HAMCUBE CW Pokemon

V5.03 User Manual

HAND Electronics studio

2021.11

Directory

Product introduction

Thank you for choosing our HAMCUBE CW Pokemon Trainer and let's experience the fun of ham radio.

HAMCUBE is an EMBEDDED HAM product based on ARM. The main purpose of product development is to build an open architecture and realize some HAM daily functions by cooperating with different expansion boards. Use alone can also complete a certain core HAM electronic DIY products.

HAMCUBE CW Pokemon is a controller with built-in CW exercise firmware. It has all the functions of CW learning and can assist learners in the learning links such as code recitation, code listening and copying, and code sending. Two CW fun games are included to make you enjoy learning the CW.

HAMCUBE CW Pokemon is also a CW connected assistant that can connect to hand keys, auto keys and computer keyboards. It is compatible with IambicA and IambicB modes. It can even connect computers and mobile phones with cables. There are 8 groups of preset sending messages built-in in the machine. When connected to a computer or mobile phone, more preset information storage groups can be obtained to assist fans to connect to THE CW more easily.

The device has built-in connection log recording function.

You can edit, input, and output connection logs by keys and keyboard. The output radio log information is in standard ADI format, which is easy for other radio log software to export and process.

With CW Pokemon Pro, you can also digitally decode CW audio signals from external stations on the DSP and display the decoded information on the screen. Enable the Chinese decoding function, but also realize the Chinese and English mixed send and decode.

Accessories

CW Pokemon Mini

Mini host	1 pcs
USB charging data cable	1 pcs
OTG conversion plug	1 pcs
Adhesive machine support	1 pcs
Equipment storage bag	1 pcs

CW Pokemon Pro

|	
Pro host	1 pcs
USB charging data cable	1 pcs
OTG conversion plug	1 pcs
Dual 3.5mm audio cable	1 pcs
Adhesive machine support	1 pcs
Equipment storage bag	1 pcs

Optional accessories

- External MIC audio options:Used to collect radio audio signals for decoding.
- PS/2 keyboard adapter option:Connect PS/2 computer keyboard to host for sending code.

Release notes

The release number includes the device hardware version number and device software version number.

Hardware Version number: X . XX

Child version number

Main version number
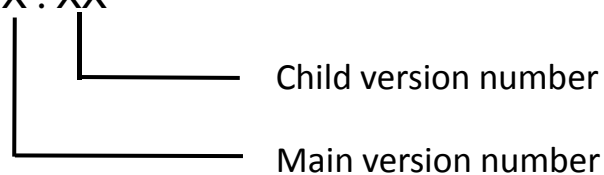
The hardware major version number is the development code of the series of devices, throughout the life cycle of the series of devices, will not change; Hardware subversion refers to the hardware upgrade or improvement code of the series, and increases with hardware changes. The larger the subversion number is, the newer the hardware is.

Software Version number:

X . XX . XX

Test version Number

Child version number

Main version number
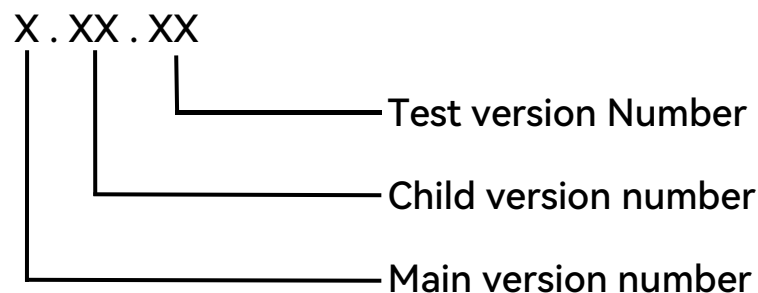
The software major version number is the development code of the software firmware of the series devices. It will run through the life cycle of the series devices and will not change. The software subversion number is the stable release version of the software of the series of devices, and the release version after major adjustment of software functions and stability test; The test version number is a record of software changes such as minor adjustments, BUG fixes, and new function tests based on the subversion number. The beta version of the software is adjusted to a certain extent and is upgraded to the next stable

release after a long period of testing by users.

The hardware and software version number of this machine can be viewed in "Menu" -- "System Parameter Setting" -- "System Information". For details about how to download the firmware upgrade, see Section 15 in the user manual.

Matters needing attention

● HAMCUBE CW Pokemon is not a consumer electronics product. Users need to have certain radio knowledge, and the device should not be left for children to play with or use.

● When using outdoors, please pay attention to waterproof and moistureproof, and can be put into waterproof plastic bag when necessary.

● The external interface, programming interface and USB charging socket of the device are all surface patch components. Please be careful to remove and insert the device when using, and exert vertical force to avoid damage to the interface.

● The batteries used in the equipment are lithium polymer batteries, which should be properly kept out of the reach of

children.

● Do not use the device directly exposed to sunlight. This may cause the device temperature to rise too quickly or use the device in high temperature for a long time, which may affect the service life of the device and battery and may cause further risks.

● The device should be watched when charging, and keep away from flammable and explosive objects. Do not cover the device with other objects.

● In hospitals, airports and other places sensitive to RF signals, do not turn on the device.

● The output signal of the SP audio output jack of this product is strong, please adjust the appropriate volume before inserting the earphone to listen, in case of ear hearing damage.

1 Panel shows

The key that

Power multi-function switch: this is a three-way multi-function button, which can start up, shut down, adjust parameters and other functions.

Panel indicator light: when the code is sent or decoded, it is lit to indicate the signal.

F1-f4 function keys: Different functions can be realized based on different interfaces. You can click to complete the corresponding functions in the function area on the right of the screen. Long press THE F1-F4 key to convert the fast function area (see setting the fast function area for details). In menu Settings, most functions of the F4 key are to exit, give up and

return to the upper-level menu.

Reset button: press the Reset button in the hole with a fine thing to achieve the Reset of the machine, used to restore the machine abnormal situation or Reset the machine after the upgrade operation is completed.

