

ELAD TM-2



USER MANUAL

Contents

1	Overview	3
1.1	Description	3
1.2	Specifications	3
1.3	Hardware	3
2	Using TMate2 with ELAD FDM-SW2	4
3	ELAD TMate2 SDK	6
4	Using TMate2 with Perseus V5 Software.....	7
5	Using TMate2 with SDR-Console	10
	Declaration of Conformity (EC)	11
	Declaration of Conformity (FCC)	12

1 Overview

1.1 Description

ELAD TMate2 is the most awaited accessory by many users of SDR radio that cannot or will not stay without usual knobs and display. With knobs and buttons, multi-functions color display, USB HID interface and the upgradable software, ELAD TMate2 allows the control of main functions of SDR software. Intended mainly to allow the use of SDR software without the need to watch the screen of the PC, or when the screen of the PC is crowded by various programs such as LOG or software for DIGITAL operations or CONTEST.

1.2 Specifications

- ✓ HID USB 2.0 device (no driver required);
- ✓ Works using Vcom and CAT protocol or directly supported in software;
- ✓ Works even your SDR is not active windows;
- ✓ Main tuning knob (with push button) for incremental step VFO tuning (user defined);
- ✓ Two detent encoder (with push button) for various functions (factory defined);
- ✓ 6 function keys (factory defined);
- ✓ RGB custom display (color user defined in RGB range);
- ✓ Heavy metal ergonomic enclosure;
- ✓ Heavy metal knobs;
- ✓ No power supply required;
- ✓ Compatible with remote operation (using serial to TCP converter);
- ✓ Directly supported (no CAT) in ELAD SW2 Software for the FDM-S1 & FDM-S2.

1.3 Hardware



Dimensions:
143mm x 78mm x 135mm (LxHxP)

Weight:
780g (without USB cable)

