

**LASERMET AA-04
AUDIO ALERT
INSTRUCTION MANUAL**



**RECORDED MESSAGE
PLAYBACK DEVICE**

LASERMET AA-04 Instruction Manual

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1 Declaration of Conformity



LASERMET LIMITED

AA-04 AUDIO ALERT

Drawing no. 01156-00-000 Standard

DECLARATION OF CONFORMITY

This is to certify that the AA-04 Audio Alert designated by Lasermet Drawing Number 01156-00-000 has been tested in accordance with the following directives and standards and found to comply.

Lasermet certifies that this product complies with the basic requirements for health and safety as provided by the following directives and standards:

Directives: Low Voltage Directive 2014/35/EU
 CE Directive 93/68/EEC
 EMC Directive 2014/30/EU

Standards: EN 60598-1:2008
 EN 62471:2008
 EN 55015:2006
 EN 61547:1995 +A1:2000
 EN 61547:2009

Supplier:

Lasermet Limited
Lasermet House
137 Hankinson Road
Bournemouth
BH9 1HR
Dorset
United Kingdom

Country of Origin: England

Signed.



Paul Tozer
Managing Director

Date: 10 June 2019



2 Safety Warnings

This device is intended to be used as part of a safety system which may be used to protect personnel and equipment from possible injury, damage, or loss.

As such it must be installed and wired according to these instructions and tested by suitably qualified persons. No attempt may be made to tamper with the parts, open them, or use them outside of the parameters contained herein.

The units are only designed to be fixed to surfaces using their inbuilt fixing holes. They must not come into contact with each other or any other moving part when in use. The parts should never be subject to impact or mechanical strain.

Safety switches should never be defeated or bypassed. It is imperative that all steps are taken to ensure that any spare actuators are made unavailable, such that they cannot be used to defeat the switch or reduce the protection offered by the system in any way.

3 Concept

The AA-04 Audio Alert device is intended to be used in conjunction with Lasernet's Laser Interlock systems for the purpose of audibly warning personnel of hazards by playing back a message recorded on the device. However, the devices can be readily used independently from Lasetmet Interlock systems.

The AA-04 plays back a recorded message up to 40 seconds long (13 seconds default) when a supply voltage of +6VDC to +24VDC is applied.

The message is generally recorded at factory and can be any audio whether it be speech, music or other. The repetition rate and the number of repetitions of the message are factory settable to end-user requirements.

The AA-04 incorporate adjustable volume control and line-out features to allow audio output to external devices such as amplifiers, speakers and PA systems.

Lasermet provides a full range of laser interlock equipment including control systems, interlock switches, illuminated warning signs, laser shutters, door locks, external power supplies etc. which can be connected to provide a complete laser interlock system. Full support, design and installation is available from Lasetmet, please contact us for any queries. Contact details are given at the end of this manual.

