

Riedel Acrobat WB-2 Wireless Beltpack

Digital Wireless Intercom System User Manual



Harmonised standards applied

Directive 1999/5/EC: Radio and Telecommunication Terminal Equipment

Air interface of the radio systems pursuant to article 3 (2)
EN 301406 : V2.1.1 (2009)

Protection requirements concerning electromagnetic compatibility according to article 3 (1) b
EN 301489-1 : V1.9.2 (2011),
EN 301489-6 : V1.3.1 (2008),
EN 61000-4-3 : 2002 + A1 : 2002

Health and safety requirements pursuant to article 53(1) 1 (article 3(1) a)
EN 60950-1 : 2001

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada.

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.
3. 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 A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Radiofrequency radiation exposure Information:

The radiated output power of the device is far below the FCC radio frequency exposure limits. Nevertheless, the device shall be used in such a manner that the potential for human contact during normal operation is minimized.



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1 Safety Information

1.1 Explanations of Symbols

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

1.1.1 Danger

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.

1.1.2 Warning

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.

1.1.3 Caution

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.

1.1.4 Hint

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

- All service has to be undertaken ONLY by qualified service personnel.
- All service has to be undertaken ONLY by qualified Riedel service personnel.
- There are no user serviceable parts inside the 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.

1.3 Voltage

- Ensure that the supply voltage available at the installation site meets the voltage range of the battery loader.
- When you remove a power cable never pull on the cable itself but on the connector. A damaged cable could lead to shocks or burns.

Danger	
	Non-observance can lead to electrical shock.

1.4 Environment

- Operating temperature of the system: -5°C ... 50°C.
- Never expose the device to any liquids.
- If the equipment has been exposed to a cold environment and transferred to a warm environment, condensation may form inside the housing. Wait at least 2 hours before applying any power to the equipment.

1.5 Battery Safety

The device is fitted with the following battery: Lithium-Ion battery Acrobat RB-2300, 7.2V, 2300mAh. Use only the original Lithium-Ion battery.

Warning	
	<p>Risk of explosion if battery is replaced by any other incorrect type</p> <p>Do not short circuit</p> <p>Use specified charger only</p> <p>May explode if disposed in fire</p>
<p>Dispose of used batteries according to the instructions. Do not expose to high storage temperatures above 60°C (140°F).</p>	

1.6 CE Declaration of Conformity

	<p>The Acrobat devices conform to the EU guideline 1999 / 5 / EC as attested by the CE mark.</p>
	<p>FCC ID: AY3-BSIP1US IC: 267AQ-BSIP1US</p>

1.7 Disposal

Disposal of old Electrical & Electric Equipment

(Applicable throughout the European Union and other European countries with separate collection programs)

	<p>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.</p>
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2 Introduction

2.1 General

Thank you for choosing a Riedel product.

This manual describes the user accessible elements of the Acrobat Wireless Beltpack 2 (WB-2). Where not other stated, all descriptions apply to Acrobat CC-8, CC-60 and CC-120.

For further information about the Acrobat hardware please contact your local distributor or the Riedel headquarters in Wuppertal.

2.2 Terminology

The term **Beltpack** is used as a synonym for a Acrobat WB-2 Wireless Beltpack.

The term **Acrobat** is used as a synonym for the whole Acrobat Digital Wireless Intercom system.

