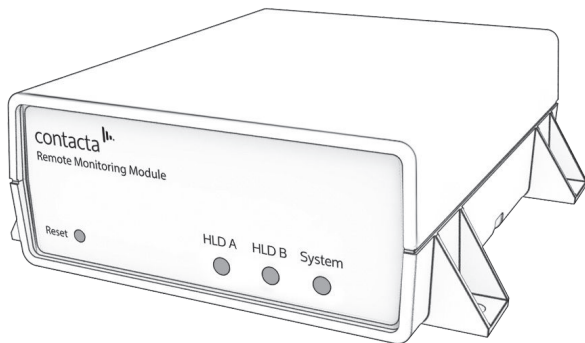


Remote Monitoring Module RMM1



Setup Guide

July 2018

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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.

Product Overview

The Remote Monitoring Module is an accessory for HLD7 and HLD9 large area hearing loop drivers.

The device relays the status details of two HLD7 or HLD9 units in standalone or phased array configuration. Drive levels and loop output levels can be altered through an adjustment page, accessible via a local area connection (LAN) from both desktop and mobile.

A fault alert system monitors the hearing loop drivers and sends email alerts if a fault arises, such as a loop disconnect, power failure, or overtemperature failure. This keeps installers and clients updated on the status of hearing loop drivers when not physically on site.

Note: The email address registered to the device will only be used for email alerts and to inform users about product updates related to the Remote Monitoring Module.

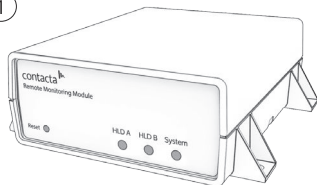
Network Requirements

- It is recommended that the Remote Monitoring Module is always behind a firewall.
- DHCP server operating on LAN.
- Port 80 enabled with unrestricted outgoing access.
- IPv4 compatible only.

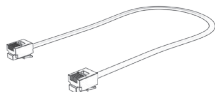
If the Remote Monitoring Module is connected to the internet through a network using a firewall, network ports may need to be adjusted. Please consult the network administrator about network settings.

Components

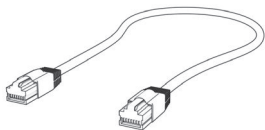
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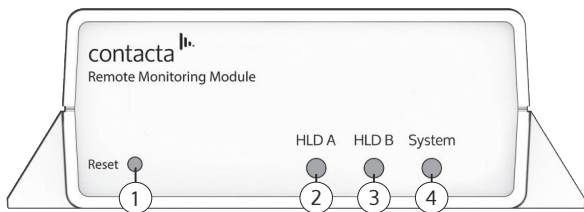
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1. Remote Monitoring Module.
2. HLD connection cable (x2).
3. Ethernet cable.
4. Power supply/micro-USB cable.

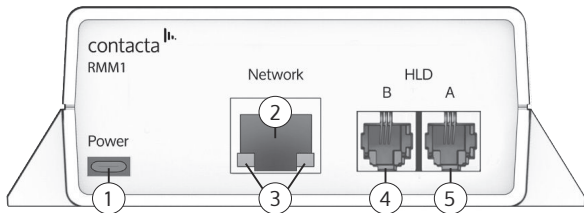
Connections

Front Display Overview



1. **Reset:** Pin-port for resetting the device to factory default settings.
2. **HLD A:** LED which turns solid green when the corresponding port is connected to a hearing loop driver.
3. **HLD B:** LED which turns solid green when the corresponding port is connected to a hearing loop driver.
4. **System:** LED which steadily flashes to indicate the device is undergoing setup, and solidly illuminates when connected to the internet.

Rear Display Overview



1. **Power:** Micro-USB power supply port.
2. **Network:** Ethernet cable port.
3. **Network Signal Indicators:** LEDs which flash intermittently, indicating the device is sending or receiving network signals.
4. **HLD B:** Hearing loop driver port B.
5. **HLD A:** Hearing loop driver port A.

Setup

1. Login or register the interface:
 - a. Access **http://netmon.contacta.co.uk/** using a web browser.
 - b. Enter the Username and Validation Key provided on the underside of the device.
 - c. Complete and submit the registration form.

Note: The MAC address must be entered exactly as on label – e.g., AA:BB:CC:DD:EE:FF.
2. Ensure there is no connection between any hearing loop driver and a power source.
3. Connect an HLD connection cable from the first hearing loop driver's feature port to the Remote Monitoring Module's HLD A port.
4. To connect a second hearing loop driver, connect an HLD connection cable from the second hearing loop driver's feature port to the Remote Monitoring Module's HLD B port.
5. Connect the ethernet cable to the Remote Monitoring Module's network interface port and an internet connected router or socket.
6. Connect the power supply to a power source and the Remote Monitoring Module's power port.
7. Connect all hearing loop drivers to a power source and check that they are operating correctly.
8. Turn on the Remote Monitoring Module; this will not impact the hearing loop drivers. The System LED indicator will begin flashing steadily.
9. The System LED indicator will illuminate if the device is connected to the internet; the hearing loop driver LED indicators will then illuminate. If the System LED indicator does not illuminate within 60 seconds, refer to Frequently Asked Questions (see page 8).

