



## 2.0 A.T.U. AUTOMATIC TUNER UNIT



- Plug the power supply in and turn it on, the display shows the home screen version of the firmware loaded eg v.2.19
- After 3 seconds, the display will show the last tuned frequency and the S.W.R. value
- During the tuning procedure (both manual and automatic) the red led **TUNING** will light up
- The blue led **MOTOR** lights up only when the motor is being powered and is actually connected

**First of all, you have to set your LOOP ANTENNA: BABY or MIDI**

**→ for the first time ONLY!!!**

### SET LOOP TYPE

- Press the **—** key for 3 seconds
- The display will show **SET FULL AUTO?**
- Select by the **+** key **SET ANT. TYPE**
- Press **ENTER**
- Scroll through the options using the button **+**
- **AUTO DETECT?**
- the ATU tests the motor polarity and the minimum and maximum frequency. After the procedure you will get the antenna pattern detected and it will load the default parameters for the specific model.
- **BABY?**
- **MIDI?**
- Press **ENTER** to confirm the choice

**WARNING! DO NOT TRANSMIT WHEN THE BLUE LED IS ON!**



- If when tuning the loop, the blue led does not light up, possibly means the motor is not drawing any current.  
Possible reasons for this include:
  - ⇒ the motor is not correctly connected or not connected at all:  
*check the motor cable and their connections by the AUTODETECT MODE*
  - ⇒ the motor is at the stroke end:  
*type a different frequency and tune again*
  - ⇒ the motor is faulty:  
*contact the customer support*
- If there is no keyboard you will see the message **WAIT KEYBOARD**.
- The message **WAIT KEYBOARD** is disabled if ATU is configured for **FULL AUTO MODE** (available only with the optional card I/O RS232 interface).

## AUTOMATIC TUNE MODE

- Press the \* key, type the desidered frequency in KHz and press **ENTER**  
(Eg. in agreement 10,000 MHz : \* **10000 ENTER**)
  - Press the **ENTER** to repeat the last set frequency agreement (already on the display)
- If the minimum level of SWR is > 3,  
the red LED flashes and the message "WARNING: SWR> 3 - PRESS ANY KEY" will shown.**



## PROCEDURE FOR MANUAL TESTING OF MOTOR CONTROL

- Press the / for 3 seconds
- Enter the tuning frequency in KHz and press **ENTER**
- The display shows on the frequency set on the second line and the SWR measured in real time
- You can operate the motor by pressing the **9** (to open) and **3** (to close) – **HIGH SPEED**
- You can operate the motor by pressing the **8** (to open) and **2** (to close) – **LOW SPEED**
- You can operate the motor by pressing the **7** (to open) and **1** (to close) – **FINE TUNING**
- The blue led indicates that there is power being consumed by the motor
- To return to the home screen, press **BACK SPACE**



## **FULL AUTO MODE for ICOM – YAESU & ELECRAFT**

**(available only with the optional card I/O RS232 module)**

**ICOM needs CT-17 CI-V level converter with DB25m/DB9f cable**

**YAESU needs CAT interface with DB9 f/f cable**

**ELECRAFT needs KXSER-a cable**

- Press the **—** key for 3 seconds
- The display will show **SET FULL AUTO?**
- Press **ENTER**
- Scroll through the menu with **+** button:
  - **ICOM MODE** - the ATU automatically scans to detect the address of the ICOM transceiver connected. When the scan is complete the ID is displayed on the device detected and will ask operator to confirm the setting. You can cancel scanning at any time by pressing the **DELETE** key or the **BACKSPACE** key.
  - **YAESU MODE** - set the baud rate on the YAESU transceiver at 4800
  - **ELECRAFT MODE** - set the baud rate on the ELECRAFT transceiver at 4800
  - **DISABLED** - to exit the FULL AUTO MODE
- Press **ENTER** to confirm
- When you set the ATU in **FULL AUTO MODE**, the working frequency is read continuously, the calibration is done automatically when the set frequency differs in the range of 2 KHz 1,7-10MHz, and 3 KHz in the range 10-30MHz
- The automatic re-calibration starts when the frequency of the RTX has not changed for at least one second

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## **UPDATING THE FIRMWARE**

- Disconnect the power connector and the keypad on the device
- Save in the root of a USB memory cml\_XXX.tes the file provided by the manufacturer
- Insert the memory into the USB port on the front panel
- Switch on the device
- After a few seconds the display will start flashing showing on the progress of the update that will last about a minute
- After the update you will see the message: **UPGRADE OK, REMOVE USB MEDIA**, remove the memory USB
- The upgraded system will boot and you can reconnect the keypad.