2.3 Supported headsets

- Riedel PRO Headset
- Riedel MAX Headset
- Riedel AIR Headset

3 User Elements

3.1 User Elements Top

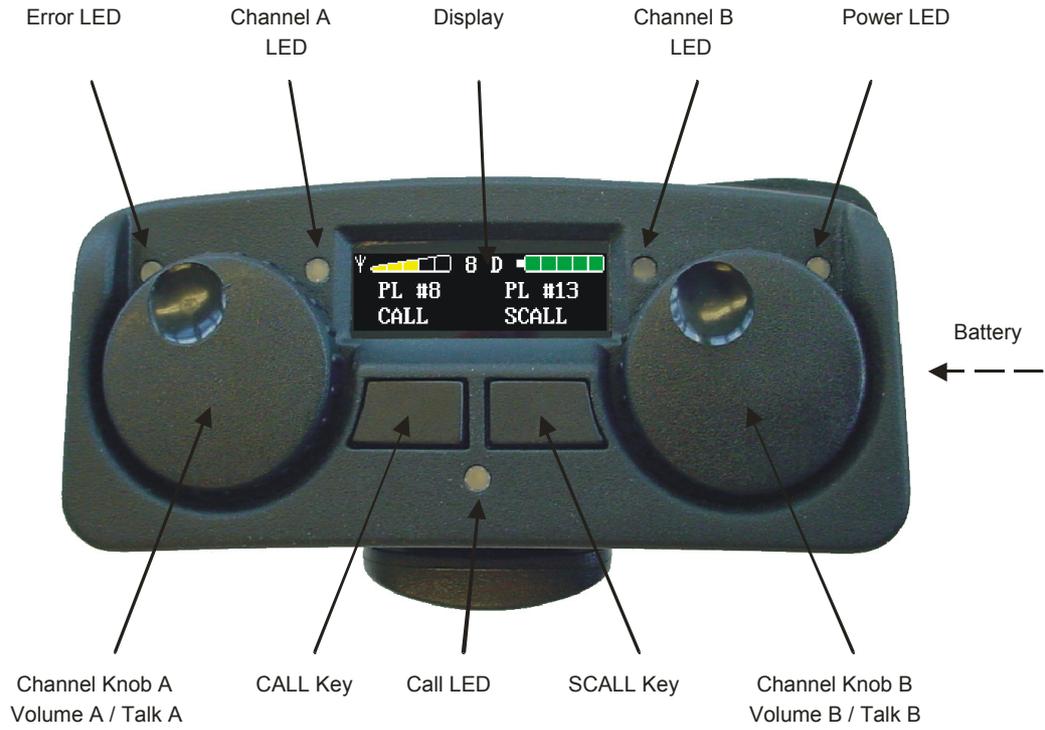


Figure 1:User Elements (Top)

3.1.1 Error LED (red)

The error LED indicates that the Beltpack is outside the DECT coverage area. The partyline cannot be used in this case.

Color	Status
Red, flashing fast (0.5 sec ON, 0.5 sec OFF)	Partyline error occurred
Off	Partyline works fine

3.1.2 Power LED (red)

The Power LED indicates that the Beltpack is powered ON and also powered sufficiently.

Color	Status
Red, flashing (1.0 sec ON, 1.0 sec OFF)	Powered ON
Red, flashing (0.25 sec. ON, 0.25 sec. OFF), about 5 minutes remaining to automatic power off	Powered On, battery low
Off	Insufficient powered

3.1.3 Call LED (orange)

The CALL LED lights orange when the CALL key is pressed and TALK is active. If an incoming call is received, the CALL LED blinks bright orange alternating with the green LED of the channel being called.

Color	Status
Orange	Outgoing CALL
Orange, flashing	Incoming CALL

3.1.4 Channel A/B LED (green)

This LED indicates that the TALK is active on the channel. The LED lights solid green when the channel is turned on.

