*Defender*

Smart & Safe Living

*Defender*

Smart & Safe Living

# Alarm System
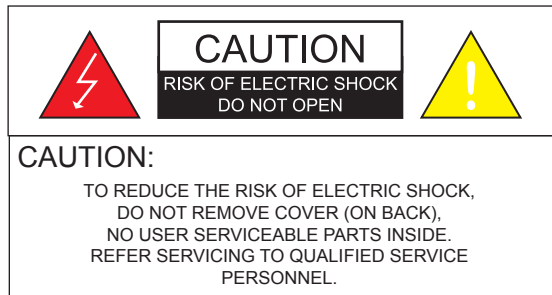# User Manual

- *Ver. 3.0 Voice Plus*
- *Ver. 4.0 Voice Plus*

FC   C E

**Defender Co, Ltd.**

**Monitor • Control • Surveillance**

*Before operating the system, please com rm the correct input power voltage.*

## CAUTION
### RISK OF ELECTRIC SHOCK
### DO NOT OPEN

CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (ON BACK),
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

The lightning flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**INFORMATION** - This equipment has been tested and found to comply with limits of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated

**WARNING** - Do not change or modify any parts or component used and approved by the manufacturer.

**WARNING** - To prevent electric shock and risk of fire hazards:
Do NOT use power sources other than that specified.
Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes.

**Monitor • Control • Surveillance**

## *Defender Alarm Shortcut Key*

- Away Arm: Press Button A for 3 Sec
- Home Arm: Press Button H for 3 Sec
- Disarm: Press (4 Digit Password)
- Bypass Zone: Press *(4 Digit Password)(No of Zone)#
- Change Password: Press *6(4 Digit Password)0
  (New 4 Digit Password)(New 4 Digit Password)
- Tel No Setting: Press *7(4 Digit Password)1(Tel. No)#

1 for setting User 1, 2 for User 2, 3 for User 3, 4 for User 4

## *Telephone Control Manual*

4 Digit Password is 1234
- Press 0 to Disarm
- Press 1 to Arm
- Press 2 for Home Automation Control
- Press 3 for Bypass Setting
- Press 4 for Panic Alarm
- Press # to Exit

**Monitor • Control • Surveillance**

## System Installation Information

| Description | Zone | Entrance | Internal Delay | Instant | 24 hour |
|---|---|---|---|---|---|
| | 1 | | | | |
| | 2 | | | | |
| | 3 | | | | |
| | 4 | | | | |
| | 5 | | | | |
| | 6 | | | | |
| | 7 | | | | |
| | 8 | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

### *Timer*

Entry Time          [_____]

Exit Time            [_____]

Bell Cut Off Time   [_____]

### *Telephone*

Number of ring before answer   [_____]

Each number well be dial

              1 [_____]
              2 [_____]
              3 [_____]
              4 [_____]

**Monitor • Control • Surveillance**

---

This information is provided to ensure your safety and to prevent any losses. Please read it carefully and use the product accordingly.

*For product inquiries, please contact the retail shop where you bought the system.

• Please make sure the product is installed at proper place to insure system operate properly.

### Warning/Attention/Special Mark Messages

| | | | |
|---|---|---|---|
| ⚡ | Ignoring this information may result in death or serious personal injuries. | ⚠ | Ignoring this information may result in material loss or personal injuries. |
| 🚫 | Indicates"Never Allowed." | 🚫 | Indicates"No Disassembling." |

### *Correct Disposal of This Product*
*(Waste Electrical & Electronic Equipment)*
(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contact. This product should not be mixed with other commercial wastes for disposal.

**Monitor • Control • Surveillance**

Do not install system under extreme temperatme conditions or in high humidity environment.
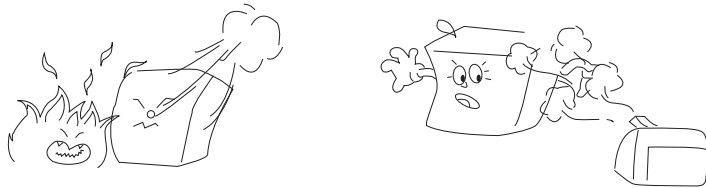
Use only under temperature conditions between -10˚C and +50˚C.
Provide good ventilation when using in high temperature conditions.

Manufacturer warrants original purchaser twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, manufacturer, at its option, repair or replace any defective product upon return of the product to its factory.

## International Warranty

The warranty for international customers is the same as for any customers within malaysia, with the exception that manufacturer shall not be responsible for any customs fees, taxes, or VAT that may be due.

## Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping, handling, improper maintenance or improper application.
- damage caused by disaster such as fire, floor, wind, earthquake or lightning.
- damage due to causes beyond the control such as excessive voltage, mechanical shock or water damage.
- damage caused by unauthorized attachment, alterations, modifications or foreign objects.
- damage caused by peripherals.
- defects caused by failure to provide a suitable installation environment for the products.
- damage caused by use of the products for purposes other that those for which it was designed.

## Out of Warranty Repairs

Manufacturer will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to Manufacturer must first obtain an authorization number. Manufacturer will not accept any shipment whatsoever for which prior authorization has not been obtained. Product which Factory determines to be repairable will be repaired and returned. Products which factory determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit for the case is defer mines out of warranty.

## Maintenance

The system requires minimum maintenance.

1. Do not wash the keypad with a wet cloth. Light dusting with a barely damp cloth should remove normal accumulations of dust.
2. It is recommended that the standby battery be replaced every year.

### WARNING

This system is an advanced security system, it does not offer guaranteed protection against burglary, fire or other emergency. Whether commercial or residential.

### Remember

Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
Intrusion detector (e.g. passive infrared detectors), smoke detectors, and any many other sensing devices will not work without power.

Battery-operated devices will not work without batteries, with dead batteries, or if the batteries are not put in properly. Some device may have sensing limitations.

*1. PC BOX*    *2. Keypad*    *3. Mother Board*

*4. Transformer*    *5. Resistor*    *6. Fuse (1A)*

*7. Fuse (2A)*    *8. User Manual*

*This equipment has been designed to give the highest flexibility and convenience.*
*Read this manual carefully and have you installer instruct you on system operation and on which features have been implemented in your system.*

### Important Notice

To ensure that you system continues to functions as intended, it is important that you check & test your system every 2 weeks.
If your system does not function properly, call your installer for service.

A security system cannot prevent emergencies.

Remember it is only intended to alert you and, monitoring  of an emergency situation.

This security systems is reliable but may not work under all conditions and not substitute for prudent security practices of life and property insurance.

Your security systems should be installed and serviced by qualified security professionals who should instruct you on the level of protection that has been provided and on system operations.

---



**Defender Network Configuration**

This page allows the configuration of the board's network settings.

CAUTION: Incorrect settings may cause the board to lose network connectivity. Recovery options will be provided on the next page.

