Overview

This quick start guide provides instructions and diagrams describing how to quickly connect and configure the Tri-Gain Selectable Downconverter.

Supporting product user guides can be downloaded from DTC's WatchDox facility.

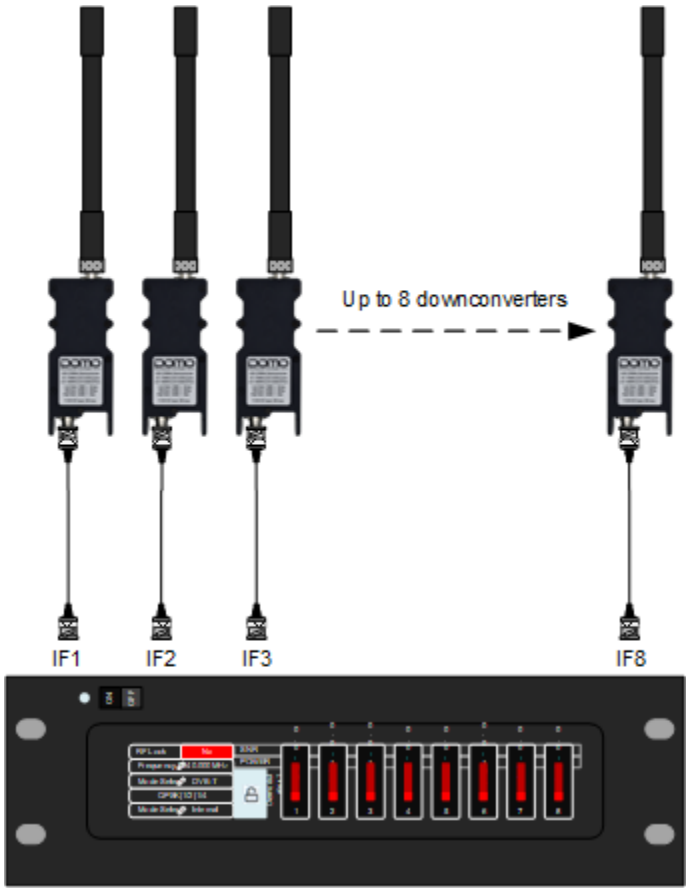
Connections

The Tri-Gain Selectable Downconverter gets power from a connected receiver which must be configured to apply power and set the local oscillator (LO) settings.

The downconverter gain, and LO setting if applicable, are configured using the front panel LED button.

It is recommended that antennas are connected directly to the downconverters and that cable lengths are kept as short as possible to minimise losses.

Note: The power from the receiver must be 9-24VDC.

