

Newcomers and Elmers Net:

Sound Card Interfaces and Powers Blocks

Robert AK3Q 07-09-17

(collected from the various manufacturers)

MFJ 1204 Series USB Digital Mode Interfaces \$99

Explore the digital world of Amateur Radio using MFJ 1204 Series USB Digital Mode Interfaces.

MFJ 2104 Series interfaces feature:

- * USB connectivity
- * Powered by USB port
- * Dedicated on-board sound card
- * Quick plug-and-play connectivity
- * Easy to adjust and operate
- * Works with all digital modes
- * Dozens of free downloadable programs
- * Innovative circuitry eliminates delay control
- * Available interface cables
- * Low cost, small size, light weight
- * For base station, portable, or "go-kit" applications

No-solder jumpers take only minutes to install, and once in place, they`re locked in until you decide to change radios. To operate, simply connect the MFJ-1204 to any free USB port on your computer and plug the appropriate interface cable into the back of your radio.

Convenient front-panel controls set receive and transmit levels, and there`s no front-panel "Delay" to adjust because the MFJ-1204 controls your radio`s PTT line using a unique internal detector circuit.

You may transmit and receive using traditional modes such as CW, RTTY, SSTV, AMTOR, PSK31, and EchoLink, or explore newer modes like MT-63, WINMOR, WSPR, and WSJT-X. In fact, new experimental modes are emerging all the time.

The signal path between the radio and computer is completely isolated against ground loops and common-mode noise.

RigExpert TI-8 Digital Mode and Radio Control Interfaces \$250

RigExpert TI-8 Digital Mode and Radio Control Interfaces are clever all-in-one devices for connecting your transceiver audio, data, keying and control ports to your computer.

Join in the fun of working digital voice, CW, RTTY and dozens of other keyboard digital modes, including PSK31 and JT65, using your personal computer via its USB port. Software AFSK keying and "true" RTTY FSK keying (if available on your transceiver) is supported. As a huge plus, these all-new TI-8 interfaces have a CW output jack for true CW keying with logging and contest programs that support WINKEY mode!

TI-8 interfaces provide all of these exciting operational features:

Transceiver Audio Interface:

Their analog audio interface is a connection to transceiver audio output (external speaker connector or line output) and transceiver audio input (microphone connector or line input). These audio interfaces enable operating digital modes, recording and playing voice and performing other useful functions (such as measuring signal levels) by using your computer. Two channels of input audio (main and sub) and the output volume levels are adjusted by level controls on the front panel of the interface.

CAT Interface:

Computer Aided Transceiver (CAT) systems provide control of the transceiver's frequency, operating mode and other functions via computer software. Normally, modern transceivers have serial ports providing CAT interface capabilities.

FSK Output:

Frequency Shift Keying (FSK) is a popular method of transmitting digital messages in radio teletype (RTTY) mode. A separate COM port is assigned for the FSK output when using a RigExpert TI-8.

Transceiver PTT and CW output functions:

Available Push to Talk (PTT) and Continuous Wave (CW) keyer outputs are provided for software control and CW keying. TI-8 PTT and CW outputs are assigned to the RTS and DTR lines of a separate COM port, used by some popular logging and contesting software systems.

Squelch Input:

Some software, such as EchoLink, requires digital interfaces to provide a squelch input to detect if the radio channel is busy. With a TI-8, the squelch input is assigned to the DCD line of the COM port used for PTT and CW outputs. Note: the squelch connection is not available in all cables manufactured by RigExpert. The user may have to add this connection, if necessary.

Technical details:

Computer connection:

- * USB-A (Universal Serial Bus) computer connector
- * USB-B connector (on rear of TI-8)
- * Powered from the computer's USB port
- * Current drain: 100 mA maximum

Transceiver connection:

- * 25-pin interface cable provides connections from interface rear panel
- * Many transceiver models supported
- * Information for custom cables provided (supports almost ANY rig)

Audio interface:

- * Isolated from digital noise
- * Maximum input/output level: 1V
- * Input/output sample rate: 8 to 48 kHz
- * DAC/ADC: True 16-bit
- * Levels adjusted by front-panel potentiometers

CAT serial port:

- * Baud rate: 300-115,200 baud
- * Compatibility: RS-232, CI-V, TTL or inverted-TTL

PTT/CW outputs:

- * PTT output: open collector and TTL-level
- * CW output: open collector
- * Maximum current: 500 mA

FSK output:

- * Baud rate: 45-1200 baud
- * Open collector output

System requirements:

- * Computer with USB 1.1, 2.0, or 3.0 compliant port
- * Operating system: Windows 2000/XP/2003/Vista/7/8/10 (32 or 64-bit)
- * RigExpert Navigator Software download is provided free
- * Requires USB-A to USB-B cable (not included) 15 ft. maximum length
- * Requires rig-specific cable (sold separately)

RigExpert WTI-1 Digital Mode Interfaces ~\$400

RigExpert WTI-1 Wireless Digital Mode and Radio Control Interfaces are advanced devices that are designed to allow operations by voice, CW and digital modes on your computer connected transceiver over a local Wi-Fi network or via the Internet. The WTI-1 combines the sophisticated all-in-one interface capabilities of the TI-7 with an internal Wi-Fi 2.4 GHz device that allows you to:

- * To operate your transceiver from another room of your house
- * To operate from another city or country
- * To share your rig with your friends
- * To be able to install and operate your station at a remote location, if you are unable to do it at home

RigExpert WTI-1 interfaces give you the freedom to move around: Now you don't need to stay in your shack all the time. You can operate from any place in your home or apartment where you have access to your local network. WTI-1 interfaces, connected to your transceiver, link to your Wi-Fi router or access point. You will only need a laptop or a desktop computer running a ShackLink program, and a conventional computer headset, to operate in voice mode. In addition, your favorite Amateur Radio software may be used for CW and digital modes, as well as to control your transceiver.

You may also operate from any place in the world where you have Internet access; such as a hotel room. A high-speed (ADSL or faster) Internet connection is required. Note: It is necessary that you have a routable (or "public" or "external") IP address (either static or dynamic) at the place where your WTI-1 is installed.

RigExpert WTI-1 general features that are supported with optional

transceiver interface cables:

- * Wireless transceiver audio interface for operating digital modes, voice recording and playback via local Wi-Fi network or Internet
- * Computer Aided Transceiver (CAT) system
- * FSK output
- * PTT and CW outputs
- * VoIP link provided for remote voice-mode operation

Computer connection:

- * USB (Universal Serial Bus) connector (only for first-time configuration) via a Wi-Fi network (2.4 GHz, "b" or "g")
- * Powered from the transceiver's power supply or other external DC source
- * Power supply: 9 to 15 VDC, 500 mA

Audio interface:

- * Isolated from digital noise
- * Maximum input/output level: 1V
- * Input/output sample rate: 12 kHz
- * DAC/ADC: 16-bit
- * Volume levels are adjusted by the ShackLink application

Transceiver connection:

- * 25-pin interface cable (sold separately) provides connections from interface rear panel
- * Many transceiver models supported
- * Information for custom cables provided (supports almost ANY rig)

CAT serial port:

- * Baud rate: 300-115,200 baud
- * Compatibility: RS-232, CI-V, TTL or inverted-TTL

PTT/CW outputs:

- * PTT output: open collector and TTL-level
- * CW output: open collector
- * Maximum current: 500 mA

FSK output:

- * Baud rate: 45-1200 baud
- * Open collector output

System requirements:

- * Computer with USB-A 1, 2, or 3 compliant port
- * Operating system: Windows 2000/XP/2003/Vista/7/8 (32 or 64-bit)
- * No special USB drivers required
- * Requires USB-A to USB-B cable (not included) 15 ft. maximum length
- * Requires rig-specific cable (sold separately)
- * RigExpert WTI-1 software is provided free of charge

Same as above with a WiFi extender ~\$460

Tigertronics Signalink™ USB Digital Communications Interface Combos ~120 w/ cables

Tigertronics Signalink™ USB Digital Communications Interfaces are sold as Combos, with the interface and interface cable together in a package.

