CODER-F100E User Manual

1. Introduction

The CODER-F100E programmer is a portable device that addresses and reads address of the addressable devices developed and manufactured by our company. It is a necessary tool in the process of installation, commissioning and maintenance of automatic fire alarm system. The functions of the programmer are: address and read the address of the devices, modify the mode of the sounder beacons, modules and detectors, count the number of devices, test device communication and start/stop devices, etc.

2. Features

(1) Small size, shockproof, easy to carry and easy to operate.

(2) Ultra-low power consumption, can address more than 50,000 points when the battery is fully charged.

(3) With the function of adding one address automatically, it can continuously code the equipment and improve the efficiency of project installation.

(4) With real-time display function of remaining battery power.

(5) It has the function of protecting the battery from over-discharge.

(6) With output short circuit protection function.

(7) With charging indication function.

(8) It has the function of automatic shutdown to save power.

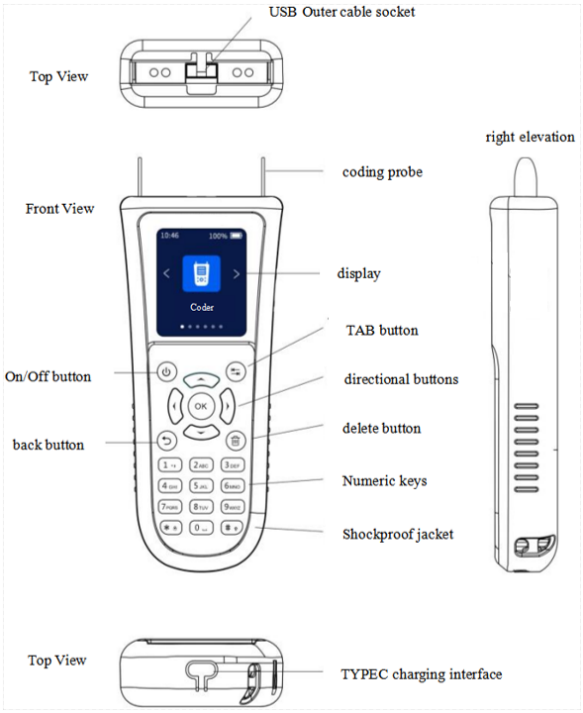


Figure 4-1

3. Technical Parameters

(1) Working voltage: DC5V, it can be connected to an external 5V adapter to charge the battery or directly use it as a working power source.

(2) Output capacity: constant output current 200mA, pulse output current 500mA@50ms.

(3) Working environment: temperature -20℃～60℃, relative humidity 5%～95%.

4. Assembling of Peripheral Devices

Figure 4-1 shows the appearance of the programmer. The functions of each component are as follows:

(1) Insert theΦ3.5mm earphone plug into the earphone jack of the address writer's detector base, it can be oper-ated for reading and writing the address of the smoke detector, heat detector and sounder beacon. See figure 4-2：

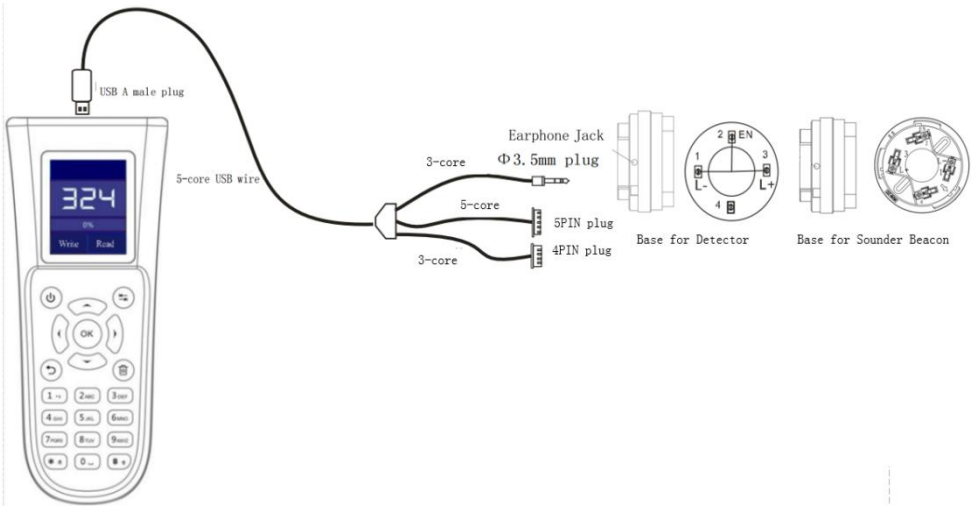


Figure 4-2

(2) Insert the Φ3.5mm earphone plug into the adapter with terminal block, it can be operated for reading and writing the address of the manual call point.See figure4-3：

