new function *Mains power failure* or *Backup power failure* to show these faults explicitly via connected yellow LEDs on output 2. This will also work with normal LBB4432/00 keypads, but then the color of the built-in indicator is green.

- A bug fix has been implemented to solve a rare startup issue with the PRS-4OMI4.

- A mute function, specifically for PRS-1P500 and PRS-2P250 amplifiers with HW release 6.20, has been implemented that will mute the audio signal for 3 s when corrupted audio data is detected that could otherwise damage these amplifier models when they are unloaded or hardly loaded. This may happen during system startup, or when Praesideo units are connected and/or disconnected in a live network, or in marginally stable networks where the optical power margin of an interconnection between two Praesideo units is too low because of bad connectors, sharply bent fibers or a

too long interconnection cable. To avoid such brief audio interruptions it is important to check the network health after system installation with the diagnostic tools that are offered via the configuration web pages.

This mute function is not active (and not needed) on other amplifier models or on other HW release versions of these amplifiers.

Systems using PRS-1P500 or PRS-2P250 with HW release 6.20 should be upgraded to this Praesideo SW release 4.35 (or a later release).

4.8 Added functionality Release 4.34

- Praesideo now supports MS Windows 10.
- For compliancy to the Chinese GB16806 standard the behavior of the *Zone Status* action, mainly intended for the PRS-CSKPM Call Station Keypad Modules, has changed. For the *Zone Status* action the key/input itself is not used, only the associated indicators/outputs are used. They show the emergency status of a zone or zone group with a red LED and the fault status of a zone or zone group with a yellow LED. Now the zone fault indication will only blink for open circuit faults (i.e. for the following fault events: Amplifier loudspeaker line failure, Class-A switchover, Loudspeaker line failure). For all other zone related faults the indicator is steady on. In case of multiple simultaneous faults the steady on indication has priority. Fault events reported via the Open Interface remain the same as in previous releases.
- The PC Call Station Client can be set to operate in full screen mode (*Always on top*), so it cannot be closed or moved away from. However, it was still possible to leave the application by accessing the *Help* (F1) function of the PC Call Station Client. This unused *Help* (F1) function has been removed now.
  Windows 10 users also have to disable the option to close the PC Call Station Client via the *Alt+Tab* switcher screen in the Windows registry: create a new DWORD **AltTabSettings** with value **1** in *HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer*, then restart.

4.9 Added functionality Release 4.33

- An important bug fix has been implemented for the specific combination of a PRS-4P125 and/or the LBB4424/10 power amplifier with the LBB4440/00 supervision master board for line/loudspeaker supervision on channel 3 and/or channel 4 of that amplifier. This bug may cause interruption of the line/loudspeaker supervision on these channels when sudden amplifier load changes occur. Subsequent line/loudspeaker faults will then not be detected until the next restart of that amplifier.
  Systems using this combination of system components and a PRS-NCO3 network controller

must be upgraded to release 4.33.
Systems using this combination of system components and a PRS-NCO-B network controller must be upgraded to release 3.63.

4.10 Added functionality Release 4.32

- A bug fix has been implemented on determining the Praesideo cable length margin. This fix was erroneously announced earlier for release 4.30.
- An important bug fix has been implemented for the PRS-4OMI4, to solve the issue that in some cases no fault event is generated when the Ethernet connection to the device is lost. Systems on release 4.30 or 4.31, incorporating one or more PRS-4OMI4 devices should be upgraded to this release.
- The pop-up warning message for leaving a configuration webpage without submitting it first has been modified for consistent behavior with different browsers and/or browser versions. There is no OK button anymore in the message window; instead the user should press the Submit button on the page.

4.11 Added functionality Release 4.31

- Several vulnerability issues in the embedded web server of the network controller were addressed, improving the system security. This is especially important in case the notes regarding network security (see section 5.1 of these Release Notes) are not taken into account sufficiently, or even the internal network cannot be trusted completely.
- Login to the various Praesideo programs are now subject to rate limiting, which means that after a number of failed login attempts the response slows down to protect against brute-force system attacks.
- User passwords on the Praesideo user management configuration web pages are now hidden by stars and not legible anymore.
- A side effect of using a different core program for the file transfer application (FTA) is that the maximum length of the user name is limited to 7 characters, the password can be longer.

4.12 Added functionality Release 4.30

- Praesideo programs can now be used under Windows 8 and 8.1, with the exception of the PRS-TIC, that still needs Windows 7, due to its dependency on AsteriskWin.
  Support for Windows XP and Windows Vista has stopped. Praesideo may still work on older Windows versions, but it is not tested anymore on these platforms.
- This release supports the new OMNEO interface PRS-4OMI4, for transferring up to four audio channels from an OMNEO or Dante network to Praesideo and up to four audio channels from Praesideo to an OMNEO or Dante network. The

control part of OMNEO (called OCA) is not supported in this release.

- The maximum number of TCP/IP connections for the PRS-NCO3 has increased from 5 to 7.
- Possibility to configure the emergency reset button of the PC call station to abort running calls or not. This was already possible for control inputs or keypad keys.
- The port number for off-line configuration with FTA, using a local Praesideo web server, has changed from port 80 to 9402, to circumvent Windows access control for port 80, introduced with Windows 8.1. In case of conflicts, this port number is configurable via an FTA command line parameter.
- It is now possible to configure Start/Stop behavior for Virtual Control Inputs, next to the existing Call activation behavior. This allows zones to be added to or removed from existing active calls, instead of starting new calls. This is important as only four simultaneous calls are possible that contain a prerecorded message.
- In the logging viewer it is possible to hide faults with status 'Reset' to concentrate on the active faults.
- The accuracy of the Real Time Clock of the PRS-NCO3 has been improved.
- A new specific fault event 'Fan failure' has been introduced for the PRS-xPxxx power amplifiers, to indicate a non-spinning fan (UL-mode only). Formerly, this fault was presented as a general Overheat fault.
- Various bugs solved.

