O.Y.L. TECHNOLOGY SDN. BHD.

Security
&
Home Automation System

AX1 LCD & ICON

USER MANUAL

(REVISION 4.0)

CE

CONTENTS

PREFACE

Thank you for selecting the new AX1 Security and Home Automation system. This manual will explain to you on how to operate your AX1 security and home automation system. This system is made up of a control panel, keypads, integrated switch module and telephone voice module. Specific areas of detections are called zones. Zones can be programmed to have different characteristics. Some zones may be 24-hour zones; they remain armed even when the alarm system is asleep. (This setting is done during the installer programming as per user's request). In addition, some zones can be programmed by the users to allow bypassing. When you bypass a zone, the zone is temporarily removed from the alarm system. Always remember that bypassed zones are not protected.

How does your AX1 security and home automation system work?

When a detection device is triggered, the zone indicator will light up. If the alarm system is armed, the control panel responds by reporting an alarm condition. The control of the system can be done either through keypad or telephone. If the alarm system is triggered, the signal can be transmitted to a central monitoring station (CMS). (Provided the AX1 system is connected to CMS)

For safety purposes, the operation of the AX1 system requires the users to enter the personal identification number (PIN). User is advised to disable the installer access whenever necessary. (i.e. commissioning and servicing)

FEATURES

AX1 LCD

1. 8 fully programmable zones (expandable to 32 zones)
2. Expandable up to 32 output controls (with feedback capability)
3. Supports up to 8 LCD keypads
4. 4 Real time ARM/DISARM timer on Daily basis or Schedule basic.
5. 4 Real time ON/OFF timer on Daily basis or Schedule basic.
6. 12 user codes & 4 guest codes
7. Ability to divide into 4 partitions
8. 4 programmable Outputs (OC)
9. Customizable Zone Naming Indicator
10. Customizable Output Naming Indicator
11. Event Log viewing
12. 16 Event Trigger Outputs with programmable countdown timer

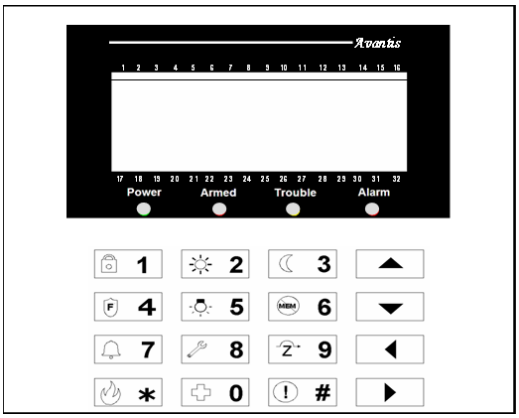
AX1 ICON

1. 8 fully programmable zones
2. Expandable up to 8 output controls (with feedback capability)
3. Supports up to 4 ICON keypads
4. 1 Real time ARM/DISARM timer on Daily Basis only.
5. 4 Real time ON/OFF timer on daily basis
6. 7 user codes & 1 guest code
7. 8 Event Trigger Outputs

AX1 ICON and LCD

1. 3 Soft Zones (Emergency/Fire/Panic)
2. 2 Programming Mode- Installer Programming and User Programming
3. 4 User Arming type (Auto home arming/ Day arming/ Night arming / Force arming)
4. Real time clock function
5. Programmable Entry/Exit Delay Time
6. 4 bell types (Steady/ Pulse/ Chirp/ Silent)
7. 3 zone types [End-of-line (EOL) / Normally Open (NO) / Normally Close (NC)]
8. Adjustable loop response sensitivity
9. Key Switch function (Latch/ Momentary)
10. Dedicated Tamper zone
11. AC power supply monitoring
12. Low battery indication
13. Bell Loss indication
14. Bell Test function
15. Telephone line loss detection
16. Telephone Voice Module
17. RS485 ready (to support longer distance communication)
18. Report events to 4 phone numbers with 4 account numbers
19. Ademco® Contact ID CMS reporting format
20. Voice reporting format (direct to user) or tone reporting format
21. Interactive Voice menu or tone beepers during user call in
22. Support Remote programming via touch tone telephone
23. Programmable event trigger
24. Fast Key on Keypad for Easy menu access
25. Duress code
26. Walk test function
27. Double Call-in Feature for Fax Machine telephone line sharing
28. Support AX1 GSM
29. Support AX1 Web Server Module (WSM)

Ax1

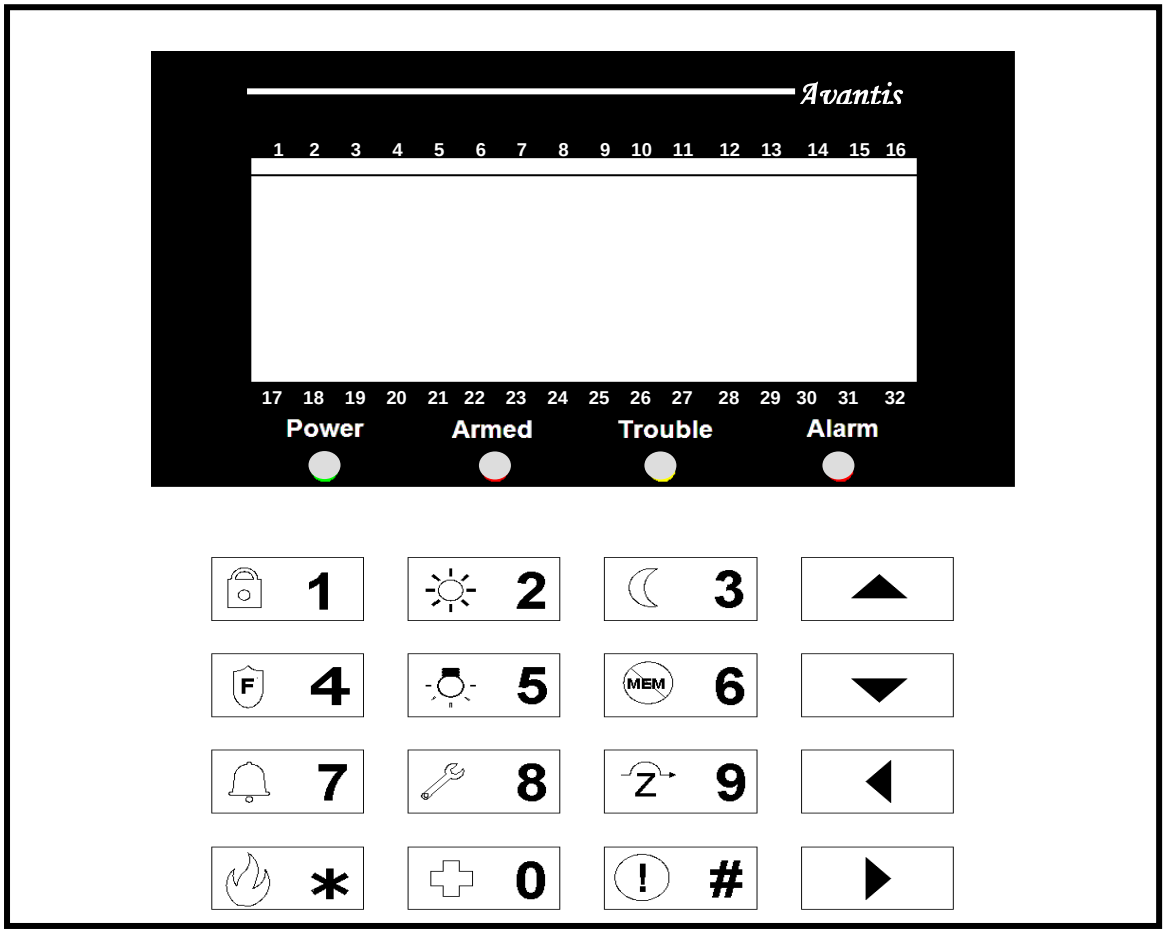


LCD KEYPAD

USER MANUAL

LCD KEYPAD OUTLOOK

POWER: AC Power light	**ARMED:** System arm light	**TROUBLE:** System trouble light	**ALARM:** System Alarmed