Long press the power button to power on, the blue indicator on the panel will light up, and the startup LOGO screen will be displayed (users can design and customize the startup screen freely), and then enter the work interface, which is composed of status bar, functional area and main window. The status bar displays some system parameters: electric quantity, code speed, key type and state parameters of decoding board; Function area displays the shortcut function corresponding to the current function key; The main window displays the content that is freely sent or decoded.

Status Bar Description

- Electric quantity display: When the electric quantity display is empty, please charge the device in time

- Bit speed setting: display range 10-50

- Decoding speed display: display range of 10-50

- Key types: Hand, Auto and Bug counter key, Auto key and analog Bug key

- Audio flags: system mute and enable flags

- Decoding board connection state: Display decoding board connection state (professional version function)

- Decoder board Filter (FIL) parameters: Display the current filter parameters (professional version function)

- Decoding board digital Noise reduction (DNR) parameters: display digital noise reduction level (professional version function)

Functional areas:

Indicates the function key shortcut on the current interface. On different interfaces, the content of the shortcut key prompt changes to correspond to the function of the current shortcut key.

The main window:

The main window is used to display Chinese and English characters for sending and decoding. Each line can display 24 English characters or 12 Chinese characters. The window can display 8 lines of content in total. The current line of Chinese characters is displayed in red to alert the user. Whether to enable Chinese display can be set in the menu.

2 Device to connect

Mini:

- A charging port and data controller connect to a computer and mobile phone to send messages at a cost. You can also upgrade the system firmware. It also acts as a charging port for the internal battery of the device.

- A keypad interface connects to different types of hand keys, automatic keys and, via optional keyboard adapter attachments, a PS/2 interface on a computer keyboard for sending messages.

- A headphone jack connects to either headphones or an external speaker, either active or passive. The power of a passive speaker is limited to 5W, and the plug on the interface has to be stereo. Using a mono plug can short-circuit a sound channel and damage the audio module.

- Keyed output and multiplexing interface: the default function is keyed output, which can output the CW control signal sent by the machine. It is effective at low level and can control the key interface of external shortwave radio, which is used to control the sending of CW information of shortwave radio. By enabling the reuse function, this interface can also realize other special functions (not currently used).

Pro:

- Anyway, the Mini version adds a row of interfaces to its version, which features the rest of the interface.

- The audio input interface bills an external CW audio signal into the device decoding expansion board via a data cable, which is used for CW decoding.

- A virtual audio output interface connects to either a headset or an external speaker, either active or passive. The power of a passive speaker is limited to 5W, and the plug on the interface must be stereo. Using a mono plug can short-circuit a sound channel and damage the audio module.

- Expansion ports are reserved for system function expansion (not currently used).

Typical connection mode:

  The device can be connected to the computer, mobile phone or the KEYBOARD adapter to connect to the PC keyboard to send CW information. When the mobile phone is connected to the device, the OTG adapter plug should be connected to the device. When the PC keyboard is connected to the device, the keyboard adapter option should be connected to the device. The device is connected to the KEY interface of the external radio through a stereo audio cable, and the audio of the radio is connected to the audio input interface of the device through the audio cable or MIC module option (the professional version has a unique function, but the mini version does not have this function).

This typical device connection can realize the function of sending and receiving both Chinese and English (the mini version can only send both Chinese and English).

[Note] After the decoding function of the professional version is enabled, the volume of the side voice of the radio station should be turned off to prevent the side voice of the radio station from being sent into the mixing of the decoding board and the transmitting audio of the device, resulting in the incorrect display of the transmitting information on the screen.

3 Basic operation

Device keys:

Click – Release after pressing the button

Long press – Press the button for 0.5 seconds and release

Continuous – Pressing the button is not loose

Power multi-function switch: this is a three-way multi-function button, long press down can realize the device boot action; You can click down to enter menu items, determine parameters, select content, and pause and resume playing. Downstroke can

realize the function of shutting down the device. In the working interface or part of the practice interface, the left and right function keys can adjust the code speed, and the code speed value is displayed in the status bar of the screen. If the power button is not loose, the volume of the machine can be adjusted quickly (if the volume is not loose, it will increase if the volume is not loose, and if the volume is not loose, it will decrease if the volume is not loose), and there will be a prompt sound for volume adjustment. Release the power button when the volume is appropriate.

Firmware upgrade:

● Power off the device;

● Hold down the F1 and F4 keys, and long press the power button to power on. Release all keys when the firmware upgrade prompt appears on the screen.

● Connect the device and computer with data cable (professional version please use the TOP USB port), wait a moment, the computer prompts to find a mobile storage device named HAM MODULE;

● Copy the upgrade file to the mobile storage device

according to the instructions of the upgrade package. Ensure that the TXT file name on the storage device is ready. TXT. After the file is copied, the mobile storage device will refresh the file name. You can copy only one file at a time. Before copying the next file, hold down F4 and manually reset the mobile storage device once. After the TXT file in the storage device is named ready. TXT, you can copy other upgrade files (the file names cannot be changed without authorization).

● After the required upgrade file is copied, hold down the power button or press the reset button in the reset hole with a thin pin to shut down the device and remove the USB data cable. Wait for 3-5 seconds and press the power button to restart the device to complete the upgrade.

Note: If you upgrade in Win10 or Win11 operating system and upgrade user program firmware (A000014. bin) separately, the upgrade interface will be directly displayed (unknown system problems) when starting up, so you cannot enter the user interface. Please shut down the machine, press F1 and F4 keys while starting up, and re-enter the upgrade interface. Try refreshing F000000.bin (boot screen firmware) and then

A000014.bin (user program firmware).

Firmware file description:

A000014.bin   User master program firmware (must be brushed into the device each time)

F000000.bin   Custom boot screen firmware (no need to swipe in every upgrade)

F0000C0.bin   Resource firmware (according to the version upgrade prompt, determine whether to flush)

F003800.bin   Font firmware (no need to swipe in every upgrade)

The file name in the upgrade package is related to the location of the program. Do not change the file name at will; otherwise, serious consequences may occur.

