

# **REPEATER PANEL**

## **INSTALLATION AND OPERATION MANUAL**

[www.nordencommunication.com](http://www.nordencommunication.com)

## Product Safety

To prevent severe injury and loss of life or property, read the instruction carefully before installing the Repeater Panel 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](http://www.recyclethis.info)

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# 1.Introduction

## 1.1.Overview

The NFA-T01RP Repeater Panel, featuring a built-in MCU processor, is designed to accurately display fire event messages from the control panel and provides a rapid relay response with both audible and visual alerts. This repeater panel can be configured to limit zone displays, allowing it to show either all zones or a specific zone and its adjacent zones, easily set through panel key buttons. Connected to the NFA-T04FP series of Intelligent Addressable Fire Alarm Control Panel via a communication loop, it supports up to 254 units per loop. This panel is ideal for relaying information to multiple points, ensuring key personnel are informed as needed.

Manufactured in compliance with EN 54 Part 2 of the European Standard, the NFA-T01 RP features a compact, unobtrusive design that complements modern building aesthetics. Its plug-in assembly simplifies installation and maintenance for installers. Designed to work seamlessly with the NFA-T04FP Intelligent Addressable Fire Alarm Control Panel by Norden, this repeater panel ensures compatibility without addressable communication issues.

## 1.2 Feature and Benefits

- EN54-2 Compliance
- Fire display passive repeater panel
- Built-in MCU processor and digital addressing
- Fast response of audible and visible signal from the panel
- Direct access common keys such as MUTE, UP, DOWN and BROWSE.
- Programmable Zone Display such as All Zone, Single Zone and Three Adjacent Zone
- LED status indicator
- Onsite Adjustable Parameter
- Loop sited wiring with external 24V supply
- Compact size and aesthetically pleasing design
- Surface mounting with fix base for simple installation

## 1.3 Technical Specification

• Listed	LPCB Pending
• Compliance	EN 54-2: 1997+A1: 2006
• Input Voltage	Loop Power: 24VDC [16V to 28V] External PSU: 24VDC [20 to 28V]
• Current Consumption	Loop: Standby: 1mA, Alarm: 1.2mA External PSU: Standby: 25mA, Alarm: 80mA
• Memory Capacity	Up to 200 fire event history
• Number per loop	Up to 254 units (ideal)
• Material / Color	ABS / White Glossy finishing
• Dimension / LWH	180mm x 110 mm x44 mm
• Weight	300g (with Base), 256g (without Base)
• Operating Temperature	0°C to +40°C
• Humidity	0 to 95% Relative Humidity, Noncondensing

## 2.Installation

### 2.1 Installation Preparation

This Repeater Panel 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. Mount the Repeater Panel base on standard Figure two [1] to five [2] gang electrical back box. Follow the arrow mark for the correct position. Do not over-tighten the screws otherwise the base will twist. Use two M4 standard screws.
2. Connect the wire in terminal according to the requirement as shown in Figure [3]. Verify the device address and other parameters then stick on the label before attaching the Repeater Panel. The sticker labels are available on the control panel. Align the interface module and tabs and gently push the device until it locks into place.



Figure 1: Repeater Panel Structure



Figure 2

#### Terminal Description

- Z1 Signal In (+)
- Z1 Signal Out (+)
- Z2 Signal In (-)
- Z2 Signal Out (-)
- D1 External Power Supply In (+)
- D2 External Power Supply In (-)
- D1 External Power Supply Out (+)
- D2 External Power Supply Out (-)