Key Indication

1	Auto Home Arming	9	Bypass Zone
2	Day Arming	*	Fire / Cancel Key
3	Night Arming	0	Emergency
4	Force Arming	#	Panic / Enter Key
5	Automation	▲	Scroll Up Key / Zone Indicator
6	Clear Alarm Memory	▼	Scroll Down Key / IO Indicator
7	Chime	◀	Left / Back Key / Volume Control
8	Trouble Viewing	▶	Right / Forward Key

ARMING MODE

ARMING TYPE	ZONE STATUS	INFORMATION	WHEN TO USE
Auto home Arming	Normal Status	To arm the system with delay time in order for the user to exit the house To arm the system in delay time with the interior zone bypassed provided that the user does not leave the premises	When user leaves the house and no one is at home.
Day Arming	Normal Status	The perimeter zone is armed instantly while the user stays at home The interior zones are automatically bypassed	When user is at home.
Force Arming	Normal Status or Abnormal Status	To force arm the system instantly regardless of the zone status. The interior zones are not bypassed	When there are zone still open & user is at home.
Night Arming	Normal Status	The perimeter zone is armed instantly while user stays at home. The interior zones are automatically bypassed. The delay zones become instant zones.	When everyone come back to home & user want to sleep.

NOTE: Zone refers to the designated areas that are protected by the AX1 system. Zone status refers to the condition of the area. Normal status means door, window or detectors are in good/close condition. While abnormal status means the door/window may have been opened or the detector is not functioning.

SOUND INDICATION

Sound Indication	Description
Acceptance / Acknowledgement tone	2 fast beeps
Error tone	Continuous buzz for about 2 seconds
Entry delay	Continuous beep for the delay programmed by installer.
Exit delay	Continuous beep for the delay programmed by installer.
Door chime	Continuous tone for about 2 seconds
Alarm	Chirp (1 second ON/ 4 seconds OFF) Pulse (2 seconds ON/ 2 seconds OFF) Continuous Tone Silent

LIGHT INDICATION

LED Indication	Description
Power LED	Indicates power supply to keypad.
Armed LED	Indicates system has been armed. Permanent LED ON when system is fully armed LED Blinking when system is partially armed (some partitions are not armed)
Trouble LED	Indicates there are troubles in the system. i.e. AC loss, Battery loss, External communication error, Tamper, Short Circuit, Bell Strobe Siren Loss.
Alarmed LED	Indicates there is alarm occurring in the system. There is a need to clear the alarm memory to clear this LED.

KEYPAD NAVIGATION KEY FUNCTION

Arrow Up - Scroll Up
Arrow Down - Scroll Down
Arrow Left - Exit to previous menu
Arrow Right - nil
" # " Key - Enter
"* " Key - Exit

LCD Keypad Overall Menu Tree

1.) ARM

- AUTO HOME
  - ALL
  - PARTITION
    - PARTITION 1
    - PARTITION 2
    - PARTITION 3
    - PARTITION 4
- DAY
  - ALL
  - PARTITION
    - PARTITION 1
    - … PARTITION 4
- NIGHT
  - ALL
  - PARTITION
    - PARTITION 1
    - … PARTITION 4
- FORCE
  - ALL
  - PARTITION
    - PARTITION 1
    - … PARTITION 4

2.) DISARM

- ALL
- PARTITION
  - PARTITION 1
  - PARTITION 2
  - PARTITION 3
  - PARTITION 4

3.) CLEAR ALARM

4.) BYPASS ZONE

- ZONE 1
  - ACTIVE / BYPASS
- ZONE 2
  - ACTIVE / BYPASS
- … ZONE 32
  - ACTIVE / BYPASS

5.) AUTOMATION

- OUTPUT CONTROL
  - OUTPUT 1
    - NO/OFF
  - OUTPUT 2
    - NO/OFF
  - … OUTPUT 32
    - NO/OFF
- ON ALL
- OFF ALL

6.) SYSTEM

- KEYPAD SETTING
  - KEYPAD B/LIGHT
    - ENABLE / DISABLE
  - LCD B/LIGHT
    - ENABLE / DISABLE
  - CHIME
    - ENABLE / DISABLE
  - KEYPRESS TONE
    - ENABLE / DISABLE
  - PRE-WARN TONE
    - ENABLE / DISABLE
  - KEYPAD TAMPER
    - ENABLE / DISABLE
  - FAST KEY
    - ENABLE / DISABLE
  - SPEAKER
    - ENABLE / DISABLE
  - VOLUME CONTROL
  - COLOR MODE
    - BLUE / AMBER
- TEST
  - WALK TEST
  - BELL TEST
  - BATTERY TEST
- TROUBLES
- ZONE STATUS
  - ZONE 1
  - ZONE 2
  - … ZONE 32
- PHONE LOSS DET
  - ENABLE / DISABLE

7.) USER PROGRAMMING

- MASTER
  - ENTER NEW PIN
- USER
  - ADD NEW USER
  - DELETE USER
- GUEST
  - ADD NEW GUEST
  - DELETE GUEST
- INSTALLER
  - INSTALLER ACCESS
    - ENABLE / DISABLE
- TIMER
  - ZONE TIMER
    - ARM TIMER
      - SELECT TIMER – TMR1 to TMR4
        - DAILY
        - SCHEDULED
    - DISARM TIMER
      - SELECT TIMER – TMR1 to TMR4
        - DAILY
        - SCHEDULED

- OUTPUT TIMER
  - ON TIMER
    - SELECT TIMER – TMR1 to TMR4
      - ❖ DAILY
      - ❖ SCHEDULED
  - OFF TIMER
    - SELECT TIMER – TMR1 to TMR4
      - ❖ DAILY
      - ❖ SCHEDULED
- DATE & TIME
  - DATE
  - TIME
  - DAY