4.13 Added functionality Release 4.10

- This release supports the new Line Isolator System, by implementing a new fault event (Zone line fault input) that can be assigned to a control input.
- A new set of call station modules, PRS-CSM, PRS-CSRM and PRS-CSKPM, are introduced with this release. These units are described in the Installation and User Instructions of this release 4.10, although the support for these units already exists from SW release 3.52 onwards.
- Support for the audio expander PRS-4AEX4. Due to obsolescence of some internal parts of the audio expander LBB4402/00, this unit has been redesigned. This redesign requires specific firmware that is incorporated in this release for the PRS-NCO3.
To emphasize this difference the new version of the LBB4402/00 was renamed to PRS-4AEX4, according to the new product nomenclature. IMPORTANT: The PRS-4AEX4 can only operate in Praesideo systems running either SW release 3.61 or 4.1 or later. Systems running on an older release need to be upgraded. For backwards compatibility, SW release 3.61 and 4.1 support the PRS-4AEX4 as well as the previous LBB4402/00.

- A bug fix has been implemented to solve an issue with the PRS-NCO3, not supporting some types of Gigabit Ethernet Switches.
- A bug fix has been implemented to solve an issue with a false audio path supervision fault, generated by an acoustically overloaded call station.
- A bug fix has been implemented to solve an issue with the remote call station not recognizing the 16th keypad.
- A bug fix has been implemented to solve an issue with Class A loudspeaker loops connected to an MCI/BAM combination.

4.14 Added functionality Release 4.00

- Release 4.00 is the first software version for support of the third generation Praesideo network controller PRS-NCO3, the successor of the network controller PRS-NCO-B. The new PRS-NCO3 provides the same functionality as the PRS-NCO-B, but has a faster processor, more memory, a 24Vdc output to power indicators and an internal buzzer for fault/alarm notification.
- The PRS-NCO3 must be used with Praesideo software version 4.00 or higher. Do not downgrade the unit to an older software version! (The second generation Praesideo network controllers PRS-NCO-B can only be used with Praesideo software releases 3.00 up to version 3.6x, while the first generation Praesideo network controller LBB4401/00 can be used with Praesideo software releases up to version 2.36. Please contact your Bosch Sales Office to find a solution when it is absolutely necessary to use an old version of the Praesideo software.)
- Now the maximum call duration is shown in the Print Config tool.
- Function wise this version is almost identical to release 3.60.

4.15 Added functionality Release 3.61

- A bug fix has been implemented to solve an issue when two PRS-NCO-B network controllers are used in a redundant configuration. Previously at start up an NCO could generate a false positive redundant network ring fault.
- A bug fix has been implemented to solve an issue with a false audio path supervision fault, generated by an acoustically overloaded call station.
- A bug fix has been implemented to solve an issue with the remote call station not recognizing the 16th keypad.
- Support for the audio expander PRS-4AEX4. Due to obsolescence of some internal parts of the audio expander LBB4402/00, this unit has been redesigned. This redesign requires specific firmware that is incorporated in this release for the PRS-NCO-B, and in release 4.1 and onwards for the PRS-NCO3.
To emphasize this difference the new version of

the LBB4402/00 was renamed to PRS-4AEX4, according to the new product nomenclature.

- The Praesideo Installation and User Instructions version 3.6 are still valid for release 3.61, specifically the description of the LBB4402/00 audio expander is also valid for the PRS-4AEX4.

4.16 Added functionality Release 3.60

- Several extensions of the Open Interface
  - Addition of virtual control inputs to the Open Interface. They are assigned as part of the NCO configuration, just like normal control inputs. Via the Open Interface these virtual control inputs can be triggered to start/stop/ abort a call with assigned zones and zone groups. In this way the complete call configuration remains part of the NCO configuration, instead of becoming part of the Open Interface client configuration. This facilitates easy interfacing to e.g. fire control panels via TCP/IP.
  - The range of the attenuations for pre- and end-tones, messages and live speech for an Open Interface call has been extended, the 20dB range limitation has disappeared.
- Several extensions of the PC Call Station
  - PC Call Station support for redundant network controllers. In the PC Call Server configuration client for every NCO a spare NCO can be assigned that must be connected via the master/slave NCO switches (specials PSP-D00039 and PSP-D00040). Upon failure of the Main NCO, the PC Call Server will address the Spare NCO instead.
  - Fault and emergency alarm indicators are added to a separate section of the PC Call Station screen, to warn the user, comparable to the indicators on a regular call station.
  - Now a default predefined call can be selected on a PC Call Station. After a configurable time out the PC Call Station will deselect the last selected predefined call and select the default call for subsequent use. This default selection can be useful for immediate live speech without further required selections.
  - The level of tones, messages and live speech can be changed for calls coming from a PC Call Station, similar to calls from a regular call station (via call macro).
  - Now it is possible to select call stacking as an option for calls from a PC Call Station. The selection includes configuration of Time out and Forwarding conditions.
  - Default connection of PC Call Station Client is now via IP address instead of computer name to prevent connection problems.
  - In the Predefined Calls screen it is now possible to select for calls without live speech whether messages and tones are distributed from one network controller through the whole

system (to keep all outputs synchronous) or are generated in every connected network controller independently (to avoid audio transport via interconnections between multiple sub-systems).

