TX7322

Addressable Sounder Base
Installation and Operation Manual

Product Safety

To prevent severe injury and loss of life or property, read the instruction carefully before installing the Addressable Sounder Base to ensure proper and safe operation of the system.

European Union directive
2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points.

For more information please visit the website at www.recyclethis.info

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1 Introduction

1.1 Overview

The TX7322 Addressable Sounder Base is an alarm warning device used to notify persons in the vicinity of the occurrence fire emergency in order the person to take appropriate measures. The unit adopt multi-application device starting from the types, parameters and wiring layout in single unit. The TX7322 Addressable Sounder Base is powered by the communication bus. The TX7322 can change into different encoding modes such as non-coding mode, single-encoding mode and dual-encoding mode using a programming tool. And it has different starting modes. In addition, the alarm tone can be configured according to the requirement from 17 different tones.

The unit manufactured base on the requirement of EN 54 part 3, European Standard. The unit is aesthetically pleasing with unobtrusive design that will complement modern building designs and its plug-in type assembles make installation and maintenance more convenient to the installer. The unit is compatible to the TX7004 Analogue Intelligent Fire Alarm Control Panel, produced by single manufacture T&A, to avoid addressable communication compatibility problem.

1.2 Feature and Benefits

- EN54-3 compliance
- Built-in MCU processor and digital addressing
- 17 tones Programmable sound output
- Encoding modes such as Non-coding Mode, Single-encoding Mode and Dual-encoding Mode
- Programmable Evacuate or Pre-alarm/Evacuate signal
- Be started directly by a detector
- Onsite adjustable parameters
- Loop power input
- Aesthetically pleasing design
- Universal mounting with fix base for simple installation

1.3 Technical Specification

Compliance	EN54-3
• Input Voltage	Loop Power: 24VDC [16V to 28V]
• Current Consumption	Standby: ⩽0.8mA, Alarm: ⩽4mA
• Protocol/Addressing	T&A, Value range from 1 to 254
• Address Sequence	non-coding mode: Alarm tone Single Address: Alarm tone Dual Address: 1st warning tone / 2nd Alarm tone
• Material / Colour	ABS / White Glossy finishing
• Dimension / Height	Diameter 140mm / 59.1mm (with a cover)
• Weight	194g (with a cover)/176g (without a cover)
• Class	Type A, Indoors
• Operating Temperature	-10°C to +55°C
• Ingress Protection Rating	IP30
• Humidity	0 to 95% Relative Humidity, Non condensing

2 Installation

2.1 Installation Preparation

This alarm warning device must be installed, commissioned and maintained by a qualified or factory trained service personnel. The installation must be installed in compliance with all local codes having a jurisdiction in your area or BS 5839 Part 1 and EN54.

2.2 Installation and Wiring

1. Install the TX7980-type base in the position where the Addressable Sounder Base will be installed. Following the arrow mark for the correct position. Do not over-tighten the screws otherwise the base will twist. Use M4 standard screws. Terminals 1 and 6 are the bus signal inputs for connection to the last device. Terminals 2 and 5 are the bus signal outputs for connection to the next device. Terminals 3&8 or 4&7 are used to connect remote indicators. TX7980-type base structure and the terminals connection diagram as shown in Figure 1.
2. The bottom structure of the Addressable Sounder Base as shown in Figure 2. Install the Addressable Sounder Base on the TX7980-type base with the installation terminals of the two devices are one-to-one. The device number or other device parameters can be verified with a handheld programmer if desired.
3. The top structure of the Addressable Sounder Base as shown in Figure 3. An upper cover or a detector can be mounted on the Addressable Sounder Base, as shown in Figure 4.

