

# TFS-214S

## Conventional Alarm Notification Horn / Strobe

### Technical Manual



**TELEFIRE FIRE & GAS DETECTORS LTD**

PO Box 7036  
Petach Tikva 49250  
Israel

Tel: 972 3 970 0400

Fax: 972 3 921 1816

eMail: [marketing@telefire.co.il](mailto:marketing@telefire.co.il)

Web: [www.telefire.co.il](http://www.telefire.co.il)



**Revision 1.12**  
**April 2013**

***i***

**Note**

The terms "**Trouble**" as used in NFPA 72 guideline and UL standards and "**Fault**" as used in EN 54 standards are used interchangeably throughout this manual.

***i***

**Note**

Do not install, operate, and maintain this TFS-214S before fully reading this manual.

## 1 Introduction

The TFS-214S sounder / Strobe is intended for indoor use as an indicator of alarm in fire alarm systems.

Tone and volume can be set via a DIP switch setting (see section 3.3 on page 2).

The TFS-214s combines a high sound level and low current consumption and has polarized inputs, thus enabling connection to both level activation and reversed polarity outputs.

## 2 Compatibility

### 2.1 Control Panels

The TFS-214S is compatible with the following control panels:

- All ADR-3000 models when connected to the HORN or ALARM outputs
- All ADR-3000 models when connected via an ADR-823
- All TSA-1000 models
- TSA-1000X
- TSA-200 and TSA-200X
- All GSA-1000 models
- GSA-2B

## 3 Installation

Planning of quantity and location of detectors, push buttons, notification appliances and extinguishing devices shall be done according to the local codes and regulations and in accordance to the planning consultant's requirements.



### Warning

**Disconnect all power supplies, main and batteries before connecting or disconnecting cables and devices to the control panel.**

### 3.1 Pre-Installation Planning

#### 3.1.1 Cabling Planning – Activation Lines and 24Vdc Out

Use a 2-wire cable, 12 – 18 AWG (0.8 to 3.3 mm<sup>2</sup>) for Activation Line connections.

The length of activation lines cabling depends on the required current and cable size.

Ensure that the maximum voltage drop to the end of the line at full load does not exceed 2V and will leave the last device the minimal operating voltage as per the manufacturer's specification.

#### 3.1.2 Output Wiring

Activation circuit cabling between the 24Vdc source to the output device such as sounders, extinguishing devices, strobes, etc., shall be calculated to a maximum voltage drop of 2V or a voltage drop that will leave the device with the lowest operating voltage specified by the manufacturer – the lowest voltage drop of the two.

### 3.1.3 Maximum Connections

Output	Maximum Connection
ADR-3000 Horn output	Up to 5 units
ADR-823	Up to 5 units. Connect the Sounder to NAC A and the strobe to NAC B
TSA-1000 / TSA-1000X	Horn output: Up to 5 units Other outputs: Up to 3 units
TSA-200 / TSA-200X	Out 1: Up to 3 units
GSA-1000	Horn output: Up to 3 units Other outputs: Up to 2 units
GSA-2B Horn output	Up to 3 units

*i*

**Note**

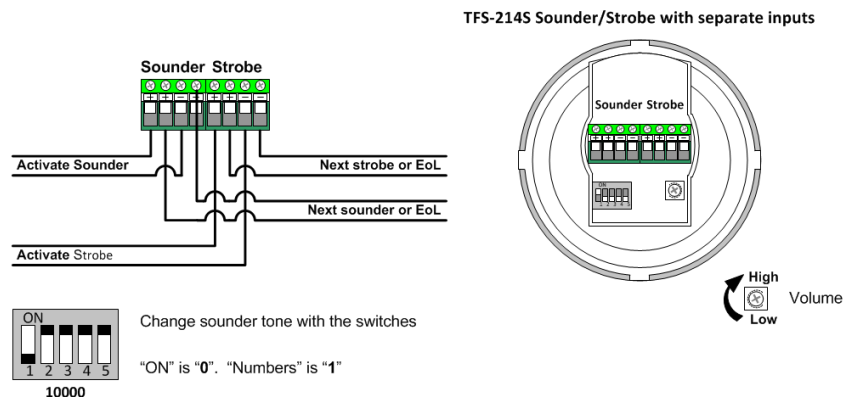
The limitations in the table below assume that TFS-214S is the only device type connected to the output.  
Should you connect other devices to an output, calculate total current consumption and ensure it does not exceed the output's capacity.