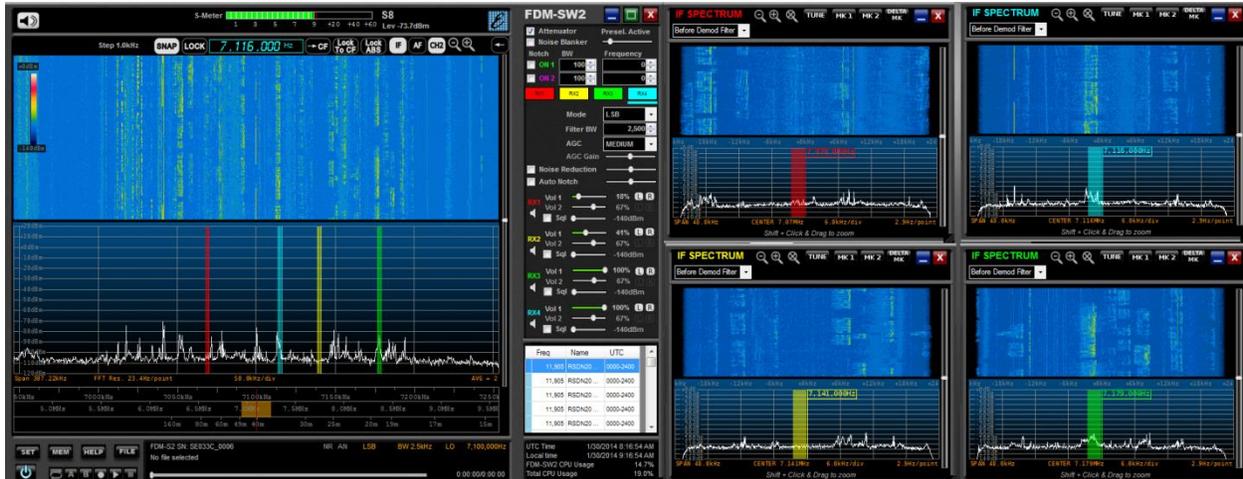
Front panel inclination:
45°

USB (PC) Powered

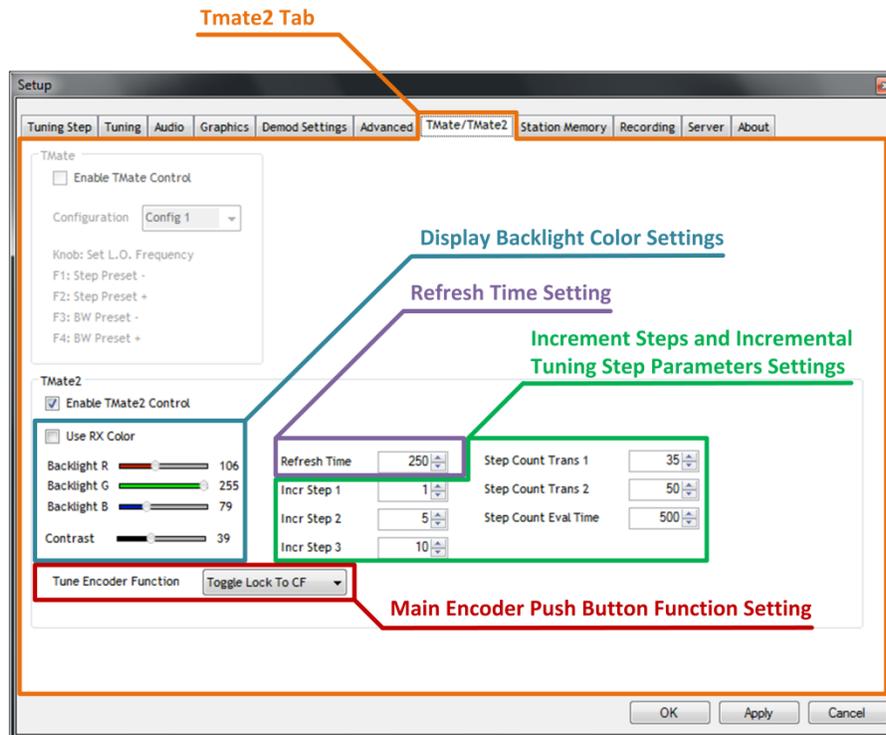
USB cable included

2 Using TMate2 with ELAD FDM-SW2

ELAD FDM-SW2 is a SDR (Software Defined Radio) software that is intended to be used with the ELAD FDM SDR devices (for more information on ELAD SDR please visit our website www.eladit.com).



ELAD FDM-SW2 directly supports ELAD TMate2, no other software is required. Connect the USB cable to a free USB port of your PC and run ELAD FDM-SW2; the software automatically sense the TMate2 device and automatically enables TMate2 Tab in the setup window.



In this panel, the user can set the display backlight color, the refresh time, the increment steps of the three knobs and incremental tuning step parameters.

Editable parameters, encoders functionality and LEDs meaning are described below.



Editable parameters :

- ✓ with the main encoder : frequency, “Lock To CF”,
- ✓ with the E1 encoder : volume, squelch, noise reducer, noise blanker, auto notch,
- ✓ with the E2 encoder : filter bandwidth,
- ✓ with the buttons :
 - F1 : changes the selected receiver (works only when more than one receiver active),
 - F2 : changes the AGC setting,
 - F3 and F4 : changes the mode,
 - F5 and F6 : changes the step.

Encoders functionality :

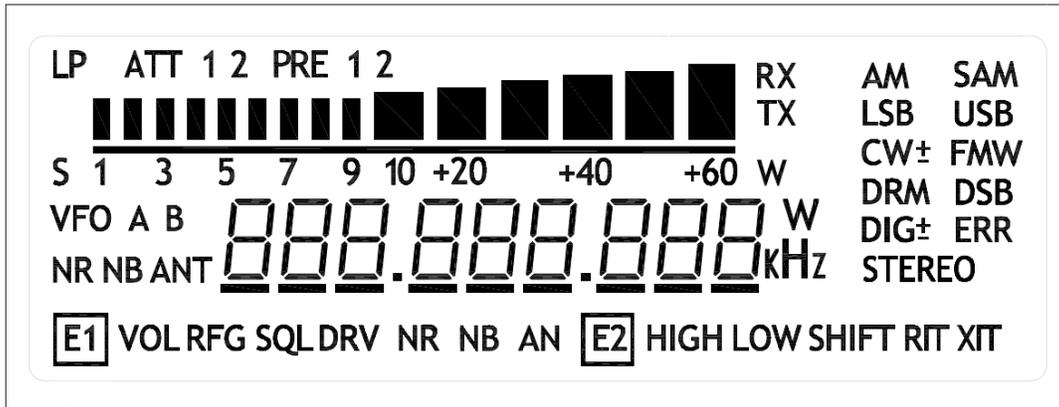
- ✓ main encoder : allows to tune the frequency,
- ✓ main encoder button : toggles the functionality “Lock To CF”,
- ✓ E1 encoder : modifies the selected E1 parameter value,
- ✓ E1 encoder button : changes the E1 parameter selection,
- ✓ E2 encoder : modifies the selected E2 parameter value,
- ✓ E2 encoder button : changes the E2 parameter selection.