- BGM fade in added. For every BGM channel it can be configured whether the BGM should return by fading in or by switching on after being overruled by a call. Fade in time is configurable between 0 and 10 s.
- Extension of configuration diagnostics: an error is generated when a zone is configured for multiple BGM channels simultaneously, by itself or as part of zone group.
- The list of languages for web configuration, logging and PC Call Station configuration is extended with Korean.
- For the backup power mode it is now possible to configure whether a fault must be generated or not when this mode becomes active.
- Various bugs solved

4.17 Added functionality Release 3.53

- A bug fix has been implemented in the Open Interface, related to subscriptions to resource state notifications.

4.18 Added functionality Release 3.52

- The parametric audio equalizer function has been extended to improve the acoustic control of room/loudspeaker resonances. It provides additional options for the selection of frequency (f), gain (G) and filter quality (Q). The f-resolution quadrupled with more overlap between adjacent filter sections, the G-resolution doubled and the maximum attenuation increased to - 20dB, the Q-range increased to a maximum of 10 for the fully parametric sections and 2 for the low cut and high cut filters. All selection options of previous releases are still available.

4.19 Added functionality Release 3.51

- A bug fix has been implemented to solve the issue of false SCB faults.
- A bug fix has been implemented to solve the issue of BGM returning with the wrong volume after a call has been made.
- A fix has been implemented to prevent wrong volume and equalizer settings when the SVG Viewer was not installed for Internet Explorer.
- The pilot tone control range has been adapted to prevent pilot tone calibration faults on the 70V output of the amplifiers.
- Several different length silence tones have been added to the tone set.

4.20 Added functionality Release 3.50

- A critical timing issue is solved, that can lead to signal spikes, causing unintended spontaneous 'key presses', even though that key was not actually pressed by an operator. This is a very rare phenomenon and appears to be dependent on the production batch of the processors that is used for the keypad. Only a few incidents with very low reproducibility have been reported since the year 2007 and none in earlier years. It is solved in two ways:
  - In the first place, new production keypads with HW version 01/15 (LBB4432/00) or HW version 01/10 (LBB4434/00) have updated factory firmware to avoid these spikes, even for older Praesideo SW versions.
  - In the second place, Praesideo 3.5 adds a digital spike filter, implemented in SW, that removes nearly all such spikes, even for older keypads. Customers are advised to upgrade to Praesideo 3.5. If this does not solve the problem completely or if for some reasons an older Praesideo release must be used and the system is suspect to have this spontaneous key press behavior, customers are advised to exchange the keypads for new versions.
- The Diagnose section of the configuration web pages now contains an overview of the HW and FW versions of the connected units.
- Control outputs can be configured as System fault indicator.
- A buzzer is delivered with the NCO to be connected as audible indicator for fault or emergency alarm.
- The installation DVD contains a battery calculation program to assist with proper dimensioning of the backup power supply.
- Multiple small bug fixes have been implemented.
- PRS-xPxxx amplifiers from HW 06/00 onwards have the option to monitor the fans in hi-speed mode (jumper selection).

4.21 Added functionality Release 3.41

- A problem with the installation of the Logging Server and PC Telephone Interface Client, which resulted in an InstallShield error on non-English Windows versions, has been solved.

4.22 Added functionality Release 3.40

- Many new functions and updates for compliancy to UL 864, UL1711 and UL2572 have been added (certification in progress).
- Complete update of the configuration web pages, compatible with all recent versions of Internet Explorer and Firefox.
  Installers are advised to keep an old IE6 browser on their PC for servicing Praesideo systems operating on release 3.31 or lower, and install a recent Firefox browser on that PC to service Praesideo systems with release 3.40 or higher.

Windows does not allow IE7 or IE8 on the same PC as IE6, but Firefox can be on the same PC as IE6.

- Language selection is now supported for the configuration web pages. On the release date approximately 10 languages are supported.
- Praesideo is now compatible with Windows Vista and Windows 7.
- Call macros now include a configurable live speech attenuation, e.g. to make emergency calls louder than business calls.
- The Open Interface now includes call parameters for the attenuation of start chime, messages, live speech and end chime.
- The audio line inputs on NCO, AEX and PAM now support 20 kHz pilot tone interconnection supervision.
- Supervision of a remote call station can be disabled to allow for temporary removal of the call station.
- A rename function has been implemented for zones, zone groups, call macros and BGM channels.
- Extended audio delay settings on PAMs, but only for the PRS-xPxxx series with a hardware release 05/00 or higher.
- On call stations with keypads it is now possible to keep the selection after the call has finished. To be configured in the general section of the call station configuration webpage.
- For the Fault alarm indicator output of the NCO (i.e. NCO_CO5) a mains power fault grace time can be configured to suspend the fault state, useful in areas with frequent short mains interruptions.
- It is now possible to configure a reactivation time for acknowledged but unresolved faults. The already silenced fault alarm sounder will then be reactivated.
- In a call macro the maximum call duration of a call can now be configured. The call will be stopped automatically after this time, e.g. when a call station is left unattended. This function should not be used in combination with stacked or scheduled calls.
- Extended configuration consistency check on the Diagnose web page.
- New Save options for modified or new configurations with automatic configuration consistency check.
- The database file for the logging application (default name 'Logging.mdb') is now located in the common application data directory. Windows Vista and Windows 7 do not allow this data to be put in the folder '\Program Files\' anymore.
- The margin on the length of the system cable bus is now indicated on the Diagnose web page, together with the number of addressable nodes found. This requires an NCO with hardware release 20/00, or higher.