Enter the new settings for the board below:

☐ Enable DHCP — Un-tick because using static IP

IP Address: 192.168.1.10
Gateway: 192.168.1.1 — 192.168.1.10 static IP address
Subnet Mask: 255.255.255.0
Primary DNS: 169.254.1.1
Secondary DNS: 0.0.0.0

Save Config

cancel

*Figure 10.6*

*c. If want to change back to Dynamic DHCP after Static, just tick the ENABLE DHCP at Network configuration then follow the steps in 4.0 (b).*

5.0 Default factory setting
*a. If unable to connect to DSA due to incorrect setting, user can reset DSA to factory default setting.*
*b. Turn off the DSA power, then press the reset button and turn on the power. Continue pressing the button until the LED flashes release the button.*

6.0 Security Features
*a. For security purpose, the browser will auto logout after some time. This is because user might forget to logout.*

### 9.0 Default factory setting

*a. If any mistake cause the DSAW unable to connect, set to factory default setting is needed.*

*b. Off the DSAW power, press the reset button and on the power, continue holding the button until the LED flash then release the button.*

*c. After reset, the DSAW network setting was returned to default factory setting and the Username was reset.*

### 10.0 Security of DSAW

*a. For security purpose, the DSAW will auto logout to login page after some time when do some instructions.*

*b. If access the DSAW by illegal (without login the username and password), the information of defender smart alarm will hide or automatically return back to login page.*

### Central Features

2 Programmable Partitions
2 Programmable phone numbers for CMS reporting
2 Programmable account numbers for CMS reporting
2 Arm Modes: Away & Home
8 Full programmable zone

### Speech Dialer

Support 4 programmable phone numbers for voice messages reporting.
Only master code holder has full access to phone remote operation.

### Keypad

Support up to 4 keypads per system

### Access Code

Support 3 level authorizations: Installer, Master, User
Support 1 installer code, 1 master code, 8 user code
Default installer code is [1397]
Default master code is [1234]

### Remote Operation Functions Include

Secure remote communications using security codes
Remote operation via touch / mobile phone
Zone status check
Arm & Disarm
Zone bypass
Home automation control

## PROGRAMMING THE CONTROL PANEL

The programming menu can only be accessed when the control panel is fully disarmed

### To Enter The Programming Menu

Press [*] [o] follow by [installer code] to access the system programming menu.
Key in the address code 2 digit [ ] [ ]
To exit the programming menu, press [#]

### To Set The Entry Time

Press [*] [o] follow by [installer code] to access the system programming menu
Press [40]
Enter the entry timer [ ] [ ] [ ]
Press [#] to save & exit programming menu

### To Set The Exit Time

Press [*] [o] follow by [installer code] to access the system programming menu
Press [42]
Enter the exit timer [ ] [ ] [ ]
Press [#] to save & exit programming menu

### To Set The Silent Zone

Press [*] [o] follow by [ installer code] to access the system programming menu
Press [16]
Enter the zone number
Press [#] 2 time to save & exit programming menu

**Monitor • Control • Surveillance**

**Monitor • Control • Surveillance**

## To Activate The Remote Control

Press [*] [o] follow by [installer code] to access the system programming menu,
Press [33]
Light on the zone 7 and zone 8 LED,
Press [#] 2 time to save & exit programming menu.

## To Reset Panel

Press [*] [o] follow by [installer code] to access the system programming menu,
Press [99]
Press [#] 2 time to save & exit the programming menu.

## To Change The Sensitivity of Zone Respond

Press [*] [o] follow by [installer code] to access the system programming menu,
press [45]
Enter the value [ ] [ ] [ ],
Example: High sensitive [001], low sensitive [255]
Press [#] to save & exit programming menu.

## To Change Master Code

The system must be disarm,
Press [*] [6] follow by old master code [1234] (default)
Press [o]
Enter new master code for 2 time [xxxx] [xxxx] (4 digit)

## To Add User Code

The system must be disarm,
Press [*] [6] follow by [master code] (4 digit)
Press user number [x], maximum can set up to 8 user
Enter new user code for 2 time [xxxx] [xxxx] (4 digit)
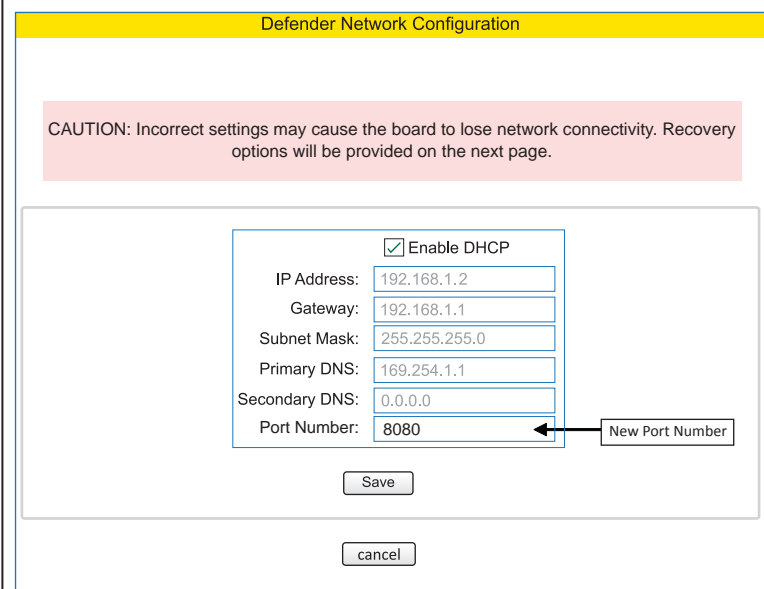
## To Add The Phone Number

The system must be disarm,
Press [*] [7] follow by [master code] (4 digit)
Press user number [x], maximum can set up to 4 user
Press the user phone number [        ]
Press [#] after finish, to save & exit Programming menu.

## To Delete The Phone Number

Press [*] [7] follow by [master code] (4 digit)
Press user number [x], which want to delete
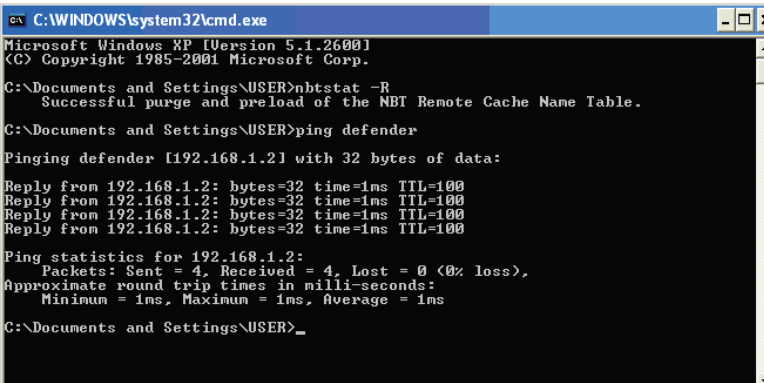Press [#] to save & exit Programming menu.

## To Turn On / Off The Chime  Mode

The system must be disarm,
Press [*] [81]
Press [zone number] which want to on/off chrime mode.
Press [#] to save & exit programming menu.

