

KN920

Multi-mode transceiver KN920

operation manual

(for MCU v02.02)



Statement

This manual does not include installation and commissioning of the machine method, the daily use of the machine that contains only the relevant parts. The specification for the KN920 MCU software version v02.02, you can see on the boot screen KN920.

This manual is higher than the software version for the function KN920 does not fully include, if there is a new software version, please press the appropriate release control to the instruction manual.

Developer undertakes to maintain existing functionality methods of operation, unless the function has been canceled or whose operation has obvious flaws.

Be sure to use when using KN920 power, antenna, speakers and so meet the requirements!

KN920 panel a total of 7 buttons, 5 knobs, namely: POWER, DIS, F1, F2, F3, F4, ATU four buttons and RF POW, FM SQL, CW TUN, AF VOL and the main frequency knob.

RF POW: Frequency output power regulation, by adjusting it to the radio frequency output power to enough the requirements of use.

FM QSL: FM mode receiver squelch adjustment, in appropriate circumstances can the FM mode automatically when no signal is white noise cancellation.

CW TUN: CW narrow filter center frequency tuning, it requires the activation of the software menu, N-1, N-2 function can work side. By tuning the filter center frequency to obtain the CW signal to be received and to filter out unwanted interference enhanced.

AF VOL: Audio volume adjustment.

Other use of buttons and knobs will be described below.

Switch on/off power

In the power-off state, long press the POWER button to turn on the power.

In the power-on state, long press the POWER button to turn off the power.

Adjust the receiving frequency

Ham radio products www.bh3mde.com

Email:bh3mde@hotmail.com



Knob clockwise main frequency step value can be increased in accordance with certain receiving frequency.

Rotate the knob main frequency step value can be reduced according to a certain frequency receiver.

If the rotary knob does not change the main frequency receiving frequency, check the following items:

1. Ensure that the main frequency knob is not locked, ie, the first character of the second line of LCD does not display a small key symbol.
2. Ensure that the current state of the VFO, that the first character of the first line LCD for V.
3. Adjusted to ensure that the state is not currently RIT, that second line of LCD displays the last character is not a "<" symbol.
4. Ensure that the current does not hide the menu parameter adjustment of status, that is no longer the right side of the second line of LCD digital strings.

Change the step value

DIS button Short press repeatedly, the second line of the LCD display is adjusted to the character shown below:



Now press the F3 key, LCD second line becomes the following display:



Above the display and the machine corresponds to the current step value, then

Ham radio products www.bh3mde.com

Email:bh3mde@hotmail.com

rotate the main frequency knob above the display will change back to, for example, when the main frequency knob clockwise one bar, LCD display will change to the second line:



"^" Symbol corresponds to that on the first line of the frequency A is changed when rotating the main frequency of the knob position to be changed.

Step value is adjusted to the desired position, press the F3 key to return to the previous state, then the knob and then rotate the main frequency can be changed according to the new step value of the receive frequency.

Save a frequency to current channel

If a frequency is that you always want to use, such as a local AM radio station frequency, you can use KN920 channel storage function will preserve these frequencies, the next time when you need to use can be very easily and quickly tuned to this channel, easy to listen to. Current channel is displayed on the LCD first row, fourth and fifth characters represent the number at the channel. To store a frequency into the current channel, you only need to ensure that the current work in the VFO mode, then repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



At this point press the F4 key to store the frequency of the current work to the current channel.

Memory frequency to the specified channel

If you want to store the current frequency to the specified channel, need to follow the following operations:

The KN920 switch to MEM state, if not the MEM status, you can repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



Then press the F1 key, the first line of the LCD will display the first character is M.



Then rotate the main frequency knob to adjust to the need to store the channel, and then press the F1 key to switch back to VFO state, and finally press the F4 key, the current frequency is stored to the desired channel storage.

Switching channels

Stored in the channel more content, you can switch channels to listen to a desired program and signals. To switch to a different channel, you need to switch to MEM KN920 state, if not the MEM status, you can repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



Then press the F1 key, the first line of the LCD will display the first character is M, ie, channel status.



