

TX25A **USER MANUAL**



TX25A - 25W Complete Stereo FM Transmitter

TX25A is a cost effective high performance 25W Stereo FM transmitter designed to offer excellent performance, spectral cleanliness and 24/7 operation without malfunctions for years!

SPECIFICATION

Frequency Range: 87.5MHz - 108MHz
PLL Steps: 50 KHz (By MC145170 PLL-IC)
Frequency stability: +/- 250Hz
RF Output Power: Adjustable 25 Watt \pm 15%
RF out connector: N-type Teflon connector - Impedance: 50 Ohms
Low Pass Filter on board for clean spectrum

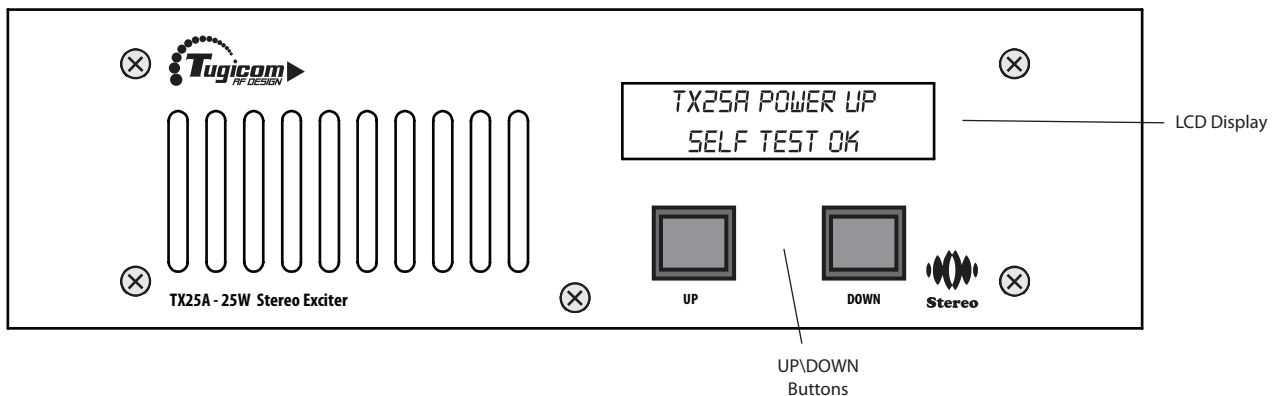
Panel Control: 2X16 LCD + 2 buttons
Operation Voltage: 110-220V 65W AC

Audio input RCA Impedance : 10kohm
Audio Inputs Standard Line IN - Level - internal adjustable
Audio Response 30Hz to 16 KHz +/-0.6dB
Over 40dB separation - Typical 45dB
Low Audio Distortion, less than 0.5%
Pilot Tone 19 KHz +/-3Hz