Adjustment Page

The adjustment page allows adjustment and live level monitoring over LAN for all connected hearing loop drivers.

1. To access the adjustment page:
 - a. Connect a computer to the same LAN as the network interface.
 - b. Enter the NetBIOS name located on the underside of the Remote Monitoring Module into a web browser. For example:
http://HLDxxxxxx/
The NetBIOS name can be customised through the embedded web user interface.

2. The username and password requested for login are the following:

Username: engineer

The requested password is the case-sensitive **Validation Key** provided on the underside of the device.

3. If adjustments are made manually to the hearing loop drivers while a user is in the adjustment page, the site will need to be refreshed. Alterations will then be reflected.

Fault Alert System

The Fault Alert System provides remote monitoring via email alerts.

1. To test the fault alert system, disconnect one of the link leads from the hearing loop driver.
2. The registered alert email address will receive an email notification stating the driver was disconnected.
3. Reconnect the lead back into the hearing loop driver.
4. The registered alert email address will receive an email notification stating the driver was reconnected.

Email Alerts

Email Alert Type	Reason(s) for Alert	Note
Power Supply Failure Detected	1) PSU has failed (i.e. output is below 14V). 2) HLD has been driven over capacity.	
Loop: Fault	A loop connected to the HLD has been disconnected.	
No Driver Connected	1) HLD has been turned off. 2) HLD hardware failure. 2) HLD has been unplugged.	
RMM1 has detected a communications failure with the HLD connected	1) A communication error between HLD & RMM1 has occurred (cable damage). 2) HLD hardware failure. 3) Incompatible firmware.	Incompatible firmware refers to HLD models constructed prior to May 2017.
HLD's are scheduled to perform a self test	RMM1 has performed its daily reset.	This function is used to detect disconnected loops when HLDs are not in use.
HLD loop tuning has failed	1) Incorrect loop has been connected. 2) No loop has been connected.	RMM1 will stop communication with the driver after this fault has been detected. HLD/RMM1 must be reset before continuing.
RMM1 has completed its power up self test	RMM1 has performed a self-test and been powered on.	
Re-established connection with the cloud	RMM1 has confirmed an installer has the correct IP address to access the RMM1.	
Temperature: XX°C HIGH	HLD has overheated. It is either being overdriven or does not have sufficient ventilation.	
Temperature: X°C OK	HLD temperature has dropped below the warning threshold.	
Loop: OK	HLD has been reconnected to a hearing loop.	

Frequently Asked Questions

What indicates that the Remote Monitoring Module is connected to the internet?

The System LED indicator will flash whilst the Remote Monitoring Module attempts to connect to the internet. When the product has connected successfully, the System LED will stop flashing and remain solid illuminated.

What if the Remote Monitoring Module does not connect to the internet?

Perform the following steps:

1. Ensure all cables are properly seated and the Remote Monitoring Module is connected to a power source.
2. Ensure all network requirements are compatible (see page 3).
3. Test the internet connection using another internet connected device such as a laptop or desktop.
4. Contact the network administrator for assistance.
5. If none of the above is successful, email sales@contacta.co.uk or call 01732 229900 to report the issue.

Where is the the Remote Monitoring Module's MAC Address, NetBIOS name, Username, and Validation Key found?

The product information is provided on the underside of the device.

How is the adjustment page entered on a local area connection?

See page 7 for Adjustment Page instructions.

I am using an Android device to connect to my Remote Monitoring Module and the NetBIOS address is not recognised. What do I do?

Netbios is a Microsoft protocol and is therefore not compatible with Android devices.

Enter the IP address assigned to the Remote Monitoring Module by the DHCP server into your Android device. This IP address can be found in the email you received when the device was powered up for the first time.

My Remote Monitoring Module is connected to the internet but I have not received any emails from the system. What do I do?

Search your email client's junk mail folder and add the following email address to your email client's whitelist:

donotreply@netmon.contacta.co.uk

Can hearing loop drivers be adjusted from a remote location via a WAN (Wide Area Network)?

No. The adjustment feature is available only via a local area network connection.

What communicates that the Remote Monitoring Module is registered and operating correctly?

Once the registration form has been submitted, an email will be sent to the registered email address. Connected hearing loop drivers are then automatically monitored by the Remote Monitoring Module.

Can the Fault Alert System be tested to ensure that it is operating correctly?

Yes. See page 7 for Fault Alert System instructions.

Glossary

- Monitoring** The Remote Monitoring Module oversees fault conditions on the HLD amplifier and sends email alerts to the registered user to notify them of any negative changes.
- Adjustment** The Remote Monitoring Module can alter the levels on connected hearing drivers from where the appropriate LAN is accessible.
- NetBIOS** Network Basic Input/Output System. Allows applications on different computers to communicate within a LAN.
- Browser** A web client such as Internet Explorer or Firefox.
- LAN** Local Area Network. Allows computers to share information and internet connections in a small area such as an office, home, or school.
- WAN** Wide Area Network. A computer network with a radius of more than 1km.
- DHCP** Dynamic Host Configuration Protocol. Allows computers to automatically assign an IP address and connect to other devices on a network.
- Port 80** The default port which servers expect to receive from a web browser.



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