BP-2001

RPL 2000 1-Channel Beltpack

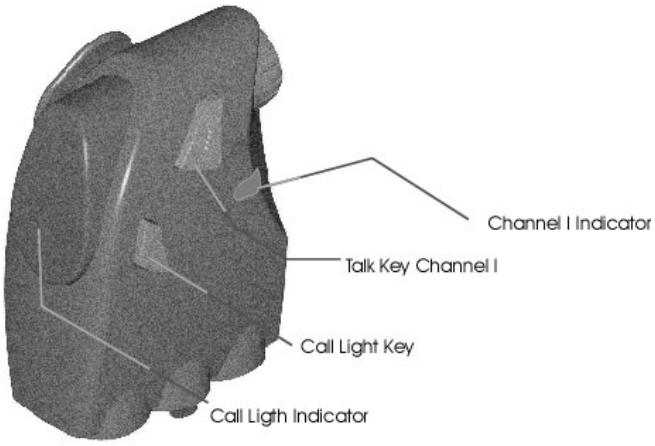
Operating Instructions

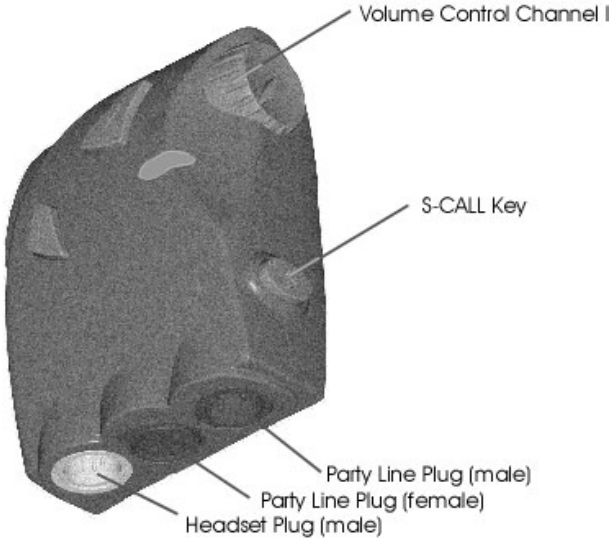
1 General

The BP-2001 is an attractive single channel beltpack in a modern design and with an impact-proof plastic housing. During the design phase, particular attention was paid to easy access of the controls and the visibility of the call light in practical use. Marks on the keys and the layout of the controls enable “blind” operation. The volume control is mounted on the side for ease of operation. The talk key is marked and include an LED indicator. The call light has a particularly large design, thus guaranteeing the required visibility. Apart from the call light, the beltpack also features an S-CALL button. With the BP-2001 you can now also talk to the radio users or switch to the paging system for announcements directly from the beltpack. Connection is established via a 3-pin XLR with loop-through, and a 4-pin XLR is used for the headset. The BP-2001 can be pre-programmed depending on the application, i.e. a buzzer can be activated in addition to the call light. The BP-2001 is compatible with ASL®, Clear-Com® and RTS/Telex® Systems.

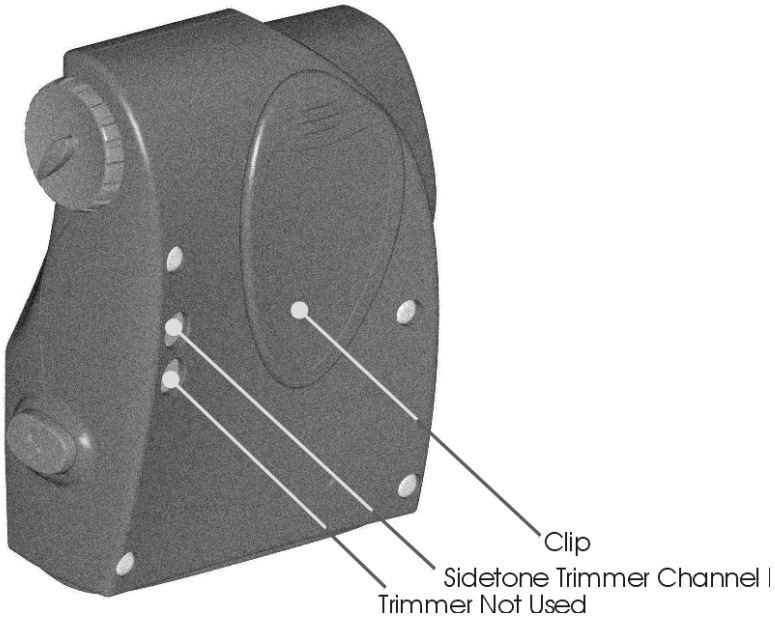
2 Setting up

2.1 Front view





2.2 Rear view



2.3 Control elements and connectors

The BP-2001 is a single-channel beltpack and therefore has one talk key and a volume control. The talk key is labelled “I”.

The call light key is marked with the letter “L“ and also located at the front of the unit.