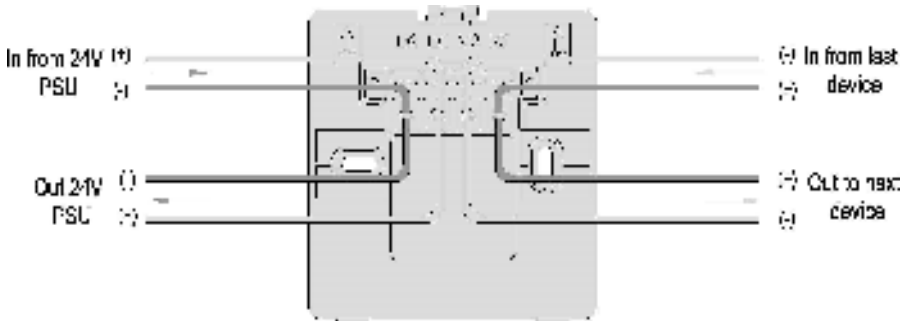


Figure 3: Wiring Details

### 3.Repeater Panel Configuration

#### 3.1 Preparation

The NFA-T01PT Programming Tool is used to configure Repeater Panel soft address. This tool is not included, must be purchased separately. The programming tool is packed with twin 1.5V AA battery and cable, ready for usage once received.

It is mandatory for the commissioning personnel to have programming tool to adjust the Repeater Panel 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 Repeater Addressing

1. Connect the programming cable to Z1 and Z2 terminals (Figure 4). Press **“Power”** to switch on the unit.
2. Switch-on the programmer, then press button **“Write”** or number **“2”** to enter Write Address mode (Figure 5).
3. Input the desire device address value from 1 to 254, and then press **“Write”** to save the new address (Figure 6).

**Note:** If display **“Success”**, means the entered address is confirmed. If display **“Fail”**, means failure to program the address (Figure 7).

4. Press **“Exit”** key to go back Main Menu. Press **“Power”** key to switch-off the programmer.

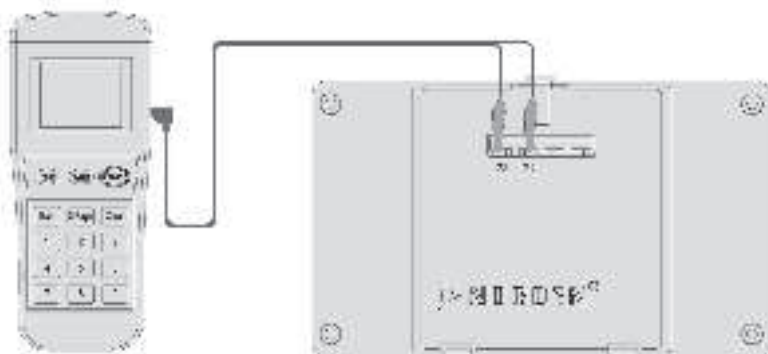


Figure 4: Programming tool Connection Detail

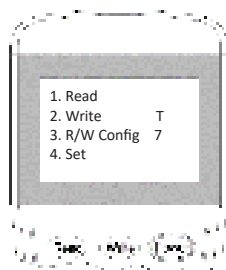


Figure 5

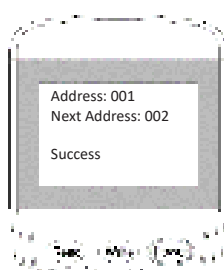


Figure 6



Figure 7

### 3.3 Panel Operations

#### 3.3.1 LED Indicators

Aside from the LCD display, the NFA-T01RP Repeater panel indicate the working status of the unit as refers to the below table.

LED Indicators	Colour	Description
<b>On</b>	Green	When illuminated it indicates the power supply is present
<b>Fire</b>	Red	When illuminated it indicates that a FIRE has been detected in the protected location
<b>Mute</b>	Green	When illuminated it indicates that the Mute button has been pressed
<b>Communication</b>	Green	When illuminated it indicates that the repeater panel is online communication with the control panel

#### 3.3.2 Description of Keys

All the repeater panel keys are dual functions, this section will guide you to understand the working mode in order the key to work in proper function.

