1200 series
SmartPanels 1.0
User Manual

01-000HB03EG-A10

This device complies with Part 15 of the FCC Rules and with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications made to this equipment not expressly approved by Riedel may void the FCC authorization to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

This device is granted pursuant to the Japanese Radio Law (電波法) and the Japanese Telecommunications Business Law (電気通信事業法).
This device should not be modified (otherwise the granted designation number will become invalid).

The device conforms to the following EU guidelines as attested by the CE mark.

- EMC 2014/30/EU
- LVD 2014/35/EU
- RoHS 2011/65/EU

YFJRSP1232HL (1200 series SmartPanel RSP-1232HL)

Standards

- CAN ICES-3 (B)/NMB-3(B)
- EN 50581:2012
- EN 55032: 2015
- EN 55035-2:2017
- EN 61000-3-2:2014, EN 61000-3-3:2013
- EN 61000-4-2:2009, EN 61000-4-3:2006+A1:2008+A2:2010, EN 61000-4-4:2012, EN 61000-4-5:2014, EN 61000-4-6:2014, EN 61000-4-8:2010, EN 61000-4-11:2004
- IEC/EN 60950-1:2005+A1:2009+A2:2013
- IEC/EN 62368-1:2014, UL/CSA 62368-1:2014

Industry Canada 8706A-RSP1232HL (1200 series SmartPanel RSP-1232HL)

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SmartPanels 1.0 User Manual

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1 Preface

Thank you for choosing a Riedel product.

This PDF document provides detailed information about the Riedel SmartPanels, pin outs, mechanical and electrical data.

This manual is available in additional formats:

CHM	"Compiled HTML Help" is the standard format for Windows online help and .Net applications
EPUB	"Electronic Publishing format" is a cross-platform e-book standard

For further information, please refer to the Riedel Website or contact your local distributor or the Riedel headquarters in Wuppertal.

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1.1 Information

Symbols

The following tables are used to indicate hazards and provide cautionary information in relation to the handling and use of the equipment.

Danger	
⚠	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
	The highlighted line indicates the activity to prevent the danger.

Warning	
⚠	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	The highlighted line indicates the activity to prevent the danger.

Caution	
⚠	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.
	The highlighted line indicates the activity to prevent the danger.

ℹ	This text is for generally information. It indicates the activity for ease of work or for better understanding.

Service

- All service has to be undertaken ONLY by qualified service personnel.
- There are no user serviceable parts inside the devices.
- Do not plug in, turn in or attempt to operate an obviously damaged device.
- Never attempt to modify the equipment components for any reason.

Caution	
⚠	**All adjustments have been done at the factory before the shipment of the devices. No maintenance is required and no user serviceable parts are inside the module.**

Ventilation

- Do not place the devices next to a hot source like a radiator.
- The ventilation openings of the devices must never be blocked.

Environment

- Never place the devices in an area of high dust particles or humidity.
- Never place containers with any liquids on top of the devices.
- If the devices have been exposed to a cold environment and transferred to a warm environment, condensation may form inside the housing. Wait at least 6 hours before applying any power to the devices.

Voltage

- The power cable should only be connected to a correctly grounded source.
- Do not use any adapters.
- Never bypass a ground contact.

Danger	
⚠	**To reduce the risk of electric shock do not remove cover or expose the products to rain or moisture.**

Warning	
⚠	• Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan. • Apparatet må tilkoples jordet stikkontakt. • Apparaten skall anslutas till jordat uttag. • Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.

Disposal

Disposal of old Electrical & Electric Equipment (Applicable throughout the European Union and other European countries with separate collection programs).

🗑	This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of this product please contact your local city office.

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1.2 Firmware Version

This Manual refers to the RSP-1232HL firmware version: **1.0**.x
The "x" in the firmware version indicates the bugfix version that is described in the related release notes.
The firmware version can be checked in the SmartPanel and in the web interface:

SmartPanel

- Touch the gear icon in the Info-display.
- Navigate with the small bottom rotary encoder to the menu: '**Device-Info**'.
- Push the small rotary encoder.

The second line in the Info-display shows the SmartPanel's firmware and bugfix version.

figure 1: firmware version (SmartPanel)

Web-Interface

Enter the IP address of the **AES67 interface** (Ethernet connectors) of the SmartPanel in the web browser of a PC on the same network.

> The IP addresses of the SmartPanel are displayed in the Panel-Menu > Network > **AES67**.

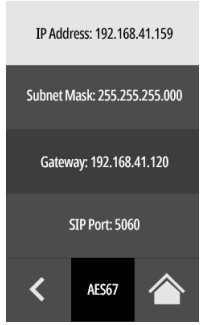


figure 2: IP address of the SmartPanel

Open the web interface of the SmartPanel:

- Enter the IP address in the web browser (e.g. 192.168.41.159).

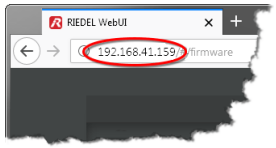


figure 3: web interface of the SmartPanel

The firmware manager is opened.

The firmware version of the SmartPanel is displayed next to its IP address.

figure 4:firmware version (web interface)

1.3 About 1200 Series SmartPanels

Building upon the technology that powers its SmartPanel app-driven user interfaces, Riedel Communications proudly introduced the new 1200 series SmartPanel today. The RSP-1232HL represents a quantum leap forward in workflow flexibility, power, and connectivity.

Featuring multiple full-color multitouch displays, 32 innovative hybrid-lever keys, the ability to leverage apps for multifunctionality, and the ability to adapt easily to the various workflows in use today, this new panel is poised to allow users to work the way they always have while opening up entirely new possibilities.

The two-year research and development effort behind the RSP-1232HL panel involved input from many users and industry pros. Every aspect of existing panel technology was evaluated, from the spacing of components to their look and feel. The result is a 32-key user interface with each lever key having an integrated rotary encoder that provides control over parameters in the same location as the key. The levers have been meticulously designed to have the perfect form, weight, comfort, responsiveness, and anti-fatigue qualities to effectively redefine the way an intercom panel should feel.

