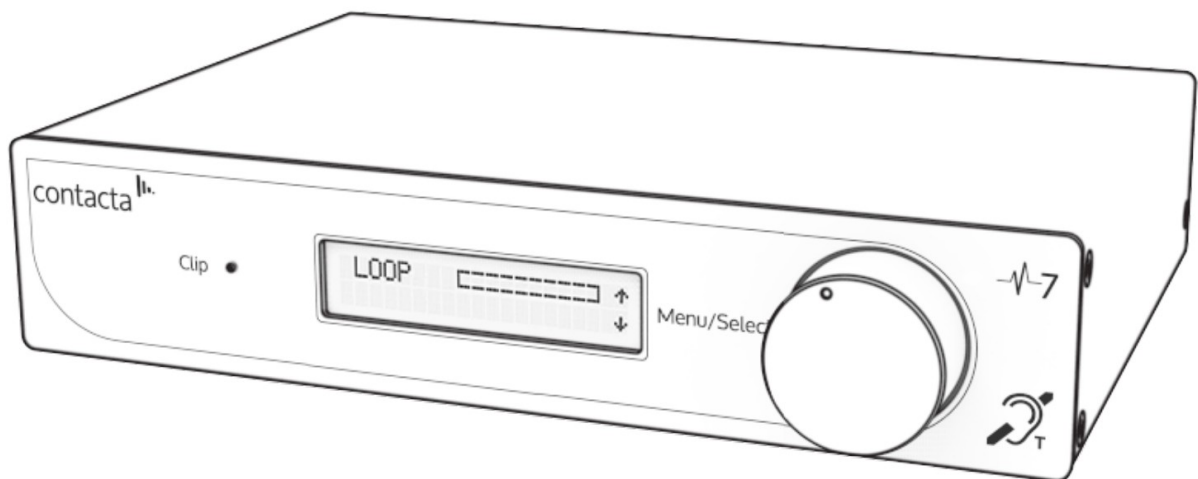


Contacta V7 Series Hearing Loop Drivers User Guide

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contacta

 **series**
V7 / NV15 / Vi5a
Hearing Loop Drivers



**Installation &
User Guide
November 2019**

Contacta has a policy of continuous product development, therefore small specification changes may not be reflected in this manual. Images, labels, packaging, accessories and product colours are subject to change without notice.

Contents

- 1 Product Overview
- 2 Components
- 3 Connections
- 4 Start-Up Tests
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- 7 Troubleshooting
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Product Overview

Our highly efficient and compact V7, V15 and V15a hearing loop drivers are suitable for smaller facilities and venues.

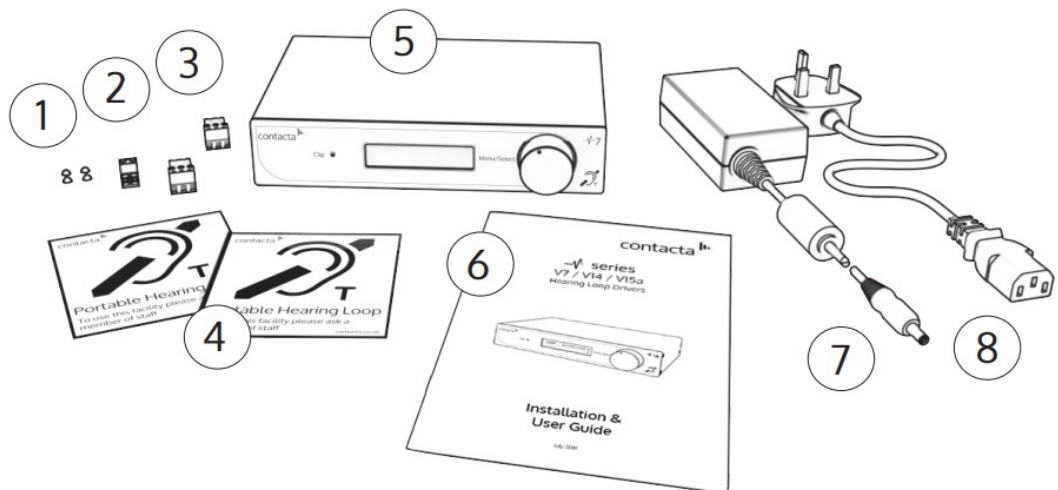
The V7 and V15 are constant current hearing loop drivers which power hearing loops utilising a single output. The V15a is a constant current dual output hearing loop driver with integral phase shifter for phased array configuration.

These hearing loop drivers have Class-D amplifier output stages and an audio subsystem built around an advanced DSP core. Combined with a powerful CPU that ensures peak performance, they use cutting edge technology proven in the pro audio world to achieve life-like speech and first-class music reproduction.

Note: For large area hearing loop installation instructions, consult the Large Area Hearing Loop Installation Guide.

Components

V7

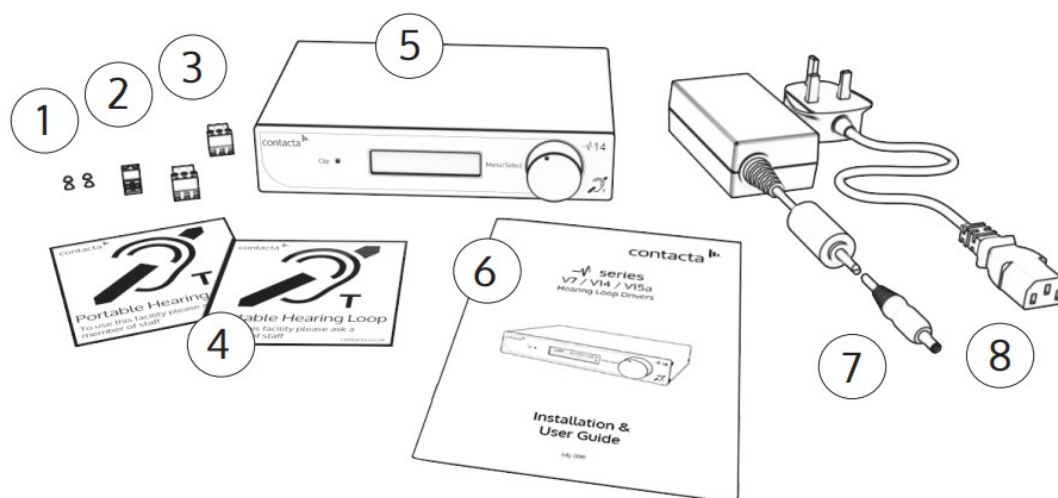


- 1. Rubber Feet x4
- 2. 5.08mm Euro-Block Connector
- 3. 3.81mm Euro-Block Connector x2
- 4. Signage
- 5. V7 Hearing Loop Driver
- 6. Installation & User Guide