- For a PC call station now parallel audio interconnections can be configured between a single output on the main NCO and multiple inputs on the sub NCOs.
- On a PC call station zone groups spanning more than one NCO can be created.
- There are 4 high efficiency alarm tones on the distribution DVD in the folder '\Tools\Audio Tools and Sounds\Sounds\High efficiency alarm tones'. These tones are wav-files with a length of 60 s and should be used as messages. The RMS-level is -6dBFS for continuous playback. These tones sound much louder than sine waves of the same RMS level.
- Multiple small bug fixes have been implemented.

4.23 Added functionality Release 3.31

- A bug fix has been implemented that solves the issue of false line and loudspeaker supervision faults with systems containing a PRS-MCI with PRS-8B060 and/or PRS-4B125 amplifiers.
- A bug fix has been implemented to solve a problem with false SCB-failures in a PRS-MCI that previously required a power cycle to reset the fault.

4.24 Added functionality Release 3.30

- This release adds several functions for compliancy to the new EN54-16 and ISO7240-16 standards for emergency sound systems.
- Display of zone related faults. These are faults that cause that (part of) a zone cannot be reached for calls anymore. This fault can be indicated on the zone selection keypad and on the PC call station. This indication is the aggregation of 16 different faults that may cause a problem to reach a zone completely, like line faults, overheat and overload faults. If a fault is internally solved by e.g. automatically switching to a spare amplifier, this will not result in a zone related fault.
- The former 'Zone emergency status' has been renamed to 'Zone status', because its function has been extended with the 'Zone fault status', showing zone related faults.
- An indicator test is added; via a keypad key all indicators of a call station can be switched on to visually check the indicators on that call station and connected keypads, including the numeric keypad.
- Up to five calls can be started simultaneously from one control input or keypad key. This applies to call activation inputs/keys, start inputs/keys and stop inputs/keys. This allows for e.g. starting an evacuation message on one floor and alert messages on lower and higher floors in a single action.
- Calls are now allowed to have only control outputs in the zone definition, without audio outputs. In previous releases such calls would abort

immediately. Such a control output can be used to activate an external alarm (siren) in a zone.
- A site specific data check has been added; Praesideo will regularly check whether the configuration file in flash memory is not altered in any way.
- The manual reset of the voice alarm condition now offers the possibility to select whether running emergency calls should be aborted by the reset action or not. The default setting is that running calls will not be aborted and the emergency status will not be reset in that case. A reset is only possible after the emergency calls have finished. This differs from previous releases, where the reset would abort such calls!
- The call logging has been improved by logging the real originators of extended calls, created and changed via Start/Stop keys or contacts.
- New alarm tones have been added with timing according to ISO8201.
- The CobraNet Discovery tool has been updated and also allows for configuration of the CobraNet Interface. The program CNConfig is not required anymore.
- New checks have been incorporated on the Diagnose web page.
- The web page 'Configuration > Save' has been extended with a dedicated 'Restart system' button to restart the system after a new configuration file was copied to the NCO. The 'Save configuration and Restart System' button would simply reload the original unchanged configuration already present in the NCO; this button should be used after the configuration was changed via the web pages.
- The LCD contrast setting has been removed from the front panel menus of the 19"-units. The LCD contrast is now fixed at the factory.

4.25 Added functionality Release 3.20

- This release is identical to Release 3.10, with the exception that the PC Telephone Interface Client (PRS-TIC) has been added to the installation CD. Users of Release 3.10 do not need to upgrade their systems. To use the PRS-TIC, however, requires an update of the PC Call Server and renewal of the registration.
- The PC Telephone Interface Client of the PC Call Server provides a voice response menu to make calls via a Praesideo system using a telephone.

4.26 Added functionality Release 3.10

- Modified support for the PRS-16MCI Multi Channel Interface (MCI), which connects to the Basic Amplifiers PRS-1B500, PRS-2B250, PRS-4B125 and PRS-8B060 (BAM). The pilot tone calibration algorithm has been adapted to support the PRS-4B125 and PRS-8B060 in a better way

than with Release 3.0x. These amplifiers should not be used with the previous Release 3.0x.

- Support for the new PRS-CRF Call Stacker, a unit for storing and forwarding of calls in case zones are occupied and become available later. This unit also allows for time shifting of calls for pre-monitoring and to avoid acoustical feedback to the microphone.
- Support for the new PRS-CSNKP Numeric Keypad, a unit for user access control of call stations and numeric zone selections.
- The audio input sensitivity settings on the configuration web pages have been changed from absolute values (in dBV) to relative values (in dB) with reference to the default 0dB setting. This is done to make this value independent of the actual sensitivity, which is hardware dependent and may change. A negative value, e.g. -8dB, indicates a less sensitive setting than the default 0dB, a positive value means a more sensitive setting.
- Extension of the Open Interface, a.o. to enable names retrieval from the configuration and BGM volume setting information per zone.
- Extension of the Logging Server and Viewer with new events and additional information about call progress and completion.
- Extended activation characteristics (momentary, toggle or single shot, with or without abort option) for control inputs and keypad keys.
- The call macro configuration now has a weekly scheduler and routing and timing schemes can be set. The options depend on the availability of a call stacker in the system. With the routing scheme now also the partiality of the call can be configured for each call independently; it is not fixed anymore per call station.
- Option to simultaneously acknowledge and reset fault or emergency status with one control input or key.
- Backup power mode via control input is now logged as a fault event, as this function is intended to mimic a real mains power fault.
- Additional diagnose functions are added to check for configuration errors.
- An important bug fix has been implemented that solves the situation that if a multi-channel interface gets disconnected temporarily from the Praesideo network, sometimes one or more connected basic amplifiers do not get their active audio channel back, without notification. Current users of release 3.0x, using a multi-channel interface should upgrade to release 3.10 or later.
- An important bug fix has been implemented that solves the issue that after upgrading the unit firmware of the network controller no messages can be played until the system has restarted.