At this time the main frequency by turning the knob you can change channels, listen to the specified signal.

If the rotary knob does not change the main frequency channel, please check the following items:

Ensure that the main frequency knob is not locked, ie, the first character of the second line of LCD does not display a small key symbol;

Ham radio products www.bh3mde.com

Email:bh3mde@hotmail.com

Ensure that the current state of the MEM, ie, the first character of the first line of LCD is M; Ensure that the current does not hide the menu parameter adjustment of status, that is no longer the right side of the second line of LCD digital strings.

Read from the channel frequency

In some cases, the need to adjust the reception frequency stored in the frequency down to a channel in the vicinity of such channel is stored in a 7.050MHz, and now have to work 7.053MHz, which requires the frequency of the channel status read channel VFO in the past. Operation should be carried out as follows:

In MEM mode, select the channel to be read, press the DIS button repeatedly, the second line of the LCD display is adjusted to the character shown below:



Then press the F4 key, the current state of the channel and frequency have been read out, and automatically switch to the VFO state, you can rotate the main dial to adjust the frequency of the received frequency.



Switching work mode

KN920 in LSB, USB, CW, AM, FM mode, these types of work, and you can switch back and forth, to switch to a working model, you need to follow the following steps:

Repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



Then press the F1 key, the mode will switch between the LSB and USB, press F2, operating mode will switch to CW, press F3, operating mode will be switched to AM, press F4, operating mode will switch to FM.

KN920 now live mode appears on the LCD at the last character in the first line of each mode is shown below:

**Ham radio products www.bh3mde.com
Email: bh3mde@hotmail.com**

L	U	C	A	F
LSB	USB	CW	AM	FM

Using N-1 Function

KN920 can be changed by inserting a center frequency narrowband filter, used to provide additional resistance to adjacent channel interference performance. Insert and cancel two states can switch, to switch to another state, you need to follow the following steps:

Repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



Then press the F1 key to toggle between insert and cancel

KN920 now live broadband and narrowband status is displayed in the first line of the third character LCD to the left.

When the display is a long time, the filter N-1 insert.

When the display is a short bar, the filter N-1 canceled.

Using N-2 Function

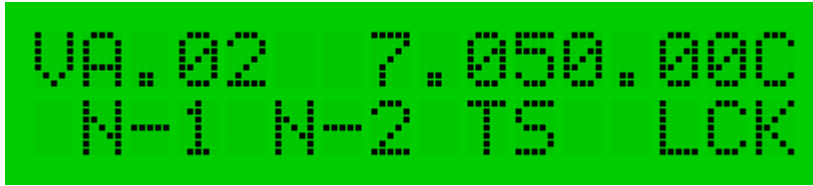
KN920 is provided with another set of variable center frequency of high-Q narrow band filter is N-2.

N-2 to start the N-1 was only based on the start. If the N-1 filters are canceled, N-2 is automatically canceled.

Use the lock function

When tuned to a frequency, we can begin to enjoy the waves of fun, but sometimes careless sensitive to touch down the main frequency knob (the knob can trigger 40 times per lap, 9 degrees per turn can trigger a) in this case, you can use the lock function of the primary frequency lock knob, the knob ignore the master frequency control signal generated by the rotation. Locking and non-locking state can be arbitrarily switched with each other, you want to switch to another state, you need to follow the following steps:

Repeatedly press the DIS button to adjust the second line of the LCD display characters showbelow:



Then press the F4 key will toggle between locking and non-locking. KN920 now live lock status display on the LCD first character of the second line.

When displaying a small key symbol, main frequency knob is locked;

When a small key symbol is not displayed when the main frequency knob is not locked.

Main frequency knob lock restrictions are imposed only on KN920 frequency, channels, and RIT (Receive fine) adjustment, KN920 all other keys and other functions will not be restricted.

Switching VFO-A and VFO-B

Now transceiver typically set VFO-A and VFO-B two frequencies, KN920 well. Setting a variety of roles two frequencies, one of which can be stored in different frequency operation (SPLIT) of the two frequencies. Here's how to switch between these two frequencies. To switch to another state, you need to follow the following steps:

Repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



Then press the F2 key will VFO-A and VFO-B to switch between.