**MUTE:** This button mutes the buzzer of the repeater panel. Pressing the mute button will stop the internal panel buzzer. (Operation Mode)

**MUTE** as Escape function is available during the commissioning mode of the repeater. Pressing this button return the menu and allow user to exit the commission mode. (Commission Mode)

**BROWSE:** This allows easy single activation of viewing fire alarm events especially during multiple fire alarm events by pressing Up (▲) and Down (▼) button. (Operation Mode)

**Browse** as **Enter** function is available during the commissioning mode of the repeater. Pressing this button will confirm operation and saving setting. (Commission Mode)

Up (▲) and Down (▼): This button is for the position indicator on the display screen where a user can enter inputs. (Operation Mode)

Up (▲) and Down (▼): Access to the menu setting. To enter the menu, steady hold both Up (▲) and Down (▼) for four (4) seconds then the screen displays the menu. (Commission Mode)

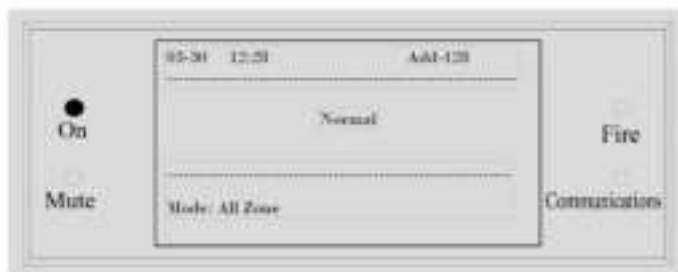


Figure 8: Normal Display Status



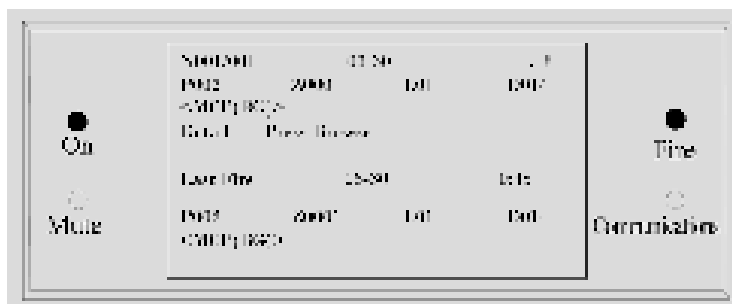


Figure 9: Fire Display Status



Figure 10: Display When Browse Pressed

### 3.3.3 Commissioning Procedures

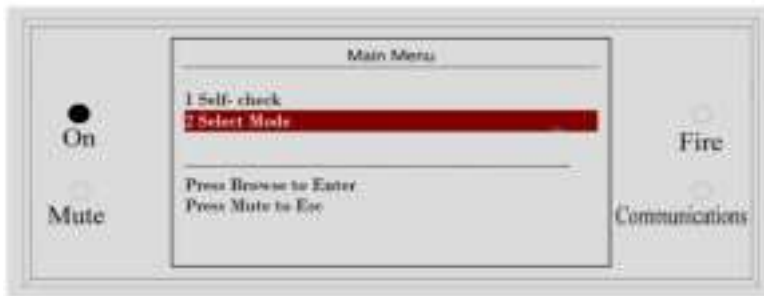
Before switching on the repeater ensures all the connections are tested, measured and visually checked and should be wired correctly.

#### 3.3.3.1 To Enter to Commissioning Mode

1. **Main Menu:** Once supplied by 24Vdc, the panel turns on to show the normal display. To access the menu setting, press and hold both Up (▲) and Down (▼) buttons for four (4) seconds then the screen displays the main menu.
2. **Self-check:** When selected the user allows to test the repeater condition, the units will perform the auto self-check. The unit will simultaneously alarm the buzzer, the turn-on all the LED and reset the LCD display. On the main menu, press Up (▲) or down (▼) buttons to select 1. Self-Check and then press the **Browse** button to Enter.



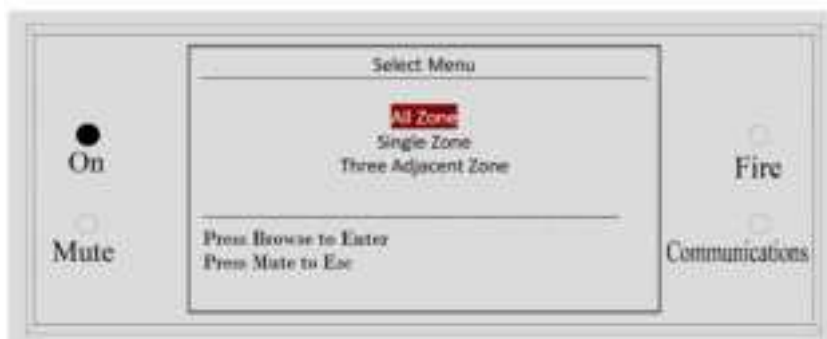
3. **Select Mode:** when selected the user allows you to select the zone or zones to display. The units have 3 types of zone display as shown below:



1. **All Zone:** Selecting this option user allows to set the repeater panel to display FIRE events in all the zones. This is the default setting of the repeater panel.

