

1296 / 144 MHz Transverter V2.3

Specifications

	Min.	Typ.	Max.
Frequency range RF	1240 MHz	1296 MHz	1300 MHz
Frequency range IF	144 MHz		148 MHz
LO Frequency: Normal mode LO frequency: LO shift mode Repeater Mode: Shift -6 MHz Shift -28 MHz		1152 MHz 1150 or 1154 MHz 1146 or +/- 2MHz 1124 or +/- 2MHz	
LO Accuracy at 20 deg. C		+/- 1 ppm	
LO temp. stability -20 ...+70 deg . C		+/- 2.5 ppm	
Output Power	2 W	2.5 W	3.0 W
Power Supply	12 V		13.8 V
Current Consumption			0.85 A
Input Power	0.2 W		5 W
Receive Gain , Adjustable	-5 dB		+10 dB
Noise Figure		1 dB	
Dimensions			104x114x25mm
Spurious response		< -55 dBc	

Features

2W output power

Low noise figure , GaAs HEMT input stage

High performance UP / DOWN converters

High stability TCXO

Input for 10 MHz external reference oscillator

Internal Tx/Rx switch

Possibility to work with split Tx/Rx (selectable , required soldering)

Internal Directional Coupler

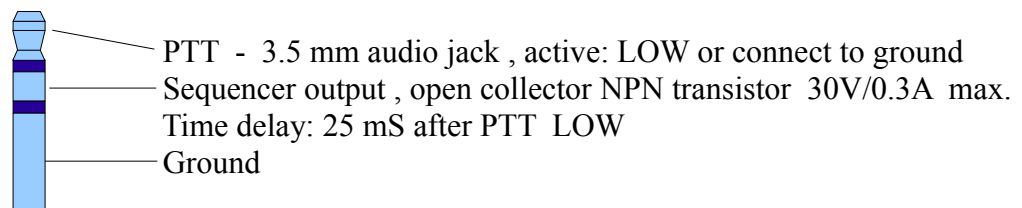
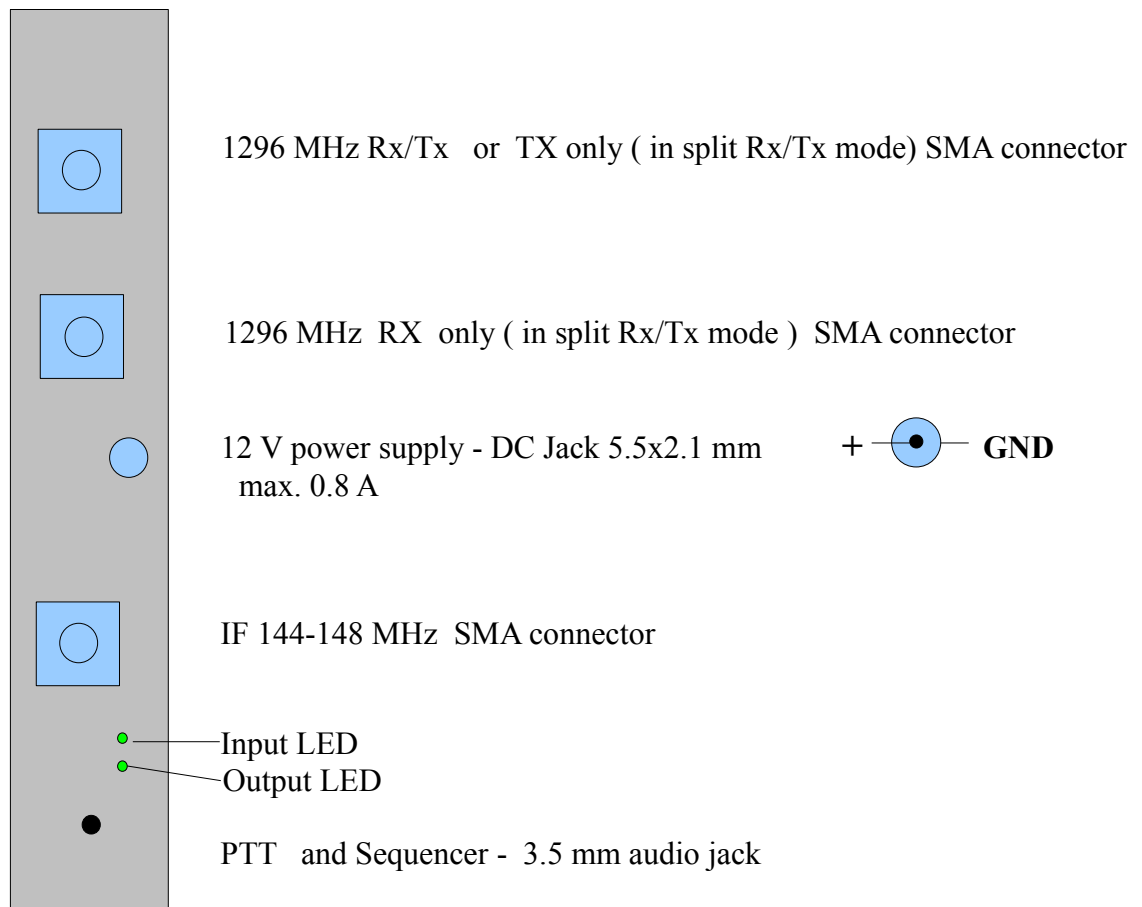
PTT can be switched by connecting PTT to ground, by RF power (selectable) or by DC voltage

Output SWR indicator - bi color LED

Optimal input power indicator - bi color LED

Integrated Sequencer

Possibility to work with repeater : -28 /-6 MHz LO shift TX (selectable)



