

*International
Circuits*

- o *PCB Design Services*
- o *Schematic Capture*
- o *Library Management*
- o *Over 25 years experience*

www.intcircuits.com

Introducing the VE3FEX SDR/Monitor Audio Switch



Introduction:

Are you tired of listening to a remote SDR signal echoing in your ear when you transmit? This new product will automatically switch to your rig's monitor audio without echos or time delays.

You have full control with the "Source" switch. It can manually select the audio source which is best suited to your headphones.

Introduction continued...page 2

Operation is simple....hit the PTT (footswitch) to transmit. SDR audio is muted automatically. You only hear your monitor audio proving that you are on the air. The product is manufactured in Canada by Mark VE3FEX using brand name components. It is housed in a rugged extruded aluminum case with laser etched text that will never wear out. Power it up with any AC or DC source 7 volt-16 volt any polarity! A rear panel ground lug is included to keep stray RF away from your signals.

Connections requirements:

- PTT input and output
- Standard ¼ " male phone plugs
- Audio inputs: 3.5mm stereo or mono phone plugs
- Power input: 2.1mm coaxial power plug
- Headphone output: 3.5mm male phone plug.

Introduction continued...page 3



Operation view..front panel

The front panel toggle switch allows one to monitor either local transceiver or computer SDR audio.

During transmit, the MONITOR audio of the transceiver is present in the headset if you select it on the transceiver.

RCVR LED: Audio to headphone coming from local rig.

SDR LED: Audio to headphone coming from station computer supplying SDR station audio

Source: Quickly select SDR or station transceiver.

Head Phones: A Heil headset or similar product.

Introduction continued....page 4



PTT Out= footswitch signal to transceiver

PTT In = footswitch input

Audio In ports:

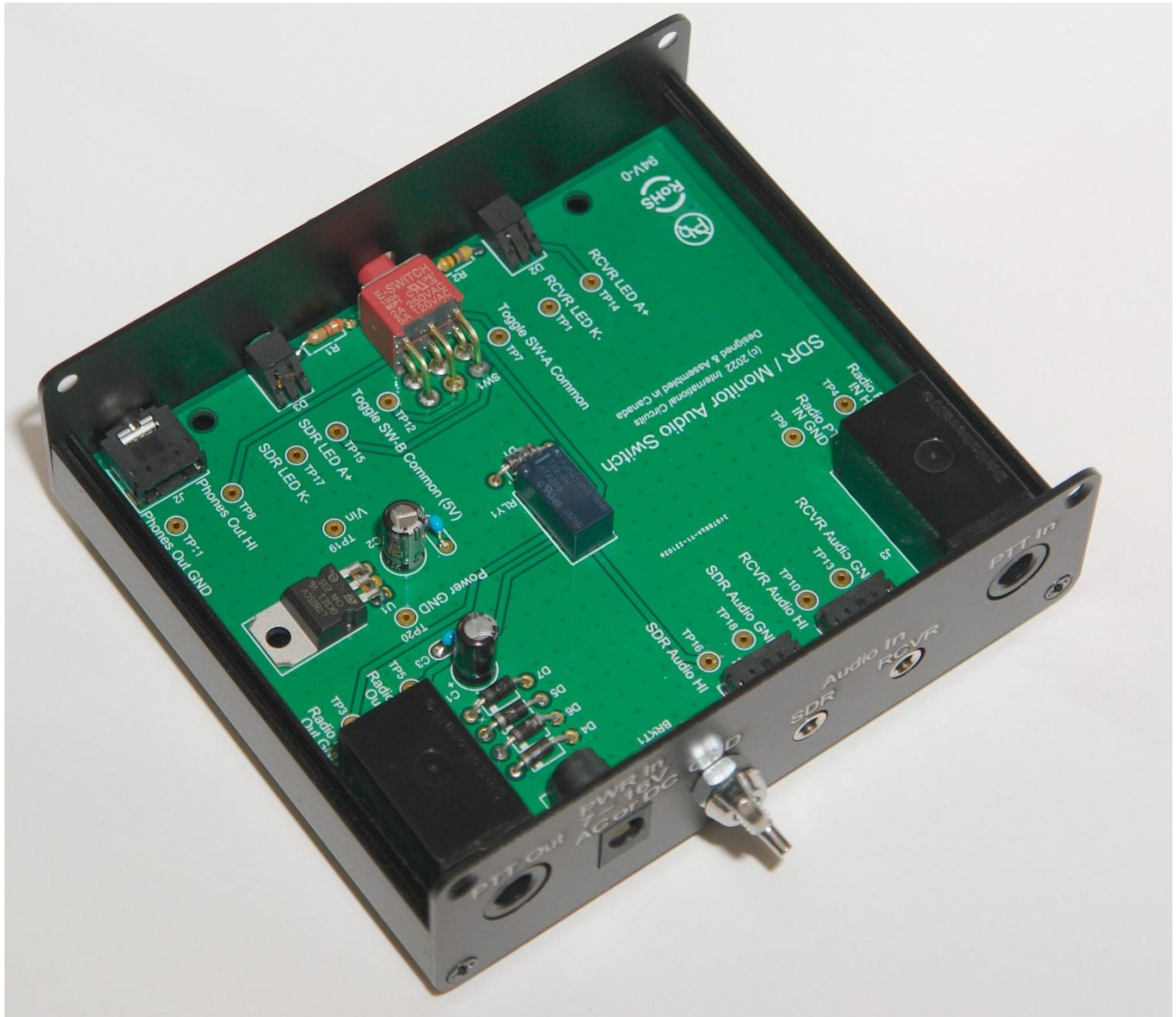
SDR: Analog audio from from station computer

