Instructions on Type 46 Answering Machine and Type 554 Receiver

Model: ZL-HT46
FCC ID: 2AUFC-HT46

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Solutions Department

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1 Product Overview

Type 46 Answering Machine and Type 554 Receiver are high-tech products independently developed by Shenzhen Zhongke Xunlian Technology Co., Ltd. with independent intellectual property right.

With a Type-46 answering machine and a computer-connected receiver and corresponding client software used by each student, classroom teaching evaluation and voice teaching interaction can be carried out.

To meet the requirements of the reform of linguistic subjects in the entrance examination for senior high schools, break the one-way cramming teaching mode, help teachers to accurately and immediately grasp the learning situation of each student in the class, timely adjust the teaching progress and direction, so as to improve the efficiency and quality of classroom teaching. Through the answering machine and supporting software, we can provide a variety of interactive activities between teachers and students, such as choice, true or false, rush to answer, games, voice evaluation, etc. We can change the one-way teaching method in class, stimulate the interest of students in learning and participation, and truly realize "teaching and enjoying".

2 Product Introduction

2.1 Hardware Composition

Hardware Composition: Type 46 Answering Machine and Type 554 Receiver.

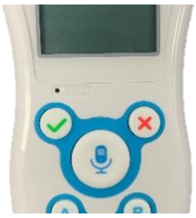

Figure 2-1 Type 46 Answering Machine

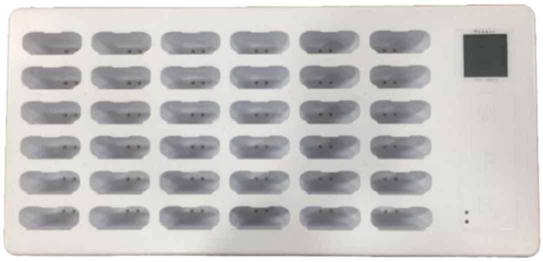

Figure 2-2 Type 554 Receiver

2.2 Appearance of Type 46 Answering Machine

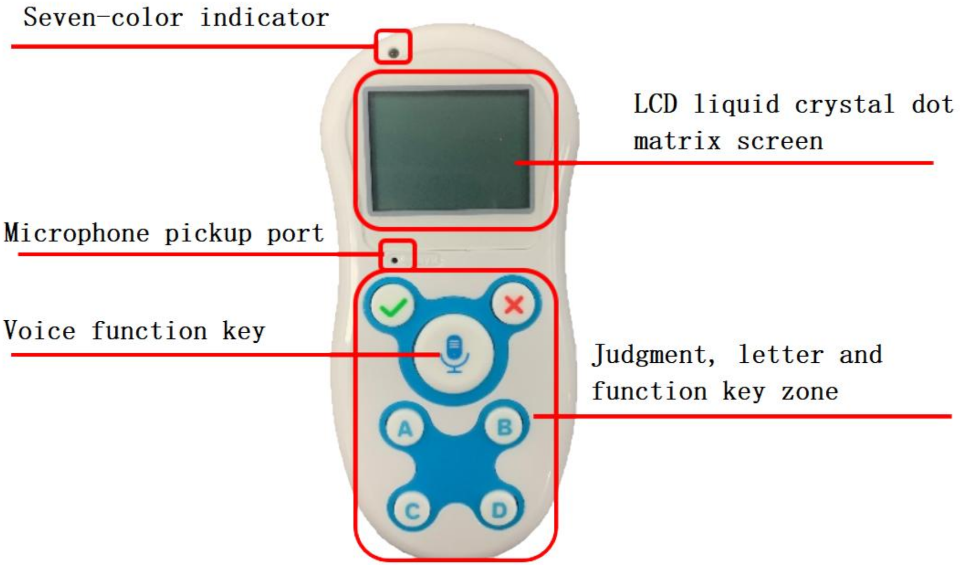
Seven-color indicator
LCD liquid crystal dot matrix screen
Microphone pickup port
Voice function key
Judgment, letter and function key zone
A
B
C
D

Figure 2-3 Type 46 Answering Machine

The Type 46 answer machine uses a 1.5-inch dot matrix display screen with seven silicone buttons, including letters A-D √ ,×and function keys (voice keys). The screen can display the status of signal, ID of the answering machine and the power consumption. It can dynamically display Chinese and digital information, including question number, answering content and Chinese student name , as well as other contents, such as reward information, correct answer information, etc. It has a wide range of personalized content.