Color	Status
Green	TALK active
Green 100%, flashing	Incoming CALL to Channel

3.1.5 Display

3.1.5.1 Display elements during operation mode

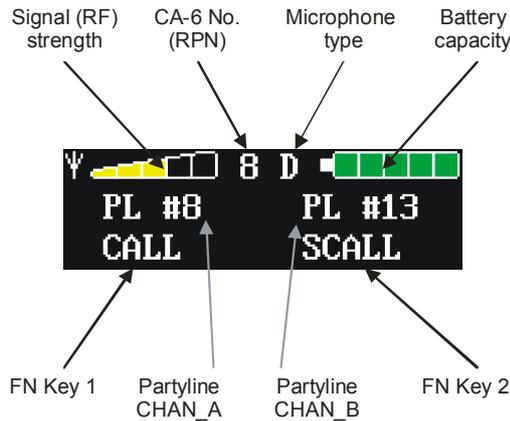


Figure 2: Display elements during operation mode

Display Element	Description
Signal strength	Displays the current incoming signal (RF) strength which was received by the Cell Antenna CA-6 . Less than 5% are signalled by a colourless RF symbol.
CA-6 No. (RPN)	Displays the RPN (Radio Part Number) of the CA-6 by which the WB-2 is communicating with.
Mic type	Displays the configured type of microphone (see setting of DIP switch #5 or service menu). "D" for Dynamic , "E" for Electret microphones
Battery capacity	Displays the current battery capacity in 20% steps. Less than 4% are signalled by a colourless battery symbol.
FN Key 1	Soft labeling of the FN Key 1. CC-8: In operation mode fixed labelled with "CALL". CC-60/CC-120: In operation mode, the label is configured at the Artist system.
Partyline CHAN_A (Partyline CHAN_B)	Displays the name of the associated partyline of channel A (B). CC-8: In operation mode fixed labelled with "PL #" and no. of Partyline (e.g. PL#12). CC-60/CC-120: In operation mode, the label is configured at the Artist system.
FN Key 2	Soft labeling of the FN Key 2. CC-8: In operation mode fixed labelled with "SCALL". CC-60/CC-120: In operation mode, the label is configured at the Artist system.

3.1.5.2 Display elements during metering mode

If metering mode is activated (see Service Menu), the display shows the following elements.

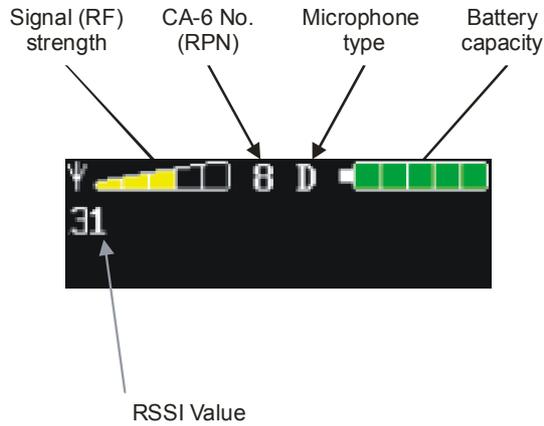


Figure 3: Display elements during metering mode

The following table depicts the correlation between "RSSI Value", the "Signal Strength" and the Symbol assigned.

RSSI Value	Signal Strength	Symbol
46 - 50	81 - 100 %	Ψ
41 - 45	61 - 80 %	Ψ
36 - 40	41 - 60 %	Ψ
31 - 35	21 - 40 %	Ψ
26 - 30	6 - 20 %	Ψ
0 - 25	0 - 5 %	Ψ

3.1.5.3 Other display messages (excerpt)

Display	Comment
Bootloader 1	Power-On: Beltpack is loading the bootloader (boot1)
Booting 2	Power-On: Beltpack is booting the bootloader (boot2)
Booting Applic	Power-On: Beltpack is booting the Application
Restart	During firmware updates or after changes in the service menu: Beltpack is rebooting
Downloading Boot 2	During firmware updates: Beltpack is downloading the boot2 firmware image
Downloading Applic	During firmware updates: Beltpack is downloading the application firmware image
Flashing Dect	During firmware updates: Beltpack is flashing the DECT firmware image
Error low batt. Please load accu	WB-2 has undergone a restart due to a low power condition
Error No 2	The bootloader 2 couldn't be found
Error no App	The application software could not be loaded
Save settings and rebooting	After changing values in the service menu
Chan xxx Occupied	(Applicable only for CC-60 / CC-120). This message indicates that the configured MADi channel is occupied.
No Chan configured	(Applicable only for CC-60 / CC-120). This message indicates that no MADi channel was configured at the WBM (Web Based Management) for this Beltpack.

3.1.6 Channel Knob (dual purpose)

3.1.6.1 Volume Channel A/B

The channel volume knob levels the volume of the respective channel of the WB-2 (0-100%). Turn the knob clockwise to increase and counterclockwise to decrease the volume of the channel.

