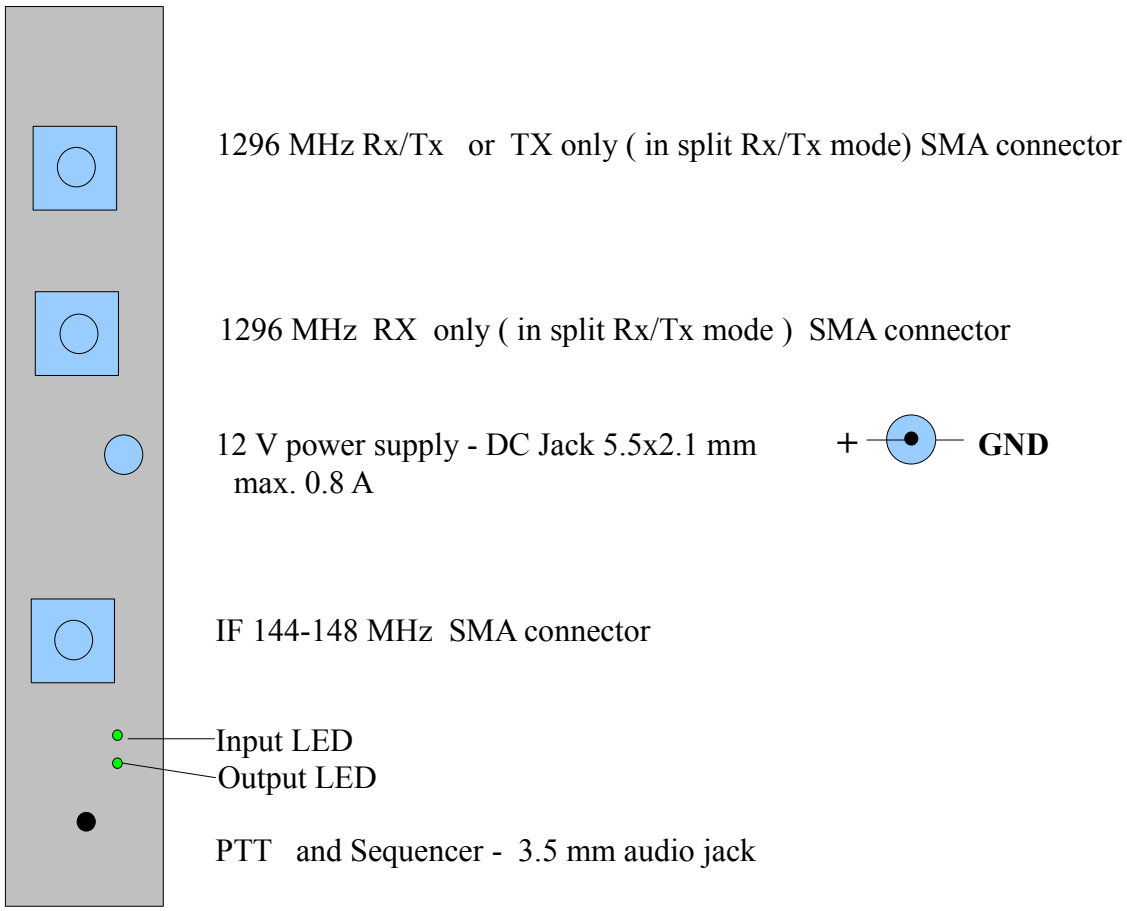
1296 / 144 MHz Transverter V2.2

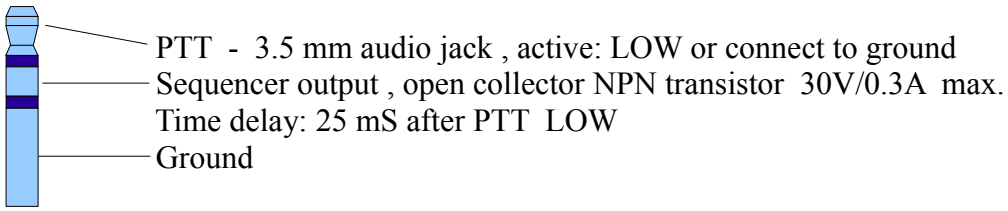
Specifications

	Min.	Typ.	Max.
Frequency range RF	1240 MHz	1296 MHz	1300 MHz
Frequency range IF	144 MHz		148 MHz
LO Frequency: Normal Mode Repeater Mode: Shift -6 MHz Shift -28 MHz		1152 or 1150 MHz 1146 or 1144 MHz 1124 or 1122 MHz	
LO Accuracy at 20 deg. C		+/- 1 ppm	
LO temp. stability -20 ...+70 deg . C		+/- 2.5 ppm	
Output Power	1.8 W	2.0 W	2.5W
Power Supply	12 V		13.8 V
Current Consumption			0.8 A
Input Power	0.2 W		5 W
Receive Gain , Adjustable	-5 dB		+10 dB
Noise Figure		0.9 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
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)