Signalink™ USB Interfaces support all computer program digital modes and digital voice modes, WITHOUT using your computer sound card! This includes legacy modes, such as RTTY, SSTV, and CW, as well as today's most popular modes, like PSK31, JT-65, JT-9, MT-63, WSPR, Olivia, and EchoLink.

Convenient front panel controls let you adjust your Transmit Audio, Receive Audio and Transmit Delay "on the fly", making operation easy. Tigertronics Signalink™ USB Interfaces have a state of the art built-in low-noise Analog to Digital sound chip, only one USB connection to the computer and, typically, only one connection to the radio. They are fully isolated and compatible with ALL radio Mic, Accessory and Data Ports. The USB cable is included for connection of the Signalink™ USB Interface to your computer

Just order the correct combo package of the Signalink™ USB Interface and Interface Cable for your radio. On the left of your screen, simply select by radio manufacturer and model, or connector type. Click the "See All" link to open a complete listing of radios supported. Installation of the Tigertronics is a snap, especially if you add an optional Plug-N-Play jumper module that matches your interface and cable selection.

Unified Microsystems SCI-6 PC Sound Card Interface Kits \$25

Unified Microsystems SCI-6 PC Sound Card Interface Kits are an affordable option to get you on PSK31, RTTY, WSJT, EchoLink, and other exciting digital

modes by utilizing your PC's internal sound card. These SCI-6 interfaces are your ticket to cutting-edge digital communications developments.

Their design incorporates transformer isolation on both transmit and receive audio. The PTT circuit interfaces to a PC serial port through an opto-isolator to generate automatic transmit/receive control. Since the computer PTT-out pulls high, these SCI-6 interfaces require no external power source.

These SCI-6 kits also make a great club project! Give your members some kit-building experience, as well as an introduction to new modes. These kits contain a high-quality, double-sided circuit board with a solder mask and component legends for easy assembly. Unlike other low-cost kits, a machined case is included.

For convenience, the cables to your PC's sound card are included. You supply the cables to your particular model of radio. RCA phono connectors make it easy for you to customize the remainder of the connections to your radio. Software for many of the digital modes can be downloaded from the Internet at no cost.

When using a PC sound card for digital modes, you may inadvertently transmit sounds generated by your operating system. PC-based sounds can usually be eliminated by a settings change. Please see our images for an example of how to eliminate PC sounds.

SCI-6 features:

- * TX audio: transformer isolation
- * RX audio: transformer isolation
- * PTT: optical isolation
- * Power requirements: None
- * Size: 2.5 in. wide, by 2.5 in. deep, by 1.0 in. high

West Mountain Radio RIGblaster Pro Digital Mode/Rig Control Interfaces ~\$275

West Mountain Radio RIGblaster Pro Digital Mode/Rig Control Interfaces are the easiest way to properly connect your radio to a computer. You will be able to operate any sound-card based digital mode that your radio could not otherwise support!

For basic Amateur Radio sound card operations, RIGblaster Pros are easier to set up and operate than any other sound card interface. Front panel status indicators show at a glance signal routing, audio signal level, and activation of PTT, CW, and FSK control and keying.

Cable hookups for RIGblaster Pros remain similar to all other models of RIGblaster. RIGblaster Pro flexibility provides, for example, four ways to connect to receive audio.

Now available from DX Engineering, these West Mountain Radio RIGblaster Pro Digital Mode/Rig Control Interfaces will help you expand your Amateur Radio horizons!

Check these outstanding features:

- * Can be used with almost any make or model microphone and most radios, no matter which brand
- * Any radio that has an 8-pin round screw on microphone connector
- * Any radio that has an RJ-45 modular telephone-style connector
- * Any radio with RJ-25 6 wire microphone connector with the purchase of an optional FT100 style 6-wire modular microphone cable
- * Any radio with 4-pin round microphone connector with the purchase of an optional 4-pin mic cable
- * Supplied with both a standard DB9 RS232 serial cable and USB cable interface (supported for Mac (OS9,10), Linux, Windows (98SE, XP, Vista 32 and 64-bit). May be used with old or new computers with your choice of USB or RS232 DB-9 serial.
- * Fully isolated CW keying output for direct keying of your rig's CW. This jack is for use with non-sound card software using serial DTR control.
- * Fully isolated FSK keying output for direct keying of your rig's FSK jack. This jack is for use with non-sound card software using serial TXD control.
- * Built-in rig control, RS232 to TTL interface tested with Icom and Yaesu; compatible with Ten Tec
- * Rig control is possible, along with sound card PTT control and CW keying on a SINGLE serial port using Hamscope or MixW software
- * Rig control, FSK keying, and sound operation are supported using two serial ports or when using two separate programs
- * Four ways to connect the receive audio from your radio: direct, mic jack, line out, and speaker out. A radio speaker loop jack is included.
- * Dual rear panel RCA PTT jacks provide for a foot switch, amplifier, and

