Honeywell | Security and Fire



PAMMI Plus

(Part No. 583651, 583652, 583653, 583654)



Operation and Commissioning Instruction

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Intended purpose

This products may be used only for the applications outlined in the catalogue and in the technical description, and only in conjunction with the recommended and approved external devices and components.

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Safety-related user information

This manual includes information required for the proper use of the products described.

In order to ensure correct and safe operation of the product, all guidelines concerning its transport, storage, installation, and mounting must be observed. This includes the necessary care in operating the product.

The term 'qualified personnel' in the context of the safety information included in this manual or on the product itself designates:

- project engineers who are familiar with the safety guidelines concerning fire alarm and extinguishing systems.
- trained service engineers who are familiar with the components of fire alarm and extinguishing systems and the information on their operation as included in this manual.
- trained installation or service personnel with the necessary qualification for carrying out repairs on fire alarm and extinguishing systems or who are authorised to operate, ground and label electrical circuits and/or safety equipment/systems.

Symbols

The following information is given in the interest of personal safety and to prevent damage to the product described in this manual and all equipment connected to it.

Safety information and warnings for the prevention of dangers putting at risk the life and health of user and maintenance personnel as well as causing damage to the equipment itself are marked by the following pictograms. Within the context of this manual, these pictograms have the following meanings:



Warning - Designates risks for man and/or machine. Non-compliance will create risks to man and/or machine. The level of risk is indicated by the word of warning.



Note - Important information on a topic or a procedure and other important information!



Standards and guidelines - Observe configuration and commissioning information in accordance to the national and local requirements.

Hazard warnings on the system components



Warning - risk source.

Warning - dangerous electrical voltage.

Dismantling



In accordance with Directive 2012/19/EU (WEEE), after being dismantled, electrical and electronic equipment is taken back by the manufacturer for proper disposal.

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1 General / Application

The PAMMI Plus software offers the user extensive functionality for operating and maintaining the PA system VARIODYN[®] D1. Use of the software requires good knowledge of the system in addition to product training.

Features

- Function as a call station for making live connections and for playing back saved, variably composed text messages
- Time-controlled playback of saved text messages
- Recording of announcements for subsequent or scheduled playback
- Monitoring of the VARIODYN® D1 system and ETCS control unit
- Configuring/regulating operating parameters of the VARIODYN® D1 system and ETCS control unit
- Volume display for audio signals in the VARIODYN® D1 system and ETCS control unit
- Online configuration of the PAMMI Plus user interface and control parameters
- Importing of the D1 configuration directly from the connected system
- Navigation between any number of parallel or hierarchical system views

The software is a client/server system and consists of 3 or 4 components (2 or 3 executables, 1 DLL):

• PA-MMI

Visible user application (executable file PAMMI.exe) that provides the user with the GUI for operating the software.

PA-Server

Interface application (executable file paserver.exe) for the VARIODYN[®] D1 system that coordinates user commands of the PA-MMI application(s) and controls communication with the VARIODYN[®] D1 system. It is visible only as an icon in the task bar.

VservCli

The DLL used by the PA server that provides the interface functions for communication with the VARIODYN[®] D1 system over a LAN via TCP/IP.

UAG-Server

Gateway application (executable file UAGServer.exe) for the audio signals to be fed into or output from the VARIODYN[®] D1 system. The audio signal from the PC microphone is fed into the system via this application. The application functions like a VARIODYN[®] D1 control unit (DOM, SCU) and is therefore controlled by the PA server. Use of this application is optional, and the decision of whether or not to use it is made during the installation.

The communication between PA-MMI and PA-Server takes place over LAN → TCP/IP. This allows the two applications to run on different computers, if necessary.

The communication between PA-Server and the VARIODYN[®] D1 system also takes place over LAN \rightarrow TCP/IP, whereby the PA-Server acts here as the TCP client and the associated DOM and SCU as TCP servers.

The communication between the PA server and the UAG server takes place over LAN \rightarrow TCP/IP with the PA server as TCP client and the UAG server as TCP server.

The communication between the UAG server and the VARIODYN[®] D1 system also takes place over LAN \rightarrow UDP/IP analog to the way the control units (DOM, SCU) communicate with each other.

1.1 System requirements

The PAMMI Plus software runs on networked PCs with the following operating systems:

- Microsoft Windows 7 Professional
- Microsoft Windows 10 Professional

The two components PA-MMI and PA-Server can run on the same computer or on two computers that are networked together. This is recommended if multiple PA-MMI applications access the D1 system over a shared PA-Server application.



- This configuration is not covered in this document and is mentioned only to provide a better understanding of various indicators and properties of PAMMI Plus.
- Hereinafter, a PAMMI Plus installation, of which the software components all run on the same PC, will be referred to as a "single station system". Components with UAG servers are also called PC call stations.

Only system components (DOM, SCU) with the current version of the firmware should be installed in the VARIODYN® D1 system.

- DOM V33.03R001
- SCU V02.07R000
- ETCS V1.3.1R000

Firmware versions older than DOM 02.09, SCU 02.07 and ETCS 1.3.1 are no longer permissible!

The communication of the PAMMI Plus software with the VARIODYN[®] D1 system takes place over the LAN, using PA Protocol V10 or V11.

Protocol V11 is compatible, but can only be used in small systems with max. 10 DOM, <u>without</u> SCU, <u>without</u> ETCS and <u>without</u> UAG!

Due to the restriction of PA servers (see Chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**), the number of single station systems or PC call stations within the PA system is limited to a maximum of ten! The following system requirements are also mandatory for the installation of the UAG Server application, and the PAMMI Plus software as a PC call station:

- DOM control device with firmware version V03.00R001 or higher (older versions are not compatible)
- Exclusive use of PA Protocol V10 (V11 is not compatible with the UAG server)
- In the PA system, up to ten PC call stations are permissible (see chapter Fehler! Verweisquelle konnte nicht gefunden werden.)



To ensure the operational safety and to protect against cyber attacks from the Internet, especially if security-relevant functions are carried out during operation such as the playback of calls for evacuation and emergency instructions, it is recommended that the PAMMI Plus be operated only within an independent VARIODYN[®] D1 network that is disconnected from the Internet and contains exclusively VARIODYN[®] D1 components. If such a decoupling is not possible, the VARIODYN[®] D1 network must be protected against unauthorized access from the Internet by means of a gateway and firewall.

For these reasons, the system operator must implement a suitable access control system to prevent unauthorized persons from gaining access to the devices within the VARIODYN[®] D1 network.

This document applies to single-workstation systems (i.e. all components of the PAMMI Plus software are installed on a single PC) and for PAMMI Plus versions from V33.01R000, including the integrated UAG version as of V01.00R000.



Additional and updated Information

The described features, specifications and product related information in this manual correspond to the date of issue (refer to date on the front page) and may differ due to modifications and/or amended Standards and Regulations of the System design, Installation and Commissioning.

Updated information and declaration of conformity are available for comparison on the www.varidyn-D1 or www.hls-austria.com homepage.

VARIODYN[®] D1-Systems are registered trademarks in Germany.



In principle, the standards and guidelines outlined in this documentation refer to the current versions as amended.

1.2 System limits

The installation of the PAMMI Plus software is subject to the following system boundaries within a PA system:

- Max. ten PA servers per system
- Max. ten single-station systems per system
- Max. ten PC call stations per system
- Max. 90 PA MMI applications, which can be connected to a single PA server through their individual computers



This configuration is not covered in this document and is mentioned only in relation to the restrictions for PAMMI clients per PA server.

1.3 Definitions of terms and abbreviations

General:	
3D	3-dimensional
API	Application Programming Interface
DLL	Dynamic Link Library
Executables	Executable Program Files
GUI	Graphical User Interface
HW	Hardware
IO, I/O	Binary Input/Output
LAN	Local Area Network
LED	Light Emitting Diode
MMI	Man-Machine-Interface
MS	Microsoft
MS-Windows	Microsoft Windows Operating System
PA	Public Address
PAS	Public Address System
PC	Personal Computer (using Microsoft Windows as operating system)
РТТ	Push-To-Talk Button
SW	Software
TCP/IP	Transmission Control Protocol / Internet Protocol (Datenübertragungsprotokoll am LAN)
UDP/IP	User Datagram Protocol / Internet Protocol
VARIODYN [®] D1 compone	ents:
Variodyn-D1	Product name of Honeywell's digital PA-System
D1	Shortcut for the digital PA-System Variodyn D1
D1-Net	All components building together a complete D1 PA-System
D1-Node	Single PA-(sub-) system within a D1-Net represented by a DOM or SCU
System-Controller	Controller module of a single D1-Node (DOM, SCU)
DOM	Digital Output Module, D1-Node module with own controller as well as integrated power-amplifier and speaker-line outputs
SCU	System Communication Unit, D1-Node module with own controller applied as player/recorder/storage of pre-recorded announcements
UAG	Universal Audio Gateway, D1 node control module for feeding external audio signal sources into the VARIODYN [®] D1 system as well as for outputting internal audio signals to external devices
DAL, DAL-Bus	Digital Audio Link, interface between DOMs and external audio modules (DCS, UIM)
DCS	Digital Callstation, connected to any DOM via DAL-Bus
UIM	Universal Interface Module, hardware-module of the D1 PA-System to interface analog audio-signals and IO signal-lines to DOMs via DAL-Bus
AI	Audio Input (to the PA-System)
AO	Audio Output (from the PA-System)
DS	Digital (Call-) Station, i.e. a module connected to any DOM via DAL (DCS, UIM)
ETCS	Ethernet Touch Call Station is a call station with touchscreen which connects to VARIODYN® D1 system via Ethernet
Ю	In/Out, a binary input/output (to/from the PA-System)
LR	Line Relay for a (switchable) speaker-line
PA	Power Amplifier, i.e. an output channel to a power amplifier
PR	Pre-Amplifier, i.e. an audio input's pre-amplifier
SC	System-Controller, the controller module of a single D1 node (DOM, SCU)

SG TL	Signal Generator for pre-signals, chime-tones and standard messages Transportation Line, (virtual) router for binary signals
D1-Designer D1-Terminal	Configuration-Tool for the VARIODYN [®] D1-System Terminal-Interface to the maintenance interfaces of the DOM modules
PA-MMI, PAMMI	Designation of the PAMMI client application, which provides the GUI for the PAMMI operation. This designation is used also as representative for the entire system (i.e. the PC-Callstation SW) ¹
PA-Server, PAServer	Designation of the PAMMI server application, serving as interface for the PAMMI clients to the Variodyn-D1 system
VServCli	DLL providing the software API for Variodyn PA system control
Master-Server	Identification of the first one of a couple of PA-Servers provided to work as active and standby servers
Slave-Server	Identification of the second one of a couple of PA-Servers provided to work as active and standby servers
UAG-Server, UAGServer	SW application for feeding external audio signal sources into the VARIODYN [®] D1 system and for outputting internally generated audio signals to external devices
PC call station	PAMMI Plus single station system with PAMMI PA server, VServCli and installed UAG server
Zone	Area of destinations addressed for execution of an announcement, represented by a single audio output or an arbitrary combination of such
Single Zone	Any combination of audio outputs respectively speaker lines, used by the PAMMI-SW as smallest unit for zones which can be addressed as a whole only and not split up (in many cases this is a single audio output or speaker line)
Zone Group	Any combination of single zones
(PA-)Input	Any combination of audio-inputs to the PA-System (usually a single audio-input)

¹ The designations PAMMI-SW and PAMMI-Software always belong to the entire system, i.e. to all SW components

2 Program interface and operation

View of the PAMMI Plus GUI and the layout of functional areas.



Fig. 1: PAMMI program interface

Title line

Displays the call station title, the selected function view, the date and time.

Menu bar

File, View, Help

• File

Minimize, Maximize, Restore and Exit the PAMMI Plus application



Fig. 2: File menu

View

Selection of the configuration dialogs in the function view for editing the views in the zone view and status indicator view, for configuring the PAMMI Plus settings and selecting the PAMMI Plus resources, for scanning and selecting the device configuration, for creating / changing / removing addressable target zones and PA inputs.

Honeywell		MMI D1-PA	
File	Vi	iew Help	
Zone Fo		Edit Input/Device Status View Edit Zone View Device Configuration Zone Configuration	
		Input Configuration Properties	

Fig. 3: View menu

Help

Displays brief instructions on the operation of PAMMI Plus in the function view, displays the PAMMI Plus version.

Honeywell		MMI D1-PA	
File	View	Help	
Zone Form	at But	Contents	1
		About	
	_		-

Fig. 4: Help menu

Toolbar

Selection of the view format in the zone view (graphically in "Zone Format" or as button array in "Button Format"):

Honeywell	MMI D1-PA					
File Vi	ew Help					
Zone Format Button Format						

Fig. 5: Left toolbar, zone view selection

Select the function view in the function window via the "Scheduler", "DVA", "Queue", "Recorder", "History" and "Alarms" buttons:

User				[WA		Γ
	Scheduler	DVA	Queue	Recorder	History	Alarms	

Fig. 6: Middle toolbar, function selection

Definition of the zone selection mode with the "AND" button:

	15/07/13	16:18:23
AND Stop	AND	Stop

Fig. 7: Right toolbar, function buttons

When deselected, only single zones or zone groups can be selected via the collective call buttons; when selected, it is possible to select any combinations of single zones.

Zone view

Configurable system view with selection fields for target zones and views, with status indicator fields for PA inputs, functions and alarms as well as control elements for configuring settings and displaying device parameters.