3.1.6.2 TALK Channel A/B (Auto / Momentary)

Pressing the left knob activates the TALK for the respective channel. This is indicated by the green Channel A/B LED. An active TALK key enables talking to the corresponding digital partyline channel.

The TALK key can be set to latched (TALK is switched on/off by every press) or momentary (TALK only active while pressing the button) using the service menu.

3.1.7 CALL Key

When TALK A or TALK B is active, pressing the CALL key

- sends a CALL signal to the related channel (A, B or A and B) of the partyline and
- activates the CALL LED until the CALL Key is released.

On all connected devices, the corresponding CALL signal will light up e.g. WB-2 - TALK LED (green) alternates blinking with the CALL LED (orange).

At the CC-8, the CALL Key is also sent to the external user via the GPO interface. At the CC-60/CC-120, the CALL key is handled by the Artist system.

3.1.8 SCALL Key

If TALK A or TALK B is active, pressing the SCALL key sends a command. At the CC-8, the SCALL Key closes the GPI-out port to the devices on the corresponding channel. At the CC-60/CC-120, the GPI signal is handled by the Artist system.



The function carried out by the SCALL key is not displayed on the WB-2.

3.1.9 Battery



Figure 4: Battery

The light and powerful rechargeable Lithium-Ion battery Acrobat RB-2300 allows the Acrobat Digital Wireless Beltpack 8 hours of operation. The battery is located in the covered battery case at the right side of the WB-2.

3.2 User Elements Bottom

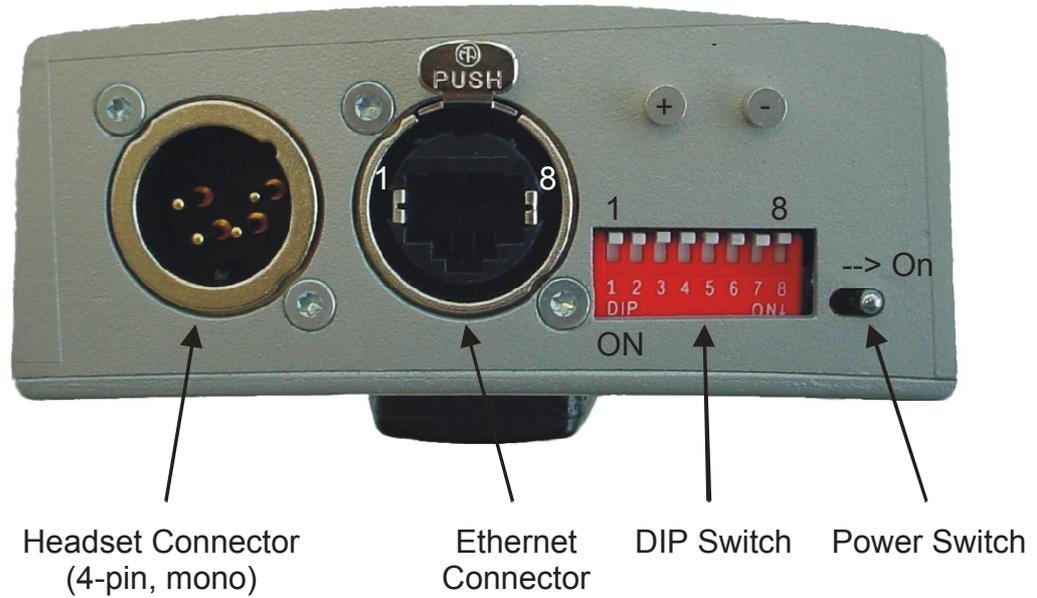


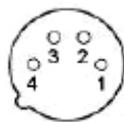
Figure 5: User Elements Bottom (without bottom protective cover)

3.2.1 Power switch

The WB-2 may be switched OFF or ON using the Power switch.

3.2.2 Headset Connector (4-pole male XLR)

The headset connector is a 4-pole male XLR connector and supports mono headsets with electret (~4.5V) or dynamic microphones, depending on the DIP switch setting.