Set custom boot screen:

The image file used for the boot screen should meet the resolution of 320*240. If the image does not meet the requirements, use image processing software to adjust the si

ze of the image. At https://gitee.com/admvip/cw-pokemon-infomation (foreign users: https://github.com/admvip/CW-Pokemon-Infomation) in the Tools directory, download ImageLcd. Rar tool package, extract to the hard disk, it is a green software, enter the software inventory, Double-click to run the Image2Lcd. Exe main program. In the output data type select: binary (*.bin); Scan mode: horizontal scan; Output gray level selection: 16-bit true color; Maximum width and height: 320 and 240; Check the include image header data and MSB First option. Click on the 16-bit color TAB and check the R:5 G:6 B:5 option; After all Settings are completed, click the Open button to open the image file that has been made. After observing that the images in the left and right Windows are normal, click the Save button to save the image as a bin file with the same name. Change the bin file name named with the original image file name to f000000.bin, and then copy the file into the device in a normal upgrade way. After the restart, the change of the boot screen will be completed.

F1-F4 shortcut function keys

As the name implies, a button can quickly perform a function, a menu. The panel size of CW POKEMON series machine is limited. There are only four function keys on the right side of the panel, namely F1, F2, F3 and F4. In order to realize more shortcut functions, the function keys are reused, and each shortcut key has different functions in different reuse modes. You can view the function prompt of the current shortcut key in the function prompt area on the right of the screen.

You can enter four different shortcut areas by holding down the function key. In each shortcut area, you can press F1-F4 to realize four more shortcut functions. The F1 shortcut area has two shortcut areas. So including the default boot four shortcut functions, through the partition Settings, the machine currently has 24 shortcut function keys can be used. The shortcut function of partition 4 has not been developed and will be used in the system upgrade.

In menu Settings, most functions of the F4 key are exit, abandon, return to the upper-level menu and other functions.

List of shortcut functions

Key	default function	Long press F1	Long press F2	Long press F3	Long press F4
F1	Memory training	AutoCall 1.5	Mute/Restore	Log entry	NULL
F2	Listen training	AutoCall 2.6	Decode board filter selection	Log view	NULL
F3	Send training	AutoCall 3.7	Decode board DNR selection	Log output	NULL
F4	Follow training	AutoCall 4.8	Clear the screen	Clear the screen	NULL

Key function mapping table of each shortcut function area

The above functions can be entered or realized by one-key shortcut. To enter the exercise function and log function, press F4 or ESC key to terminate and exit normally.

Hold down the F1-F4 key to switch between default functions and shortcut functions. Users can set them according to their own needs.

After the startup LOGO screen is displayed, the device enters the work interface. The device is mainly divided into two interfaces, one is the work interface, the other is the menu and function options interface; Click the power button to enter the menu Settings and function options interface, and click F4 to return to the work interface.

On the working interface, you can freely practice sending and receiving, and use it as receiving decoding and automatic call. The machine has 8 custom character storage areas and 1 call sign storage area, each memory can store 60 user-defined characters (including space), which can be used to call one-key send in the working interface. You can also use the shortcut keys of the functional area to quickly achieve various preset functions.

CW decoding Settings and adjustments

CW audio decoding is a special feature of the bag Spirit professional edition, which can decode the CW audio signal of the radio station after digital processing with DSP and display it on the screen. The difficulty in decoding short-wave CW audio

signals mainly lies in the fact that short-wave signals are influenced by ionosphere and have different degrees of QSB, which leads to great changes in signal strength and high short-wave background noise, thus affecting the decoding accuracy of CW signals. So machine decoding can not replace manual decoding, can only be used as an auxiliary means.

When using Pocket Smart Pro for CW audio decoding, there are two key points to improve decoding accuracy. First, the audio signal level sent by the shortwave radio station to the host should be just right, so that the host is in the most sensitive level of CW audio signal, which will greatly improve the decoding accuracy and reduce the error code level. The second is to adjust the frequency of the receiver, the CW audio signal frequency is controlled near 600Hz, will greatly improve the signal recognition rate of the expansion board; Specific operations are as follows:

1. CW decoded signal volume adjustment

Connect the audio of the shortwave radio station to the audio input port of the decoding board through the audio cable with a 3.5mm plug, or connect the audio input port of the decoding board with an external MIC option (it is recommended

to use the external MIC option, so as not to affect the radio speaker sound). Turn on the radio, adjust the radio's volume knob or RF gain knob, or adjust the gain potentiometer of the external MIC option (clockwise volume is large, counterclockwise volume is small), so that the CW decoding indicator on the pocket Elf host panel just goes off without CW signal (increase a little and it will blink). At this time, the decoding sensitivity of the audio level is the highest. When there is CW signal, the CW decoding indicator light will flash clearly with the rhythm of the code signal. When the signal stops, the corresponding flashing will also stop, and the decoding accuracy will be relatively high at this time.

Of course, the recognition rate of CW decoding is directly proportional to the quality and signal-to-noise ratio of the signal. The stronger and clearer the signal, the higher the decoding accuracy. When the weak signal or the noise is larger than the signal, the decoding accuracy will decline, or even can not be decoded.

2. CW decoded signal frequency adjustment system

In audio input level after the adjustment, will have signal, radio frequency to fine-tune knob, radio frequency makes the

CW signal occurs, the pocket elf host panel light is bright, is the accurate decoding frequency, although about frequency deviation can be decoded, but obviously the accurate decoding frequency, will improve the decoding of the time.

3. CW Common Settings for decoding

- Filter bandwidth setting   medium
- DNR Settings   No
- Decoding tolerance   9
- Decoding the lock   Shut down

When the signal interference is large, setting the filter to narrow band or starting the digital noise reduction function can improve the ability of decoding CW signal from noise to a certain extent.

When the CW decoding function is not used, please disable the decoding function in the options menu to save the battery consumption of the host.

4 Morse code training

Enter the menu to select Morse code training options, internal there are 8 corresponding training functions:

- Memory training: the machine displays characters or code symbols to assist learners in memorizing code symbols;

- Listening and copying training: the machine sends different patterns of code for learners to practice listening and copying;

- Koch listening and copying training: Listening and copying training using the Koch method, a total of 40 periods;

- Sending training: the machine displays messages of different modes of code, and the learner carries out sending training;

- Following the training: the machine displays random characters. After the learner sends the message, the machine evaluates the sending method.