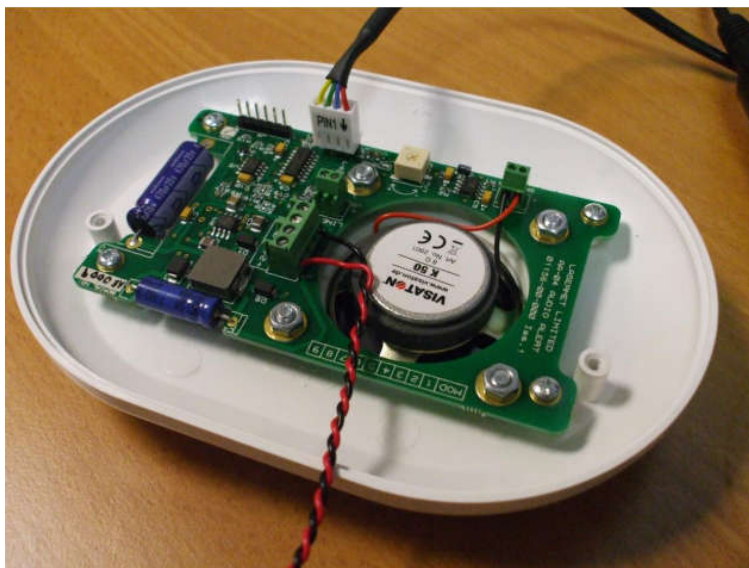
4 Recording a Message

Generally, the customer can provide Lasetmet with a digital audio file when ordering an AA-04 and Lasetmet will upload the file onto the device for the customer prior to delivery. Lasetmet also has an in-house vocalist who can record written messages onto the AA-04 prior to delivery.

If the customer wishes to record their own messages, then optional Lasetmet part AA-MIC can be purchased. AA-MIC is special microphone with custom connections specifically for the Audio Alert range. The following steps indicate how recording with the AA-MIC is performed.

Step 1 – Remove Rear of Case**Figure 1. Removing Highlighted Screws**

Remove the two screws circled in red and remove the rear half of the case exposing the circuit board below.

Step 2 – Connect Power & AA-MIC**Figure 2. Connecting Power and AA-MIC Cables**

Connect +6VDC to +24VDC to J1. (Refer to “Wiring” section if in doubt)

Connect the AA-MIC to J3, making sure Pin 1 of the AA-MIC is aligned with Pin 1 of J3.

Step 3 – Record Message

Figure 3. Recording the Message using AA-MIC

Ensure power is on to the AA-04.

Slide the switch on the AA-MIC to on and record your message, speaking clearly into the microphone. Immediately after you finish speaking, slide the switch on the AA-MIC back to the off position.

Switch off power to the AA-04.

When power is reapplied to the AA-04, your recorded message should be heard. Repeat this process until you are satisfied with the message.

When satisfied, remove power and AA-MIC from the AA-04 and screw the rear of the case back on.

5 Installation

The AA-04 is designed to be permanently attached to a wall or other fixed vertical surface.

5.1 Positioning

The AA-04 should be mounted in a convenient position for use and wiring.

During installation, wired connections will need to be made and allowance should be made for the installation of electrical conduit or trunking if required to make entry to the unit.

Ideally the AA-04 should be attached directly to the wall with the cables being fed from within the wall. For hollow walls this should be straightforward. For solid walls it may be easiest and neatest to feed the cables right through the wall from the other side.

Alternatively, the AA-04 may be attached to a round conduit box which may be buried or surface-mounted, though this last option will result in the unit projecting further from the wall, making it less stable and more vulnerable.

It is recommended that there must be a flat unobstructed area of wall extending at least 70mm above and 110mm below the mounting centre to allow fitment and removal.

If a Lasermet Miniature Warning Sign is being fitted above the AA-04 the centres should be at least 140mm apart vertically.

Refer to Figure 4 for details of the fixing holes and cable entry. The wall plate and locking plate are secured using preferably four screws on a 35.4mm square around the cable entry point. The locking plate and plastic wall plate disk are pre-drilled and may be used as a marking template. If using a round conduit box, the holes will align with the cover fixing holes.

Once all the holes have been made, secure the wall plate and the locking plate as shown in figure 4 with the plastic wall plate against the wall. Check that the plastic wall plate and locking plate are aligned as shown.

Feed the cables through the hole in the centre of the locking plate.

NOTE: Make the electrical connections before attaching the unit to the wall plate, see the Wiring section.