sequencer

- * Front panel audio drive control allows setting the transmit audio from the computer to your radio without fumbling with your mouse
- * Your microphone may be bridged to the computer as well as the radio for on-the-fly digital recording
- * Transmit speech processing is done by looping microphone audio through the sound card using appropriate EQ and compression software
- * A second microphone jack allows for instant automatic switch-over to a headset microphone without unplugging your main microphone
- * Both 1/4 in. and 1/8 in. front panel headphone jacks are provided to monitor computer receive and transmit audio; no searching for adapters. These connections also facilitate using DSP receive audio software
- * Computer speaker PTT activated mute-on-transmit works with speech processing and for general sound card operation
- * PTT override and interrupt enables microphone to override the computer or stop the computer program, perfect for contesting or SSTV operation
- * Front panel LED indicators show whether computer audio or microphone audio is routed to the radio
- * Front panel LED indicator shows if the computer audio is present at an adequate level for transmit or receive
- * Front panel LED indicators show PTT, CW, and FSK activation status, making it easy to check the operation of your software

West Mountain Radio RIGblaster Plug and Play Digital Mode/Rig Control Interfaces ~\$120

West Mountain Radio RIGblaster Plug and Play Digital Mode/Rig Control Interfaces are small, simple, rugged and inexpensive sound card interfaces-- perfect for portable use or temporary setups such as Field day or DX-peditions.

Advanced digital modes are becoming much more common. Don't be left behind as others grasp at the digital age. Just check the "Instructions" tab for radio compatibility, then grab one of these West Mountain Radio RIGblaster Plug and Play Digital Mode/Rig Control Interfaces from DX Engineering and stay up on all of the latest modes!

Check these standard features:

- * USB cable supplied

- * USB powered--no external power required
- * Built-in rig control with Icom and Ten Tec or with TTL level CAT control (round CAT jack) Yaesu radios. Control cable an inexpensive option.
- * Rig control is possible, along with sound card PTT control and CW keying on a SINGLE serial port using Hamscope or MixW software. If HRD is used with DM780, because they are separate programs, they must be configured correctly to work together as one program.
- * Fully isolated CW keying output for direct keying of your rig's CW. This jack is for use with non-sound card software using serial DTR control. CW keying cable optional.
- * Simplest radio interface to plug in, provided your radio has compatible data/aux jacks
- * Available adapters simplify mic/keyer/audio connections
- * Isolated audio and keying
- * Front panel indicators show PTT and CW keying control, USB connection status
- * Properly matched and RF-suppressed audio for your radio
- * Carrier detect (COR) for Echolink-ready
- * Very compact--great for portable or QRP operation

West Mountain Radio RIGblaster Blue Wireless Interfaces ~\$200

West Mountain Radio RIGblaster Blue Wireless Interfaces add an exciting new dimension to transceiver and computer digital modes, rig control and audio interconnection devices.

RIGblaster Blue interfaces are revolutionary and innovative products which integrate the flexibility and convenience of Bluetooth® with a solid and trusted platform for Amateur Radio interfaces. If you are interested in computer digital mode operation and hands-free phone operation, RIGblaster Blue interfaces have been designed to give you the most flexible approach to leveraging Bluetooth® technology for use in Amateur Radio. They have many outstanding features which will enhance and simplify your operation.

These interfaces operate on virtually every digital mode available. Popular modes and programs like PSK31, RTTY, JT-65, Olivia, with MMTTY, DM780, Digipan, MultiPSK, HF Packet and VHF APRS are covered. Also included are analog and digital SSTV! If the audio interface software is out there, then it's likely that RIGblaster Blue will let you work it! Or, set your transceiver up for

Bluetooth® microphone or headset operation on SSB, AM or FM!