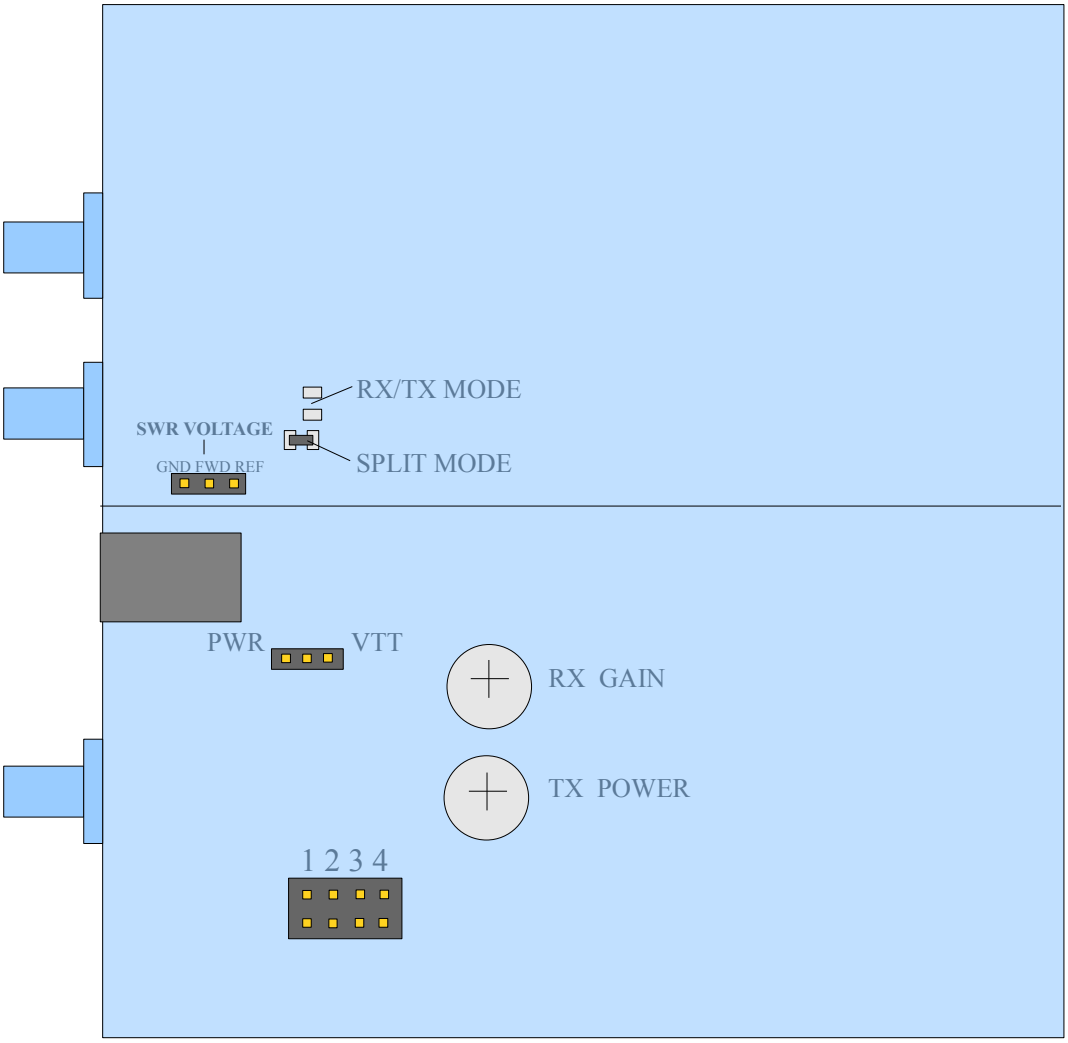




Input power adjustment:

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



Trimmers

RX GAIN - You can adjust the overall gain from -5 to +10dB

TX POWER - When PTT is LOW and power supplied to the IF input , rotate until the LED lights up green

Jumpers

1 - OFF : Normal operation ; ON : Repeater mode

2 - OFF : LO 1152 MHz ; ON: LO 1150 MHz (alternate frequency)

3 - Repeater shift: OFF: 28 MHz ; ON: 6 MHz

4 - OFF : PTT ON by connecting PTT input to GND

ON : PTT is also RF activated with IF input power >0.2W

Note: **Alternate frequency can be changed to 1154 MHz, connecting pin 2 of ATMEGA8 to GND (soldering pin2 to pin3)**

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.

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