

Translated version of BX-182_Baumappte_130227.pdf

This kit contains a PCB with the dimensions 160 mm x 160 mm, all required components and a printed housing. Only wired components are used to make building easier. Microphone and buttons and connection, all controls for voice transmit memory and CW keyer are located on the front side of the housing, all other ports on the back. The Modes are via pluggable jumper selected on the board. A Jumper matrix allows flexible configuration the microphone jack. CW Keyer and memory operate independently of the sequence controller.

The actual construction of the kit is not a particularly difficult, however, before testing and configuration carefully study the circuit to gain a complete understanding of the functionality and avoid the risk of damage due to incorrect configuration. Connecting cables are not part of the kit. The cable required, depends on the devices to be connected.

Assembly After reviewing the parts list (Table 1 in the Appendix) and the comparison with the supplied components, start the assembly of the board. The order of build is not critical, however, it is sensible to start the low components and only fit the sockets at the end.

The following Instructions must be observed and if in doubt consult the layout and circuit diagram in the appendix. The electrolytic capacitors are polarised. When mounting the IC sockets follow the location markers on the board This prevents accidentally inserting the ICs the wrong way and destroying them. To improve the frequency response were the kit in the current series some The ETAL transformer will need its connector legs bending to fit. Use pliers bend each 1.2 mm (Fig. 3). Instead of Electrolytic capacitor C25 resistance R19 is fitted. R20 is soldered to the underside of the board, parallel to the primary side of the transformer. C31 is also on the bottom. shown in Figure 4. When soldering large copper (ground) Surfaces special attention is needed. Due to the rapid heat dissipation the heat supplied is not often enough to flow the solder to properly and thus make a good connection. The result is a dry joint, a common cause of "inexplicable "malfunctions. To avoid this error, the temperature of the soldering iron used should be increased to at least 400 ° C.

Before inserting the ICs check the supply voltage sense at Bu1 to be 12 V with a multimeter. The Voltage across C4 should be +5 V Accidental reverse Polarity of the operating voltage leads to the immediate destruction of fuses F1 and F2. If everything is in order, put the ICs into the sockets, switch the supply voltage on again. Before performing a function tests, please read the following sections on connection and operation of the FA Station Manager carefully. **Before the sequence control is tested the can must be in the language a memory- stored ne any message , even if this module later ter should not be used. This is a Microphone to the FA station manager at- and ruled according to description**

Microphone port RJ-45 Jacks are used to connect microphone (BU4) and Transceiver (BU10) (Fig. 5). Their performance is stable and reliable and has proved successful in network technology. For configuration of the microphone pin assignment there is a jumper pad fro input and output. The contacts A, B and C are 1:1

looped and can be used for various functions. Additional functions could be for example, *up / down fast* or *loud- speaker* (for Icom models). There is also a Microphone power supply connection + *VMIC* looped directly through to power an electret. Note that if the output cable is not connected to the radio, the microphone insert will have no voltage. The microphone will not function and therefore no storage of voice texts will occur. Since the card does not support this voltage it must be fully wired up to the transceiver. If we have a radio with RJ-45 microphone connector we need to connect the FA station manager via a 1:1 cable. It can be a network cable. It goes without saying that the configuration of the output matrix must be the same as the input. To use FA Station Manager with Microphones or radios with 8-pin round plug, a 1:1 adapter cable (Fig. 6) must be used. This has the advantage that the Cables are universally applicable, to the Jumper matrix. In Figure 7 we see typical jumper configurations for some microphones or Transceivers. The specifications are typical and do not claim to correctness and completeness. Refer to the technical Documentation of the connected devices for the correct settings. This type of microphone circuit configuration makes the solution very flexible.

Equipment Connection At the back of the FA-Stations manager are located the following jacks:

12 V: power supply terminal of the FA SM The power consumption is dependent on the loading operating mode and the connected units devices and is around 20 mA.

Sequencer

1 / PRE AMP: switch output for preamplifier or Antenna changeover relay

2 / PA1: Switching output for the first Power amplifier

3 / PA2: Switching output for the second Power amplifier or transverter

The time delay circuit switch order from receive to transmit is socket1, -> 2 -> Jack 3 and the return to receive, vice versa (see also Description of the operating modes).

12V output from 1 on receive or transmit depends on the configuration of jumper J8.