4.27 Added functionality Release 3.05

- The configuration of the AVC settings in the zone configuration web page has been extended. Now it

is possible to enable or disable AVC for emergency calls (i.e. calls with a priority above 223). This setting is zone-specific.
- A fix has been implemented to detect checksum errors on some Compact Flash cards.

4.28 Added functionality Release 3.04

- A very important bug fix has been implemented to solve the situation that a short circuit on a channel of the LBB4428/00 will switch the amplifier and its spare amplifier to standby. With this 3.04 release only the output of the LBB4428/00 spare amplifier channel that has the short circuit on the line will be switched off. The other channels continue. In case there is no spare amplifier, then only the main amplifier channel that has the short circuit on the line will be switched off. The other channels continue.
- A bug fix has been implemented to correct an invalid loudspeaker line supervision fault event on spare power amplifiers.
- The content of the Compact Flash card is checked less frequent and with a fixed rate (still within 100 s) to improve the MTBF of the Compact Flash card. Also, the Praesideo NCO now comes with a specially selected Compact Flash card that permits very frequent reading of the content. The MTBF of the CF card is now more than 10 years again.
- A bug fix has been implemented that solves the problem of a slower system response when remote call stations are disconnected from their call station interface.

4.29 Added functionality Release 3.03

- The installer program of the File Transfer Application (FTA) has been updated to allow installation on the same PC of both a Praesideo release 2.34 (or older) and a release 3.03 (or newer). In this way the same PC can be used to install and configure old Praesideo systems with a LBB4401/00 NCO and newer Praesideo systems that use a PRS-NCO-B.
- The control speed of the AVC has been slowed down to 1dB/s. This way the system will not be disturbed by short bursts of noise.

4.30 Added functionality Release 3.02

- The Compact Flashcard interface has been extended to accept certain specific types of cards.
- A bug fix has been implemented to extend the pilot tone calibration range on 70V outputs that caused calibration faults on heavily loaded loudspeaker lines.

4.31 Added functionality Release 3.01

- In the configuration page System settings a selection box has been added to select disabling the NCO on an internal fault (default is No). This

function is specifically implemented for systems with a redundant network controller. If an internal fault in the master NCO occurs, e.g. a flash card fault, then the master NCO is disabled. This is detected by the special network switch, which switches the system to the spare NCO. For systems with one NCO, select No.

4.32 Added functionality Release 3.00

- Support for the new PRS-NCO-B, the successor of the network controller LBB4401/00. The new PRS-NCO-B provides the same functionality as the LBB4401/00, but has a faster processor, more memory and a battery backup input with supervision.
- Support for the PRS-16MCI Multi Channel Interface (MCI), which connects to the new Basic Amplifiers PRS-1B500 and PRS-2B250 (BAM).
- Power save mode to set amplifiers in standby during backup power mode, to reduce battery power consumption.
- BGM routing limit, to set a limit to the zones that are allowed to receive a certain BGM channel. This allows for distribution of licensed music to certain zones only.
- BGM audio inputs for BGM channels that have their amplifier outputs only on the same unit as where the audio input is, will not use a Praesideo network channel for distribution. This allows for more than 28 BGM channels in a network. It requires the use of the BGM routing limit.
- The volume of the tones (chimes and alarm tones) is adjustable in the call macro.
- The volume of the prerecorded messages is adjustable in the call macro.
- Spare power amplifiers can now be configured via the web interface. Audio inputs, control inputs and control outputs of a spare amplifier can be configured and used independent of the spare function. Line supervision can be used to monitor the connection between spare and main amplifier.
- Multi-language support for Logging Server and Viewer.
- An additional front panel menu item for LCD contrast adjustment is available now for the NCO, AEX, CIN and PAM. The hidden 2 steps LCD intensity control, as implemented in release 2.34, has been removed. Some recent (year 2006) hardware versions of these units with LCD have a fixed contrast setting, optimized in the factory, which cannot be changed from this menu.

4.33 Added functionality Release 2.36

- An important bug fix has been implemented for the LBB4428/00. In case of a short circuit on one of the output channels, then this amplifier is taken over by its spare amplifier and only the output of the LBB4428/00 spare amplifier channel that gets the short circuit transferred will be switched off.

The other channels continue. In case there is no spare amplifier, then only the main amplifier channel that has the short circuit on the line will be switched off. The other channels continue. Users of the previous 2.xx release with LBB4428/00 amplifiers must upgrade!

4.34 Added functionality Release 2.34

- Release 2.34 is identical to release 2.33, except for the addition of a hidden user control in the power amplifiers, audio expander, CobraNet interface and network controller.

4.35 Added functionality Release 2.33

- In the Logging Application the name (instead of the IP-address) of a TCP/IP device that has been configured in System definition will be shown as originator.
- The OI accepts longer command strings to be able to deal with the maximum number of zones.
- A conflict between the Logging Server/Viewer and some other applications (e.g. Bosch Divar SW), related to the use of Windows Process Counters has been solved.

4.36 Added functionality Release 2.30

- Support for Remote call station, LBB4438/00, Remote call station kit, LBB4439/00, and Call station interface, LBB4437/00, enabling call station connection via CAT-5 cable up to 1000m away from the Praesideo network.
- Configuration of the maximum (allowed) BGM level for each zone.
- Scheduler for automatic time related calls, with start time, end time and repeat interval.
- Start and Stop functionality that allow for starting and stopping a call from different call station keypad keys and Control inputs, including the possibility to extend an already running call with additional zones.
- Automatic sequential upgrading of unit firmware.
- Grouping of zones in call and fault events in Logging Viewer.
- An active selection of events can be printed from the Logging Viewer.
- The fault event table of the Logging Viewer now shows the time and originator of a fault event acknowledge and reset action.