The RSP-1232HL has been designed to support varied workflows. Some comms users prefer “Talk & Listen” workflows where the user chooses what to listen to from an initially silent panel. Other workflows prefer a “Talk & Mute” workflow where users start with a panel that broadcasts everything, with the users selectively choosing which signals to turn off. Users decide which mode they prefer on a per-panel basis.

Inventing a panel from scratch also enables new features that greatly aid in making the panel easier to understand for users. Riedel’s new Logical Groups concept allows users to choose custom colors for either the key labels or the LED rings that are positioned around each key. Each key label has an eight-character main label, a 16-character sub-label, and user-defined icon labels. Along with that is an icon-based signaling mechanism to tell the user what state each key is in at any point in time. Open Mic, Muted Key, Incoming Beep, or Port Busy are easy to read and understandable at a glance. Users can get as much or as little information about any given key as needed.

Connectivity is always a big consideration for Riedel, and it was important that the new panel take advantage of both the AES3 digital connectivity the company has always used along with the SMPTE 2110-30 (AES67) connectivity that it has embraced in recent years. AES67 connections are two fiber SFPs and two RJ45 connections that create a variety of daisy-chaining and redundancy options to realize extraordinary cabling flexibility.

Other features include stereo, phase-accurate speakers; front-panel mic mute and sidetone adjustments and front/rear USB; GPIO 4-and wire ports.

2 RSP-1232HL SmartPanel

The unique feature set of Riedel's RSP-1232HL SmartPanel includes 3 high-resolution, sunlight readable, multi-touch color displays and 32 lever keys including rotary encoders in 2RU.

Features

- 32 lever keys
- 3 high-resolution, sunlight-readable displays
- Integrated power supply
- 2 SFP slots
- 2 USB ports
- 2 Ethernet connectors
- 2 Matrix connectors (RJ45/BNC)
- 1 Expansion connector (future use)
- NFC-/Bluetooth connectivity (future use)
- 1 Management connector (future use)
- 1 SD card slot
- 1 Displayport (future use)
- 3 GPI-In
- 3 GPI-Out
- 2 Analog audio
- 2 Headset connector (RJ45)
- removable gooseneck microphone
- internal microphone (future use)
- exchangeable Headset connector (mono/stereo)
- 2RU

2.1 Operating Elements

figure 5: RSP-1232HL (front view)

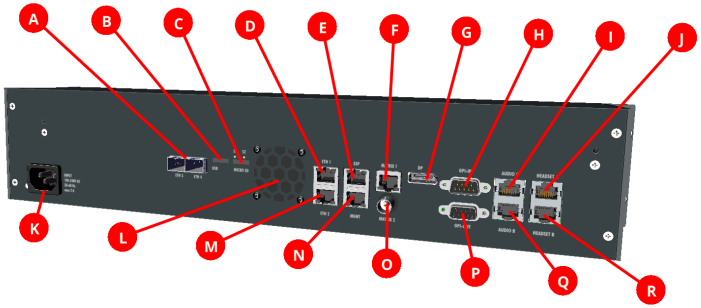


figure 6: RSP-1232HL (rear view)

1	Panel Microphone Connector (6.3 mm jack)	1×
2	Key-Displays (Touchscreen)	2×
3	Lever Keys with integrated Rotary Encoders with push functionality	32×
4	Panel Microphone (internal, future use)	1×
5	Light Sensor (future use)	1×
6	Rotary Encoder (big) with push functionality	1×
7 13	Speaker (left + right)	2×
8 J R	Headset Connectors (front: XLR / rear: RJ45)	1× / 2×
9	NFC Antenna / Bluetooth-Antenna (future use)	1× / 1×
10	Info-Display (Touchscreen)	1×
11 B	USB Connectors (front: Type-A / rear: Type-C)	1× / 1×
12	Rotary Encoder (small) with push functionality	1×
A	SFP Slots ETH3/ETH4	2×
C	Micro SD Card Slot	1×
D M	Ethernet Connectors ETH1/ETH2 (RJ45)	2×
E	Expansion Connector EXP (RJ45)	1×
F O	Matrix Connectors (AES3, RJ45/BNC)	2×
G	Displayport DP (future use)	1×
H P	GPI Inputs / GPI Outputs (D-Sub-9, female/male)	3× / 3×
I Q	Analog Audio Inputs / Outputs (RJ45)	2×
K	Power Supply (mains input)	1×
L	Fan	1×
N	Management Connector MGNT (RJ45, future use)	1×

All Ports and Pinouts can be found in chapter Ports / Pinouts.

2.2 Status LEDs

figure 7: RSP-1232HL (front status LED positions)

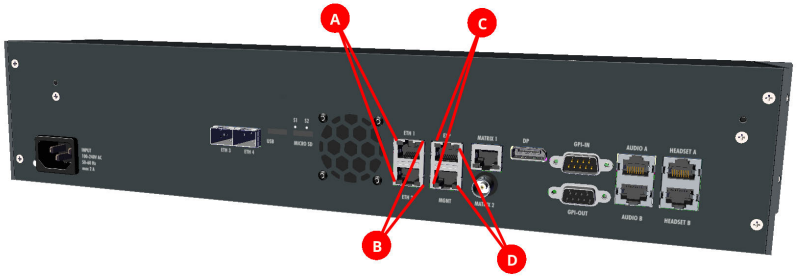


figure 8: RSP-1232HL (rear status LED positions)

The meaning of the Status LEDs in normal operation is listed in the following table:

1	**Panel Microphone**	**white**	Panel microphone active, Headset deactivated
		off	Headset active, Panel microphone deactivated
2 4	**LED Ring (top / bottom)**	**RGB**	Depending on operation mode: • Group-Color • Signalization
3	**Rotary Encoder (big)**	**red blinking**	Speaker muted
		off	Speaker active
5	**Rotary Encoder (small)**	**red blinking**	Microphone muted
		off	Microphone open
A	**Ethernet (left)**	**green**	Activity
		off	No activity
B	**Ethernet (right)**	**yellow**	100 Mbit/s link to the Intercom Network present
		green	1 Gbit/s link to the Intercom Network present
		off	No link
C	**Expansion / Management (left)**	**orange**	Link ok
		off	No link
D	**Expansion / Management (right)**	**yellow**	Activity
		off	No activity

2.3 Lever Key Numbering

The lever keys are numbered as follows:

figure 9: Numbering of lever keys

2.4 Power-Up

Connect the RSP-1232HL with the mains voltage and wait until the SmartPanel has booted.