Lie at the sockets 2 and 3, the shift- contacts of Rel2 and Rel1 that the Send closed and reception are open.

Digimode

TRX: output to the transceiver

I / F: input from the interface

The signal lines of a connected Digimode interfaces the PTT line. The sequencer reads the PTT signal and it is switched time- delayed to the output.

CW

SIDETONE: CW sidetone Output

KEY: CW switching output

The manual button or the paddle is at the Front page of the FA station manager closed. The configuration of J7 determines whether the switching output on the back is delayed.

BAND: Yaesu band input voltage Some types of Yaesu transceivers output a DC voltage whose magnitude depends on the band selected. The station manager can read uses this Band voltage shift for evaluation purposes.

MIC: Microphone output to the transceiver

Configuration jumpers The jumpers J1 to J8 are used to configure the different loading modes and for the switching of additional. The meaning of the jumper positions is shown on the Printed circuit board, however, this is reasons of space, not

always immediately next to that header. The jumpers have the following functions:

J1: sequencer (SEQ) On / Off

J2: Yaesu band voltage evaluation (FT-8x7) On / Off

J3: band discrimination for Bu7/Bu8 (it- hey explanation of the control flow)

J4: optional connection of microphone and frame ground

J5: optional connection for an external speaker (e.g. for Sound card)

J6: CW sidetone internal Piezo sounder On / Off

J7: CW signal caching On / Off

J8: 12 V switching voltage sense on bu9 transmission or reception operation

For an initial functional test, any configuration can be selected. For further testing, the configuration should be adjusted accordingly.

Configuring the sequencer control

The PIC microcontroller is responsible for the control of the sequencer. It is here that the transceiver PTT circuit is controlled directly by a transistor and CW signal lock using optocouplers. In addition, inside on the board are two six-pin mini-DIN connectors, following current transceiver standards. From the input jack (BU5) connected to digital mode interface, the PTT can be closed, the signal picked up on the Se- led sequencer, and then delayed on to the Output jack (BU11). All other signal lines are 1:1 looped. So when using WSJT modes and RTTY, PSK31, etc. a clean switching sequence for preamplifiers amplifiers, transceivers is ensured. Connection from the FA Station Manager to the radio uses a standard cable *Ste- plug connector* with 1:1 wiring (e.g. # AK 3233, [3]). For CW operation, the holding time after the last Morse character is about 600 ms before the sequencer goes off. Since the sequence control depends on the operating mode, between 80 ms and 120 ms is required until all stages are switched on, **were de the first CW character depending on the Give pace of earlier Sequenzerschalt- tions mutilated. This led not sel- ten to the radio partner and irritation was therefore very annoying.** In order to avoid this, the controller firmware contains a buffer. This is the CW characters only with 130 ms delay from. However, this delay results at least at higher speed encoder to that the human brain with the time- union offset between direct monitor- tone heard of, and in parallel, delayed Tone from the transceiver problems BEKOM- men can. Therefore, one should at a total betempo above about 100 characters per minute, the sidetone of the radio off and only the FA-station manager issued synchronously use. This is either via the internal Pie zokapsel LS1 or an external loud- speaker or headphones possible (BU6a). The user can of course free choose whether the direct or ver- would hesitate CW signal work. The Configuration is done via the jumper J7 on the board. Can be selected by jumper J8, whether a voltage at the socket BU9 of 12 V in the transmit or receive mode want to use. This made it possible, for example Coaxial switch or preamplifier or dine. The relays used ha- of about 5-benAnzugs bzw.Abfallzeiten ms. The FA Station Manager has the following modes of operation:

Off Mode

If no jumper is inserted on J1 the Sequencer remains turned off. After a PTT switch, or CW signal Rel3 switches the voltage to BU9. In parallel, the transceiver PTT is activated and the CW lock released.

