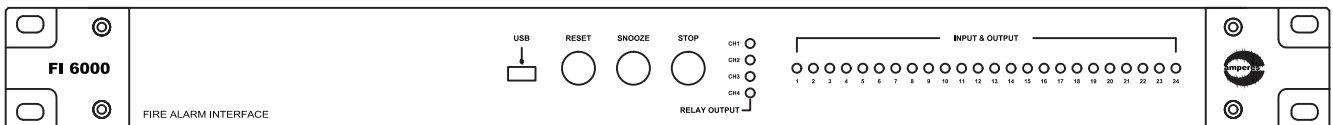




INSTRUCTION MANUAL

FI6000 Fire Alarm Interface



Thank you for choosing another quality product from Amperes Electronics.

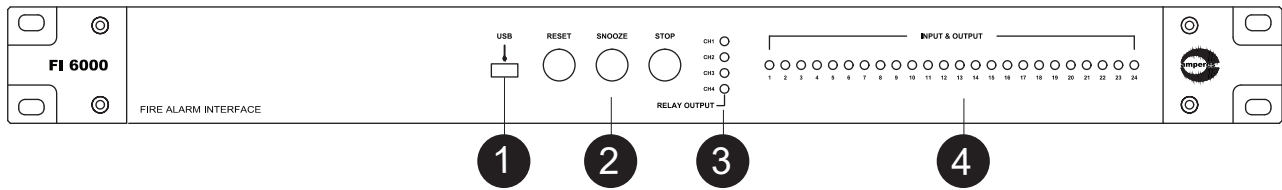
FI6000 is a phase evacuation controller which can be integrated with various Amperes equipment such as zone decoder and voice message player for interfacing with Fire Alarm System.

As part of requirement of EN54, it is necessary that voice alarm to be broadcasted according to zone(s) for orderly evacuation or warning purposes. FI6000 performs the task required by triggering appropriate announcement and intended broadcast zones.

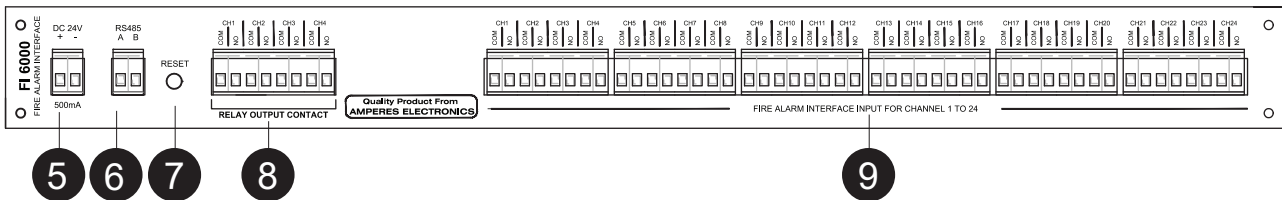
FI6000 can be configured via configurator software and is flexible in its setup.

Parts Identification

Front View



Rear View



1. USB PORT

USB Input Slot, used for configuring the unit.

2. RESET / SNOOZE / STOP BUTTON

The switches determine how to manage the alarm whenever the unit is activated.

3. RELAY INDICATOR

LEDs to indicate which relay contact is currently active.

4. CHANNEL INPUT LED INDICATORS

The green LED indicates the corresponding channel is normal, whereas red indicates that the channel is faulty.

5. DC SUPPLY INPUT PORT

24V DC of 1A regulated power supply is required. Amperes PS9400 is recommended as a DC supply source to your installation.

6. RS485 DATA PORT

RS485 data port is used to interface with other Amperes products, to enable simpler cabling or interconnection works. Alternatively, it can be linked to PC for firmware upgrade. A USB-RS485 converter shall be required for this purpose.

7. RESET BUTTON

Button for resetting the unit to factory default. Use only when required as settings done previously would be lost.

