

IM5966

Hanwell Pro Mark 5

Repeater

Installation Guide

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Contents

1	Introduction.....	3
2	Testing Radio Range	4
3	Wall Mounting Repeater	5
4	Battery Backup	6
5	Repeater with Remote Receiver or Transmitter.....	7
6	Contact Hanwell	8

1 Introduction

The Mark 5 Hanwell Repeater unit is a wall-mounted booster which receives signals from Radio Telemetry Sensors and sends the signals on to CRx Controllers and/or SRx Series Smart Receivers, effectively increasing the radio range of the Radio Telemetry Sensors.

This Document outlines how to install the Mark 5 Repeater and applies to all Repeater units produced after June 2018, including Repeaters with a remote Receiver or Transmitter.

2 Testing Radio Range

1. Make sure that all Radio Sensors and other Repeaters are switched off (batteries removed).
2. Reconnect the power to the Repeater.
3. Put the Repeater into its approximate final position.

Note: Do NOT permanently fix a Repeater into position until a Range Test has been completed.

4. Place a Radio Sensor next to the Repeater and switch it on.
5. Plug in a **Fast Transmit Dongle** and note the **Sensor ID**. This should be displayed on the LCD display when powered up, assuming it is a 4000 Series Unit.
 - The **Transmit** and **Receive** LEDs should now flash at intervals of 10 seconds or less.
6. Go back to the CRx/SRx and check that the LCD is displaying a signal from the Radio Sensor from paragraph 4 above.
 - If a signal is not displayed, the Repeater will need to be moved to either a nearer location or a better location (higher up or further away from RF obstacles). Failing that, a second Repeater or CRx or SRx will need to be installed.
7. Once the Repeater is in a good radio location, permanently fix it into position and connect the battery (via the two-pin white connector).

3 Wall Mounting Repeater

When selecting a position for the Repeater, please follow the guidelines below or signal strength will be greatly reduced and Radio Range impaired.

- **Do NOT** mount the Repeater on metal surfaces or with its antenna touching metal surfaces.
There should be no metallic objects within 20cm of any part of the Repeater's antenna.
- **DO** mount the Repeater vertically, with the power socket downwards and its antenna pointing vertically upwards.
- If possible, mount the Repeater in an open area rather a tightly enclosed space (e.g. small cupboard).
- Under normal operation, Transmit and Receive LEDs are on, blinking off periodically as signals are received and re-transmitted.

4 Battery Backup

The Repeater has a battery backup. This will maintain operation of the Repeater in the event of a power outage for approximately 12 for hours.

Note: There are many considerations which affect this time, so the above should be used as a guide only.

The battery pack should be replaced every 3 years.

5 Repeater with Remote Receiver or Transmitter

The Remote Repeater units are made up of two units connected by a four-core cable.

They are designed to assist with Transmitting/Receiving signals from either one building to another or through Radio blocking obstacles.

- The Remote Receiver/Transmitter Unit can be placed on an outside wall, if required, as it is environmentally sealed. The Unit should preferably be located in a protected location, as high up as possible on the outside of the wall.
- A Repeater with Remote **Receiver** should be used if signals from another building need to be sent to a CRx or SRx unit in the building where the Repeater is located.
- A Repeater with Remote **Transmitter** should be used to send signals from one building to another where a CRx or SRx unit is situated.
- The interconnecting cable should leave and enter the Unit's case via the supplied cable gland.

The cable should be connected between the two four-way terminal blocks, one to one as shown below:

Signal name	4 Way Terminal block – Remote Unit	4 Way Terminal Block – Repeater
VCC	1	1
RX signal	2	2
TX Signal	3	3
GND	4	4

Note: Repeaters with a Remote Receiver/Transmitter will have a slightly reduced battery pack life of approximately 6 hours.

- The LEDs will operate on the Repeater unit as stated in Section 2 above.
- The Repeater's location should be selected as described in Section 3 above.

Note: The maximum inter-connecting cable length should be 2 metres.

6 Contact Hanwell

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