7. Power Supply [PS-55]

8. IEC Power Lead

V15



1. Rubber Feet x4

2. 5.08mm Euro-Block Connector

3. 3.81mm Euro-Block Connector x2

4. Signage

5. V15 Hearing Loop Driver

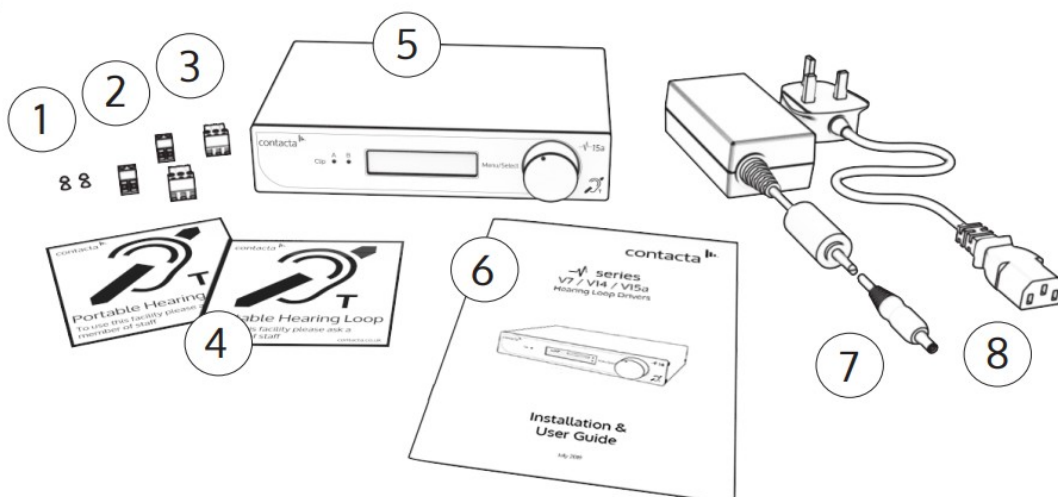
6. Installation & User Guide

7. Power Supply [PS-60]

8. IEC Power Lead

* Plug type varies by country.

V15a



1. Rubber Feet x4

2. 5.08mm Euro-Block Connector x2

3. 3.81mm Euro-Block Connector x2

4. Signage

5. V15a Hearing Loop Driver

6. Installation & User Guide

7. Power Supply [PS-60]

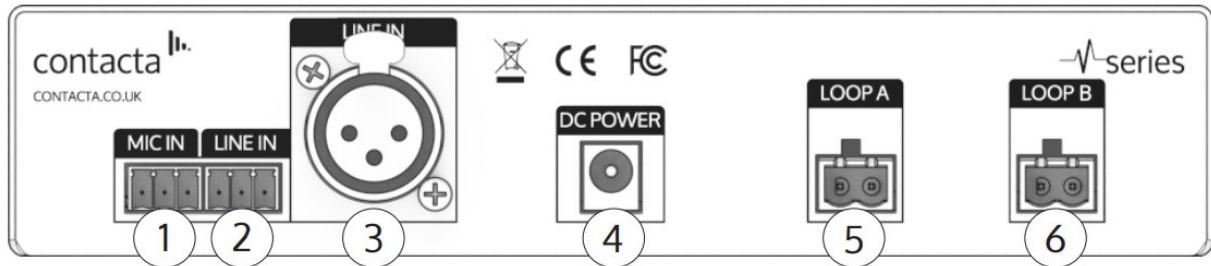
8. EC Power Lead*

*Plug type varies by country.

Cable & Equipment: A length of loop cable determined by the loop design is also required. Hearing loop drivers also require ancillary equipment for audio feeds, such as a microphone or sound system.

Connections

Rear Panel Connections



1. Microphone Input – 3.81mm Euro-block balanced microphone input (12V phantom power via 680Ω).

2. Line Input 1 * – 3.81mm Euro-block balanced line input/feedthrough.

3. Line Input 2 * – XLR balanced line input/feedthrough.

4. Power Supply Input – *V7 DC Power Input, 2.1mm 14Vdc 2.14A

***V15 DC Power Input, 2.1mm 24Vdc 4.17A

**V15a DC Power Input, 2.1mm 24Vdc 4.17A



Caution: Use only the provided Power Supply.

5. Loop A Output – 5.08mm Euro-block.

6. Loop B Output – 5.08mm Euro-block [V15a only].

* **Note:** Only connect to one Line Input at a time.

Connection Examples

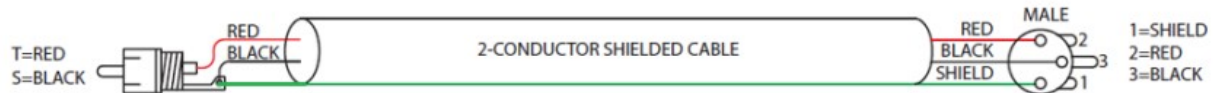
XLR to XLR (line)



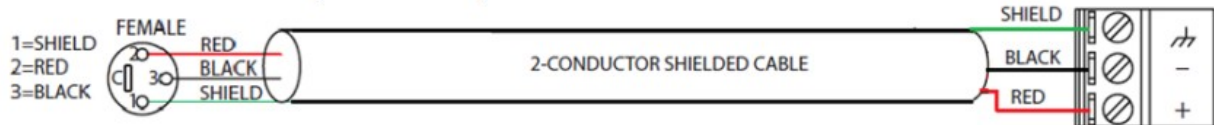
TRS to XLR (line)



Unbalanced to XLR



XLR to Euroblock (balanced)



Unbalanced to Euroblock



Suitable Cable Lengths

The tables in this section show the approximate maximum cable lengths for differing maximum required currents. Loop impedance (at 1.6kHz) should be less than the voltage capability of the driver (V7: 7.5Vrms, V15: 15Vrms, V15a: 15Vrms) divided by the required current. This achieves 400mA/m field strength at 1kHz.