*Figure 8.1 Network Setting*



*Figure 8.2 Command Prompt*

c. *Open the browser and key in* **http://defender:8080**. *Successfully accessed the login page was shown. Refer to figure 3.0.*

**6.0 Configuration DSAW's Port number**
*a. Refer to figure 8.0, the default DSAW's port number was assigned as 8088.*

Defender Network Configuration

CAUTION: Incorrect settings may cause the board to lose network connectivity. Recovery options will be provided on the next page.

☑ Enable DHCP

| | |
|---|---|
| IP Address: | 192.168.1.2 |
| Gateway: | 192.168.1.1 |
| Subnet Mask: | 255.255.255.0 |
| Primary DNS: | 169.254.1.1 |
| Secondary DNS: | 0.0.0.0 |
| Port Number: | 8088 |

Save

cancel

***Figure 8.0 Network Setting***

*b. To update the new port number, just key in the new port number at Port Number text box (figure 8.1). A reboot message was shown at figure 7.3 after Save button was pressed.*

i. Follow the reboot message, close the browser and open the command prompt. If users used window vista or window 7 (latest OS), please open the command prompt as **"run as administrator"**.

ii. Key in **"nbtstat –R"** command. "Successful purge and preload of the NBT Remote Cache Name Table" message was shown at figure 8.2.

iii. Key in **"ping defender"** command to ping DSAW. A successfully reply message was shown at figure 8.2.

**Monitor • Control • Surveillance**

---

**To Bypass Zone**
The system must be disarm,
Press [*] [4] follow by [master code]
The **BYPASS LED** will turn on
Enter the zone number to by passed.
Press [#] to save & exit programming menu.
(The LED at zone that is bypass will **Keep Flashing**)

**To Unbypass Zone**
The system must be disarm,
Press [*] [4] follow by [master code]
The **BYPASS LED** will turn on
Enter the zone number to unbypass.
Press [#] to save & exit programming menu.
(The LED at zone that is unbypass will **Stop Flashing**)

**To Set The System Time**
The system must be disarm,
Press [*] [1] follow by [master code]
Press [30]
Enter the time [HHMM]
Press [#] to save & exit Programming menu.

**To Set The System Date**
The system must be disarm,
Press [*] [1] follow by [master code]
Press [31]
Enter the date [DDMM]
Press [#] to save & exit programming menu.

**To Set The System Year**
The system must be disarm,
Press [*] [1] follow by [master code]
Press [32]
Enter the Year [YYYY]
Press [#] to save & exit Programming menu.

**Monitor • Control • Surveillance**

*Version 3*

**Monitor • Control • Surveillance**

---
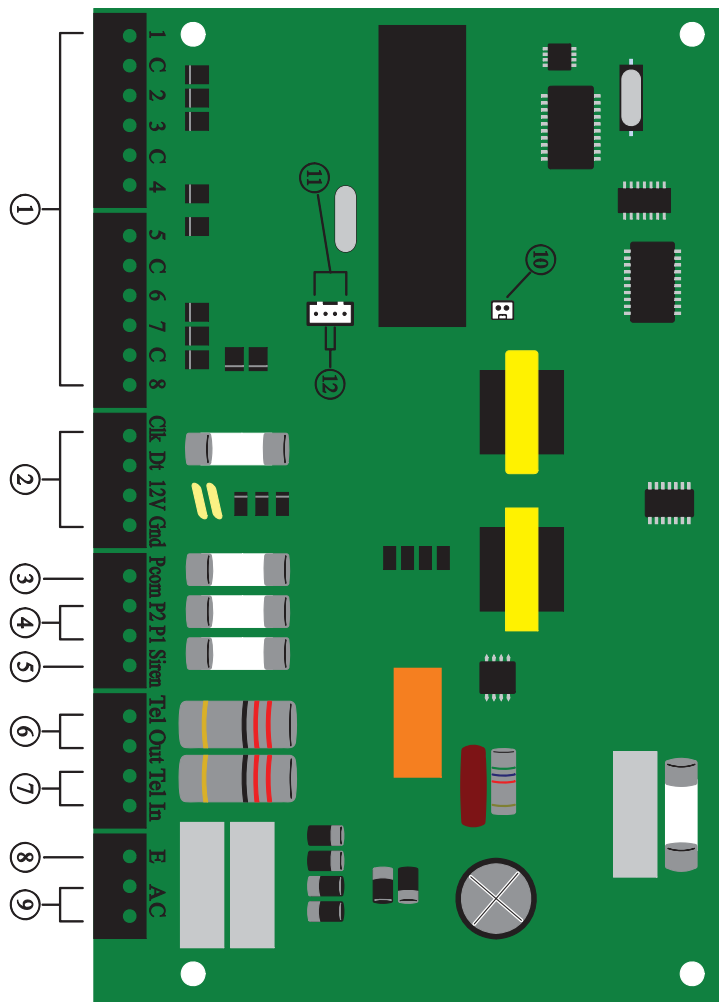
c. If users want to change back to Dynamic DHCP after Static, just tick the ENABLE DHCP at Network configuration then save.
  i. The Reboot message was shown in the browser (figure 6.1).
  ii. Then followed the step 6.0.b.
  iii. to 6.0.b.
  vii. Successfully result was shown at figure 6.4 and figure 6.5.



*Figure 6.4 Command Prompt*



*Figure 6.5 Network Setting*

**Monitor • Control • Surveillance**

iii. Follow the reboot message, close the browser and open the command prompt. If users used window vista or window 7 (latest OS), please open the command prompt as **"run as administrator"**.

iv. Key in **"nbtstat –R"** command. "Successful purge and preload of the NBT Remote Cache Name Table" message was shown at figure 6.2.

v. Key in **"ping defender"** command to ping DSAW. A successfully reply message was shown at figure 6.2 with new Static IP address (192.168.1.10).



*Figure 6.2 Command Prompt*

vi. DSAW have been successfully configured to static IP address. Open the browser and login to DSAW by key in **http://defender:8088**. (Figure 3.0).

vii. Go to the Network setting, the updated information was shown at figure 6.3.



*Figure 6.3 Network Setting*

**Monitor • Control • Surveillance**

---

**1. Zone input 1 to 8**
Terminal is use for connect the sensor or detector such as magnetic, vibration or PIR sensor with 1K resistor.

**2. Keypad Connector**
Terminal is provide connection for the keypad, can connect up to 4 keypad at the same time to control at differ place.

**3. Pcom**
Terminal is provide 12v power positive to the device that require 12v power.

**4. P2 & P1**
Terminal is use for Home Automation Output, to drive auxiliary devices such as LED or Relay.

**5. Siren**
Terminal is use to connect to the siren negative.

**6. Tel Out**
Terminal is for other telephone extension sockets.

**7. Tel In**
Terminal is for incoming phone line.

**8. Earth Ground Connection**
Terminal is to earth or an earth rod.

**9. Ac Input**
Terminal is for 16v transformer.

**10. Remote control**
Terminal is use to connection the remote control use to activate the alarm thought the remote control.

**11. Web Server**
Terminal is use to connection the web server module.

**12. Hard Reset**
Terminal is use to restore the panel to the defaults setting, need to connection the pin 2 and pin 3 together at the web server port and power up the panel power.