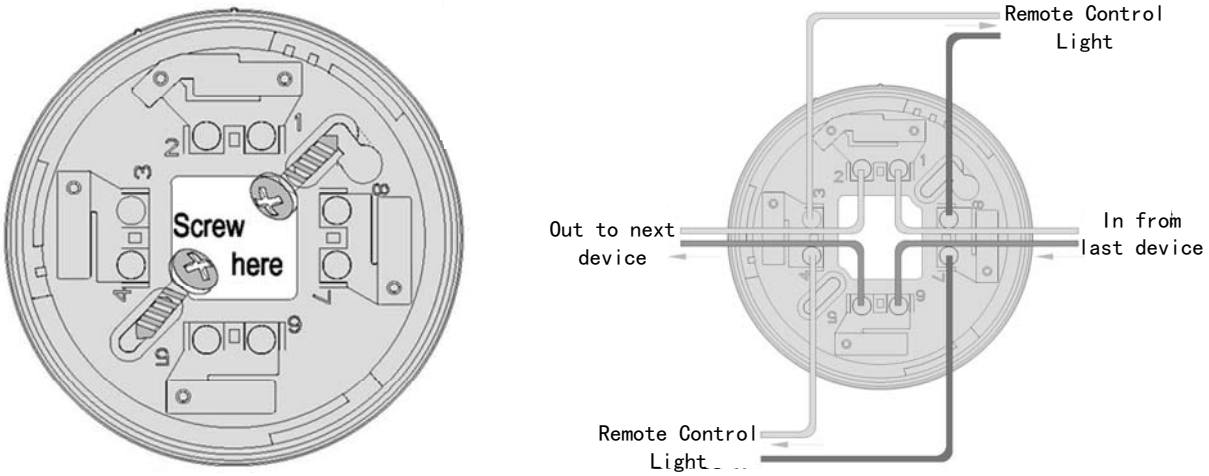

Fig.1 TX7980 base structure and the terminals connection diagram

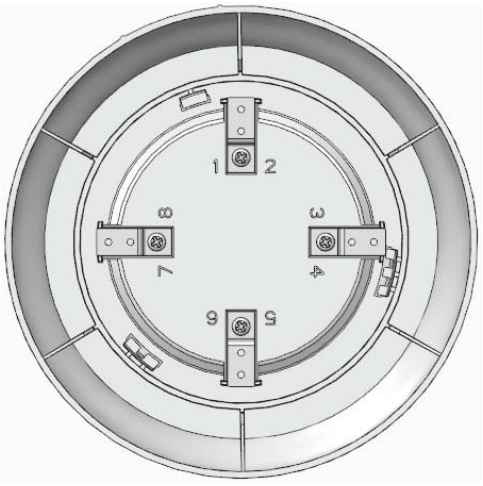

Fig.2 Bottom structure of the Sounder Base

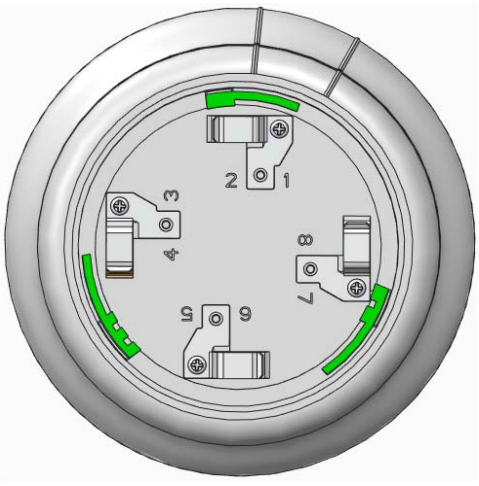

Fig.3 Top structure of the Sounder Base

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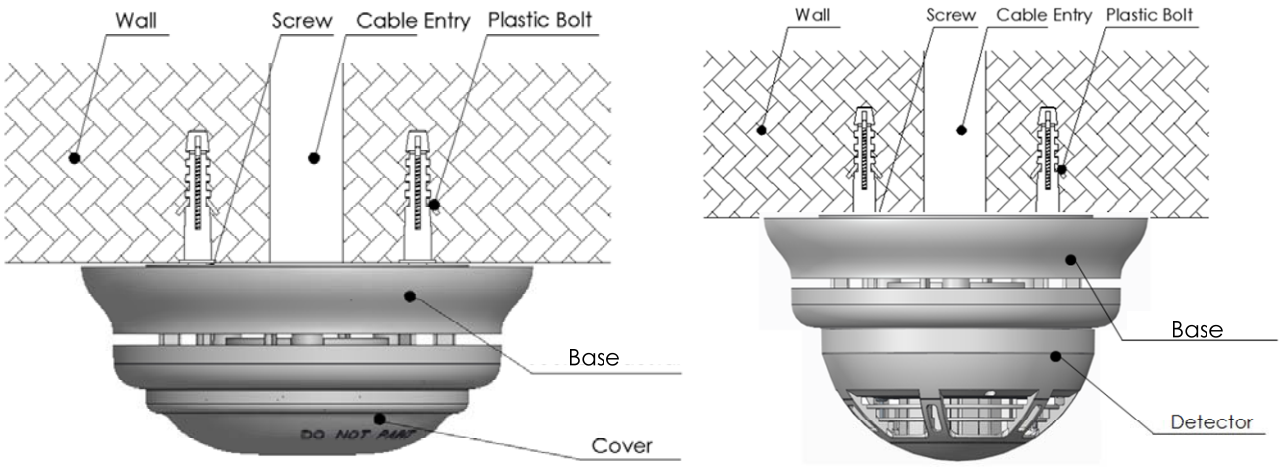