Function view

Provides control and display elements in function-specific views. The respective view is selected in the toolbar or via the "View" menu.

The function views that can be selected via the toolbar and are used during normal operation as a call station:

Scheduler	Editor for the scheduled playback of text phrases
DVA	Selection and playback of text phrases in the zones selected in the zone view.
Queue	Display of the active announcements initiated via PAMMI Plus
Recorder	Recording of new text phrases
Alarms	Display and acknowledging of the triggered alarms
History	Display of the logged events (announcements and errors)
The dialogs for online c	onfiguration of the PAMMI Plus are selected via the "View" menu:
Assign inputs	Editor for the view in the status indicator view
Assign zone	Editor for the zone views of both formats
Device configuration	Dialog for querying and accepting the device configuration of the connected VARIODYN [®] D1 system, for comparing the saved device configuration and for manually additing the D1 device configuration and for

	manually editing the DT device configuration relevant to PAMMINI Plus
Zone configuration	Editor for the PA zones addressable by PAMMI Plus as announcement destinations
PA input configuration	Editor for the audio inputs into the PA system controllable from PAMMI Plus
Settings	Dialog for selecting PAMMI Plus resources (microphone, monitor speaker, external PTT button,) and announcement attributes (pre-signal, priority, connection mode)

and for configuring PAMMI Plus settings (colour settings for status indication)

Status indicator view

Configurable view for displaying the operating states of audio inputs at call stations and UIMs, the SCU, of functions and communication connections (especially to the PA-Server application) and for general signalling of error/alarm states

PTT button

Push-to-talk button for initiating connections of the call station microphone to the selected zone(s) for live announcements

Status field

Display and clearing of the last event message concerning the operating state of the system (alarm / OK messages, start-up message, etc.)

Signalfarben

The states of zones in the zone view as well as the devices and functions shown in the status indicator view are indicated by colours. The indicated states and the default colours assigned to them (modifiable via configuration):

i

Not available (no connection to the VARIODYN [®] D1 PA system)	Grey
Ready, operationally ready (available but not active)	White
In use by the existing PAMMI Plus	Green
In use (generally) and "On" or "Active" for functions or communication connections	Yellow
Alarm	Orange

The states of live announcements are indicated via the colour of the PTT button: The announcement states and the default colours assigned (modifiable via configuration):

Connection initiated	Grey
Playing back the pre-signal	Yellow
Playing (ready for speaking)	Green
Fault	Orange

3 Installation

For installing the PAMMI Plus software the following steps must be performed:

- Run the installation program.
- User account control message: "Do you want to allow the following program from an unknown publisher to make changes to your computer?"
 Please answer with "Yes".
- The start page of the installation program appears → "Next >".
- Select the installation directory to which the software should be extracted. By default, an appropriate subdirectory of the "Program Files" folder is offered. Confirm the selection with "Next >".
- Select the folder in the Start menu where the links for running the PAMMI Plus software, to various utility
 programs and to the Uninstall program should be placed. By default, an appropriate folder with application
 name and version in its path name is offered.
 Confirm the selection with "Next >".
- Select the preliminary settings of the PAMMI Plus software required for operation:
 - Node number → Unique node address for the PAMMI Plus call station
 - Device number → Device number of the PAMMI Plus call station
 - UAG number → Unique node address for the Universal Audio Gateway
 - Operation language → Interface language (English / German)
 - Configuration password → Password for creating/changing the PAMMI Plus configuration (assigning resources, configuring properties, editing the screen views)

If the installed PAMMI Plus software is configured as the only PC call station for the system and the proposed "Node number" 238 is not otherwise used in the system as a DOM or SCU address, the proposed default values for "Node number" (238) and "Device number" (2) can be accepted. If multiple PAMMI Plus instances are configured for the PA system, each instance of PAMMI Plus must be assigned a unique "Node number" (not otherwise used in the system) here during the installation.

The device number serves to differentiate the PAMMI Plus software from any other programs present on the same PC that also have access to the system and may identify themselves with the same node number as PAMMI Plus.

As UAG number, a system-wide <u>unique</u> node address must be assigned to the Universal Audio Gateway.



The installation takes place with specification of a node address for the Universal Audio Gateway. This activates the use of the host PC microphone as the call station microphone. If the input field for the UAG number remains empty, the functionality of the product installed on the UAG is <u>not</u> available.

Select the desired language "Operation language"

When specifying a "Configuration password", entry of the password is required as soon as one of the configuration dialogs (selectable via the "View" menu") is selected in the function window. The configuration authorisation remains active for three hours, then the password must be entered again.

Confirm the selection with "Next >".

Display of all selected installation options for confirmation. If a correction is necessary, click on "< Back" to
return to the window containing the incorrect entry, correct the entry there and return again to the
confirmation view with "Next >".

If all entries are correct, click "Install" to start the installation of the PAMMI Plus software.

• After installation of the PAMMI Plus software, the program asks whether the "HASP SRM Runtime Environment" should be installed. This software is required for executing the encrypted PAMMI Plus executables including the matching USB dongle.



If this is not yet installed on the computer (e.g. in the course of a previous PAMMI Plus installation) or if you are unsure, answer this question with "Yes". The installation can take several minutes. A progress indicator is displayed during the installation. A message appears to indicate when the process is complete.

Only when you are certain that the "HASP SRM Runtime Environment" is already installed may this item be skipped with "No".

- Message that the PAMMI Plus installation is complete. Close the installation program with "Finish".
- The PAMMI Plus icon "StartPAMMI" is now present on the desktop for starting the PAMMI Plus software. This link can also be found in the selected Start menu folder along with links for individually running the PAMMI Plus applications (PA-Server, PAMMI), to utility programs and the Uninstaller. If the PAMMI Plus software should be started automatically when the computer boots, manually copy the "StartPAMMI" link to the Autostart folder of the start menu.
- If the UAG function was activated with the installation, the microphone installed in the PC must be configured in the operating system as standard capture device in order for it to be available to the UAG as an audio source.

To do this, open the the corresponding setup dialog with Windows Control Panel \rightarrow Hardware and Sound \rightarrow Sound and select the Capture Devices tab. Select the desired microphone here and set it as default device (not default communication device).



The Windows dialog in which the default capture device is selected can also be opened via the UAGServer program.



Clicking on the icon in the taskbar brings the program to the foreground. Open the Windows dialog from the "Audio" tab with the button "Open Audio Control Panel".

Configuration Connections Audio Logging
Status
No active call.
Presignal attenuation [dB]
Input Device
Error reason (for developers)
Open Audio Control Panel Open Audio Input Test

The button "Open Audio Input Test" starts a diagnosis tool that can be used as follows:

- 1. Precise control can be achieved using the built-in peak meter for the microphone volume. The volume is changed with a slider control in the Windows dialog.
- 2. It is checked in advance whether the PC used satisfies the audio requirements for speaking into the VARIODYN[®] D1 system.



Before a new installation of PAMMI Plus, always delete the existing PAMMI Plus installation first! Before starting the uninstall program, make certain that none of the PAMMI Plus applications are active, and that the installation folder or the working folders of the applications (if not identical to the installation folder) as well as the files they contain are not in use by other programs (e.g. text editor, viewer, etc.).

Incomplete deletion of the data could cause problems with the new installation.

4 Configuration

4.1 First steps

For commissioning of a newly installed PAMMI Plus, the structure of the VARIODYN[®] D1 system must first be detected in order for the required resources to be assigned to PAMMI Plus on this basis. In addition, the configurable views for the zone selection and status indicator view must be created and populated with control elements. The initial configuration of PAMMI Plus created in this way can still be changed later to adapt it to future changes in the VARIODYN[®] D1 structure.

4.1.1 Scanning / Creating the device configuration

- Start PAMMI Plus by selecting the "StartPAMMI" icon on the desktop.
- Select the "Device configuration" function in the function view via the View → Device configuration menu item.
- Open the dialog for synchronising the device configuration with that of the connected PA system by clicking the "Sync" button in the function view.
- Enter the node address and the IP address of the DOM or of the ETCS via which the routes to the other nodes of the system will be scanned ².
- Start a system scan, beginning with the DOM / ETCS specified above by clicking the "Scan System Setup" button. For the duration of the scan, the "Scan System Setup" button is marked yellow to signify that the system scan is running (see Fig. 9). The system scan may take several minutes, depending on the size of the system.
- After the system scan ends, the "Scan System Setup" button appears grey again, and the VARIODYN[®] D1 nodes (DOM, SCU, ETCS, UAG) detected during the scan are listed as newly detected devices (see Fig. 10).
- Accept the configuration with "Synchronize all" in the device list of the function view. This closes the dialog
 for synchronising the device configuration.
 Alternatively, individual devices in the list can be selected and selectively transferred into the device list of
 the function window by clicking the "Synchronize selection" button.
- The list in the function window now shows the selected device configuration. Double-clicking on a device displays the real and virtual sub-devices (call stations, output amplifiers, ...) assigned to it. This process can be continued for the sub-devices. Double-clicking on a device closes the display again.
- Clicking on the "Save" button applies the configuration of devices displayed in the device list to the PAMMI Plus configuration. The following additional configuration elements are generated automatically:
 - 1 target zone each for every configured audio output circuit (AO ... audio output) for selection in the configuration of control elements
 - 1 input for each configured audio input (AI ... audio input) for selection in the configuration of control elements (The microphone input of the host PC is listed as AI of the UAG)
 - Control elements for positioning in the configurable screen views (zone view, status indicator view):
 - 1 single zone selector button per configured audio output circuit
 - 1 zone group selector button over all single zones for an "All Call"
 - 1 clear button for resetting the current zone selection
 - 1 status indicator field per configured audio input
 - 1 status indicator field for the connection to the PA server
 - 1 status indicator field for SCU playback
 - 1 status selector field for played pre-signals
 - 1 status indicator field each for 5 defect / error groups by priority

² During configuration of the D1 system with the designer, the routes to all other nodes of the system are automatically entered in every DOM.

4.1.2 Assignment of resources

- Select the "Settings" function in the function view via the View → Settings menu item
- Select an audio input as signal source (microphone) for live announcements
- Select and configure the PTT button for initiating live announcements
- For configuration of an external PTT button: Select an indicator LED for live announcements
- Select an audio output as monitor speaker
- Save the selection with the "Save" button

4.1.3 Configuration of the status indicator view

- Select the "Edit Input/Device Status View" function in the function view via the View → Assign inputs menu item.
- The available control elements are displayed in the function view. The automatically configured status indicator fields are located at the end of the list.
- 6 fields for status indicator views are already pre-designated in the status indicator view. These can now be assigned status indicator fields from the control elements list in the function window by selecting the list and clicking on the desired field in the status indicator view.
- Save the view with the "Save" button in the function window.

4.1.4 Creating a zone view in button format

- Select the button format of the zone view by clicking on the "Button format" button in the toolbar.
- Select the "Edit zone view in button format" function in the function view via the View → Assign zones menu item.
- The available control elements are displayed in the function view. The automatically configured single zone and zone group selector buttons are located at the start of the list.
- In the zone view window, fields are already pre-designated in button format for the positioning of control elements. These can now be assigned control elements by selecting the list and clicking on the desired field in the zone view.

The assigned single zone selector buttons are depicted as rectangular buttons with coloured borders. The colour of the border indicates the status of the respective target zone. The colour of the button inside the border indicates whether the associated zone is selected as the target for the next connection to be triggered (blue) or not (grey).

The colour of the zone group selector button indicates whether all of its assigned (single) zones are selected as the target for the next connection to be triggered (blue) or not (grey).

• Save the view with the "Save" button in the function window.

4.1.5 Creating a zone view in graphical format

- Select the graphical format by clicking on the "Zone format" button in the toolbar.
- Select the "Edit zone view in graphical format" function in the function view via the View → Assign zones menu item.
- The available control elements are displayed in the function view. The automatically configured single zone and zone group selector buttons are located at the start of the list.
- Creating the background image:
 - Open the drawing program "Paint" with the "Edit template" button
 - The size of the image shown here corresponds to that of the zone view window before loading the drawing program.
 - Draw the zone plan, possibly using the import function for existing plans or parts thereof. Note here
 that every zone must represent an enclosed area bordered by lines or other graphical elements with
 colours that differ from the colours of the zone area as well as the status colours (see colour settings,
 chapter 4.3.5).
 - Save the image as a bitmap.
 - Close the Paint program. The created background image is shown in the zone view.
- Position the single zone selector buttons within the areas created in the zone plan:
 - Select the single zone selector button in the control elements list of the function view
 - Draw a dashed rectangular frame in the zone area by clicking on the target position for one corner, dragging the mouse with the button held down to the diagonally opposite corner and releasing the mouse button.
 - Click inside the drawn rectangle. The single zone selector button is now present in place of the drawn rectangle.
 - The size and position of the button can be subsequently changed by selecting in the zone view (click) and moving the respective positioning symbols (arrow, cross) that appear upon moving the mouse over the edge of the button.

The status of the target zones addressed by the single zone selector button is indicated by the colour of the area around the button. A clear bordering of the zone area in the background image is absolutely required since areas outside this may also be coloured with the status colour. The colour of the button indicates whether the zone it addresses is selected for the next connection to be triggered (blue) or not (grey).

- Position the "Clear" and zone group selector button at any location in the plan:
 - Select the control element in the list of the function view.
 - Pre-draw the (dashed) positioning frame as for the single zone selector buttons (see above).
 - Insert the selected control element into the zone view by clicking inside the positioning frame.
- Save the view with the "Save" button in the function window.