To activate the S-CALL, there is a key marked “S” underneath the volume control on the right-hand side of the unit.

On the right, next to the talk key is the channel indicator LED. It tells you whether the talk key is activated or not.

The call light indicator is located on the top of the housing.

On the underside of the unit, you will find the XLR connectors for connecting and looping through the intercom line (3-pin), as well as a 4-pin XLR for the headset.

On the back of the unit are two sidetone trimmers, the BP-2001 only uses the upper one.

2.4 Connecting the beltpack to a Riedel Party Line (RPL)

The beltpack is a portable headset station powered through the intercom wiring using the PS-2002 or PS-2004 power supply.

The beltpack is connected to the party line via a 3-pin XLR plug and is ready for use immediately. The headset is connected via the 4-pin XLR male headset connector.

3 Operation

3.1 Talk

3.1.1 Talk key properties

The Talk key has touch and latch function. Pressing the key briefly represents the latch function for switching on and off. If the key is held down for a longer period, the touch function will be activated. In this case, the Talk function will be active for as long as the key is held down.

3.1.2 Talking to the intercom channel

Press Talk key “I” to talk to intercom channel I. The active Talk function is indicated by the corresponding LED.

3.2 Listen

A volume control is provided on the right-hand side of the unit. To increase the volume, rotate the knob clockwise.

Note: If the headset is put down and the Talk function is active, depending on the volume of the headset, feedback can occur. Therefore, before putting the headset down, always switch off the Talk function. Activated Talk keys can be switched off remotely using the “Mic Kill” function on the MS-2004 and MS-2002 master stations.

3.3 Call Light

3.3.1 Sending a call light signal

You can only send a call light signal to a channel where the Talk function has been activated. If the channel is switched to “Talk”, the corresponding LED indicator lights up. By pressing the call light key marked “L”, the call light signal is sent to the intercom line. The call light illuminates on all

beltpacks in the party line unless it has been suppressed by beltpack-setup. Your own call light will also be illuminated for the duration of the call.

3.3.2 Receiving a call light signal

If the beltpack receives a call light signal from the party line, the call light will be illuminated. If the Talk function of the beltpack is not active, the channel LED indicator flashes.

3.3.3 Buzzer

By programming the beltpack, you can switch in an acoustic signal in addition to the call light signal. This causes a buzzer in the beltpack to sound if a call light signal is received. The buzzer is not activated in the factory default setting. If the buzzer is activated and the beltpack receives a call light signal, you can mute the buzzer by pressing the S-CALL key. The buzzer will sound again with the next call light signal received. Pressing the S-CALL button during a call light to mute the buzzer does not trigger an S-CALL, but only deactivates the buzzer. It is only if the S-CALL key is pressed yet again that an S-CALL is sent to the activated channel.

3.4 S-CALL key “S”

You can only send an S-CALL to a channel where the Talk function has been activated. If the channel is switched to “Talk”, the corresponding LED indicator lights up. By pressing the S-CALL key marked “S”, a “Special Call” is generated and sent to the intercom line. It switches a relay in the MS-2004 master station and in the IF-2004 2/4-wire interface for the duration of the key-press.

By using the appropriate relay in the MS-2004 master station or IF-2004 4-wire interface, you can, for example, key the transmitter of a radio base station to talk to radio users or switch to a paging system for an announcement, turn on a cue-light etc.

3.5 Sidetone trimmers

On the back of the unit are two sidetone trimmers, one above the other. The top trimmer is responsible for setting the talk-back (sidetone) for Channel I. The trimmer underneath is not used with the BP-2001.

You can adjust the talk-back from the user’s own microphone to the headset earpieces to suit the requirements of the user using the sidetone trimmer. To avoid malfunction please make sure that the control is not right up to the left-hand stop.

3.6 Mic Kill

The beltpack detects the Mic Kill signal (sent from a master station) to turn off the active Talk function. In this way it is possible to switch off all open microphones on the particular channel from the master stations.

4 Programming

4.1 Programmable options

If the intercom supply is applied, the BP-2001 can be programmed to special operating conditions in which the unit can be used. If the intercom power supply is switched off or the unit is unplugged, the programming remains in memory.

In Service Mode, the following settings are available:

Mode No.	Clip label	Explanation	Default setting on delivery (LED indicator illuminated = On)
1	Mic Electret	A/B-power for electret microphone provided	Off
2	Mic Gain	Microphone amplification increased by +6dB	Off
3	Channel Assign A	Beltpack channel assigned to RPL intercom Channel A (I) (Off: beltpack channel assigned to RPL intercom Channel B (II))	On
4	Buzzer	Acoustic signal with call light enabled	Off
5	Call	Enable call light function	On
6	S-CALL A	Enable S-CALL function	On
7	CC-Mode	Clear-Com®-compatible mode activated	Off (RPL)
8		Enable automatic latching function of Talk key	On

4.2 Programming modes

Proceed as follows to either check or set up modes:

- Switch off Talk function.

