

ADDRESSABLE FIRE ALARM PANEL



TECHNICAL SPECIFICATIONS:



• Operating Voltage	180-240 Vac
• Power	100 W
• Battery Type	Lead-Acid Sealed Battery Capacity 2 x 12V/7Ah
• Number of Loops	1-4
• Active Detectors per Loop	150
• Maximum Detectors per Central	1000
• Ethernet Connection	Yes
• Battery Short Circuit Protection	Yes
• Operating Temperature	-10°C +55°C
• Humidity	% 95

- **Siren Output:**

- Output Type

- Contact Rate

- Fuse

- Maximum Voltage

- End of Line Resistor

Normally Open

1 A @ 30 Vdc

400 mA Automatic Reset

32V

4K7 KOhm

- **Open Collector Outputs (1,2,3):**

- Output Type
- Output Current
- Maximum Voltage

Open Collector
50 mA max
32V

- **Alarm Relay Output:**

- Output Type
- Contact Rate

Normally Open (NO), Normally Closed (NC)
1 A @ 30 Vdc

- **Error Relay Output:**

- Output Type
- Contact Rate
- 24V Output
- Loop Power
- Loop Load

Normally Open (NO), Normally Closed (NC)
1 A @ 30 Vdc
Yes 400mA max
300mA maximum
120R

- **Serial Out (RS-485):**

• Baud Rate	19200
• Data bits	8
• Parity	None
• Stop Bit	1
• Flow Control	None
• Case Material	Metal Case 1.2mm
• Environmental Category	IP30
• Dimensions	34,5 x 36 x10,5 cm
• Weight	1.8 kg
• Data retention	10 years

BASIC FIRE

Main Controller

- The brains of the system.
- Provides power to the system, monitors inputs and controls outputs through various circuits.
- Performs other functions as required by the appropriate code



ELEMENTS OF A CONTROL PANEL

Requires two Power Sources :

- AC power source.
- Battery 12V/7AH (2)



Primary (AC)



Secondary (DC 24V)

ELEMENTS OF A CONTROL PANEL

Inputs:

- A fire alarm system can have a variety of input devices



Detector

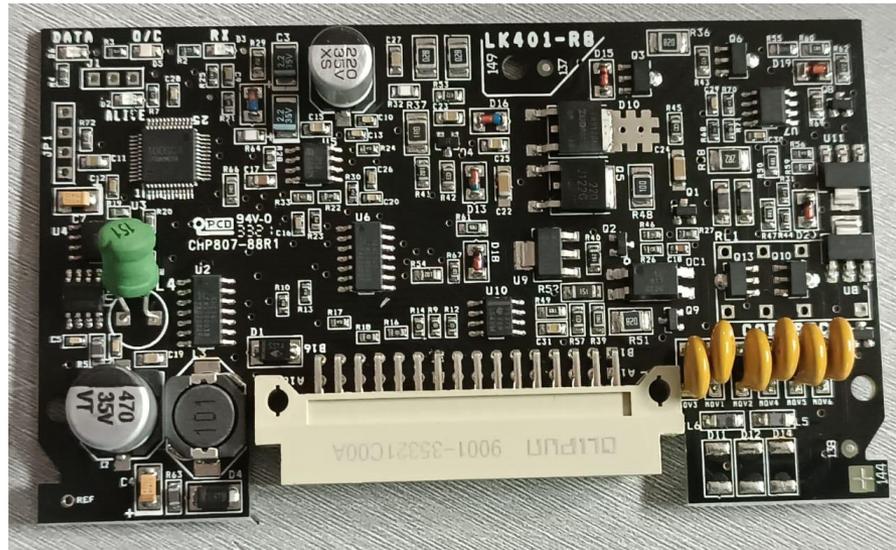


Manual call
point

TYPES OF FIRE ALARM CONTROL PANELS

Addressable panel:

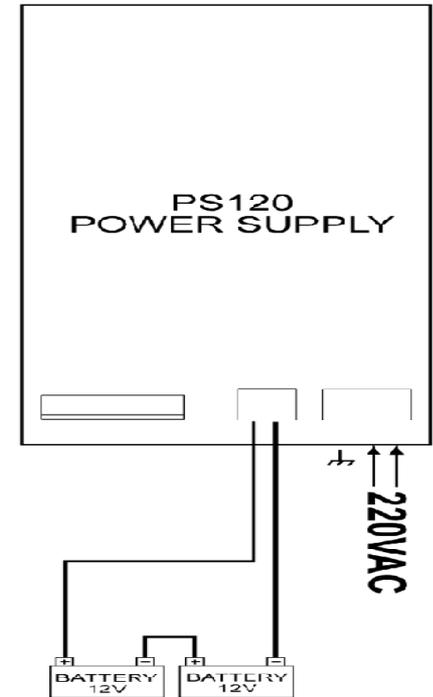
- 4 loops

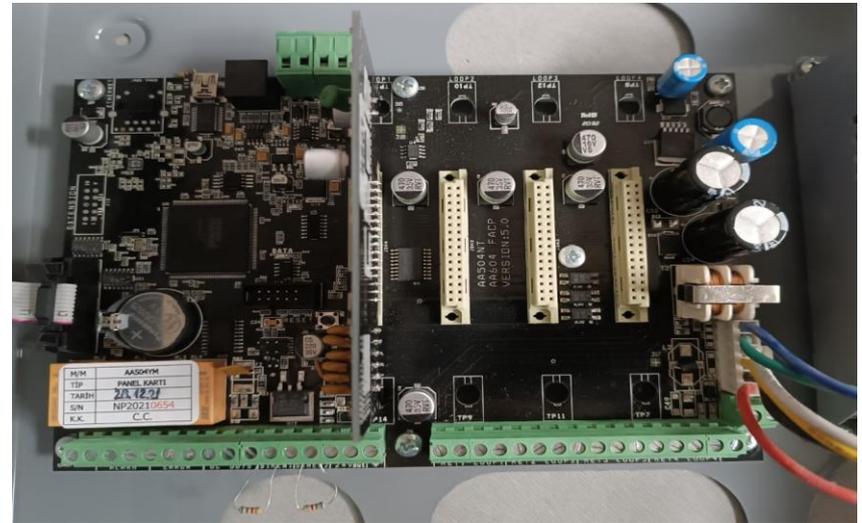
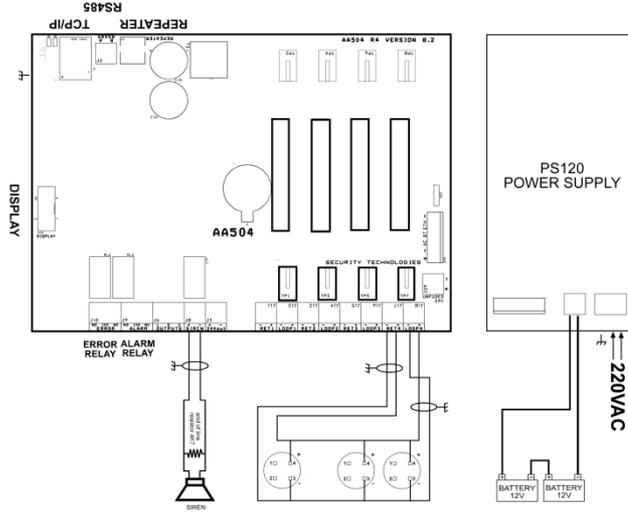