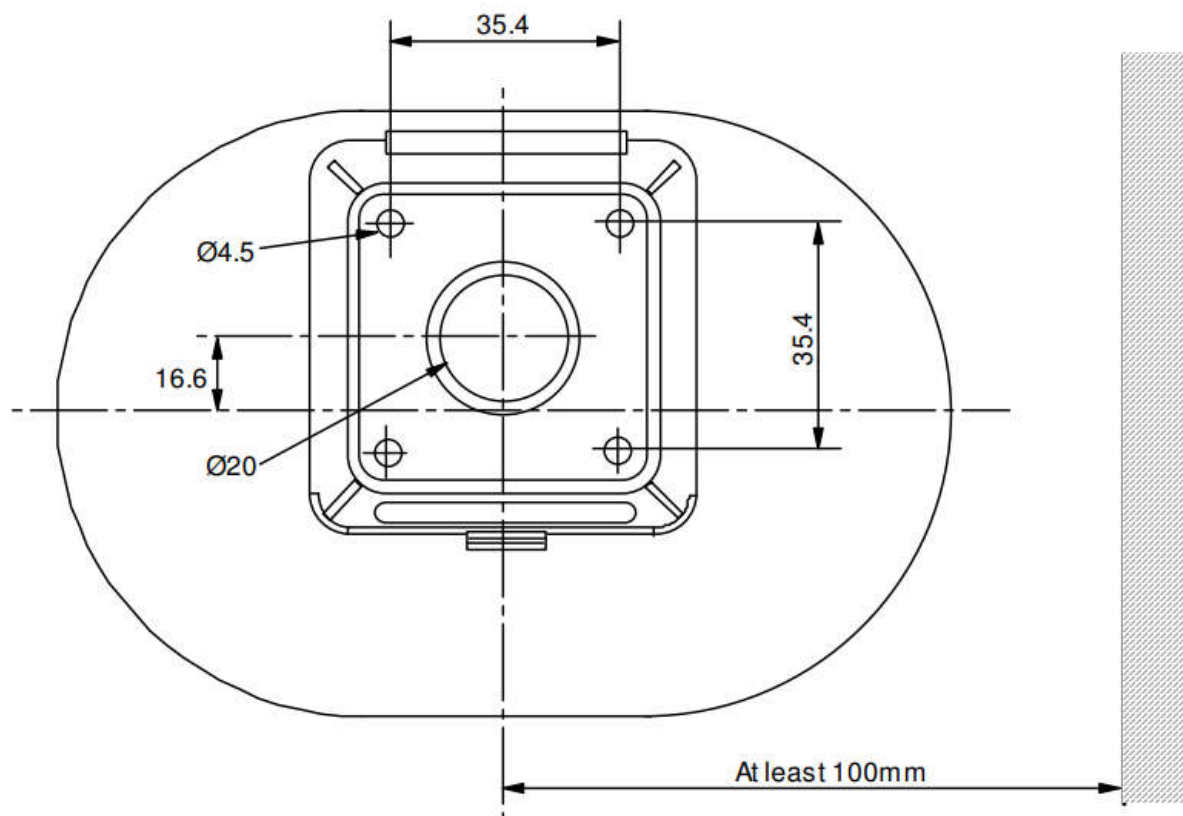
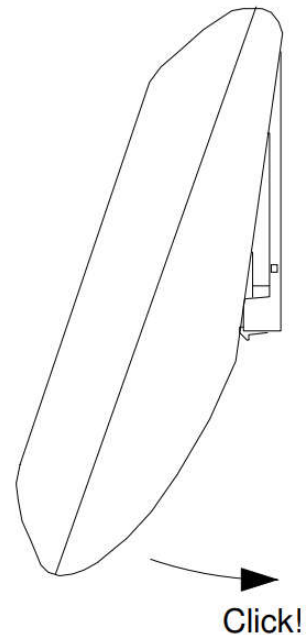


Figure 4. Wall Drilling Details

5.2 Attaching the AA-04 to the Backplate

Once all the wiring connections have been made, attach the AA-04 to the backplate by hooking the top of the AA-04 onto the backplate and swinging the bottom against the wall. Press firmly until it clicks into place.



