Band Decoder Quick Reference Guide.

Congratulations on purchasing your VE2DX Band Decoder, the most advanced band decoder on the market. Our Band decoder family is made of three versions;

- BD1-BT is a single radio with a single set of eight outputs for antenna or BPF* switching.
- BD1-BTPlus, a single radio with two sets of eight outputs for Antenna ***AND*** BPF* switching.
- Our star is the IBD2-BT, a ***DUAL*** radio with two sets of eight outputs for antenna or BPF* switching.

* BPF = Band Pass Filters

Designed with advanced features like VE2DX TrueTTL, TrueCAT, and TrueCIV, VE2DX BOA, VE2DX SDI, RFI filtration, heavy shielding, signal processing, automatic signal leveling, External Voltage Switching, CAT/CIV support, Automatic RS232c/TTL support, WiFi, USB-C, Int/Ext Voltage Switching, GND Switching, Status/Error messages in CW or Decimal, Mismatched Radio manufacturers, Mismatched remote switches, Mismatched band/output configurations, Blocked outputs on error, FLEXRadio, ICOM, KENWOOD, YAESU supported at this time, twelve band frequency definitions per output sets, eight output with support of multiple band definitions, Automatic SWL detection with assigned output.

LED(s):

The VE2DX Band Decoders come with multiple LEDs used to give the operators a simple, fast way to know the status of the unit: Power (RED), DATA (Cat/CIV, RED), Automatic (RED), Selected Radio (Green), Error (RED), Outputs (Yellow), and on the IBD2-BT only SDI (RED).

Power Up Sequence:

The VE2DX Band Decoder will go through a series of tests during power-up. Some of these can be bypassed in the configuration menu. All can be bypassed during power-up by a single click of the knob.

- The LEDs will be cleared during power-up, and the power will be ON.
- After a few seconds, the GREEN radio selects LEDs with flash/1sec; this indicates that the Band Decoder is waiting for you to enter configuration mode via the USB-C port. You can bypass this by single clicking on the select knob.
- Then, the same GREEN radio Select LEDs will flash twice/1sec if you reconfigured your band decoder with your WiFi network. It will do so until your network is connected. You can bypass this by single clicking on the select knob.
- Finally, you will get a single BEEP, and the Band decoder will start a power-up test of all the LEDs, finishing with some CW. You can bypass this by single clicking on the select knob.

Configuration:

The VE2DX Band Decoder configuration is only accessible via the USB Port in this version. We will also offer the configuration via WiFi web access in later versions.

- Attach your band decoder using a USB-A to USB-C cable to a Windows PC.
- Load and start a Serial Port Terminal Emulator like PUTTY.
- Using Device Manager, locate and identify your band decoder COM port (CH340) in the COM/LPT section.
- Configure your Serial Port Terminal Emulator in Serial Mode with your COM port number and a speed of 115200.
- Power on your Band decoder and follow the instructions.

Once you are in the Configuration/Diagnostic menu, follow the instructions. The main menu sections are Operational, WiFi, Radio, Band and Outputs, Factory Default Reset, and Advanced Diagnostic.

!!! Warning !!! Diagnostic routines for the VE2DX support team should not be used without our guidance. These will drastically slow down your VE2DX Band Decoder and may cause problems with normal operations.

WiFi:

Your VE2DX Band Decoder is configured as an ACCES POINT with SSID “VE2DX BAND DECODER” and no SSID Password by default. Using your PC, Tablet, or Cell Phone, you will be able to connect.

Once Connected, simply open your browser and connect to 192.168.1.1

Your VE2DX Band Decoder WiFi configuration can be changed to your local network.

Jumpers:

!!! Warning !!! Improper jumper settings will damage your band decoder. Please note the cable path and take a reference picture.

The VE2DX Band Decoder Hardware configuration can be changed to adapt your unit to different radio CAT protocols, VDC/GND switching, and INT/EXT voltage switching.

- Remove the Power cable and all other cables attached to the unit.
- Remove the knob from the front of the unit.
- Remove the four 2.5mm Allen screws located on the rear cover corners.
- While pushing lightly on the selector on the front of the unit, pull the rear cover out.

!!! Warning !!! 1- Note carefully the proper positioning of the cables. 2- The large RFI Chokes on the output cabling will be a very tight fit. We recommend you take a picture of their positioning for reassembly.

- Once the PCB is OUT, carefully flip the rear panel and cable harness toward the right (when looking from the front).
- Locate the YELLOW, RED, and BLUE jumpers and the One or TWO driver chips with a RED DOT.

To change from CAT (default) to CI-V, move the BLUE jumper to the selected CAT output. CI-V is toward the ESP32-S3 processor.

To change from Internal (12VDC default) to External voltage, move the RED jumper from the front to the rear side position and connect an external power source in the back of the unit.

Move the YELLOW jumpers to your left, away from the RED dot on the PCB, to change from VDC to GND switching. Remove the driver chip(s) with the RED dots and install the GND driver chip(s) with the BLUE dot.

!!! Warning !!! The driver chip(s) have a polarity indicated by a notch on one end of the chip. That notch must ALWAYS be toward the rear of the unit. Improperly installing these driver chips WILL damage your band decoder, which will not be covered by warranty.

Pinout:

The output connectors have the following pinout (From left to right): Outputs 1, 2, 3, 4, 5, 6, 7, 8, 12VDC, Ground.