Transverter mode

For this mode, jumpers J1, J2 remain open. After pressing the PTT, Rel3 (BU9) switches, then 40 ms later, Rel2 (BU8, floating), Rel1, (BU7, floating) and finally the transceiver PTT is activated and CW locking released (Fig. 8). In this mode, you can switch a microwave power amplifier over BU8 and a transverter over BU7. You can of course connect two power amps to BU8 and BU7

FT-817 Mode

FA Station Manager supports features for the Yaesu transceiver type FT-817 This transceiver outputs a band voltage to their ACC jack which the micro controller can evaluate (connection to Bu3). This mode requires a jumper on J1 and J2. Depending on the selected band then either BU8 BU7 are activated 40 ms after the PTT signal and 40 ms later follows TRX PTT and CW locking (Fig. 9). Thus, it is possible to use two amps for different bands, which can be switched band-dependent. J3 configures this: If a jumper is plugged in, frequencies in the 2-m band select BU8 and in 70cm select BU7. This example shows separate amplifier operation for both Bands. With J1 open and the 817 operating below 144 MHz, an HF amplifier can be controlled on BU8, while a 2-m / 70cm dual-band power amplifier can be controlled on BU7

Normal mode Where the two delay stages switching signals in *transverter* mode and the 40 ms extra switching time are not required You can use the following "trick": Initially configure the *FT-817* mode (J1 and J2 inserted). Instead of a band-voltage, put a shorting plug on BU3, so that there is always 0V to the input, and it switches to Rel3 (BU9) 40 ms later basically only Rel2 to BU8. Rel1 to BU7 remains inactive. After another 40 ms the TRX PTT and CW locking then switches again. In all modes, after releasing the PTT button on the microphone, the waste PTT the digital mode interface or after CW delay of 600 ms in the reverse order off again. Figure 9 illustrates this as a timing plot. **Due to some identified problems** **two parallel transceivers with PTT Sig-** tonal to the microphone jack and the digimode or CW input on the Sequencer according to the source only the associated output signal as the final Switching stage. Thus, for example after operation the microphone PTT only this line connected to the transceiver, the Digimode- de-PTT is inactive and vice versa. During CW operation, only the correspond- enged output sampled at Bu6b. The transceiver must be at least in the semi- BK mode to work, otherwise it will not send. The PTT line in Bu10 is not ge- on.

transmit voice memory (voice keyer) The voice keyer function is in the ISD1760 circuit (IC4) under the control of the microcontroller IC3.

Recording mode The device gives four memories can be distributed over the entire recording time. Thus, there is no fixed specification for the recording time. For example, the first text could be 20 s, the second 5s, the third 25 and fourth 10 seconds long. The only limitation is a total recording time of 60 s **However, this flexibility requires, before a recording of the complete memory whatsoever. Subsequently, the Texts directly after each other off-set addressed. Four of which is incorporated not necessarily required to be in- example, only two are required, one can the recording procedure also be prematurely end.**

The recording procedure starts after the Operation of the *record* switch (S5). The Record LED (LED2) flashes to indicate the deletion of the entire memory. Once clearing is completed, the *Play* LED (LED1) signals through a Morse K, that the recording can be started. To record a message, press the PTT button of connected microphone (transmitter not upsampled in this case) speak then release the PTT

Button. During the recording the *Play* the LED is lit permanently. To store texts two to four, the process must be repeated. After 50s recording the *Record* LED begins to blink, to indicate that only 10 seconds of recording time remains. All four messages recorded, the *Play* - LED confirms by flashing "R" in Morse. We then set the *record* Switch back to the *off* position, the *Record* LED goes off and the recordings can now be used. If you want fewer than four messages, after the last recording set the *Record* switch to *Off*. This is also confirmed on the *play* LED by a Morse R. The receiving logic assumes that at least one voice message was left. If you put the *Record* - Switch back without a message the unit will go in to a fault mode and signals the Problem by continuous flashing the two LEDs. This continues until the *record* - Switch is pressed again, and at least one message is been recorded.

Playback mode Switches S2 and S3 control the playback of the stored messages and are used twice. A short press on S2 recalls memory 1, pressing S2 for half a second recalls memory 3. S3 behaves similarly for M2 and M4. For example, if you have only one Recorded message, this can only be played on S2. S3 and the Double occupancy for memory 3 and 4 are disabled in this case. **An exchange between the stores, example of one space for storage 4 space, forcing the circuit, the therebetween lying between storage locations to over- jump. The process is a short- Play indices flashing LED. The microcontroller keeps track of the last played message, so playing with renewed call the same memory starts immediately.** The transmission of the recorded messages can be by a short press the PTT switch on the microphone or S2 and S3 and can be cancelled at any time. If you want to play messages in a Loop, you put the *repeat* Switch S4 on and then select the desired text. Depending on individual preferences or activity the Break time on the potentiometer RP2 can be set on the front panel between 0 s and 30 seconds. turning off S4 terminates the loop mode. During playback, the text is still played to the end. In Loopback mode play is disrupted with S2, S3 or PTT every time - even during the breaks.