If the SmartPanel is not connected to a matrix, you will see the following contents in the info display on the right:

Info-display	Function
Network	State of the audio network.
Address	IP address of the AES67 port.
Media Port	Selection of the Ethernet-port that is connected to the AES67 network.
Transport Selected	Shows the current selected transport mode.
Matrix	State of the connection to the matrix.

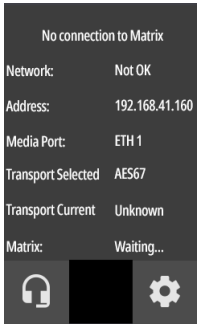


figure 10: Info-display (no connection)

If the SmartPanel is connected to the matrix, the matrix status changes to '**RX/TX OK**' before the default view is displayed.

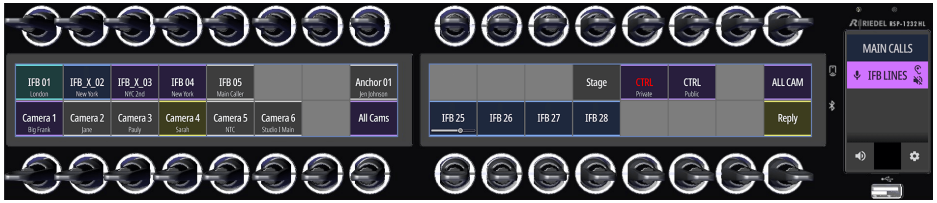


figure 11: RSP-1232HL (connected with matrix)

- The name (**key label**) of the corresponding channel is displayed below/above each lever key.
- The subtitle (**16-char subtitle**) of the corresponding channel is displayed in the second line.

2.5 Info-Display

The Info-display is located on the right side of the SmartPanel.

- Switching of Key-Banks (by prolonged touch)
- Indication of active functions
- Switching between panel- and headset operation
- Open the panel menu

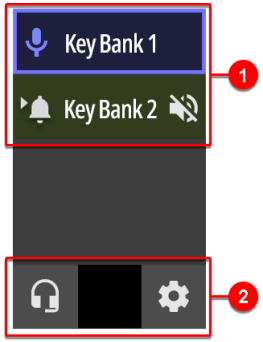


figure 12: RSP-1232HL (Info-Display)

1	Indication and switching the active Key-Bank. Various symbols signal events on the corresponding Key Bank.		
	Beep symbol		If at least one channel on the inactive Key-Bank has an incoming beep, the Beep symbol is displayed.
	Talk-symbol	This symbol depends of the operation mode:	
		Talk/Listen	If at least one channel on the Key-Bank has an active call, the Talk symbol is displayed.
		Talk/Mute	
	Mute symbol (Listen symbol)	This symbol depends of the operation mode:	
		Talk/Listen	If at least one channel on the Key-Bank listens to a remote station, the Listen symbol is displayed.
		Talk/Mute	If at least one channel on the Key-Bank is muted, the Mute symbol is displayed.
2	**Speaker symbol (Headset symbol)**	Switching between speaker and headset.	
		Speaker	SmartPanel speaker and microphone are active.
		Headset	The connected headset is active.
	Gear symbol	Opening the panel menu.	

2.6 Reset

A restart of the SmartPanel can be forced in the panel menu "Service > Reboot Panel".

2.7 Panel-Menu

Basic information and settings of the SmartPanel can be displayed and modified in the Panel menu.

➢ Touch the gear icon on the Info-Display to open the Panel menu.

Info-display	Function
Transport	Set Transport Mode (**AES3** or **AES67**)
Brightness	Adjust brightness off displays and LEDs
Device-Info	Show SmartPanel information
Network	Show/edit network settings
Matrix	Show Matrix information
Service	Stores a log file and reboots the SmartPanel

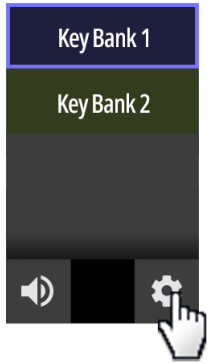


figure 13: Panel menu

In the Panel menu, keys can be navigated as follows:

	Turning the lower, small rotary encoder	• Select the next / previous menu item • Change values / settings
	Pushing the lower, small rotary encoder	Enter selected menu item
	BACK icon in the Info-display	Back to parent menu item
	ESC icon in the Info-display	Cancel entry
	OK icon in the Info-display	Confirm entry
	HOME icon in the Info-display	leave menu / back to main view

2.7.1 Transport

The menu **Transport** allows selecting the protocol that is used to connect the SmartPanel with a matrix.

Info-display	Function	
Current Mode:	Shows the current used mode.	
Selected Mode:	Selection of the mode to be used:	
	Auto	The SmartPanel selects the mode automatically to establish a successful connection to a matrix.
	AES3 Cat	The SmartPanel establishes a connection via RJ45 matrix connector.
	AES3 Coax	The SmartPanel establishes a connection via BNC matrix connector.
	AES67	The SmartPanel established a connection via the Ethernet-port defined for using AES67 (see panel-menu: Network>AES67: Media-Port).

2.7.2 Brightness

The menu **Brightness** allows adjusting the display and LED brightness between 10% and 100%.

Info-display	Function
Display Brightness:	Adjusting the brightness of the displays.
LED Brightness:	Adjusting the brightness of the key rings.

2.7.3 Device-Info

The menu **Device-Info** shows information about the SmartPanel.

Info-display	Function
Date:	Shows the current date.
FW Version:	Shows the current firmware version.
SN#:	Shows the serial number of the SmartPanel.

2.7.4 Network

The menu **Network** allows showing/editing network settings.
The menu **AES67** allows configuring the AES67 interface.

Info-display	Function
IP Address	Static IP-address of the AES67-port.
Subnet Mask	Network mask of the AES67-port.
Gateway	Gateway of the AES67-port.
SIP Port	Selection of the SIP-port. (Standard 5060)
Media Port	Selection of the Ethernet-port (ETH1...4) that is connected to the AES67 network.