➢ DURESS
- ENTER NEW PIN

8.) ALARM REPORT

9.) PC COMM

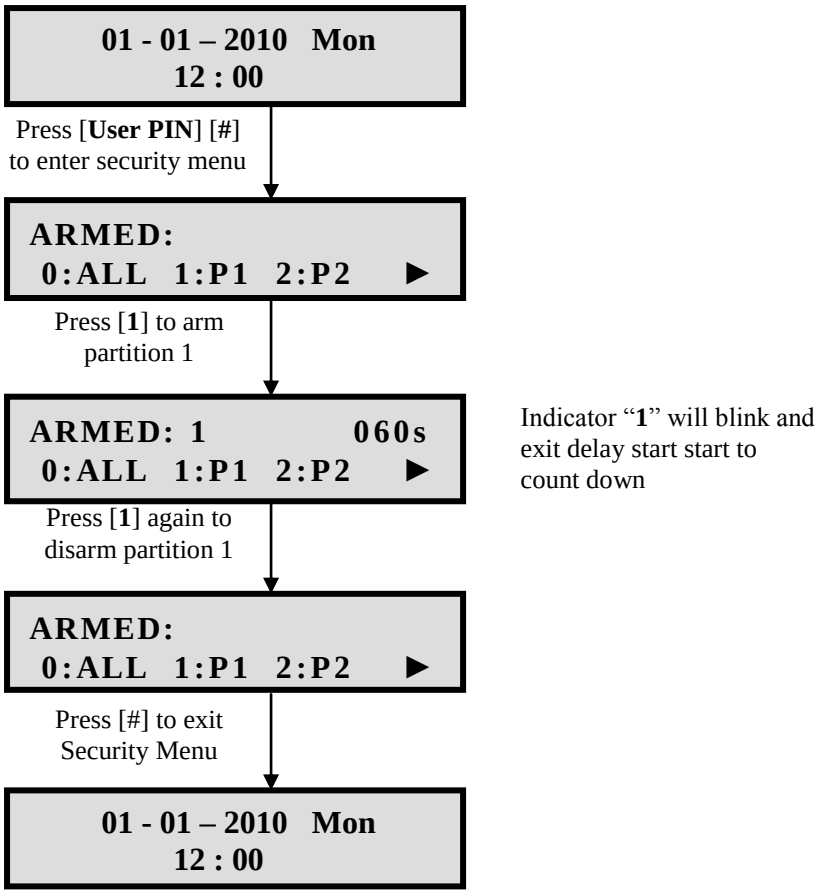
➢ WEB ACCESS
- ENABLE / DISABLE

CHAPTER 1: ALARM SYSTEM CONTROL

1.0 ALARM SYSTEM CONTROL USING LCD KEYPAD

1.0.1 SECURITY MENU

Security menu is a menu that able user to toogle **Arm** or **Disarm** by press the partition number. This menu will show system arming status on the upper line and keypress description on the bottom line.



1.0.1.1 ARM / DISARM ALL PARTITION

When [All partition authorized PIN] is use to enter security menu, user will be able to press [**0**] to arm / disarm all partition. The control condition is shown in table below:

NO	SYSTEM STATUS	ACTION WHEN KEY [0] PRESSED IN SECURITY MENU
1	All Arm	System will Disarm all partition
2	Partially Arm	System will Disarm all partition
3	Not Arm	System will Arm all partition

1.0.1.1 ARM / DISARM PARTICULAR PARTITION

In security menu, user can Arm/ Disarm a particular partition by press key [**1**] / [**2**] / [**3**] / [**4**]. User is not able to control an unauthorized partition. The control condition is shown in table below:

NO	ACTION WHEN KEY [1]/[2]/[3]/[4] PRESSED IN SECURITY MENU	DESCRIPTION
1	Partition Arm	Previous status for the partition was disarm
2	Partition Disarm	Previous status for the partition was arm
3	Request Rejected	Partition not available / Partition temporary not available
4	Request Rejected with open zone name	System is not in full proof condition
5	Unauthorized User	User are not authorized to Arm/Disarm

Alarm system Control Sub-Menu

1.0.2 ARM

- AUTO HOME
  - ALL
  - PARTITION
    - PARTITION 1
    - PARTITION 2
    - PARTITION 3
    - PARTITION 4
- DAY
  - ALL
  - PARTITION
    - PARTITION 1
    - … PARTITION 4
- NIGHT
  - ALL
  - PARTITION
    - PARTITION 1
    - … PARTITION 4
- FORCE
  - ALL
  - PARTITION
    - PARTITION 1
    - … PARTITION 4