KN920 now live VFO status display on the LCD at the first line of the second character.

When the character A is displayed, KN920 in the VFO-A.

When the display character B is, KN920 in VFO-B.

Using A = B function

Ham radio products www.bh3mde.com

Email:bh3mde@hotmail.com

KN920 contains A = B function, which can be very quick to VFO-A and VFO-B frequency set to the same frequency. To use the A = B function, you need to follow the following steps:
Repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



Then press the F3 key will VFO-A and VFO-B frequency equal.



When the current job at the VFO-A, the above result of the operation will VFO-B is equal to the frequency of the VFO-A.
When the current job at the VFO-B, the above result of the operation will VFO-A is equal to the frequency of the VFO-B.

Using different frequency transceiver function

In amateur radio work, and sometimes need to get yourself receiving and transmitting equipment operating at different frequencies.

KN920 has a different frequency transceiver functions, to use this feature, you need to follow the following steps:

Repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:



Then press the F1 key, using different frequency transceiver functionality and is not used to switch between different frequency transceiver function. KN920 now live in different frequency transceiver operating status display on the LCD at the second line of the fourth character. When the display character SPO when, KN920 in different frequency transceiver operating status.



When the display character SPF when, KN920-frequency transceiver is not in working condition.

When you enable the different frequency transceiver function, KN920 will automatically PTT / CW reception and transmission control switching frequency.

When the current job in the VFO-A, press the PTT / CW, KN920 will automatically switch to VFO-B transmitter;

When the current job in the VFO-B, press the PTT / CW, KN920 will automatically switch to VFO-A emission;

When the current in the VFO-A launch, release PTT / CW, KN920 will automatically switch to VFO-B receiver;

When the current in the VFO-B launch, release PTT / CW, KN920 will automatically switch to VFO-A receiver;

Note:

As KN920 launch low-pass is to use relay control, so I do not recommend that users use two different bands on different frequency transceiver functions.

When using automatic key feature when working different frequency if needed, please confirm the two VFO mode of operation is CW.

Use automatic key function

KN920 includes automatic key , auto key in accordance with the standard 1:3 ratio to issue the corresponding dots and dashes .KN920 automatic key functions used in two modes

One is the relatively early automatic key way , each time you press a button , it will automatically send a corresponding signal point plan , if quick succession press any key , it will automatically send key operation too late to order saved, and then in turn send signals corresponding point plan .

In this mode, press and hold a key down will only be sent once the signal . This model KN920 is defined as KEYS-NORMAL mode.

Another automatic key way is to hold down a key, the KN920 will send this key represents a continuous signal when it is released it will stop sending . In this way many times for a quick press also has a memory function , it will be too late to automatically send key operation saved, then turn sent. This mode is defined as KN920 KEYS_FAST mode.

To use KN920 automatic key function , you need to follow the following steps:

Repeatedly press the DIS button to adjust the second line of the LCD display characters shown below;



Then press the F2 key, the key will automatically switch between the various states,

KN920 now live automatic key work status display on the LCD at the second line of the eighth character.

When the display character 0, it indicates OFF, KN920 automatic key in the closed state;

When the character N, indicates NORMAL, KN920 automatic key in NORMAL state;



When the character F, it means FAST, KN920 automatic key in FAST state.



Note: KN920 speed automatic keys can be hidden menu to adjust the specific adjustment method see KN920 adjustment menu brief description (ver01.05)

Use UP / DOWN keys function

KN920 handle includes a microphone UP / DOWN key, UP / DOWN keys There are three functions:

In CW mode and automatic key feature is enabled in the case, UP keys correspond to sending a point;

In CW mode and automatic key feature is enabled in the case, DOWN keys correspond to transmit a program.

In any mode, and automatically shut down in case key functions:

Short press UP key is equivalent to the main frequency knob clockwise one unit;

Press DOWN key is equivalent to the main frequency knob counterclockwise one unit;

Press UP key equivalent continuous clockwise rotation of the main frequency knob;

Press DOWN key is equivalent to the constant rotation of the main frequency knob counterclockwise.