RIGblaster Blue features front panel selectable functions:

- * Pairing with a Bluetooth® headset for untethered hands-free phone operation
- * Bluetooth® Headset discovery and audio level adjustment without the use of a computer or...
- * Pairing with a traditional PC*, smart phone or tablet for untethered digital mode operation and rig control

Each RIGblaster Blue function benefits from:

- * Fully isolated transmit and receive audio. Bluetooth® connection gives extra degree of isolation
- * A sound device and serial port to Windows, Linux or Mac which can be used with existing Amateur Radio software
- * Audio level controls (both RX & TX) on the front panel
- * Pre-wired Instant Setup Connectors - no more complex jumper wiring!
- * TTL rig-control (CAT/CI-V) with RS-232C externalization for some transceivers
- * VOX push-to-talk with adjustable delay
- * Separate audio jacks for received and transmitted audio
- * Foot-switch PTT input
- * TX inhibit switch (for listen-only mode)

Yaesu SCU-17 USB Interface Units \$195

Yaesu SCU-17 USB Interface Units are innovative devices that combine digital mode and computer transceiver control interfacing into one centralized unit.

Special interface cables are included for quick connection to the FTDX-1200, or may be purchased separately to connect this unit to your other Yaesu transceivers. The computer USB cable is included; these units are powered via USB. Front panel controls for transmit and receive audio and status LEDs provide visual indications of operational modes.

Perfect for use with computers that do not have serial ports (RS-

232), this unit connects via a single USB port. Dual COM ports are supported for one or two program use of simultaneous CAT transceiver control and digital audio streams with high isolation and no interference.

Note: Third party software is required on your PC for CAT and to operate digital modes with this device and your Yaesu transceiver, including RTTY, SSTV, PSK and others.

BUXCOMM RASCAL Mk IV \$70

Choose your color, White, Black or Blue

The BUXCOMM RASCAL IV does NOT require a serial Comport, or USB port. That's right, while other operators are trying to set their software for the correct serial comport, or USB port, you can be operating the digital modes with the RASCAL IV. FREE with each RASCAL IV you receive both a RASCAL to Radio interface cable and a FREE USB sound card, with detailed instructions. There are only two (2) connections: **one to the radio, and one to the PC.** We also include a FREE Software CD with more than 30 Digital Modes to select from. The RASCAL IV is available in color choices; *Almond (white) Black, or Blue.* Instructions include screen shots and images to walk you through the software setup. After you installed software from the CD, it's time to have fun, it's that simple and easy.

Power Poles and Accessories

The **RIGrunner** is the most convenient and safest way to connect all your 12 VDC equipment to a power source. Eliminate messy binding posts, frayed wire connections, black tape or short circuits! These 13.8 VDC power panels use the excellent Anderson Powerpole® connectors. Standardize all your 12 VDC connections using the amateur radio ARES/RACES adopted Powerpole® system. Each outlet is individually fused with automotive ATC/ATO fuses. Shipped with fuses installed. ([Extra ATC/ATO auto fuses](#) are easy to get and are available in many values from 1 to 40 Amps). Each fuse has a blown fuse LED illuminator to show short circuit problems instantly! LED and audio alerts of safe, over and under voltage conditions. Audio alert is selectable to alarm on over voltage, under voltage or can be disabled.

The **West Mountain Radio PWRgate PG40S** is a 12 volt backup power system that can supply up to 40 Amperes continuously from either a Power Supply or a Battery, and can also charge the battery with its high performance charger. Connected equipment will instantly switch to battery during a power blackout or power supply failure. No glitches. The circuit uses two 80 Ampere Schottky diodes as an OR-Gate to isolate the battery and

power supply from each other. Forward voltage drop of less than 0.3 volts at 20 A. To keep the battery fully charged and ready for use, the Super PWRgate has a built-in four-stage battery charger with selectable current rates of 1, 4, 7 or 10 Amperes. The circuit is optimized for use with GELLED & AGM type batteries, but will keep flooded lead acid and marine type batteries near full charge as well.