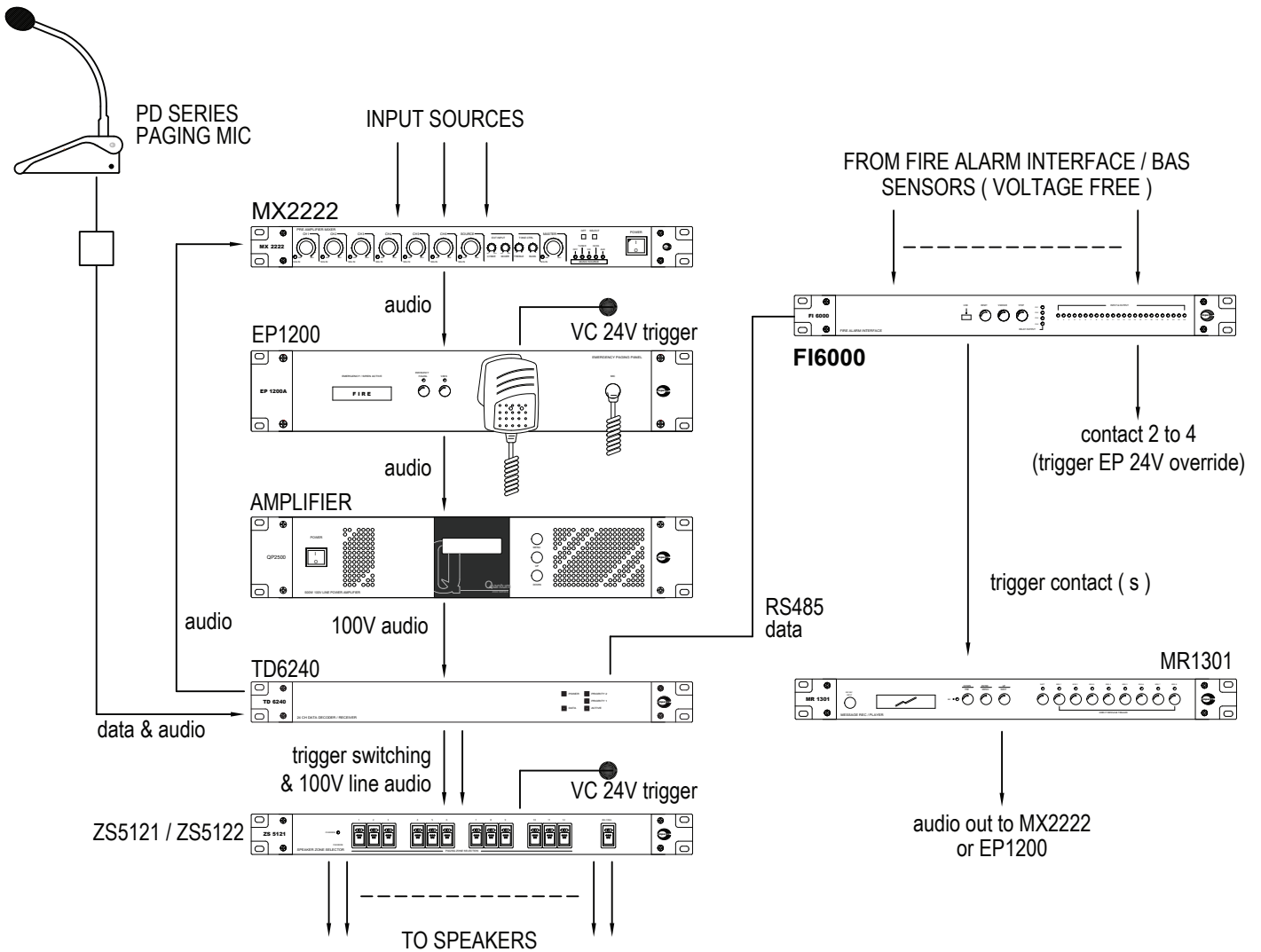
8. RELAY CONTACT

This is the dry contact for triggering other emergency devices, such as EP1200, message recorder or zone selectors.