Pin	Signal
1	Microphone -
2	Microphone +
3	Speaker -
4	Speaker +

Microphone type	DIP SW 5
Electret microphone	ON
Dynamic microphone	OFF

Figure 6: Headset 4-pole male XLR Connector

3.2.3 Ethernet Connector

For firmware updates and initial configuration the WB-2 has to be connected with the Cell Controller using the Ethernet connector (RJ45, 10/100 Mbit with auto negotiation).

Pin	Signal
1	Tx+
2	Tx-
3	Rx+
4	
5	
6	Rx-
7	
8	

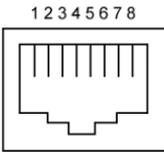


Figure 7: Ethernet Connector RJ-45 (8P8C)

3.2.4 DIP Switch Functions

SW	OFF	ON	Comment
1	Boot to application	Stop booting in bootloader1 (see comments)	Boot behaviour of WB-2: If SW1 is set to ON, the following rules apply: If current bootloader1 Version is \geq 3.32.8: -> Stop in bootloader1 If current bootloader1 Version $<$ 3.32.8: Stop in bootloader2 (applies only, if current version of bootloader2 \geq 3.32.8)
2	Reboot WB-2	No action	Boot behaviour of WB-2 after an exception occurred:
3	Accessible	Locked	Service Menu access
4	Disabled	Enabled	Enables or Disables the MAD1 channel selection at the WB-2. Refer to chapter "4.3 MAD1 channel selection at WB-2 (CC-60/CC-120)" on page 19.
5	Dynamic microphone	Electret microphone	Microphone type
6	n/a	n/a	not used
7	n/a	n/a	not used
8	n/a	n/a	not used

4 Service menu

Besides the normal **operation mode** of the WB-2, a special **service mode** consisting of a **service menu** is available.

If the WB-2 is in service mode, the following restrictions apply:

- The display of the operation mode is not available, instead the service menu will be displayed.
- The TALK functionality of both Channels is not available
- After leaving the service mode with changes made, the WB-2 will undergo a reboot to activate the changes.

Overview of available functionalities in both modes.

Feature	Operation Mode	Service Mode
Listen to partyline	Yes	Yes
Incoming CALL	Yes	Yes
Outgoing CALL	Yes	No
TALK to partyline	Yes	No

4.1 Activation of service menu

4.1.1 Prerequisites

 The activation of the service menu is NOT possible if a Channel is active. To use the service menu, all Channels have to be closed using the Channel Knobs A and/or B.

4.1.2 Open service menu

Pressing the **CALL** Key and the **SCALL** key **simultaneously** (or consecutively while keeping the other pressed) will open the main menu of the service menu. For CC-8, the service menu will be displayed immediately, for **CC-60 / CC-120** both keys have to be pressed for at least **5 seconds**.

 If a TALK channel (A and/or B) is active accidentally, this procedure will initiate a CALL signal and a SCALL signal to the corresponding channels.

4.2 Operation of service menu

4.2.1 User elements (Navigation keys)

In service mode, the User elements of the WB-2 have other functionality than in normal operation mode.