4.2 Device configuration

The PAMMI Plus software is informed of the structure of the PA system to be controlled and monitored via the device configuration. This is the basis for further PAMMI Plus configuration settings. The function view for the device configuration is selected via the View → Device configuration menu item.

This view provides the function elements for creating and editing the device configuration.



Operating the device configuration dialog and the popup dialogs used requires detailed knowledge of the VARIODYN® D1 system.

Devices:		Sync	New Modify Delet	e
ID		Name	Туре	
050.SC.001	UAG 50		UAG-1	
211.SC.001	DOM 211		DOM4-8	
212.SC.001	DOM 212		DOM4-24	
213.SC.001	DOM 213		DOM4-24	Save
220.SC.001	ETCS 220		ETCS	
221.SC.001	ETCS 221		ETCS	
236.SC.001	SCU 236		SCU	

Fig. 8: Function view for the device configuration

All devices are shown hierarchically in the function view. After selection of the device configuration, the system device components (DOM, SCU, ETCS, UAG) appear in the function window. Double-clicking on a device additionally displays the immediate sub-devices for better differentiation from the higher level devices with inset ID. This process is available for every displayed device with sub-devices. Double-clicking again ends the display.

The following is shown for every device:

• ID

This is the designation of the device that is unique within the entire system (incl. all address parameters)

Name

The name that describes the device. Every device can be assigned an arbitrary name via the configuration. If no name is assigned to a device, PAMMI Plus generates a default name.

Type

This specifies the product type of the device insofar as this does not clearly follow from its ID, e.g. DOM4-8, DOM-4-24, UIM, DCS15, ...

Sub-devices (call stations, UIM, output amplifiers) are freely configurable in the VARIODYN[®] D1 system or permanently assigned to the higher level device (signal generator, audio outputs and inputs, ...). The permanently assigned devices are shown with a grey background and can only be removed from the device list together with a hierarchically higher level, freely configurable device.

The device list can be created and modified in two ways:

- Automatically using the system scan
- Manually by using the "New", "Modify" and "Delete" buttons

Changes are applied by clicking the "Save" button.

Before saving, the changes can be discarded by selecting another function to leave the device configuration and answering the confirmation prompt with "No".

4.2.1 Performing and evaluating a system scan

- Open the dialog for synchronising the device configuration with that of the connected PA system by clicking the "Sync" button in the function view.
- If no DOM has been saved yet in the device configuration, input windows of the node and IP address of the DOM at which the system scan should be started will appear. Both entries are required. All routes to other system nodes that are saved in the scanned DOM are also scanned, and if the configuration is consistent (e.g. with the designer), the entire PA system is run through in its current configuration.
 If the saved device configuration already contains a DOM, no input fields for the nodes and IP address of the DOM are displayed for the scan start. The already configured system nodes are scanned first, followed by all other system nodes.
- Start the system scan by clicking the "Scan System Setup" button. For the duration of the scan, the "Scan System Setup" button is yellow to signify that the system scan is running (see Fig. 9). The system scan may take several minutes, depending on the size of the system.
- When the system scan is finished, the "Scan System Setup" button becomes grey again and the differences from the existing configuration detected in the scan are listed (see Fig. 10).
- With "Synchronize all", the entire configuration detected by the scan is accepted; in other words, the newly detected devices are added to the device list, devices not configured in the D1 system are removed and the devices configured differently in the device configuration are assigned the configuration from the D1 system.

Alternatively, deviations in the scanned configuration can be selectively applied to the device list by selecting the devices to be synchronized and clicking on the "Synchronize selection" button. This closes the dialog for synchronizing the device configuration.

- The list in the function window now shows the new (not yet saved) device configuration. The sub-devices can be viewed and checked by double-clicking on the new devices. Clicking on the "Modify" button allows the configuration of a selected new or changed device to be viewed and changed.
- Apply the current device list to the device configuration by clicking on the "Save" button in the function view.

Honeywell	MMI D1-PA	User		Edit D1-Device	Configuration		04/09/19 15:20:13
File Vi	ew Help	L.	P.				, p
Zone Format	Button Format	Sc	heduler DVA Queue	Recorder	History Alarm	IS	AND
Zone Format	Button Format	Synchronize Device Configuration Select devices for synchron ID	heduler DVA Queue	Recorder Type	History Alarm	s Sync. Action	AND Step Scan System Setup starting at Node 211 with IP-Address 192 . 166 . 1 . 211
							Synchronize Selection Synchronize All Cancel
Devices: II)	Name	Sync New Modify Type	Delete	Save Status	Clear 018 MMI 15:19:3	<u>РП</u> 38 Рб SCR - ц

Fig. 9: Running system scan with empty device configuration

Honeywell	MMI D1-PA	User	·		E	it D1-Device Cr	nfiguration		04/09/19 15:05:52
File V	iew Help	P							P • •P
Zone Format	Button Format		Scheduler	DVA	Queue	Recorder	listory A	larms	AND
L 2010 FORMAT		Synchronize Device Co Select devices for 050 SC 001 UA 211.SC 001 DO 212.SC 001 DO 213.SC 001 DO 220.SC 001 ET 236.SC 001 SC	Infiguration aynchronization G 50 M 211 M 212 M 213 S 220 S 221 J 236	Name	UAG UAG DOM DOM DOM ETC: ETC: SCU	Type	Scan Result ew ew ew ew ew ew	Sync. Action Add Add Add Add Add Add Add Add Add	Scan System Setup starting at Node 211 with IP-Address 192 . 168 . 1 . 211 Synchronize Selection Synchronize All Cancel
Devices:	D	Name	Sync	New M	Nodify Delet	Se	we		
							SI	atus: Clear 0000010 MMI 15:04	PTT 16 P1 PA-CTRL + C

Fig. 10: Display of the system scan results

4.2.2 Editing the device list

- "Delete" removes all selected devices from the device list.
- "Modify" opens a dialog that displays all the configuration settings of the selected device (see Fig. 11). The name of the device can be changed in this dialog. Changes to the other configuration settings are only possible by deleting and recreating the device. "OK" accepts the new name for the device and closes the edit dialog.
- "New" opens the dialog for creating a new device. After filling out the form, click on "OK" to add the new device to the device list and close the popup dialog.
- Apply the edited device list to the device configuration by clicking on the "Save" button in the function view.



Fig. 11: Popup dialog for changing the configuration of the device selected in the device list

4.3 Settings

Microphone:	ETCS 220, Mic In	•	Monitor Speaker: Recording Indicator:	ETCS 220, Speaker DOM 211, DCS1, Key 10 (Button &
-PIT-Button				
O Press	O Delayed Abort	External Button	Ext. PTT-Button:	DOM 211, DCS1, Key 10 (Button & 💌
Toggle	Instant Abort	Screen Button	Ext. PTT-LED:	DOM 211, DCS1, Key 10 (Button & 💌
- Announcement A	ttributes			
Message	Type Pre-Si	gnal Priority	Connect N	Node Setup Colors
Live	▼ 3xGong	▼ 100 ÷	Full Connect	▼ Save

Fig. 12: Function view for defining the PAMMI Plus settings

The following can be done via the "Settings" function dialog:

- Assign the necessary resources to PAMMI Plus
- Define the properties of the initiated connections
- Define the colours for the status indicators of zones/inputs/devices/functions and of announcements

This is selected in the function window via the View \rightarrow Settings menu item.

The configured settings must be applied to the configuration with "Save". Until then, it is possible to discard changed settings by selecting another function in the function view and answering "No" to the confirmation prompt that appears.

4.3.1 Microphone

All audio inputs present in the PA system (On a configured UAG, also the microphone of the host PC) are offered as a selection for the microphone. It is absolutely required that a microphone be specified to use the "Speak" (see chapter 5.1) and "Record" (see chapter Recording) functions.

4.3.2 PTT button

The "PTT" screen button in the PAMMI Plus GUI and/or an external button in the D1 system can be selected as a PTT button for the connection of a live announcement via the microphone specified in chapter 4.3.1. If the button on the screen as well as an external button is configured as PTT button, a live connection can be initiated by PAMMI Plus using either of the two buttons. The connection is ended with the same button via which it was initiated.

All binary inputs in the D1 system registered in PAMMI Plus are offered for the external button. A binary input can also be the button of a call station or a control input on a UIM. In order to be used as a PAMMI Plus PTT button, the state must be reported to PAMMI Plus via the transport line. This must be configured accordingly in the configuration of the D1 system. PAMMI Plus detects all usable binary inputs in the system scan (chapter 4.2.1) and offers them in the "Settings" function view as possible external PTT buttons.

In addition to the external button, an output line can also be configured to signal the readiness for speaking "Ext. PTT-LED". All binary outputs that are reachable via a transport line are offered for this. When a call station button is configured as an external PTT button, it should be selected as "Ext. PTT-LED".

Configurable properties of the PTT button:

• Mode:

"Press" or "Toggle" mode. In "Press" mode, the voice connection remains active as long as the PTT button is pressed. In "Toggle" mode, every press of the button switches the active state of the voice connection (on <-> off).

• Delayed abort:

If "Delayed Abort" is selected, an existing voice connection is only disconnected 300 ms after the end of the announcement. This prevents an accidental early release of the PTT button in "Press" mode from interrupting the voice connection. The delayed abort should only be selected in "Press" mode and not in "Toggle" mode. Alternatively, "Instant Abort" causes the voice connection to be disconnected immediately upon the end of the announcement (releasing of the PTT button).

4.3.3 Monitor speaker

All audio outputs of VARIODYN[®] call stations and UIMs present in the device configuration are offered as possible "monitor speakers". For the "Pre-listen" function in the "Announcement" dialog (see Chapter 5.3) and the "Play" (playback) and "Pre-listen" functions in the "Recorder" dialog (see chapter 0), an audio output must be specified as monitor speaker.

4.3.4 Announcement attributes

For the connections initiated by PAMMI Plus, the following attributes can be parameterised depending on the type of message output:

Pre-signal

1x, 2x, 3x gong or no pre-signal

• Priority level:

1-250 (highest priority = 1, lowest = 250)



For security reasons, the priority level must always be below the priorities for security-relevant messages defined for the system.

• Connection mode:

Full connection, partial connection and reconnection, intermediate saving if blocked

The possible message types are:

- Live announcements initiated via the PTT button (chapter 4.3.2)
- Playback of a text phrase from the SCU via the "Play" button in the "Announcement" dialog (see chapter 5.3) These text phrases are organised into the message groups that are assigned separate selector buttons in the "DVA" dialog (selection of the "Message Type" on the left). Every message group corresponds to a different message type.

4.3.5 Setup colours

The states of zones in the zone view as well as the devices and functions shown in the status indicator view are indicated by colours. The states of live announcements are also indicated via the colour of the (screen) PTT button: These colours can be configured. To do this, click on the "Setup colours" button in the "Settings" dialog. A window for defining these status colours appears (see Fig. 13).

Edit Color Settings		L 02	100			NO.	
Zone&Input Stat	te Indication Colors			Announcement St	tate Indication Colors	6	
State	Color	RGB-Code		State	Color	RGB-Code	
Unavailable:	Grey 🔻	192/192/192		Initiated:	Grey 🔹	192/192/192	
Ready:	White -	255/255/255		Presignal:	Yellow 💌	255/255/0	
Busy:	Yellow 💌	255/255/0		Playing:	Green -	0/255/0	
In Use by Me:	Green 💌	0/255/0		Fault:	-	255/100/0	
Fault:	-	255/100/0					
		Can	cel	OK			

Fig. 13: Popup dialog for editing the signal colours

The following zone and device states exist:

- Unavailable (no connection to the D1 PA system)
- Ready (available but not active)
- In use by the existing PAMMI Plus
- Busy: In use (generally) and/or "On" or "Active" for functions or communication connections
- Alarm

Announcement states indicated by colour on the PTT button are:

- Connection initiated
- Playing back the pre-signal
- Playing (ready for speaking)
- Fault

Each of these states can be assigned a separate colour.

- By selecting one of the colours grey, white, yellow, red, green or blue
- By directly entering the RGB code (red / green / blue colour components)
- By clicking on the colour field to the right of the input field for the RGB code and selecting any user-defined colour.

4.4 Zone configuration

Zones are the target areas in the PA system addressable by PAMMI Plus for announcements.

Single zones

Up to 1024 definable zone areas whose operating state is monitored and, if corresponding control elements (see chapter 4.6.2.1) are placed in the views of the zone view and zone indicator view, are displayed by PAMMI Plus. Every single zone can be assigned any combination of audio outputs of the PA system.

• Zone groups

Any combination of single zones that are addressed together via the identification number of the zone group.

Both types share the same range of 1999 identification numbers (0...1998, also called a zone number), of which only the numbers 1...1024 are permitted for single zones. The identification number 0 is reserved as an empty zone and assigned the "Zone group" type. Zone 0 is used for clearing already selected zone addresses.

When devices selected (announcement targets) as audio outputs, the individual speaker circuits and line-outs at the call stations and UIM are initially added to the device configuration, a single zone is automatically created for each configured audio output in the PA system. In addition, a zone group that contains all single zones is also created for "All calls".

If the device configuration is changed or if the automatically created zones do not correspond to the desired zone configuration, these can be manually changed via the "Zone Configuration" function dialog (see Fig. 14).

This dialog can be opened via the View \rightarrow Zone Configuration menu item in the function view, and all configured zones are listed identically with number (ID), name, type and assignments. If the name of a zone is identical to a device ID (see 4.2), an automatically generated default designation is shown for the device instead of this device ID.