1.0.3 DISARM

- ALL
- PARTITION
  - PARTITION 1
  - PARTITION 2
  - PARTITION 3
  - PARTITION 4

1.0.4 ALARM REPORT

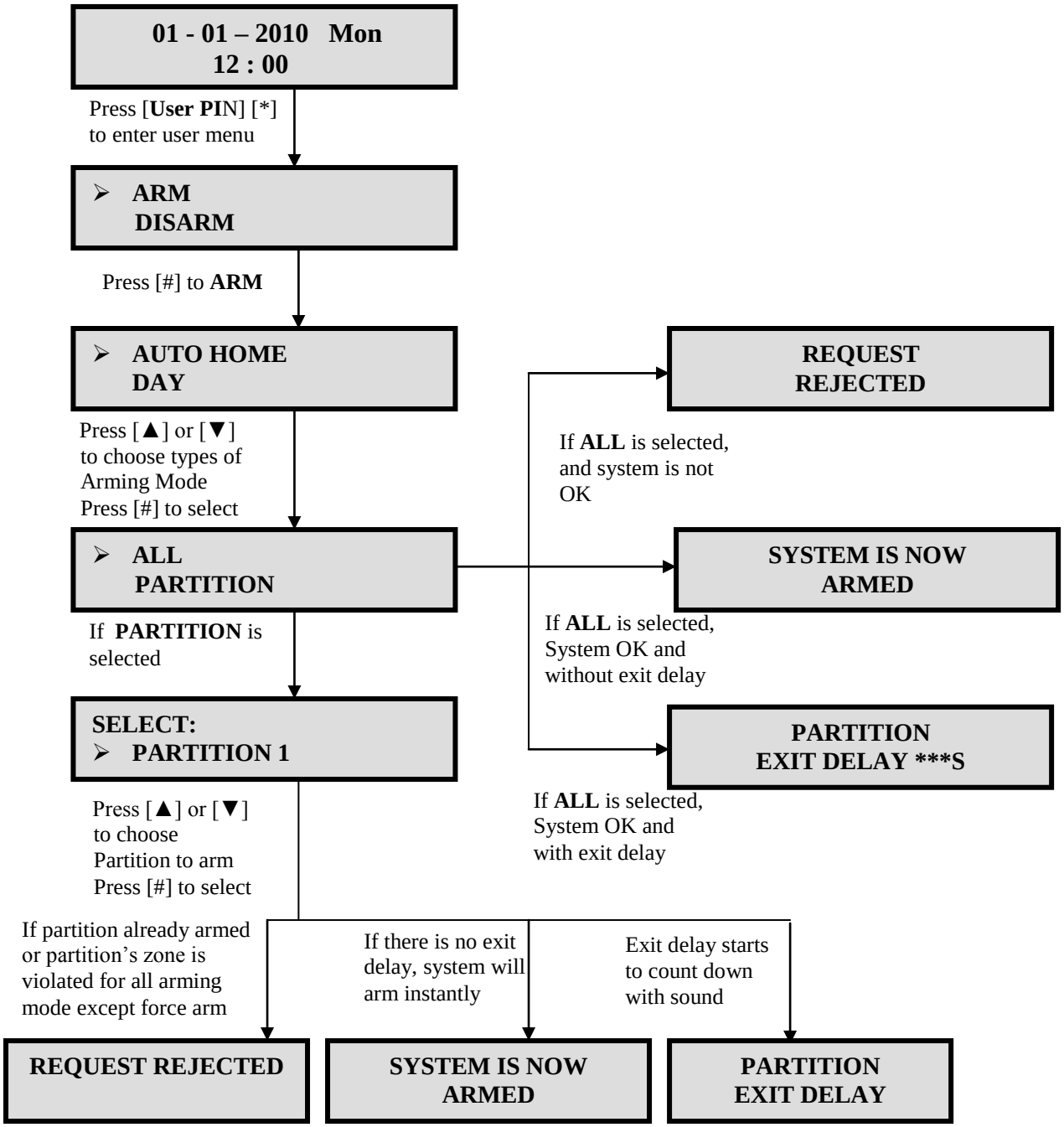
1.0.5 CLEAR ALARM

1.0.6 BYPASS ZONE

- ZONE 1
  - ACTIVE / BYPASS
- ZONE 2
  - ACTIVE / BYPASS
- … ZONE 32

1.0.7 ZONE STATUS VIEWING

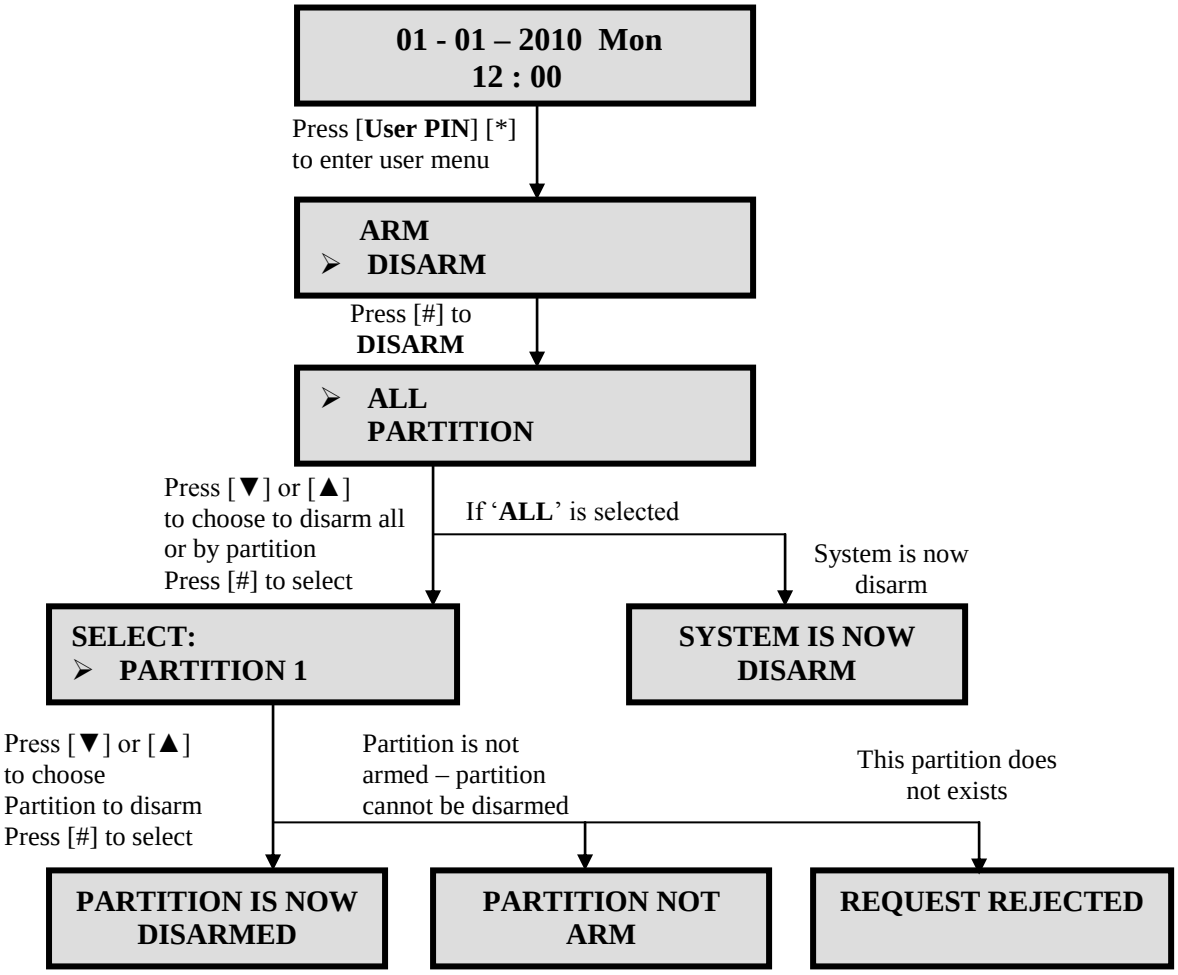
1.0.2 ARMING



1.0.2.1 QUICK ARMING

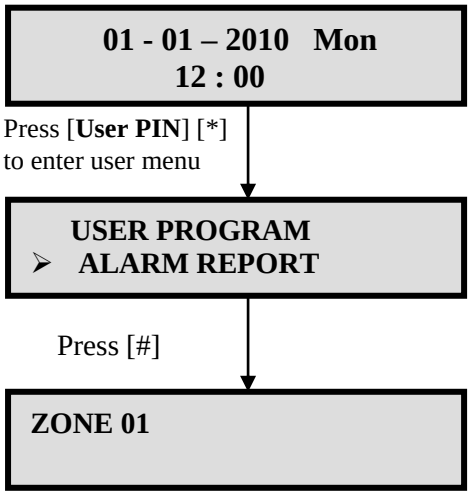
COMMAND	INFORMATION
Press and hold the button **[1]** for 2 seconds	Auto Home Arming
Press and hold the button **[2]** for 2 seconds	Day Arming
Press and hold the button **[3]** for 2 seconds	Night Arming
Press and hold the button **[4]** for 2 seconds	Force Arming

1.0.3 DISARMING



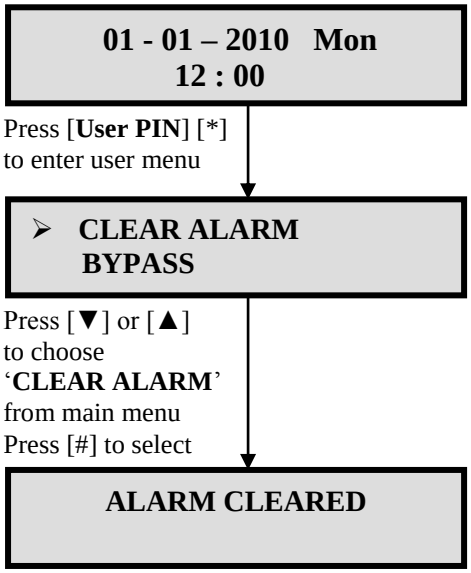
1.0.4 ALARM REPORTING

When alarm occurs, the strobe lights and the bells will be turned on. If the system is disarmed, it could only turn off the bell but not the strobe light. At the moment, the User can trace back which zone has been violated previously.