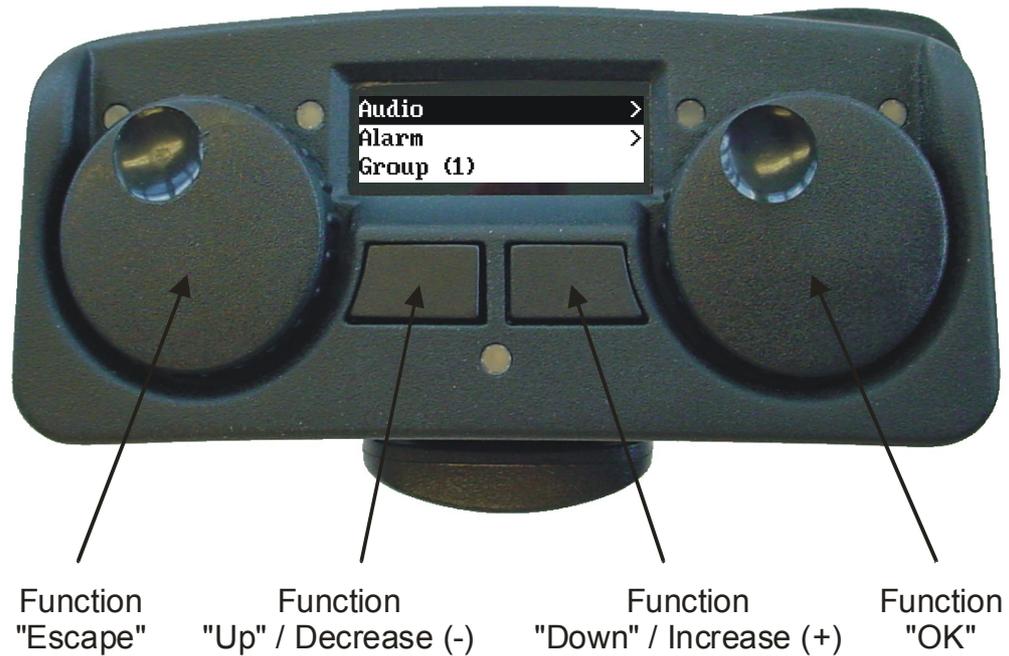


Figure 8: User Elements (Navigation Keys)

Element	Function
Channel Knob A	Escape (ESC)
CALL Key	Up (↑) or decrease (-) a value
SCALL Key	Down (↓) or increase (+) a value
Channel Knob B	OK / Enter

4.2.2 Navigation

The service menu is hierarchically organized and consists of three types of menu elements:

- main menu,
- several **sub menus** and
- **configuration options** with configuration values.

The service menu consists of two different action modes:

- selection mode and
- edit mode.

4.2.2.1 Initial screen

After stepping into the service menu, **selection mode** is active and the **first entry** in the main menu is **selected** (and therefore **marked inverse**).

Display	Comment
wireless	Menu display after invoking menu.
Audio >	The ">" at the right side indicates, that the actual (inverse) marked menu element is a sub menu .
Alarm >	

4.2.2.2 Navigating

Use the buttons [**Up**] (CALL) and [**Down**] (SCALL) to **navigate** through the service menu.

wireless	Menu display after pressing the button [Down].
Audio >	The ">" at the right side indicates, that the actual (inverse) marked menu element is a sub menu .
Alarm >	

4.2.2.3 Stepping inside a sub menu

If a sub menu is selected (indicated by a ">" sign at the right side of the selected entry), use the button [**Ok**] to **step** inside this **sub menu**. This example shows the configuration options of the Audio menu.

sideton (on)	Menu display after pressing the button [Ok]
sidetonevol. 50%	
warntonevol. 10%	

4.2.2.4 Changing values of configuration options

sideton (on)	Menu display after pressing the button [Down].
sidetonevol. 50%	
warntonevol. 10%	

To activate the modification of a configuration option you have to **switch** from selection mode to **edit mode**. This is accomplished by pressing the [**Ok**] button for a selected configuration option.

sideton (on)	Menu display after pressing the button [Ok].
sidetonevol. 50% *	The "*" at the right side indicates, that the actual mode is edit mode.
warntonevol. 10%	

To change the value of a configuration option in edit mode, change the values using the [**Up**] and [**Down**] buttons once or consecutively. (Hint: Percentage values are changed in 5% steps)

sideton (on)	Menu display after pressing the button [Down] several times.
sidetonevol. 60% *	
warntonevol. 10%	

To **save** the changed value of a configuration option, press the button [**Ok**].

To **discard** the changes of a changed configuration option, press the button [**Escape**].

4.2.2.5 Exiting service menu

To exit the **edit mode** or exit the **menu** to the **upper menu** level - or if already in the main menu level - exit the **service menu completely** - use the **[Escape]** button once or consecutively.

Display	Comment
Save changes?	Menu display after pressing the button [Escape] .
No Yes	

Pressing the left button (labeled "No") will discard all changed value.
 Pressing the right button (labeled "Yes") will save all changed value.