9. CHANNEL INPUT CONNECTOR

To connect to external sensors / link to BAS / FAS with dry contact (voltage free)

Schematic Diagram



In the above application, FI6000 shall be used to generate systematic auto voice announcement according to the preset zones. The inputs section shall be connected to external sensors or Fire Alarm System and in any event, it shall trigger the required zone via TD6240 / ZS5121 and plays required message via MR1300 (MR1301).

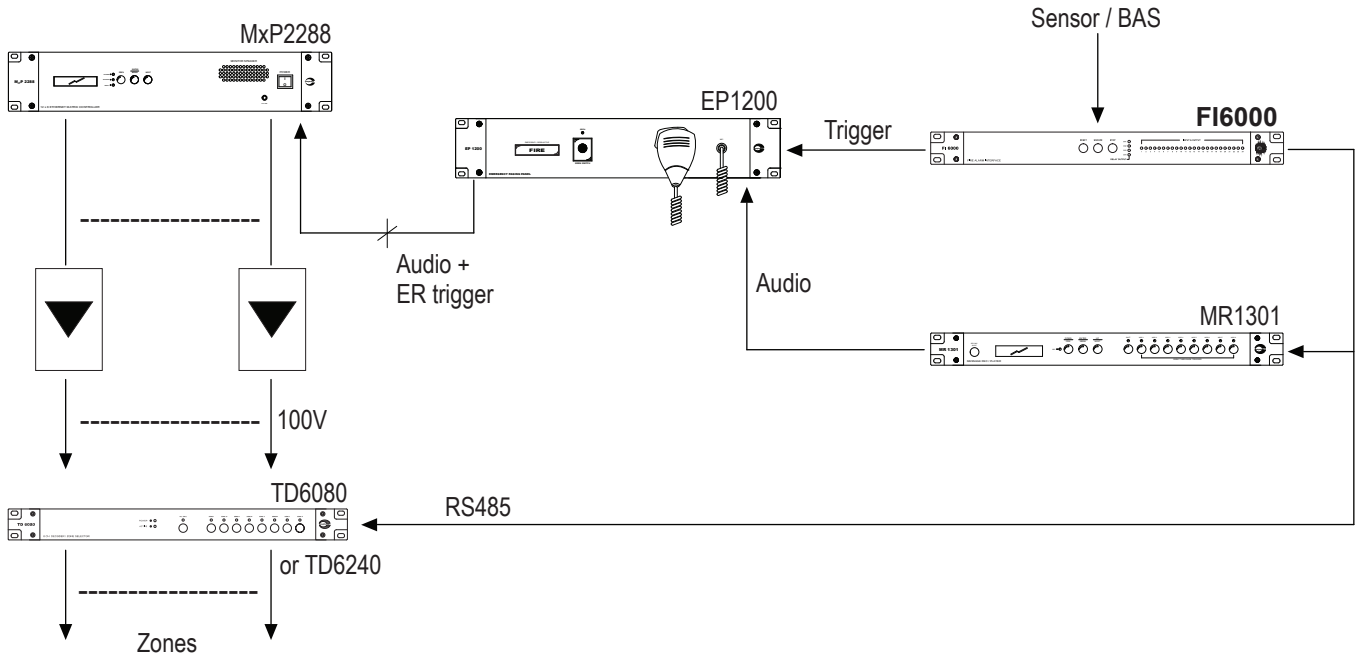
RS485 data from FI6000 can be used to trigger TD6240 or TD6080 as well as MR1301. Additional dry contact port of FI6000 can be used to trigger Volume Control overriding (through EP1200).