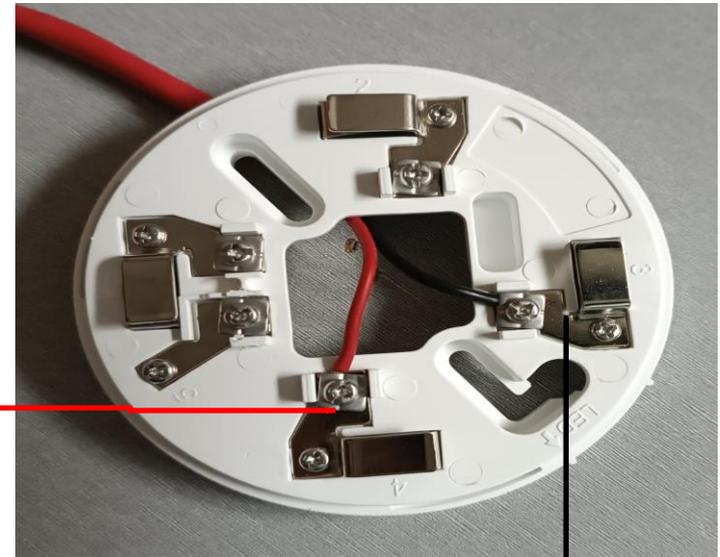
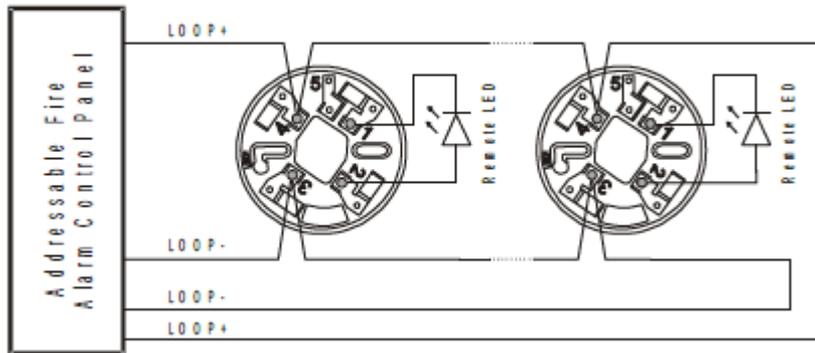
BATTERY CONNECTION

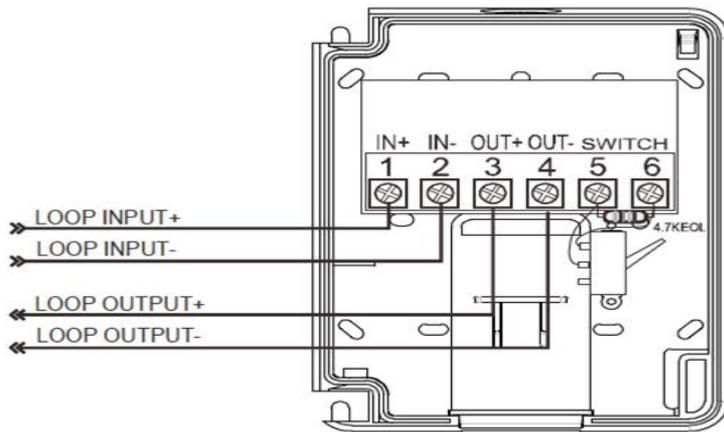


2 Battery
DC, 12 V / 7Ah

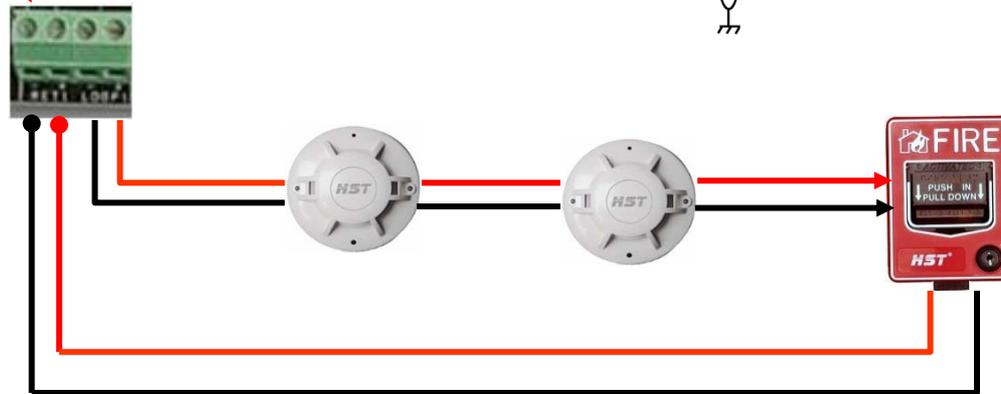
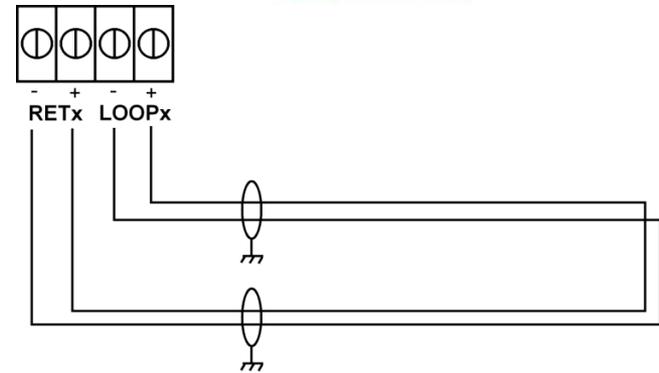
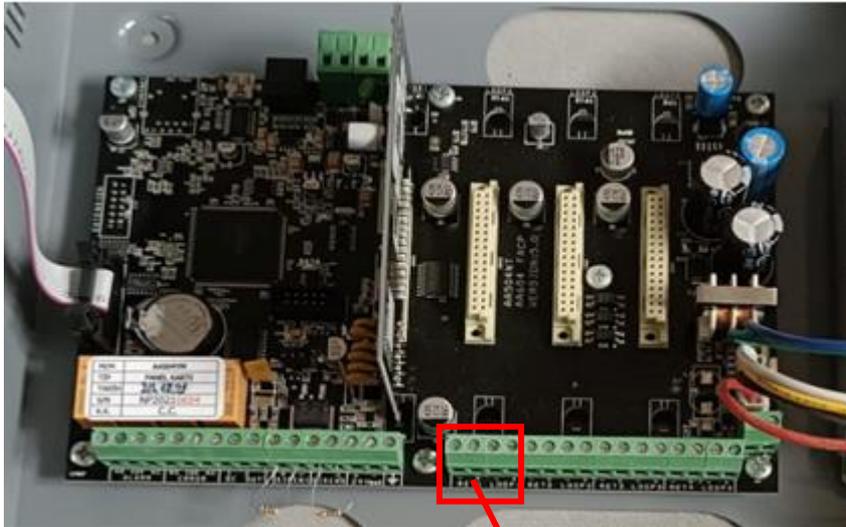