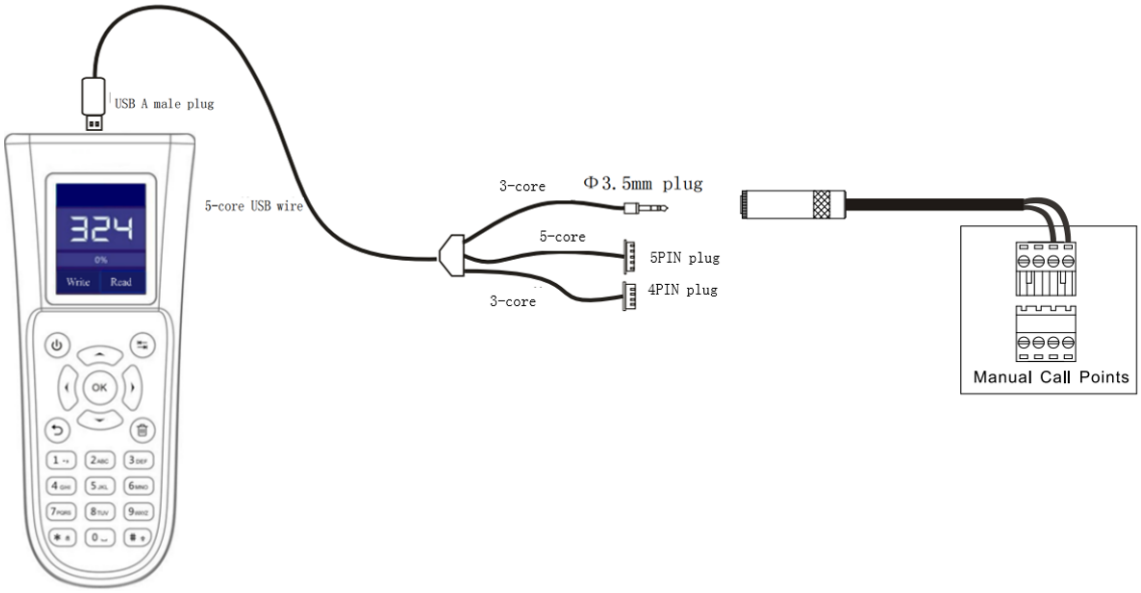


Figure 4-3

(3) Coding probe: directly contact the bus terminal of the addressable devices such as detector, module or sound and light alarm to perform address coding/reading operation. The width of the probe can be adjusted according to the distance of the terminal on the devices. See Figure 4-4:

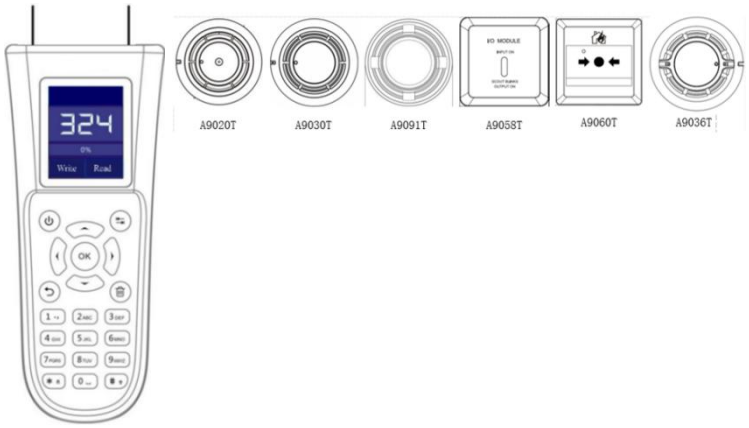


Figure 4-4

(4) Insert the Φ3.5mm earphone plug into the adapter with Crocodile clip,The bus terminal of Addressable devices such as detectors, modules or sounder can be used to write/read addresses, as shown in Figure 4-5:

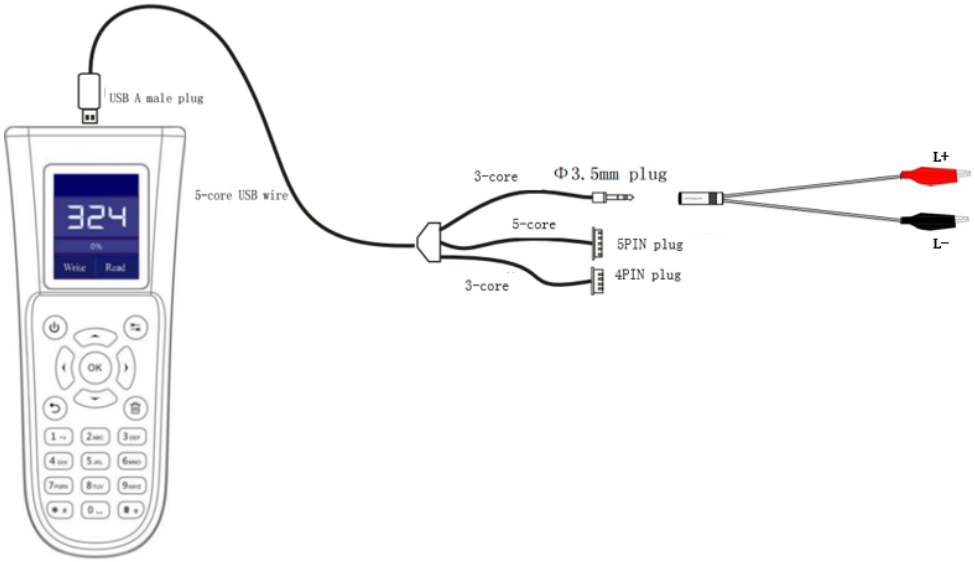


Figure 4-5

(5) Display screen: display main function, time information, power information, address number to be addressed, address of the device, sub-menu function prompt information, etc.

(6) Keyboard: It has 21 keys, such as ON/OFF, BACK, TAB, DELETE, OK, UP, DOWN, LEFT, RIGHT, and number keys.

1) On/Off button -- Turn the device on or off.
2) Back button -- in any submenu function interface, after pressing this button, the interface will return to the previous interface.
3) TAB button -- selects multiple sub-menu functions in the same interface.
4) Delete button -- valid in addressing mode, when the input address is wrong, you can press this button to delete and then re-enter the address.
5) OK button -- to select a function or to start/stop a function.
6) 0～9 Numeric keys--Enter the address number to be programmed and enter the submenu function page.
7) * button -- in the submenu function of the programmer, “read” function, or read the address of the device, working mode and alarm value.
8) # button -- in the submenu function of the programmer, “write” function, or address the address of the device, working mode, and alarm value.

(7) Type-C charging interface: External Type-C data cable. Type-C data cable can be used for programmer charging and programmer product upgrade.

5. Operations

(1) On/Off

When the programmer is off, press and hold the "On/Off" button for 2 seconds to turn it on, and the display shows starting as shown in Figure 5-1.The programmer is turned on;

When the programmer is working normally, press and hold the "ON/OFF" button for 2 seconds to turn off the programmer ; when an external DC power supply is used, press this button to shut down, the display will display the charging status, and press this button to reset.

Note: When the system enters an unknown state and needs to be forced to shut down, press and hold the power button for 15s!

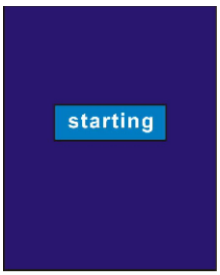


Figure 5-1

(2) Charge

The charging interface is a Type-C interface, which can be charged by an external Type-C data cable and a mobile phone adapter. The schematic diagram of charging is shown in Figure 5-2.



Figure 5-2

(3) Coder

“Coder” The main functions are: Address and read the address of the devices, modify the mode of the

sounder beacons, modules and detectors, count the number of devices, test device communication and start/stop devices, etc.