V7 Single-Turn Hearing Loop (Metric)

| | Current | 2.0A | 3.0A | 4.0A | 5.0A |
|--|---------|------|------|------|------|
|--|---------|------|------|------|------|

| Cable Type | | | Cable Length | | |
|--------------------|--------|------|--------------|------|------|
| Round Cable (CSA) | 0.5mm | 85m | 56m | 42m | 34m |
| | 1mm | 133m | 89m | 66m | 53m |
| | 1.5mm | 155m | 103m | 77m | 62m |
| | 2.5mm | 173m | 115m | 86m | 69m |
| Flat Cable (Width) | 10mm | 101m | 67m | 50m | 40m |
| | 12.5mm | 192m | 128m | 96m | 77m |
| | 25mm | 255m | 170m | 127m | 102m |

V7 Single-Turn Hearing Loop (Imperial)

| | | | | |
|---------|------|------|------|------|
| Current | 2.0A | 3.0A | 4.0A | 5.0A |
|---------|------|------|------|------|

| Cable Type | | | Cable Length | | |
|--------------------|--------------------|-------|--------------|-------|-------|
| Round Cable (AWG) | 18AWG | 438ft | 292ft | 219ft | 175ft |
| | 14AWG | 593ft | 395ft | 296ft | 237ft |
| Flat Cable (Width) | 18AWG (equivalent) | 505ft | 336ft | 252ft | 202ft |
| | 14AWG (equivalent) | 711ft | 474ft | 355ft | 284ft |

V15 Single-Turn Hearing Loop (Metric)

| | | | | |
|---------|------|------|------|------|
| Current | 2.0A | 3.0A | 4.0A | 5.0A |
|---------|------|------|------|------|

| Cable Type | | | Cable Length | | | |
|----------------------|--------------------|--------|--------------|------|------|------|
| Maximum Cable Length | Round Cable (CSA) | 1mm | 242m | 161m | 121m | 97m |
| | | 1.5mm | 284m | 189m | 142m | 114m |
| | | 2.5mm | 319m | 213m | 160m | 128m |
| | Flat Cable (Width) | 10mm | 180m | 120m | 90m | 72m |
| | | 12.5mm | 340m | 226m | 170m | 136m |
| | | 25mm | 450m | 300m | 225m | 180m |

V15 Single-Turn Hearing Loop (Imperial)

| | | | | |
|---------|------|------|------|------|
| Current | 2.0A | 3.0A | 4.0A | 5.0A |
|---------|------|------|------|------|

| Cable Type | | | Cable Length | | | |
|----------------------|--------------------|--------------------|--------------|-------|-------|-------|
| Maximum Cable Length | Round Cable (AWG) | 18AWG | 746ft | 498ft | 373ft | 299ft |
| | | 14AWG | 997ft | 664ft | 498ft | 399ft |
| | Flat Cable (Width) | 18AWG (equivalent) | 840ft | 560ft | 420ft | 336ft |
| | | 14AWG (equivalent) | 1327ft | 885ft | 663ft | 531ft |

V15a Single-Turn Hearing Loop (Metric)

| | | | | |
|---------|------|------|------|------|
| Current | 2.0A | 3.0A | 4.0A | 5.0A |
|---------|------|------|------|------|

| Cable Type | | | Cable Length | | | |
|----------------------|--------------------|--------|--------------|------|------|------|
| Maximum Cable Length | Round Cable (CSA) | 1mm | 266m | 177m | 133m | 106m |
| | | 1.5mm | 311m | 208m | 156m | 125m |
| | | 2.5mm | 350m | 233m | 175m | 140m |
| | Flat Cable (Width) | 10mm | 197m | 131m | 99m | 79m |
| | | 12.5mm | 373m | 249m | 186m | 149m |
| | | 25mm | 493m | 329m | 247m | 197m |

V15a Double-Turn Hearing Loop (Metric)

| | | | | |
|---------|------|------|------|------|
| Current | 2.0A | 3.0A | 4.0A | 5.0A |
|---------|------|------|------|------|

| Cable Type | | | Cable Length | | | |
|----------------------|--------------------|--------|--------------|------|------|------|
| Maximum Cable Length | Round Cable (CSA) | 1mm | 193m | 129m | 97m | 77m |
| | | 1.5mm | 209m | 139m | 104m | 83m |
| | | 2.5mm | 219m | 146m | 110m | 88m |
| | Flat Cable (Width) | 10mm | 172m | 115m | 86m | 69m |
| | | 12.5mm | 267m | 178m | 133m | 107m |
| | | 25mm | 316m | 211m | 158m | 126m |

V15a Single-Turn Hearing Loop (Imperial)

| | | | | |
|---------|------|------|------|------|
| Current | 2.0A | 3.0A | 4.0A | 5.0A |
|---------|------|------|------|------|

| Cable Type | | | Cable Length | | | |
|----------------------|--------------------|--------------------|--------------|-------|-------|-------|
| Maximum Cable Length | Round Cable (AWG) | 18AWG | 819ft | 546ft | 409ft | 328ft |
| | | 14AWG | 1093ft | 729ft | 547ft | 437ft |
| | Flat Cable (Width) | 18AWG (equivalent) | 921ft | 614ft | 461ft | 369ft |
| | | 14AWG (equivalent) | 1456ft | 971ft | 728ft | 582ft |

V15a Double-Turn Hearing Loop (Imperial)

| | | | | |
|---------|------|------|------|------|
| Current | 2.0A | 3.0A | 4.0A | 5.0A |
|---------|------|------|------|------|

| Cable Type | | | Cable Length | | | |
|----------------------|--------------------|--------------------|--------------|-------|-------|-------|
| Maximum Cable Length | Round Cable (AWG) | 18AWG | 598ft | 399ft | 299ft | 239ft |
| | | 14AWG | 684ft | 456ft | 342ft | 273ft |
| | Flat Cable (Width) | 18AWG (equivalent) | 723ft | 482ft | 362ft | 289ft |
| | | 14AWG (equivalent) | 949ft | 633ft | 475ft | 380ft |

Start-Up Tests

V Series drivers perform a series of tests when powered on, causing a number of indications to appear on the display screen during start-up.