Trimming function using the receiver

KN920 with acceptable frequency tuning function, can be adapted to receive and transmit frequency QSO objects inconsistencies or some other conditions. To use the receiver tuning function, you need to follow the following steps:

Repeatedly press the DIS button to adjust the second line of the LCD display characters shown below:

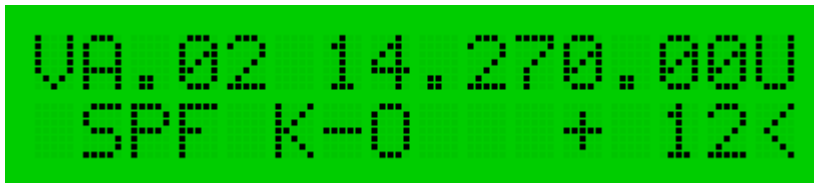


Now press the F3 key will be received in the use of fine-tuning and fine-tuning does not use the receiver to switch between

KN920 whether receiving trimming function in the second line of the LCD can be seen,

When the RIT, it means receiving trimming function is not used;

When the display similar to the following characters, that the use of fine-tuning of the receiver.



Shown above, indicates the current receiving frequency than the VFO frequency (LCD first line shows the frequency) high 120Hz, receiving and tuning frequency shown in the display is corresponding to the VFO frequency, i.e. see the numbers on the LCD of the last a bit of 10Hz.

Contents shown above represent the following meanings:

Current VFO frequency is higher than the reception frequency, another possibility in the display is the symbol "-", which represents the current VFO frequency is lower than the reception frequency.

12 999 numbers or other small, representing VFO receive frequency and the frequency difference value, the unit is 10Hz. Ie receiving trimming can be adjusted between the $\pm 9.99\text{kHz}$.

<Means now turn the main tuning frequency knob to change the frequency of acceptance, rather than changing the VFO frequency.

If you need to change the VFO frequency, you can press the F4 key to switch, when <disappears, turn the frequency knob can change live VFO frequency.

Check the signal strength

Ham radio products www.bh3mde.com

Email:bh3mde@hotmail.com

KN920 received signal strength can be displayed, the function of the S-meter.

To use this feature, you need to follow the following steps:

Long press the DIS button, adjust the second line of the LCD display characters shown below:



Character S behind the black bar represents the number of signal strength.
(Note: This feature can only be qualitative, not quantitative be displayed.)

View output power intensity

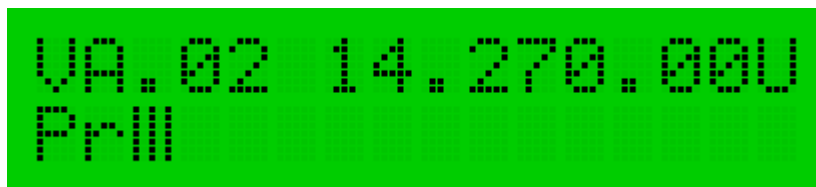
KN920 to show the strength of the transmit power.To use this feature, you need to follow the following steps:The launch state, long press DIS key to adjust the second line LCD display characters shown below:



Po character behind the black bar represents how much the strength of the output power.
(Note: This feature can only be qualitative, not quantitative be displayed.)

Check the strength of the reflected power

KN920 can display the intensity of the reflected power.
To use this feature, you need to follow the following steps:
The launch state, long press DIS key to adjust the second line LCD display characters shown below:



The characters behind the black bar represents the reflected power much strength.
(Note: This feature can only be qualitative, not quantitative be displayed.)

View SWR rate

**Ham radio products www.bh3mde.com
Email:bh3mde@hotmail.com**

KN920 VSWR can display size.

To use this feature, you need to follow the following steps:

The launch state, long press DIS key to adjust the second line LCD display characters shown below:



SWR characters behind the black bar represents the number of standing wave ratio (SWR) in rate.

(Note: SWR meter function can only provide information, its accuracy is not the focus of the design.)