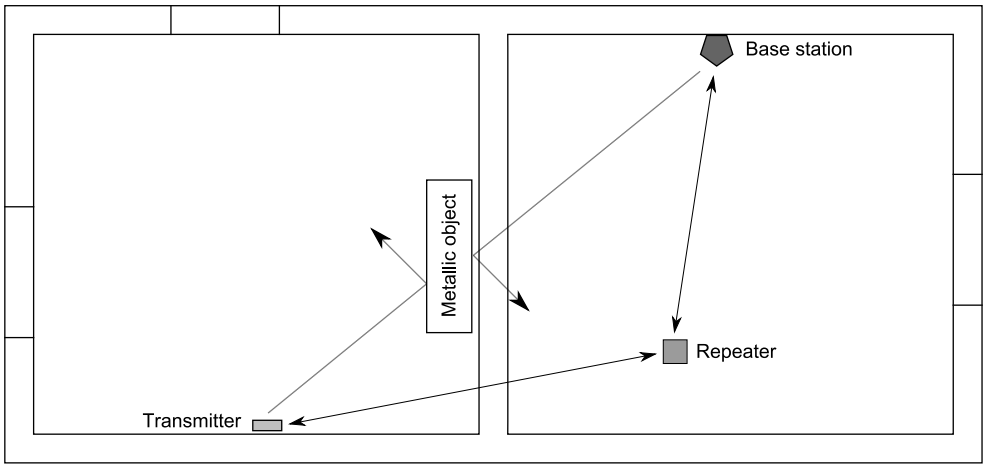
PLACING THE REPEATERS

In case of long device distances or poor reception, repeaters can be used to extend the network range. One FLTA base station can communicate with up to 8 repeaters.

NOTE: Use a FLREP-U repeater equipped with external antenna instead of a FLREP repeater equipped with internal antenna whenever possible. The external antenna provides better network coverage.



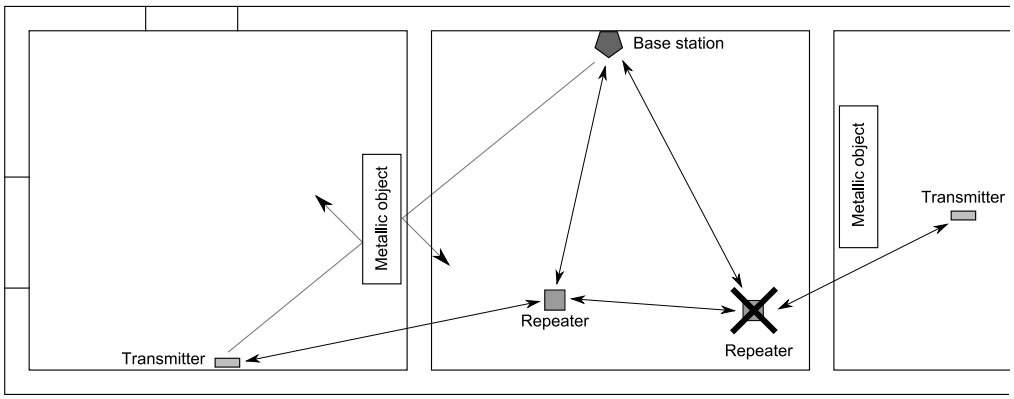
The ideal repeater position can be found by using FLSER commissioning tool.