Connect the device with the external cable, select the "Coder" function, after entering the "Coder" function, there are 5 sub-menu functions,You can directly press the corresponding number key to enter the corres-ponding submenu function interface according to the order of the submenu functions, or you can move the cursor by pressing the "TAB" or "up" and "down" keys to select the corresponding submenu function, and then press the "OK" key to enter. Below is a description of each submenu function.

1) Addressing/reading

Select "Coder" in the five sub-menu functions of "Coder" function, and the following interface will be displayed, as shown in Figure 5-3:



Figure 5-3

① writing

On the coder interface, directly press the number keys to input the address to be programmed, use "TAB" to switch to the "Write", press the "OK" button to address, or directly press the "#" button to address. When successful, the current programmed address will be displayed and you can hear a beep. When the addressing fails, ERR will be displayed, and then the address to be programmed will be displayed, and you can hear an error tone (three beeps).

Tips:Short press the "up" key,The address will be incremented by one.Short press the "Down" key,The address will be decremented by one, Long press the "up" key will continue to auto-increase the address. Long press the "Down" key will continue to auto-reduce the address.

② reading

On the coder interface, use "TAB" to switch to the "Read" , press the "OK" button to read the address, or directly press the "*" button to read the address, when the address reading is successfully, the current device address will be displayed and a success tone will sound. When the address reading fails, ERR will be displayed and an error tone will sound.

Tips: writing/reading settings are in the Set--SystemSet.

2) MoudelSet

The MoudelSet is to set the working mode of the module. Select "MoudelSet" in the five sub-menu functions after the main menu "Coder".The operation method is the same as the address and reading of the address, but the original address represents the working mode of the module.

3) SounderSet

SounderSet is to set the working mode of sounder. Select "SounderSet" in the five submenu functions after the main menu "Coder",The operation method is the same as the address and reading of the address, but the original address represents the working method of sound and light.

4) Electrical

The Electrical function is used to read or write the alarm value of the electrical fire monitoring system device,The operation method is the same as the address and reading of the address, but the original address represents the alarm value of the device.

5) ModeSetting

The ModeSetting is to set the working mode of the optical Smoke and Heat Multisensor Detector/IO module and Sounder. Select "ModeSetting" in the five sub-menu functions after the main menu "Coder", and use the "TAB" key to modify the mode setting options, and the "up" and "down" keys to modify the settings.

For example, when the cursor is in ModeSetting, press the "Up" and "Down" keys to modify the device type of the setting mode, and press the "OK" key to see the device types of all setting modes, such as Multi-sensor

detector, IO module, sounder beacon base.Press the "TAB" key to make the cursor in the FuntionSelection, press the "Up" and "Down" keys to modify the set mode, and press the "OK" key to see all the mode settings.

If ModeSetting is selected in "**Multi-sensor**", it is the Optical Smoke and Heat Multisensor Detector mode setting, press the "TAB" key to stay the cursor on FuntionSelection, you can modify the mode, such as **Smoke or heat(A2R), Smoke or heat(A2), Only heat (A2R), Only heat (A2S), Only smoke**.The operation method of reading and writing is the same as that of reading code. After selecting the mode, read and write.

(4) Device

This feature is not yet available.

(5) Controller

The main functions of the "Controller"  are statistics, point test and point start。

Connect the external circuit with the USB external cable or the alligator clip external cable,Select the "Controller" function,Entering the controller function interface has the following three sub-menu functions: You can move the cursor through the "TAB" or "Up" and "Down" keys, select the corresponding sub-menu function, and then press the "OK" key to enter.The following is the introduction of each sub-menu function, and the sub-menu functions are shown in Figure 5-4.