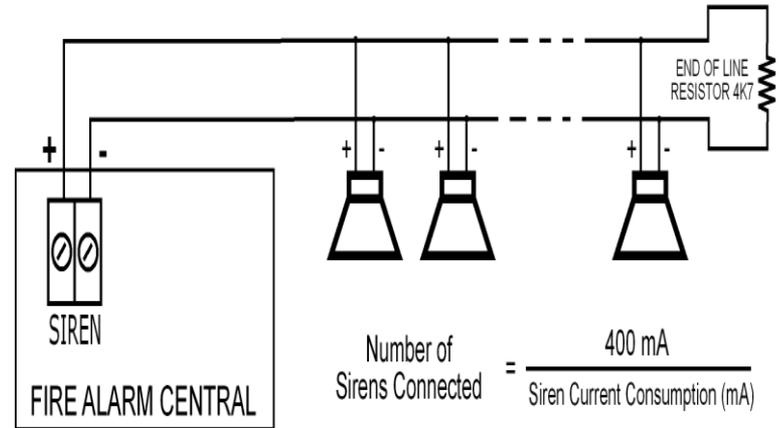
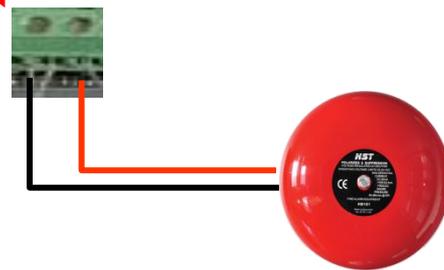
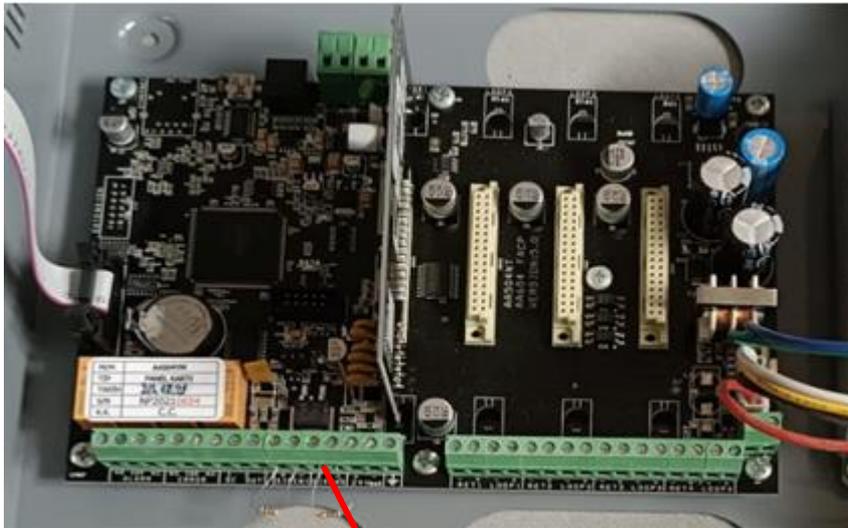






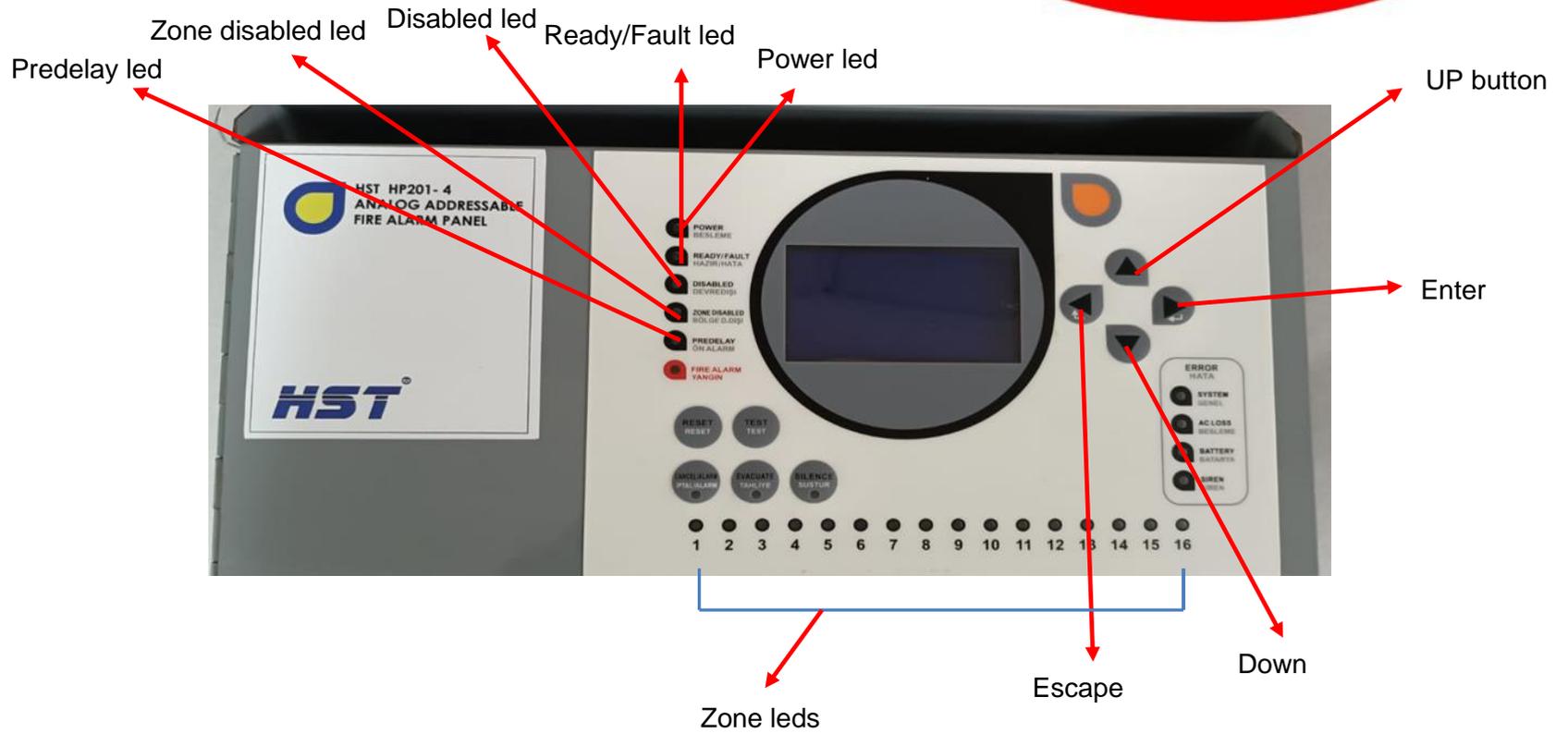
CONNECTIONS:

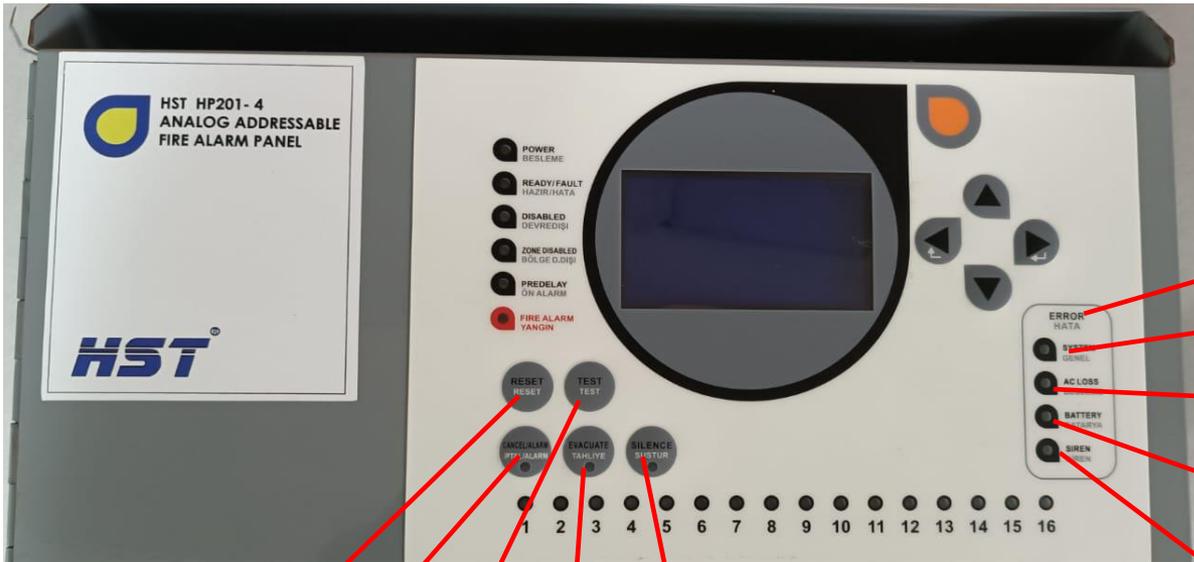




$$\text{Number of Sirens Connected} = \frac{400 \text{ mA}}{\text{Siren Current Consumption (mA)}}$$

Each bell 18mA





- Reset button
- Cancel alarm button
- Test button
- Evacuate button
- Silence button
- Trouble indicators
- System fault indicator
- AC loss indicator
- Battery indicator
- Siren indicator

ACCESS LEVELS

There are 4 access levels:

Level 1: Untrained User.

Lamp test, Silence buzzer, Menu navigation

Level 2: Authorized User.

Acknowledge alarms and reset the system, enable the panel controls.

Level 3: Service and Maintenance Engineer.

It is possible to read or interrogate the site specific data on the panel,
The installer can do all facilities and programming in the Menu.

Level 4: Factory Setup and Senior Service Engineers.

Only manufacturer or authorized technical person of distributor can intervene to the panel, Return to factory defaults, Program memory can be changed

MENU

1-Zones:

Press Enter

1-The Main Menu items are as follows:

```
>> Zones      ←
   LOOPS
   Disabled
   Faults
   Event Log
   Settings
   Outputs
   System info
```

When entered in Zones Menu :

```
>Zone  001  (004)  <
Zone  002  (005)
Zone  003  (005)
Zone  004  (003)
Zone  005  (000)
Zone  006  (000)
Zone  007  (000)
Zone  008  (000)
```

Zone number

Number of devices

A) To change Zone name :

```
Zone 001  
tufan  
>Total Devices:004 <  
Change Zone Name  
Zone Predelay:030  
Zone is enabled  
Multiple OFF  
Outputs : 0
```

```
... Editing Text ...  
Zone Name  
  
-
```

B) To change Predelay:

```
Zone 001  
tufan  
>Total Devices:004 <  
Change Zone Name  
Zone Predelay:030  
Zone is enabled  
Multiple OFF  
Outputs : 0
```

```
Zone 006 Predelay  
  
> 030 sn <
```

C) Change between enabled or disabled by UP & Down and save by pressing escape:

```
Zone 006      0
Total Devices:000
Change Zone Name
Zone Predelay:030
>Zone is disabled ←
Multiple OFF
Outputs :    0
```

D) Multiple trigger :

```
Zone 006      0
Total Devices:000
Change Zone Name
Zone Predelay:030
Zone is disabled
>Multiple OFF ←
Outputs :    0
```

In case of an alarm from the devices defined in the zone, the system waits for another device defined in the same zone to be alarmed in order to be alarmed.

E) Outputs are used to get zones to do various jobs with different delays.

```
Zone 001  
tufan  
>Total Devices:004 <  
Change Zone Name  
Zone Predelay:030  
Zone is enabled  
Multiple OFF ←  
Outputs : 0
```



```
Zone 006 Outputs  
  
>Output 1:Disabled <  
Output 2:Disabled  
Output 3:Zone Out
```

Output1:

This output group contains 250 output channels. Each channel means a job to be done.

it is possible to perform different operations as follows.