The sequence of activities (tasks) has to be set accordingly to avoid loss of communication. Such as, when channel 2 is triggered :

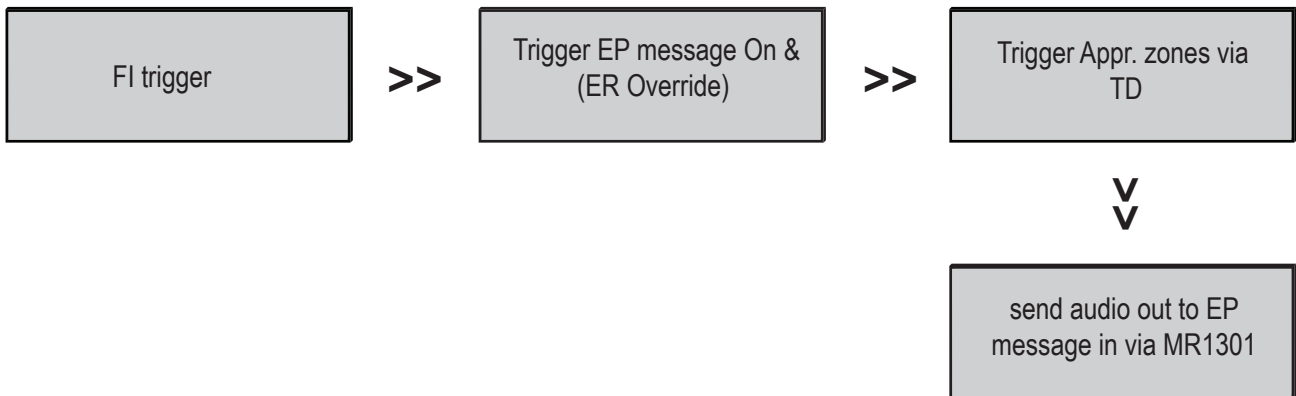
> Trigger EP VC Override >> Trigger Zone 1,3,4 >>> Trigger Message 1
 The sequence can be set using the Configurator Software provided.

Schematic Diagram (Matrix)

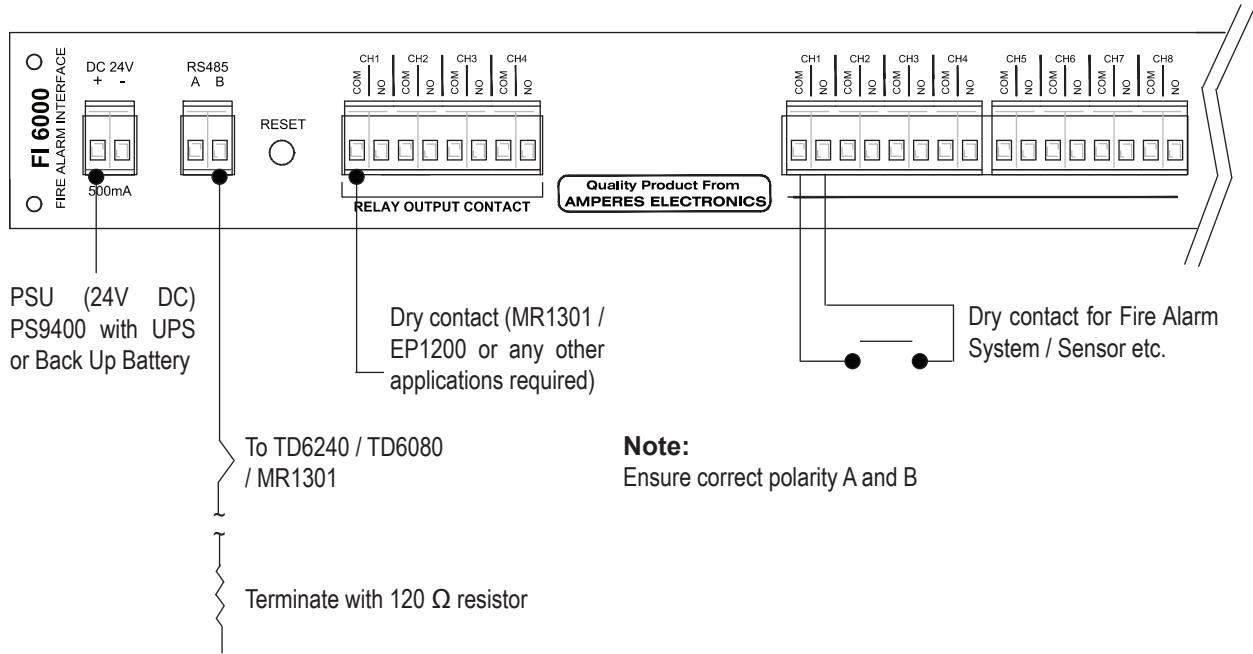
The schematic below illustrates the application of FI6000 in a matrix system.