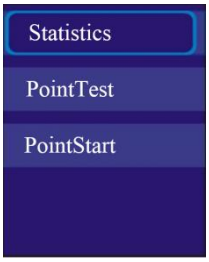


Figure 5-4

1) Statistics

The Statistics function is used to count the number and production type of loop devices。

In the device statistics interface, press the "OK" key, "Start Statistics" the number of devices, At this point, the device will be counted and the statistical progress will be displayed. When the statistics are completed, the number of modules and detectors will be displayed. When you press "PointStart", a list of addresses and production types will be displayed. After "Start Statistics", you can no longer enter the setting interface. After the statistics are completed, you can return to the previous function interface and re-enter the device statistics function.The device statistics interface is shown in Figure 5-5:

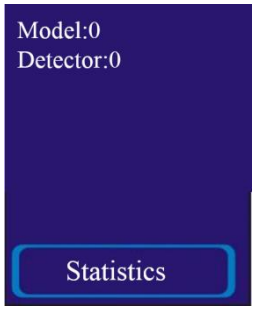


Figure 5-5

Note: The programmer can only count the loops with a loop current less than 200mA. When the power is lower than 20%, it is recommended to use an external power supply (such as a power bank or an adapter). When the number of loop devices is larger than 100, the latter device production type is not displayed, but the number of modules and detectors can still be displayed.

2) PointTest

The PointTest function is used to view the production type and status of an address.

In the PointTest interface, directly press the number to input the address. If the input is wrong, you can press the "Delete" key to delete it and enter it again. After the setting is completed, press the "OK" key to enter the PointTest interface, and the PointTest will be started at this time.The production type and status scroll below the curve, and the curve shows the status value. Press the "OK" key again to stop. When the PointTest is activated, you cannot enter the setting interface, and you need to stop the PointTest to enter.The single point test interface is shown in Figure 5-6:

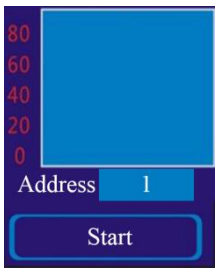


Figure 5-6

3) PointStart

The PointStart function is used to start or stop the sound, light or module of a certain address.

In the PointStart interface, directly input the address that needs to be operated.If the input is wrong, you can press the "Delete" key to delete and re-enter,Finally, pressing the "OK" key will perform a PointStart operation, and pressing "OK" again will perform a PointStart operation.In the PointStart state, the setting interface cannot be entered.The PointStart interface is shown in Figure 5-7:



Figure 5-7

(6) DDS

The DDS function is used to generate sinusoidal leakage current and trigger the device alarm of the electrical fire monitoring system. Use the addressed devices through the residual current transformer and short the terminals.

After connecting the wires as above, enter the current generation interface (as shown in Figure 5-8),Use the "up" and "down" keys to adjust the current value, each step is 100mA(700mA MAX), after setting the current value, press the "OK" key,The current output will be performed, and the maximum output current of the current range will be displayed; To adjust the current value again, press the "TAB" key to select the drop-down box of the current value, and follow the above operations.

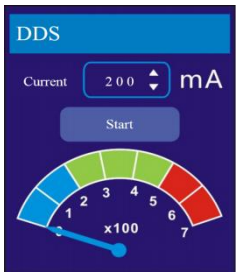


Figure 5-8

Note: Due to the difference between the sampling circuit and sampling algorithm of the programmer and the sampling circuit and sampling algorithm of the electrical fire monitoring system, Therefore, the current value displayed by the electrical fire monitoring system is not completely consistent with the setting value of the programmer, and the sinusoidal current output is only used as a trigger. The alarm signal is convenient for engineering debugging, and does not make a standard judgment basis.

(7) File

“File” function is used to check the remaining internal storage space and format, and press the "OK" key to format and delete all stored files.

(8) Set

"Set" function has five sub-functions: "TimeSet", "SystemSet", "PowerOffSet", "About" and "Manual".

You can use the "TAB" or "Up" and "Down" keys to enter the relevant sub-functions.

1) TimeSet

TimeSet is used to set the current time and date. Enter the time setting interface,Use the "TAB" key or the "Up" and "Down" keys to select the set date and set time,Use the "right" key to switch the cursor to the specific setting interface. Use the "up" and "down" keys to switch numbers. Use the "TAB" key to switch items. After the setting is complete, press the "OK" key.

2) SystemSet

SystemSet are used to set the backlight, language, ModeSel and Batch of the system, use "TAB" to switch to the corresponding item, and use the arrow keys to select. The following is the specific content of the SystemSet:

① LightSet

When the cursor stays on the lightSet, press the "left" and "right" keys to adjust the screen brightness, the displayed number is the brightness level, and the level ranges from 1-10.