Fig.4 Addressable Sounder Base with an upper cover or a detector

3 Addressable Sounder Base Configuration

3.1 Preparation

The TX7930 handheld programmer is used to configure the address and other parameters of the Addressable Sounder Base. It is not included in the Addressable Sounder Bases which you purchased. So it must be purchased separately. The programmer is packed with twin 1.5V AA battery and cable, ready for usage once received.

It is mandatory for the commissioning personnel to have programmer tool in order to adjust the Addressable Sounder Base conferring to the site situation and environmental requirements.

Program a unique address number for each device according to the project layout before placing from the Terminal Base.

Warning: *Disconnect the loop connection whilst connecting to the handheld programmer.*

3.2 Parameter setting

1. Connect the programming cable to Z1 and Z2 terminals, as shown in Figure 5. Press **"Power"** to switch on the unit. The main menu after the boot as shown in Figure 6.
2. Switch-on the programmer, then press button **"3"** to set encoding mode. Select the desired encoding method and then click the button **"Write"** to save the configuration information, as shown in Figure 7.
3. Exit the programming tool to the main menu and then press button **"Write"** or **"2"** to set address. Input the desire device address value from 1 to 254 and then press **"Write"** to save the new address, as shown in Figure 8.

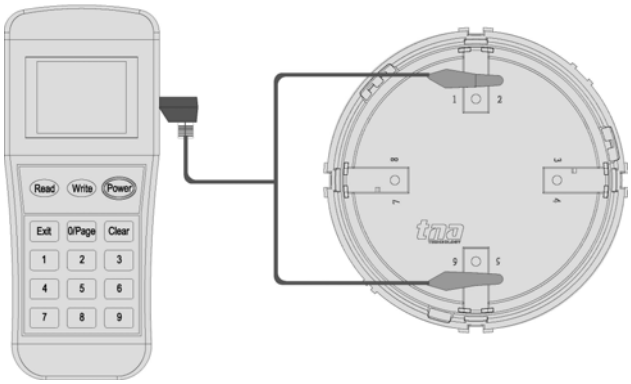

Fig.5 Connection of programming tool and Addressable Sounder Base

4. Exit the programming tool to the main menu and then press button **"4"** to set alarm sound type. Input the desire tone type from 1 to 16 and then press **"Write"** to save the new tone, as shown in Figure 9.
5. Exit the programming tool to the main menu and then press button **"Read"** or **"1"** to view the

configuration information of the Addressable Sounder Base, as shown in Figure 10.

6. Press "**Exit"** key to go back main menu when all the information is set up. And then press "**Power"** key to switch-off the programmer.

Note: If display **"Success"**, means the entered information is confirmed. If display **"Fail"**, means failure to program the information. And it is need to re-operate.