The **West Mountain Radio PWRguard Plus** will automatically turn the power off when its input voltage exceeds 15 volts *or* drops below 11.5 volts. Momentary dips below 11.5 volts are tolerated to prevent false tripping.

PWRguard *Plus* will deliver 30 amps continuously but can handle up to 40 Amps during periods when a rig is transmitting. It uses a solid state switch to control the voltage output, eliminating the contact bounce inherently found in relay controlled outputs. The switch turn-on and turn-off is also slew rate limited, softening the transition to slightly reduce in-rush current. Input and output is via Powerpole® connections.

In addition to the provided indicator LEDs, an audible alarm has been added to notify the user that PWRguard Plus has turned the power off. The alarm sounds once per minute unless the user has disabled it.

The **Paradan Power Strip 4** horizontal design permits easy fan-out from the four Powerpole® outputs. The bright LED digital display accurately indicates the DC voltage. The input is fused, and the strip is RF filtered. Anderson locking clips may be used to secure the connections. 40 Amps maximum capacity. 5-17 VDC.

The **Paradan Power Strip 8** displays voltage and current on a backlit LCD digital meter. There is an ON-OFF-AUTO power switch. In AUTO, the power is turned off if the input voltage is too low, saving batteries and equipment from damage. An LED lights up behind a fuse, if it is blown. The tri-color LED shows high, correct, or low operating voltage. The output add-on Powerpole® can connect to our Power Strip 5. A 6 foot Powerpole to ring terminals power cord is supplied. 8 Loose Powerpoles are supplied. Can be used with Anderson Locking Clips (not included) to secure the cables. 40 Amps total capacity

The **Paradan DC Gate 40** is a 13.8 volt battery back-up system for powering your radio station, *go-box*, or RV. It can output up to 40 amperes from either the power supply or the battery. Whenever the AC power is lost, the FET gate instantaneously switches from the power supply to the battery. A small built-in charger keeps your battery (not included) fresh.

The **Paradan DC Gate 80** is 13.8 volt high-power battery back-up system for powering your radio station, repeater, or other equipment. It can supply up to 80 Amperes from either the power supply or the battery. Whenever the ac power is lost, this unit instantaneously switches from the power supply to the battery. The switching element is a dual Schottky Diode. There is a built-in four-stage 10-20 Amp battery charger to rapidly restore the battery following a power outage. Charge current, and battery voltage, are displayed on the LCD digital meter.

he **MFJ-1128** is a versatile, DC power strip with 12 outlets. Factory installed fuses include: three 1 amp, four 5 amp, four 10 amp, one 25 amp, one 35 amp. It has a built-in 0-25 VDC Voltmeter. The ON/OFF switch controls outlets 4 through 12, and handles a total of 20 amps. Outlet 1, 2 and 3 are unswitched and handle 40 amps total. Includes 12 pair of Anderson Powerpole® 24 40 amp contacts, 10 fuses (2 each of: 1, 5, 10, 25 and 40 amp).

Each Anderson Powerpole® outlet can carry up to 40 amps. You can fuse each outlet as needed to protect your accessories or transceiver. The main fuse is 40 amps (total capacity of the strip).

Powerwerx PanelPole, Panel Mount Housing for Two Powerpole Connectors with a Weather Resistant Cover

Alternative to power pole connectors: MC4 Connectors

MC4 connectors are the industry standard for solar power and they are rated for 20A at 600V. Unlike Anderson Power Poles, MC4 connectors are waterproof and snap together with a pair of barbed inserts.

They are also much easier to install onto wire. I am using 10g stranded copper for the run from the panels on my roof to the indoor charge controller and the connectors have gone together without a hitch - *much* easier than APP connectors.

Each contains three rubber o-rings: one on each connector-to-wire fitting and another joining the two connectors (male & female) together.

Some Possibly Useful Links

<http://www.qsl.net/wm2u/interface.html>

http://www.w0btu.com/digital_modes.html

<https://www.youtube.com/watch?v=o1MWMrFhXXs>

<http://ae5x.blogspot.com/2016/07/an-alternative-to-anderson-power-poles.html>

<https://powerwerx.com/dc-power-products>