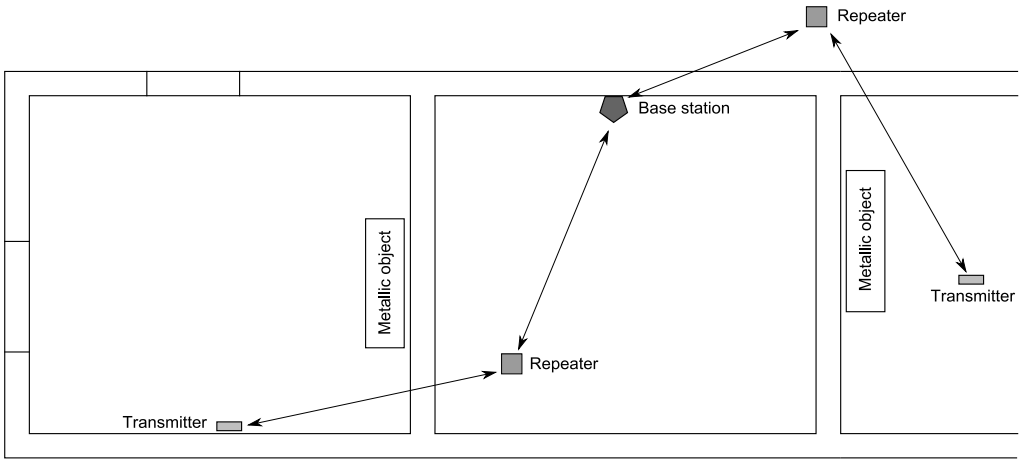
NOTE: You should minimize the use of repeaters to avoid message collisions and keep the wireless system costs down.

IMPORTANT: The RYFL I/O module does not support the use of repeaters.

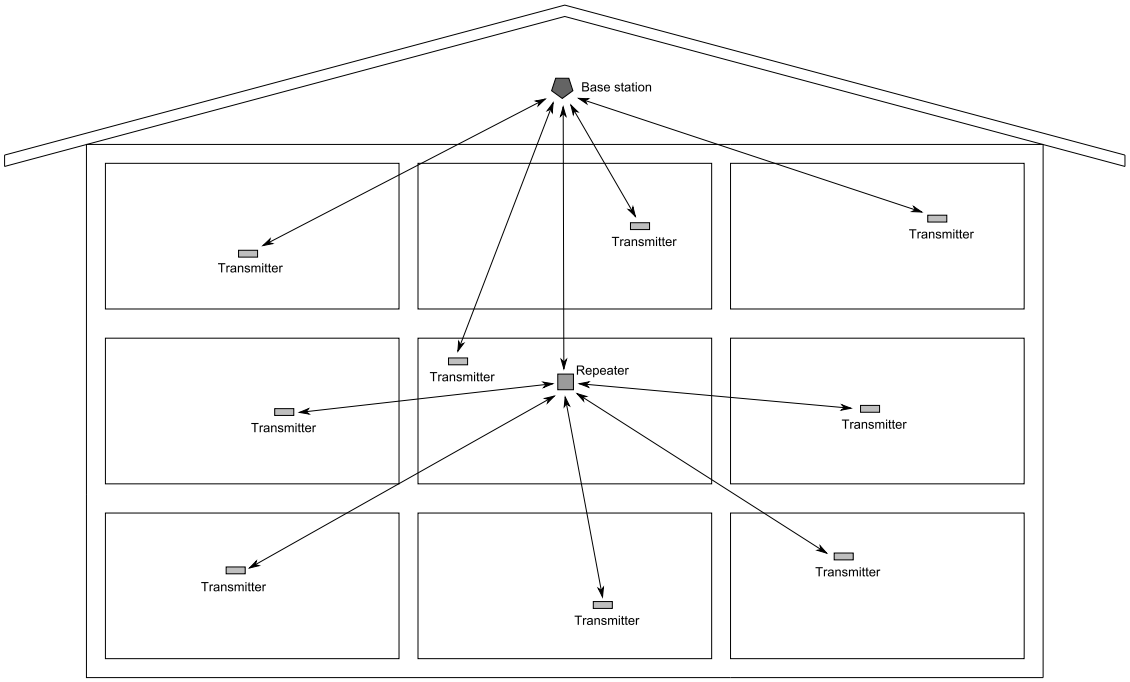
The Produal wireless network can automatically chain repeaters. However, it is strongly recommended to avoid repeater chaining to ensure a reliable network.

See the following figures for repeater positioning examples.