CW Keyer

The FA Station Manager uses the *Pico Keyer* by Dale Botkin, NØXAS, Dale has invested hundreds of hours in the further development ment of its CW keyer over the years. The offered functionality and to minimal space covers all requirements. The *PicoKeyer* includes an electronic keyer allowing paddle buttons to simulate *modes Iambic-A, Iambic B, Ultimatic* Another feature unit is that even hand keys can be used. At power-on the keyer checks the electronics, whether a Paddle (Stereo jack) or a hand- button (mono jacks) is connected. In the latter, signals paSS to the output But nevertheless recall (can only be described with paddles) - a very clever solution. This saves a separate jack for a Hand key. Complete control of the CW keyer can be done with only one button (S1). A Short Tap plays storage-1, holding the button pressed, you will hear beeps in succession: two for memory 2, three for memory 3, 4 for four memory. Releasing the button after each tone, plays the associated memory keyer contents. Whether this is repeated this automatically (with Pauses from 0 to 99s possible) can be set. Playback can be cancelled at any time by operating the Morse key. If you hold down S1 to get to the beeps for the CW memory in the Programming mode, various settings can be adjusted for example, the settings for the contest mode (including automatic QSO numbering off, abbreviated CW characters, such as T instead of Ø, etc.) and break times, weighting and sidetone. Also the Paddle mode can be changed. The functions of the keyer in the setup menu, are in the Appendix lists. At this point it is worth mentioning the speed setup In the on our

board realized Scarf tion variant, The CW speed can be set by RP1 at the Front pane; But in the programming mode a *default* can be set a speed when the RP1 is turned fully to the left. This allows favourite speed to be set easily.

Keyer Setup Menu Commands

U	<p>Tune mode: Tune mode is used to send either a steady carrier or a series of dits for adjusting or testing your station equipment. While in tune mode, each paddle acts as an on/off toggle switch. Tap the dash paddle to turn a steady carrier on or off. Tap the dot paddle to start or stop a continuous stream of dits. This gives you a 50% duty cycle signal that is preferred by some operators as a way to tune up with less stress on final PA, tuner and antenna components.</p>
S (Default: 13 WPM)	<p>Speed : The keyer will always announce the current speed in WPM. If the current speed is not the same as the stored speed, the keyer will announce the current speed followed by a slash and the stored speed. For example: Assume the stored speed is 13 WPM, any you have the optional speed pot installed and set for 20 WPM. The keyer will announce —20/13 . If you have the pot set to its minimum, you will be using the stored speed and the keyer will only announce the stored speed, since it is the same as the current speed. It sounds more complicated than it is; play with it a little and you'll get the hang of it. You can adjust the stored speed from the menu. Tapping the dot paddle will decrease the speed by one WPM, or the dash paddle will increase it. Holding either paddle will continuously increase or decrease the speed, with a dot or dash sent at the new speed for each step. When the paddle is released, the keyer will again announce the current speed setting and the stored speed, if it is different from the current speed. Speed may be set from 5 to 60 WPM.</p>
M	<p>Messages : Four message memories are available, numbered 1 through 4. When you enter Message mode, message 1 will be the default selection. You have a choice of actions available to you when in memory mode, selected by sending a single character from your paddle:</p> <ul style="list-style-type: none"> • Send the number 1, 2, 3 or 4 to select a message memory. The keyer will respond by sending 1, 2, 3 or 4 to confirm • Send P (Play) to listen to the contents of the currently selected memory. The keyer will play the message, followed by the Morse prosign AR and the message number • Send R (Record) to record a new message. If a message already exists it will be erased and replaced. The keyer will respond with K to let you know it is in record mode. Enter your message, with exaggerated word space but normal spacing between characters. If you make a mistake when recording the message, just send 8 dits and the keyer will backspace one word. You will hear a single dit to confirm this (two dits means you are at the beginning of the message). Tap the setup button once when you are finished recording. The keyer will send R and the message number to indicate the end of the message. You can then P lay the message back • Send C (Continue) to add to or edit the message. The keyer will play the current message, then enter Record mode. You can backspace over existing words if needed. <p>You can use the R, P and C commands to listen and change your message until you're satisfied. Each memory can hold up to 60 characters. If you send something other than 1 - 4, P, R, or C the keyer will respond with — ? and let you try it again.</p>

Several special embedded commands may be used in messages. All commands start with a slash followed by one or two characters. When playing back a message in setup mode you will hear the command itself, not its effect – message chaining, QSO numbers, pause and beacon mode are inactive while in setup mode. For example, you will hear /R instead of the word to be repeated. To store a slash character in a message, save it as //.