4.3 MADi channel selection at WB-2 (CC-60/CC-120)

The MADi channel selection applies to Acrobat CC-60 / CC-120 systems only.

4.3.1 Implementation of DIP SW 4

The Status of DIP SW 4 is needed for two issues:

1. If set to **ON**, the service menu "MADI/Profile" is available, otherwise this service menu is not available. If set to On, a MADi channel may be selected using the WB-2.
2. If set to **OFF**, the service menu "MADI/Profile" is NOT available, the MADi channel selection has to be configured at the WBM (Web Based Management) of Acrobat.

For details refer to the Administration Manual of Acrobat CC-60/120.

4.3.2 Sub menu MADI/Profile

The sub menu MADI/Profile has dual purpose functionality.

4.3.2.1 Indication of current selected MADi Channel

The menu may be used to indicate the currently active MADi channel. The current channel is displayed if the main service menu is active and DIP-SW 4 is set to on.

In the following example, MADi Channel **48** is currently active.

MADI/Profile (48)	>
wireless	>
Audio	>

4.3.2.2 Selection of a MADi Channel

After invoking the menu MADi/Profile, the list of free MADi channels will be downloaded by air from the CC-60 / CC-120. Free MADi channels are Channels which are **Enabled** and **no Outgoing call** is assigned. During the download period, the following menu is displayed:

Please wait Downloading list of MADi Channels	Menu display after invoking menu.
---	-----------------------------------

	Under normal conditions the download of the list will require up to three seconds. Bad or low RF quality will extend the download phase or will disrupt the download at all. In this case, the menu is displayed as if the Beltpack was started new (standard screen).
---	--

If the list of MADi channels was downloaded successfully, the following menu is displayed. Otherwise (e.g. after timeout expires), the Beltpack will display the standard screen for no DECT connection

	<ul style="list-style-type: none"> • Inside this menu the audio functionality of the WB-2 is not available. • The list of Available MADi channels is sorted ascending by the channel no.
---	--

The first entry in the list of Free Channels is selected by default.

001 Light 002 Sound 003 Director	Menu display after downloading list.
--	--------------------------------------

4.3.2.3 Navigating

Use the buttons [Down] and [Up] keys to **navigate** through the list of available MADi channels. The [Down] button will step **down** the list in **single step** mode.

The [Up] button will step **down** the list in **multi step** mode using an increment of **10 entries** and selecting the first entry in a 10 decade (if available). At the end of the list (indicated by a "-----" entry), an automatic wrap-around will be issued and the first entry will be selected.

001 Light 002 Sound 003 Director	Menu display after pressing the button [Down].
--	--

002 Sound 003 Director 004 Staff	Menu display after pressing the button [Down].
--	--

To **save** the selection, press the button [OK]. The selected Channel will be signaled to the CC by air. The Beltpack will start with the initialization sequence again.

To exit the **menu** to the **upper menu** level - or if already in the main menu level - exit the **service menu completely** - use the [Escape] button once or consecutively.

4.4 Menu structure Acrobat CC-8 (Overview)

Menu element	Possible values
<ul style="list-style-type: none"> Wireless <ul style="list-style-type: none"> Name: BP-041_G2 Timeslots (even) Meter. mode (off) ARI. 10-1b-2f-f7-00 	Displays Beltpackname (WB2) Displays timeslot parity (even) Metering mode (on off) Displays ARI
<ul style="list-style-type: none"> Audio <ul style="list-style-type: none"> Sidetone (on) Sidetonevol. 50% Warntonevol. 10% Channel A <ul style="list-style-type: none"> Local talk (on) Btn A (latched) Channel B <ul style="list-style-type: none"> Local talk (on) Btn B (latched) MicType (dyn) 	on off Percent (50 %) Percent (10 %) on off latched momentary on off latched momentary dyn. elect.
<ul style="list-style-type: none"> Alarm <ul style="list-style-type: none"> low batt (off) low RF (on) out of sync (on) 	on off on off on off
<ul style="list-style-type: none"> Partyline selection <ul style="list-style-type: none"> ChanA PL # 1 ChanB PL # 2 	(1, 2 ... 18, no) (1, 2 ... 18, no)
<ul style="list-style-type: none"> Firmware1 <ul style="list-style-type: none"> 1 v3.27.2 Jun 17 2009 2 v3.28.2 Jul 6 2009 A v3.28.2 Jul 6 2009 	Version Bootloader 1 Version Bootloader 2 Version Application
<ul style="list-style-type: none"> Firmware2 <ul style="list-style-type: none"> Sys: CC8 SN: 381 Fpga: 2.0 Dect: 3.32 	CC8 CC60 Serial Number of WB-2 Version of WB2-FPGA and DECT-Module
<ul style="list-style-type: none"> Hardware <ul style="list-style-type: none"> HW-Rev: 1.0.0 IP: 192.168.5.62 00-50-C2-8B-9F-08 	Hardware-Revision IP-Address MAC-Address
<ul style="list-style-type: none"> Default settings 	