- Sending game: a random Tetris style sending game in which learners erase characters using keys or keyboards;

- Listen and Copy game: a random card game in which learners select the correct answer by pressing a button or keyboard;

- Chinese sending: send Chinese telegram code, the machine

shows the sending result.

Memory training

Before memory training, you can also set the mode of random reporting, which is the same as listening and copying training. You can also set the delay for displaying the correct information. After entering the memory training function, the shortcut key functions are as follows:

F1: display the character code comparison table, flip the power button left and right to switch the display, F4 exit

F2: Display the characters first, and prompt the corresponding code symbol and audio after the delay

F3: display code symbol and audio first, and display corresponding characters after delay

F4: Exit the exercise and return to the superior menu

After entering the memory exercise function, you can press F1 to display the code symbol table for view, and press F4 to exit the view; Press F2 or F3 to perform code-assisted memory exercises in the set mode. The machine sends CW characters randomly, and the user answers the corresponding information according to the displayed characters, and then compares it

with the standard information to strengthen the memory effect of CW characters. Initial practice, the delay time can be set a little longer, leave enough time to think; Later skilled, can set a shorter delay time, improve the response speed. Press F4 to exit the exercise and return to the superior menu.

Listen to copy training

Before listening and copying training, you need to set the interval between characters and words, the number of practice groups, the pattern of random characters, and the setting of custom characters (if necessary) according to your own training requirements. The training mode includes pure letters, pure digits, mixed mode, callsign mode, custom character mode, and communication phrase mode. Users can select the training mode as required.

After entering the listening and copying training function, the shortcut keys are as follows:

F1: Repeat this training

F2: Display the characters first, and then send the corresponding code audio

F3: send the code audio first, then display the corresponding characters

F4: Exit the training and return to the superior menu

Click F2 (display characters first) or F3 (display characters after) to select the display mode, and then start listening and copying training. Learners copy the code message, and check it with the report displayed on the screen after listening and copying. Press F2 or F3 to turn the page before and after viewing. Press F1 or press the power button to repeat the listening exercise. Continue pressing F4 to exit the listening training.

Listen to copy the training step by step training method: first of all, choose a suitable speed (not too low); Send the time interval of characters, need to increase the early time interval, with the increase of proficiency, gradually narrow the time interval, the interval of the initial can be accumulated it is advisable to copy the content of 10%, 90% when can correct and stable copy after the training of character, a time interval can be narrowed, continue to repeat the above steps training. Until the character interval is reduced to the normal level (normal horizontal character interval is 1 stop).

Koch listens and trains

Learning the CW (Morse Code Telegraph) is a gradual process. It is generally believed that we should learn to listen and copy first, and then learn to take and send. Listening and copying training is also emphasized on the speed of step by step, from a very slow speed, in the copying accuracy of close to 100% and then gradually improve the speed, until the level of operation on the machine. The Koch method is different in that it starts from the target speed and emphasizes direct response rather than "translation". Of course, the Koch method also emphasizes gradual copying. The copying training starts with two letters, and when the copying accuracy reaches 90%, another letter is added until the learning is complete. After the Koch method listening and copying training function is enabled, the shortcut keys are as follows:

F1: Repeat this training

F2: Display the characters first, and then send the corresponding code audio

F3: send the code audio first, then display the corresponding characters

F4: Exit the training and return to the superior menu

Click F2 (display characters first) or F3 (display characters

after) to select the display mode, and then start listening and copying training. Learners copy the code message, and check it with the report displayed on the screen after listening and copying. Press F2 or F3 to turn the page before and after viewing. Press F1 or press the power button to repeat the listening exercise. Continue pressing F4 to exit the listening training.

Character interval time and word interval time can be selected to adapt to the current speed target training; Koch course parameters can be set. The range of courses ranges from 1-40. Each additional lesson will add a new character, and each lesson needs to be gradually reduced from the larger character and word interval to the standard interval of 1, and then transferred to the next course. Step by step from lesson 1 to lesson 40, you can complete the listening and copying of all 40 CW characters.

Transmitting training

Before sending out training, you can also set the mode of random reporting, which is the same as listening and copying training. After entering the sending training function, the

shortcut keys are as follows:

F2: Turn the page up

F3: The bottom of the newspaper page down

F4: Exit the training and return to the superior menu

The sending training automatically generates the character reporting for sending. Learners can carry out the sending training according to the reporting, turn the page of the reporting content through F2 or F3, or press F4 to exit the training and return to the higher menu.

Tip: The random English characters automatically generated by sending messages can also be used as the base of the characters when the code is read aloud.

Following the training

The following training mode is specially aimed at using the hand keys to send messages for training. By comparing with the sound and graphics of the standard code, it can find out the irregularities in the hand keys sending messages of the trainer, and then the trainer can conduct targeted correction training.

Before entering the following training, some related system parameters need to be checked and set. The first is to adjust to

the appropriate code speed; Secondly, in the menu of "System Parameter Setting", set the parameter of "Decoding tolerance" to an appropriate value (the smaller the value is, the more strict the time check of CW dot, stroke and interval, and the higher the requirement of sending technique), such as 3 or 5, in order to obtain a good hand key training effect.

Before following the training, you can also set the random or custom character reporting mode, which is the same as listening and copying training. After entering the following training function, the shortcut key functions are as follows:

F4: Exit the training and return to the superior menu

Follow the training into the interface, the machine can according to set good character pattern, the randomly generated a training characters, trainers need according to the characters of display, with a key issued corresponding code, after the hair machine can be evaluated according to the standard code transmitting technique, and through comparing the form of a graphical display on the screen, according to the machine evaluation, The trainer can correct the problem of transmission technique. When the learner sends a wrong code, the machine will send the character repeatedly, and the trainer can continue training.

In the following training, the power button can be adjusted at any time to adjust the coding speed; Press F4 to exit training and return to the superior menu.