- /R will repeat the last word, including the word space after it. This can save a lot of memory space, since each /R takes up only two character positions in memory. For example, to send a 3x3 CQ, you can simply store —CQ /R/R DE (callsign) /R/R Kl. This can save a lot of memory space.
- /1 , /2 , /3 and /4 can be used to chain the message memories. The indicated message will be played immediately when one of these commands is encountered. You can chain messages in any order
- /P will insert a pause in the message. This will cause the message to pause while you manually send information such as manually entered QSO number, RST, etc. The message will automatically resume after a full word space has passed with no paddle input. Hint: If you use /P , store it immediately following the preceding characters without a word space. In other words, store — UR RST /P ...l instead of — UR RST /P ...l. This prevents you starting to send before the word space completes, which will terminate memory playback completely
- To have your message automatically repeat at timed intervals, insert the command /B (BEACON) at the end of your message. This will cause the keyer to delay for the number of seconds set with the B parameter (see below) and re - send the message. You can terminate beacon operation by tapping either paddle or the button. This can be especially useful for calling CQ, or to use your PicoKeyer to control a propagation beacon or —foxl transmitter
- To have Message #1 automatically start whenever power is applied to the PicoKeyer, store the /A command as the first two characters in message #1. This is useful for autostarting a keyer used as part of a beacon. Remember that you will still need to use /B at the end of the message if you want it to repeat.
- To send the QSO number and increment it by one, send /QI (QSO & Increment).
- To send the QSO number and NOT increment it, send /QN (QSO & No increment).
- To the last (previous) QSO number, send /QR (QSO Repeat). This is useful during contests if you need to send a —filll.
- To temporarily increase the keyer speed by one WPM, send /SU (Speed Up). Note that this and the /SD command will take effect immediately and will remain in effect only until the message is finished. You can store multiple /SU or /SD commands to change speed by more than one WPM – for example, /SU/SU will increase your speed by 2 WPM.
- To temporarily decrease keyer speed by one WPM, send /SD (Speed Down).
- To temporarily set a specific speed , send /S nn where nn is the speed you want. /S or /S0 will resume the normal speed. For example, to send a signal report at 30 WPM and return to the normal speed you would use /S30 599/S.