2.7.5 Matrix

The menu **Matrix** shows information about the connected Matrix.
Content is only available if the SmartPanel is connected with a Matrix.

figure 14: Matrix

Display	Function
Net	Net number of the connected matrix.
Node	Node number of the connected matrix.
Bay	Bay number of the connected matrix.
Port	Port number of the connected matrix.
Room	Shows the Room code (if applied).
Name	Name of the SmartPanel.
Firmware-Version	Current version of the firmware of the connected matrix.
Bootloader-Version	Current version of the Bootloader of the connected matrix.
Emergency-Version	Current version of the Emergency-firmware of the connected matrix.
CurAPi	Shows the active audio patch.
PAN	Number of the panel in the Artist.
Alarm	Number of alarms in the connected matrix.
Node IP	IP-address of the connected matrix.
OnCall	Number of incoming calls to the SmartPanel that are active when the matrix menu is opend.
Datum	Shows the current date of the connected matrix.
Uhrzeit	Shows the current time of the connected matrix..
MIC conf	The microphone setting of the panel can be changed between **dynamic** and **electret** by using the lever key 29.
HS conf	The microphone setting of the headset can be changed between **dynamic** and **electret** by using the lever key 31.
<	Key in the Info-display to return to the parent menu item.
⌂	Key in the Info-display to return to the main view.

2.7.6 Service

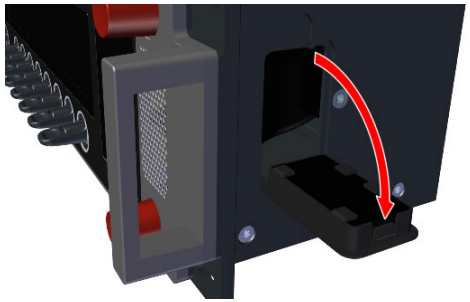
The menu **Service** allows storing logfiles and rebooting the SmartPanel.

Info-display	Function	
Log Files	Stores the internal log file onto an USB stick. This data is used by the Riedel service for analysis and troubleshooting.	
	Save to USB	Saves the log file "report_*.tgz" to a previously inserted USB stick. The file is saved in the folder "\Riedel\reports".
Reboot Panel	Reboot now	Restarts the SmartPanels.
	Cancel	Exits the menu item and jumps back one level.

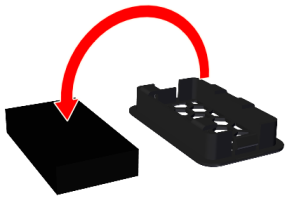
2.8 Replacing the Air Filter

The air filters are located on both device sides.

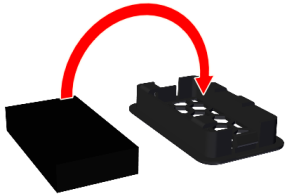
- Use your fingers to pull out the grille including the air filter on the upper side.



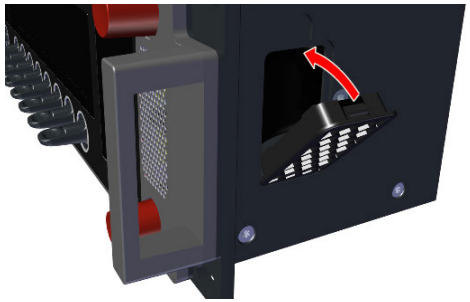
- Remove the air filter out of the grille.



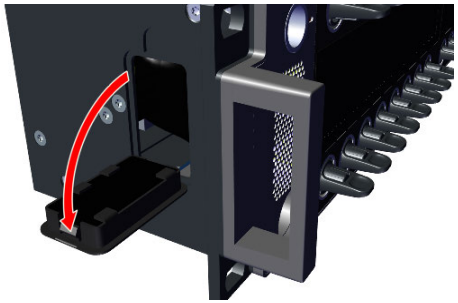
- Push the new/cleaned air filter in the grille.



- Insert the grille into the bottom of the SmartPanel first and then press it evenly.



- Repeat this step on the opposite side of the chassis.



3 SmartPanel Firmware

The firmware version **1.0** contains following app:

App	License	Version	Description	
Intercom app	**RSP-1232HL-APP-PRO**	1.0	Standard App for Intercom functionality.	These licenses are already pre-installed on the SmartPanel.
AES3 app	**RSP-1232HL-LIC-AES3**	1.0	Standard Apps to use the AES3 interface.	

3.1 Licensing

The 1200 series SmartPanels need license files to activate the apps running on the panel. If a panel is not already licensed by Riedel, the license file is provided by your local distributor. The name of the license file needs to be equal to the serial number of the panel where the license will be installed. The serial number of a SmartPanel is 13 digits long and contains numbers only (e.g. "1234512345678"). The license file is a "bin"-file (e.g. "1234512345678.bin"). Every license file is only readable by the panel matching the serial number.

3.2 Intercom App

The first SmartPanel app turns the SmartPanels in innovated and intelligent intercom panels.
Riedel's intercom app can be quickly and easily upgraded to the desired edition, without changing any hardware components.

i	This app requires a license file (RSP-1232HL-APP-PRO). This license is already pre-installed on the SmartPanel.

Intercom App	Pro
Intercom Keys	32
Multi-Touch Displays	3
GPI (In/Out)	3/3
Audio I/O A	✓
Audio I/O B	✓
Headset A	✓
Headset B	✓
Expansion Panels	✓
Key-Banks	✓
Logical Groups	✓

3.2.1 Operation

This chapter describes the operation of the Intercom app of the SmartPanel:

Lever-Key Functions

Push the lever key up or down to trigger the function.
An activated function is indicated either by the lever keys' LED-ring or in the corresponding Key-display.

The lever up key function is only latching.
The lever down key function depends on the configuration in Director: momentary, latching or automatic (short press = latched / long press = momentary).

figure 15: Lever Key Functions

Key-Display Functions

Touching the display of a key for half a second opens a drawer with various key functions. The dialog will disappear after 3 seconds of inactivity.

figure 16: Key-Display functions

	Sends a beep to the remote panel as long as the symbol is touched.
	Activates/deactivates the listening function of the outgoing audio (Talk) on the remote panel (monitor remote panel). In **Talk/Listen** mode this functions is adequat to the lever up key function. In **Talk/Mute** mode the activated monitoring function is indicated by an ear icon in the upper right area.
Norm.	Sets the volume of the corresponding channel to normal level or switches off the muting.
	Configures the **copy/reply** button to this port.