**Monitor • Control • Surveillance**

## Control Panel Layout



Version 4

**Monitor • Control • Surveillance**

---
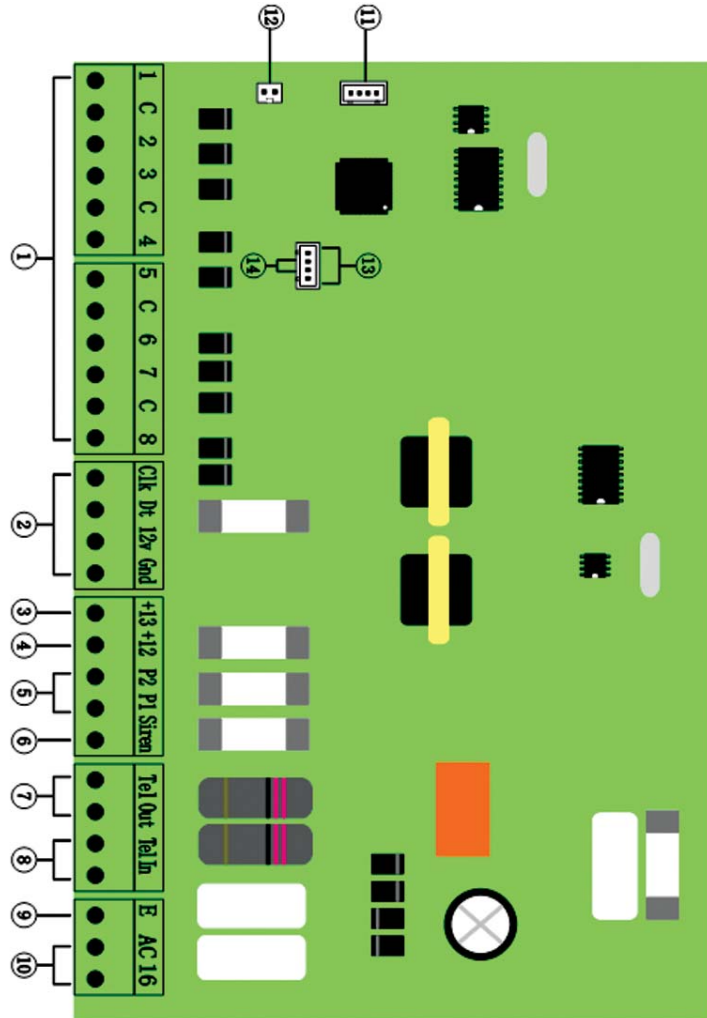
### 5.0 Instruction to configure DSAW as Static IP
a. Default DSAW's network setting assigned to DHCP.
b. Refer to figure 2.0, the DSAW's IP address was assigned by router as 192.168.1.2 in Dynamic DHCP.
   If users want to assign DSAW as static IP address, please follow below instructions:

i. Go to Network Setting, un-tick the ENABLE DHCP and assigned a new IP address
   (for example: 192.168.1.10) then click Save.



**Defender Smart Alarm**

Defender Network Configuration

CAUTION: Incorrect settings may cause the board to lose network connectivity. Recovery options will be provided on the next page.

Un-tick the Enable DHCP

☐ Enable DHCP

Update new IP address

| | |
|---|---|
| IP Address: | 192.168.1.10 |
| Gateway: | 192.168.1.1 |
| Subnet Mask: | 255.255.255.0 |
| Primary DNS: | 169.254.1.1 |
| Secondary DNS: | 0.0.0.0 |
| Port Number: | 8088 |

Save

cancel

*Figure 6.0 Network Setting*

ii. The Reboot message was shown in the browser (figure 6.1).

**Defender Smart Alarm**

Reboot In Progress...

Your settings were successfully saved, and the board is now rebooting to configure itself with the new settings.
**Please close the internet Explorer and type in "nbtstat-R" at command Prompt**

**For more detail please refer to user manual**

*Figure 6.1 Reboot message*

**Monitor • Control • Surveillance**

*d. Password Setting (figure 4.4)*
• Maximum 4 digits numeric

| Defender Alarm Board Configuration | | |
|---|---|---|

**User Password**

| USER | PASSWORD | NOTE |
|---|---|---|
| 1 | 1111 | |
| 2 | 2222 | |
| 3 | 3333 | To enable the button SET |
| 4 | 4444 | Please key in 4 digits for |
| 5 | 5555 | each user password and |
| 6 | 6666 | same password are forbidden |
| 7 | 7777 | |
| 8 | 8888 | |

SET

cancel

***Figure 4.4 Password Setting***

*e. Status Log  (Figure 4.5)*

• Reload button - for reload the latest information. Maximum show 1000 events, after 1000 events, the next events will show at first location.

| Log Data | | |
|---|---|---|

| Date/Time | Event | Description |
|---|---|---|
| 11/10/2010 10:19 | Remote Disarm | Partition 1 User 3 |
| 11/10/2010 10:19 | Remote Arm | Partition 1 User 3 |
| 11/10/2010 10:19 | Remote Disarm | Partition 2 User 2 |
| 11/10/2010 10:19 | Remote Disarm | Partition 1 User 2 |
| 11/10/2010 10:19 | Remote Arm | Partition 2 User 2 |
| 11/10/2010 10:19 | Remote Arm | Partition 1 User 2 |
| 11/10/2010 10:09 | Remote Disarm | Partition 2 Master |
| 11/10/2010 10:09 | Remote Disarm | Partition 1 Master |
| 11/10/2010 10:09 | Remote Arm | Partition 2 Master |
| 11/10/2010 10:09 | Remote Arm | Partition 1 Master |
| 11/10/2010 10:01 | Periodic Test Report | - |
| 11/10/2010 09:25 | 24 Hour (safe) Alarm | Partition 2 Zone 8 |
| 11/10/2010 09:21 | Remote Disarm | Partition 2 Master |
| 11/10/2010 09:21 | Remote Disarm | Partition 1 Master |
| 11/10/2010 09:21 | Remote Arm | Partition 2 Master |

Maximum 1000 events

Reload    cancel

***Figure 4.5 Status Log***

**Monitor • Control • Surveillance**

---

**1. Zone input 1 to 8**
Terminals use for connect the sensor or detector such as magnetic, vibration or PIR sensor

**2. Keypad Connector**
Terminals provide connection for the keypad, can connect up to 4 keypad at the same time to control at differ place

**3. +13**
Terminals provide 13v power positive, use to supply remote control power and external siren power only can't connect with strobe light.

**4. +12**
Terminals provide 12v power positive to the device that require 12v power.

**5. P2 & P1**
Terminals use for Home Automation Output, to drive auxiliary devices such as LED, Sounder or Relay.

**6. Siren**
Terminals use to connect to the siren negative.

**7. Tel Out**
Terminals for other telephone extension sockets.

**8. Tel In**
Terminals for incoming Phone line

**9. Earth Ground Connection**
Terminals to earth or an earth rod

**10. Ac Input**
Terminals for 16v transformer

**11. Wireless Module**
Terminals use to connection the wireless module

**12. Remote control**
Terminals use to connection the remote control, to activate the alarm through the remote control.

**13. Web Server**
Terminals use to connection the web server module

**14. Hard Reset**
Terminals use to reset the program to defaults setting, need to connection the pin2 and pin3 together at the web server port and power up the panel power.