### 3.2 Installation

*i*

**Note**

Notify the operator or the security personnel that the system will be temporary disconnected before adding devices to a control panel.  
Measure the wiring to ensure there are no shorts before connecting the wiring to the control panel.  
Connecting or adding devices to a control panel shall be done when all power to the control power (AC and batteries) is off.



11/2012

### 3.3 Tone and Volume Selection

Select the tone as per the following table. Ensure that the volume selector is at maximal position (clockwise).

No.	Sound	Code (Switches 12345)	Sound Level (dB) <sup>1</sup>
1.	Changing tone 800 / 970 Hz at 2 Hz	11111	101
2.	Swooping tone 800 – 970 Hz at 7 Hz	11110	100
3.	Swooping tone 800 / 970 Hz at 1 Hz	11101	101
4.	Constant tone 2850 Hz	11100	110
5.	Swooping tone 2400 – 2850 Hz at 7 Hz	11011	109
6.	Swooping tone 2400 – 2850 Hz at 1 Hz	11010	112
7.	Slow Whoop	11001	101
8.	Swooping tone 1200 – 500 Hz at 1 Hz	11000	100
9.	Changing tone 2400 / 2850 Hz at 2 Hz	10111	112
10.	Pulsing tone 970 Hz at 1 Hz	10110	102
11.	Changing tone 800 / 970 Hz at 1 Hz	10101	103
12.	Pulsing tone 2850 Hz at 1 Hz	10100	114
13.	970 Hz at 0.25 sec. on / 1 sec. off	10011	98
14.	Continuous tone 970 Hz	10010	106
15.	554 Hz for 100mS and 440 Hz for 400mS	10001	97
16.	Pulsing tone 660 Hz at 150mS on / 150mS off	10000	93
17.	Pulsing tone 600 Hz at 1.8S on / 1.8S off	01111	96
18.	Pulsing tone 600 Hz at 6.5S on / 13S off	01110	96
19.	Continuous tone 660 Hz	01101	95
20.	Changing tone 554 / 440 Hz at 1 Hz	01100	100
21.	Pulsing tone 660 Hz at 1 Hz	01011	95
22.	Pulsing tone 2850 Hz 150mS on / 100mS off	01010	111
23.	Swooping tone 800 – 900 Hz at 50 Hz	01001	98
24.	Swooping tone 2400 – 2850 Hz at 50 Hz	01000	109
25.	Pulsing tone 970 Hz at 500mS on / 500mS off	00111	102
26.	Pulsing tone 2850 Hz 500mS on / 500mS off	00110	114
27.	Continuous 4 KHz tone	00101	108
28.	Pulsing 400 Hz at 500mS on / 500mS off	00100	98
29.	Pulsing 400 Hz at 500mS on / 250mS off	00011	95
30.	Swoop 320 – 480 Hz at 40 Hz	00010	95
31.	Pulsing 2 KHz tone at 200mS on / 500mS off	00001	108
32.	Off	00000	–

<sup>1</sup> Typical sound level at 1m distance @ 24V100

## 3.4 Wiring

*i*

### Note

Notify the operator or the security personnel that the system will be temporary disconnected before adding devices to a control panel.

Measure the wiring to ensure there are no shorts before connecting the wiring to the control panel.

Connecting or adding devices to a control panel shall be done when all power to the control power (AC and batteries) is off.

Ensure all input devices are in normal state and no devices are in alarm before connecting any extinguishing activation devices

### 3.4.1 End of Line Device (E.O.L.)

Install the End of Line Device (E.O.L.) to the last device in the output.

## 3.5 Post-Installation

### 3.5.1 Activation Test

Test the activation matrix by activating the appropriate initiating devices and verify that the outputs are activated as specified by the planning consultant.

Test the outputs of the system to ensure that they are activated according to the conditions specified by the consultants.

## 4 Specification

Diameter .....	92 mm
Height .....	72 mm
Weight .....	208 gr.
Operating Temperature range.....	-10°C – +60°C (14°F – 140°F)
Relative Humidity Range .....	10% – 93% non-condensing
Operating Voltage.....	24 Vdc nominal
Maximum Current Consumption	
Sounder (configuration dependant).....	up to 30 mA
Strobe .....	up to 12 mA

**All values are nominal. Specifications are subject to change without prior notice**

## 5 Certification

Telefire's TFS-214S Analog Addressable Conventional Description has the following approvals:

- EN 54 Compliant
- GOST Compliant
- IS 1220 Approved