Volume Level

Master Volume

The upper, big rotary encoder is used to adjust the master volume of the SmartPanel. The volume level is temporarily visualized by a vertical bar on the right side of the Info-display.
If the Headset mode is enabled, the volume of the connected headset is adjusted. The volume levels of speaker and headset can be set independently.
Pushing the big rotary encoder will mute the speaker. This is indicated by a blinking LED inside this rotary encoder.

figure 17: Master Volume

Port Volume

The individual port volume is adjusted by turning the integrated rotary encoder in the respective lever key. The volume level is temporarily visualized by a horizontal bar on the corresponding Key-display.
Pushing the rotary encoder will mute the corresponding port. Muting is also possible by turning down the volume completely. This is indicated by a mute icon in the corresponding Key-display.

figure 18: Port Volume

Sidetone Volume

The lower, small rotary encoder is used to adjust the sidetone level of the SmartPanel. The volume level is temporarily visualized by a vertical bar on the left side of the Info-display.
Pushing the small rotary encoder will mute the microphone. This is indicated by a blinking LED inside this rotary encoder.

figure 19: Sidetone Volume

i	The Sidetone function is always active on 1200 SmartPanels and must not be additionally configured in the Director.

Scroll Lists

To call up scroll lists configured in the Director on a 1200 smart panel, the respective configured rotary encoder must be pressed twice (double-click). In the respective key display, either the alphanumeric name search (**Search**) or the function type (**C2 Port/L2 Port**, ...) can now be selected by turning and pressing the rotary knob in order to select a scroll list entry.

figure 20: Scroll Lists

3.2.2 Signalization

The LED-ring as well as the corresponding Key-display can be used to indicate any activity of the respective port. The indication varies depending on the selected workflow mode (Talk/Mute or Talk/Listen).

Furthermore a symbol can be displayed in the corresponding ports.

The name (**Key Label**), subtitle (**16-char Subtitle**) and the symbol (**Icon**) of the port can be entered in the Director software: right-click on the respective key > **properties** > '**General**' tab.

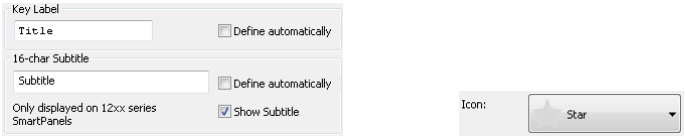
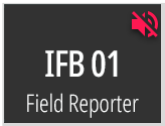


figure 21: name / subtitle / icon of the port in the Director

Talk/Mute-Modus

In Talk/Mute mode, signaling is always shown via icons in the upper area in the key display.

Signal	Display	Description
Call (active, outgoing)		The mic icon in the upper left area indicates an active outgoing call.
Mute (active)		The red mute icon in the upper right area indicates a muted port.

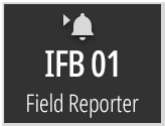
Talk/Listen-Modus

In Talk/Listen mode, the signalization depends on the configuration of the group color:

- If the group color is indicated via the key ring, the signalization is indicated via the display.
- If the group color is indicated via the display, the signalization is indicated via the key ring.

Signal	Display		Description
Call (active, outgoing)	**Signaling** via the *Key-display* (**Group color** via the *LED-ring*)		A red bar is displayed below the title.
	Signaling via the *LED-ring* (**Group color** via the *Key-display*)		The lower part of the LED-ring lights red.
Monitor (listen, active)	**Signaling** via the *Key-Display* (**Group color** via the *LED-ring*)		A green bar is displayed above the title.
	Signaling via the *LED-ring* (**Group color** via the *Key-display*)		The upper part of the LED-ring lights green.

Common Signalization

Signal	Display	Description
Call (incoming)		The Key-display is highlighted (fade in / out) while a call is incoming if the port is not muted.
Beep (incoming)		The animated bell icon shows where the Beep being received is coming from.
Beep (outgoing)		The animated bell shows that the user is beeping a remote panel.
Port occupied		This symbol indicates that the remote panel is currently in a call.
Active Control Signal		This signal will cover all control functions in the Artist. The user can choose to color the control signal in the key function.

3.2.3 Lever-Groups

The keys of the SmartPanel can be assigned into up to 16 groups.
For an easy identification each group has an separate group color.
The group color can be selected in **Key Properties** in the Director software: right-click on the respective key > **Properties** > '**General**' tab > '**Group color**'.
The group color is indicated either in the key ring or in the display of the SmartPanel.
This setting is done in **Panel Properties** in the Director software: right-click on the respective SmartPanel > **Properties** > '**UI Config**' tab > '**Group color**'.

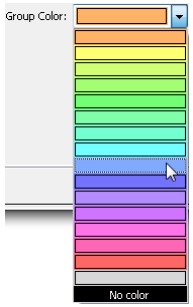


figure 22: group color per key in Director (Key Properties)

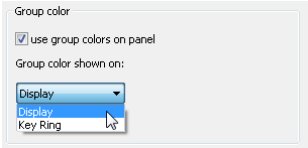
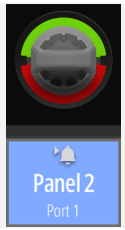


figure 23: indication of group color in Director (Panel Properties)

The key signalization is indicated in the opposite way:

- If the group color is indicated via the key ring, the signalization is indicated via the display.
- If the group color is indicated via the display, the signalization is indicated via the key ring.

Group Color via Key Ring		Group Color via Display	
Group-Color (i.e. light blue)		**Signalization via the key ring** (only in Talk/Listen mode)	
Signalization (Bars) via the display (only in Talk/Listen mode)		**Group-Color (i.e. light blue)**	

In Talk/Mute mode, signaling is always shown via icons in the key display.

3.2.4 Operation Mode

The RSP-1232HL offers two different ways of operation:

- Talk/Listen
- Talk/Mute

The desired mode can be set in the Director software (**panel properties** > '**UI Config**' tab): right-click on the respective SmartPanel > **Properties** > '**UI Config**' tab > '**Panel operation mode**'.