- Relay On
- Relay Off
- Switch Relay Position
- Periodic Relay On/Off
- Periodic Relay Off/On

Output delay between 1 and 250 seconds can be defined for this output. This output group can only activate the relays on the panel where it is set.

```
Zone 006 Outputs  
  
>Output 1:Disabled ←  
Output 2:Disabled  
Output 3:Zone Out
```

Output2:

Output delay between 1 and 250 seconds can be defined for this output.

In networked extended systems, the Output 2 Group effects directly. In case of an alarm coming from any panel in the network, the output units on any of the other panels in the network can be activated.

```
Zone 006 Outputs  
  
>Output 1:Disabled <  
Output 2:Disabled ←  
Output 3:Zone Out
```

Output3:

Output delay cannot be defined for this output. The exit delay defined for the zone is also valid for this group.

In networked extended systems, the Output 3 Group effects directly.

```
Zone 006 Outputs  
  
>Output 1:Disabled <  
Output 2:Disabled  
Output 3:Zone Out ←
```

2-Loops:

```
>> Zones <<
  Loops ←
  Disabled
  Faults
  Event Log
  Settings
  Outputs
  System info
```

When enter key is pressed:

```
LOOP 01 (006) Sea.
>LOOP 02 (009) ←
LOOP 03 (008)
LOOP 04 (004)
LOOP 05 -----
LOOP 06 -----
LOOP 07 -----
LOOP 08 -----
```

```
Loop 02 - Normal
>All Devices (009) <
  Disabled Dev.(000)
  Faulty Device(000)
  Alarm Devices(000)
  Loop Tools
  Auto Search
```

```
Loop 02 - Normal
```

```
>All Devices (009)<  
Disabled Dev.(000)  
Faulty Device(000)  
Alarm Devices(000)  
Loop Tools ←  
Auto Search
```

- **Loop xx Enabled:** Loop can be disabled and reactivated from this menu.
- **All Loop Leds On:** It turns on the alarm leds of all devices connected in the relevant loop continuously.
- **Cancel All Tests:** Ends all tests started in the loop.
- **Walk test mode:** After this mode is activated, the panel monitors all devices in order of address.

```
Loop Tools
```

```
> Loop-02 Enabled <  
All Loop Leds On  
Cancel All Tests  
Walk Test Mode  
Walk Period :020
```

- **Walk Period:** The duration of each device being active in the walk test.

Selecting Auto-Search will initiate a search over the loop.

```
Loop 02 - Normal
>All Devices (009)<
  Disabled Dev.(000)
  Faulty Device(000)
  Alarm Devices(000)
  Loop Tools
  Auto Search ←
```

Automatic search does not start in case of loop errors or it does not end successfully.

If “All Devices” is selected, the list of the detectors sorted by the addresses, and the types of the detectors , followed by status text

The abnormal status Codes are :

M : Missing
D : Disabled
O : Open
S : Short
P : Prealarm
A : Alarm



```
Device Faults(01/01)
L3-D081 SOM      0
```

Possible device types are:

type 1	HRD	Heat Detector
type 2	ION	Ionized Smoke Detector
type 3	OSD	Optical Smoke Detector
type 4	COM	Combined Detector
type 5	BEA	Beam Detector
type 6	MCP	Manual Call Point
type 7	SIM	Single Input Module
type 8	SOM	Single Output Module
type 9	GAS	Gas Detector

Devices:

In the All devices menu, move the cursor over a desired device and press enter twice.

```
Loop 02 - Normal
>All Devices (009) ←
Disabled Dev.(000)
Faulty Device(000)
Alarm Devices(000)
Loop Tools
Auto Search
```

```
COM 02-058 Normal
>Disable device <
Set test mode OFF
Change device text
Change zone
Indicator Settings
Diagnose Device
```

Set test mode on/off is using for lit of the device leds always.

In order to test the relay contacts of SOM (output module) devices, the "toggle output off/on" line in the detail menu of the device is reached and pressed once.

```
SOM 01-065 Normal
>Disable device <
Toggle Output OFF
Change device text
Out Channels : 000
Evacuate Trig OFF
Diagnose Device
```

```
COM 02-058 Normal
>Disable device <
Set test mode OFF
Change device text
Change zone
Indicator Settings
Diagnose Device
```

Change Device Text allows to show and change the name of the device.

```
SOM 01-065 Normal
>Disable device <
Toggle Output OFF
Change device text
Out Channels : 000
Evacuate Trig OFF
Diagnose Device
```

If the device is an output unit, output channel is the menu that displays the output channels and enables them to be changed.

The task of forwarding the alarm information from the zone to the output units will be done from output channel menu.

```
SOM 01-065 Normal
>Disable device <
Toggle Output OFF
Change device text
Out Channels : 000
Evacuate Trig OFF
Diagnose Device
```

When the evacuate trig is select as “ON” the device will trig by evacuate if the device is an output unit (SOM).

```
SOM 01-065 Normal
>Disable device <
Toggle Output OFF
Change device text
Out Channels : 000
Evacuate Trig OFF
Diagnose Device
```

Diagnose is including engineering parameter of device.

3-Disabled.

```
>> Zones <<
  LOOPS
  Disabled ←
  Faults
  Event Log
  Settings
  Outputs
  System info
```

```
Disabled Menu
>Zones 001<
Loop1 Devices 000
Loop2 Disabled 000
Loop3 Devices 000
Loop4 Devices 000
```

If any of the zones is disabled, all outputs set in that zone are disabled. Data exchange of all devices in that area is interrupted.

4-Faults:

```
>> Zones <<
  LOOPS
  Disabled
  Faults ←
  Event Log
  Settings
  Outputs
  System info
```

```
Faults Menu
>Panel Faults (00) <
  Loop Faults (00)
  Device Faults (00)
  Network Fault (00)
  NW RXTx Fault (01)
```

```
Panel Faults Menu
Battery Error
```

```
Faults Menu
>Panel Faults (00)<
Loop Faults (00)
Device Faults (00)
Network Fault (00)
NW RxTx Fault (01)
```

Possible loop faults are short circuit, open circuit or the loop card cannot be exist. When the circuit is short-circuited, the panel will display as an open-circuit fault.

```
Faults Menu
>Panel Faults (00)<
Loop Faults (00)
Device Faults (00)
Network Fault (00)
NW RxTx Fault (01)
```

```
Device Faults(01/01)
L3-D081 SOM 0
```

```
Faults Menu
>Panel Faults (00)<
Loop Faults (00)
Device Faults (00)
Network Fault (00)
NW Rxtx Fault (01)
```

The communication of the network cards with the panel is checked. When there is a break or short-circuit, it is displayed on the panel. In this case, the connection between the panel and the network card is checked.

```
Faults Menu
>Panel Faults (00)<
Loop Faults (00)
Device Faults (00)
Network Fault (00)
NW Rxtx Fault (01)
```

If the communication between the network cards is broken, the panel will give this error.