 The Default settings are marked **blue/bold**.

4.5 Menu structure Acrobat CC-60 / CC-120 (Overview)

Menu element	Possible values
MADI/Profile (XXX)	(Only available if DIP4 ON)
(Display/Selection of MADIChan <NameOfMADIChan>)	
Wireless	
Name: BP-041_G2	Displays Beltpackname (WB2)
Timeslots (even)	Displays timeslot parity (even)
Meter. mode (off)	Metering mode (on off)
ARI. 10-1b-2f-f7-00	Displays ARI
Audio	
Sidetone (on)	on off
Sidetonevol. 50%	Percent (50 %)
Warntonevol. 10%	Percent (10 %)
Channel A	
Local talk (on)	on off
Btn A (latched)	latched momentary
Channel B	
Local talk (on)	on off
Btn B (latched)	latched momentary
MicType (dyn)	dyn. elect.
Alarm	
low batt (off)	on off
low RF (on)	on off
out of sync (on)	on off
Firmware1	
1 v3.27.2 Jun 17 2009	Version Bootloader 1
2 v3.28.2 Jul 6 2009	Version Bootloader 2
A v3.28.2 Jul 6 2009	Version Application
Firmware2	
Sys: CC8	CC8 CC60
SN: 381	Serial Number of WB-2
Fpga: 2.0 Dect: 3.32	Version of WB2-FPGA and DECT-Module
Hardware	
HW-Rev: 1.0.0	Hardware-Revision
IP: 192.168.5.62	IP-Address
00-50-C2-8B-9F-08	MAC-Address
Default settings	



The Default settings are marked **blue/bold**.

5 Tones and events

5.1 Tones

To signal the user special events, some signal tones are generated at the WB-2.

Tone name	Tone type (*)	Description
Low battery	0.1 / 60.0 / 400	Low battery tone - the battery of the WB-2 is near its end (only some minutes left).
Low RF	0.2 / 60.0 / 800	Low RF tone - WB-2 is outside DECT coverage and/or Cell Controller not functional
Out of sync	0.1 / 3.0 / 800	Out of sync tone - the WB-2 is outside the coverage area of the CA-6
Alone in partyline	1 / 4 / 400	Alone in partyline tone - if inside a partyline only one Beltpack is assigned to that partyline

(*) = Pulse time in seconds / Pause time in seconds / Frequency in Hz

5.2 Troubleshooting

Symptom	Reason
The POWER LED is flashing fast (0.25sec / 0.25 sec.) and the display is switched off.	The battery is near its end (only some minutes left). Replace the battery with a charged one.

6 Maintenance Recommendations

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

6.1 General

None

6.2 Daily

None

6.3 Weekly

None

6.4 Monthly

None

6.5 Yearly

- Check the capacity of the battery and replace it if necessary.

6.6 Other

None

7 Service

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

- Telephone service
- E-mail service
- Skype Service
- Fax service
- Configuration Support
- Trainings
- Repairs

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

Skype: riedel.communications.service

Or use the contact form on our website:

www.riedel.net > [Company](#) > [Riedel Communications](#) > [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 > [Company](#) > [Services](#) > [Support](#) > [Contact](#)

Notes

Notes