1.0.5 CLEAR ALARM MEMORY

When alarm occurs, the strobe lights and the bells will be turned on. If the system is disarmed, it could only turn off the bell but not the strobe light. Thus, the user needs to clear the alarm memory to turn off the strobe light. Besides that, once the alarm memory is cleared, the auxiliary power supply 1 will be reset for 3 seconds before restoring it again.

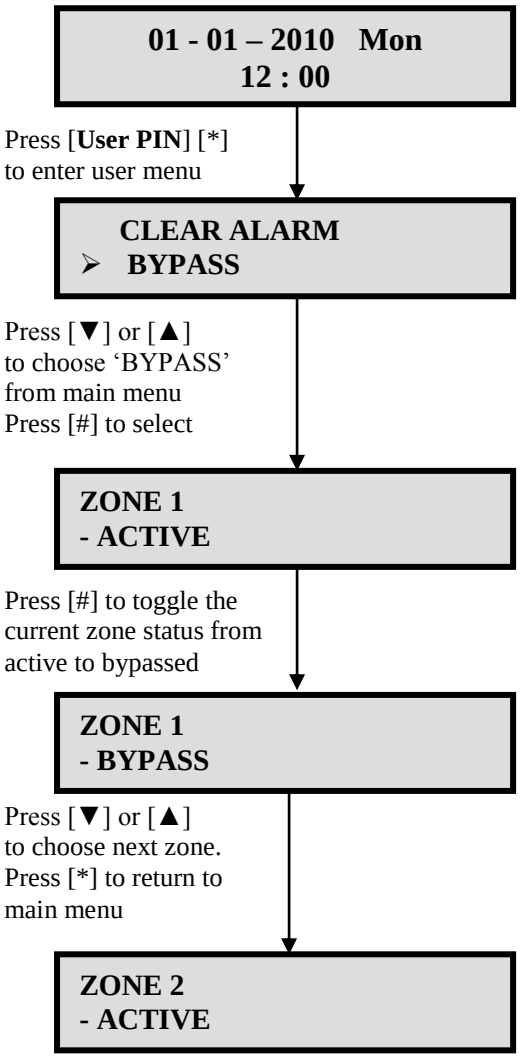


1.0.5.1 QUICK CLEAR ALARM MEMORY

COMMAND	INFORMATION
Press and hold the button **[6]** for 2 seconds	Clear alarm memory

1.0.6 BYPASSING ZONE

Bypassing a zone means removal of one or more protection zones from the system. In order to perform bypassing, the system must be in normal mode. Once the system is disarmed, all the zone will be unbypassed.



1.0.6.1 QUICK VIEW ON BYPASS DESCRIPTION

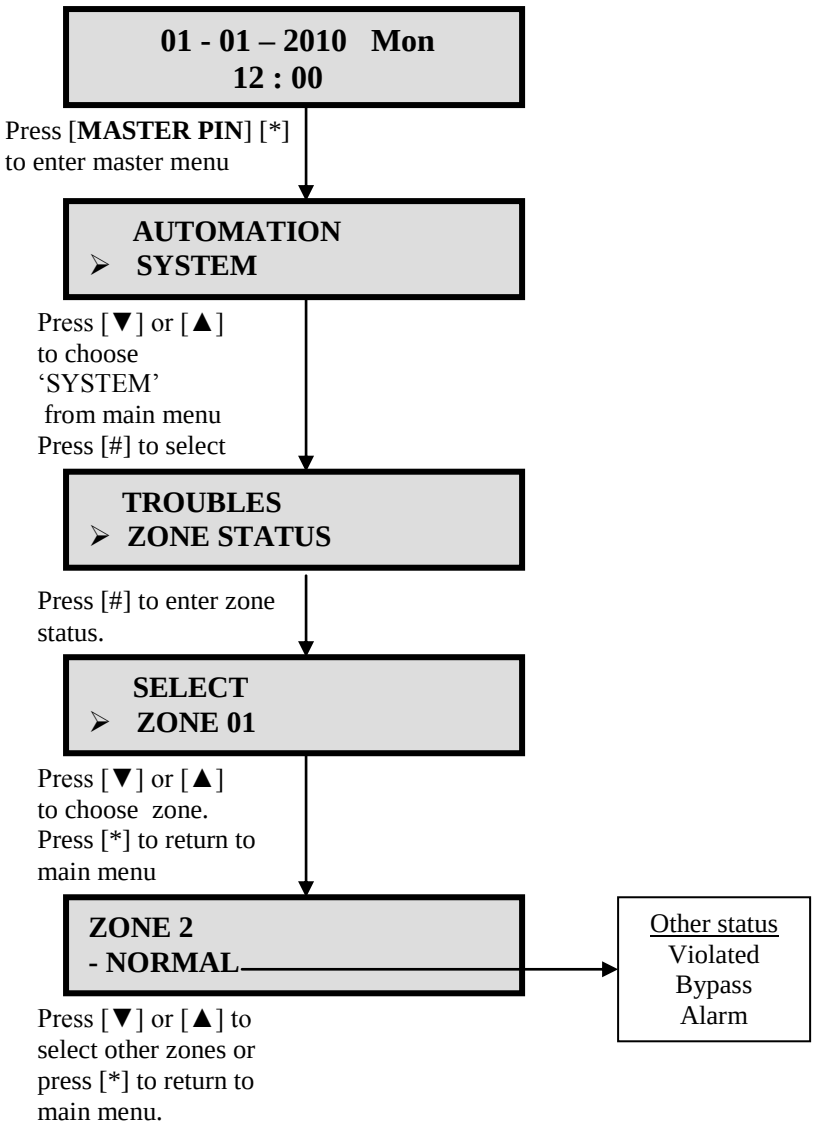
Once at desired zone in ZONE STATUS menu, press "**0**" to view the zone description that have been predetermine during installation using the voice setting.

1.0.6.2 QUICK BYPASSING ZONE

COMMAND	INFORMATION
Press and hold the button **[9]** for 2 seconds	Bypassing zone

- Bypass zones are cleared after system is disarmed.
- It can be done by pressing [#] in bypass menu until the ACTIVE status is shown.

1.0.7 ZONE STATUS VIEWING



1.0.7.1 QUICK VIEW ON ZONE DESCRIPTION

Once at desired zone in ZONE STATUS menu, press "**0**" to view the zone description that have been predetermine during installation using the voice setting.