② Language(Restart)

When the cursor stays on Language (Restart), you can set the language of the machine, which is divided into "中文" and "En". Selecting "中文" means the language is Chinese, and selecting "En" means the machine language is English. This setting needs to restart the programmer to take effect.

③ ModeSel

press "TAB" to switch the cursor to ModeSel, you can see **9000** or EPC, 9000 represents the 9 series (for example, **The EN series devices are 9 series**), and EPC represents the A series. 9 series was chosen as default. Some devices can only support 9 series, choose 9000. Some devices can only support A series, choose EPC. Some devices can support both A-series and 9-series, so no selection is required.

④ **Batch**

In Batch, you can choose whether to **increase the address number automatically**.This function can improve the efficiency of encoding when a large number of devices with consecutive addresses need to be addressed. Selecting "Non" means not to use address auto-increment, and **selecting "Increas" means to use address auto-increment.** The selection method is the same as the selection protocol. Press "TAB" to switch the focus to Batch, after selecting "Increment" mode, the "Encoding" button on the original programmer interface will become "Start". After pressing the "OK" button, the address plus one encoding will be activated. **When the device is connected to the programmer, the programmer will automatically address; If the addressing is successful, the buzzer will give a beep, and the display will flash "P--". At this time, remove the device, and the address will be auto-matically increase by one**. Sequentially addresses consecutively without entering an address.**But to exit from this mode, you need to press the"*"key.**

3) PowerOffSet

The PowerOffSet is used to set the shutdown time of the system without operation, from top to bottom, it is 5 minutes, 10 minutes, 15 minutes and 20 minutes.

Note: After starting automatic encoding, if the corresponding device is successfully addressed, it will not automatically shut down.

4) About

The About is used to display version information and upgrades.

Upgrade operation: use the Type-C data cable to connect the computer and the programmer, the connection method is shown in Figure 5-2,A U disk icon appears on the computer, the name is F100, copy the upgrade file into it (do not modify the file name of the upgrade file). Disconnect the programmer from the computer, click the "Update" button, wait for the upgrade to complete. If it shows that the upgrade failed, you can restart and enter the About interface and click the "Update" button. Do not make any operations during the upgrade process to avoid the upgrade failure.

Note: If the system cannot be used normally due to some reason during the upgrade process, you can press the "TAB" key first, then press and hold the On/Off key for about 15s, it will enter the function of "reset to the factory version", when the upgrade interface appears, immediately release the switch key , and wait for the restore to complete.

5) Manual

Put the cursor on Manual and click the "OK" button, you will see a QR code, which displays the instruction manual of the programmer.

6. Other functions

(1) Bus short-circuit detection, when the bus is short-circuited, the programmer interface screen will display "Short-circuit fault!", the buzzer will beep at the frequency of 3 seconds/1 time/3 sounds, and the short-circuit fault will be displayed.

(2) If there is no operation for one minute, the display will darken and enter the power saving mode; press any key to make the brightness to normal state (except the "ON/OFF" button).

(3) After the shutdown setting is completed, if there is no operation for some time, it will automatically shut down.

7. Troubleshooting

(1) Always shows error when addressing/reading

1) Please check whether the bus type and the product type is correct. Enter the Set page, check the bus type in the "SystemSet" interface, and return to the previous interface to check whether the entered submenu function corresponds to the product;
2) Please confirm whether the device to be address or read is in good condition, and try another device;
3) Please check whether there are any defects such as looseness or falling off of the connecting cable socket.

(2) Fail to power on

Please confirm whether the battery has sufficient power, and try to turn it on with an external DC power supply.

(3) The buzzer sounds continuously

When the loop is short-circuited, the buzzer will sounds continuously. Please check whether the loop is short-circuited; if it is not short-circuited, the programmer may be faulty.

If the above phenomenon is correct after checking the connection cable and device selection, but the fault still exists, please call our service department for consultation.

8. Precautions

(1) Any other type of USB device is not allowed to connect to the Type-A USB interface on the top of the programmer, because its voltage is about 27.6V, otherwise it might damage your USB device.

(2) Keep away from corrosive liquids and do not use in wet, hot environment and strong magnetic field.

(3) This programmer is used only for the products our company produces. Please do not use on products of other company.