5-Event log:

```
>> Zones <<
Loops
Disabled
Faults
Event Log ←
Settings
Outputs
System info
```

The total number of events that can be kept is limited to 65536.

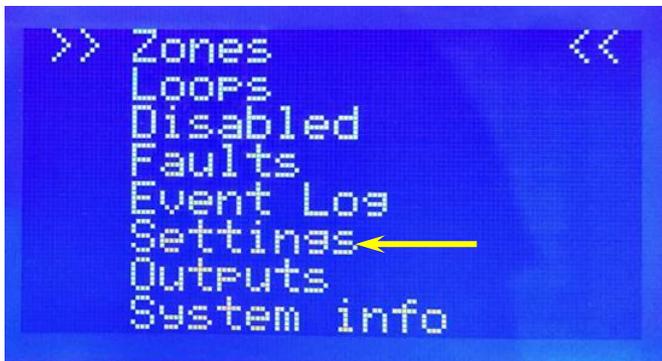
```
Log 004312 / 004312
15:27:00 08/07/2021

*00:L03-SOM Open R.
00:L03-SOM Open
00 NW RxTx Ok
00 Batt.Recover
00 Batt.Failure
```

there are a total of 4312 records and the record shown is record number 4312. The record number 4312 took place on 08.07.2021 at 15:27:00, this signal is open-circuit restored.

The data can be read and printed through the software.

6-Setting:

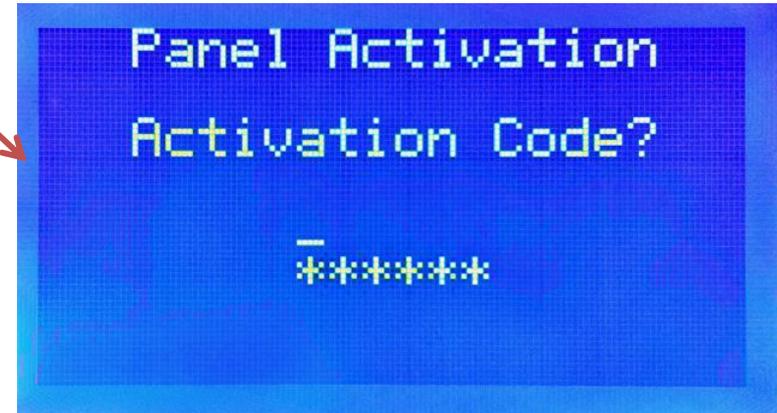


When the access level is 2 and 3, the system settings menu will be accessible.





In order for the activation process to be carried out, the manufacturer must be contacted.



```
Settings Menu
Panel Activation
>Set Date/Time <
Day/Night Mode
Access Level 4
Networking
Advanced Settings
```

```
Setting Date & Time
> Year : 2021
Month : 07
Date : 08
Hour : 15
Minute : 28
Second : 25
```

In day mode, alarm delays defined in the system are used. In night mode, alarm signals are processed without delay, ignoring delays.

```
Settings Menu
Panel Activation
>Set Date/Time <
Day/Night Mode
Access Level 4
Networking
Advanced Settings
```

```
Day/Night Mode
> Day Mode <
```

```
Settings Menu  
Panel Activation  
>Set Date/Time <  
Day/Night Mode  
Access Level 4  
Networking  
Advanced Settings ←
```

```
Advanced Settings  
Factory Defaults  
Erase Log  
Ground Fault ON  
Language: English  
>CMS/Port Settings <  
Connect to PC
```

This menu will be used by the installer and can only be used when AL4 is active.

7-Outputs:

```
>> Zones <<
  Loops
  Disabled
  Faults
  Event Log
  Settings
  Outputs ←
  System info
```

```
Outputs Menu
>> Devices : 010 <<
  Output Control
  Out1 Channels
  O/C Out Mapping
  Pending Outs (000)
```

The control of the relays and loop-powered sirens on the panel is done from the output control menu.

```
Onboard Out Relays
>> Alarm Enabled <<
  Siren Enabled
  Fault Enabled
  LoopSirens En.
  O/C Outputs
  Alrm Silence On
```

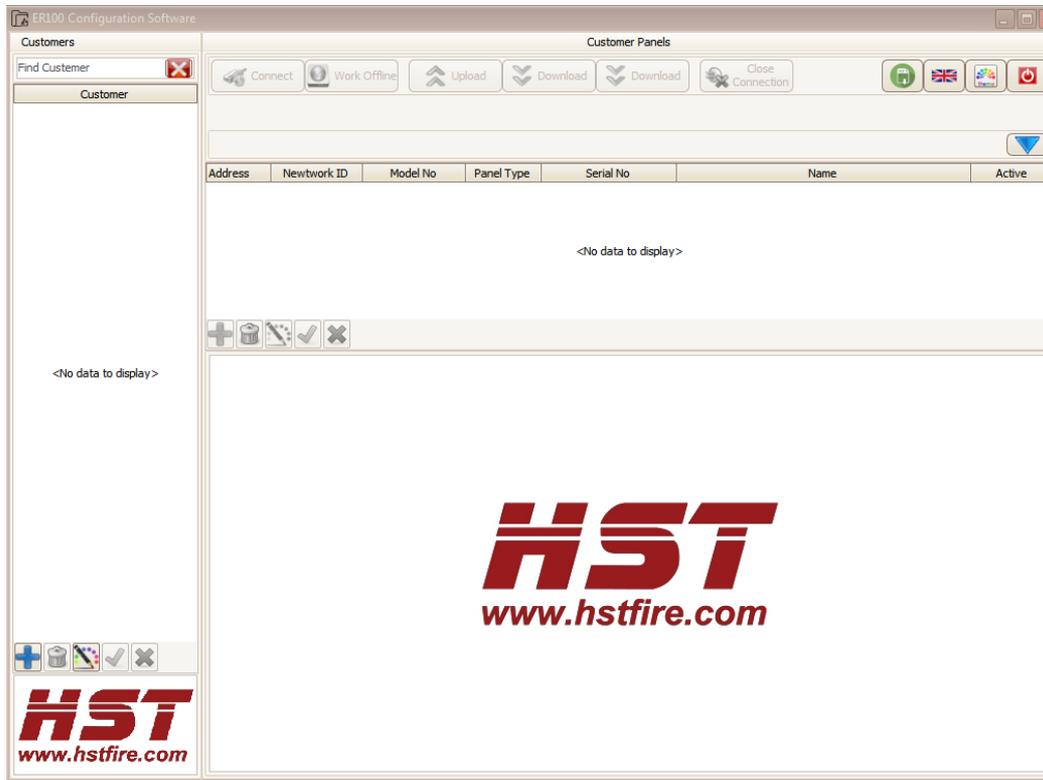
7-System Info:

```
>> Zones <<
  Loops
  Disabled
  Faults
  Event Log
  Settings
  Outputs
  System info ←
```