Transmitting game

Before sending the game, you can also set the game mode, game speed, and view the game record list. After entering the game function, the shortcut key functions are as follows:

F4: Exit the exercise and return to the superior menu

There is a 3-second countdown before the game, and then random characters start to fall, learners need to use the key to send codes to eliminate the corresponding characters, the characters that are not eliminated in time will be stacked, until the stacked characters reach the top, the game ends, each successful elimination of a character, one point. Press F4 to exit the game and return to the superior menu.

Listen to copy the game

At the beginning of the game, randomly select a character and send the corresponding Morse code audio, then the

interface will display 4 cards, one of the cards shows the correct character just voiced, learners need to press the corresponding F1-F4 function key to select the correct answer (if the computer keyboard is opened and connected, Can be selected by keyboard F1-F4 key, number 1-4 key); After correct selection, the next group will be displayed after the correct prompt tone is issued. If an error message is played, you can continue the selection. Press the power key or ESC or Entry key on the computer keyboard to display GAME OVER, and then display the error character statistics table. Press the power key or ESC or Entry key on the computer keyboard again to exit the GAME and return to the upper menu.

Chinese origin

After entering the Chinese sending exercise function, the shortcut keys are as follows:

F1: Clear the contents in the display area

F4: Exit the exercise and return to the superior menu

In the Chinese sending practice interface, every 4 digits sent corresponds to a Chinese character, which is shown in red. During the practice, if the content is sent incorrectly, you can

send the CW code "? ". As a correction character, you can clear the contents of the current sent numeric group, or the contents of the previous numeric group if the current numeric group is empty.

Press F4 to exit the exercise and return to the superior menu.

5 Auto Call shortcut key Settings

8 groups of custom character memory can be set, each group can set 60 English characters, punctuation and space; After entering the shortcut key setting screen, the shortcut key functions are as follows:

F1: Clear memory contents

F2: Move the cursor forward one character

F3: Move the cursor back one character

F4: Abandon Settings and exit to return to the upper-level menu

You can set the character of the current cursor position by pressing the power button. You can click the power button to save the current setting and return to the upper-level menu.

The shortcut key content can be set by pressing the power key around, or setting the code with the key, or using the computer keyboard connected to the machine to input, or connecting the computer or mobile phone to one-time transfer the setting content through the software, and you can choose different setting methods according to your own needs.

6 System Settings

● Screen backlight:

Screen backlight setting range is 1%-100%, the system default brightness 20%.

● Set the volume:

Volume Settings range from 0 to 63, 0 is mute, and 63 is maximum volume. When using earphones, please adjust the appropriate volume Settings to avoid hearing damage.

● Locking by decoding:

Set unlock mode: decoding speed can adapt to change; Set lock mode: the decoding speed is locked to the current code speed unchanged. Hand key sending practice, please set lock; In decode mode, set to unlock.

● Decoding tolerance:

Decoding tolerance setting range 0-9, 0 is the strictest checkpoint length and interval; 9 Delimit the length and interval for the loosest checkpoint. When the device is used as a decoder, set it to 9 to obtain the best decoding accuracy. When the device is used as the hand key for practice, please set it to 3, strictly check point stroke length and interval, and standardize the sending technique.

● Automatic shutdown time:

The setting range is 5-1440, the unit is minute. When the total non-pressing time exceeds the set value, the device automatically shuts down to save battery power consumption.

● Language interface setup:

You can set the Chinese or English interface as required.

● Restoring factory Settings:

If the system parameters are incorrectly set, you can restore the device parameters to the default Settings by restoring the factory Settings.

● Date and time Settings:

Set the system date and time. The set date will be saved after the shutdown for the convenience of next setting. The time parameter will disappear after the shutdown. You can set the

date and time to facilitate the entry of the date and time in the log. If you do not need to enter the log, you do not need to set the date and time. In this case, the time parameter is used as the startup duration.

- System information:

You can view the software and hardware version numbers, hardware parameters, and device numbers.

7 Key parameter Settings

- Key type setting:

Key types can be set to connect the device: Hand key, Auto key, KeyB computer keyboard and Bug simulation key; The default value is Auto.

- Lambic mode setting:

Set the auto key mode. You can choose between IambicA mode and IambicB mode. The default mode is IambicB.

- DiDa to swap Settings:

When the auto key is backstroked, or the hand key does not respond, please set the backstroked swap, default to normal mode.

- Code tone:

Used to set the tone of the code. Setting range: 300HZ–1500Hz.

- Long code or short code setting:

Morse long code or short code can be set. Long codes can send characters, numbers, and symbols, while short codes can send only numbers and partial symbols.

8 Option Functions

Decoder board open

This option can be used to turn on or off the decoding board of Pocket Spirit Pro. When the decoding board function is not in use, it can be turned off to save battery power consumption. Pocket Sprite Mini this setting is not valid.

Chinese decoding enabled

After The Chinese decoding function is enabled, the system can send and decode both Chinese and English (professional version function). The system is disabled by default, and can only send and decode in English (professional version function).

Automatic repeat call storage unit Settings

You can set the storage unit for automatic call repetition (F1-F8). After you press the automatic call button, the selected storage unit enters the state of automatic call repetition at a specified interval. The repeated call stops when a key is pressed, a keyboard key is pressed, or a menu is displayed.

Set the interval for automatic call repetition

Set the interval for automatic call repetition, in seconds. Interval setting range:

Minimum interval: 3 seconds

Maximum interval: 3600 seconds (1 hour)

When setting parameters, within 1 minute, adjust step is 1 second; Within 1-5 minutes, adjust step is 5 seconds; Within 5-60 minutes, step adjustment is 60 seconds.

Communication logs

There are four submenus under the communication Log option:

❖ Communication log entry

You can use the key or keyboard to enter the call sign, frequency, sending and receiving signal report, time and date, communication mode and short remarks of a communication

log.

The frequency is expressed in MHz, with a maximum of 6 digits after the decimal point. Such as:

7.023000

14.270

Time format: HHMMSS (hour, minute, second, actual input, second can be omitted)

The date format is YYYYMMDD.