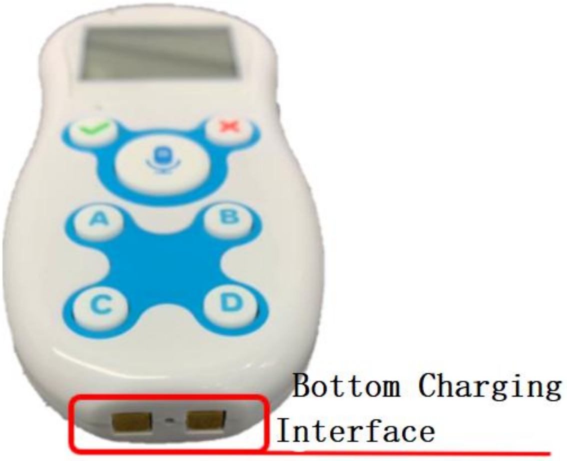
A
B
C
D
Bottom Charging Interface

Figure 2-4 Bottom Charging Interface of Type 46 Answering Machine

Type 46 answering machine uses a built-in, non-removable and rechargeable 1200 mAh lithium battery, which automatically starts when the lithium battery has power.

2.3 Display of Type 46 Answering Machine

1) Status bar display (which is fixed display content)

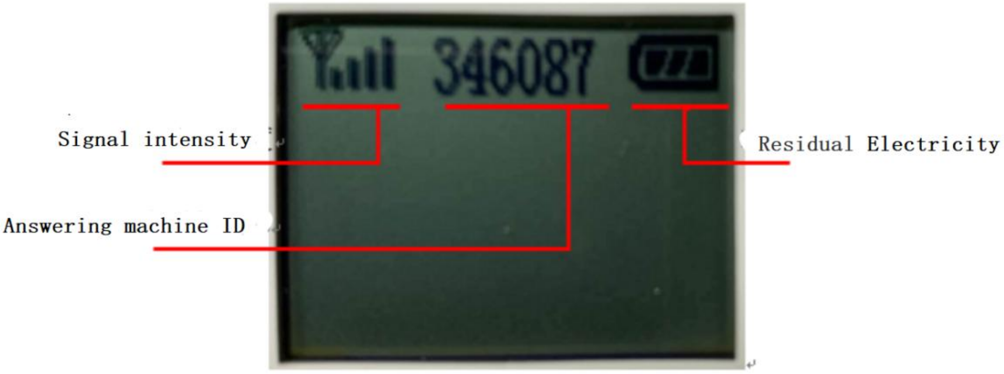

Figure 2-5

Type 46 answering machine starts for the first time, and the signal intensity is displayed in blank. When Type 554 receiver cooperates with the interactive software to initiate an interactive request to Type 46 answering machine, the signal intensity will be displayed.

Signal intensity is related to the communication distance and surrounding environment between Type 46 answering machine and Type 554 receiver. The farther the distance is, or the more occlusions between answering machine and receiver, the smaller the signal intensity is, and the fewer content cells are displayed.

2) Display of Voice Question

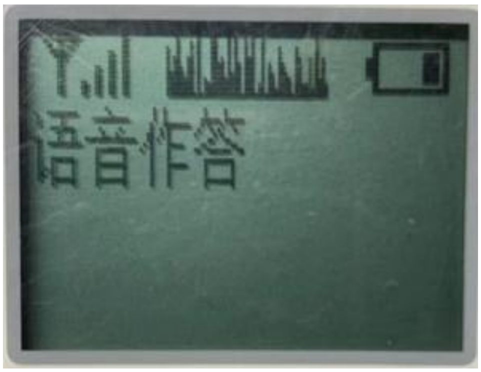

Figure 2-6

After receiving the voice questions, press the voice button for a long time and collect the audio from the microphone on Type 46 answering machine. When the audio messages are collected, the audio graphics will be displayed dynamically in the status bar on the display screen (indicating that the audio content is being received). When the voice key is released, the dynamic audio graphics in the status bar on the display will disappear and the audio acquisition will be completed.

3)Display of microphone function

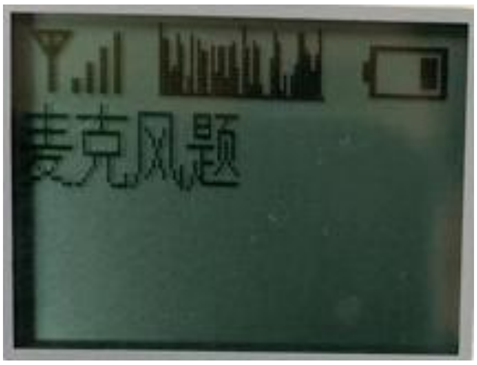

Figure 2-7

When the interactive software opens the microphone function, Type 46 answering machine immediately opens the pickup function, and you can speak directly without any key operation on Type 46 answering machine. When the microphone collects the audio message, the status bar on the display screen will dynamically display the audio graphics (indicating that the audio content is being received). When there is no audio message, the dynamic audio graphics in the status bar on the display screen will disappear.