LEDs :

- ✓ USB green led : indicates that the TMate 2 is operating,
- ✓ Tune Lock red led : indicates if the “Lock To CF” functionality is enable or not.

3 ELAD TMate2 SDK

A Windows Software Development Kit (SDK) is also available to interface ELAD TMate2 with your own applications. The SDK contains the software libraries and a sample project to shows how to open a connection with ELAD TMate2, how to read the encoders and the keys status and how to set the LCD segments.



The SDK is compatible with the 32bit and 64bit editions of Window Vista, 7, 8, 8.1 and 10. Please contact ELAD S.r.l. or ELAD USA Inc. to obtain ELAD TMate2 SDK.

4 Using TMate2 with Perseus V5 Software

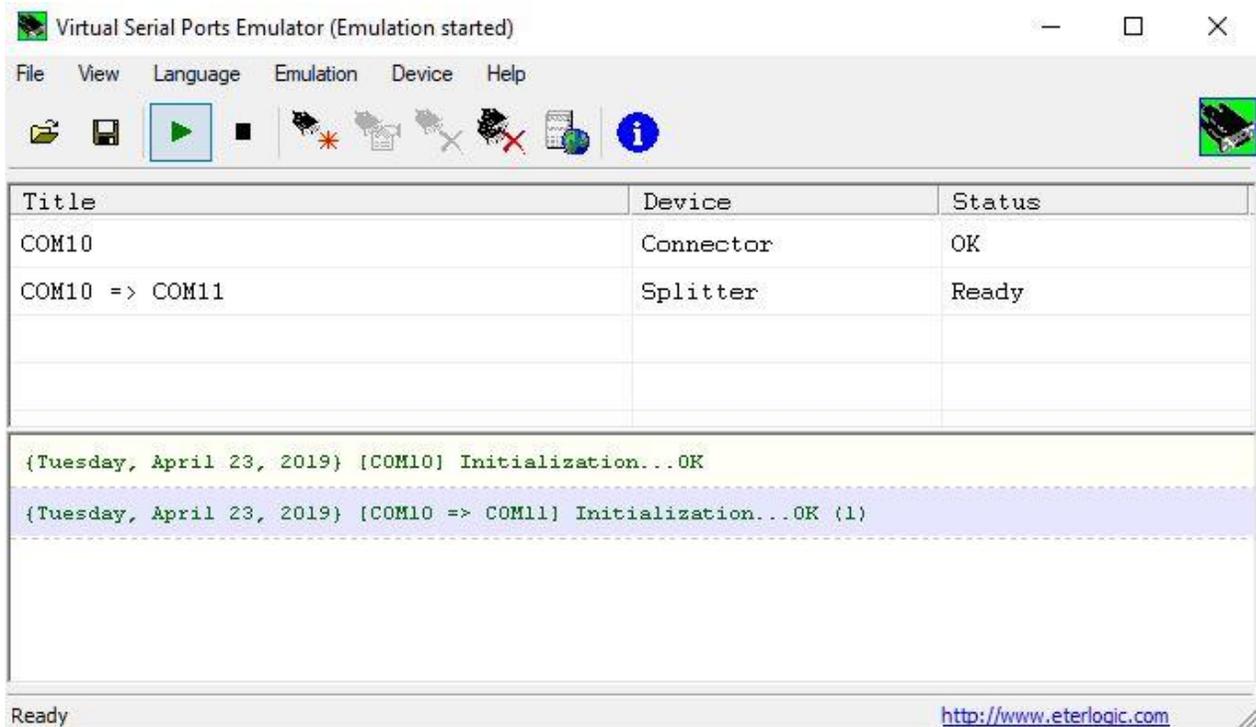
The ELAD TMate2 can be used with the Perseus SDR and the Perseus V4 & V5 software that is supplied by Microtelecom s.r.l.

There are some additional steps needed for it to function compared to the ELAD FDM-SW2 software. You will need a Virtual Com Port application such as VSPE or com0com or any other, there are many available, for this document purpose, VSPE from Eterlogic will be used.

Then you will need our ELAD Tmate2ConsoleSetupv009.zip zip file from <http://sdr.eladit.com/ACCESSORIES/TMATE2/index.php?lang=EN> unzipped to a location on your PC.