Upon receiving alarm, FI6000 shall be set to generate a sequence of activity with the following manner.



Connection Diagram



Application Note:

Although FI6000 is intended to be used with Fire Alarm System, its application is not limited as specified. It can be used as a tool to generate a sequence of functions by using the dry contacts available. It is a tool similar to a miniature PLC unit.

Device Setup (PC Interface)

The Configurator Software for FI6000 is available from website / download. Download the package to your PC and run " FI6000 Setup " file.

Should you encounter interruption during download, please disable any active Anti Virus software temporarily. An icon shall appear at your desktop.



FI6000 Icon

Connect your PC to FI6000 via USB cable provided, and the main page shall appear as shown in the next page.

At the upper right corner of the page, a table shows the information about the unit's version.

If the device connected to PC this info shall appear.

PORT	COM2	Destination port on the PC
Firmware Version	V01.03	States version number at firmware
Device Name	Fireman Interface	
Address	1	Address of the unit

Device Setup (PC Interface)

PORT	COM3
Firmware Version	V01.15
Device Name	Fireman Interface
Address	1

Task Configuration Channel Configuration Device Configuration

Firmware Version V01.15

Update to ... Select Firmware Image

Parameter	Setting
Device Name	Fireman Interface
Address	1
Monitored Channels	1 To 20
Channel Queue	<input type="checkbox"/> True
Snooze Duration	10
Pulse Mode Threshold	1000
Trigger Scan Interval	50
Debounce Threshold	100

Default Refresh Save

Update Firmware

Setting

General Sequence of Channel Setting:

In general, the following sequence are to be followed when setting up the unit.

- 1.) Device Configuration
- 2.) Channel Configuration
- 3.) Task Configuration
- 4.) Save Setting
- 5.) Upload to Device

1. Device Configuration

At the " Device Configuration" tab, fill in the Parameter data accordingly, ie:

- Device Name : The name of the unit can be unique to user's preference
- Address : Set address for identification if more than 1 unit is installed
- Monitored Channel : Set number of inputs for interfacing. Unused channel will not be shown by the green LED.
- Channel Queue : If ticked, tasked performed by one channel will be followed by the next activated channel
- Snooze Duration : determine the duration of a snooze in seconds
- Pulse Mode Threshold : determine how an input signal is categorised, as pulse or latch
- Trigger Scan Interval : The scanning interval of inputs
- Debounce threshold : To prevent unnecessary triggering problem caused by relay debouncing.

Device Setup (PC Interface)