4)Display of True or False Questions

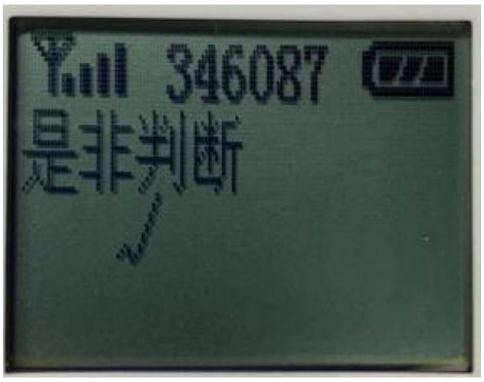

Figure 2-8

After receiving True or False Questions, click key "√" or "×" to complete the answer selection and automatically submit, and the answer can not be changed after submission.

5)Display of single choice of single question

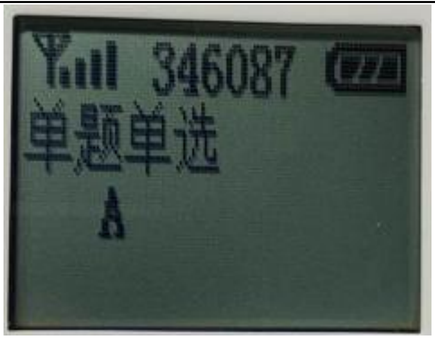

Figure 2-9

After receiving single-choice of single question, click one of "A", "B", "C" and "D" to complete the answer selection and automatically submit. And the answer can not be changed after submission.

6）Display of multiple choice of a single question

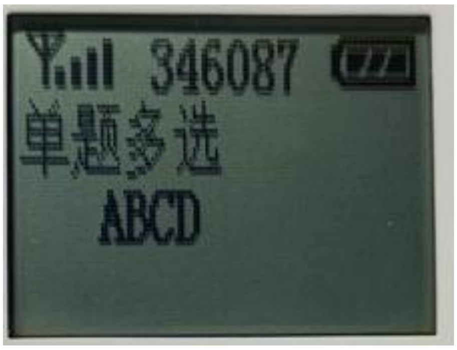

Figure 2-10

After receiving the multiple-choice type of a single question, click two or more of "A", "B", "C" and "D". After that, click " √ " to complete the answer selection and automatically submit. But the answer can not be changed after submission. If you need to modify the answer before submitting it, you can delete the answer to be submitted one by one by clicking “×”.

7）Display of Single choice for multiple questions

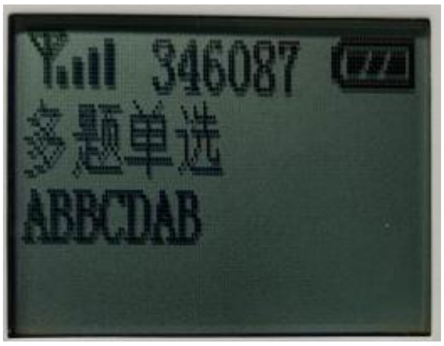

Figure 2-11

After receiving the multiple-choice answers of a single question, click "A", "B", "C" and "D". If you enter "ABBCDAB" in turn, it means that the single-choice answers to questions 1 to 7 are A, B, B, C, D, A and B, respectively. A maximum of 16 single-choice questions can be completed at a time. Click " √ " to complete the answer selection and automatically submit, and the answer can not be changed. If you need to change the answer before submitting it, you can delete the answer to be submitted one by one by clicking “×”.

2.4 Display Instructions of Type 46 Answering Machine

The display screen can display up to four lines of contents, and the first line is the fixed content.

Each line can display up to 8 Chinese characters or 16 letters/numbers.

Users can define display content according to application requirements.

The color and pattern of the display panel can be customized according to the requirements.