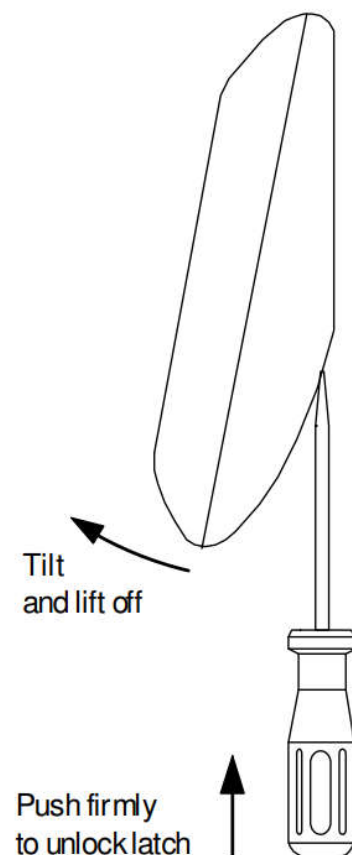
5.3 Removing the AA-04 from the Wall

Once the keypad has been locked to the wall, a 5mm flat screwdriver is required to release the locking latch before it can be removed as shown below.

Ensure that the supply is turned off.

Insert the screwdriver into the recess in the bottom of the AA-04 at the back and push the latch upwards to disengage it from the case. Note that the latch is quite secure, and some force may be needed before it releases. When the latch is released it will be possible to tilt the bottom of the AA-04 forwards and then lift it off the backplate.

Use a 3mm flat screwdriver to disconnect the wires from the terminals.



6 Wiring

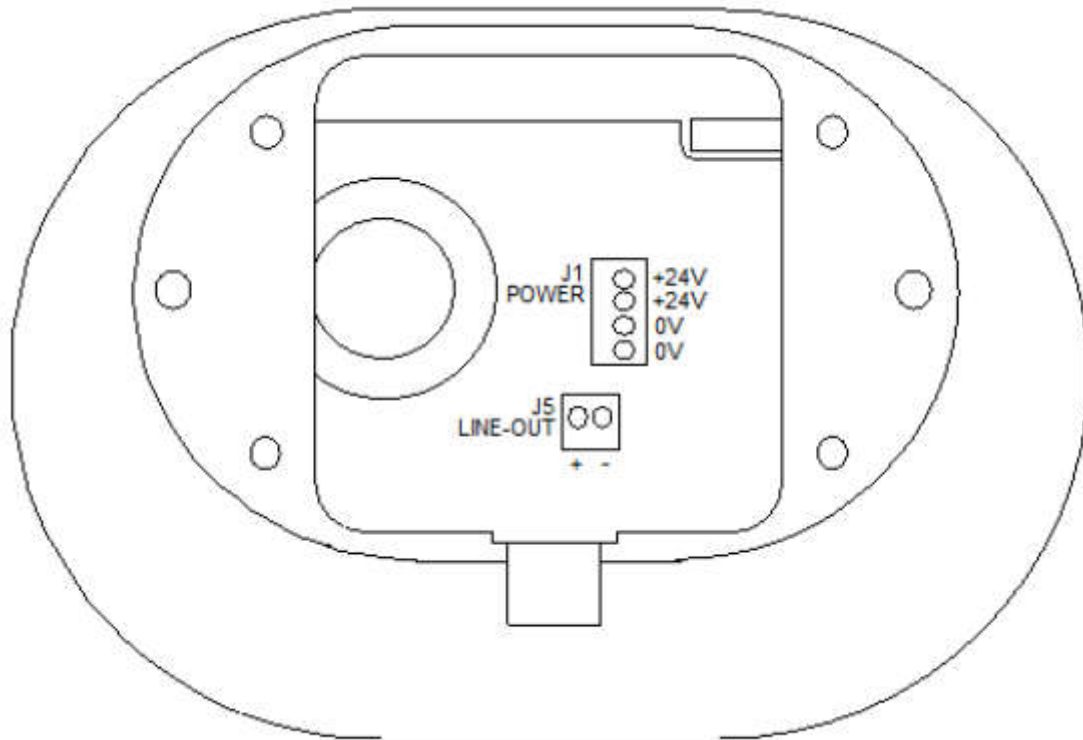


Figure 5. Terminal Identification

+6 to +24VDC should be applied to J1 (Power) in order to activate the unit and start the speech routine. Positive should be connected to a +24V terminal and negative to a 0V terminal.

