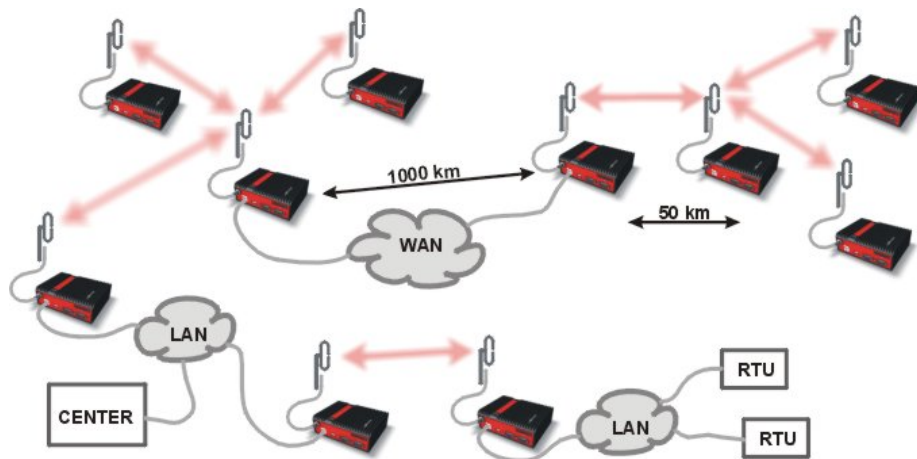


## Application notes



# RipEX Back-to-Back Repeater

version 1.0  
11/29/2017



---

## Table of Contents

1. Back-to-Back repeater .....	5
1.1. Back to Back in Bridge mode .....	5
1.2. Back to Back in Router mode .....	5
A. Revision History .....	7

---

# 1. Back-to-Back repeater

This layout and settings may be used if you need to operate different parts of the radio network on different frequencies. Connection between these two parts is realised by Back2Back connection between two RipEX's (hereafter referred to as border RipEX's), each of which operates on different frequency.

## 1.1. Back to Back in Bridge mode

### Ethernet

If end devices are connected to RipEX's over Ethernet, border RipEX's can be connected with an Ethernet cable. IP addresses of all RipEX's as well as connected devices must be within the same LAN. Ethernet interfaces must be interconnected for proper function of remote service access.

### COM

If end devices are connected to RipEX's over COM interface, one (any of the two) COM port of a border RipEX must be connected to a COM port of the other border RipEX using RS232 crossover cable or null modem. Communication parameters of both connected ports must be set to the same values, we recommend using the highest available speed.



#### Important

Border RipEX's should be interconnected via one COM port only, connecting both COM ports would create a loop.

**Limitation:** If a device is connected to the free COM port of a border RipEX, it only sends data to its part of the radio network. Data from all other COM ports of other RipEX's throughout the entire network will be delivered to both COM ports of all other RipEX's.

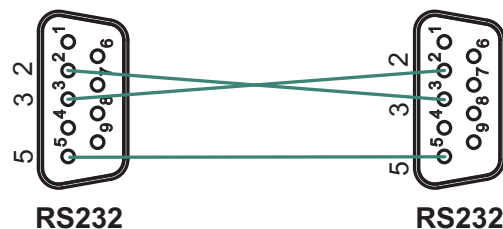


Fig. 1.1: Crosslink serial cable

### Ethernet + COM

If end devices are connect to RipEX's both over Ethernet and COM ports, or if you require remote access to a network which uses COM ports, border RipEX's must be interconnected both via Ethernet (see 1.1) and COM (see 1.2).

## 1.2. Back to Back in Router mode

In Router mode border RipEX's are interconnected by Ethernet cable. Routing in both parts of the network must be set up so that communication passes through the Ethernet interface of the border RipEX's. We recommend splitting both radio networks to two separate LAN networks.