**Monitor • Control • Surveillance**

12v  Gnd  1S  2S  Com

Red  Black  Brown  Gray  White

12v power   connect to 8 zone

Panel   Clk  Dt  12v  Gnd
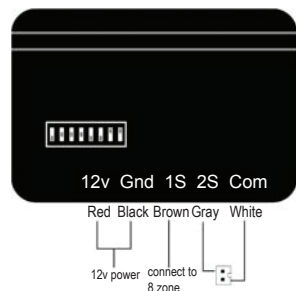
+V & -V - connect to 12V DC power supply.
1 S - Connect 1 S to zone 8
2 S - Connect 2 S to pin number 2
Com - Connect com to pin number 1

(1 S is use for panic button)
(2 S is use for Arm and Disarm System)
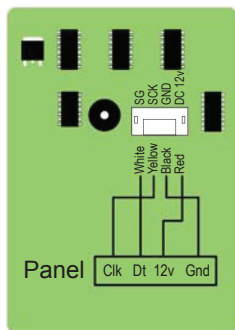
### ZONE PROGRAMMING

| Zone Type | Address / Zone | Default Zone Type 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| *Delay* | 10 | ● | | | | | | | |
| *Internal Delay* | 11 | | ● | | | | | | |
| *Internal* | 12 | | | | | | | | |
| *Instant* | 13 | | | ● | ● | ● | ● | ● | |
| *24 Hour* | 14 | | | | | | | | ● |
| *Fire* | 15 | | | | | | | | |
| *Silent* | 16 | | | | | | | | |
| *Normally Open* | 17 | | | | | | | | |
| *Zone Respond* | 18 | | | | | | | | |
| *Intelligent Zone 1* | 19 | | | | | | | | |
| *Intelligent Zone 2* | 20 | | | | | | | | |
| *Zone Partition1* | 21 | ● | ● | ● | ● | ● | ● | ● | ● |
| *Zone Partition2* | 22 | | | | | | | | |
| *Auto Reset Zone* | 23 | ● | ● | ● | ● | ● | ● | ● | ● |
| *CMS Zone Report* | 24 | ● | ● | ● | ● | ● | ● | ● | ● |
| *Partition 1 user* | 25 | ● | ● | ● | ● | ● | ● | ● | ● |
| *Partition 2 user* | 26 | | | | | | | | |

( ● is default setting)

---

### 4.1 Con guration DSAW

*a. Zone setting ( gure 4.1)*

• Location – name the location for each zone (max 10 characters).
• Camera Link – IP camera web link for each zone (max 40 characters).

**Defender Alarm Board Configuration**

Alarm Sensor Zone

| ZONE | LOCATION | CAMERA LINK |
|---|---|---|
| ZONE 1 | Garden | http://www.zonelink1.com.my |
| ZONE 2 | Dining | http://www.zonelink2.com.my |
| ZONE 3 | Kitchen | http://www.zonelink3.com.my |
| ZONE 4 | Fence | http://www.zonelink4.com.my |
| ZONE 5 | Corridor | http://www.zonelink5.com.my |
| ZONE 6 | Hall | http://www.zonelink6.com.my |
| ZONE 7 | Front Door | http://www.zonelink7.com.my |
| ZONE 8 | Back Door | http://www.zonelink8.com.my |

Alarm Light Zone

| LIGHT ZONE | LOCATION |
|---|---|
| ZONE 1 | Inside |
| ZONE 2 | Outside |

save

cancel

*Figure 4.1 Zone setting*

**Monitor • Control • Surveillance**

**Monitor • Control • Surveillance**

b. *Refer to figure 4.0.*

• Status – condition for each zone in Arm, Trigger, Ready, Open or Bypass status.

• Last Trigger – indicate which zone was triggered after disarm.

• Camera Link – IP camera link for each zone.

• Bypass – indicate which zones have been bypass.

c. *Functionality of DSAW.*

• ARM – to arm the alarm system

• DISARM – to disarm the alarm system

• BYPASS – to set or clear the zone bypass

d. *Configuration of DSAW (only master authenticate)*

• Zone Setting – to define zone location and IP Camera Link for each zone.

• Timer Setting – auto arm or disarm the alarm system and auto turn on or off the light follow timer (24 hour format).

• Network Setting – Configure DSAW's network setting in Dynamic (IP address assign by router) or Static (IP address assign by user) and Port number.

• Password Setting – change the user's login password (only 4 digits acceptable).

• Status Log – to indicate who and what activities done on DSAW.

• Logout – logout the DSAW.

## Technical Data

*Delay* - The zone will not cause an alarm during the entry / exit delay time.
*Internal Delay* - The zone will not cause an alarm during the delay time at Away mode and will not caues an alarm during home mode.
*Internal* - The zone will not cause an alarm during home arm mode.
*Instant* - The zone will cause an instant alarm when the system is arm.
*24 Hour* - The zone will cause instant alarm regardless of system arm / disarm.
*Fire* - The zone will cause a unique alarm with distinctive 'fire' tone if it is violated regardless of system arm / disarm
*Silent* - The siren will not sound when the zone open.
*Normally Open Zone* - The zone can be assign to normally open or normally close
*Zone Respond* - Have 2 different respond time: 'on' mean slow respond, 'off' mean fast respond.
*Intelligent Zone 1 & 2* - The zone will not trigger siren before the zone counter and zone reset timer expires.
*Zone Partition 1 & 2* - Partition allow the system to be divided into areas of protection so that different partition can be arm and disarm independently from each other.
*Auto Reset Zone* - The zone will restore and become normal after the bell time.
*CMS Zone Report* - The panel will report the zone status to the CMS center
*Partition 1 & 2 User* - To assign the user to access the partition.
*(Default: All user can access to partition 1 only)*

## SYSTEM SETTING

| CMS Reporting | Address | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 | Zone 7 | Zone 8 |
|---|---|---|---|---|---|---|---|---|---|
| | 30 | ● | ● | ● | ● | ● | ● | ● | |

**Zone 1** - Report Panic
**Zone 2** - Report Duress
**Zone 3** - Report Arm / Disarm
**Zone 4** - Report AC Fail
**Zone 5** - Report enter / exit programming mode
**Zone 6** - Report Telephone line fault
**Zone 7** - Report Bypass
**Zone 8** - Report Battery low

## Technical Data

*Report Panic*
On - The panel will report panic to the centre
Off - The panel will not report panic to the centre

*Report Duress*
On - The panel will report Duress to the centre
Off - The panel will not report Duress to the centre

*Report Arm / Disarm*
On - The panel will report Arm / Disarm to the centre
Off - The panel will not report Arm / Disarm to the centre

*Report AC Fail*
On - The panel will report AC Fail to the centre
Off - The panel will not report AC Fail to the centre

*Report Enter / Exit Programming Mode*
On - The panel will report Enter / Exit programming to the centre
Off - The panel will not report Enter / Exit programming to the centre

*Report Telephone Line Fault*
On - The panel will report telephone line fault to the centre
off - The panel will not report telephone line fault to the centre