If the audio signal is required to be outputted to an external amplifier or other audio device, then the positive and negative terminals of J5 should be connected to the positive and negative terminals of the external audio device.

6.1 Adjusting Volume

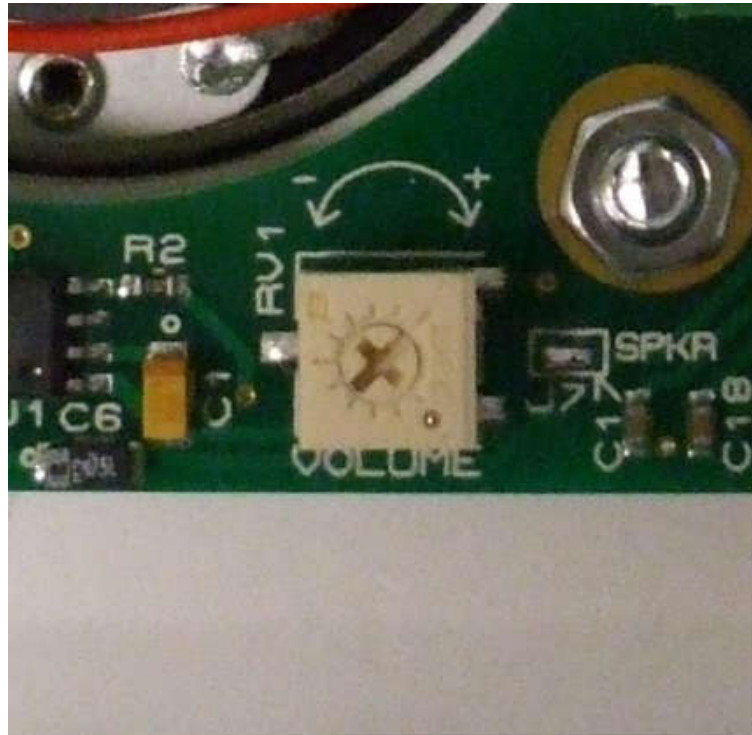


Figure 6. Volume Adjuster

In order to adjust the volume of the playback, a small screwdriver should be used to turn the volume adjuster (pictured above) clockwise to increase volume or counterclockwise to decrease the volume. Depending on the screwdriver you are using, you may or may not have to remove the rear of the case as shown the “Recording a Message” section of this manual. The volume adjuster is placed within the unit to prevent unauthorised changes to the volume of the device.

7 Specifications

Dimensions	160w x 108h x 38.5d mm
Weight	250g
Operating Voltage	+6 to +24VDC
Power Consumption	0.48W standby 3.8W activated

Values given as 'typical' are average values measured across a number of samples and are not guaranteed. Lاسernet reserve the right to alter any specification without prior notice.

8 Warranty

Lاسernet provide a 12-month warranty for defects in materials and manufacture, from the date of installation or delivery. Installations completed by Lاسernet are covered against defects in workmanship for 12 months.

Damage or defects caused by other factors are not covered. For example, industrial contamination, incorrect cleaning, storm damage. Consequential loss is not covered under warranty. Compensation for indirect or direct loss or damage is expressly excluded. Rectification of the defects or a replacement does not initiate a new warranty period.

For all deliveries, payments and other legal transactions, English law takes precedence for any litigation.

9 Contact Details

Lasernet provide a full range of laser interlock equipment including interlock switches, illuminated warning signs, laser shutters, entry keypads with built-in fail-safe override timer, door locks, external power supplies etc. which can be interconnected to provide a complete system. We also supply equipment and consultancy covering all aspects of laser safety. Full support, design, and installation is available from Lasernet, please contact us for any queries.

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