	<ul style="list-style-type: none"> To alter the letter spacing, send /F n where n is one digit, 0 through 9. This will act the same as setting the letter spacing in the menu. For example, say you want to add a little extra space between letters in your call sign in a CW message. You could store, —CQ /R/R DE /F2 N0XAS /R/R K /F0 /B . Remember to set the letter spacing back to your normal setting To insert an extra word space in your message, use the special prosign character — 1M (. -----). To insert a steady carrier, use the /C n command, where n is the number of seconds (from 1 to 9) that you wish to send the carrier.
Q	QSO Number: The keyer will send the current QSO number. You can use the paddles to set the QSO number anywhere from 1 to 255. Note that when the QSO number is auto - incrementing, it can go from 1 to 65535.
R L (Default: 5 WPM)	Range Low : This sets the low end of the speed control pot range . The setting is adjusted the same way you would set the stored speed – the dot paddle will reduce the setting, the dash paddle will increase it.
RH(Default: 40 WPM)	Range High: This sets the high end of the speed control pot range. Set the same way as the stored speed and low range setting.
L (Default: OFF)	Auto letter spacing: The keyer will announce the current setting and wait for input. Automatic letter spacing takes effect for messages sent from memory as well as code sent manually with the paddle. 0 turns automatic letter spacing off. In this mode you control the spacing between letters. This is the default setting, and is the same as most keyers. 1 turns on auto letter spacing at the set speed. A letter space is automatically inserted if the keyer detects no input from either paddle at the end of the space after a dot or dash. Settings from 2 to 9 will set automatic letter spacing with longer delays. For example, selecting 2 will insert one extra —ditl length spacing between characters. Selecting 3 will insert an extra 2 —ditl lengths, and so on. Note that auto letter spacing is ignored while in setup mode.
X (Default: 0/9)	Cut numbers: The keyer will send Ø and 9 using the current setting and wait. You can cycle between no cut numbers (Ø 9) cut zeros (T 9), cut nines (Ø N), or both (T N). Note that this only affects the way QSO numbers are sent. Other numbers in stored messages, or numbers sent by hand, are not affected. The default setting is no cut numbers.
Z (Default: N)	Leading Zeros: The keyer will send —Y or —N and wait. As with other menu settings, either paddle may be used to switch between the two settings. Y will send numbers in stored messages with up to two leading zeros (1 is sent as 001, 99 is sent as 099, 123 is sent as 123, 1000 is sent as 1000). N sends numbers without leading zeros. Like the X setting, this affects only QSO numbers and not other numbers stored in messages or sent manually. The default setting is N.
B (Default: 15 sec.)	Beacon delay: The keyer sends the current beacon delay in seconds. Use the dash paddle to increase or the dot paddle to decrease the delay between beacon transmissions from 0 to 99 seconds.
W (Default: 5)	Weight : The keyer announces the current weight and waits for input. The dot paddle may be used to decrease the weight or the dash paddle to increase it. Weight can be set anywhere from 1 (50% "light") to 5 (normal) to 9 (50% "heavy"). The default setting is 5.
T (Default: Y)	Sidetone : The keyer announces the current sidetone setting and waits for input. You can use the dot and dash paddles to switch between —N (sidetone OFF), —Y (sidetone ON) and —M (MCW mode). In MCW mode, the keying output is active any time code is being sent and for two word spaces after the key is released. This can be used to control the PTT

	line of an FM transmitter. Regardless of the sidetone setting, the sidetone is always used while in setup mode.
K (Default: Mode A)	Key Mode: The keyer will send the current keying mode: " A " or " B " for iambic A or B timing modes, — U for Ultimatic, — G for bug or — S for straight key. You can use the key or paddle to switch between modes. In —Bug mode, dots are made automatically with the correct spacing and length with one paddle input, while dashes are made manually with the other. If straight key mode is selected while using a paddle, either paddle input will key the transmitter.
P	Paddle Selection : This will allow you to reverse the paddles for misfired paddles or left handed operators. Simply hit whichever paddle you want to use for DITs. No need to rewire your paddle!
A (Default: Around 2 kHz)	Audio Tone: The keyer will send a dash at the selected sidetone audio frequency each time a paddle is hit. Use the paddles to increase or decrease the audio frequency as desired. The default setting is approximately 2000 Hz , which gives the loudest audio from the on - board speaker .
D (Default: 0)	Transmit delay compensation: Some transmitters tend to shorten Morse code elements when used in QSK mode. This setting can be used to lengthen Morse elements and shorten spaces to compensate. The setting can be from 0 to 50 milliseconds. This is similar to weighting, except that it is independent of speed. Weighting shortens or lengthens elements by a percentage; delay lengthens elements by a specified number of milliseconds. Be aware that this can cause problems when using large delays and fast speeds. The default setting is zero.
V	Firmware version: The keyer sends the version number of its internal firmware program.
C (Default: PDL)	Command Mode: You can select between —Button mode (BTN) or —Paddl e mode (PDL). In Paddle mode, you will hear a —? prompt once you enter setup mode. Simply use your paddle to send the Morse letter of the option you want to review or change. For example, to set the speed you would send —S . To leave a menu item, tap the button to return to the —? prompt. To leave setup mode, either tap the button again or send —SK with your paddle. In Button mode, just hold the button to scroll through the list of available commands. When you hear the letter of the item you want to change, release the button. When you're finished with that setting, y you can either tap the button to exit setup mode, or press and hold to continue with the list of setup commands. Note: If you have selected Paddle mode but are using a straight key, the menu will temporarily revert to Button mode since commands cannot be accepted from the straight key.
F	Factory Reset: The keyer sends — RESET ? and waits. If you tap either paddle the keyer will be completely reset to its original settings All message memories are deleted and the QSO number is reset to 1. If this is not what you want, tap the button to exit without making changes. You can also perform a factory reset at power - on. The button is pressed when power is first applied, the keyer will send — RESET ? in Morse code. Tap either paddle to perform the reset, or press the button to exit without resetting.