4.37 Added functionality Release 2.20

- Support for multiple End-of-line and Loudspeaker supervision boards, LBB4440/00, LBB4441/00 and LBB4443/00.
- Support for upgraded power amplifiers LBB4421/10, LBB4422/10 and LBB4424/10, needed for the multiple End-of-line and Loudspeaker supervision boards.
- Flexible, extended AVC functionality.

- Event logging via Logging Server with database and Logging Viewer:
- Event logging is part of Open Interface (OI).
- Definition of OI-protocol to support non-Windows OI-clients, like touch screen control panels.
- BGM volume, mute and channel control per zone or zone group via control inputs (e.g. wall panel control).
- Cascading delete of configuration items; deleting an item will also delete all instances of its use.
- Selection lists now default to a <None> selection in the list.
- Disabled configuration items show up between brackets in selection lists.
- The fault indicator on call stations (yellow flashing LED) can be released after fault acknowledge or after fault reset.
- Configurable key time-out for call stations
- Configuration of TCP/IP devices (OI-clients); missing devices generate a fault event.
- Configurable access permission for non-configured TCP/IP devices (OI-clients).
- Configurable call station microphone name for easy Open Interface referencing.
- Backup power mode selection via control input possible, to force the system into backup power mode (stop BGM and low priority calls).
- Extended BGM volume settings per zone, with three level time scheduling.
- Possibility to clear existing logging information from the network controller via the FTA.

4.38 Added functionality Release 2.10

- Support for CobraNet Interface, LBB4404/00, including configuration software for Praesideo and CobraNet.
- New Open Interface functions for BGM control.
- BGM view on call stations.
- Improved enabled/disabled item behavior: disabled items cannot be activated and disabled items do not generate faults.
- Printing of configuration data: converts praesideo.cfg to readable HTML-table for reference and printing.
- Fault indications on LCD of 19"-units, with brief indication on power amplifiers, audio expanders and CobraNet interfaces, and detailed indication on the network controller with Acknowledge and Reset.
- Installation diagnostics: -3dB option for fiber transmitter to check the optical power margin.
- Dedicated installation web page for easy selection of programs to install.
- New fiber interface without network node, LBB4414/10, to overcome the network limit of 63 nodes at the expense of not having control inputs.
- Selection of act on make or act on break for control inputs.

- Extended control output configuration for Call active, Volume override and Switch out.
- Key time out for keypad keys is now adjustable.
- Focus jumps to last fault event in diagnostics.
- Priority 255 calls override other priority 255 calls for emergency call take-over.
- Configurable release of fault indicator on call stations; release on fault acknowledge or reset.
- PAM 4x125W can act as spare for PAM 4x60W.
- Pilot tone for network controller and audio expander outputs is now volume independent.
- Primary and secondary power supply configuration for call station kit.
- Import new tone set.

4.39 Added functionality Release 2.00

- Support for LBB4428/00, 8x60W PAM.
- Open Interface via TCP/IP, to create a custom PC call station.
- Better sorting of diagnostic events (last on top).
- Faster software installation (upgrade all).
- Configurable priority-based blocking of calls when the system is backup powered (not fixed to emergency calls anymore).
- Both mains and backup power can be enabled/disabled per power amplifier.
- Calls started from a contact input are partial (e.g. for emergency).
- AVC on PAM can be active on BGM too.
- Improved default names for input and outputs.
- Improved diagnostics descriptions.
- Improved configuration file checking.
- Presence of flash card is configurable.
- Real time settings can also be configured off-line.
- Spare amplifier can have a superset of the line supervision boards that the main amplifiers have.
- Configurable pilot tones on NCO and AEX outputs.
- The system can be (remotely) restarted from the configuration PC.
- Call station can do multiple calls via call activation buttons, just like call station kit.
- Checking on call station kit backup power availability is now configurable.
- Clock synchronization by contact input.
- Contact input to contact output 'call' can be made.
- External logging program improved and accepts 32 NCOs.
- Priority status indication extended to priority 0, to indicate BGM presence in zones.

4.40 Added functionality Release 1.30

- Business calls are allowed during back-up operation. Now it is possible to choose the minimum priority level (0-255) at which calls will be allowed during operation on back-up power.
- Selection of 48Vdc as the primary power supply. Absence of the mains power supply will no longer

generate an error message if this mode of operation is selected.

- Calls started by a call activation key, either on a call station (kit) keypad key or a control input, can now be stopped immediately.

4.41 Added functionality Release 1.20

- Local AVC – Automatic Volume Control has been added to the Power amplifiers.
- A 20 kHz pilot tone can be added to the outputs of the NCO and AEX for supervision of analog connections to subsequent audio devices.

4.42 Added functionality Release 1.10

- The option to enable/disable system redundancy is available at System wide settings in the configuration.
- Activation, acknowledgement and reset of the emergency state are logged as general events.
- The Network Controller supports four message generators for broadcasting messages. This means four messages can be played simultaneously (network controller HW15/00 or higher required).
- The call station kit is provided with contact input supervision for its control inputs (call station kit HW07/00 or higher required) and the PTT-key.
- Contact output 4 and 5 of the Network controller are assigned for audible and visual fault indication (network controller HW15/00 or higher required). These contacts are needed for IEC60849 compliancy.
- Audio delay function for power amplifier outputs.