1.0.7.2 QUICK ZONE STATUS VIEWING

COMMAND	INFORMATION
Press and hold the button **[▲]** for 2 seconds	Zone 1-32 status O: **Normal** (Zone is OK) X: **Violated** (Zone is OPEN)

- Top Row [**Zone 1 to 16**] starting from left to right
- Bottom Row [**Zone 17 to 32**] starting from left to right

CHAPTER 2: HOME AUTOMATION CONTROL

2.0 INTRODUCTION

The system can support up to 32 outputs. The outputs can be electrical appliances such as air-conditioners, fans or lights. The outputs can be configured as event-triggered outputs or normal outputs which are controlled either by LCD keypad, real time clock timer or telephone remote control.

Recommended air conditioner with memory backup or last state memory in Malaysia is as below:

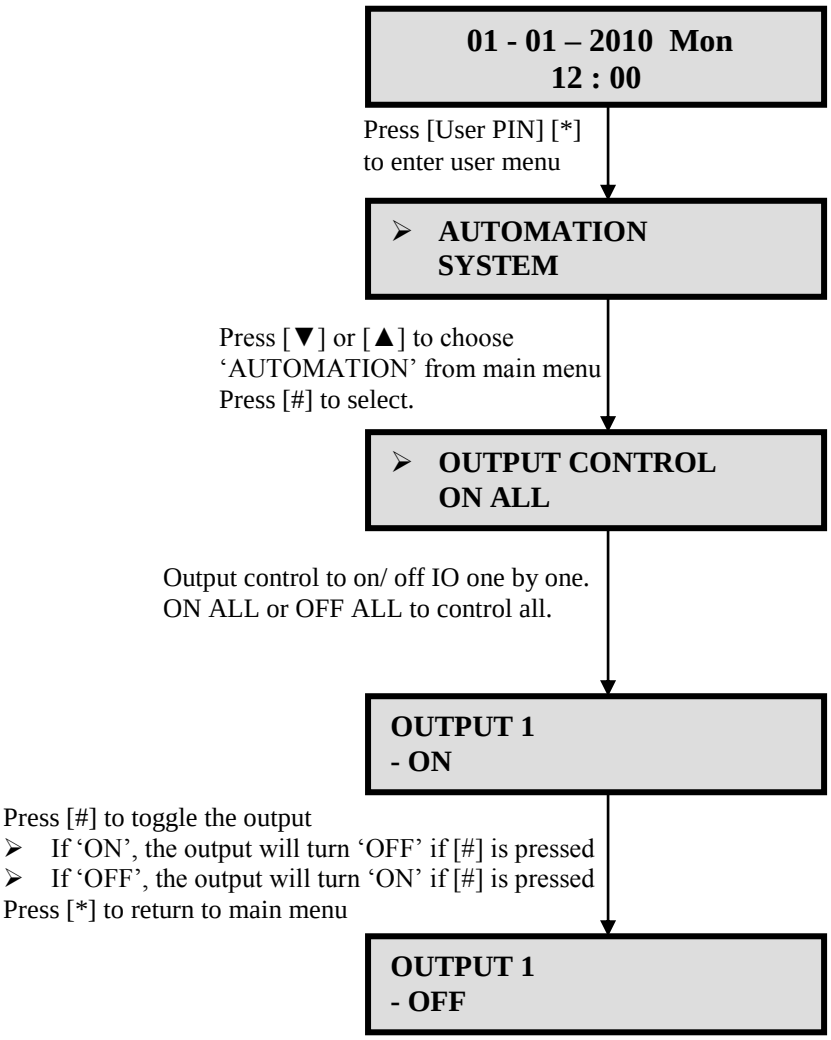
1. Wall Mounted Split Air Conditioner (Brand : Acson)
   Model: AWM101 – (1.0 HP)
   AWM151 – (1.5 HP)
   AWM201 – (2.0 HP)
   AWM251 – (2.5 HP)
   AWM301 – (3.0 HP)

2. Ceiling Cassette Split Air Conditioner (Brand : Acson)
   Model: ACK15B – (1.5 HP)
   ACK20B – (2.0 HP)
   ACK25B – (2.5 HP)
   ACK30B – (3.0 HP)

Automation Control Sub-Menu

1) AUTOMATION
   - OUTPUT CONTROL
     - OUTPUT 1
     - OUTPUT 2
     - OUTPUT 3
     - OUTPUT 4
     - … OUTPUT 32
   - ON ALL
   - OFF ALL

2.1 AUTOMATION CONTROL USING LCD KEYPAD



2.1.1 QUICK AUTOMATION CONTROL

COMMAND	INFORMATION
Press and hold the button **[5]** for 2 seconds	Automation control

2.1.2 QUICK VIEW OF OUTPUT DESCRIPTION

Once at desired output, just press "**0"** to view the output description that have been predetermine during installation using the voice setting.

2.1.3 QUICK VIEW OF OUTPUT STATUS

COMMAND	INFORMATION
Press and hold the button **[▼]** for 2 seconds	Output status 1-32. O: On, X: Off, Blank: No output

- **Top Row** [Output **1** to **16**] starting from left to right
- **Bottom Row** [Output **17** to **32**] starting from left to right

CHAPTER 3: USER PROGRAMMING

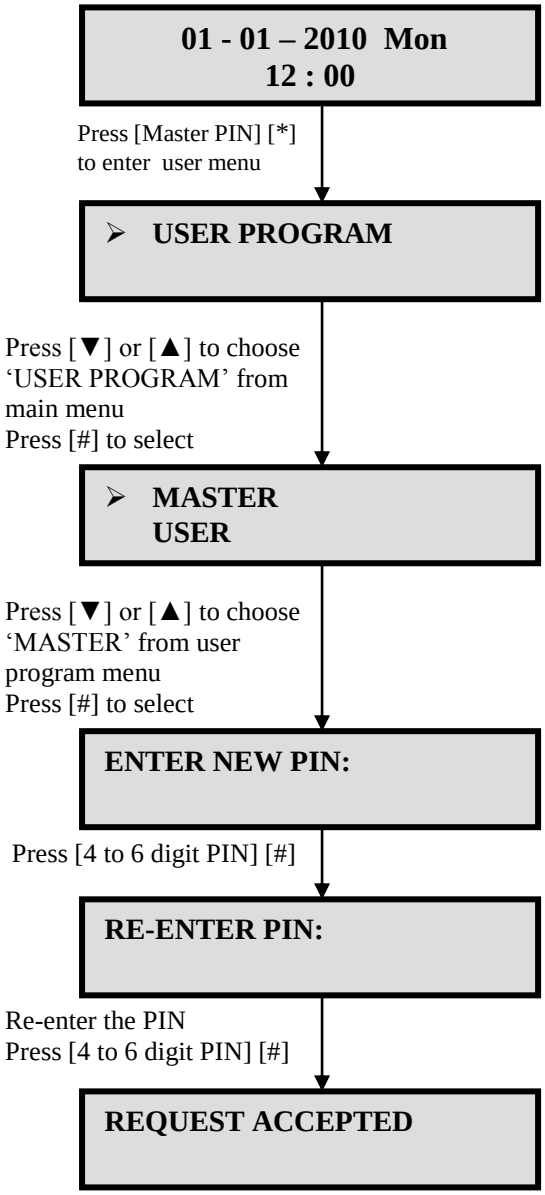
3.0 USER SETTING EDIT

Only the user who has the **Master PIN** can access the user-programming mode. Once the user goes into user programming mode, user can access to the following options:

USER PROGRAMMING SUB-MENU

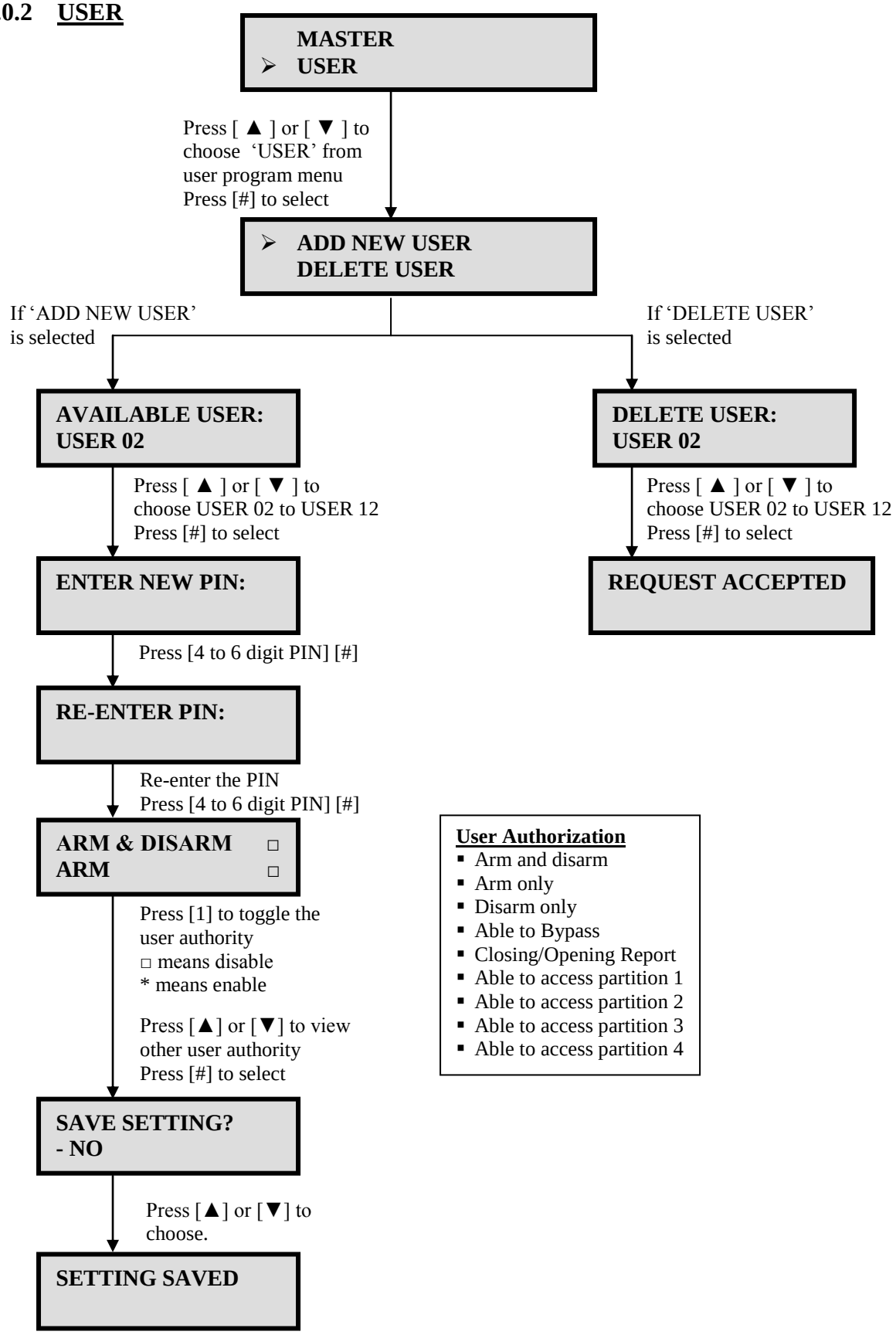
1) USER PROGRAMMING
   - MASTER
     - ENTER NEW PIN
   - USER
     - ADD NEW USER
     - DELETE USER
   - GUEST
     - ADD NEW GUEST
     - DELETE GUEST
   - INSTALLER
     - INSTALLER ACCESS
       - ENABLE / DISABLE
   - TIMER
     - ZONE TIMER
       - ARM TIMER
         - SELECT TIMER – TMR1 to TMR4
           - DAILY
           - SCHEDULED
       - DISARM TIMER
         - SELECT TIMER – TMR1 to TMR4
           - DAILY
           - SCHEDULED
     - OUTPUT TIMER
       - ON TIMER
         - SELECT TIMER – TMR1 to TMR4
           - DAILY
           - SCHEDULED
       - OFF TIMER
         - SELECT TIMER – TMR1 to TMR4
           - DAILY
           - SCHEDULED
     - DATE & TIME
       - DATE
       - TIME
       - DAY
   - DURESS
     - ENTER NEW PIN

3.0.1 MASTER USER



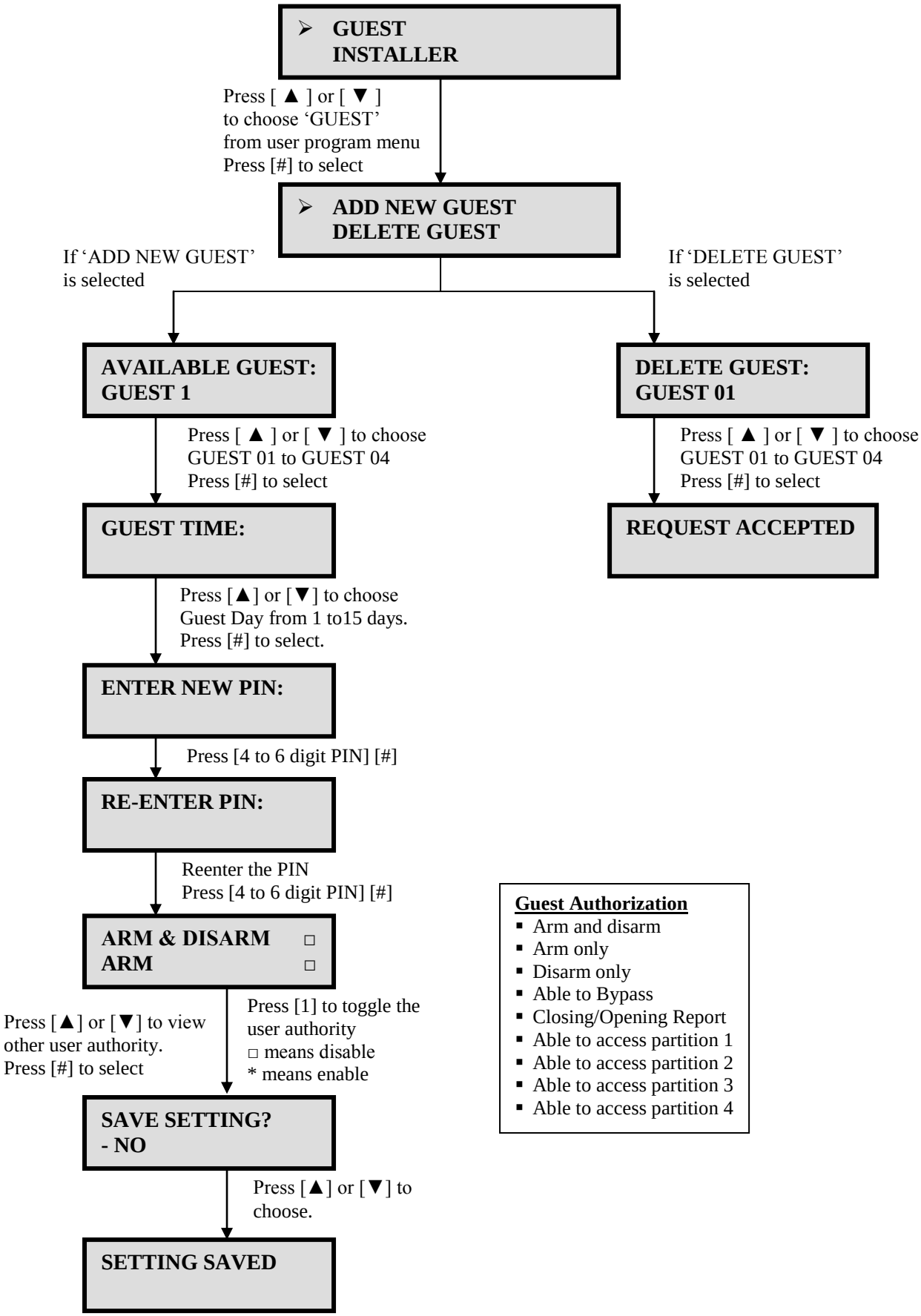
* Pin "**000000**" is **not** allowed to be used as password.