*Report Bypass*
On - The panel will report Bypass to the centre
Off - The panel will not report Bypass to the centre

*Report Battery low*
On - The panel will report battery low to the centre
Off - The panel will not report battery low to the centre

| Communicator Setting | Address | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 | Zone 7 | Zone 8 |
|---|---|---|---|---|---|---|---|---|---|
|  | 31 | ● |  |  | ● |  | ● |  |  |

**Zone 1** - Enable personal resporting
**Zone 2** - Enable CMS resporting

**Zone 4** - Enable Fix line
**Zone 6** - Enable skip password protect

## Technical Data

**Enable personal resporting**
On - The panel will report the event to the user
Off - The panel will not report the event to the user

**Enable CMS resporting**
On - The panel will communicate with the CMS centre
Off - The panel will not communicate with the CMS centre

**Enable Fix line**
On - The panel will communicate using telephone line
Off - The panel will not communicate using telephone line

**Enable Skip password protect**
On - When call out the user don't have to key in password
Off - When call out the user have to key in password

| System Option | Address | Zone 1 | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 | Zone 7 | Zone 8 |
|---|---|---|---|---|---|---|---|---|---|
|  | 33 | ● | ● | ● | ● | ● | ● | ● |  |

**Zone 1** - Keypad buzzer on during entry delay
**Zone 2** - Keypad buzzer on during exit delay
**Zone 4** - DTMF dialing

**Zone 5** - Arm using H or A
**Zone 6** - Panic button P
**Zone 7** - Remote control
**Zone 8** - Bell squawk

**Keypad buzzer on during entry delay**
On - The keypad will produce the entry tones
Off - Entry tones will not produce

**Keypad buzzer on during exit delay**
On - The keypad will produce the exit tone
Off - Exit tone will not produce

**DTMF dialing**
On - The panel will dial using DTMF tone
Off - The panel will dial using older pulse tone

**Arm using H or A**
On - Enable arm using H or A key
Off - Disable arm using H or A key

**Button P**
On - Enable using button P for panic button
Off - Disable using panic button

**Remote Control**
On - The panel will Enable remote control
Off - Disable remote control

**Bell Squawk**
On - The panel siren will pulsed once_when the system is arm, pulsed twice when the system is disarm
Off - The siren will behaves normally on arm and disarm

**Monitor • Control • Surveillance**

## 4.0 8 zones alarm panel status

a. The status of 8 zones home alarm panel status will shown as below after login ( gure 4.0).

| ZONE | STATUS | LAST TRIGGER | CAMERA LINK | BYPASS |
|---|---|---|---|---|
| Zone 1 Garden | Ready |  | Camera Link | Set/Clear |
| Zone 2 Dining | Ready |  | Camera Link | Set/Clear |
| Zone 3 Kitchen | Ready |  | Camera Link | Set/Clear |
| Zone 4 Fence | Ready |  | Camera Link | Set/Clear |
| Zone 5 Corridor | Ready |  | Camera Link | Set/Clear |
| Zone 6 Hall | Ready |  | Camera Link | Set/Clear |
| Zone 7 Front Door | Ready |  | Camera Link | Set/Clear |
| Zone 8 Back Door | Ready |  | Camera Link | Set/Clear |

Disarm Selected — Alarm system disarm

Alarm system arm → ARM  DISARM  Refresh

If the setting of PGM1 and PGM2 are 104, 105, 106, 107, it will no allow to turn on/off manually. Refer to Installer manual for PGM definition

| ZONE | STATUS | SWITCH | NOTE |
|---|---|---|---|
| Light 1 Inside | ON | On/Off |  |
| Light 2 outside | ON | On/Off |  |

Configuration DSA

On/Off the light

Zone Setting | Timer Setting | Network Setting
Password Setting | Status Log | Logout

*Figure 4.0 Defender 8 zone alarm panel status*

**Monitor • Control • Surveillance**

b.  Username maximum can be register with **8 characters.**

c.  Username can be register as alphanumeric with uppercase or lowercase.



| Defender Smart Alam |
| --- |

Login Name Registration

Login Name :  [      ]

Register

Login name is registered. To reset login name, power off the web server. Then press the button on web server while it is turn on and keep pressing for 5 seconds.
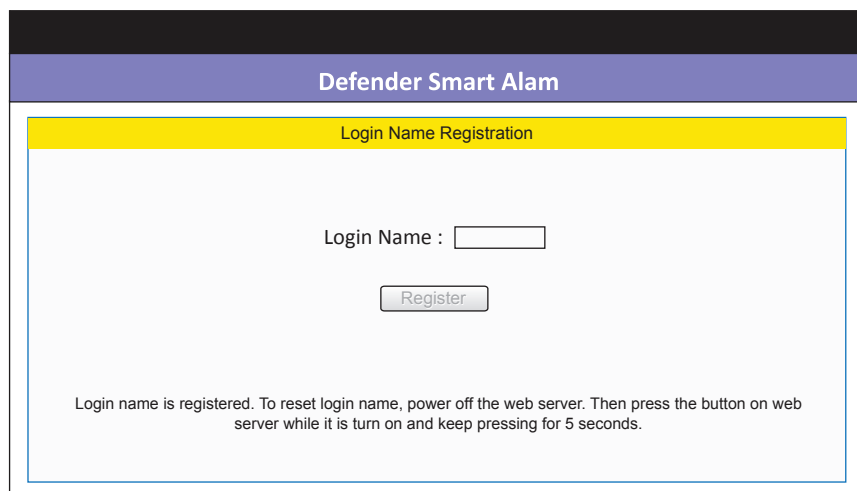
*Figure 3.2*

d.  The username only can be registered one time only, after successfully registered username it will automatically link to login page ( gure 3.2).

e.  If users forget the username, it need to power off the web server. Than press the button on web server while it is turn on and keep pressing for 5 seconds.

f.  After successfully reset the username, it will automatically link to login page ( gure 3.1).

| Time Setting | Address | Default Value | Unit |
| --- | --- | --- | --- |
| Entry 1 | 40 | 040 | sec |
| Entry 2 | 41 | 040 | sec |
| Exit 1 | 42 | 120 | sec |
| Exit 2 | 43 | 120 | sec |
| Bell Time | 44 | 005 | minute |
| Fast respond | 45 | 008 | ms |
| Slow respond | 46 | 015 | ms |
| Intelligent counter 1 | 47 | 002 | times |
| Intelligent counter 2 | 48 | 003 | times |
| Intelligent reset timer 1 | 49 | 010 | minute |
| Intelligent reset timer 2 | 50 | 030 | minute |
| Home Automation 1 | 51 | 103 | manual trigger |
| Home Automation 2 | 52 | 103 | manual trigger |
| Keypad lock digit | 55 | 032 | times |
| Keypad lock time | 56 | 060 | sec |
| Communicator dialing time | 57 | 040 | sec |
| Communicator idle time | 58 | 100 | sec |
| Communicator dial loop | 59 | 003 | times |
| Answer ring | 60 | 006 | ring |
| Communicator password error auto hang up | 61 | 020 | times |
| CMS periodic report | 62 | 024 | hour |