5 Important notes

5.1 Network security

The Praesideo network interfaces do not provide extensive security measures to protect the system against malicious network attacks. Such measures would be insufficient on the long term anyway, because Praesideo systems in operation are unlikely to be updated regularly to repair security leaks. Therefore do not keep the network controller permanently connected to an open Ethernet network. When a network connection is needed after configuration, e.g. in case of connection to a PC Call Server or a Logging Server, then use a separate network, not accessible by others, or setup a Praesideo specific VLAN by using Ethernet switches with VLAN capabilities to partition the network into multiple broadcast domains with one domain assigned solely to Praesideo. When also audio connections are established on Ethernet, via CobraNet interfaces or OMNEO interfaces, these interfaces must be connected to the separate network or VLAN too. Because audio connections on Ethernet consume considerable network bandwidth and, unlike physically separate networks, VLANs share bandwidth, VLAN trunks may require aggregated links and/or quality of service prioritization.
This also applies to releases 4.31 and later, despite their improved security.

5.2 FTA user name

Since Praesideo release 4.31 a different core program is used for the file transfer application (FTA). A side effect of this new program is that the maximum length of the user name is limited to 7 characters. The password can be longer.

5.3 Remote call stations

The call station interface PRS-CSI, the remote call station PRS-CSR and the remote call station kit PRS-CSRK have been released with different hardware versions:

- **HW01/15 and older** – these versions use the original interface between the PRS-CSI and the PRS-CSR(K).
- **HW01/20** – this version uses an extended interface between the PRS-CSI and PRS-CSR(K), introduced in 2013. However, units with this version may have connectivity issues with matching units and need to be replaced.
- **HW01/30** – this version uses an improved version of the extended interface that is also compatible with units with HW01/15. Furthermore it solves an issue with audio path supervision.

The extended interface is required for future products and features, based on possibilities offered by Praesideo SW version 3.52 or higher.

The following limitations must be observed:

- A PRS-CSI with version HW01/15 or older can only be used with a PRS-CSR(K) with versions HW01/15 or older, or HW01/30.
- A PRS-CSI with version HW01/20 can only be used with a PRS-CSR(K) with version HW01/20. Although this combination will work in most cases, replacement is recommended.
- A PRS-CSI with version HW01/30 can only be used with a PRS-CSR(K) with version HW01/15 or older, or HW01/30.
- A PRS-CSI and PRS-CSR(K) combination with both version HW01/20 or both version HW01/30 must be used with a Praesideo software version 3.52 or higher. Using an older software version results in the power LED of the PRS-CSR(K) to be off, even though the unit is operating correctly.

In case of a defect PRS-CSI or PRS-CSR(K) with a hardware release HW01/20, also its accompanying PRS-CSR(K) or PRS-CSI must be offered for service, to avoid that the service department will return a single unit back with HW01/30 that will not operate with a unit with HW01/20.
Also functional units PRS-CSI or PRS-CSR(K) with hardware release HW01/20 may be presented to the service department for replacement, free of charge.

5.4 Downgrading to previous release

Network controllers PRS-NCO-B with HW 21/01 and later use a type of flash memory that is only supported by SW releases 3.50 or newer.
Downgrading such a unit to an older software version will lock the unit. Unlocking can only be done at a BOSCH service center! Please contact Bosch to find a solution when it is absolutely necessary to use an old version of the Praesideo software.

After downgrading an PRS-NCO3 from software version 4.1 or higher to 4.0x an unexpected processor reset fault occurs when under 4.1 a control input or key was configured as Zone line fault input. The reason is that this control action did not exist yet for version 4.0x.

5.5 Upgrading from previous release

When upgrading from a previous release, prior to release 3.4, it can happen that the line input supervision of a power amplifier (LBB442x/xx or PRS-xPxxx) is automatically set to On. When the input has been configured as microphone input with supervision enabled, but this input was changed later on to line input (without disabling the microphone supervision first), this supervision setting is transferred to the configuration. Because input supervision didn't exist for line inputs in previous software versions, it was invisible in the configuration, but now it becomes visible and active. When no line input supervision is required, this must be disabled manually in the configuration.

5.6 Grounding of backup batteries

The negative terminal of the backup battery, connected to the amplifiers and/or network controller is connected to the signal ground. The mains/safety ground is connected to the metal parts of the cabinet. Inside the Praesideo products, signal ground and safety ground are interconnected by capacitors for compliancy to EMC standards, and by zener diodes for compliancy to ESD standards. Therefore, it is best to keep the batteries floating without ground connection, or ground the negative battery input on the equipment. NEVER GROUND THE POSITIVE TERMINAL OF THE BATTERY, as this will damage the Praesideo equipment. In that case the ESD protection zener diodes will be overloaded by the battery. Please note that some telecom battery chargers do ground the positive terminal of the battery. These chargers should not be used!

5.7 CobraNet Discovery

At the moment of this release, the latest version of the CobraNet Discovery tool is version 4.05, which is included on the installation DVD. This version is compatible with Windows 7, Vista and XP. Check http://www.cobranet.info/downloads/disco for the latest version.

CobraNet Discovery 4.0.5 does not officially support Windows 8. Nevertheless, it may be possible to run CobraNet Discovery under Windows 8 by taking some measures. CobraNet Discovery 4.0.5 uses Microsoft .NET Framework 3.5 and refers to the Windows 7 setup on the Microsoft website to install this framework. Under Windows 8 no installation is needed, but the .NET Framework 3.5 just needs to be enabled in the Control Panel. Choose Control Panel from the Start screen, then choose Programs, then choose Turn Windows features on or off, then select the .NET Framework 3.5 (includes .NET 2.0 and 3.0) check box.
In addition, on a PC that is maintained by a corporate update server, ask your administrator to enable the policy to use Windows Update instead of Windows Server Update Services (WSUS). For more details, see http://msdn.microsoft.com/en-us/library/hh506443(v=vs.110).aspx.

