

4 State QRP

Proudly Introduces

The “**MagicBox**”



The “**MagicBox**”

What is it?

An all solid state Electronic T/R Switch

Connects a transmitter and receiver together for a fully operational station

Full QSK and Semi-QSK modes with built-in Sidetone

Microprocessor sequenced RF and Audio switching and muting for smooth, noiseless keying

PCB construction using leaded parts

The “MagicBox”

General Specs

160-10 meter operation

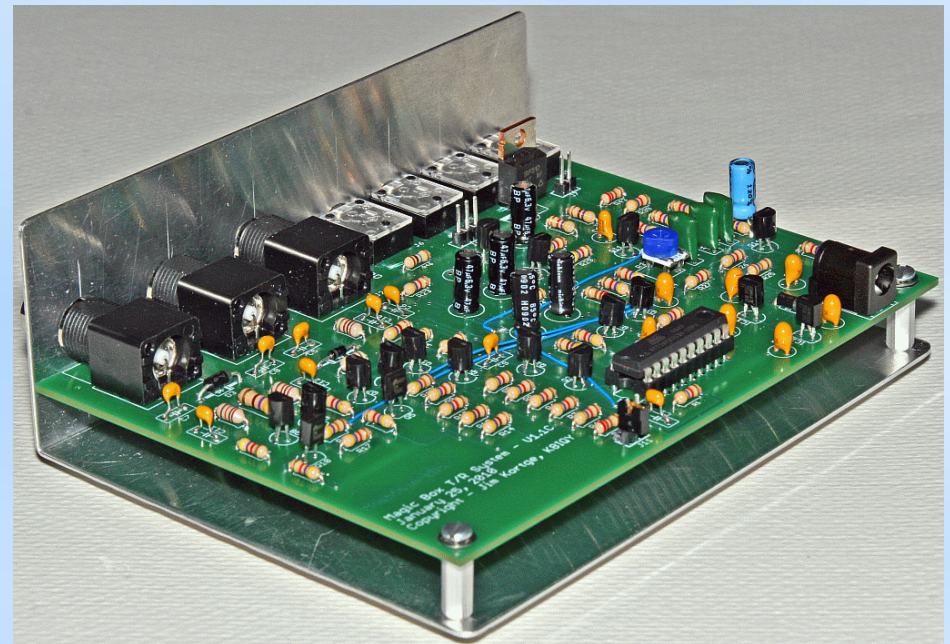
Up to 5 watts of RF input

5.3" X 4.0 " PCB, fits TenTec
TP-41 case

Approximately 120 parts

Beginning builder skills level
project

Construction/testing time
approximately 8 hours



The “MagicBox”

When can I get one?

Soon – design is tested and finalized

Ready to order parts/boards

All PCB parts supplied

Case and “Added Function” parts supplied by builder

Added Functions:

- On/Off Switch
- Power “ON” indicator
- Tuneup/Spotting Switch
- Transmit “ON” indicator



The “**MagicBox**”

Technical Specifications

RF

Receive Mode

Antenna to Receiver Input Loss: Less than 3 dB, 1.8 - 28 MHz
Transmitter to Receiver Input Isolation: Greater than 25 dB, 1.8 - 28 MHz

Transmit Mode

Transmitter Output to Antenna Loss: Less than 0.25 dB, 1.8 - 28 MHz
Antenna to Receiver Input Isolation: Greater than 90 dB, 1.8 - 10 MHz
Greater than 85 dB, 14 MHz
Greater than 80 dB, 28 MHz

Audio Section (32 Ohm source and load)