Zones:			New Modify Delete	
ID	Name	Туре	Assigned Zones/Devices	
0001 DOM 211, S	peaker-Line 1.1	Single Zone	211.AO.001	
0009 DOM 212, S	peaker-Line 1.1	Single Zone	212.AO.001	
0057 DOM 213, L	oop 1	Single Zone	213.AO.001,213.AO.002	
0058 ETCS 220,	Speaker	Single Zone	220.AO.041	Save
0059 ETCS 220,	Line Out	Single Zone	220.AO.042	
0060 ETCS 221,	Speaker	Single Zone	221.AO.041	
0061 ETCS 221,	Line Out	Single Zone	221.AO.042	
1901 All Zones		Zone Group	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,1	
		-		
< .			>	

Fig. 14: Function view for zone configuration

To apply to the configuration after finishing all editing steps, click the "Save" button in the function view. To discard the changes, select another function in the function view and answer the confirmation prompt with "No".

4.4.1 Creating a new zone

- Click on the "New" button. A dialog for creating a new zone is opened (see Fig. 15).
- Enter the zone number as the identification number for the new zone. All numbers still available are offered for selection. The numbers of zone groups should be greater than or equal to 1025 in order to keep the lower values open for single zones.
- Enter a name.
 Zone names may contain the following characters: All alphanumeric characters, spaces, dashes.
 Commas and underscores are not allowed.
- Define the zone type: Single zone or zone group
 All elements available for the selected type are shown in the selection list.
- Select the audio outputs / single zones to be assigned in the selection list:
 - For single zones: All audio outputs of the PA system
 - For zone groups: All single zones
- Move the selection to the assignment list by clicking the "<<" button
- Elements moved to the assignment list can be moved back to the selection list by selecting them and clicking on ">>".
- Apply the new zone to the zone list of the function view and finish with "OK".

4.4.2 Modifying a zone

- Select the zone to be modified in the zone list by clicking on it.
- Click on the "Modify" button. A dialog for modifying the selected zone appears (see Fig. 15). This dialog is similar to the one for creating a new zone (see chapter 4.4.1). The zone number cannot be edited, and the current configuration of the zone assigned to this number is displayed when the dialog opens.
- Change the name, type and/or assignment, see chapter 4.4.1.
- Apply the changed data to the zone list of the function view and finish with "OK".

Setup Zone						
ZoneNo.	Zone Name 211.AO.001		⊙ Sir	igle Zone ne Group		
	Assigned Audio Outputs				Selectable Audio Outputs	
211.AO.001	: DOM 211, Speaker-Line 1.1		~	211.AO.002: 211.AO.0103: 211.AO.017: 211.AO.017: 211.AO.018: 211.AO.025: 211.AO.025: 211.AO.025: 211.AO.042: 211.AO.043: 211.AO.043: 211.AO.043: 211.AO.044: 211.AO.045: 211.AO.045: 211.AO.047: 212.AO.001: 212.AO.002: 212.AO.003: 212.AO.003: 212.AO.005:	DOM 211, Speaker-Line 1.2 DOM 211, Speaker-Line 2.1 DOM 211, Speaker-Line 2.2 DOM 211, Speaker-Line 3.1 DOM 211, Speaker-Line 3.2 DOM 211, Speaker-Line 4.1 DOM 211, Speaker-Line 4.2 DOM 211, DCS1, Speaker DOM 211, DCS2, Speaker DOM 211, DCS2, Line Out DOM 211, DCS2, Line Out DOM 211, UIM3, Line Out 1 DOM 211, UIM3, Line Out 1 DOM 211, UIM3, Line Out 1 DOM 211, UIM3, Line Out 2 DOM 211, DCS4, Speaker DOM 212, Speaker-Line 1.1 DOM 212, Speaker-Line 1.3 DOM 212, Speaker-Line 1.3 DOM 212, Speaker-Line 1.5	~
		Cancel		0	ĸ	

Fig. 15: Configuration dialog for newly created zones or for modifying zones

4.4.3 Deleting zones

- Select all zones to be deleted by clicking on them.
- Click on the "Delete" button. The selected zones are removed from the zone list. Their IDs (zone numbers) are freed up and available again for new zones.

4.5 PA input configuration

Audio signals are fed into the PA system and identified via up to 1023 PA inputs. Their operating state is constantly monitored and also displayed if corresponding control elements (see chapter 4.6.2.3) are placed in the zone view and status indicator views. Normally, a PA input configured for the PAMMI Plus is assigned to an audio input in the VARIODYN[®] D1 system; on a configured UAG, also the microphone of the host PC. However, it is also possible to group together multiple inputs for a shared status indicator (e.g. 2 signal sources assigned to one operating location).

Every time a new device is added to the device configuration via which audio signals can be fed into the PA system a PA input is automatically created for the PAMMI for each configured audio input in the PA system (microphone inputs and line-ins at the call stations and UIM, microphone inputs and line-ins at the ETCS as well as the microphone input on the host PC of the PAMMI Plus). In addition, a PA input is created that collects together all signal generators for pre-signals in the system, and a collective PA input for the played-back text phrases of an SCU. Both can only be used for displaying their operating state (e.g. pre-signal is played, text phrase from the SCU is played) and not as a signal source for a live announcement (chapter 5.1) or a playback (chapter 5.3).

Normally, the automatically generated PA inputs are sufficient. If they do not correspond to the desired configuration, they can be manually edited via the "PA Input Configuration" function dialog (see Fig. 16). This dialog can be opened via the View \rightarrow PA Input Configuration menu item in the function view. All PA inputs configured are listed here with number (ID), name and assignments.

Inpute	x	New Modify Delete	j
ID	Name	Assigned Audio-Input(s)	
0001	050.AI.001	050.AI.001	
0002	050.AI.002	050.AI.002	
0003	211.AI.041	211.AI.041	
0004	211.AI.042	211.AI.042	Save
0010	212.AI.041	212.Al.041	
0011	212.AI.042	212.AI.042	
0014	220.AI.041	220.AI.041	
0015	220.AI.042	220.AI.042	
0902	Pre-Signal	050.AI.031,211.AI.031,212.AI.031,213.AI.031,220.AI.031,221.AI.031, v	
<		>	

Fig. 16: Function view for PA input configuration

To apply the changes after finishing all editing steps, click the "Save" button in the function view. To discard the changes, select another function in the function view and answer the confirmation prompt with "No".

4.5.1 Creating a new PA input

- Click on the "New" button. A dialog for creating a new PA input is opened.
- Select the input number as an identification number for the new PA input. All available numbers are offered for selection.
- Enter a name. This can contain any printable character.
- Select the audio inputs to be assigned in the selection list:
- Apply the selection by clicking the "<<" button
- Elements moved to the assignment list can be moved back to the selection list by clicking on ">>".
- Accept the new PA input and finish with "OK".

4.5.2 Modifying a PA input

- Select the PA input to be modified by clicking on it.
- Click on the "Modify" button. A dialog for modifying the selected PA input appears (see Fig. 17). This dialog is the same as for creating a new PA input (see chapter 4.5.1). The input number cannot be edited, and the current configuration of the PA input assigned to this number is displayed when the dialog opens.
- Change the name, and/or assignment (see chapter 4.5.1).
- Accept the new PA input and finish with "OK".

Setup Input			
InputNo. Input Name			
Assigned Audio Inputs		Selectable Audio Inputs	
211.Al.031: DOM 211, Pre-Signals 212.Al.031: DOM 212, Pre-Signals 213.Al.031: DOM 213, Pre-Signals 220.Al.031: ETCS 220, Pre-Signals 221.Al.031: ETCS 221, Pre-Signals	« »	050.Al.001: UAG 50, Audio Input 1 050.Al.031: UAG 50, Audio Input 2 050.Al.031: UAG 50, Audio Input 31 211.Al.041: DOM 211, DCS1, Mic In 211.Al.042: DOM 211, DCS2, Line In 211.Al.043: DOM 211, DCS2, Mic In 211.Al.044: DOM 211, DCS2, Line In 211.Al.045: DOM 211, DCS2, Line In 211.Al.046: DOM 211, UIM3, Line In 1 211.Al.047: DOM 211, UIM3, Line In 1 211.Al.047: DOM 211, DCS4, Mic In 211.Al.047: DOM 212, DCS1, Mic In 212.Al.041: DOM 212, DCS1, Line In 1 212.Al.042: DOM 212, UIM2, Line In 1 212.Al.043: DOM 212, UIM2, Line In 1 212.Al.044: DOM 212, UIM2, Line In 2 220.Al.041: ETCS 220, Mic In 220.Al.042: ETCS 220, Line In 220.Al.042: ETCS 220, Line In 220.Al.042: ETCS 221, Mic In 220.Al.042: ETCS 221, Mic In 221.Al.043: DCS 20, Stored Audio 221.Al.044: ETCS 221, Line In	~
	Cancel	ОК	

Fig. 17: Popup dialog for configuration of a PA input

4.5.3 Deleting PA Inputs

- Select all PA inputs to be deleted by clicking on them.
- Click on the "Delete" button. The selected PA inputs are removed from the list. Their IDs (input numbers) are freed up and available again for new PA inputs.

4.6 Creating the views for the Zone view and the Status indicator view

3 views are configurable by the user:

- Zone view in graphical format
- Zone view in button format
- Status indicator view

The names of the 3 views are derived from what should be displayed in these views. Single zone selector buttons in the "View-specific standard setting" operation mode, as assigned during automatic generation, are displayed according to the view (see chapter 4.6.2.1):

The zone view in graphical format is a plan view of the monitored area that displays the arrangement and structure of the zones addressed by the PA system. Railway line, building and/or room plans form the basis. The zone view in button format corresponds to the same operating options as in the graphical format, although

the target zones are only depicted (in the standard setting) schematically as buttons with the name of the respective zone.

The status indicator view serves to display the operating states of signal sources, functions and devices.

Regardless of the type and display of the single zones in "View-specific standard setting" operation mode, all 3 views have the same design options and are structured identically. Each of these views is assigned a background image and a selection of control elements that are positioned against this background.

The combination of the 3 views (graphical zone view – zone view in button format – status indicator) is also referred to as a layout, and its configuration is saved in a shared layout file. Any number of such layouts can be created and selected in the zone view and status indicator view using the layout selector buttons (see chapter 4.6.2.4).

Creating / modifying a layout view:

- Start the configuration dialog (see chapter 4.6.1)
- Create / edit the control elements list (see chapter 4.6.2)
- Create / edit the background image (see chapter 4.6.3)
- Position the control elements in the view (see chapter 4.6.4)
- Save the view in the desired layout file 9 (see chapter 4.6.5)

4.6.1 Starting and ending a configuration session for system views

• The configuration session is started by selecting the configuration dialog (see Fig. 18) for the affected view via the menu:

View \rightarrow Assign Zones Edit the current view in the zone view

View \rightarrow Assign Inputs Edit the current view in the status indicator view

- During the configuration session, the view to be edited can be reselected within the selected view window by
 - Loading the view of another layout: Select the desired layout file from the list of available layout files and click the "Load" button.
 - Changing the display format of an edited zone view (graphic format <-> button format): Click on the appropriate button in the toolbar ("Zone Format" or "Button Format").

Every time the view is changed, the user is informed of unsaved configuration changes in the old view (save or discard).

• The session can be ended by selecting any other function in the function view (save or discard).

Contr	ols:		New	Modify Dele	ete	Layout file:
ID	Туре	Name		Setup		layout1.ini 🔹
0000	Zone-Group Button	Clear	LO		~	
0001	Single-Zone Control	211.AO.001	1			Load Save
0002	Single-Zone Control	211.AO.002	2			
0003	Single-Zone Control	211.AO.009	3			
0004	Single-Zone Control	211.AO.010	4			
0005	Single-Zone Control	211.AO.017	5			
0006	Single-Zone Control	211.AO.018	6			
0007	Single-Zone Control	211.AO.025	7			Edit Imago
0008	Single-Zone Control	211.AO.026	8		~	
<	-				>	Delete Element

Fig. 18: Function window for editing the system views

4.6.2 Creating, editing and deleting user elements

The configuration dialog (see Fig. 18) contains the list of already configured control elements. These are displayed differently based on the use and selection status in the edited view and the elements list:

Black text on grey background → Control element positioned in the view Black text on light blue background → Control element selected in the view White text on blue background → Control element selected in the list	Black text on white background	→	Unused control element
Black text on light blue background → Control element selected in the view White text on blue background → Control element selected in the list	Black text on grey background	→	Control element positioned in the view
White text on blue background	Black text on light blue background	→	Control element selected in the view
	White text on blue background	→	Control element selected in the list

Before a control element can be assigned to a view and placed, it must first be created and configured. During creation of the device configuration (see 4.2), the following control elements are generated automatically:

- 1 single zone selector button in the "View-specific standard setting" operation mode (see chapter 4.6.2.1) for each newly created single zone (chapter 4.4)
- 1 zone group selector button in the "With selection indication" operation mode (see chapter 4.6.2.2) for each newly created zone group (chapter 4.4)
- 1 zone group selector button without zone assignment for clearing the zone selection (Clear button)
- 1 status indicator field (see chapter 4.6.2.3) for each newly generated PA input (and thereby for each audio input into the PA system, the microphone input of the PAMMI Plus host PC, for the pre-signal playback and for playbacks from the SCU, see chapter 0)
- 1 status indicator field (see chapter 4.6.2.3) for the connection to the PA server
- 1 status indicator field (see chapter 4.6.2.3) for the scheduler
- 5 status indicator fields (see chapter 4.6.2.3) for defects/faults of the alarm levels 1 5

Additionally required control elements, such as layout selector buttons and setting controls, must be created manually.