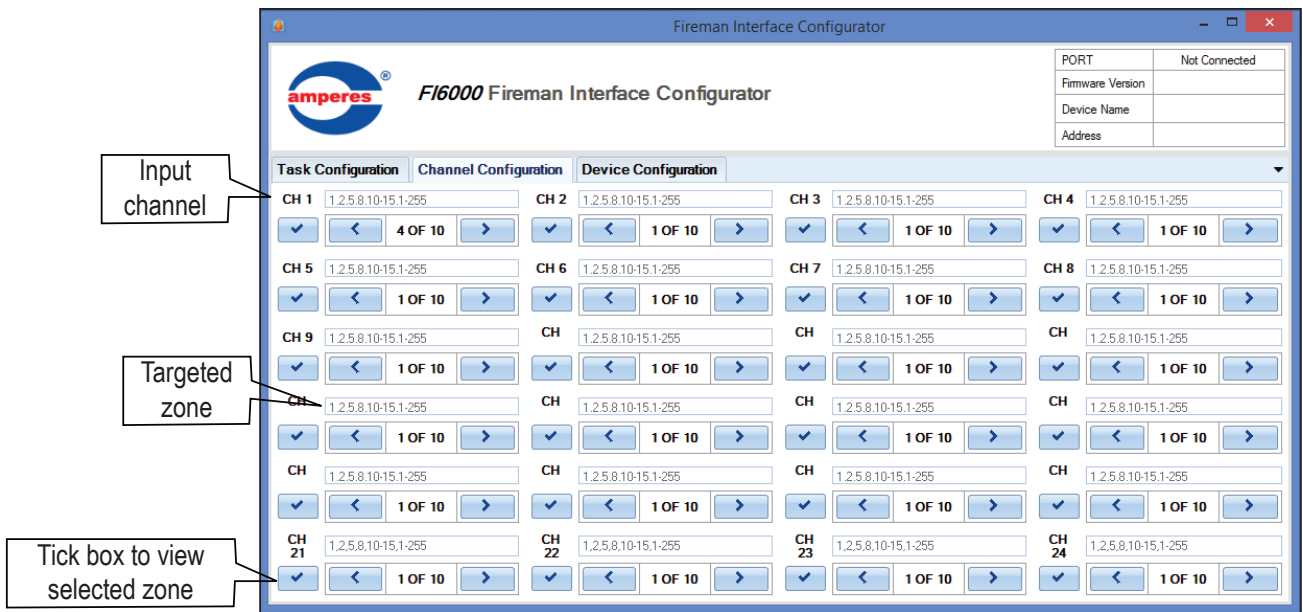
2. Channel Configuration

There are 24 boxes, with each represent an input channel. Upon activation of each channel, the system shall look up to the relevant box to obtain the data on which zone to trigger. (Diagram as at page 9)

Example : when channel 1 is active, it is required to trigger Zone 1,2,5,6 to 10. Thereby fill in the numbers as 1,2,5,6-10.

There are up to 10 zone groupings, which is useful to provide secondary or subsequent triggering if the fault is not restored. Example ; when channel 1 is active, trigger zone 1,2,5,6 to 10, 11 to 15 and after the 10 min lapse (set in Task Configuration tab), if the fault is not attended to, it shall select second zone group such as 1,2,5,6 to 10, 15,20. Thereafter to ALL CALL.

Example:



3. Task Configuration

5 type of Tasks are available. Every triggered channel shall follow the same sequence of Task set.

Up to 255 tasks can be set (All channels shall share same tasks set). Ensure correct task sequence when doing the configuration. Upon completion, the settings can be saved in a file and retrieved later on for editing or uploading to the unit.

Task type : Zone Selector

1 Task Type Zone Selector Address 1 Type Channel Specific Priority 1 Set No 1 Trigger

Activation of TD6240 or TD6080 shall be done using RS485. The parameters at this task type are :

- Address : refers to the unit address of the TD
- Type : to trigger specific zone or ALL CALL, if "channel specific" is selected and channel configuration window is required to specify zone
- Priority : priority setting of FI as compared with others, such as paging mic.
- Set No : the zone number of range of zones
- Trigger slide : select to trigger or off the zones

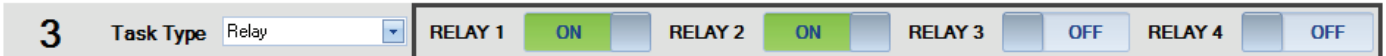
Task type : Delay

2 Task Type Delay Delay 10 Seconds

Apply this task to insert delay in between tasks, measured in seconds.