The meanings of these indications are as follows:

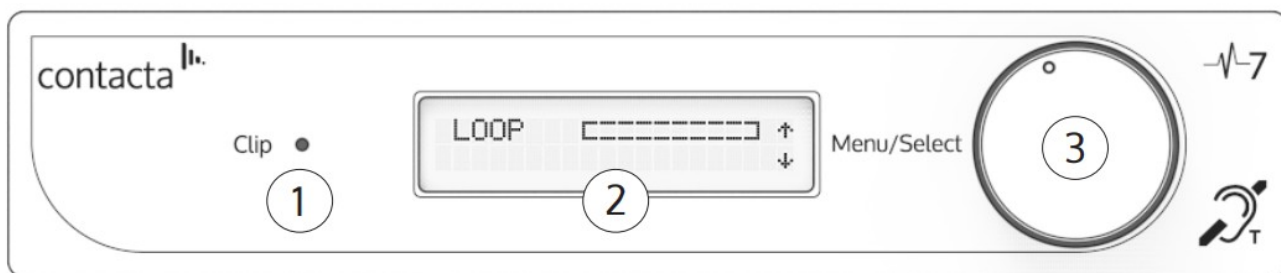
| Indicator | Meaning | Remedy |
|--|---|--|
| V7 and V15: Loop Good V15a: Loop A Good Loop B Good | Hearing loop(s) is/are correctly connected to the driver. | None required. |
| V7 and V15: Loop Open Fault V15a: Loop A Open Fault Loop B Open Fault | Hearing loop(s) is/are improperly connected to the driver. An open-circuit loop will not damage the driver, and start-up will continue to the main menu. | Ensure that the loop(s) is properly connected to the driver. The loop current indication in normal operation may be used to confirm the connections. |
| V7 and V15: Loop Ground Fault V15a: Loop A Ground Fault Loop B Ground Fault | A ground fault with the hearing loop(s) has been found. The driver will halt operation with this message displayed on screen, as such a fault would cause stress to the driver were normal operation to continue. | Switch off the driver and carefully check the loop(s) for shorts to ground. Rectify the faults and re-apply power to the driver. |
| Incorrect Power | The power input supply voltage from the mains power supply is incorrect. The driver will halt operation with this message displayed on screen, as such a fault would cause stress to the driver were it to continue to normal operation. | Switch off the driver and connect the power supply which was provided with the driver. If this is not available, contact your distributor to order a new power supply. |

Please note if using V15a: If connecting only one loop to a V15a, whichever loop connection has not been used (either Loop A or Loop B) will show as an “Open Fault” as default. This is the correct display for operation with only one loop; continue as normal.

Controls

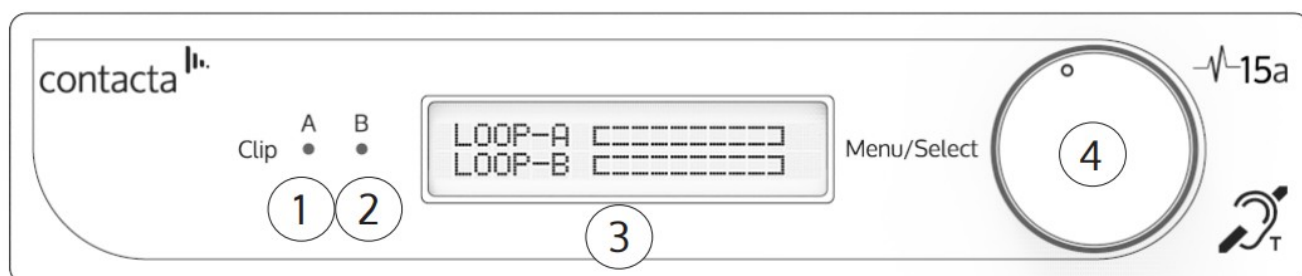
Front Panel Overview

V7 and V15



1. Clip Status Light – When lit, this status LED indicates the signal on the hearing loop output is clipping (see Troubleshooting on page 28 for appropriate solutions).
2. Display Screen – Indicates the status of the Loop Output, displays menu and adjustment options.
3. Control Dial – Used for unlocking and making adjustments.

V15a



1. Clip Status Light – When lit, this status LED indicates the signal on Hearing Loop A is clipping (see Troubleshooting on page 28 for appropriate solutions).
2. Clip Status Light – When lit, this status LED indicates the signal on Hearing Loop B is clipping (see Troubleshooting on page 28 for appropriate solutions).
3. Display Screen – Indicates the status of the Loop Output, displays menu and adjustment options.
4. Control Dial – Used for unlocking and making adjustments.

Locking/Unlocking the Hearing Loop Driver

The hearing loop driver will power up in Output Current Display Mode and will be locked from entering Adjustment Mode.



Unlock the Driver

1. To unlock the hearing loop driver, press the control dial, and when prompted “Unlock driver?” click “Yes.”
2. Enter the passcode 2239:
 - a. Rotate the control clockwise to select the first required digit.
 - b. Press the control dial in to select the digit.

c. Repeat steps (a) and (b) until all the digits have been selected.

Note: Entering the wrong code returns the hearing loop driver to the lock screen.

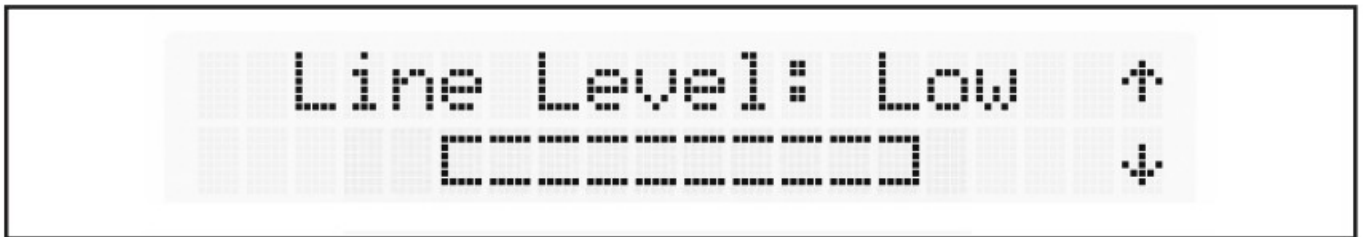
Additional Functions and Codes

1. To access one of the additional functions available, press the control dial, and when prompted “Unlock driver?” click “Yes.”
2. Enter one of the following passcodes:
 - 1010: Disable the display backlight 10 minute auto switch-off.
This setting is remembered through power cycles.
 - 1011: Enable the display backlight 10 minute auto switch-off.
This setting is remembered through power cycles.
 - 9999: Disable the auto re-lock (timeout). This is not remembered through power cycles.
 - 8888: Restore all factory defaults and restart the driver.

Modes

Main Menu

After being unlocked, the hearing loop driver will display the main menu. This is indicated by up and down arrows on the display screen.



When in this mode, rotating the hearing loop driver's control dial clockwise will move the screen to the next menu item and rotating the dial anti-clockwise will move it to the previous menu item.