- Then simultaneously hold down the keys call light (L) and S-CALL (S).

- Next press the Talk key 5 times in succession. The buzzer sounds once. Service mode is now active. Now release the call light and S-CALL keys.

- With the call light key L, step through the menu list. Pressing once displays the next menu item. You can also press the L key a number of times to go direct to the required menu item. The current menu item is signalled by the sounding of the buzzer in the frequency of the item selected.

- You can change the setting of the current menu item by pressing the S-CALL key “S”. The channel indicator displays the setting, i.e. an activated menu item is indicated by an LED that is lit up.

- If all settings are made, by pressing Talk key I, you exit Service mode and the settings are saved. Saving and exiting are possible at any time.

4.2.1 Examples

- Switch off Talk function.

- Then simultaneously hold down the keys call light L and S-CALL S.

- Next press the Talk key 5 times in succession. The buzzer sounds once. Service mode is now active. Now release the call light and S-CALL keys.

- Press the “L“ key once, then after about 500ms, the buzzer sounds once. You are now in Service mode Position 1 (Mic Electret).

- Press the “L“ key twice, then after about 500ms, the buzzer sounds four times. You are now in Service mode Position 4 (Buzzer B).

- Press the “L“ key five times, then after about 500ms, the buzzer sounds nine times. You are now in Service mode Position 9 (Call A).

- Press the “L“ key six times, then after about 500ms, the buzzer sounds twice. You are now in Service mode Position 2 (Mic Gain).

- You can change the current setting of the menu item by pressing the S-CALL key “S”. The channel indicator displays the setting, i.e. an activated menu item is indicated by an illuminated LED.

- If all settings are made, by pressing Talk key I, you exit Service mode and the settings are saved. Saving and exiting are possible at any time.

5 Connecting Options

5.1 Headset:

4-pin XLR-male for headset with dynamic or electret microphone

Pin	Definition
1	GND
2	Microphone high
3	Loudspeaker low
4	Loudspeaker high

5.2 Intercom Line Connector

At this point, it is important to observe the different modes for RPL and Clear-Com®. In RPL mode, two channels are available on a 3-pin XLR connector. Using the service mode you can select on which RPL intercom channel the BP-2001 single channel beltpack will work. In CC mode, by contrast, pin 2 is used only for the supply voltage of 30 VDC+. No audio is provided on pin 2. The intercom connectors are looped through. Accordingly, pin 1 (female) is connected to pin 1 (male), and so on.

5.2.1 Intercom line connector in RPL Mode

3-pin XLR male and XLR female

Pin	Definition
1	Ground
2	Audio channel B and +30 VDC
3	Audio channel A

Audio channel B is only used if the BP-2001 is assigned to RPL intercom channel B (II). This is not the default setting and must be configured using the beltpack´ s service mode if required.

5.2.2 Intercom line connectors in Clear-Com®-Mode

3-pin XLR male and XLR female

Pin	Definition
1	Ground
2	+30 VDC
3	Audio

6 Technical Data

6.1 Intercom Line

Line Impedance: 200 Ω

Line Level: -12 dBu up to +6dBu maximum

Wire Type: 0,38 mm^2 (AWG 22), 2 conductor shielded mic cable with <65pF/m capacity and <70Ω/km overall DC resistance

Line Length (single channel): up to 5000m

Signal to Noise, Single-Channel: -70dBu

6.1.1 Signalling

RIEDEL Mode:

- Call Signal Send/Receive: 20 kHz ±500 Hz Sine wave, appr. –12dBu
- Special Call Signal Send/Receive: 28 kHz ±500 Hz Sine wave, appr. –12dBu
- Mic Kill Signal Send/Receive: 24 kHz ±500 Hz Sine wave, appr. –12dBu

Clear-Com® Mode:

- Call Signal Send: +11 VDC
- Call Signal Receive: +4 VDC

6.2 Mic Preamp

Mic Impedance: 200 Ω

Headset Mic: dynamic or electret with +6 VDC supply

Mic Gain: 40dB or 46dB (selectable via service mode)

Limiter Range: 20dB

6.3 Output Amp

Headset Output Level: +20 dBu / 600 Ω maximum

Headset Impedance: > 50 Ω (recommended 600 Ω for low power consumption)

Gain: 32dB

6.4 Power Consumption

BP-2001 beltpack	22 mA, avg., channels activated

7 Warranty

This equipment is under warranty for 24 month from the date of delivery unless otherwise specified.

All equipment found to have manufacturers defects or defects resulting from normal use within the warranty period will be repaired at no cost.

The warranty is null and void if repairs or modifications are made on the equipment by the purchaser or a third party not authorized by LINEAR TECHNOLOGIE.

Damages resulting from inappropriate use or handling, incorrect installation or storage, or inappropriate connection are not covered by the warranty.