Receive Mode

Receiver Audio Loss: Less than 2 dB

Transmit Mode

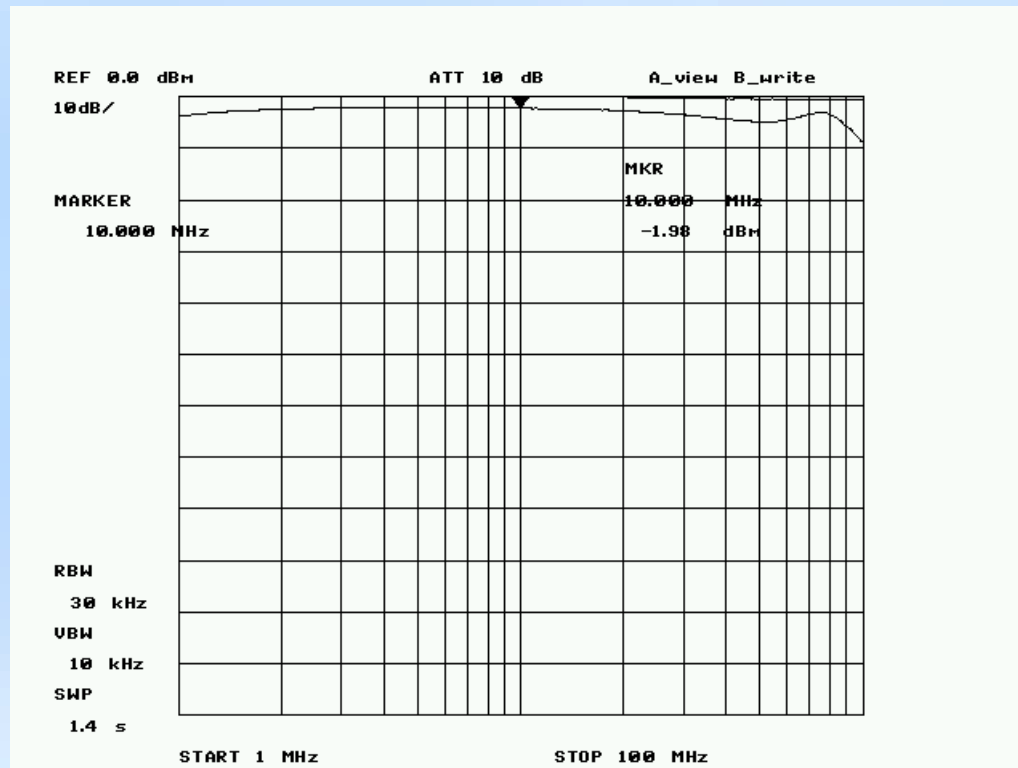
Receiver Audio Isolation: Greater than 220 dB

Keying

QSK Mode Up to 50 WPM
Non-QSK Mode 1 second receiver delay
Transmitter Types Solid state or cathode keyed tube

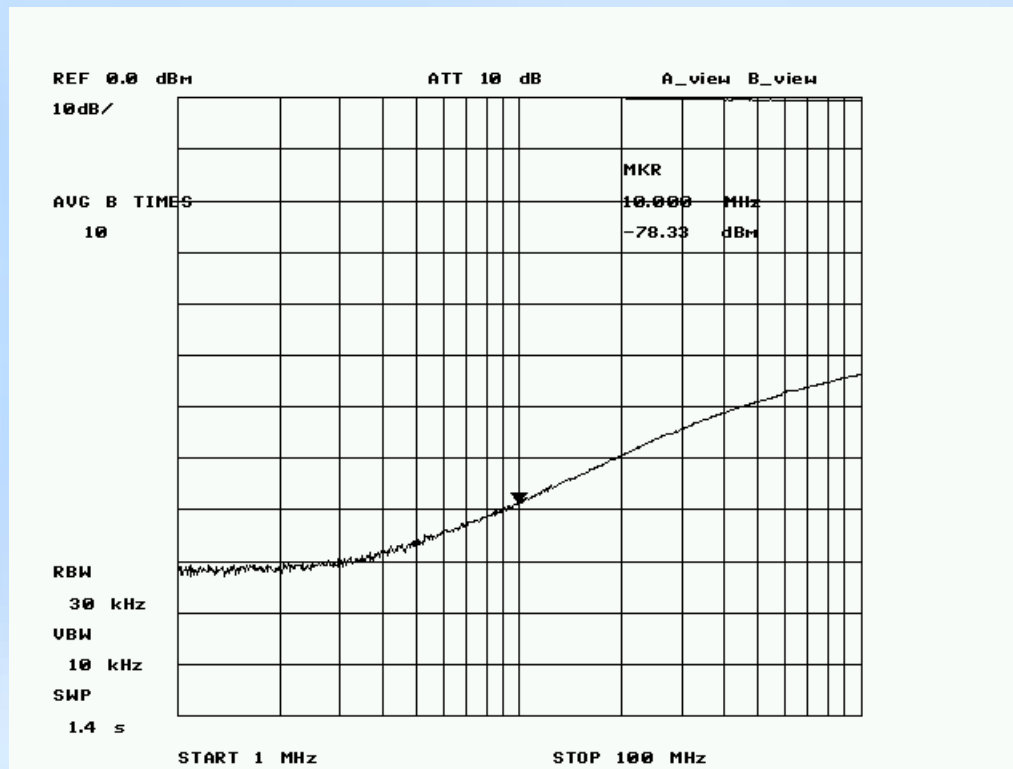
The “MagicBox”

Data Plot – Ant Port to Rx Port Loss; Receive Mode



The “MagicBox”

Data Plot – Ant Port to Rx Port Loss; Transmit Mode



The “MagicBox”

Data Plot – Tx Port to Ant Port Loss; Transmit Mode