The menu options are as follows:

V7 and V15

1. Loop Output
2. Line Input
3. Phantom Power
4. Microphone Input
5. Current Output (no adjustment)
6. High-Frequency Compensation

V15a

1. Loop Output
2. Line Input
3. Phantom Power
4. Microphone Input
5. Loop B Trim Adjustment

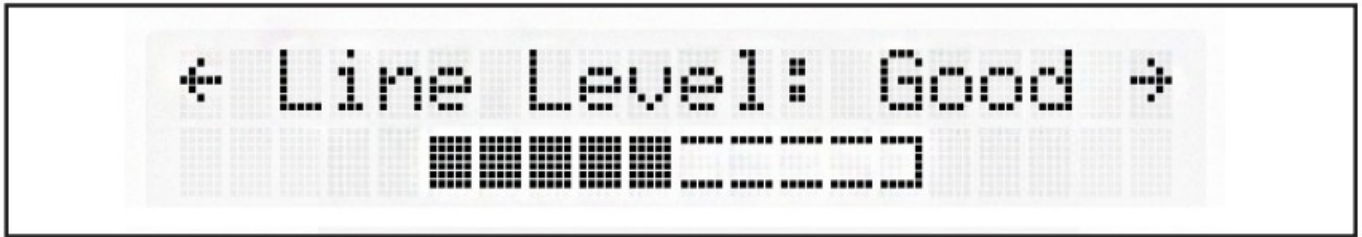
6. High-Frequency Compensation

Adjustment Mode

Press the control dial in to enter Adjustment Mode; the arrows on the display screen will move to a left and right position.

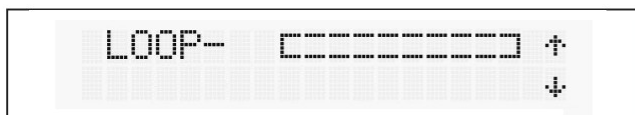
Rotate the dial clockwise or anti-clockwise to make the adjustment.

Press the control dial in to confirm the selection and return to the main menu.

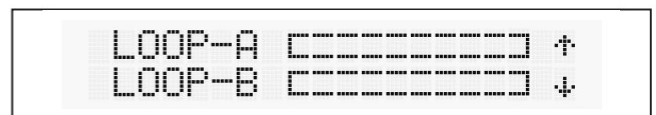


If the control dial is not used for 120 seconds when in Adjustment Mode the hearing loop driver will revert to the main menu, with Loop Output as the default screen.

Loop Output



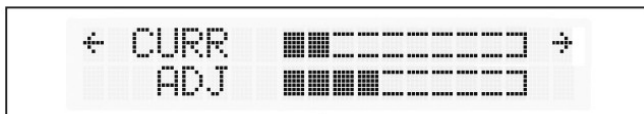
V7 and V15 Loop Output



V15a Loop Output

Adjustments

The hearing loop driver's Loop Output section displays the real-time output current in 0.5A steps.



V7 and V15 Loop Output: Adjustment Mode



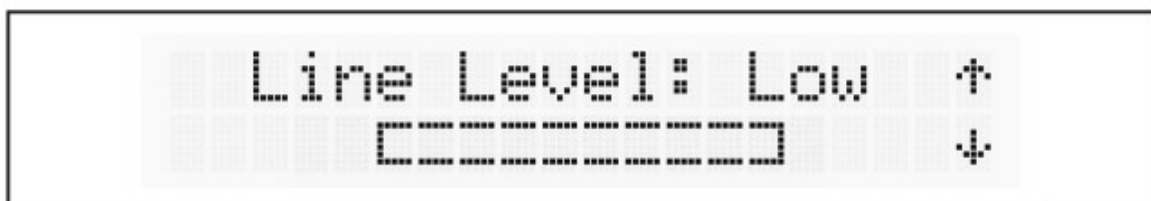
V15a Loop Output: Adjustment Mode

In Adjustment Mode, the real-time output current is displayed on the top line in 0.5A steps. The bottom line indicates the strength of the loop output level adjustment.

To alter the loop output level, enter Adjustment Mode:

- To increase the loop output level, rotate the control dial clockwise.
- To decrease the loop output level, rotate the control dial anti-clockwise.
- Press the control dial once to confirm the selection and return to the main menu.

Line Input

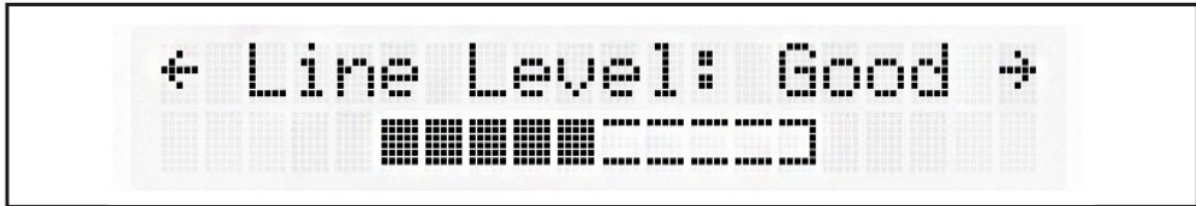


The hearing loop driver's Line Input section displays the line input level within a range of 47dB. The text on the display indicates if the correct line level has been achieved:

- "Low" indicates the line level is too low for the automatic gain control to operate.
- "Good" indicates the line level is at an optimum level for the automatic gain control to operate.
- "High" indicates the line level is too high and signal clipping may occur. Signal clipping will also be shown by the

LED.

Adjustments



It is recommended that at least 5 blocks in the adjustment block are filled (see the above image for an example). Enter Adjustment Mode, and alter the line input level displayed on the bar until the text displays 'Good':

- To increase the line input level, rotate the control dial clockwise.
- To decrease the line input level, rotate the control dial anti-clockwise.
- Press the control dial once to confirm the selection and return to the main menu.

Phantom Power



Adjustments

Phantom power for a connected microphone is set off as the default setting.



Rotating the control dial clockwise or anti-clockwise in Adjustment Mode will toggle the phantom power on or off. Press the control dial once to confirm the selection and return to the main menu.

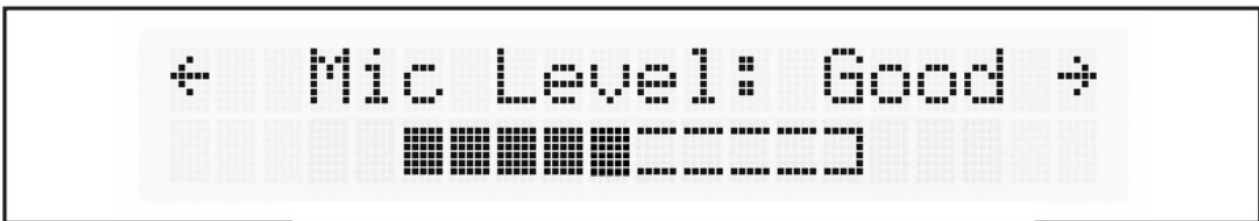
Microphone Input



The hearing loop driver's Microphone Input section displays the microphone input level within a range of 47dB. The top line of the display indicates if the correct microphone input level has been achieved:

- "Low" indicates the microphone level is too low for the automatic gain control to operate.
- "Good" indicates the microphone level is at an optimum level for the automatic gain control to operate.
- "High" indicates the microphone level is too high and signal clipping may occur. Signal clipping will also be shown by the LED.