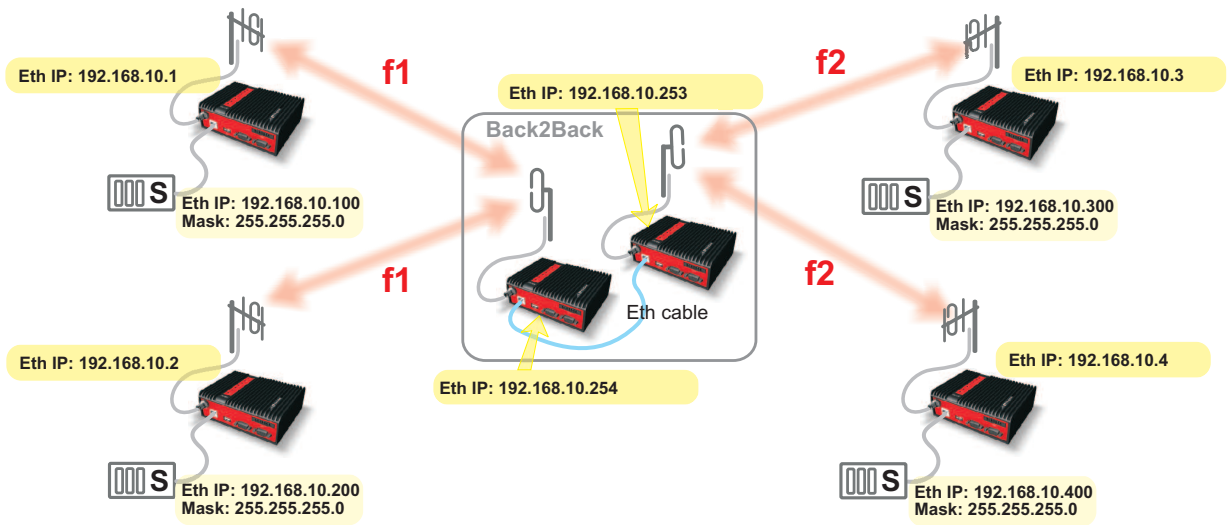


Fig. 1.2: Back2Back in bridge mode

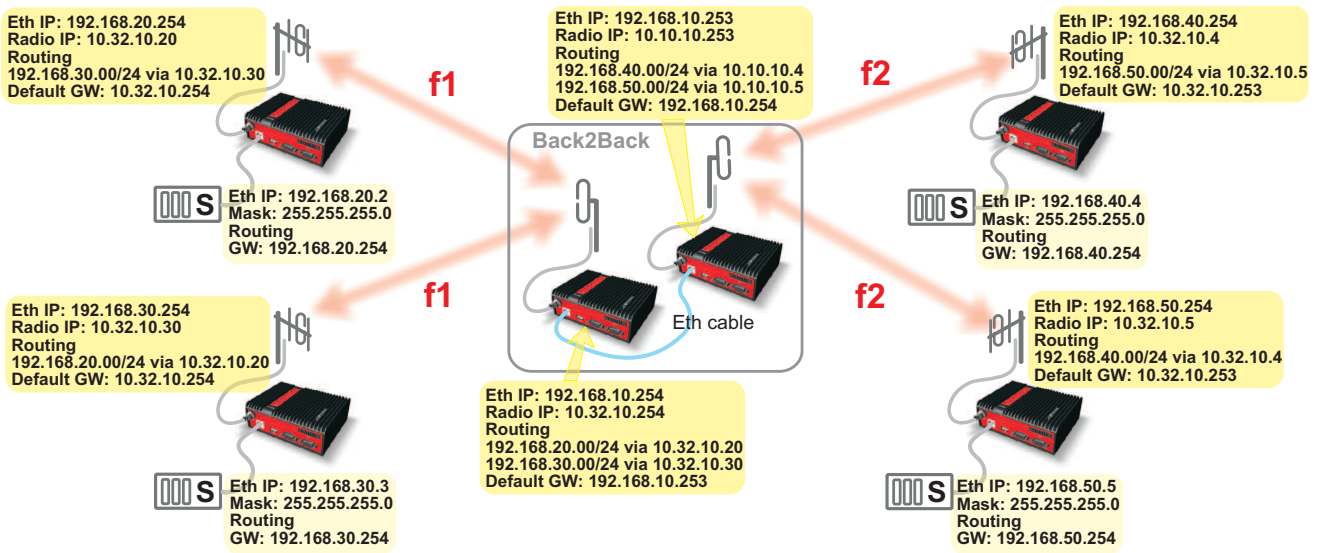


Fig. 1.3: Back2Back in router mode

## **Appendix A. Revision History**

Revision 1.0	2017-11-29
First issue	