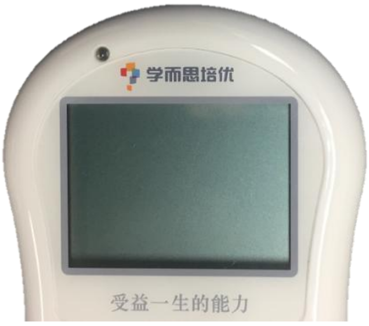

Figure 2-12 Customization Example of Display Panel

2.5 Type 554 Receiver Appearance

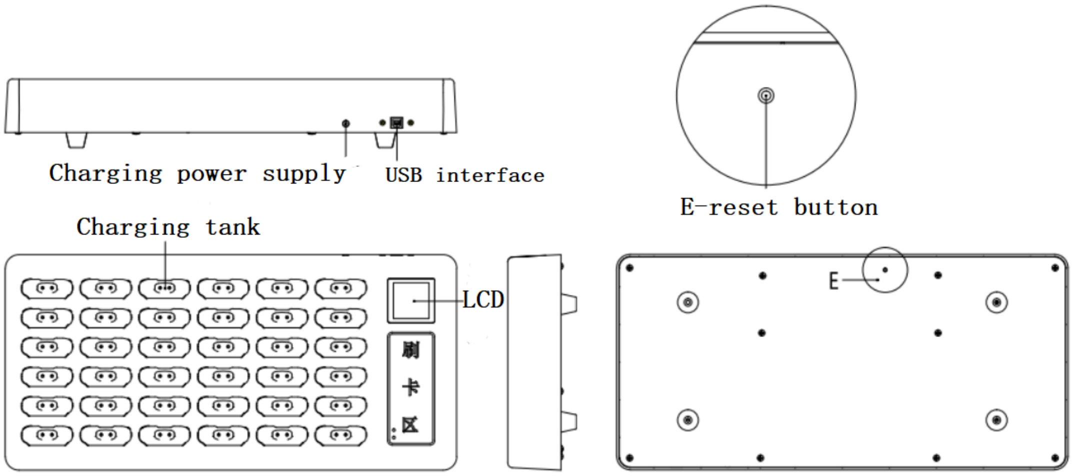

Figure 2-13 Type 554 receiver

Display screen: Display the running status of the device;

Shape size: 479.9*229.0*71.7mm;

Material: Environmental ABS fire-proof material with fire-proof grade V0;

Charging tank; each charging tank has been over-current protection, that is, to protect the back of the answering machine plug from damage, but also to protect the receiver itself from damage;

USB interface: access computer USB interface;

Standard accessories: 1.5 m long USB extension line for data transmission and power supply of Type 554 receiver.

Figure 2-14 USB Extension Line

2.6 Application Configuration

Classroom area: 20m*30m

Type 46 Question Answering Machine: generally 36 sets, up to 40 sets can be used.

Type 554 Receiver: 1 set

Configuration instructions: One Type 554 receiver can meet the application requirements of 40 sets of Type 46 answering machines (40 students) in 600 square meters of classroom for interactive answering at the same time. Considering that a single Type 554 receiver charges the Type 46 answering machine, a Type 554 receiver can satisfy the application requirements of 36 sets of Type 46 answering machine (36 students) in a 600 square metre classroom for interactive answering and charging at the same time.

3 Binding mode

1) Before class, the teacher will make the list of students according to EXCEL table template.

2) The list will be sent to each classroom according to the class after it is imported into the interactive software teaching end and connected to the interactive software teaching end at the interactive software classroom end.

3) Teachers only need to swipe type 46 answering machine card at 13.56M of Type 554 receiver to complete the matching. At the same time, the names of students are displayed on Type 46 answering machine.

Explain:

Type 46 answering machine can only be bound to one type 554 receiver at a time. If it needs to be bound to another 554 receiver, the binding relationship with the previous 554 receiver will be automatically released when the binding is successful. In the absence of electricity, the type 46 answering machine can also be bound to the type 554 receiver. After replacing the battery, the type 46 answering machine can be used normally.

4 Operation instructions

Application scenario	Detailed description	
Pairing	Simply swipe type 46 card at 13.56M on type 554 receiver to complete the pairing, and the student names are displayed on type 46 answering machine.	
Answering	Voice question	After receiving the voice question type, press the voice button for a long time and the microphone port on type 46 answering machine collects the audio. When the audio message is collected, the audio graphic is dynamically displayed in the status bar on the display screen (indicating that the audio content is being received). When the voice button is released, the dynamic audio graphic in the status bar on the display will disappear and the audio capture will end.
	microphone	When the interactive software turns on the microphone function, type 46 answering machine immediately turns on the pickup function, and you can directly speak without any button operation on type 46 answering machine. When the microphone collects an audio message, the audio graphic is dynamically displayed in the status bar on the display screen (indicating that the audio content is