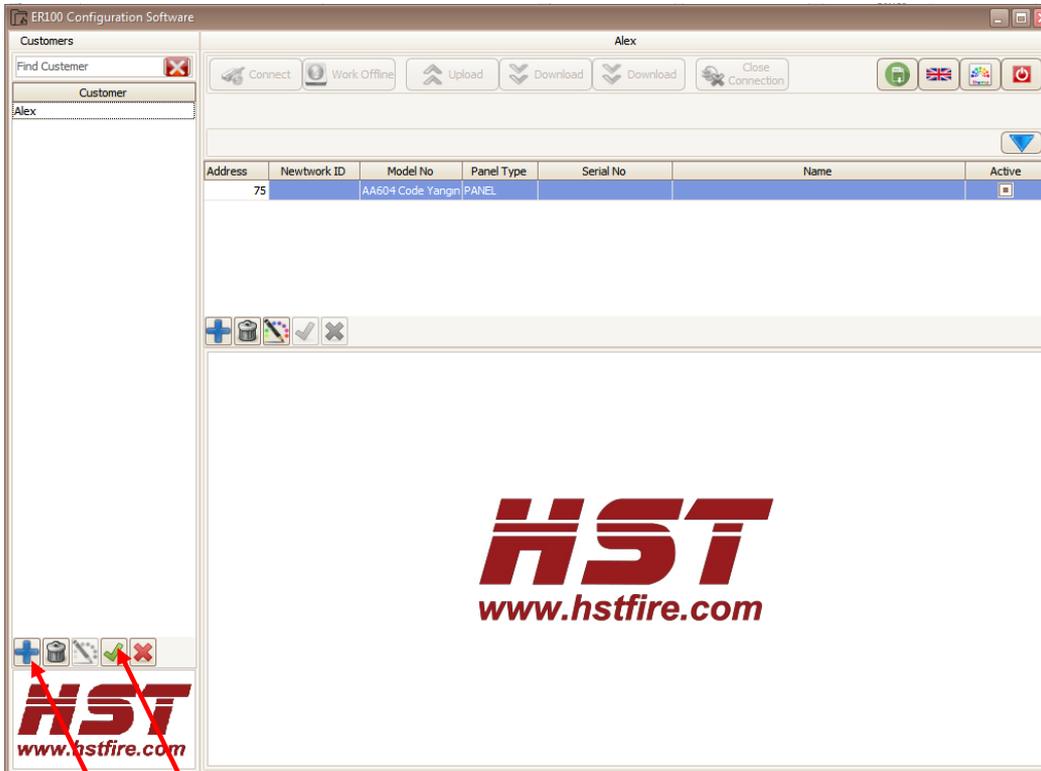
```
System Information
H.ware : AA604-H-V4.1
F.ware : AA604-F-V5.5
Serial : Not set
CMS Account : 00001
Alarm: 0000000021
```

This information can be changed via computer with configuration software.