A maximum of 32 characters can be entered in the remarks field.

On the log input interface, you can switch the current input field by pressing the power button, up or down key, or TAB key on the keyboard. The panel F2, F3 or keyboard backspace keys remove the last character of the current input for editing.

Press THE F1 key on the panel or the F1 key on the keyboard to clear all contents of the current input field; Press the power button or enter key on the keyboard to save the current log information to the log storage area. At the same time, the contents of the call sign bar are cleared, and the contents of the previous diary are reserved in other columns for the entry of the next log. Press F4 on the panel or ESC on the keyboard to exit the log entry screen without saving

information.

❖ Viewing Communication Logs

To view logs that have been recorded, press the power button, F2, F3 shortcut keys on the panel, Tab key on the keyboard, or up and down cursor keys to flip the log page. To exit the log view screen, press the power key, F4 key, or the ESC key or Enter key.

❖ Communication Log Output

The stored radio logs are output through USB data port in ADI general format, connected to a computer, and received by software. The output log content can be saved as ADI files for import and processing by other log software. Before outputting logs, connect the data cable to the computer in advance and run the software for receiving logs through the serial port. After the logs are generated, an OK message is displayed. If the logs are incorrect or uninitialized, an ERROR message is displayed.

❖ Log Initialization

Log initialization is to clear the log information and reformat the log storage area. Press the "Ok" button to enter, the screen prompts Do it? You need to press confirm again to start log initialization. If you do not want to initialize logs, press F4 to exit the log initialization operation. After the log

initialization operation starts, Wait is displayed, prompting the user to Wait for the log initialization operation. The device starts to format the log storage area (which takes about 10 seconds). After the log initialization succeeds, an OK message is displayed. Before the communication starts or to clear all logs, initialize logs. You must initialize logs before using them for the first time.

9 Online Help

The device has built-in bilingual online help information in English and Chinese. Use F1, F2, F3 keys to select online help content such as basic operations, menu functions, and usage skills. Press the power button left and right to scroll up and down, and press F4 to exit and return to the upper-level menu.

About HAMCUBE master

Here is a system introduction to the equipment, and provides the download website of firmware upgrade and QQ group for communication.

11 Connect the PS/2 keyboard

A PC keyboard with PS/2 interface can be connected to the key interface of the host computer through keyboard adapter accessories. Set the key type to [KeyB] keyboard mode in [Menu] – [Key Parameter Setting], and you can use the keyboard to control the host computer and send messages.

Keyboard key function list:

◆ a-z 0-9: common character function

◆ Case key: Toggles character case

◆ F1-F8: Eight groups of automatic calls are built into the main controller

◆ Shift+F1-F4: Simulates the main control f1-F4 click action

◆ Ctrl+F1-F4: Simulate the main control f1-F4 long press action

◆ PgUp: code speed +, analog main control power button right move

◆ PgDn: code speed -, and the power key of the analog main control is moved left

◆ up arrow: code speed +, analog main control power key right dial, menu setting switch menu bar

◆ down arrow: code speed -, analog main control power key left toggle, menu Settings switch menu bar

◆ Enter: Power button Click to enter and confirm the function

◆ ESC key: F4 Exit the function, or stop sending or stopping automatic calls

◆ Backspace: In the shortcut key editing window, you can move the cursor to backspace

◆ Shift+ESC: Shut down the main control

12 Connect computer or mobile phone

● Connect computer
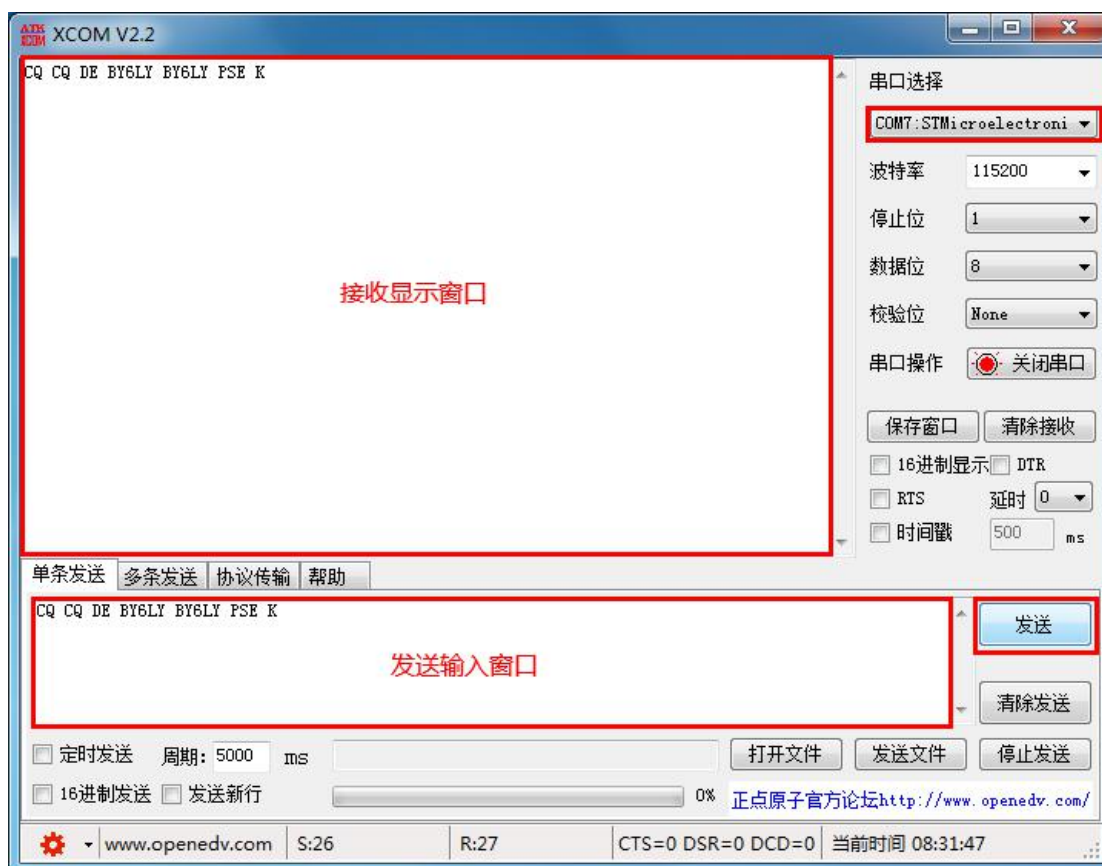
Open the PC software in the Tools folder of the firmware upgrade package. It is a green software that does not need installation and runs on two machines. The interface after opening the software is shown in the figure above.