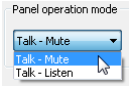


figure 24: workflow mode in Director

The following table shows the function of lever keys in both modes:

Lever Direction		Talk/Listen	Talk/Mute
up *1		Listen to outgoing audio (Talk) on a remote panel (monitor remote panel)	Mute the incoming audio signal
down *2		• Talk to a panel • Execute additional configured commands	

*1 latching only
*2 auto, momentary and latching

3.2.5 Key-Banks

Key Banks – a new take on shift pages – are layers of keys that are accessed by simply touching a button on the screen. The Info-Display shows two key banks in the main. The user can switch between the key banks by touching the respective name for 0.5 seconds. The active key bank is highlighted in the Info-Display by a thicker border. Furthermore the color of the active Key-Bank is shown as border in both Key-Displays.

figure 25: View of selected Key-Bank

The name and color of the key baks can be entered / selected in the Director software:
right-click on the respective SmartPanel > **Properties** > '**UI Config**' tab > '**Key Bank configuration**'.

figure 26: name / color of key banks in the Director

3.3 Web Interface

The SmartPanel has a web interface that can be used to update the SmartPanel.

Enter the IP address of the **AES67 interface** (Ethernet connectors) of the SmartPanel in the web browser of a PC on the same network.

i	The IP addresses of the SmartPanel are displayed in the Panel-Menü > Network > **AES67**.

A screen resolution of at least 1280x760 pixels is required to display the web interface.

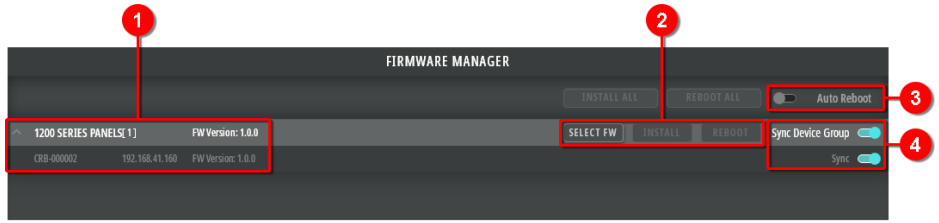


figure 27: SmartPanel web interface

1	**Asset List** The asset list displays all SmartPanels that are found in the network. The view can be grouped with the arrow icons.	
2	**Firmware Update Buttons** Buttons to update the firmware. A maximum of ten SmartPanels can be updated in parallel.	
	SELECT FW	Opens a dialog to select the firmware file (.cfw).
	INSTALL	Installs the selected firmware on a SmartPanel.
	REBOOT	Restarts a SmartPanel.
3	**Auto Reboot** If the switch is enabled, the SmartPanel is automatically restarted after the update. If the switch is disabled, the user must restart the SmartPanel after the update manually by using the REBOOT button to complete the firmware update.	
4	**Sync Device Group** If the switch is enabled, the firmware of all found SmartPanels is updated. If the switch is disabled, the firmware can be updated individually on SmartPanels.	

3.4 Firmware Update

There are two ways to update the firmware of the RSP-1232HL SmartPanel:

1. Via USB pen drive
2. Via web interface

Firmware update via USB pen drive

- Format an USB pen drive in the FAT32 or NTFS file format.
- Create the folders: "\\Riedel\firmware\unattended".
- Copy the desired RSP-1232HL firmware file into the above mentioned folder.
- Take care that the filename of the firmware is "**SmartPanel-12xx.cfw**" and rename the filename if necessary.
- When the RSP-1232HL SmartPanel is booted, insert the USB pen drive into the USB connector below the Info-display.

The update process is started automatically.

i	Do not power cycle the panel and do not remove the USB pen drive until the update procedure is finished.

- The firmware is uploaded in the SmartPanel now.

figure 28: update in progress

- After storing the firmware you will be prompted to remove the USB pen drive.

figure 29: update finished

➢ The SmartPanel is automatically rebooting after removing the USB pen drive.

The firmware update is finished now.

figure 30: rebooting

Firmware update via web interface

Enter the IP address of the **AES67 interface** (Ethernet connectors) of the SmartPanel in the web browser of a PC on the same network.

ℹ	The IP addresses of the SmartPanel are displayed in the Panel-Menu > Network > **AES67**.

ℹ	Do not disconnect the SmartPanel from mains during the update process.

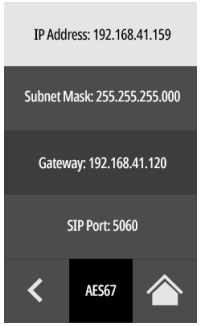


figure 31: IP address of the SmartPanel

Open the web interface of the SmartPanel:

- Enter the IP address in the web browser (e.g. 192.168.41.159).

In this example there is only one SmartPanel in the network.

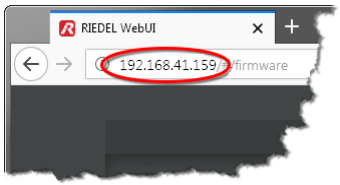


figure 32: web interface of the SmartPanel

The web interface opens.

- Click on the '**SELECT FW**' button.
- Navigate to the location of the firmware file and select the desired one by clicking the **Open** button.

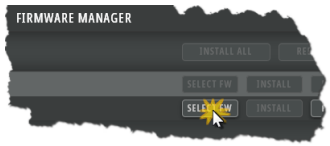


figure 33: select firmware

- Click on the '**INSTALL**' button.

figure 34: install

The selected firmware is transferred into the SmartPanel. A bar graph visualizes the update progress.

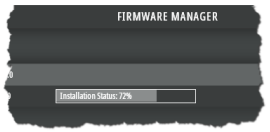


figure 35: install

The SmartPanel must be rebooted to finish the update process.

- Click on the '**Reboot**' button if the '**Auto Reboot**' function is disabled.