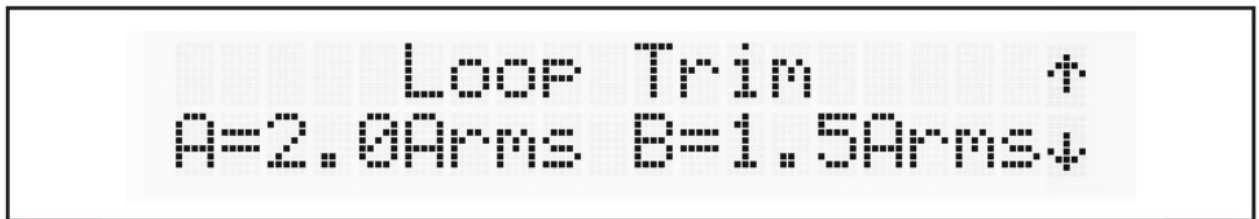
Adjustments



It is recommended that at least 5 blocks in the adjustment block are filled (see the above image for an example). Enter Adjustment Mode and alter the microphone input level displayed on the bar until the text displays 'Good':

- To increase the microphone input level, rotate the control dial clockwise.
- To decrease the microphone input level, rotate the control dial anti-clockwise.
- Press the control dial once to confirm the selection and return to the main menu.

V15a Only: Loop Trim



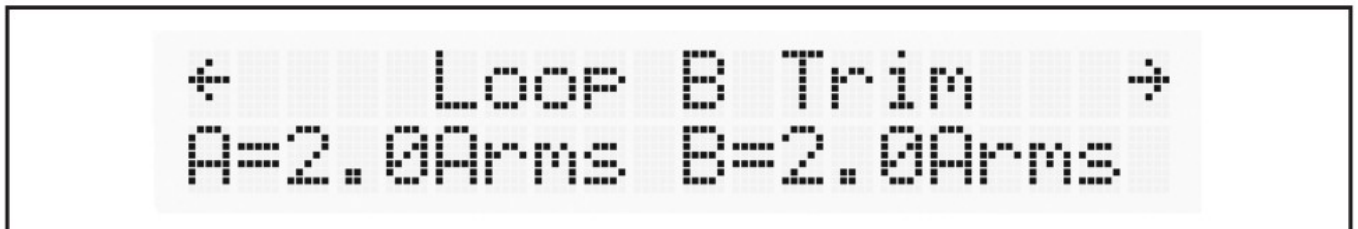
When using a V15a, the hearing loop driver's Loop Trim function allows Loop B's output to be adjusted relative to Loop A's output.

Please note: This section is only available on the V15a. The equivalent V7 and V15 menu displays Current Output, to which adjustments can be made using the Loop Output section (see page 16).

When in the Loop Trim section, adjustments are made in 1dB steps.

The measured loop output current is displayed in amps RMS (accurate for sine signals).

Adjustments



Enter Adjustment Mode to alter "Loop B Trim" relative to "Loop A".

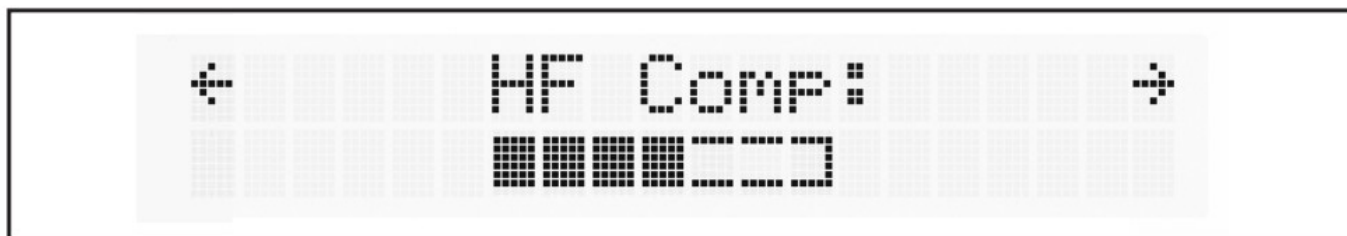
- To increase the Loop B Trim level, rotate the control dial clockwise.
- To decrease the Loop B Trim level, rotate the control dial anti-clockwise.
- Press the control dial once to confirm the selection and return to the main menu.

High-Frequency Compensation



There are 7 levels of high-frequency compensation available to adjust for metal loss. Your hearing loop driver will have high-frequency compensation turned to the lowest setting as its default.

Adjustments



To alter the high frequency compensation level, enter Adjustment Mode:

- To increase the high-frequency compensation level, rotate the control dial clockwise.
- To decrease the high-frequency compensation level, rotate the control dial anti-clockwise.
- Press the control dial once to confirm the selection and return to the main menu.

To calculate the correct high-frequency compensation level, refer to Set-Up on page 22.

Set-Up

To ensure optimal performance of a V7, V15 or V15a hearing loop driver, set-up should be performed in following order:

Step 1: Background Noise Level (see page 23)

Step 2: Metal Loss (see pages 24-25)

Step 3: Output Level and Clipping (see page 24-25)

Step 4: Field Uniformity (see page 25-26)

Step 5: Final Output Level Adjustment (see page 26)

Step 6: Input Signal Level Adjustment (see page 26)

Required for Set-Up

- TSG – Contacta Test Signal Generator (TSG1)
- FSM – Contacta Field Strength Meter (IL-CONTACTA-FSM)
- Tripod or similar for mounting the FSM is recommended
- ‘Compliance Certificate’ document

Note:

Throughout set-up, record values on the provided Compliance Certificate document whenever you see the following icon:



The Compliance Certificate document confirms compliance with IEC-60118:4 if your values are within acceptable levels.

It is highly recommended that you retain a copy of the completed Compliance Certificate document for your records and provide a copy to the relevant facilities manager.

Step 1: Background Noise Level

This test should be performed prior to loop installation.

1. Set up the FSM, ensuring that the two vertical arrows in the top-right corner of the device are placed at the correct height:



• 1.2 metres (3' 9") for seated user.

- 1.7 metres (5' 6") for standing users.