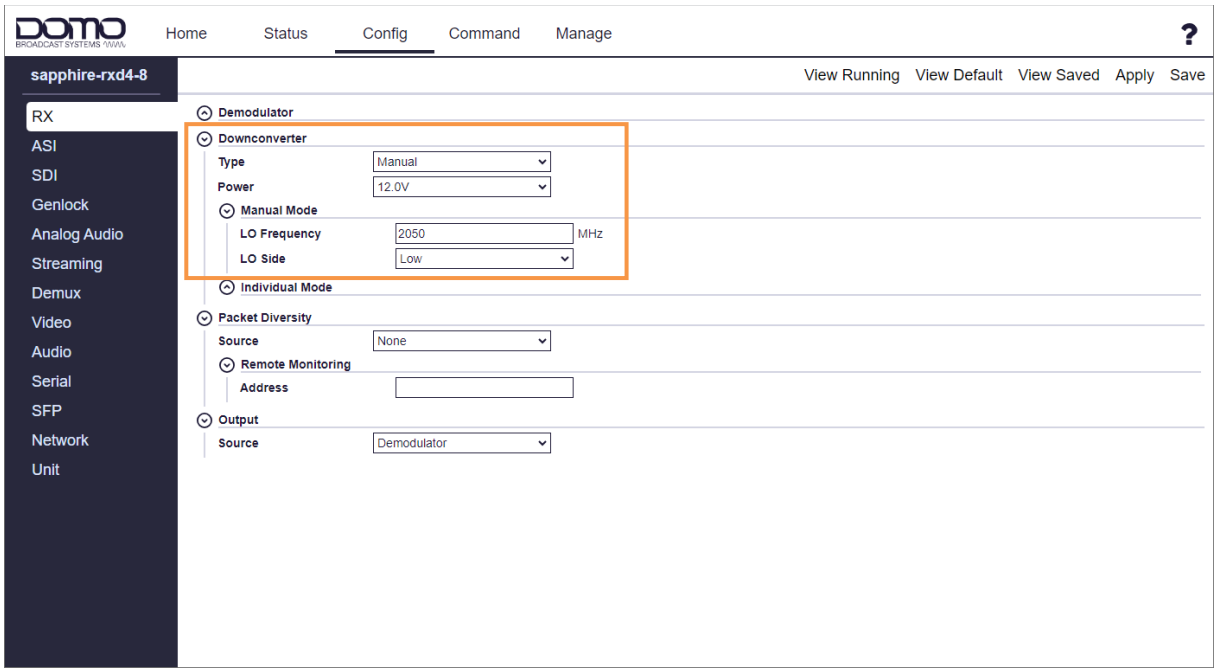


Typical Receiver Setup

The following example is for a Sapphire RXD4 receiver.

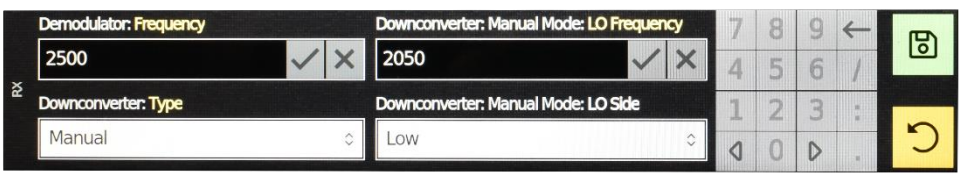
The receiver must be configured to apply power to the downconverter and set the LO settings which can be read from the downconverter label. Both the receiver and downconverter settings must align.

Open a web browser and establish IP communications with the receiver. Go to the **Config>RX** page and configure the highlighted Downconverters settings.



Property	Description
Type	Select the preset entry for the downconverter if applicable, or Manual to enter the LO Frequency and LO Side.
Power	The tri-gain downconverters require 9-24V power which is fed up the line from the receiver. Select a higher voltage for longer cable lengths.
LO Frequency	Applicable if Manual is selected. The LO frequency will be shown on the tri-gain downconverter label. Some downconverters may have two configurable frequencies.
LO Side	Applicable if Manual is selected. The LO side will depend on whether the LO frequency is lower or higher than the RF signal.

The downconverter settings can also be configured from the Sapphire touchscreen panel.



Downconverter Setup

Configuration of the downconverter is set by the front panel LED button. The LED status will indicate the current setting, this is shown on the label.

The gain setting is related to the cable lengths being used; long cable runs will need higher gain than short runs. If the received SNRs are low, try increasing the downconverter gain.

Each press of the LED button will cycle through the gain options, and if applicable, the LO setting. The example below is for a downconverter with two LO settings.

1: Solid green: low gain; LO1

4: Flashing green: low gain; LO2

2: Solid white: mid gain; LO1

5: Flashing white: mid gain; LO2

3: Solid red: high gain; LO1

6: Flashing red: high gain; LO2

When the selection has been made, the LED will turn off momentarily while the setting is applied, then relight to the set value.

If it is the customer's preference to turn the LED off, this can be achieved by holding the button down whilst power is applied to the downconverter. This time when the selection is made, the LED will remain off when the setting is applied.

If changes are required whilst the LED is off, press the button to relight the LED and make the new selection. The LED will turn off again when the setting is applied.

To return the LED to on, repeat the power cycle with the button down.