Manual creation of a new control element:

Click the "New" button in the function view: A dialog for creating the new element is opened (see Fig. 19).

Setup View Co	ntrol		1 1 M
ID .	Туре	Name	
0030 🔹			
- Parameter	Device Parameter Control Indicator Lamp		
Configurati	Layout Button Single-Zone Control		
	Zone-Group Button		OK Cancel

Fig. 19: Popup dialog for creating a new control element

- Select an available ID for the new control element. Any number from the range 0 65535 not yet already assigned to another control element is allowed as ID. The next 10 available IDs of each 1000 block are offered in the selection list for the ID in order to simplify grouping of the elements by ID. The ID can also be entered directly. By default, the lowest still available ID is suggested to the user upon opening of the dialog.
- Select the element type. Depending on the element type selected, the dialog is extended with input and selection fields for specifying the type-specific control and display parameters of the control element. The types supported by the dialog as well as their configuration are described in the sub-chapters 4.6.2.1 to 4.6.4.5; the associated type-specific extended dialogs are shown in Fig. 20 to Fig. 26.
- Assign a name. Most control element types display this name. The element name may contain all printable characters except for commas and underscores. Various types also support the escape code "\n" for inserting a line break.
- The "Configuration String" input field is provided for a system expansion. Do not use this!
- Specify the control and display parameters specific to the element type using the provided input and selection fields.
- Confirm the entries with "OK". If the entries are consistent and complete, the dialog is closed and the new element entered into the element list of the function view. The newly created control element is automatically selected for positioning in the edited view.
 If entries are missing or invalid, the user is informed of this with a popup message and the edit dialog remains open.
- The process of control element creation can be ended at any time with "Cancel" and the edit dialog closed without generating a new control element.

Changing an already existing control element:

- Select the control element to be changed in the element list.
- Click the "Modify" button in the function view: A dialog for modifying the selected element appears.
- Edit the type, name and/or type-specific control and display parameters. Changing the element type is only possible if the edited element type is not yet assigned to any view. See above for information on the "Configuration String" input field.
- Confirm the entries with "OK". If the entries are consistent and complete, the dialog is closed and the new configuration for the edited control element is applied. However, if the element is already assigned to a view, the user is informed of this and asked whether the changes should be applied.
 If entries are missing or invalid, the user is informed of this with a popup message and the edit dialog remains open.
- The process of modifying a control element can be ended at any time with "Cancel" and the edit dialog closed without changing the control element configuration.

To delete a control element from the element list, select this and click the "Delete" button. If the element is already assigned to a view, the user is informed of this and asked whether the process should be cancelled.
4.6.2.1 Single zone selector button

The single zone selection buttons have two functions:

- Selecting a single zone (see chapter 4.4) as the target for live announcements (see chapter 5.1) and for playing back text phrases (see chapter 5.3).
- Displaying the operating state of the assigned single zone

The selection of target zones via single zone selector buttons takes place based on the state of the "AND" button on the right side of the PAMMI Plus toolbar:

- If this is pressed, all single zones selected via single zone or zone group selector buttons are combined and used together for addressing announcement targets. The selector buttons have a toggle function, meaning that already activated single zones can be removed again from the zone combination by clicking again on the associated single zone selector button.
- If the "AND" button is not pressed, clicking on a selector button clears any existing zone selection and replaces it with the zone associated with the button.

The display and the way in which the activation and operating status of the zone are indicated are determined by the operation mode of the single zone selector button. 6 operation modes are available:

Representation	Rectangular grey button
Zone selection:	Clicking the button
Name display:	No
Activation display:	Dark blue colouring of the button
Display of the zone status:	Colour of the button surroundings. The bordering of the button surroundings in the background image is absolutely required and describes the limits of the area addressed by this zone.

"Selector button with surrounding status indication area" operation mode:

"Transparent selector button with surrounding status indication area" operation mode:

Representation	Text field with transparent background
Zone selection:	Click the text
Name display:	The element name forms the content of the text field (multiple names are possible by inserting the escape code "\n" for each new line)
Activation display:	Bold name in black
Display of the zone status:	Via the background colour of the text field and its surroundings. The bordering of the text field surroundings in the background image is absolutely required and describes the limits of the area addressed by this zone.

"Selector button with status indication border" of	operation mode:
--	-----------------

Representation	Rectangular grey button with coloured border
Zone selection:	Clicking the button
Name display:	Display of the element name on the button
Activation display:	Dark blue colouring of the button with white text
Display of the zone status:	Colour of the button border. The button surroundings remain unaffected, meaning that no bordering of the button in the background image is required.

"Selector field with status indication" operation mode:

Representation	Rectangular coloured field (without border)
Zone selection:	Click the field
Name display:	No
Activation display:	Blue stripes in the field
Display of the zone status:	Colour of the field. The surroundings remain unaffected, meaning that no bordering of the button in the background image is required.

"Status indicator field without selection functionality" operation mode:

Representation	Text field with transparent background
Zone selection:	Not possible
Name display:	The element name forms the content of the text field
Activation display:	The keys
Display of the zone status:	Background colour of the text field. The surroundings remain unaffected, meaning that no bordering of the button in the background image is required.

"View-specific standard setting" operation mode:

With this setting, the actual operation mode is determined depending on the view in which the single zone selector button is placed:

Zone view in graphical format:	"Selector button with surrounding status indication area"		
Zone view in button format:	"Selector button with status indication border"		
Status indicator view:	"Status indicator field without selection functionality"		

The colours used for indicating the operating status are defined via the "Settings" function dialog (see chapter 4.3.5). The default colours configured upon installation of PAMMI Plus are listed in chapter 2.

For the operation modes that require the bordering of the control element for zone delineation because the zone status is indicated via the colour of the control element surroundings, the following must be noted:

- The zone border drawn into the background image (lines, other figures and elements) may not contain or take on any of the colours used for the status signalling.
- If a template for positioning the selector button is created in the background image (see chapter 4.6.3 and 4.6.4), the border drawn for the button must have gaps; otherwise it will be interpreted as the zone border.
- The upper left corner of the selection button must lie within the drawn zone boundary. It must never lie on the zone boundary, since this would then be interpreted as a zone itself. In the case of a white background, this can cause the boundary lines to vanish.

To configure the single zone selector button, define the following control and display parameters for creating / modifying the control element (see Fig. 20):

Mode:

A list of the above operation modes is offered to the user for selection. The selected operation mode determines the type of display of the button in the view to which it is assigned.

Single zone:

A list with all configured single zones (see chapter 4.4) is offered to the user for selection. The selected zone is used for the addressing of announcement targets when the button is activated. Their operating status is constantly displayed on the button and/or its surroundings, depending on the selected operation mode.

Setup Vie	ew Control	1.0			1		-	1	a good and
ID	Туре			Name					
0030	▼ Single-Zon	e Control	•	Channel 1					
Parar	neters and Attrib	outes							
Config	uration String:	BorderButt	ton, 1						
		·							
Opera	tion Mode:	Selector b	utton with s	status indicatio	n border	•			
Logica	al Zone:	Zone001:	10, Speak	er-Line 1.1		•			
		Zone001:	10, Speak	er-Line 1.1		×			
		Zone002:	10, Speak	er-Line 1.2				ĸ	Cancol
		Zone003:	10, Speak	er-Line 2.1				×	
		Zone004:	10, Speak	er-Line 2.2					
		Zone005:	10, Speak	er-Line 3.1		=			
		Zone006:	10, Speak	er-Line 3.2					
		Zone007:	10, Speak	er-Line 4.1					
		Zone008:	10, Speak	er-Line 4.2					
		Zone009:	20, Speak	er-Line 1.1					
		Zone010:	20, Speak	er-Line 1.2					
		Zone011:	20, Speak	er-Line 1.3					
		Zone012:	20, Speak	er-Line 1.4					
		Zone013:	20, Speak	er-Line 1.5					
		Zone014:	20. Speak	er-Line 1.6		-			

Fig. 20: Popup dialog for configuration of a single zone selector button

4.6.2.2 Zone group selector button

Zone group selector buttons are grey buttons with name display (the element name is displayed). They are used to select a combination of single zones as targets for live announcements (see chapter 5.1) and for playing back text phrases (see chapter 5.3).

The selection of target zones via zone group selector buttons takes place based on the state of the "AND" button on the right side of the PAMMI Plus toolbar:

- If this is pressed, all single zones selected via single zone or zone group selector buttons are combined and used together for addressing announcement targets. The selector buttons have a toggle function, meaning that already activated zone groups can be removed again from the zone combination by clicking again on the associated single zone selector button.
- If the "AND" button is not pressed, clicking on a selector button clears any existing zone selection and replaces it with the zone associated with the button.

To configure the zone group selector button, define the following control and display parameters in the edit dialog for creating/modifying the control element (see Fig. 21):

• Mode:

The user can choose here between operation "No select-status indication" and "Select-status indication". In the "No select-status indication" operation mode, the display of the button does not change during operation. The selection is only indicated via the activation indication of single zone selector buttons that are assigned to the affected single zones.

In the "Select-status indication" operation mode, the otherwise grey button takes on a dark blue colour as soon as all single zones in the zone group are selected as announcement targets, regardless of whether this selection took place using this selector button or other selector buttons.

• Zone group:

A list with all configured zone groups (see chapter 0) is offered to the user for selection. This means that a zone group must have been previously configured for the combination of single zones to be addressed (see chapter 4.4.1). When the button is clicked (activated), all single zones assigned to the zone group are used for the addressing of announcement targets.

Setup View Control		Lak
ID Type	Name	
0030 V Zone-Grou	o Button 💽 All Zones	
Parameters and Attrib	utes	
Configuration String:	L1901	
Operation Mode:	No select-status indication	<u> </u>
Logical Zone:	Zone1901: All Zones	•
		OK Cancel

Fig. 21: Popup dialog for configuration of a zone group selector button

4.6.2.3 Status indicator field

Status indicator fields are rectangular text fields with coloured backgrounds and no borders. The name of the element is shown as text. They indicate the operating status of a PA input (see chapter 4.5) or a system function (e.g scheduling, text phrase playback, etc.) by means of the text field background colour. The colours used for this are defined via the "Settings" function dialog (see chapter 4.3.5). The default colours configured upon installation of PAMMI Plus are listed in chapter 2.

Because the status indicator fields have no border, it is recommended to provide one in the background image of the view in which they should be displayed. This can also be used as a positioning frame for the control element.

To configure a status indicator field, define the following control and display parameters in the edit dialog for creating/modifying the control element (see Fig. 22):

Device/function

A list with all configured PA inputs and the following devices/functions is offered to the user for selection:

Device/function	Displayed status				
Playback/recording device	Connection status to the SCU				
PA	At least one system node of the VARIODYN® D1 system is reachable				
DVA off	Deactivation of all playback and recording of text phrases				
PAS master	For redundant PA servers:				
	Display of the master server as active server				
PAS slave	For redundant PA servers:				
	Display of the slave server as active server				
Scheduler	Activation of the scheduler				
Alarm level 1	Activation of alarm level 1				
Alarm level 8	Activation of alarm level 8				
	In other words, at least one defect/fault of the activated alarm level exists				

Setup View Co	ontrol			
ID 0069 -	Type Indicator La	amp 🔽		
-Parameter	rs and Attrib	utes		
Device/Fu	nction:	UAG 50, Audio Input 1 UAG 50, Audio Input 2 DOM 211, DCS1, Mic In DOM 211, DCS1, Line In DOM 211, DCS2, Mic In DOM 211, DCS2, Line In DOM 211, UIM3, Line In 1 DOM 211, UIM3, Line In 2 DOM 211, DCS4, Mic In DOM 212, DCS1, Mic In DOM 212, DCS1, Line In DOM 212, UIM2, Line In 1 DOM 212, UIM2, Line In 1 DOM 212, UIM2, Line In 2		Cancel
		ETCS 220, Mic In	× ×	

Fig. 22: Popup dialog for configuration of a status indicator field

4.6.2.4 Layout selector button

Layout selector buttons are grey 3D buttons with name display for selecting the views of a different layout in the zone view and status indicator view of the PAMMI Plus GUI.

When pressed, the button becomes white to signal that the views of the assigned layout are currently being displayed. The name of the button defines the layout.

Layouts are saved in layout files. These do not have to contain all 3 views of a layout. If a layout without status indicator view is selected using the layout button, only the zone views are loaded to the respective target window. The view in the status indicator view remains unchanged. Layout files are created upon saving of a configured view (see chapter 4.6.2).

With the help of layouts, large PA systems with many zones can be divided into multiple displayable areas and hierarchically organised. The layout selector buttons serve here for navigation between the various layouts. Ensure that when creating multiple layouts, the views of each layout are also assigned layout selector buttons for other layouts.

Setup View Control		1.020
ID Type	Name	
0030 🔻 Layout Butt	ion 🔽 Layout 2	
Parameters and Attrib	utes	
Configuration String:		
Layout File:	<u> </u>	
L	layout1.ini	
	layout3.ini	OK Cancel

Fig. 23: Popup dialog for configuration of a layout selector button

To configure a layout selector button, define the following control and display parameters in the edit dialog for creating/modifying the control element (see Fig. 23):

Layout file:

A list of all available layout files is offered to the user for selection. When saving the views in layouts (see chapter 4.6.5), give a self-explanatory name to the assigned layout file.

4.6.2.5 Setting controls

Setting controls are used to control and display device parameters.