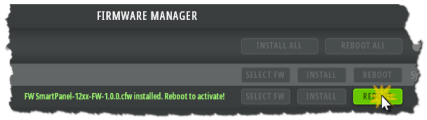


figure 36: reboot

The device is restarted. The connection is interrupted during the restart.

figure 37: restarting device

If the connection is re-established after the reboot, the new firmware version is active.

figure 38: new firmware

4 Appendix

4.1 Technical Specifications

Front Elements

Keys	32× software-assignable lever keys
Rotaries	2× rotary encoders for data entry
Displays	3× high-resolution, bright color, sunlight readable TFT Displays with multi-touch control (capacitive)
Mic	1× threaded 6.3 mm jack for microphone 1× internal panel microphone
Headset	User-exchangeable Headset connector with preinstalled 4-pin male XLR connector
Speaker	2× full-range, high-quality speakers
USB	1× USB 2.0 (standard Type-A, max. 1000 mA)
NFC	Technology RFID, Frequency 13.56 MHz (future use)
Bluetooth	Frequency DTS Band 2400 ... 2483.5 MHz (future use)
Light Sensor	Adaptation of the display brightness to the environment (future use)

Rear Elements

IEC	Power Input
SFP	2× Ethernet ETH 3 / ETH 4 (Ethernet, AES67)
USB	1× USB 2.0 (standard Type-C, max. 1000 mA)
MicroSD-card	1× MicroSD / MicroSDHC card up to 32 GB (for service purpose only)
RJ45	2× Ethernet ETH 1 / ETH 2 (10/100/1000BASE-T Ethernet, AES67)
	1× Expansion EXP connector for expansion panels
	1× Management MNG connector for panel configuration (separation of audio and management network, future use)
	1× Matrix connector for matrix connection (AES3)
	2× Analog audio 4-wire inputs and outputs
	2× Headset (“Headset A” is identical to front connector signal)
BNC	1× Matrix connector for matrix connection (AES3)
DisplayPort	1× DisplayPort connector
Sub-D9 (male)	3× GPI output, U_{max} 48 V / 300 mA, protected by self-healing fuse
Sub-D9 (female)	3× GPI input, U_{in} = +5 V ... +48 V

Overall

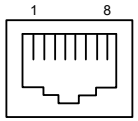
Power	supply voltage	100 - 240 VAC, 50 - 60 Hz
	power consumption	≤20 W, ≤70 BTU/hr
Dimensions	width	483 mm / 19" (445 mm / 17.5", installing dimensions)
	height	88 mm / 3.5"
	depth	95 mm / 3.7"
	form factor	19”, 2 RU
Weight	3.4 kg / 7.4 lbs	
Environment	operating temperature	0° ... +45°C
	storage temperature	-30° ... +80°C
	humidity	20 % ... 90 % relative (non-condensing)
	max. altitude	3000 m absolute

4.2 Ports / Pinouts

In this chapter the Ports/Pinouts of the RSP-1232HL are shown.

Ethernet port

The Ethernet connectors are used to connect an intercom network (AES67).
This port is 1000Base-T compatible.

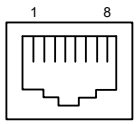


Pin	Signal	Standard color
1	BI_DA+	orange/white
2	BI_DA-	orange
3	BI_DB+	green/white
4	BI_DC+	blue
5	BI_DC-	blue/white
6	BI_DB-	green
7	BI_DD+	brown/white
8	BI_DD-	brown

figure 39: ETH connector RJ-45 pinout (8P8C)

Management port

The Management connector is currently not used. In future this port is used to configure the panel over a network that is separated from the intercom network. This port is 100Base-T compatible.

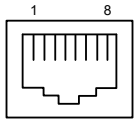


Pin	Signal	Standard color
1	TX+	orange/white
2	TX-	orange
3	RX+	green/white
4	--	blue
5	--	blue/white
6	RX-	green
7	--	brown/white
8	--	brown

figure 40: MGNT connector RJ-45 pinout (8P8C)

Expansion port

The Expansion connector is used to connect Expansion Panels.

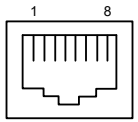


Pin	Signal	Standard color
1	TX+	orange/white
2	TX-	orange
3	RX+	green/white
4	--	blue
5	--	blue/white
6	RX-	green
7	--	brown/white
8	--	brown

figure 41: Expansion connector RJ-45 pinout (8P8C)

Matrix connectors

The Matrix connectors are used for the connection to the intercom matrix (AES3).



Pin	Matrix 1
1	TxD +
2	TxD -
3	RxD +
4	--
5	--
6	RxD -
7	--
8	--
Chassis	Chassis GND

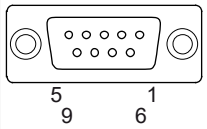
figure 42: Matrix 1 connector RJ-45 pinout

Pin	Matrix 2
1	TxRx Data +
2	TxRx Data -

figure 43: Matrix 2 connector BNC pinout

GPI IN port

The GPI input connector contains 3 single ports.



Pin	Signal	Pin	Signal
1	GP-IN1-P	6	GP-IN1-N
2	GP-IN2-P	7	GP-IN2-N
3	GP-IN3-P	8	GP-IN3-N
4	GPIO +5V	9	GND
5	Chassis	Chassis	Chassis

figure 44: GPI IN connector Sub-D-9 female pinout

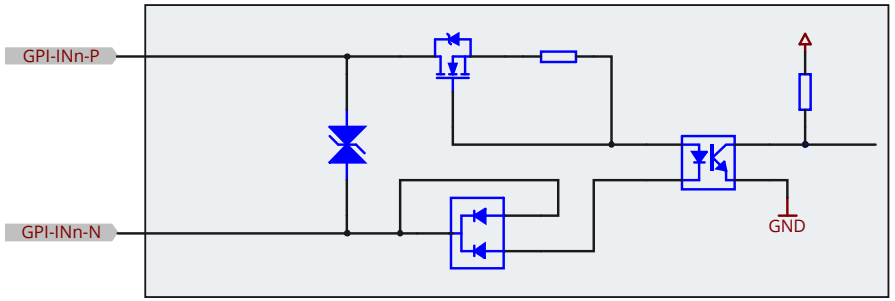
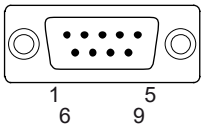


figure 45: GPI IN connector schematic

- The input voltage range of the GPI inputs is +5 to +48 VDC (~5 mA current draw, internal optocouplers).
- The polarity of the inputs is important. The higher potential must be connected to “P” of each channel.
- The inputs are galvanically isolated.
- The "GPIO +5V" output voltage drops by increasing the load: 5V @ 0mA / 3.3V @ 50mA.