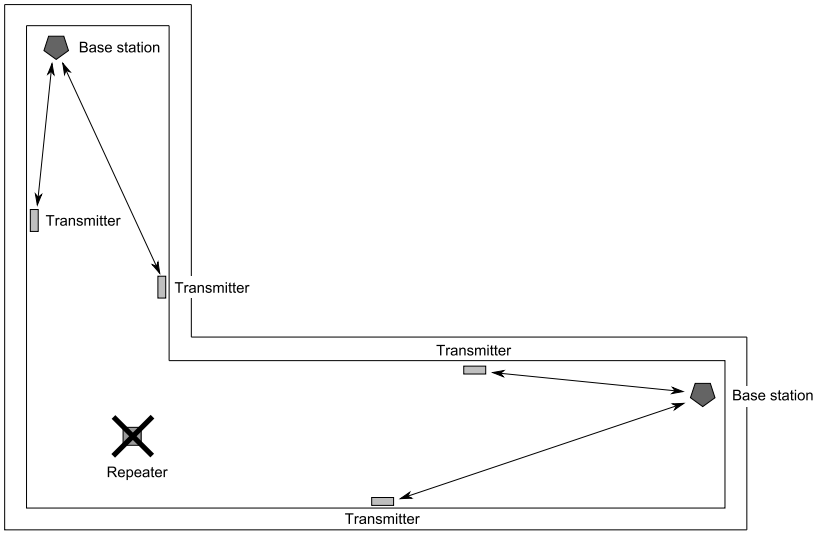


In multi-storey buildings, it is recommended to use a central repeater to get sufficient radio coverage.



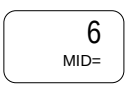
In multi-storey buildings it is often effective to use floor-specific base stations instead of repeaters. Floor-specific base stations improve network coverage and help to analyse possible problems.

In L-shaped buildings/floors it is recommended to use two base stations instead of a repeater.



Positioning repeater by using FLSER commissioning tool

1. Make sure that there are no active repeaters in the wireless network.
2. Set the FLSER tool switch to the MID position.
3. Push the + and - buttons to select the FLTA base station master ID (MID) to which you are connecting the repeater.

4. Set the FLSER commissioning tool switch to the RSSI position.

   FLSER tool starts to display the communication signal strengths between the FLSER and repeater.

5. Find a place for the repeater and check that the signal strengths are adequate.

The bigger number indicates the strength of the received signal sent by FLSER and the smaller number the strength of received signal sent by the repeater.

RSSI = Received Signal Strength Indication:

1…2 = poor,
3…5 = satisfactory,
6…9 = good

6. Set the FLSER tool switch to the REP position.

Now FLSER functions as a repeater.

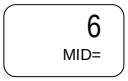
7. Go to the FLTA base station and check that the all messages are transmitted correctly to the base station.

NOTE: When the FLSER tool functions as a repeater, the battery drains approximately in 100 hours.

CONNECTING THE REPEATER TO THE WIRELESS NETWORK

The FLSER commissioning tool is needed for repeater commissioning.

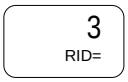
1. Disconnect the power supply from the repeater.
2. Set the FLSER tool switch to the MID position.
3. Push the + and - buttons to select the FLTA base station master ID (MID) to which you are connecting the repeater.



4. Push the OK button.
5. Set the FLSER tool switch to the S-RID position.
6. Push the M button twice.

The text ”RID=” is displayed in the lower part of the display.

7. Push the + and - buttons to select the repeater ID (RID) for the repeater.



8. Push the OK button.

“Wait” message starts to flash on the FLSER tool display. You have now approximately 30 seconds to complete the next step.

9. Connect the repeater power supply.

“OK” flashes on the FLSER display. When the flashing stops, the transmitter is ready to start the communication with the FLTA base station.

10. FLSER tool starts to display the communication signal strengths between the FLSER and repeater.

The bigger number indicates the strength of the received signal sent by FLSER and the smaller number the strength of received signal sent by the transmitter.

RSSI = Received Signal Strength Indication:

1…2 = poor,
3…5 = satisfactory,
6…9 = good

11. Go to the FLTA base station and check that the signal strengths are adequate.
12. Set the FLSER tool switch to the OFF position.

The repeater starts to communicate with the base station.