Device Setup (PC Interface)

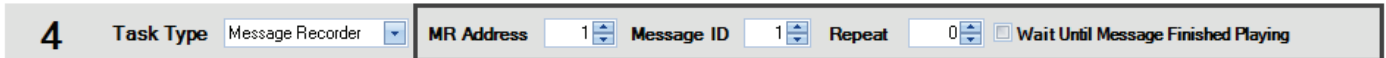
Task type : Relay



3 Task Type Relay RELAY 1 ON RELAY 2 ON RELAY 3 OFF RELAY 4 OFF

This is to select which relay to trigger upon the channel activation.

Task Type : Message Recorder



4 Task Type Message Recorder MR Address 1 Message ID 1 Repeat 0 Wait Until Message Finished Playing

Select this to trigger a message recorder via RS485. Alternatively, message recorder can be activated by using the dry contact provided.

To select RS485 option for MR activation, the following parameters shall be entered :

- MR Address : select corresponding MR address if there are several units installed in the system
- Message ID : refers to the message number of the corresponding MR
- Repeat : number of repetition of the message prior to the next task
- Tick box : tick this to allow the message to finish playing

Task type : Disabled



5 Task Type Disabled

This is the default setting for every channel. Any unused channel shall be set to " Disable" to prevent unnecessary accidental triggering of the unit.

4. Save Setting

Upon completion of setup, always save the configurations to a file for future editing.

5. Upload to Device

To transfer the setting to the device, connect your PC to FI6000 via mini USB cable provided. Click "Upload to Device" button to perform the transfer.

Firmware Update

Firmware updates are available from time to time and can be freely downloaded from our website. To update the firmware at the unit, first download the updated version file with "appbin" extension and save it into your PC.

1. Connect the PC with FI6000
2. Run FI software and select " Firmware Updates & Setting " tab, as shown in page 6.
3. Click " Select Firmware Image " and connect it to the downloaded file
4. Click " Update " to perform the process

Save the settings after changes are made and upload to the unit via FI6000 Configurator tab.

Example Of Configuration

It is important to plan, sketch the task and sequence of activities required prior to configuring FI6000.

Consider a MR1301 and TD6240 are interfaced with FI6000 via RS485 ports.

If an installation with 10 zones, it is required to have : Ch 1 to trigger zone 1,2,5,6 ~ 10

.....subsequently after 5 mins, Activate Zone 1, 2, 5, 6 ~ 10, 11 ~ 15

.....subsequently after 5 mins, Activated Zone ALL Zones

When any zone is triggered at first time, activate Message 1 of MR1300 / 1 message recorder,

.....subsequently after 5 mins, message 2

.....subsequently after 5 mins, message 3

At ALL CALL, all zones shall be activated with volume controller overriding activated.

Thereby the settings for “Channel Configuration” and “ Task Configuration” shall be as shown:

CH 1

1,2,5,6-10

Zone Group 1

1 OF 10

Channel Configuration

CH 1

1,2,5,6-10,11-15

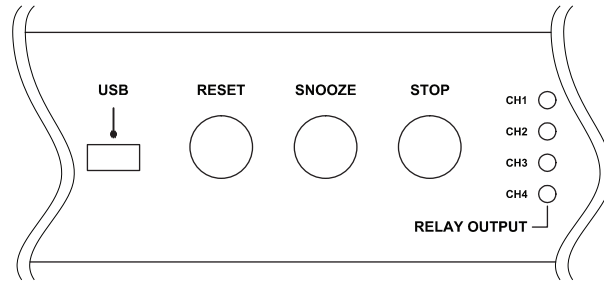
Zone Group 2

2 OF 10

Task Configuration		Channel Configuration	Device Configuration
1	Task Type: Zone Selector	Address: 1	Type: Channel Specific, Priority: 1, Set No: 1, Triggers
2	Task Type: Message Recorder	MR Address: 1, Message ID: 1, Repeat: 3	Wait Until Message Finished Playing
3	Task Type: Delay	Delay: 300	Seconds
4	Task Type: Zone Selector	Address: 1	Type: Channel Specific, Priority: 1, Set No: 2, Triggers
5	Task Type: Delay	Delay: 300	Seconds
6	Task Type: Message Recorder	MR Address: 1, Message ID: 2, Repeat: 0	Wait Until Message Finished Playing
7	Task Type: Delay	Delay: 300	Seconds
8	Task Type: Relay	RELAY 1: ON, RELAY 2: OFF, RELAY 3: OFF, RELAY 4: OFF	Use FI6000 RELAY 1 to override volume controller
9	Task Type: Zone Selector	Address: 1	Type: All Call, Priority: 1, Triggers
10	Task Type: Message Recorder	MR Address: 1, Message ID: 3, Repeat: 5	Wait Until Message Finished Playing
11	Task Type: Disabled		

Task Configuration

Operating the Unit



Under normal conditions, all input LEDs shall be Green. When an input channel is faulty (contact received as fault), the corresponding LED shall turn red and the preset Tasks would run, thereby turning on chime or message, etc..

Snooze :

User may try to find the fault and would acknowledge the alarm by pressing Snooze button. After a preset time, the alarm shall be reactivated.

The related channel LED shall blink, showing the fault is present.

Stop :

To permanently stop a fault and its related Tasks, press Stop button, but the related channel LED shall blink, indicating that the channel is still at fault.

Reset :

With stop pressed, the LED shall still blink, showing the related fault is present. It is true when the contact signal is pulse type. Pressing Reset would return the unit to normal state.

If the contact is latch type, pressing Reset would not return the unit to normal state and the related channel would still blink. The user shall need to reset the devices or system interconnected to FI6000.

When two or more channel are at fault, the system shall operate in First Come First Serve basis. While the faulty channel is running, the others would blink and would serve the next channel upon finishing the previous tasks.

Summary of Features

- Integration with Amperes products via RS485 interface and Fire Alarm System via dry contacts
- Available in 24 zone per panel and scalable to cater for larger number of zones
- Easily programmable for phased evacuation announcement
- Provided with FI6000 Configurator software for easier setup
- Bicolour LED for easier status indication for each incoming sensors

Technical Specifications

Input :	
Operating voltage	24V DC
Current consumption at idle	20mA
Current consumption at channel and relay trigger	0.10A
Power consumption at idle	0.48W
USB input	USB to RS485 Driver
Communication control	RS485
Baud rate	19200 bps
Channel input	24 Channel (dry contacts)
Software configuration	FI6000 Configurator
Output :	
Channel output	4 Channel
Contact rating	3A
LED indicator	28 LEDs
Case :	
Dimension	482 x 44 x 180 mm
Weight	1.90 kg

Note:

The above specifications are correct at time of printing but subjected to changes without prior notice due to product improvements.

Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics Service Centres may be asked for by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP 3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor, Malaysia or its authorized dealers. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

This warranty covers only repairs and replacement of defective parts ; cost and risks of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

This warranty does not cover damages caused by misuse, neglect, accident of the product as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adaptor not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit; moreover the warranty does not cover any damages which may be caused to people and things when using the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or on the identification label applied on the product.

This warranty covers all the material and manufacturing defects and is valid for a period of 36 months from the date of purchase or for a specified period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

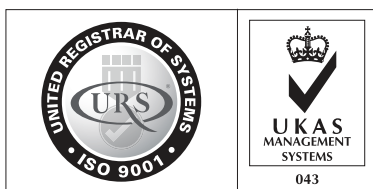
Disclaimer

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It is recommended that all services and repairs on this product be carried out by AMPERES ELECTRONICS SDN BHD or its authorized service agents.

AMPERES series must only be used for the purpose they were intended by the manufacturer and in conjunction with this operating manual.

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