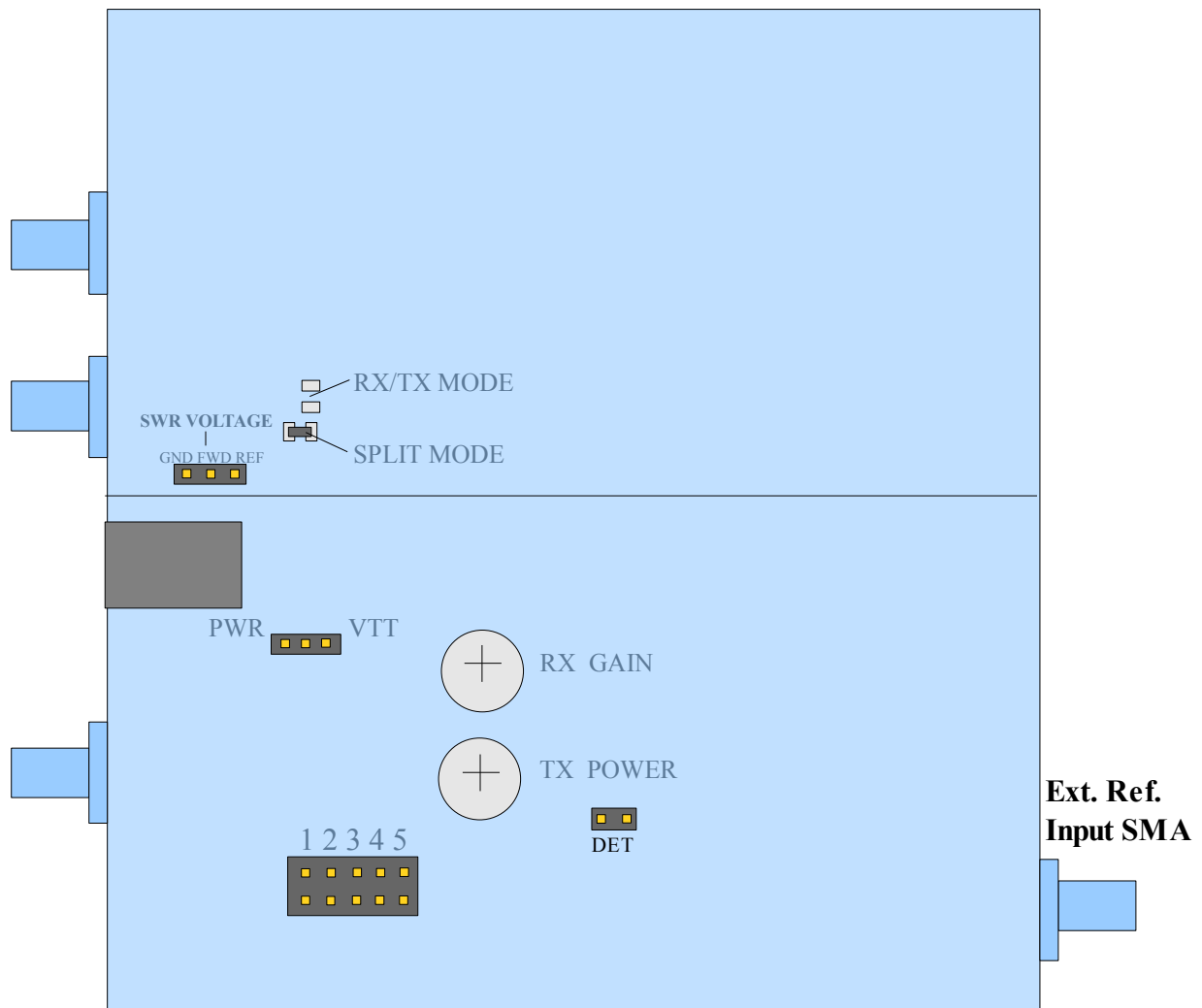
Input power adjustment:

Input LED color:

- dark - Input power is too low
- orange - Input power is low
- green - Input power is normal
- red - Input power is too high

Output LED color :

- green - Excellent output SWR
- orange - Moderate output SWR
- red - High output SWR



Ext. Ref. Input SMA - Input for optional external high stability reference oscillator, switchable by **Jumper 5**

Trimmers

- RX GAIN - You can adjust the overall receive gain from -5 to +10dB
- TX POWER - When the transverter is in TX and power is supplied to the IF input, rotate until Output LED lights up green

Jumpers

- 1 - OFF : Normal operation ; ON : Repeater mode
- 2 - OFF : Normal operation ; ON LO frequency shift mode, -2MHz or +2 MHz LO shift
- 3 - Repeater shift: OFF: 28 MHz ; ON: 6 MHz
- 4 - OFF: LO=1150MHz, when Jumper 2 is ON
ON : LO=1154 MHz, when Jumper 2 is ON
- 5 - ON - internal reference oscillator is used.
OFF - Internal reference is switched OFF. External reference with 10 MHz frequency and -10...0 dBm power must be connected to **Ext Reference Input SMA**
The transverter needs restart to switch between two modes.

PLL unlock indicator: Blinking Input LED in Red means a PLL unlock.

DET

OFF - RF VOX detector time low

ON - RF VOX detector time high (0.3 - 0.5sec.)

RF VOX is always switched ON. The Transverter automatically switches to the TX mode when RF power is applied to IF (144-148 MHz input)

SWR Voltage

Can be measured by high impedance voltmeter

FWD - voltage of forward wave

REF - voltage of reflected wave

GND - ground

PWR / VTT

PWR ON: The Transverter can be DC powered by coaxial cable.

VTT ON: PTT can be switched on by applying DC voltage 5-15 V in coaxial cable
A bias tee is needed to insert DC power into coaxial cable.