A tripod or similar for mounting the FSM is recommended.

- Any lights or equipment normally active in the surrounding area should be turned on to ensure an accurate testing environment.
- Set the FSM to the Background Noise mode – "A-weighted".



- Measure and note the background noise level throughout the looped area on the Compliance Certificate document.
- Listen to the loop through the FSM (A-weighted) or a loop listener (A-weighted). Note and demonstrate any interference to the customer which may not be heard through a hearing instrument.
- Background magnetic noise must be between -32dB and -60dB. If the readings noted pass the Compliance Certificate document's requirements, move on to Step 2: Metal Loss.

Step 2: Metal Loss

- Set up the FSM, ensuring that the two vertical arrows in the top-right corner of the device are placed at the correct height:



• 1.2 metres (3' 9") for seated user.

- 1.7 metres (5' 6") for standing users.

A tripod or similar for mounting the FSM is recommended.

- Connect the TSG to the line input of the hearing loop driver.
- Set the TSG to the 1kHz setting.
- Set the FSM to the Third Octave F= 1000Hz setting.
- Adjust the line level until "Good" is displayed.
- Adjust the drive level to achieve 2 amps of output current.



- Set the TSG to the pink noise setting and record the value measured by the FSM.



- Set the FSM to the Third Octave F= 100Hz setting and record the value measured.



- Set the FSM to the Third Octave F= 5000Hz setting and record the value measured.



- If the difference between the values measured at 1000Hz and 5000Hz is less than 3dB, record the results and move on to Step 3: Output Level and Clipping. If the difference is higher than 3dB, move on to step 11.
- Increase the HF comp and repeat steps 3 to 10.

Step 3: Output Level and Clipping



Note: This test should be performed as briefly as possible.

1. Set the TSG to the 1kHz setting.
2. Set the FSM to the RMS/Peak A-Weighted mode.
3. Adjust the drive level to achieve 2 amps of output current.
4. Measure the field strength. Achieve 0dB by using the FSM's indicated field strength to work out the extra current required. For example: if the measured field strength on the FSM is (A-RMS) -6dB then 6dB (2X) extra current will be required to achieve 0dB (see Note 1 on page 27).

Note: If more than 7.9dB is required to achieve 0dB, a different loop design or more powerful driver is required. This is potentially due to metal loss.

5. Briefly alter the current to the desired level. For instance, the example in step 4 requires 4 amps of current.
6. The field strength will now be 0dB +/- 1dB.
7. Quickly record the current required to achieve 0dB field strength. Now switch the TSG to 1.6kHz.
8. Confirm that the Loop A and Loop B Clip LEDs remain unlit.
9. If the driver's front panel Clip LEDs remain unlit, return the TSG to 1kHz and reduce output current to 2 amps move on to Step 4: Field Uniformity.

If the driver's front panel Clip LEDs are lit, the driver is clipping.
This means the loop connected is too long, and therefore:

1. The system is not IEC60118-4 compliant.
2. The sound will be distorted.
3. The driver may be susceptible to damage and warranty voided.


Perform one of the following solutions and repeat until there is no clipping:

1. Reduce the loop current,
2. Reduce the length of the loop,
3. Use a higher diameter of flat cable,
4. Try a two-turn loop,
5. Use a higher voltage driver.

Step 4: Field Uniformity

1. Set up the FSM. Ensure that the two vertical arrows in the top-right corner of the FSM are placed at the correct height:



-  1.2 metres (3' 9") for seated user.
- 1.7 metres (5' 6") for standing users.

A tripod or similar for mounting the FSM is recommended.

2. Reduce the loop output current to 2 amps.



3. Set the FSM to the RMS/Peak A-Weighted mode and record the value measured by the FSM in the centre of the loop.



4. Move the FSM to other user positions within the looped area and record the values measured by the FSM.
5. The differences measured in other positions should not be greater than +/- 3dB of that measured in the first position.
6. Repeat steps 3 to 5 to create a suitable map of the area looped.

Step 5: Final Output Level Adjustment

1. Set the TSG to 1kHz.
2. Adjust the output current to the level recorded in Step 3: Output Level and Clipping (7) on page 25. Once the current is set, disconnect the TSG.

Step 6: Input Signal Level Adjustment

1. Connect the system signal source.
2. Adjust the input level (line/mic) level until "Good" is displayed on audio peaks.
3. The system is now set up.

Note 1:

When adjusting the output current, if a level of 2.5 amps is reached and yet the field strength is still below -6dB, the correct field strength will not be achieved.

This is caused by either an incorrect loop design or installation, more metal loss than expected or an incorrectly specified driver.

There is no need to go higher than +0dB ARMS.

Adjustment to drive current/level required based on the measured field strength:

| Measured Field Strength | Output current that will achieve 0dB | Steps to increase Drive | Steps to decrease Drive |
|-------------------------|--------------------------------------|-------------------------|-------------------------|
| 6.00dB | 1.00A | | 6 |
| 5.00dB | 1.12A | | 5 |
| 4.00dB | 1.26A | | 4 |
| 3.00dB | 1.42A | | 3 |
| 2.00dB | 1.59A | | 2 |
| 1.00dB | 1.78A | | 1 |
| .00dB | 2.00A | 0 | 0 |
| -1.00dB | 2.24A | 1 | |
| -2.00dB | 2.52A | 2 | |
| -3.00dB | 2.83A | 3 | |
| -4.00dB | 3.17A | 4 | |
| -5.00dB | 3.56A | 5 | |
| -6.00dB | 3.99A | 6 | |
| -7.00dB | 4.48A | 7 | |
| -8.00dB | 5.02A | 8 | |
| -9.00dB | 5.64A | 9 | |
| -10.00dB | 6.32A | 10 | |
| -11.00dB | 7.10A | 11 | |
| -12.00dB | 7.96A | 12 | |
| -13.00dB | 8.93A | 13 | |
| -14.00dB | 10.02A | 14 | |