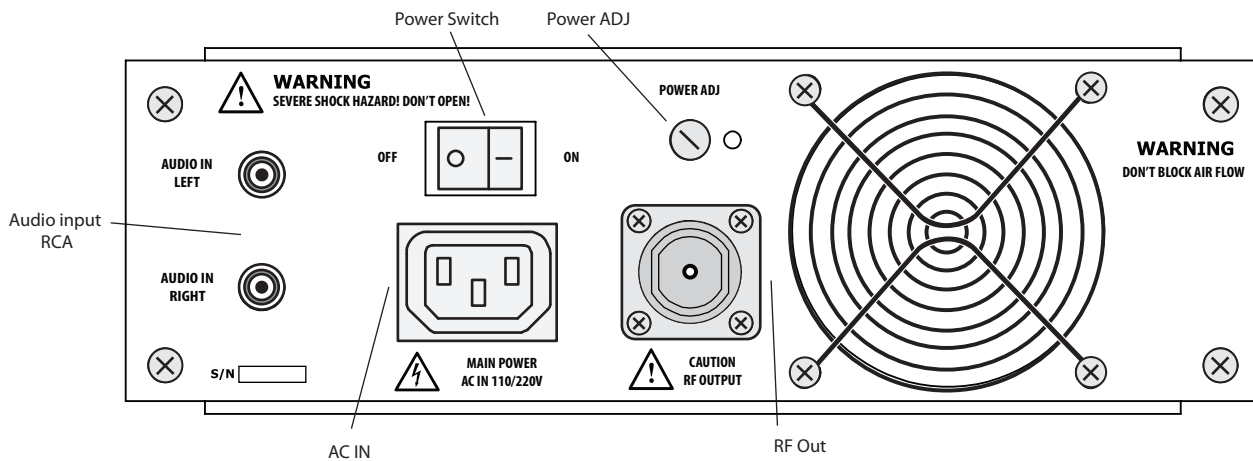
Package Contents

1x TX25A Unit, 1x User CD

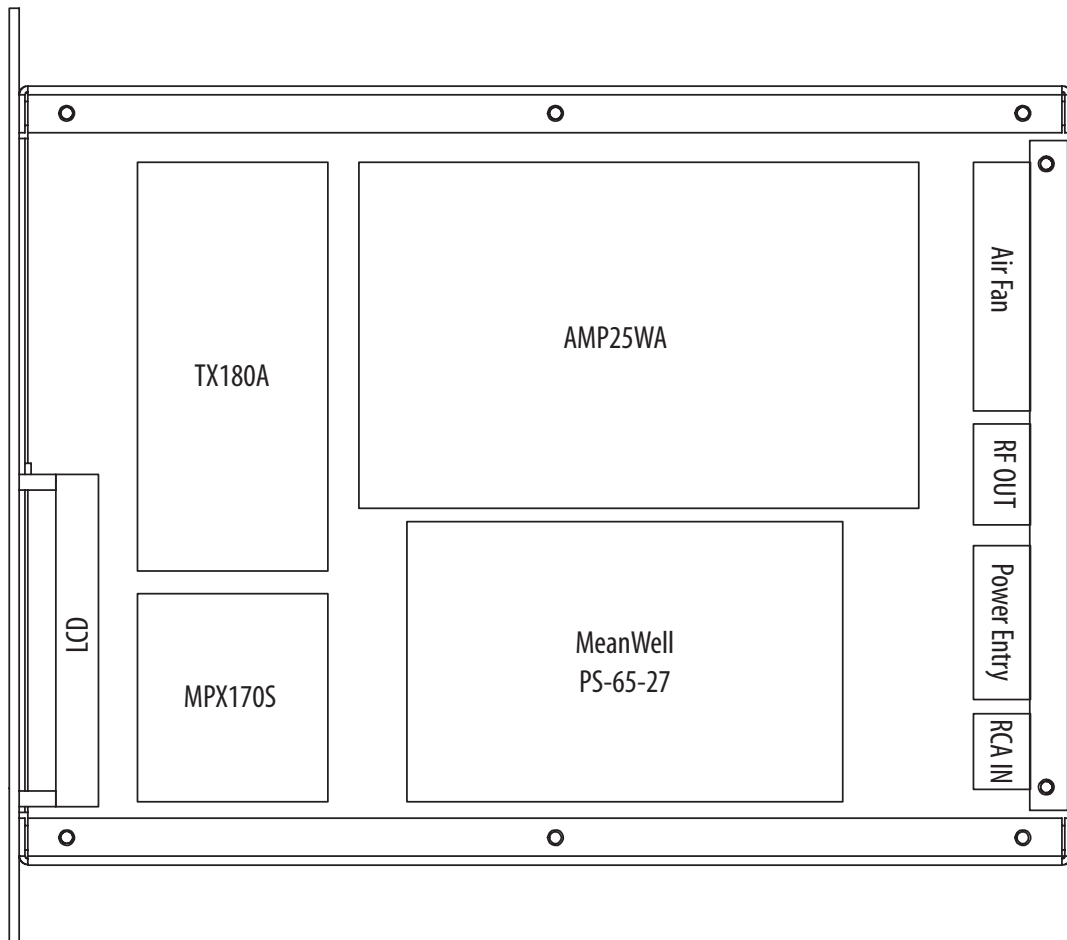
Front Panel



Back Panel



Internal view



⚠ CAUTION!

1. Opening the TX25A will AVOID the warranty
2. Severe shock hazard! Dont open - 220V inside!
3. Do not operate without antenna
4. warranty does not include the RF power transistor

First Operation

CAUTION! ⚠

Before operating Radio equipment please check for local rules about radio transmission
Some countries require radio transmission licence and operating without licence is a law violation

The first time you operate this unit you need to decide on the audio transmit mode you want - MONO\STEREO:
In order to change between mono and stereo you simply disconnect the power supply from the TX25A, push both UP and DOWN buttons and connect the power supply again with the buttons still been pushed, the LCD will show the mode you are in. MAKE SURE YOU PLUG AN ANTENNA BEFORE YOU TURN THE UNIT ON!

Setup and operation steps:

Turn on the transmitter and look at the LCD screen, you should see this message:

**TX2SA POWER UP
SELF TEST OK**

Now push both buttons together for changing frequency, you should see this message:

**FREQ: 101.5 MHZ
FREQUENCY SETUP**

Now set your frequency with UP/DOWN buttons. After setting a new frequency you should see this message:

**FREQ: 101.5 MHZ
ON AIR 20 SEC**

Now the LCD shows the new frequency and the time until lock and come on air. Finally the LCD will show this message:

**101.5 MHZ FM
TX2SA (ON AIR)**

Note: For security reason, changing frequency is enable only after pushing both buttons together.

Theory of operation

Antenna

The antenna is one of the major elements which effect on the range of your broadcast.

You will need to pay attention to the coaxial cable which will be described later.

The Best position for a FM broadcast antenna is the highest place which from him you have line sight as far as possible without any interference from other buildings, mountains and other high object which may interfere your broadcast signal.

Always remember that the critical parameter is not whether you broadcast 1W or 5W, but whether you are 10 or 15 meters above ground.

The best antenna for this transmitter will be a 50 ohm antenna which was matched exactly to the frequency you will need to use, but the price of those antennas may be high.

For a low cost antenna, we recommend standard "dipole" FM antenna from any radio equipment which looks like 2 radiators in calculate length $75/\text{freq}(\text{MHz})$, example: At frequency of 100MHz, the length of each radiator will be 0.75m.

Coaxial cable

We recommend using RG-58 which will fit to the transmitter N-type power out connector.

If you cannot find it, use RG-213 but always try to find a good quality cable, double shielded will be preferred.

Try using the shortest cable you can, but never prefer shorter cable than higher antenna,

The mention is putting the transmitter as close as possible to the antenna and never rolls "spare" cable instead of cutting the spares.

Thank you for purchasing one of our products.

Tugicom RF Design.