SOFTWARE

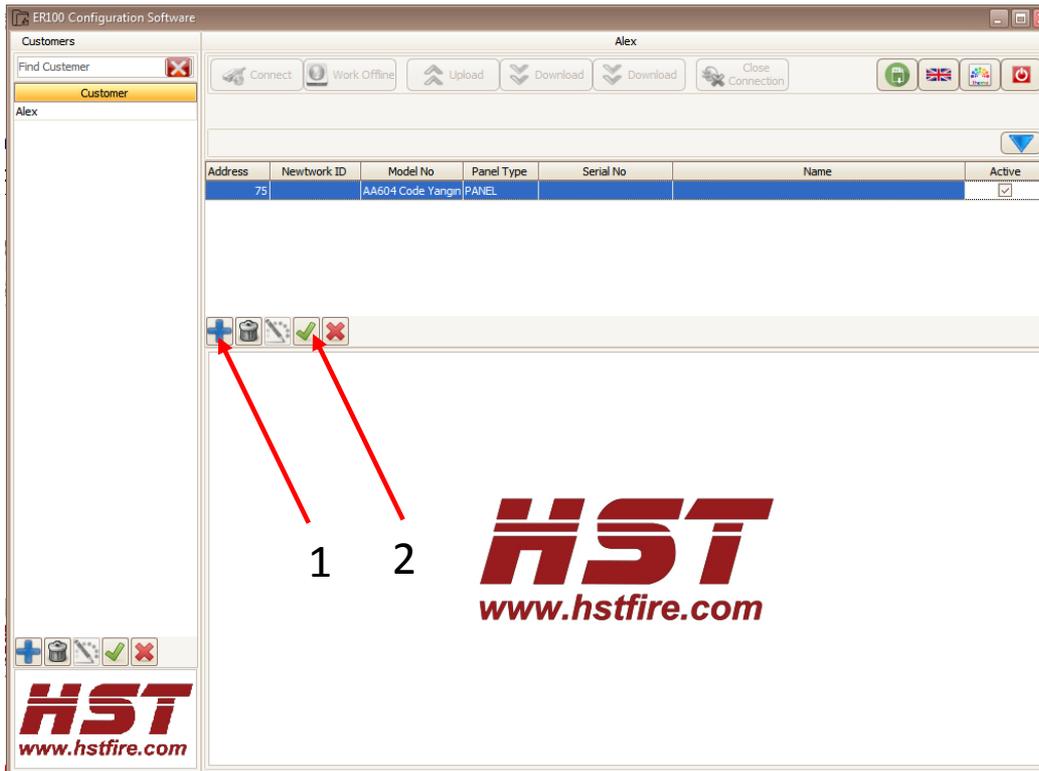


To add new customer click on , Enter the name then click on 

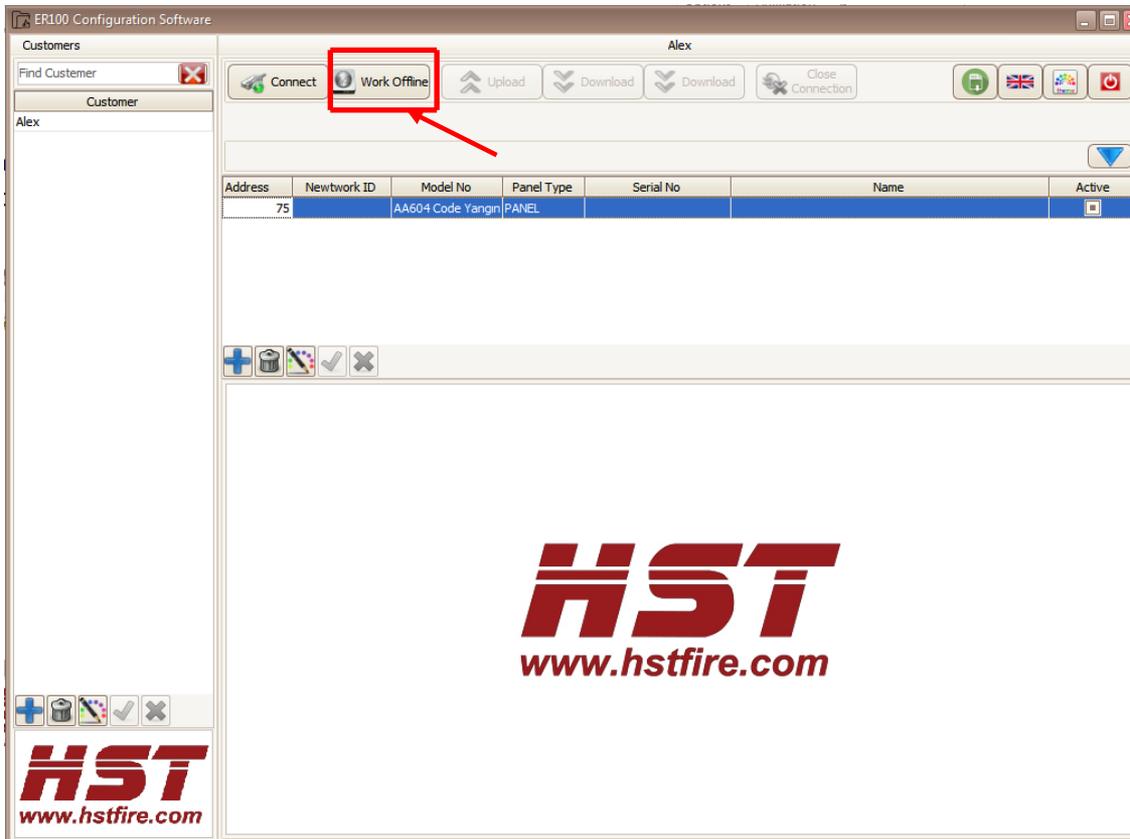


1 2

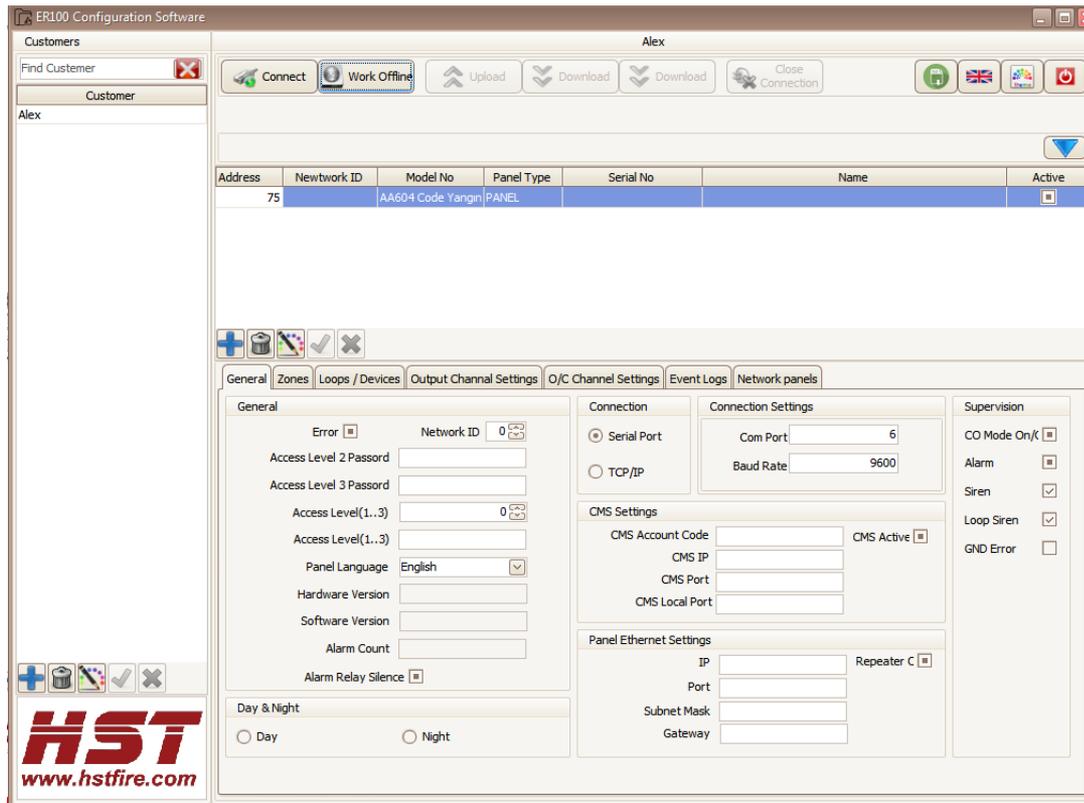
To add the panel click on  , Choose the model no., panel type and active then click .



Click on Work Offline.



Change whatever you need.



Click connect then upload.

The screenshot shows the ER100 Configuration Software interface. At the top, there are buttons for 'Connect', 'Work Offline', 'Upload', 'Download', and 'Close Connection'. The 'Upload' button is highlighted with a red box, and a red arrow points to it. Below the buttons, the status 'SENDING TO PANEL' is displayed in red text. The interface also shows a table with columns for Address, Newtwork ID, Model No, Panel Type, Serial No, Name, and Active. The table contains one row with the following data:

Address	Newtwork ID	Model No	Panel Type	Serial No	Name	Active
75		AA604 Code Yangri	PANEL			<input type="checkbox"/>

Below the table, there are several tabs: General, Zones, Loops / Devices, Output Channel Settings, O/C Channel Settings, Event Logs, and Network panels. The 'General' tab is selected, showing various configuration options such as Error, Network ID, Access Level 2 Passord, Access Level 3 Passord, Access Level(1..3), Panel Language, Hardware Version, Software Version, Alarm Count, Alarm Relay Silence, Day & Night, Connection, Connection Settings, CMS Settings, Panel Ethernet Settings, and Supervision.

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Thank you

A solid red horizontal bar runs across the bottom of the slide, extending from the left edge to the right edge.