RCVR: Analog audio from station transceiver.

PWR In: 7-16 volts AC or DC any polarity.

GND: Always a good idea to ground in the shack

Introduction continued...page 5



What's inside! Custom designed circuit with quality board/components.

Case: Beautiful brushed black aluminum.

Introduction continued...page 6

What you need to connect at your station:



ANY Station HF Radio: Icom Yaesu Kenwood



SDR station CPU



Footswitch



Headset



Headset connection to transceiver

Introduction continued....page 7

Basic Operation:

A footswitch connects to the “Heil” type headset adapter and controls “push to talk” DPDT product relay. The footswitch connects to the “PTT in” port on the switch box. One set of contacts is used to switch the transmitter to TX. The other set of contacts connects to the local audio from either the station transceiver or the remote SDR receiver. During transmit, SDR audio is muted, eliminating echo and latency. Note...some SDR receivers have more latency than others.

Introduction continued...page 8



**Heil headset adapter showing PTT and headset
mike input...note the PUSH to TALK input.**

Introduction continued....page 9

Necessary cables required (not included)

A ¼” to ¼” phone plug cable connects the “PTT” port on the switch box to the HEIL headset adapter PTT input.

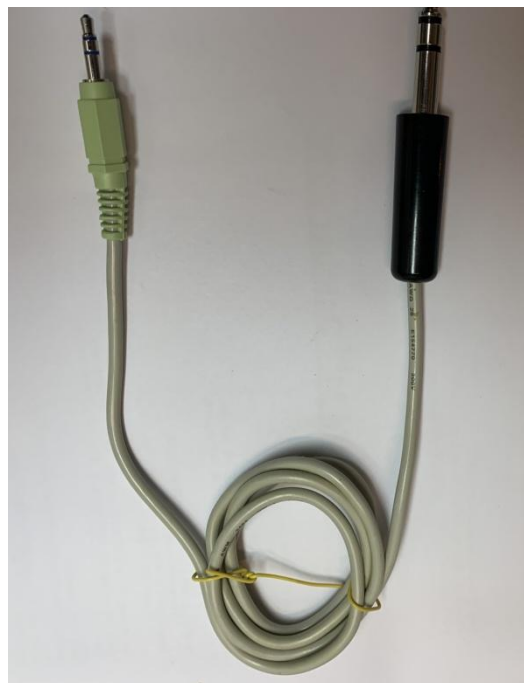


Note: This chassis plug is not grounded and floats.

Introduction continued....page 10



A ¼” cable to mini phone stereo plug connects to the transceiver “Phones” front panel. That plug connects to the “RCVR” port on the switch box.



Introduction continued....page 11

Headset audio from the “Head Phones” port on the switch box now plugs directly into the mini stereo plug as part of the HEIL headset package.

Lastly, your computer that is running the SDR station audio will connect back to the “SDR” port on the switch box. A mini stereo to stereo cable completes the installation.



Introduction continued....page 12

During normal operation, the front panel toggle switch can now listen to either local or SDR audio as necessary.

When one transmits, the switch box relay mutes the SDR receiver which can be totally confusing with the typical internet latency. If your transceiver has a “Monitor” function, engaging the PTT footswitch will now allow your radio MONITOR audio to reach the headset confirming your transmit audio is working. To confirm your receiver selection, two colour LED indicators are employed.

Introduction continued....page 13

Typcially a HEIL headset with HEIL footswitch is used to operate the system. Computer SDR audio is fed via a mini stereo plug. You can set up multiple SDR receiver sites and mute those not being used. The transceiver "Phones" audio completes the setup.

Note: Typical SDR receive "latency" will depend on the internet connection and station.

This product was inspired by Barry VE3ISX who created the original design over 10 years ago. If you operate a radio net, this is the perfect product for you.



VE3FEX SDR Switch

**Perfect for net controllers
Eliminate echos
from SDR receivers.**

Order online \$170.00 CDN shipped tax in.



Order yours today..click banner above

Mark Fex

1763 Magnolia Ave Windsor, Ontario N8P 1Z1

Telephone: 519-979-2630

[Email](#)