Device type	ID format	Parameter
Output channel (amplifier circuit)	xx.PA.001	Volume
		Minimum volume
	xx.PA.004	Maximum volume
		Alarm volume
		Highpass limit frequency
		Highpass filter magnitude
		Lowpass limit frequency
		Lowpass filter magnitude
		Parametric equalizer band 1 - Middle frequency
		Parametric equalizer band 1 - Bandwidth
		Parametric equalizer band 1 - Raising/lowering
		Parametric equalizer band 2 - Middle frequency
		Parametric equalizer band 2 - Bandwidth
		Parametric equalizer band 2 - Raising/lowering
		Parametric equalizer band 3 - Middle frequency
		Parametric equalizer band 3 - Bandwidth
		Parametric equalizer band 3 - Raising/lowering
		Parametric equalizer band 4 - Middle frequency
		Parametric equalizer band 4 - Bandwidth
		Parametric equalizer band 4 - Raising/lowering
		Parametric equalizer band 5 - Middle frequency
		Parametric equalizer band 5 - Bandwidth
		Parametric equalizer band 5 - Raising/lowering
		Parametric equalizer band 6 - Middle frequency
		Parametric equalizer band 6 - Bandwidth
		Parametric equalizer band 6 - Raising/lowering
		Parametric equalizer band 7 - Middle frequency
		Parametric equalizer band 7 - Bandwidth
		Parametric equalizer band 7 - Raising/lowering
		Parametric equalizer band 8 - Middle frequency
		Parametric equalizer band 8 - Bandwidth
		Parametric equalizer band 8 - Raising/lowering
		Audio signal level

Device type	ID format	Parameter
Speaker outputs and line outs at call stations	xx.PA.041	Volume
and UIMs		Minimum volume
	xx.PA.048	Maximum volume
		Alarm volume
		Audio signal level
Microphone inputs and line ins at call stations	xx.PR.041.01	Volume
and UIMs		Minimum volume
	xx.PR.044.02	Maximum volume
		Alarm volume
		Audio signal level
Call station	xx.DS.001	Microphone sensitivity
	xx.DS.004	
Signal generator	xx.SG.001	Volume
		Minimum volume
		Maximum volume
		Alarm volume
Speaker outputs and line outs at ETCS ³	xx.PA.041	Volume
	xx.PA.042	Minimum volume
		Maximum volume
		Alarm volume
		Audio signal level
Microphone inputs and line ins at ETCS ³	xx.PR.041.01	Volume
	xx.PR.044.02	Minimum volume
		Maximum volume
		Alarm volume
		Audio signal level



By adding in the *paserver.ini* the fields for **Login** and **Password**, this will lead to the fact that any volume change done in the ETCS or D1Terminal will automatically update in the assigned device parameter control in PAMMI. Without adding those fields the volume of ETCS is not displayed in the assigned device parameter control in PAMM!

³ Because the ETCS's default Login and Password is not the same as DOM, the user has to configure the ETCS's Login and Password manually. The ETCS's default Login is "admin" and Password is "123456". This settings are manually added in the *paserver.ini* file under the section [PAControler]

paserver - Notepad
File Edit Format View Help
AudioOutputDevices3=PA1.1,LR1.3 AudioOutputDevices4=PA1.1,LR1.4 AudioOutputDevices5=PA1.1,LR1.4 AudioOutputDevices5=PA1.1,LR1.5 AudioOutputDevices6=PA1.1,LR1.6 AudioOutputDevices10=PA2.1,LR2.1 AudioOutputDevices11=PA2.1,LR2.2 AudioOutputDevices11=PA2.1,LR2.3 AudioOutputDevices13=PA2.1,LR2.4
AudioOutputDevices14=PA2.1,LR2.6
AudioOutputDevices17=PA3.1,LR3.1 AudioOutputDevices18=PA3.1,LR3.2 AudioOutputDevices19=PA3.1,LR3.3 AudioOutputDevices20=PA3.1,LR3.4 AudioOutputDevices21=PA3.1,LR3.5 AudioOutputDevices22=PA3.1,LR3.6 AudioOutputDevices25=PA4.1,LR4.1 AudioOutputDevices25=PA4.1,LR4.2 AudioOutputDevices27=PA4.1,LR4.3 AudioOutputDevices28=PA4.1,LR4.4 AudioOutputDevices29=PA4.1,LR4.4 AudioOutputDevices30=PA4.1,LR4.5 AudioOutputDevices30=PA4.1,LR4.6
[PAControllon5]
SystemName=ETCS 220 Host=192.168.1.220 Node=220
Controllerlype=tlCS AudioOutputs=41.42
AudioOutputDevices41=SC1.1 AudioOutputDevices41=SC1.1 AudioInputDevices42=SC1.1 AudioInputDevices42=SC1.1 AudioInputDevices42=SC1.1 AudioInputDevices250=SC1.1 Login=admin Password=123456
[PAController6] SystemName=ETCS 221 Host=192.168.1.221 Node=221 ControllerType=ETCS AudioOutputs=41,42

Fig. 24: ETCS Login and Password configuration

<

The parameter "Audio signal level" plays a special role here. In contrast to all other device parameters, it cannot be set; it can only be queried and continuously reports all level changes.

Title	Display of the element name as title
Slider	Setting of the parameter value
Level meter	Display of the parameter value
Value field	Display of the parameter value as text (number value) and for setting the parameter value via up / down buttons or via direct entry of the value in the display field
Unit	Display of the physical unit of the configurable / displayed variable

The appearance of the setting control can be configured.

The slider (fader) and level meter can only be configured alternatively and not together. At least one of the elements slider, level meter or value field must be configured for the setting control.

In addition, the orientation (horizontal or vertical) of the configured elements is selectable. The length of the individual elements in the orientation direction can either be set as fixed or as variable (for the title, slider and level meter), whereby the length automatically changes proportionally upon changing of the element size (see chapter 4.6.4).

To configure a setting control, define the following control and display parameters in the edit dialog for creating / modifying the control element (see Fig. 25 and Fig. 26):

Unit

All configured devices are offered to the user for selection.

Parameter

All parameters of the selected device that can be controlled or queried are offered to the user for selection.

Orientation

Horizontal or vertical; this defines the orientation of the configured elements of the setting control.

• Title

Configuration of the title display:

- Specify the visibility
- Specification of the automatic adaptation of the field size when the size of the setting control is changed or optionally specification of a field size in pixels
- Slider

Configuration of the slider (fader):

- Specify the visibility
- Specification of the automatic adaptation of the field size when the size of the setting control is changed or optionally specification of a field size in pixels
- Level meter

Configuration of the level display:

- Specify the visibility
- Specification of the automatic adaptation of the field size when the size of the setting control is changed or optionally specification of a field size in pixels

Value field

Configuration of the value field:

- Specify the visibility
- Optional: Specification of a field size in pixels
- Unit

Configuration of the display field for the physical unit of the parameter

- Specify the visibility
- Optional: Specification of a field size in pixels

etup View Control			
D Type	arameter Control	Name Volume	
	ibutas		
Parameters and Attr	ibules		
Configuration String:	220.PA.041/Vol/V	olume,Flags=02E1	
-Control Parameters Device:	220.PA.041 (ETCS	220. Speaker-Channel)	
Parameter:	Volume		
Control Design			
Orientation:	Horizontal	○ Vertical	
Element	Visible Variable Size	Size	
Title		×	
Slider			
Levelmeter	Г		
Value-Field		×	
Unit	V		
			OK Cancel

Fig. 25: Popup dialog for configuration of a slider (fader)

Setup View Control

ID Type		Name
0069 🔻 Device F	Parameter Control	▼ Level
Parameters and Att	ributes	
Configuration String	220.PA.041/LevelMe	eter/Level,Flags=02F3
- Control Parameters	S	
Device:	220.PA.041 (ETCS 2	220, Speaker-Channel)
Parameter:	Audio Signal Level	
- Control Design		
Orientation:	Horizontal	© Vertical
Element	Visible Variable Size	Size
Title		
Slider		
Levelmeter		
Value-Field		÷
Unit		•
		OK Cancel
11 00 017	r -	

Fig. 26: Popup dialog for configuration of a level meter

4.6.3 Creating/editing the background image

Every view of every layout is assigned a bitmap file as a background image with the following functions.

- Display of the logos, view title, descriptive texts for control elements without their own names/title display, etc.
- Display of site or (railway) line plans for localizing the public address zones (in graphical format).
- Delineation of public address zones for the use of single zone selector buttons in the "Selector button with surrounding status indication area", "Transparent selector button with surrounding status indication area" or "View-specific standard setting" operation modes (the latter only for zone views in graphical format). These borders may not exhibit any gaps or contain any colours that are used for the display of zone statuses (see chapters 4.3.5 and 4.6.2.1).
- Providing (rectangular) templates for the control elements for simpler positioning (see chapter 4.6.4). Ensure here that for "Selector button with surrounding status indication area" that the template lines contain gaps; otherwise they will be interpreted as zone borders and no area will be available for the status indication.

Creating/editing the background image:

- Set the size of the PAMMI Plus window as appears necessary for displaying the planned views. The size of the window and the background images can still be adjusted later.
 (Upon every restart of PAMMI Plus, its window size is determined by the size of the background image of the zone view that is loaded in the zone view window upon starting.)
- Click the "Edit Template" button in the function view. This opens the drawing application MS Paint from Microsoft for editing the background image. The current background image of the view currently being edited is displayed. The size of the image is expanded to the minimum size required for the edited view (according to the current PAMMI Plus window size).
- To create a new background image, the content of the loaded image must first be cleared. This is done by entering the keyboard shortcut CTRL-A on the computer to select the entire image content and then pressing the DEL key.
- Draw the background image according to the functional requirements. Already existing graphics and images can be imported in the typical graphic formats (.bmp, .gif, .tif, .jpg, ...) and edited in MS Paint.
- If the image meets the expectations and requirements, save it (as bitmap, .bmp) (note: Do not use "Save As..." to save under a different name or format since it will then not be recognised as a background image by PAMMI Plus).
- Close MS Paint. The drawing application is closed and the new background image is loaded to the edited view. The control elements in the view can now be placed in front of the new background.

4.6.4 Positioning the control elements

4.6.4.1 Inserting a control element into the view

- Select the control element in the element list of the function view. Newly created elements are automatically selected after being added to the element list.
- Draw a positioning rectangle as follows:
 - Click on one corner position in the view with the left mouse button and hold the button pressed
 - With the mouse button held down, drag the cursor to the desired diagonally opposite corner
 - Release the mouse button
 - The rectangle drawn in this way is shown in dashed lines and has position marks at its corners and in the middle of each side for subsequently changing the rectangle size by sliding these position marks.
 - The rectangle can also be moved to the desired position by clicking inside it with the left mouse button and moving it while keeping the mouse button pressed.
- Click inside the positioning rectangle with the left mouse button. The control element selected in the element list is then inserted into the view in place of the positioning rectangle. The positioning rectangle disappears.

or

- Select the control element in the element list of the function view. Newly created elements are automatically selected after being added to the element list.
- Click on a position template drawn in the background image (see chapter 4.6.3) with the left mouse button and release the button without moving it. The control element selected in the element list is then inserted into the view within the positioning template. If the template is rectangular and oriented parallel to the screen edge, the element will fill the template exactly.

The element is inserted as follows:

After releasing of the mouse button, the area is searched in horizontal and vertical directions from the clicked point (to the left, right, up and down). If the scanner encounters a pixel of a different colour within a defined distance, this is interpreted as the limit for the control element to be added. If the maximum distance from the starting point is exceeded during the scan without finding a border, the mouse click has no effect; in other words, the element is not inserted into the view.

This process can be repeated any number of times for the control element selected in the element list, whereby each repetition inserts a new instance of the element into the view. In this way, a single zone selector button can be positioned simultaneously at multiple locations of the view, such as for the case in which the assigned zone does not correspond to a single continuous area but rather multiple individual areas.

A control element can be inserted in multiple elements and as often as desired.

4.6.4.2 Selecting control elements in the view

Every instance of a control element already inserted into the view can be selected by with a single click of the left mouse button. It is then surrounded by a dashed frame with position marks. This looks exactly like the positioning frame described in chapter 4.6.4.1.

This process can be repeated with the "CTRL" key held down for additional instances and other elements, which are then also selected in the view and marked with a surrounding dashed frame.

Multiple elements or instances of elements can also be selected together by drawing a position frame (see chapter 4.6.4.1) around them. After releasing the left mouse button, PAMMI Plus checks whether control elements are located within the rectangle. If yes, then they are all selected in the view. The positioning frame disappears.

All control elements and their instances selected in the view can be moved together within the view (see chapter 4.6.4.3) or removed together from the view by clicking the "Delete Element" button in the function view (see chapter 4.6.4.5).

Every element selected in the view is shown in the element list of the function window with a light blue background to make it easier to find.



A selection in the view does not cause a selection in the element list!

The size of an individual element or instance selected in the view can be changed via the position marks in the selection frame (see chapter 4.6.4.4) or moved to a different location by clicking on a different position template in the background image (see chapter 4.6.4.3).

Clicking in an open area of the view, in other words a location that cannot be interpreted as a template for an element position (see chapter 4.6.4.1), clears any element selection in the view. The selection frames disappear.

4.6.4.3 Moving control elements within the view

- Select the elements or instances to be moved (see chapter 4.6.4.2).
- Click on one of the marked elements with the left mouse button and move all marked elements by moving with the mouse button kept pressed.
- Release the mouse button as soon as the elements are located in the desired position. The selection is cleared and the selection frames disappear.