Only one PC with the CobraNet Discovery application active should be connected to the CobraNet network. Other active instances of CobraNet Discovery will show up as additional CobraNet units, which they are not.

5.8 Compact Flash cards

An empty Flash card in a network controller will generate a "Flash card data error". If no messages are needed, disable the Flash card in the configuration to prevent this fault.

Sometimes Praesideo detects and reports checksum errors on 3rd party Compact Flash cards, used for message storage in the network controller. These errors typically occur for CF cards without self-refresh. Praesideo is delivered with a CF card that has been selected and tested for reliable operation and it is recommended not to change the CF card for a different one.
In case this checksum error problem appears, please contact the spare parts logistic channel or your local Bosch contact person for a selected new CF card. Then generate a new message set file from the wav-files on the configuration PC and transfer that file to the new card. Do not retrieve the message set file from the old card and transfer that file to the new card, because most likely that file is already corrupt.

If the function 'Disable network controller on internal fault' has been activated (Yes) and a flash card fault occurs, no new message set can be transferred to the NCO, because it has been disabled. The FTA will respond with a message 'The connection with the server was terminated abnormally.' A new message set can only be transferred to the NCO when the function 'Disable network controller on internal fault' has been de-activated (set to No) and the NCO restarted.

5.9 Firmware upgrade

Units that have their firmware upgraded, but are **disabled** in the configuration, show on their display "Upgrade unit firmware" although they just got the right version firmware. The display is not updated accordingly because the unit is disabled. The unit is not defect. The solution is to enable the unit in the configuration, save the configuration and restart the system (Save and restart).

Only download unit firmware to the individual Praesideo units after a software release upgrade, or if you have added new units to the system. You will be forced to wait a couple of minutes after a system start-up before you can initiate a download. Make sure the system is idle while downloading.

5.10 Windows security checking

MS Windows provides rigorous security checking on network and Internet access. Because the Praesideo installer uses the PC web browser to show the installation menu, this security checking might prevent the browser to load the required page from the installation DVD. This depends on the security settings. The browser might give a warning instead about possible dangerous content. Please accept the risk and continue, otherwise the installation menu page cannot be shown. After the menu page is loaded in the browser, the browser may ask to 'Allow blocked content'. This should be allowed to get access to the installation menu options. Please note that after allowing blocked content, the security settings of the browser are reduced.

The Windows Firewall may show a Windows Security Alert with a blocking message for the Praesideo logging server and/or viewer. To allow the Praesideo logging server and viewer to operate and access connected network controller(s) via a network or Internet, it is necessary that these programs are unblocked by pressing Unblock in the alert window.

5.11 Installation information

The Praesideo Installation and User Instructions (manual) are available as pdf-file via download from www.boschsecurity.com.

5.12 Fault contacts on NCO

For compliancy to EN54-16 and ISO7240-16, the fault contacts of the NCO will remain in fault condition until the Praesideo system is up and running. Before release 3.30 this fault state was suppressed during start up.

5.13 PC Call Station Client

The PC Call Station Client for release 3.30 or higher will not work with older Praesideo releases because it uses Open Interface commands that are not implemented in these older versions. Upgrade the complete Praesideo system to the latest release.

5.14 Numeric keypad

Zone (group) names should always be unique, also if the name is a number for use with a numeric keypad. But also e.g. message names never should use the same number as a name.

5.15 Configuration web pages

Sometimes virus scan software interferes with the configuration software on the same PC, with the result that some web pages do not appear. Disable the virus scanner during configuration.

5.16 Internet Explorer

Internet Explorer has only limited native SVG-support, causing equalizer graphics not to display correctly. Use the SVG plug-in or use a different browser like Firefox.

6 Known Limitations and Workarounds

6.1 Reset fault after soft restart

During a soft restart of the PRS-NCO3, e.g. after a configuration change, it may happen sometimes that the processor reset (CPU or MMP) is logged already as a fault, before it could be suppressed as a normal part of the startup process. The system starts up normally and the fault can simply be cleared afterwards by a fault acknowledge/reset action.

6.2 Corrupt configuration file

In some rare cases changing equalizer settings results in a corrupted configuration file, causing the NCO to crash. Check the file with the Print Config Tool. If the equalizer settings of a unit show '???', then the file is corrupt. Repair the file by deleting that unit from the configuration and then add it again.

6.3 Call macro

Call macros programmed with a default input can be selected on units for which a default input does not exist (e.g. NCO, AEX, etc.). This can cause unexpected system behavior.

6.4 Call station

Attaching/detaching a call station to a live system may cause other system nodes to reset due to the power dip on the network cable.

6.5 Off-line configuration

Units that have been entered in the configuration with serial number "0" for off-line configuration will generate a Unit Missing fault after a system restart.

6.6 FTA user name

The maximum length of the user name in the FTA (File Transfer Application) is limited to 7 characters. The password can be longer.
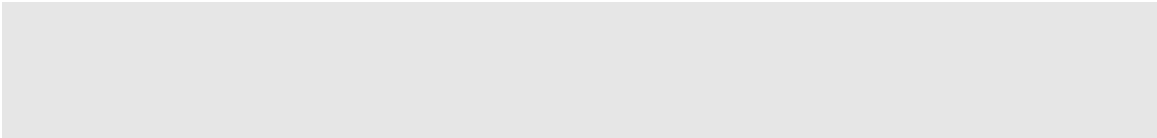
For more information please visit

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