Open the CW pocket Wizard host, after the working interface appears, connect the host and computer with the data cable, the computer will recognize a serial port named STMicroelectronics, select it in the serial port selection bar, and

open the serial port in the serial port operation below, other parameters use the default values. The middle of the interface is a receiving display window, used to display the sent information and received information; The smaller below is the send input window, in which you can input the message to be sent. Click the send button on the right, you can control the CW pocket Wizard host to send the corresponding Morse code.
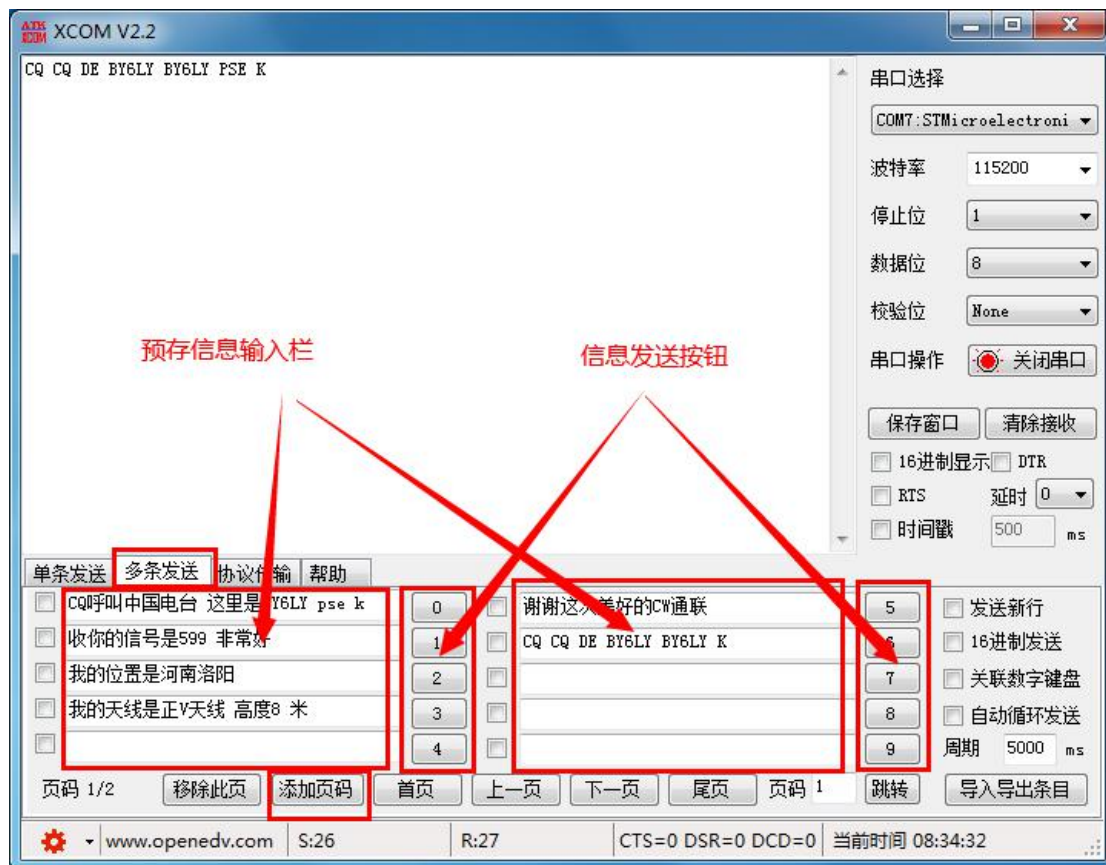
Click the multiple send options page to preset the message to be sent. Click the digital send button behind each message to

send the pre-stored message with one click. Each page can be configured with 10 pieces of pre-saved information. You can add a page of pre-saved information by clicking the add page button below. Each new page can be configured with 10 pieces of pre-saved information.

● Connect the phone

We can also use the cable to connect the phone to the CW Pocket Wizard, and control the sending of the code through the phone software, making outdoor communication more convenient and fast.

We need to prepare an Android phone, and then find the mobile version APP in the upgrade firmware package Tools and install it. We need to prepare a type-C interface OTG conversion plug for the phone (in the attached ATTACHMENT of CW Pocket Wizard) and a matching type-C interface data cable.
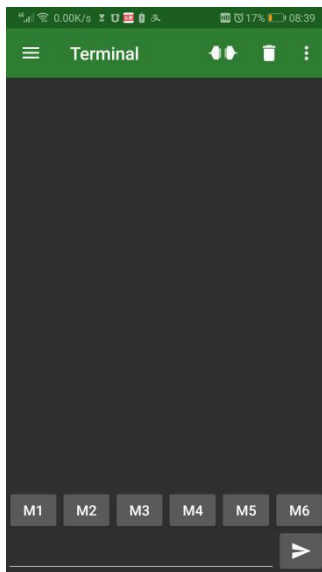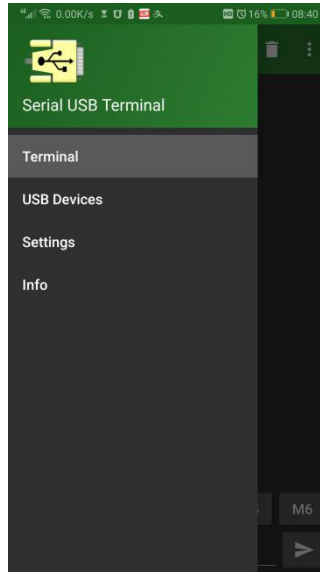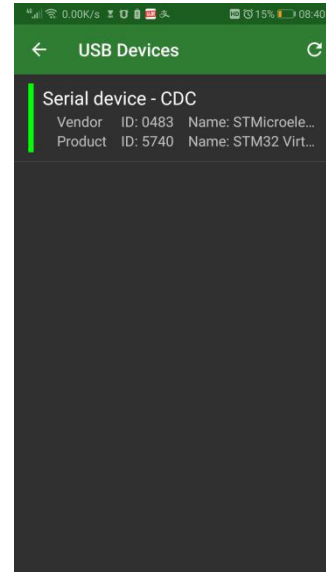
| 图 1 | 图 2 | 图 3 |