		being received). When the voice button is released, the dynamic audio graphic in the status bar on the display will disappear
	Single choice	Click one of Button "A", "B", "C", and "D" to complete the answer selection and submit automatically. But the answer cannot be changed after submission.
	Multiple choice	click two or more of "A", "B", "C" and "D". After that, click " √ " to complete the answer selection and automatically submit. But the answer can not be changed after submission. If you need to modify the answer before submitting it, you can delete the answer to be submitted one by one by clicking “×”.
	True or false	Click key " √ " or "×" to complete the answer selection and automatically submit, and the answer can not be changed after submission.
	Single choice for Multiple questions	click "A", "B", "C" and "D". If you enter "ABBCDAB" in turn, it means that the single-choice answers to questions 1 to 7 are A, B, B, C, D, A and B, respectively. A maximum of 16 single-choice questions can be completed at a time. Click " √ " to complete the answer selection and automatically submit, and the answer can not be changed. If you need to change the answer before submitting it, you can delete the answer to be submitted one by one by clicking “×”.

In particular:

The answering machine will automatically turn off the screen 150 minutes later without any key operation, and be woken up by pressing any key.

Type 46 answering machine has no switch key, and is in the state of starting automatically when the battery is electrified. In the absence of any key operation, the screen (non-shutdown) can be waked up after 150 minutes by clicking any key. The wake-up is indicated as a seven-colour light on, accompanied by a vibration reminder. No instructions from type 554 receiver can be received when the screen is turned off.

5 Product parameters

5.1 Parameters of Type 46 Answering Machine

Items	Technical Parameters
Dimensions	113mm × 52.74mm × 17.87mm
Material	Environmental protection pc
Display	1.5-inch LCD dot matrix screen, which can display information such as answering machine ID, signal status, power status, question type, credits and answering status.
Button	Letters A-D, √, ×, voice keys
Anti-static rating	4KV
Operating temperature	-20 ℃ to 80℃
Storage temperature	-10℃ to +60℃
Battery	Support for 3.7V battery that can be continuously charged
Working current	Standby current <11mA, voice question current <60mA
Communication rate	2Mbps
Signal modulation method	GFSK
Frequency	2.403-2.477GHz & 13.56MHz
Sensing range	The effective range of interactive answers is no less than 15 meters.
Data transmission	Data transmission efficiency is in the millisecond level, supporting data retransmission mechanism to ensure 100% success
Low power consumption	In the no-operation state, the answer sheet maintains a low power state and is activated by the function button.

5.2 Parameters of Type 554 Receiver

project	Technical Parameters
Dimensions	479.6mm × 229.0mm × 71.7mm
Material	Environmentally friendly ABS fireproof material, fire rating V0.

Display	It can display whether the charging is overcurrent, the cause of the fault, and the version number.
Anti-static rating	4KV
Operating temperature	-20 ℃ to 80 ℃
Storage temperature	-10℃ to +60℃
Working current	Answer mode current (5V) <260mA, charging mode current (15V) <3.2A
Communication rate	2Mbps
Signal modulation method	GFSK
Frequency	2.403-2.477GHz & 13.56MHz
Sensing range	The effective range of interactive answers is no less than 15 meters.
data transmission	Data transmission efficiency is in the millisecond level, supporting data retransmission mechanism to ensure 100% success

6 Notes

1. Type 554 receivers are equipped with type 46 answering machine charging seat, which is designed with data transmission and power supply separation. USB cable must be connected to the computer when using, but if you do not consider charging type 46 answering machine at the same time, you do not need to connect the external power adapter.

2. High-speed USB HID interface is adapted in Type 554 receivers, and it does not need not install drivers under Windows operating system and the receiver can be used after plugging.

3. The height of type 554 receiver should not be less than 1.2 meters; there should not be objects stacked in the front; any objects should be avoided in the visible range between students and students, and the receiver should be facing the students as shown in the figure.

注意事项：
1、设备放置高度不小于1.2米；
2、设备前面不要堆放物品；
3、设备与学生间可视范围内避免其它物体遮挡；
4、离开教室时请将设备电源断开。
此面正
对学生

4. Type 554 receiver should not be placed near the high-power equipment to ensure that the equipment or 2.4 GH radio frequency is not affected.

5. Type 46 answering machine should not be place in dark and humid environment, avoiding short circuit.

6. The batteries of type 46 answering machine are built-in, non-removable and rechargeable lithium batteries. It is recommended that the batteries be put back to the receiver for charging in time after use.

7. If it is not used for a long time, it is recommended to disconnect the adapter power supply of type 554 receiver.

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

* RF warning for Portable device:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.