Alternatively, an individual element or its instance can be placed in a different position by clicking on it alone in the view and then clicking in a position template (see chapter 4.6.3) just as described for inserting an element into the view (see chapter 4.6.4.1) to position it at the template location. When a position template is clicked, the repositioning of an element or its instance selected in the view takes priority over the insertion of a new instance of the control element selected in the element list in the function view. With position templates in the background image, it is therefore very easy to reposition elements by clicking on them and then clicking on the target position.

4.6.4.4 Changing the size of a control element in the view

- Select the element or its instance to be resized (see chapter 4.6.4.2).
- Drag the left mouse button on one of the positioning marks. At the same time, the new dimensions are shown in dashed lines.
- Release the mouse button. The element then fills the new frame. The frame itself disappears again.

4.6.4.5 Deleting control elements from the view

- Select the elements or instances to be deleted (see chapter 4.6.4.2).
- Click the "Delete Elements" button on the right next to the element list in the function view. The selected elements or their instances are deleted from the view.

4.6.5 Saving as layout

After completing the modifications, save the edited view to a layout file. Do the following in the function view:

- Either select one of the existing layout files or, when creating a new layout, enter the name of the new file (without path) in the input field.
- Then click the "Save" button. This saves the edited view (background image and assigned control elements) to the layout file, allowing it to be loaded again later to the associated window by clicking on a layout selector button.

If the configuration dialog is closed, the format of the zone view is changed or the view is reloaded from the configured layout file without first saving the configuration changes, PAMMI Plus outputs a warning allowing the user to save the changes first or discard them.

4.7 Examples and tips

4.7.1 Creating a new layout

Every configuration session for editing a system view builds on the current view in the selected window at the time it is loaded (zone view or status indicator view).

To create a completely new view, clear the existing view configuration, then configure the new view as described in chapters 4.6.2, 4.6.3 and 0 and save it in a <u>new</u> (!) layout file. "Saving" to a new layout file leaves the layout present at the start of the configuration unchanged.

Process:

- Start the configuration for the desired system view (see chapter 4.6.1).
- Enter the name of the layout file to which the new layout should be saved in the input/selection field beneath the "Layout file" prompt in the function view. Assign the name of the new layout and append the extension *.ini*.



The filename extension *.ini* is required to identify the file as a layout file.

- Delete the background image:
 - Load the drawing program MS Paint with "Edit Template"
 - In MS Paint:
 - Select the entire image content with the keyboard shortcut CTRL-A and delete with the DEL key.
 - Save the deleted image and close MS Paint.
- Delete all control elements positioned in the view:
 - Select all elements in the view, e.g. by drawing a positioning frame (see 4.6.4.2).
 - Click the "Delete Element" button in the function view. This completely deletes the view loaded at the start of the configuration.
- Create the new background image (see chapter 4.6.3).
- Position control elements on the new background (see chapter 4.6.4).
- Save the new view in a new layout file with "Save". This saves the new layout file in the configuration directory of PAMMI Plus under the specified name.

This process can be repeated for all views belonging to the layout, whereby a new layout file does not have to be specified each time. Ensure that the name of the previously created layout file appears in the input/selection field for the layout file before "Saving" the layout.

4.7.2 Storage of the background image and layout files

The layout files created via PAMMI Plus and the background images saved as bitmaps are saved in the configuration directory of PAMMI Plus. The PAMMI Plus configuration directory is the subdirectory **PAMMI/config** of the working directory assigned to PAMMI Plus during installation. This is either the installation directory of the PAMMI Plus software or, if the installation directory was created in the %ProgramFiles% directory tree, a subdirectory of %ProgramData% with the same relative path as the installation directory has relative to %ProgramFiles%⁴.

Any number of layouts or layout files can be created. With the exception of the layout loaded from *layout1.ini* upon starting of PAMMI Plus, they only become relevant to PAMMI Plus when they are assigned to a layout selector button that is configured as a control element in at least one visible system view.

Background images can be saved or temporarily saved during the MS Paint session under different names at any location in the directory tree for later use. However, the image that should be copied into the edited view after MS Paint is closed must be saved as a bitmap in the PAMMI Plus configuration directory under the name *editimage.bmp*.

This is the name and path of the file that is loaded at the start in MS Paint. The PAMMI Plus application then assigns a unique name upon saving that is later used for loading the layout.

4.7.3 Planning and creating layouts

If it is known already before initial configuration of the screen views how many and which layouts are required, the following procedure is recommended:

- Create all layouts by saving the empty configuration files in the associated layout files.
- Create one background image each for the 3 views of any layout. It should contain the elements that are identical in all layouts. Typically, these are various drawings, logos, the templates for the layout selector buttons and for various zone group selector buttons.
- Position those control elements that are contained in all layouts (layout and zone group selector buttons, ...) in the respective view against its background image.
- Save the views created this way in all layout files.
- Individually modify the views of every individual layout, starting from the previously created common view configurations.

⁴ %ProgramFiles% is typically C:\Program Files, %ProgramData% is typically C:\ProgramData. This depends on which MS Windows operating system is installed. If assuming a typical operating system installation in C:\Windows, for example, the installation directory of PAMMI software is C:\Program Files\PAMMI\PAMMI-Vxx.xx\, then C:\ProgramDataPAMMIPAMMI \/ \vectory of assigned during installation as the warking directory of the PAMMI software.

C:\ProgramData\PAMMI\PAMMI-Vxx.xx\ is assigned during installation as the working directory of the PAMMI software.

4.7.4 Creating layout selector buttons

Layout selector buttons are not automatically generated by PAMMI Plus. They must be created completely manually (see chapter 4.6.2 and 4.6.2.4):

- Start the configuration session for any system view (see chapter 4.6.1).
- Click the "New" button in the function view above the control elements list (see Fig. 18). The configuration dialog for creating a new control element is opened (Fig. 19).
- Select an available ID for the new control element.
- Enter the layout name as name.
- Select the "Layout Selector Button" type in the type selection field. The configuration dialog is expanded with the selection field for the layout file (see Fig. 23).
- Clicking the selection field for the layout file opens a list containing all files identified by PAMMI Plus as layout files.
- Select the file containing the layout that should be loaded when the layout selector button being created is used.
- Close the configuration dialog with "OK". The new layout selector button is added to the control elements list and can now be assigned to various views.
- If the edited view is one in which the new button should be displayed, it can be placed there immediately, as described in chapter 4.6.4.
- Save the layout with "Save".
- Load all other views (see chapter 4.6.1) into which the button should be placed, assign the button (see chapter 4.6.4) and save the respective layout with "Save".

4.7.5 Creating setting controls

Setting controls are not automatically generated by PAMMI Plus. They must be created completely manually (see chapter 4.6.2 and 4.6.2.5).

- Start the configuration session for any system view (see chapter 4.6.1).
- Click the "New" button in the function view above the control elements list (see Fig. 18). The configuration dialog for creating a new control element is opened (Fig. 19).
- Select an available ID for the new control element.
- Enter the control title as a name, e.g. "Volume", "Level", etc.
- Select the "Setting Control" type in the type selection field. The configuration dialog is expanded with the input and selection fields for specifying the control and display parameters (see Fig. 25 and Fig. 26).
- The control parameters of the setup control are configured in the chapter "Control Parameters" (see chapter 0). First select the device to be controlled and then (!)⁵ the setting parameter to be controlled / displayed in the offered selection lists.
- The appearance of the setup control is configured in the chapter "Control Design" (see chapter 4.6.2.5).
 - The orientation of the control (horizontal or vertical).
 - The control and display components by checking the respective checkbox in the column "Visible":
 - Title
 - Slider
 - Level meter
 - Value display and input field with up/down buttons
 - Unit display

The slider and level meter are mutually exclusive.

Each configured component can be assigned a size (in pixels) for the desired area in the orientation direction; otherwise the sizing is automatic. Title, slider and level meter can be configured as components with variable (configurable) size. This means that the size is automatically adapted to the length of the setup control upon positioning in the system view.

- Close the configuration dialog with "OK". The new setting control is added to the control elements list and can now be assigned to the various views.
- If the view is one in which the new control should be displayed, it can be placed there immediately, as described in chapter 4.6.4.
- Save the layout with "Save".
- Load all other views of layouts (see chapter 4.6.1) into which the new setting control should be placed, assign the control (see chapter 4.6.4) and save the respective layout with "Save".

⁵ Only the parameters that can be set/displayed for the selected device are offered for selection. For this reason, the device must be specified first.

4.7.6 Configuration example

As a configuration example, a PAMMI Plus screen for controlling the PA system of a multi-storey building is shown here:



Fig. 27: Layout 1, zone view in graphical format

Zone view, graphical format, Layout 1 (see Fig. 27):

- The "Layout 1" and "Layout 2" buttons are layout selector buttons.
- The "All Zones" button is a zone group selector button.
- The "Clear" button is also of type zone group selector but serves to clear zone selections.
- The grey (square) buttons in the plan area are unselected single zone selector buttons of "View-specific standard setting" operation mode.
- The blue (square) buttons in the plan area are selected single zone selector buttons of "View-specific standard setting" operation mode. A live announcement is currently being spoken to the assigned zones from the PAMMI Plus microphone, which is why the surrounding area is coloured in green.
- The position frames of all elements are drawn onto the background image.

Herewell			11			DUA		10/12/02
File W	iow Hr	ii Di-PA ji	User			DVA		10/07/13 10.13.00
Zono Format		лр 	Cabadular	DV0		Bearder History	Alarma	AND
Zone Format		ormat	acheduler			ecorder History		
	B	asement	Lift Groundfloor		Level 1			Layout 1 Layout 2
[Level 2	Level 3		Level 4			
								All Zones
								Clear
Message	Туре	Warning 02 No	Eating & Drinking		Language:	E - Pre-listen	•	
Select Service Control Emergency		Your attention p not eat or drink co-operation.	lease: For the safety and comfor inside the station or train compa	t of other passeng rtments. Thank yo	jers, please do u for your	Pre-listen Repeat Option: Sched.		SCU PAServer
Instant						Cancel	Status: 00000022 1	Clear PTT MMI 09:58:24 logout "root"

Fig. 28: Layout 1, zone view in button format

Zone view, button format, Layout 1 (see Fig. 28):

- The "Layout 1" and "Layout 2" buttons are layout selector buttons.
- The "All Zones" button is a zone group selector button.
- The "Clear" button is also of type zone group selector but serves to clear zone selections.
- The white-bordered buttons are unselected single zone selector buttons of "View-specific standard setting" operation mode.
- The blue, green-bordered button is a selected single zone selector button of "View-specific standard setting" operation mode. A live announcement is currently being spoken to the assigned zone from the PAMMI Plus microphone, which is why it has a green border (instead of white).
- The position frames of all elements are drawn onto the background image.

Honeywell	AI D1-PA User			D'	VA			16/07/13 10:48:25
File View H	elp							- <u>-</u>
Zone Format Button F	ormat	Scheduler DVA	Queue	Recorder	History	Alarms		AND
	Lev	el Level	Level	level				Laurant 1
								Layout I
								Layout 2
	-60.	-7.8	-11.9 -	-60.0				
	d	B dB	dB	dB				
	- [- [-				
*								
	I T	·	1					
	_							
	3-1			-30.0				
	-0. di	3 dB	dB	dB				
	Chan	nel 1 Channel 2	Channel 3	Channel 4				
								All Zones
								Clear
Massa an Tura-	Warning 02 No Esting 9 Dei-Line			any E				
Select	Your attention please; For the safety	and comfort of other pa	Langu Issengers, pleas	nge.∣⊑ - sedo ∢∣	Pre-listen +		Microphone	
Service	not eat or drink inside the station or	train compartments. The	ank you for your		Pre-listen			
Control				Re	epeat Options			
Emergency					> Sched.		SCU	PAServer
					Send	Status:	Clear	PTT
Instant					Cancel	00000029 N	IMI 10:28:24 Ic	ogon "root"

Fig. 29: Layout 2, zone view in graphical format

Zone view, graphical format, Layout 2 (see Fig. 29):

- The "Layout 1" and "Layout 2" buttons are layout selector buttons.
- The "All Zones" button is a zone group selector button.
- The "Clear" button is also of type zone group selector but serves to clear any zone selections.
- The "Channel 1" .. "Channel 4" buttons are single zone selector buttons of "Selector button with status indication border" operation mode. The "Channel 2" and "Channel 3" buttons are selected; the "Emergency Evacuation" emergency message is being played in the assigned zones, sent from PAMMI Plus. This is why the borders are green.
- The control elements above the single zone selector buttons are "Setting Controls" with fader and input field (with up/down button) for controlling the volume in the respective zone.
- The control elements above the volume controls are "Setting Controls" configured as level meters with title display to indicate the level of the audio signal output to the controlled zone.
- The position frames of all elements except for the single zone selector buttons are drawn onto the background image.

Status indicator view, Layout 1 and 2 (Fig. 27, 28, 29):

- The elements visible here are status indicator fields for the PA input of the call station microphone ("Microphone"), playbacks from the SCU ("SCU") and the connection to the PA server, the interface application of the PAMMI Plus to the PA system ("PAS").
- At the time of the screenshots in (Fig. 27, 28), an announcement was being spoken via the call station microphone of the PAMMI Plus, which is why the "Microphone" status indicator field is green.
- At the time of the screenshot in Fig. 29, the "Emergency Evacuation" emergency message was being played (to zones "Channel 2" and "Channel 3"), which is why the "SCU" status indicator field is green.
- The 3D frames for the indicator fields are drawn into the background image.