Troubleshooting

| Symptom | Possible Fault | Action |
|--|---|--|
| The driver does not turn on. | 1) Mains power is absent. 2) Internal failure. | 1) Check mains power. 2) Seek assistance. |
| Interference (buzzing/whistling/hissing) is heard through induction loop. | 1) Bad input signals. 2) Internal failure. | 1) Power off the hearing loop driver and confirm that interference isn't from external origin. 2) Disconnect input signals. If sound disappears, check inputs. |
| The driver is excessively hot to touch. | 1) Large amount of mains hum present on input. 2) Internal failure. | 1) Check input signal source. 2) Incorrect hearing loop driver being used. |
| The loop output level indicates current is flowing but I hear nothing in the loop. | 1) Shorted feeder cable. 2) Loop listener is not working or being used too far from loop. | 1) Check feeder cable, although the hearing loop driver will usually refuse to tune to shorted feeder. 2) Check listener and location. |
| The sound is distorted. | 1) Input level has been turned up too high for signal level at input. 2) Input signal is distorted. 3) Output signal is clipping. | 1) Reduce input level setting. 2) Check signal source. 3) Refer to "The Clipping Status Lights are lit" below. |
| The Clipping Status Lights are lit. | The connected hearing loop is too long. | 1) Reduce the length of the loop. 2) Use a larger diameter cable. 3) Create a two-turn loop. 4) Use a higher voltage driver. |

Technical Specification

V7:

| | |
|--|--|
| Power | |
| 2.1mm 30W 14Vdc 2.14A via External PSU (PS-55) Class 6 External PSU (100V -240V AC 50Hz-60Hz) | |
| Inputs | |
| 1 X Line XLR or 3.81mm Euro-block [optimised for -10dBV to 0dBv] 1 X Microphone (12V phantom power via 680Ω) [optimised for levels above -45dBv] | |
| Output Characteristics | |
| Output Voltage: Output Current: Loop Connector: | 7.5Vrms (21.21Vpk-pk) @ 5Arms (14.14Apk-pk) see notes 1 and 2 5Arms (14.14Apk-pk) up to 300 seconds 5.08mm Euro-block |
| Audio system | |
| Frequency Response: Distortion: AGC: HF Comp: | 80Hz to 6.5kHz THD+N <1% (-40dB) Peak detecting 7 optimised stages |
| Note 1: Z=1.4Ω (133uH +0.685Ω @ 1.6kHz) Note 2: < 1% (-40dB) distortion | |
| Display & Control | |
| Display: Control: | LED Backlit LCD display Single rotary control |
| Fault Monitoring and Protection | |
| Main Display: Front Panel LED: Cooling: | Open circuit loop (DCR measurement) Loop ground fault Output voltage clipping Internal heatsinks with thermal protection |
| Physical | |
| Height: Depth: Width: Weight: | 42mm (1.65") 132mm (5.20") [150mm (5.90") including XLR and control knob] 198mm (7.80") 938g (2.06lbs) |

V15:

| | |
|--|--|
| Power | |
| 2.1mm 100W 24Vdc 4.17A via External PSU (PS-60) Class 6 External PSU (100V -240V AC 50Hz-60Hz) | |
| Inputs | |
| 1 X Line XLR or 3.81mm Euro-block [optimised for -10dBV to 0dBv] 1 X Microphone (12V phantom power via 680Ω) [optimised for levels above -45dBv] | |
| Output Characteristics | |
| Output Voltage: Output Current: Loop Connector: | 15Vrms (42.3Vpk-pk) @ 5Arms (14.14Apk-pk) see notes 1 and 2 5Arms (14.14Apk-pk) up to 300 seconds 5.08mm Euro-block |
| Audio system | |
| Frequency Response: Distortion: AGC: HF Comp: | 80Hz to 6.5kHz THD+N <1% (-40dB) Peak detecting 7 optimised stages |
| Note 1: $Z=3\Omega$ (265.4uH + 1.37Ω @ 1.6KHz), Note 2: 1% (-40dB) distortion | |
| Display & Control | |
| Display: Control: | LED Backlit LCD display Single rotary control |
| Fault Monitoring and Protection | |
| Main Display: Front Panel LED: Cooling: | Open circuit loop (DCR measurement) Loop ground fault Output voltage clipping Internal heatsinks with thermal protection |
| Physical | |
| Height: Depth: Width: Weight: | 42mm (1.65") 132mm (5.20") [150mm (5.90") including XLR and control knob] 198mm (7.80") 938g (2.06lbs) |

V15a:

| | |
|--|--|
| Power | |
| 2.1mm 100W 24Vdc 4.17A via External PSU (PS-60) Class 6 External PSU (100V -240V AC 50Hz-60Hz) | |
| Inputs | |
| 1 X Line XLR or 3.81mm Euro-block [optimised for -10dBV to 0dBv] 1 X Microphone (12V phantom power via 680Ω) [optimised for levels above -45dBv] | |
| Output Characteristics | |
| Output Voltage: Output Current: Loop Connector: | 15Vrms (42.3Vpk-pk) @ 5Arms (14.14Apk-pk) see notes 1 and 2 5Arms (14.14Apk-pk) up to 300 seconds 5.08mm Euro-block |
| Audio system | |
| Frequency Response: Distortion: AGC: HF Comp: | 80Hz to 6.5kHz THD+N <0.3% (-50.5dB) Full current both outputs driven Peak detecting 7 optimised stages |
| Note 1: Z=3Ω (265.4uH + 1.37Ω @ 1.6KHz), Note 2: 1% (-40dB) distortion | |
| Display & Control | |
| Display: Control: | LED Backlit LCD display Single rotary control |
| Fault Monitoring and Protection | |
| Main Display: Front Panel LED: Cooling: | Open circuit loop (DCR measurement) Loop ground fault Output voltage clipping Internal heatsinks with thermal protection |
| Physical | |
| Height: Depth: Width: Weight: | 42mm (1.65") 132mm (5.20") [150mm (5.90") including XLR and control knob] 198mm (7.80") 978g (2.15lbs) |

Standards

EMC

- BS EN 55103-1: 2009 (EMC emissions)
- BS EN 55103-2: 2009 (EMC immunity)

This product has been designed and tested to comply with the following North American and Canadian standards:

- FCC class "B" EMC (emissions)
- ICES-003



This device complies with Part 15 of the FCC Rules. 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.

CAUTION: Changes or modifications not expressly approved by Contacta Systems LTD or an authorised partner could void the user's authority to operate the equipment.

Correct disposal of this product



This marking indicates that this product should not be disposed with other household waste throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal and to conserve material resources, this product should be recycled responsibly. To dispose of your product, please use your local return and collection systems or contact the retailer where the product was purchased.

Local dealer:.....

contacta^{ll.}

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Documents / Resources

| | |
|---|--|
|  | <p>Contacta V7 Series Hearing Loop Drivers [pdf] User Guide V7 Series Hearing Loop Drivers, V7 Series, Hearing Loop Drivers, Loop Drivers, Drivers</p> |
|---|--|

References

-  [Innovative assistive technology solutions - Contacta](#)
-  [Manual-Hub.com - Free PDF manuals!](#)
- [User Manual](#)

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