The mobile phone software is only Android version at present. Install the software on the mobile phone and open it. The interface is shown in Figure 1, Is the connection button; You can click to send the pre-saved information, and hold down the button to conveniently set the pre-saved information. The bottom of the interface is the send information input bar, the right is the send button.

Click on the top left Icon, enter the software setting interface, as shown in Figure 2. The USB Devices option allows you to search and select connected Devices. After connecting to the CW Pocket Wizard, the phone will find a Serial Device-CDC device, which is the device driver name of the CW Pocket Wizard, as shown in Figure 3.
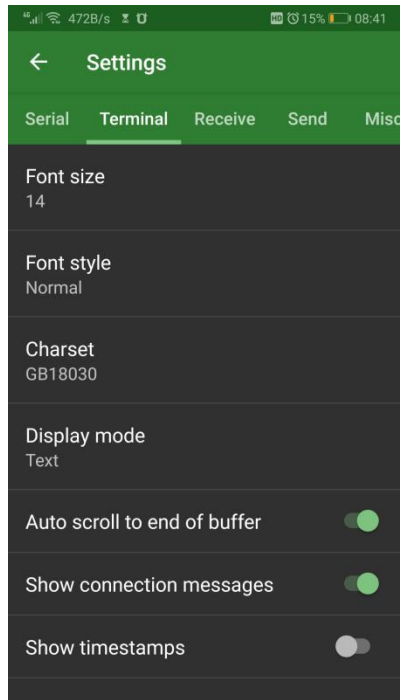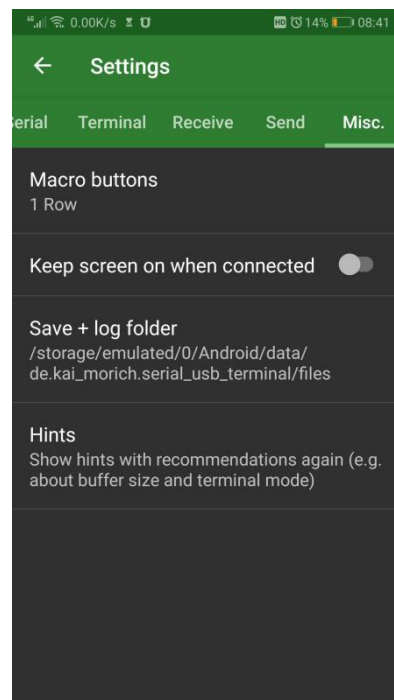
图 4   图 5

After clicking on the Settings option (shown in Figure 4), you can make some necessary Settings for the software. Click on the Terminal options page, we must set the character type Charset GB18030 encoding format, so that Chinese characters can be correctly displayed, English users can not set side options; Font size Font size can be set, other options default.

Click the Misc options page (as shown in Figure 5), Macro buttons You can set the number of macro button lines for preset information. Each line contains 6 macro buttons, and a maximum of 5 lines can be set. The default value is 1 line.

13 Equipment Maintenance

Unable to boot	Wait for 3 seconds, press the power button for more than 1 second, and release it when the blue light comes on
Can't turn it off	If long pressing the power button fails to turn off, please use the paper clip to push the reset button in the lower left corner of the hardware reset, and then try to restart.
The insertion key kept beeping	Check whether the device key type is set correctly
Insert manual key long ring	Try adjusting the click swap Settings in key Settings
The auto button ticks backwards	In key Settings, set the dot swap and adjust the left and right click direction
Unable to send letters, numbers can send	Check whether the long and short code Settings are set to short
Unable to recognize Chinese message code	Check whether the Chinese decoding option is enabled. It is disabled by default
Unable to connect to cell phone or computer	Should wait for the device to start up normally before using the data cable to connect the mobile phone or computer
The device has no sound	Check whether the volume Settings are set to minimum or the status bar displays the mute flag

The sent code cannot be displayed properly	Check whether the decoding speed is locked and whether the decoding tolerance is set too low
Receive decode normal, send decode does not display	Check whether the volume of the radio side tone is off. The radio side tone and the exerciser audio overlap, which may cause the sending information can not be displayed correctly on the screen

14 Specifications and Options

Equipment specifications:

- Screen type: 2.8-inch, 16-bit true color FTF

- Function buttons: Four function buttons, one three-way multi-function power button, and one reset button

- Buy a fault Power interface: Type-c

- Voltage: 5V

- Interface to buy a ticket: a 3.5mm stereo jack

- Queue Battery type: 3.7V lithium polymer battery

- Battery capacity: 2500mAh

- Shell size: Mini   88mm x 58mm x 17mm

                            Pro   88mm x 58mm x 22mm

- Anyway The device weighs :   163g for the Mini

                                         193g for the Pro

Equipment options:

- Queue External MIC option

- Buy a PLAYSTATION /2 keyboard interface adapter option for your computer

- Automatic button for 3D printing entry

15 Downloading the user firmware package

The user firmware package contains the device firmware upgrade, firmware upgrade instructions, host user manual, optional user manual, client, and application software.

Download address of user firmware package:

Download for Domestic users

https://gitee.com/admvip/cw-pokemon-infomation

Note: If you want to download files larger than 1 MB, you need to register with this website.

Download for foreign users

https://github.com/admvip/CW-Pokemon-Infomation

Hand Electronics Studio

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