PTT button in Fig. 27 and Fig. 28:

• At the time of the screenshots, a live connection for the spoken announcement initiated via the PAMMI Plus PTT button (see chapter 4.3.2) was active for the spoken announcement. The green colour of the PTT button indicates the connection of the PAMMI Plus microphone (see chapter 4.3.1) to the addressed target zones and signals to the speaker/user that speaking is possible.

5 Operation

With regard to colours for indicating the status of zones and connections, the default colours listed in chapter 2 are used. If the colour configuration (chapter 4.3.5) has been changed, the colours configured there are naturally used for status indication.

5.1 Speaking

To speak live announcements, a microphone must have been assigned to PAMMI Plus via the settings dialog (see chapter 4.3). An external button can also be configured there as the PAMMI Plus PTT button either in addition to or in place of the PTT button on the screen. The operating mode is configured in the same dialog.



Fig. 30: PAMMI Plus view during a live announcement

Fig. 30 shows the view of PAMMI Plus during an ongoing live announcement to the zones selected in the zone view.

Performance of a live announcement:

- Select the desired layout (if multiple layouts are available) in the zone view.
- Select the zones to which the announcement should be made.
- Press the PAMMI Plus PTT button on the screen or, if an external PTT button is configured, at the call station where the external PTT button is located.
- For the duration of the playback of a pre-signal configured for live announcements (see chapter 4.3.5), the connected zones are shown in yellow; the PTT button on the PAMMI Plus screen also becomes yellow.
- After the microphone is connected, the connected zones are shown in green; the PTT button on the PAMMI Plus screen also becomes green (see Fig. 30).
- Speak the announcement into the call station microphone.
- Release or press the PTT button again (depending on the configured operating mode).

5.2 Recording

To record self-spoken text phrases, the microphone specified in the settings dialog (see chapter 4.3) is used. In addition, an SCU must be available in the VARIODYN[®] D1 system as recording device, and this must be registered in the device configuration of PAMMI Plus (see chapter 4.2). To listen to the recorded announcements, a monitor speaker must also be selected (also via the settings dialog).

Fig. 31 shows the view of the function view while the "Recorder" function is selected during recording of the new message.

New ID Message Title	Recorder
Instant 02 Testrecording 2	Rec Stop Play
Instant 01 Testrecording 1	- Pre-listen +
	• •
	Copy Title Edit Title
	Find Pre-listen
	Delete

Fig. 31: Function view for recording self-spoken text phrases during a recording

Making a recording:

- Select the "Recorder" function view for the function view via the button of the same name in the tool bar (see Fig. 6)
- Select any available recording ID in the associated selection field.
- Enter a descriptive text or title for the announcement in the "Message Title" input field for easier identification later.
- Click on the "Rec" recorder button. The button is shown as pressed and takes a yellow colour as soon as the recorder is recording.
- Speak the announcement into the call station microphone.
- After finishing the announcement, click on the "Stop" recorder button to the right of the record button. The
 record button returns to the unpressed state and its standard colour of grey. The recorded announcement
 is now shown in the list of recorded text phrases (instant announcements) beneath the selection/input fields
 for the recording ID and the message title and will subsequently be available for playback from the "DVA"
 window (see chapter 5.3) in the "Instant" message group.
- Listen to the recorded announcement via the configured monitor speaker by clicking the "Play" playback button to the right of the "Stop" button. The playback on the monitor speaker can be stopped early be clicking the "Play" button again. The listening volume can be adjusted via the control situated below the "Rec", "Stop" and "Play" recorder buttons before each playback is started.

The control buttons beneath the listening volume control (see Fig. 31) serve for managing already recorded announcements:

• "Copy Title":

Copy the message title of the selected announcement to the input field for the next recording

• "Edit Title":

Change the message title of the selected announcement

• "Find":

Search for an announcement in the adjacent list based on the message title and automatically select the found message

"Pre-listen":

Play back the selected announcement on the configured monitor speaker. While the previously recorded announcement can be listened to with the "Play" button, the "Pre-listen" button must be selected to hear an announcement from the list of recorded announcements

• "Delete":

Delete the selected announcement from the list of instant announcements and open up the associated ID for a new recording

5.3 Playback

To play back text phrases, an SCU must be available with the provided text phrases and as a playback device. This SCU must be registered in the device configuration of the PAMMI Plus (see chapter 4.2). To pre-listen to the text phrases, a monitor speaker must also be selected (also via the settings dialog).

The text phrases are organised into message groups. The quantity, names and content of these message groups as well as the output languages are read from a database that is loaded into the device configuration from the SCU upon registration of the SCU.

Playing back a text phrase:

- Select the "DVA" function view via the button of the same name in the toolbar (see Fig. 6)
- Select the message group from which the text phrase will be selected.
- Select an announcement / text phrase in the display list field in the middle of the function view.
- Select the languages in which the announcement should be output by clicking the display box "Language:"
 and editing the dialog. The initial letters of the output languages are now listed in the language indication
 box in the order they will be output.
- Select the desired layout in the zone view.
- Select the zones to which the announcement should be played.
- Start the playback with the "Send" button. The button turns yellow to signal the successful start of the playback.
- When the connection is established, the connected zones are shown in green. The selected text phrase is played.
- At the end of the playback, the display colour of the zones returns to the previous state.
- The playback can be stopped early with the "Cancel" button.



Fig. 32 shows the PAMMI Plus window shortly after the start of a playback.

Fig. 32: PAMMI Plus view during playback of a text phase

Additional control elements of the "DVA" function view:

"Pre-listen":

Play back the selected announcement on the configured monitor speaker. The listening volume can be adjusted with the volume control (+/-) before playback.

"Repeat Options":

Set the number and time delay of the automatic repetitions of the played announcements. This opens a dialog in which these settings can be configured. If repetitions are active, the button is displayed as pressed.

"> Sched.":

The selected zones and announcements are copied to the scheduler for scheduled announcements. The function view automatically changes to the "Scheduler" view.

5.4 Scheduled announcements

Fig. 33 shows the PAMMI Plus window with the "Scheduler" function selected for displaying and editing the playback schedules (1 per week day) for scheduled announcements. For the selected announcement, the detail display has been loaded for displaying the message, the target zones and the output languages in plain text.



Fig. 33: PAMMI Plus view with "Scheduler" function selected and detail display for the entry selected in the scheduler

Entering a new scheduled announcement (see Fig. 32 and Fig. 33):

- Select the "DVA" function view for the function view via the button of the same name in the toolbar (see Fig. 6)
- Select the message group via one of the buttons in the function view.
- Select an announcement / text phrase in the display list field in the middle of the function view.
- Select the languages by clicking on the display box "Language:" and editing the dialog. The initial letters of the output languages are now listed in the language indication box in the order they will be output.
- Select the desired layout in the zone view.
- Select the zones to which the announcement should be played.
- Copy the selected text phrase and the selected zone(s) to the scheduler and switch to the "Scheduler" function view with the "> Sched." button. The codes for the announcement and the zone are already entered here in the associated input fields.
- Select the day of the week on which the announcement should be played by clicking the associated button in "Scheduler" view ("Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun").
- Enter the playback time in the "Start" input field.
- Optional: Enter a descriptive text or title for the announcement in the "Remarks" input field.
- Optional: Specify repetitions and playback times in the dialog opened with "Rep".
- Copy the edited announcement to the playback schedule by clicking the "Editor -> Sched" button. The new announcement and its repetitions are shown for the selected week day.

Additional control elements of the "Scheduler" function view (see Fig. 33):

- "Clear Editor":
 Clear all input fields for the announcement
- "Sched. -> Editor": Copy all announcements selected in the playback list for editing
- "Del Message": Delete all announcements selected in the playback list
- "Details":

Display target zones, text phrases and output languages of the announcement selected in the playback list in plain text

• "Stop":

Deactivation / reactivation of the schedule. If the schedule is stopped, the button is shown as pressed.

5.5 Announcement monitoring

In the "Queue" function view, the announcements initiated via PAMMI Plus are shown with their current status.

Clicking on the "Details" button shows the target zones, text phrase, output languages and playback repetitions of the announcement selected in the announcements list.

With the "Delete" button, the announcement selected in the announcements list is ended and deleted from the list.

Fig. 34 shows the PAMMI Plus view for the selected "Queue" function and the loaded detail display for the announcement selected in the announcements list.



Fig. 34: PAMMI Plus view with selected "Queue" function and detail display for the current text phrase playback

5.6 Defect processing

- Defective zones are shown in orange in the zone view (see Fig. 35).
- Status indicator fields for displaying activated alarm levels (see chapter 4.6.2.3), if configured and assigned to a view, signal the occurrence of defects/errors of the respective alarm level.
- All detected defects and errors are collected in the alarm list and remain there until they are corrected and acknowledged. This alarm list is shown in the "Alarms" function view (see below) by clicking the button of the same name in the toolbar (see Fig. 6).

The defects are displayed differently depending on their current status:

- Existing, unacknowledged defect: White text on red background, status (St.) "+"
- Corrected defect: Black text on yellow background, status (St.) "+/-"
- Acknowledged, not yet corrected defect: Black text on yellow background, status (St.) "0"

The unacknowledged entries in the alarm list are additionally emphasised by blinking of the columns for date and time.

The list can be sorted by defect status, ID of the affected device and time of defect detection. The function view contains the "Ack" acknowledgement button with which the selected defects are acknowledged. This puts an existing defect into the "acknowledged but not yet corrected" status; an already corrected defect is removed from the list. Already acknowledged but not yet corrected defects are automatically removed from the list as soon as their correction is detected.



Fig. 35: PAMMI Plus view with selected "Alarms" function and zone defect display "Level 1") in the zone view

5.7 Event recording

All announcements initiated via PAMMI Plus as well as all significant events that have an influence on the operation of PAMMI Plus are logged together with the time they occur. Per day, one log file is created for announcements and one for detected and corrected errors/defects/failures/... as well as major events such as start-up, shutdown, ... and made available to the PAMMI Plus GUI for display. The log files are saved for 60 days and then automatically deleted.

Date	Time	Description	03/09/19	Mon
03/09/19	12:10:56	Announcement #001#10.06# (211.AO.001), from MAS, priority 250		
03/09/19	12:11:26	Announcement #001#10.01# (211.AO.001), from RED, priority 250	Events	Lue
03/09/19	12:11:31	Announcement #001#10.06# (211.AO.001), from RED, priority 250	Errore	how
03/09/19	12:12:06	Announcement #001#10.06# (211.AO.001), from RED, priority 250		TTCU
03/09/19	12:12:20	Announcement #001#10.03# (211.AO.001), from RED, priority 250		Thu
03/09/19	12:12:29	Announcement #001#10.06# (211.AO.001), from MAS, priority 250		
03/09/19	12:12:35	Announcement #001#10.03# (211.AO.001), from MAS, priority 250		Fri
03/09/19	14:42:00	Announcement #X000000000000000000000000000000000000		
03/09/19	14:51:01	Announcement #X000000000000000000000000000000000000	Files	Sat
03/09/19	15:05:30	Announcement #X000000000000000000000000000000000000		Sun
<		>		

Fig. 36: "History" function view, display of the error logging

Date	Time				Description		04/09/19	Mon
04/09/19	14:46:47	P2	221.SC.001	+	System defect (ETCS 221)	^		
04/09/19	14:46:47	P2	236.SC.001	+	System defect (SCU 236)		Events	Tue
04/09/19	14:46:47	P1	PA-CTRL +	Cor	nnection to the PA system down		Errore	Word
04/09/19	15:07:47	P2	211.SC.001	-	System ok (DOM 211)			
04/09/19	15:07:47	P2	212.SC.001	-	System ok (DOM 212)			Thu
04/09/19	15:07:47	P1	PA-CTRL -	Cor	nnection to the PA system ok			
04/09/19	15:07:47	P2	213.SC.001	-	System ok (DOM 213)			Fri
04/09/19	15:07:48	P2	220.SC.001	-	System ok (ETCS 220)			
04/09/19	15:07:48	P2	221.SC.001	-	System ok (ETCS 221)		Files	Sat
04/09/19	15:07:48	P2	236.SC.001	-	System ok (SCU 236)			Sun
04/09/19	15:33:26	logo	ut "root"			¥		Jun

Fig. 37: "History" function view, display of the event logging

20190823.LOG 20190826.LOG 20190827.LOG 20190828.LOG 20190829.LOG 20190902.LOG 20190903.LOG	Fri Mon Tue Wed Thu Mon Tue	1 KB 34 KB 64 KB 3 KB 9 KB 6 KB 5 KB	View	02/09/19 Events Errors Files	Mon Tue Wed Thu Fri Sat
--	---	--	------	---------------------------------------	--

Fig. 38: "History" function view, display of the saved error log files

The content of the records is shown in PAMMI Plus in the "History" function view.

- Select the "History" function view for the function view via the button of the same name in the toolbar (see Fig. 6)
- Select the event type:
 - "Events" button:
 - Display the announcements initiated via PAMMI Plus (see Fig. 37)
 - "Errors" button:

Display all events relevant for operations (errors, defects, connection failures, as well as their correction, start-up and ending of the participating applications, see Fig. 36).

- Select the last day of the week for which the recorded events should be displayed by clicking on the corresponding button in the function view.
- If you would like to see older records, click the "File" button to switch to the file view, where all available log files are offered for selection (see Fig. 38). The recording date of the respective file can be found in its name (YYYYMMDD.LOG or YYYYMMDD.ERR). To display a file, select it and switch to the display mode of the "History" view with the "View" button.

Notes

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