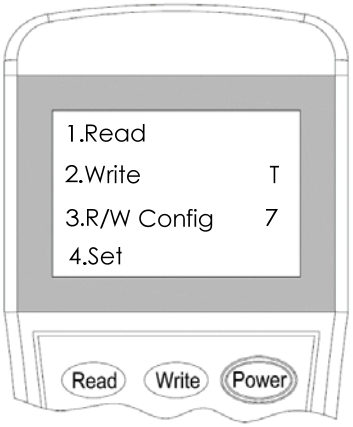

Fig.6 Main menu

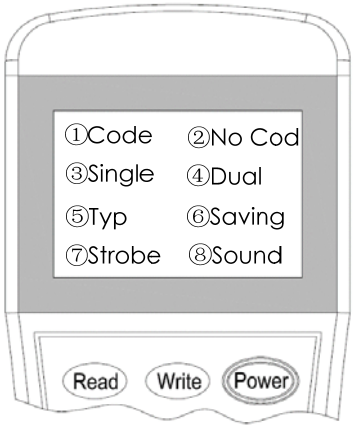

Fig.7 Encoding mode setting

Fig.8 Address setting

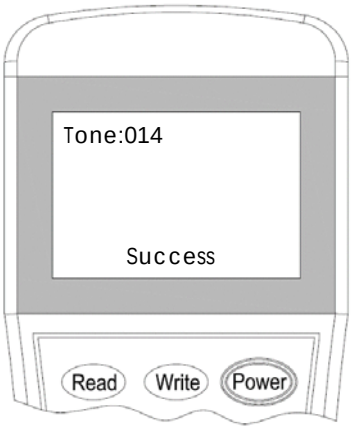

Fig.9 Alarm sound setting

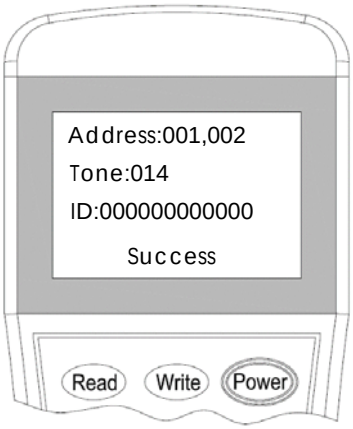

Fig.10 Configuration information

3.3 Encoding Mode Setting

The TX7322 Addressable Sounder Base has three different encoding modes such as non-coding mode, single-encoding mode and dual-encoding mode. Different encoding modes correspond to different ways of operation. It can be change the encoding mode by a programming tool.

Non-encoding Mode

In non-encoding mode, the Addressable Sounder Base is not controlled by a controller. And it will not be started by other front-end equipment linkage. The Addressable Sounder Base can only be started by a detector which mounted on the Addressable Sounder Base. The Addressable Sounder Base will make an alarm sound when the detector reported a fire. The Addressable Sounder Base does not act when the detector fire information disappeared.

Single-encoding mode

In single-encoding mode, the Addressable Sounder Base has an address. It can be started, silenced and stopped by a controller. It can also be started by other front-end devices. As in the non-coding mode, it can be controlled by a detector which mounted on it.

Dual-encoding mode

In dual-encoding mode, the Addressable Sounder Base has two addresses. It can be started, silenced and stopped by a controller. As in the non-coding mode, it can be controlled by a detector which mounted on it. It can also be controlled by other front-end devices. In the linkage control process, the Addressable Sounder Base will make a warning tone firstly when the fire occurred. And then it will make an alarm tone when the fire has confirmed by the controller.

The encoding mode of the Addressable Sounder Base can be set by a programming tool. As shown in figure 11, the option corresponding to the number will be selected when a number is pressed at the interface shown in Figure 6. And then click the button **"write"**. The word **"Success"** or **"Fail"** on the screen means that the success or not of the encoding mode setting, as shown in figure 12 and figure 13.