## Technical Data

**Entry 1** - The system uses this timer to allow the user time to access the keypad and disarm partition 1.
(Can be set  from 000 to 255 sec)
**Entry 2** - The system uses this timer to allow the user time to access the keypad and disarm partition 2.
(Can be set  from 000 to 255 sec)
**Exit 1** - This timer controls the delay between the user initiating the exit procedure for partition 1.
(Can be set  from 000 to 255 sec)
**Exit 2** - This timer controls the delay between the user initiating the exit procedure for partition 2.
(Can be set  from 000 to 255 sec)
**Bell Time** - This timer controls the duration of the bell output after an alarm has occurred.
(Can be set  from 000 to 255 minute)
**Fast respond** - If a zone is programmed with the ' fast respond' attribute, the zone respond will be controlled by the duration of this timer.
(Can be set  from 001 to 255 x 1.6ms)
**Slow respond** - If a zone is  programmed with the 'slow respond' attribute, the zone respond will be controlled by the duration of this timer.
(Can be set  from 001 to 255 x 1.6ms)
**Intelligent counter** - The intelligent Zone only cause alarm if trigger many times and exceed intelligent counter value within Intelligent reset time.
**Home Automation** - Use for connection to household appliances.
**Keypad Lock Digit** - The keypad will auto lock if key in the wrong password.
(Can be set  from 000 to 255 time)
**Keypad lock time** - The keypad will auto unlock when the lock time exceed.
(Can be set  from 000 to 255 sec)
**Communicator dialing time** - Time to wait for the user to answer during personal reporting.
**Communicator idle time** - Time to wait for key press before auto hang up during personal reporting.
**Communicator dial loop** - Number of time to redial on each telephone number.
**Answer ring** - Number of ring required in order to answer the incoming call.
(Can be set  from 000 to 255 ring)
**Communicator password error auto hang up** - Number of incorrect password digit allowed before communicator auto hang up.
**CMS periodic report** - This timer controls the CMS periodic report interval time.

**Monitor • Control • Surveillance**

**Monitor • Control • Surveillance**

| Programming | Address | Default Value |
|---|---|---|
| CMS Account Number 1 | 70 | 0000 |
| CMS Account Number 2 | 71 | 0000 |
| CMS Phone Number 1 | 72 | - |
| CMS Phone Number 2 | 73 | - |
| Change Installer Code | 76 | 1397 |
| Reset user Code | 98 | - |
| Reset panel | 99 | - |

## Technical Data

**CMS Account Number** - The panel will communicate with Centre Monitoring Station (CMS) using the account number

**CMS Phone Number** - The panel can call CMS using phone numbers. The primary number will be dialled rst (secondary telephone number is backup number for the primary number)

**Change Installer Code** - the default installer code is 1397. To change the installer code, the new installer code must to key in 2 times.

**Reset User Code** - The panel will delete all the user code. Master code will change to default password, that is '1234'

**Reset Panel** - All the programming and password will change to default value.

## HOME AUTOMATION TIMER

Enter Programming Menu,
[ * ] [ 1 ] [ Mater code ] [ Address ] [ Time ]

| System | Address | Format |
|---|---|---|
| System Time | 30 | HHMM |
| System Date | 31 | DDMM |
| System Year | 32 | YYYY |
| Auto Arm Partition 1 | 33 | HHMM |
| Auto Disarm Partition 1 | 34 | HHMM |
| Auto Arm Partition 2 | 35 | HHMM |
| Auto Disarm Partition 2 | 36 | HHMM |
| Night Mode begin time | 37 | HHMM |
| Night Mode end time | 38 | HHMM |
| Control Timer 1 on | 39 | HHMM |
| Control Timer 1 off | 40 | HHMM |
| Control Timer 2 on | 41 | HHMM |
| Control Timer 2 off | 42 | HHMM |
| Auto Off timer | 43 | Minute |

## Technical Data

**System Time** - The option allow you to set the system time.

**System Date** - The option allow you to set the system date.

**System Year** - The option allow you to set the system year.

**Auto Arm Partition** - The system will auto arm the selected partition.

**Auto Disarm Partition** - The System will auto disarm the selected partition.

**Night Mode Time** - The option allow you to set the night mode time.

**Control Timer On** - Home automation on according to user setting time.

**Control Timer Off** - Home automation off according to user setting time.

**Auto Off Timer** - Home automation will auto turn off after exceed user setting time.

**Monitor • Control • Surveillance**

b. Open the browser login to DSAW. Key in **http://defender:8088**. Login page will show as below (Figure 3.0).



**Defender Smart Alam**

**User Login**

Username : [          ]

Password : [          ]

☐ Remember my password

[ Login ]

Date : 1-1-2011
Time : 00:15

*Figure 3.0 Login Page*

### 3.0  Register New Username

a. To register new username, please enter the IP address as **http://defender:8088/protect/register.htm**. Figure 3.1.



**Defender Smart Alam**

Login Name Registration

Login Name : [        ]

[ Register ]

*Figure 3.1*

**Monitor • Control • Surveillance**

## Defender Smart Alarm Webserver (DSAW)

*A device that allow user to check the home status and control the alarm system functionality through a web page via Ethernet.*

### 1.0 Hardware – Default Factory Setting

| | |
|---|---|
| MAC Address | - C8:1E:8E:00:00:00 |
| IP Address | - 169.254.1.1 |
| Gateway | - 169.254.1.1 |
| Subnet Mask | - 255.255.0.0 |
| Primary DNS | - 169.254.1.1 |
| Secondary DNS | - 0.0.0.0 |
| Port | - 8088 |
| Web Server Username | - admin |
| Password | - 1234 |

### 2.0 Communication between DSAW and home user Router

a. Home user Router will automatically assign a Dynamic IP address to DSAW (figure 2.0).
   Example: TP-LINK ROUTER (TD-W8901G) with DSAW.

DSAW

Direct Network Cable

DHCP Enable

*Figure 1.0 Connection between DSAW and Router*
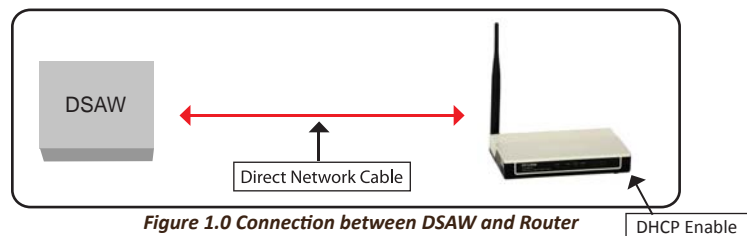
**TP-LINK®**

DHCP IP Pool Summary

| Host Name | IP Address | MAC Address | Expire Time |
|---|---|---|---|
| | 192.168.1.2 | C8-1E-8E-00-00-47 | 2days, 23:58:45 |
| oem-adc4936ff0a | 192.168.1.3 | 00-E0-4C-77-36-54 | 2days, 23:53:42 |