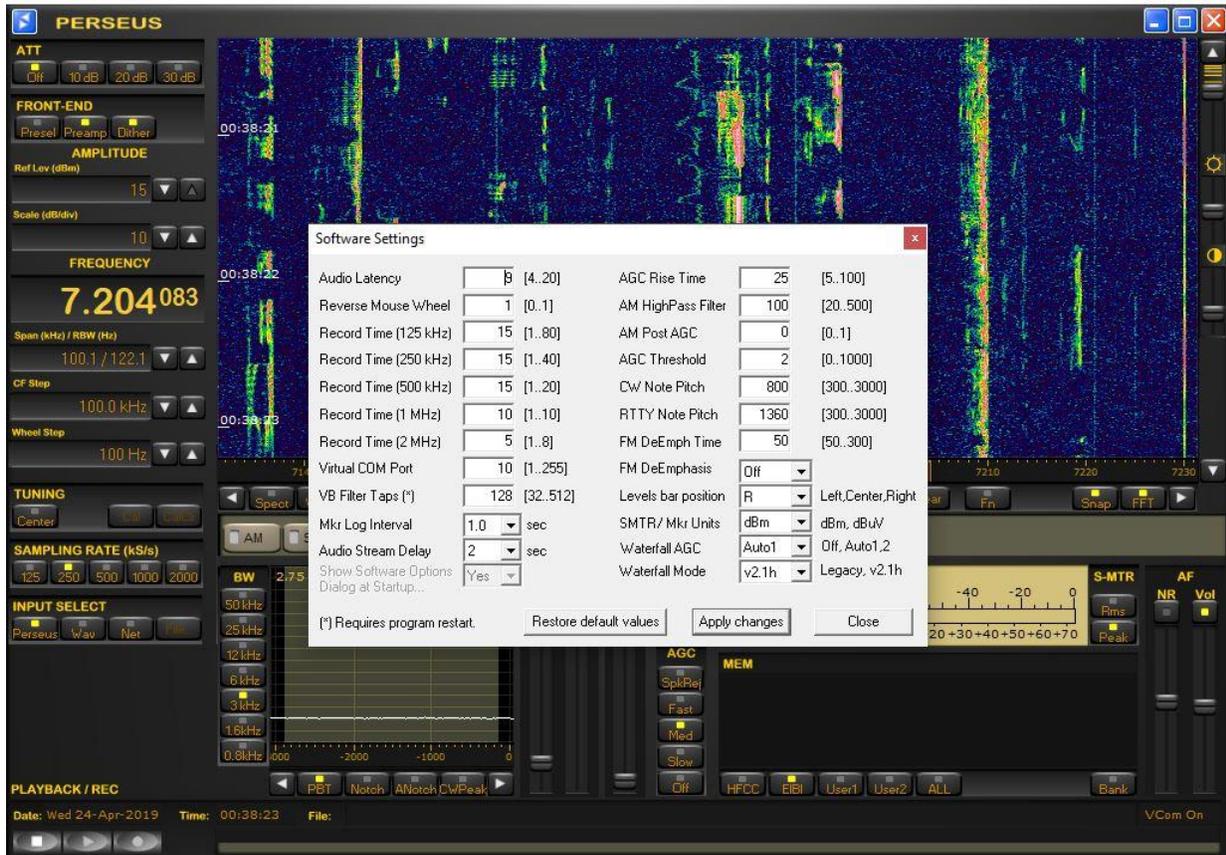
The usage outline; configure the virtual serial port application, launch the Perseus software then run Tmate2CatConsole.exe and all should be up and running.

Step 1. Configuring the Virtual Com Port Software, we need a connector and splitter connection, The connector com10 and a splitter Com10 => Com11 :