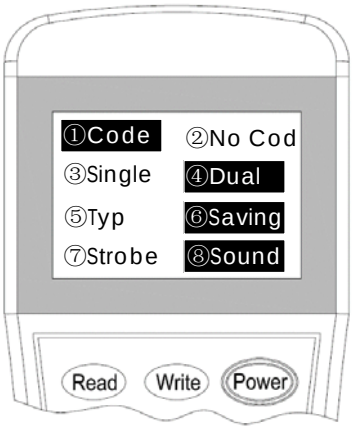

Fig.11 Encoding mode setting

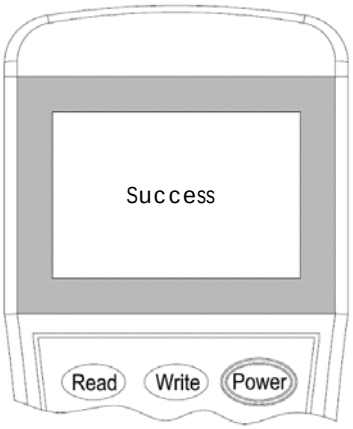

Fig.12 Success to setting

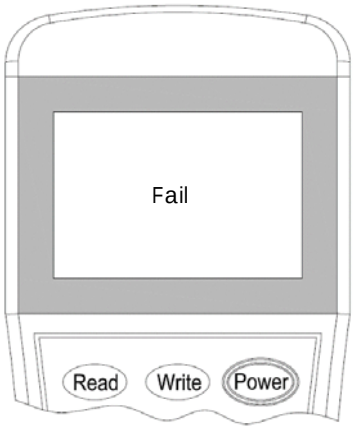

Fig.13 Fail to setting

Note: *The programming tool can still read the address of the Addressable Sounder Base in non-coding mode. But the controller can not check the presence of it. In dual address mode, the sounder will generate the unique next higher number for the second address for example: In single address mode the address number is 15, when change to dual address mode the address numbers will now be 15 and 16.*

Warning: *Dual address mode may cause Duplicate address fault on the panel and may affect the operation of the next device with conflicted address number if not carefully arrange the loop addressing.*

3.4 Tone Setting

The TX7322 Addressable Sounder Base has 16 kinds of different alarm tone and a kind of warning tone. The Tones of it can be change according to the project requirement by a programming tool. The detailed parameters of different tone are shown in Table 1.

Table 1 Detailed parameters of different tone

Parameter	Tone Code	dB(A) Output (1m)	Description
1	01	80.2	970Hz
2	02	84.8	800Hz / 970Hz @ 2Hz
3	03	85.5	800Hz -970Hz @1Hz

4	04	84.1	970Hz 1s off / 1s on
5	05	82.3	970Hz, 0.5s / 630Hz, 0.5s
6	06	86.2	500Hz - 1200Hz×3, 3.5s on / 0.5s off
7	07	87.4	2850Hz, 0.5s on / 0.5s off×3 / 1.5s off
8	08	87.4	2850Hz 0.4s on, 0.3s off
9	09	83.2	550Hz, 0.7s / 1000Hz, 0.33s
10	10	84.3	1500Hz -2700Hz @ 3Hz
11	11	80.5	2400Hz
12	12	83.5	500Hz -1200Hz @ 0.33Hz
13	13	84.6	2400Hz -2900Hz @ 9Hz
14	14	87.8	2400Hz -2900Hz @ 3Hz [Default]
15	15	85.6	800Hz-970Hz @ 3Hz
16	16	86.5	500Hz-1200Hz, 3.75s / 0.25s off
17	17	78.9	800Hz 1s off / 1s on [Pre-alarm]

1. Attach the programming tool to 1 and 6 Terminals of Addressable Sounder Base. Press **"Power"** to switch-on the unit.
2. Switch-on the programmer, then press button **"4"** to set the desired tone, as shown in figure 14. Write the number of the corresponding tone and click the button **"write"**. The word **"Success"** or **"Fail"** on the screen means that the success or not of the encoding mode setting, as shown in figure 15 and figure 16.
3. Press **"Exit"** key to go back Main Menu. Press **"Power"** to switch off the programmer.