GPI OUT port

The GPI output connector contains 3 single ports.



Pin	Signal	Pin	Signal
1	GP-OUT1-P	6	GP-OUT1-N
2	GP-OUT2-P	7	GP-OUT2-N
3	GP-OUT3-P	8	GP-OUT3-N
4	--	9	--
5	Chassis	Chassis	Chassis

figure 46: GPI OUT connector Sub-D-9 male pinout

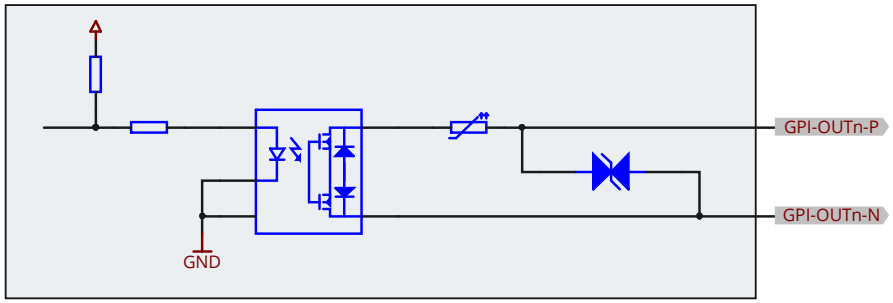
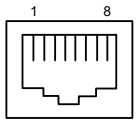


figure 47: GPI OUT connector schematic

- The GPI output contact rating is 300 mA, 60 VDC maximum (protected by self-healing fuse).
- The polarity of the output has no preference.
- The outputs are galvanically isolated.
- The "GPIO +5V" output voltage drops by increasing the load: 5V @ 0mA / 3.3V @ 50mA.

Audio connector



Pin	Signal	Standard color
1	--	orange/white
2	--	orange
3	--	green/white
4	AIO-RX-P	blue
5	AIO-RX-N	blue/white
6	--	green
7	AIO-TX-P	brown/white
8	AIO-TX-N	brown

figure 48: Audio connector RJ-45 pinout

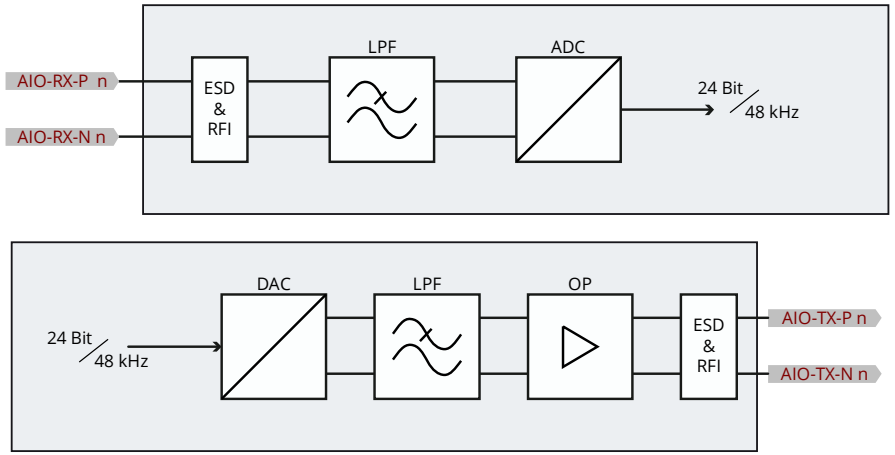
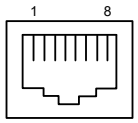


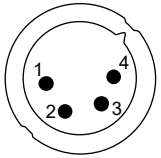
figure 49: Audio connector block diagram

Headset connectors



Pin	Headset A	Headset B
1	HS Phones A + (right)	HS Phones B + (right)
2	GND	GND
3	Data A	Data B
4	HS MIC A + , (+5 VDC)	HS MIC B + , (+5 VDC)
5	HS MIC A - , (GND)	HS MIC B - , (GND)
6	PTT A	PTT B
7	HS Phones A + (left)	HS Phones B + (left)
8	GND	GND
Case	Chassis	Chassis

figure 50: Headset connector RJ-45 pinout



Pin	Headset A	Headset B
1	HS MIC A - , (GND)	HS MIC B - , (GND)
2	HS MIC A + , (+5 VDC)	HS MIC B + , (+5 VDC)
3	GND	GND
4	HS Phones A + (left)	HS Phones B + (left)

figure 51: Headset connector XLR-4 male pinout

The microphone power (+5 VDC) will be switched on/off according to the microphone type.

4.3 Maintenance Recommendations

Following points are strongly recommended to prevent malfunction of the system.

General

- Check the functionality of the fan.

Daily

None

Weekly

None

Monthly

- Check fan dust filters and exchange them if necessary.

Yearly

None

Other

- Every three years, the fan filters should be exchanged due to an aging process even if they are not dusty or if the system was not in operation.

4.4 Service

If you have any further questions, we offer comprehensive customer service options for this product including:

- Telephone Service
- Email Service
- Fax Service
- Configuration Support
- Trainings
- Repair

Your primary point of contact for any service issues is your local dealer.
In addition, Riedel Customer Service in Wuppertal, Germany is also available to assist you.

Telephone: +49 (0) 202 292 9400
(Monday - Friday, 8am – 5pm, Central European Time)

Fax: +49 (0) 202 292 9419

Or use the contact form on our website:
www.riedel.net > Company > Contact > Wuppertal (Headquarters)

For repairs, please contact your local dealer. Your dealer will be able to help process your repair as fast as possible and/or arrange for the delivery of spare parts.

The address for repairs sent directly to Riedel Communications GmbH is:

Riedel Communications GmbH & Co. KG
- Repairs -
Uellendahler Str. 353
D-42109 Wuppertal
Germany

Please add a completed repair form to all your repairs.
The form can be found at the Riedel website:
www.riedel.net > Services > Repairs

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