To set All Zone:

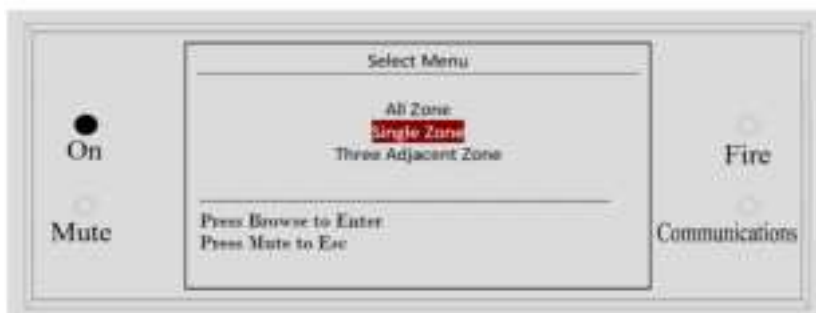
1. On the main menu, press Up (▲) or down (▼) buttons to select All Zone and then press the **Browse** button to Enter, then **SUCCESS** message shown indicates program is confirmed.
2. To exist in the commissioning mode, press the MUTE button repeatedly or wait for 50 seconds.



2. **Single Zone** : Selecting this option user all to set the repeater panel to display FIRE events in a particular zone only.

To set a Single Zone:

1. On the main menu, press Up (▲) or down (▼) buttons to select Single Zone and then press the Browse button to Enter.
2. Enter the zone number by using **Browse** and press Up (▲) or down (▼) buttons.
3. Once the zone is confirmed press the MUTE button, and then press down (▼) button to move cursor to **SAVE** and then press BROWSE. Then **SUCCESS** message shown indicates program is confirmed.
4. To exit in the commissioning mode, press the MUTE button repeatedly.





3. **Three Adjacent Zone** : In connection with the single zone, selecting this option user allows to set the repeater panel force to display additional zone above and the zone below of the **selected single zone mode**.

To set a Single Zone:

1. On the main menu, press down (▼) buttons to select Single Zone and then press the **Browse** button to Enter.
2. Enter the zone number by using Browse and press Up (▲) or down (▼) buttons.
3. Once the zone is confirmed press the MUTE button, and then press down (▼) button to move cursor to **SAVE** and then press BROWSE. then **SUCCESS** message shown indicates program is confirmed, then press **MUTE** button
4. Then press down (▼) buttons to select Three Adjacent Zone and then press BROWSE, then **SUCCESS** message shown indicates program is confirmed
5. To exit in the commissioning mode, press the MUTE button repeatedly.

For Example:

If Zone 28 is selected, the three adjacent zones will be Zone 27, Zone 28 and Zone 29 is permitted to display in the particular repeater panel.



## 4 General Maintenance

1. Inform the suitable personnel before conducting the maintenance.
2. Disable the Repeater Panel on the control panel to prevent false alarm.
3. Do not attempt to repair the circuitry of the Repeater Panel, it may affect the operation to respond to a fire condition and will void the manufacturer's warranty.
4. Notify again proper personnel after conducting the maintenance and make sure to enable the Repeater Panel and confirm if up and running.
5. 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	The wiring is loose The address is duplicate	Conduct maintenance Re-Commission the device
Unable to commission	The damage the electronic circuit	Replace the device

## Appendix 1

### Limitation of Repeater Panel

The Repeater Panel cannot last forever. In order to keep the Repeater Panel 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 Repeater Panel contain 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 Repeater Panel at least every half-year according to national codes or laws. Any LCD repeater Panel, fire alarm devices or any other components of the system must be repaired and/or replaced immediately as they fail.



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