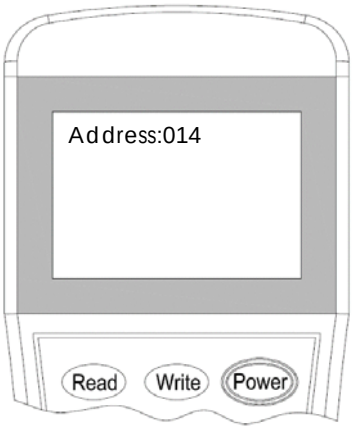

Fig.14 Tone setting

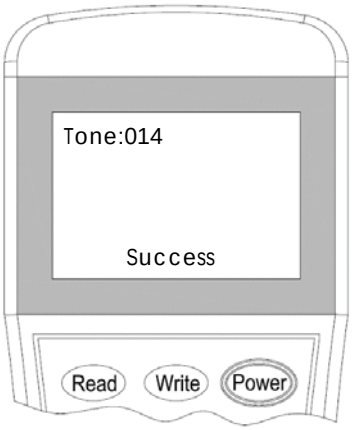

Fig.15 Success to setting

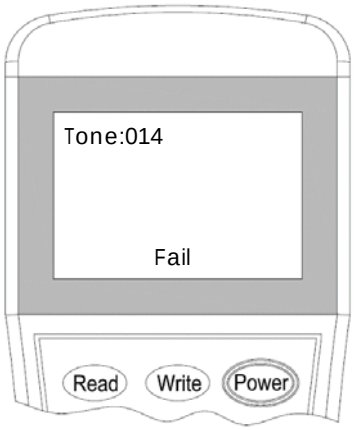

Fig.16 Fail to setting

3.5 Read Configuration

Under the main menu, as described in Section 3.2, the configuration parameters of the Addressable Sounder Base can be viewed by clicking the button 1**"Read"** or **"1"**, as shown in Figure 9.

4 General Maintenance

1. Inform the suitable personnel before conducting the maintenance.
2. Disable the alarm warning device on the control panel to prevent false alarm.
3. Do not attempt to repair the circuitry of the alarm warning device, it may affect the operation to respond to a fire condition and will void the manufacturer's warranty.
4. Use a damp cloth to clean the surface.
5. Notify again proper personnel after conducting the maintenance and make sure to enable the alarm warning device and confirm if up and running.
6. Perform the maintenance on semi-annually or depending on the site conditions.

5 Troubleshooting Guide

What you notice	What it means	What to do
Address not enrolling	In non-coding mode The wiring is loose The address is duplicate	View the encoding mode Conduct maintenance Re-Commission the device
Unable to commission	The damage the electronic circuit	Replace the device

Appendix 1

Operational Performance Data for LPCB Approved Tones

1. Tone 14 – Volume dB(A)

Table 2 Sound pressure level of tone 14 at different bus voltage with 3 meters away

Angle (3m)	Horizontal Plane		Vertical Plane	
	Max 28V	Min 17.5V	Max 28V	Min 17.5V
15°	74.9	68.9	80.0	73.5
45°	73.1	73.1	81.9	73.2
75°	72.9	70.2	80.0	79.5
105°	73.5	71.5	78.4	75.7
135°	74.4	71.8	78.9	78.6
165°	74.2	70.8	78.2	71.7

2. Tone 16 – Volume dB(A)

Table 3 Sound pressure level of tone 16 at different bus voltage with 3 meters away

Angle (3m)	Horizontal Plane		Vertical Plane	
	Max 28V	Min 17.5V	Max 28V	Min 17.5V
15°	75.0	74.3	77.6	76.3
45°	75.1	74.3	79.0	78.5
75°	76.4	73.6	82.1	80.0
105°	75.9	73.5	80.7	78.9
135°	78.1	76.3	80.5	78.6
165°	77.7	75.1	78.3	78.1

3. Tone 17 – Volume dB(A)

Table 4 Sound pressure level of tone 17 at different bus voltage with 3 meters away

Angle (3m)	Horizontal Plane		Vertical Plane	
	Max 28V	Min 17.5V	Max 28V	Min 17.5V
15°	71.5	70.7	77.4	75.5
45°	71.1	69.8	75.1	72.7
75°	70.6	73.9	76.3	77.8
105°	71.2	70.1	74.1	75.4
135°	72.0	70.4	77.5	72.3
165°	70.7	70.8	74.7	76.3

Limitation of Addressable Sounder Base

The alarm warning device cannot last forever. In order to keep the alarm warning device working in good condition, please maintain the equipment continuously according to recommendations from manufacturers and relative nation codes and laws. Take specific maintenance measures on the basis of different environments.

This alarm warning device contains electronic parts. Even though it is made to last for a long period of time, any of these parts could fail at any time. Therefore, test your alarm warning device at least every half-year according to national codes or laws. Any fire alarm devices or any other components of the system must be repaired and/or replaced immediately as they fail.

This product is not approved to EN54-23 (Beacon Functionality) and must not be used as a visual alarm device or to provide a primary warning notification of fire.