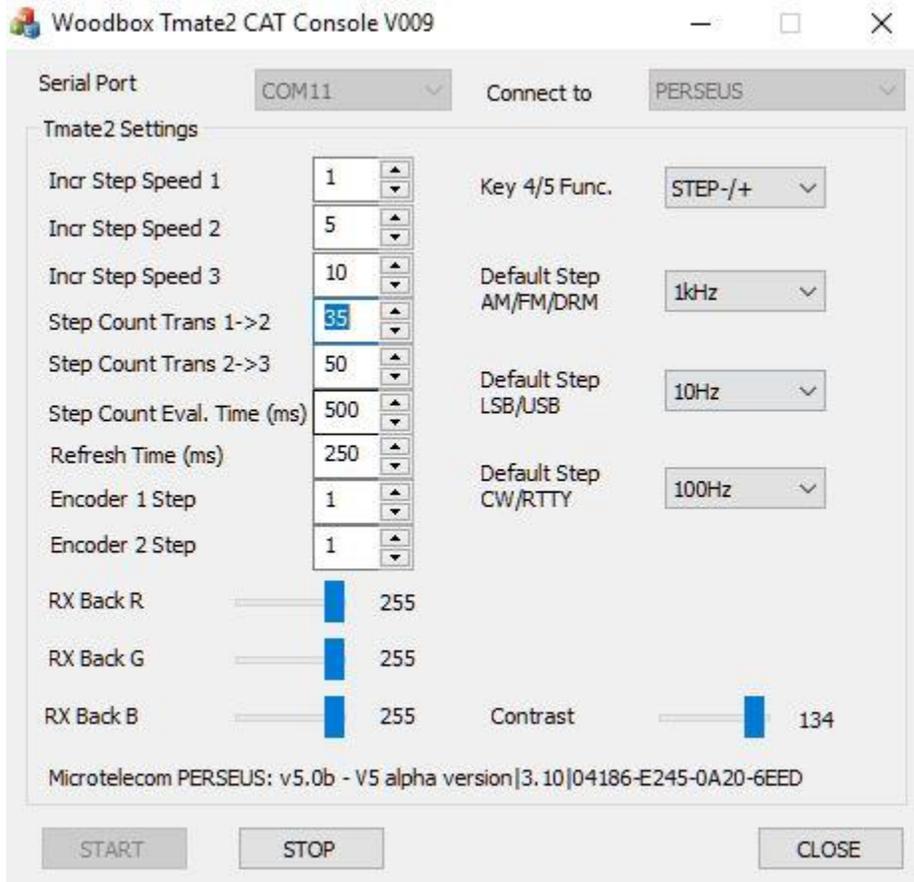
This shows the connector on Com10 and the Splitter from Com10 => Com11, once you have added each device, then hit the Play button, third icon from left. Then VSPE should be running.

Step2. Configure the Perseus software :



Click on the top title bar icon in front of PERSEUS and the about window will pop up, then click on software settings, and make sure the Virtual COM port is set to COM10 (this can be changed, as long as it matches the VSPE Connector). Then in the bottom right you should see VCom ON, if it says VCom Off, then you need to make sure the virtual com port software is running.

Step3. Run the Tmate2CatConsole.exe that you downloaded and unzipped. The following window will come up :



In serial port select the other end of the splitter we set up, so Com11 and Connect to set to Perseus. If it is all setup correctly when you hit start, you should see the line of text above the start button that says "Microtelecom PERSEUS: ..."

Remember the steps, Virtual Com Software, Perseus Software, TMate Cat Console in that order, if you load in different order, it will not work.

5 Using TMate2 with SDR-Console

SDR-Console by Simon Brown is a popular SDR Radio control program that supports many different SDR Radios. SDR-Console supports the ELAD TMat2 without any additional software. Click on the following Tools > Options > Controllers > Tmate. Then check the enable box, you can change the background color but all the other options are hard coded as follows :

- E1 : Volume,
- E2 : Filter High / Low / Shift, press to select the desired option,
- Main Encoder : current receiver Frequency, press for fast tuning,
- F1 : Mute,
- F5/F6 : previous/next mode.

Declaration of Conformity (EC)

The product marked as

TM-2

manufactured by

Manufacturer : ELAD S.r.l.
Address : Via Col De Rust, 11
I-33070 CANEVA (PN)

is produced in conformity to the requirements contained in the following EC directives :

- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- RoHS Directive 2011/65/EU

The product conforms to the following product specifications :

Emissions & Immunity :

EN 55032:2015/A11:2020
EN 55035:2017/A11:2020

Safety :

EN 62368-1:2014

and further amendments.

This declaration is under responsibility of the manufacturer

ELAD S.r.l.
Via Col De Rust, 11
I-33070 CANEVA (PN)

Issued by

Name : Franco Milan
Function : President of ELAD S.r.l.

CANEVA

Place

May, 17th 2021

Date


Signature

Declaration of Conformity (FCC)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



This product is distributed in USA by:

ELAD USA Inc.
618 Cummings Chapel Road
Ridgeville, SC 29472. USA

USA Sales Email: Sales@elad-usa.com
USA Support Email: Support@elad-usa.com
Phone: 312-320-8160