Assign by router

DSA Mac Address

*Figure 2.0: DSAW's IP address assigned by TP-link router as 192.168.1.2*

**Monter • Control • Surveillance**

---

| Home Automation | Value |
|---|---|
| *Zone Open Without Auto Off Feature* | 000 - 007 |
| *Zone Open With Auto Off Feature* | 016 - 023 |
| *Zone Open without Auto Off Feature during Night Mode* | 032 - 039 |
| *Zone Open with Auto Off Feature during Night Mode* | 048 - 055 |
| *Control follow Timer 1* | 064 |
| *Control follow Timer 2* | 065 |
| *Control follow Timer 1 & 2* | 066 |
| *Activate during away arm without auto off feature* | 067 |
| *Activate during away arm with auto off feature* | 068 |
| *Activate during away arm without auto off feature during Night Mode* | 069 |
| *Activate during away arm with auto off feature during Night Mode* | 070 |
| *Activate follow zone trigger* | 071 - 079 |
| *Activate follow zone trigger (Pulse signal)* | 087 - 094 |
| *Manual On/ Off* | 103 |
| *Activate when trouble condition exist* | 105 |
| *Activate when fully arm* | 104 |
| *Activate when zone trigger auto off after time exceed* | 106 |
| *Activate when zone trigger auto off after disarm* | 107 |

### Technical Data

*Activate when zone open without auto off feature - Activate when zone open and deactivate manually*

| | | | |
|---|---|---|---|
| **Zone 1** - 000 | **Zone 3** - 002 | **Zone 5** - 004 | **Zone 7** - 006 |
| **Zone 2** - 001 | **Zone 4** - 003 | **Zone 6** - 005 | **Zone 8** - 007 |

*Activate when zone open with auto off feature - Activate when zone open and deactivate when the auto off time exceed*

| | | | |
|---|---|---|---|
| **Zone 1** - 016 | **Zone 3** - 018 | **Zone 5** - 020 | **Zone 7** - 022 |
| **Zone 2** - 017 | **Zone 4** - 019 | **Zone 6** - 021 | **Zone 8** - 023 |

**Control timer 1** - The home automation output will activate follow control timer 1.

**Control timer 2** - The home automation output will activate follow control timer 2.

**Control timer 1 & 2** - The home automation output will activate follow control timer 1 & 2.

**Activate during entry / exit time without auto off feature** - Activate when system arm deactivate by manually.

**Activate during entry / exit time with auto off feature** - The home automation output will pulse 1 second when the system is arm, pulse 2 second when the system is disarm.

**Follow zone trigger** - Activate when zone trigger and deactivate when system disarm.

**Manual On / Off** - It can be turn on or off manually through keypad, telephone or internet.

**Activate when full arm** - It will activate the system is arm, deactivate when system is disarm.

**Activate when trouble condition exit** - Activate when the panel detect trouble.

**Activate when zone trigger auto off after time exceed** - It will only function when the system is arm, activate when zone trigger Auto off after timer exceed.

**Activate when zone trigger auto off after disarm** - It will only function when the system is arm, activate when zone trigger Auto off after disarm.

**Monter • Control • Surveillance**

| | |
|---|---|
| To disarm the system | Press [ master code ] |
| To arm in home mode | Press [ H ] 3 sec to arm all the partition in home mode |
| To arm in away mode | Press [ A ] 3 sec to arm all the partition in away mode |
| To bypass zone | Press [ * ] [ 4 ] [master code] [zone] [ # ] |
| Display memory | Press [ * ] [ 5 ] |
| Change master code | Press [ * ] [ 6 ] [master code] [ 0 ] [new master code 2 time] |
| Add user code | Press [ * ] [ 6 ] [master code] [user number] [new user code 2 time] |
| Add duress code | Press [ * ] [ 6 ] [ master code ] [ 9 ] [ new duress code 2 time] |
| Delete user code | Press [ * ] [ 6 ] [master code] [user number] [ * ] |
| Set phone number | Press [ * ] [ 7 ] [master code] [user] [phone number] [ # ] |
| Display trouble | Press [ * ] [ 50 ]  1. AC Fail  7. Time Fail  2. Battery Low  8. Date Fail  3. CMS Fail |
| Chime mode | Press [ * ] [ 81 ] [zone number] |
| Walk test | Press [ * ] [ 82 ] [zone number] |
| Testing CMS | Press [ * ] [ 83 ] |
| Home automation | Press [ * ] [ 9 ] [ 1 ] on/off home automation 1  [ 2 ] on/off home automation 2  [ 5 ] on all home automation  [ 6 ] off all home automation |
| To exit | Press [ # ] |

**Technical Data**

Default master code [ 1234 ]

Maximum 8 user code, 1 master code and 1 duress code, Max. 4 user phone number

## Smart Dialer Operation Summary

| Key | Status |
|---|---|
| 0 | Disarm System |
| 1 | Arm System |
| 2 | Home Automation |
| 3 | Bypass Zone |
| 4 | Panic Alarm |
| 8 | Check Alarm Manu |
| 9 | Repeat Alarm Status |
| # | Hang up |

**Monitor • Control • Surveillance**

| | |
|---|---|
| To arm / disarm the system | Press [ master code ] [ 0 ] arm / disarm all the partition  Press [ master code ] [ 1 ] arm / disarm partition 1  Press [ master code ] [ 2 ] arm / disarm partition 2 |
| To arm in home mode | Press [ H ] 3 sec to arm all the partition in home mode |
| To arm in away mode | Press [ A ] 3 sec to arm all the partition in away mode |
| To bypass zone | Press [ * ] [ 4 ] [master code] [zone] [ # ] |
| Display memory | Press [ * ] [ 5 ] |
| Change master code | Press [ * ] [ 6 ] [master code] [ 0 ] [new master code 2 time] |
| Add user code | Press [ * ] [ 6 ] [master code] [user number] [new user code 2 time] |
| Add duress code | Press [ * ] [ 6 ] [ master code ] [ 9 ] [ new duress code 2 time] |
| Delete user code | Press [ * ] [ 6 ] [master code] [user number] [ * ] |
| Set phone number | Press [ * ] [ 7 ] [master code] [user] [phone number] [ # ] |
| Display trouble | Press [ * ] [ 50 ]  1. AC Fail  7. Time Fail  2. Battery Low  8. Date Fail  3. CMS Fail |
| Chime mode | Press [ * ] [ 81 ] [zone number] |
| Walk test | Press [ * ] [ 82 ] [zone number] |
| Testing CMS | Press [ * ] [ 83 ] |
| Home automation | Press [ * ] [ 9 ] [ 1 ] on/off home automation 1  [ 2 ] on/off home automation 2  [ 5 ] on all home automation  [ 6 ] off all home automation |
| To exit | Press [ # ] |

**Technical Data**

Default master code [ 1234 ]

Maximum 8 user code, 1 master code and 1 duress code

Maximum 4 user phone number

## Smart Dialer Operation Summary

| Key | Status |
|---|---|
| 0 | Disarm System |
| 1 | Arm System |
| 2 | Home Automation |
| 3 | Bypass Zone |
| 4 | Panic Alarm |
| 8 | Check Alarm Manu |
| 9 | Repeat Alarm Status |
| # | Hang up |

**Monitor • Control • Surveillance**