3.0.2 USER



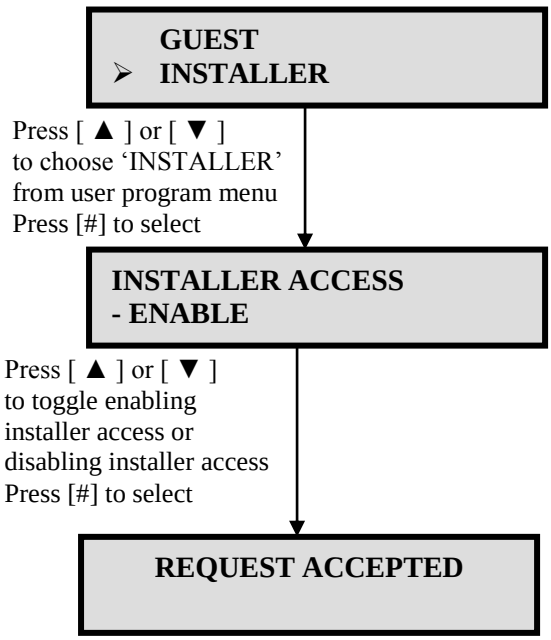
* Pin "**000000**" is **not** allowed to be used as password.

3.0.3 GUEST



* Pin "**000000**" is **not** allowed to be used as password.

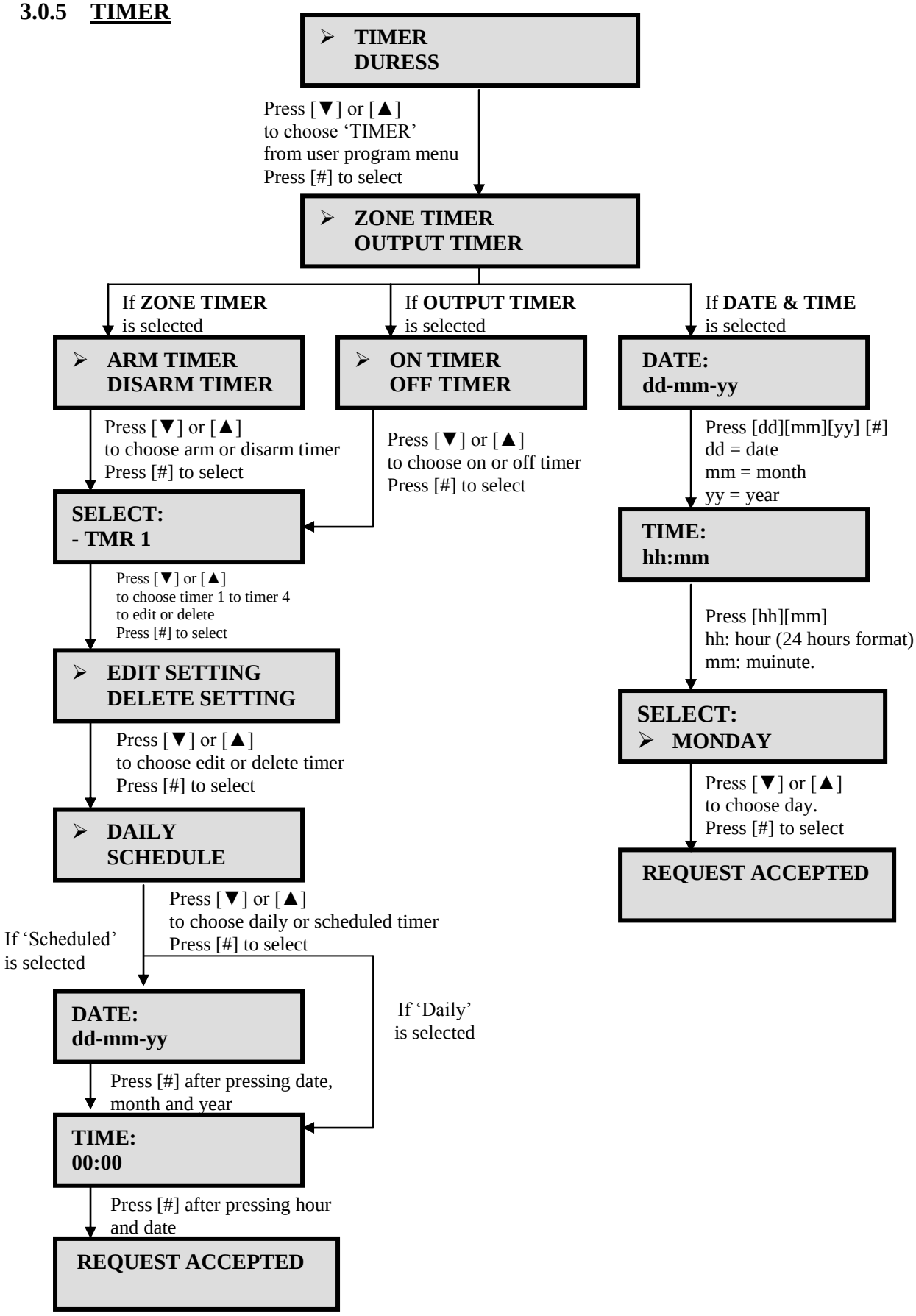
3.0.4 INSTALLER ACCESS



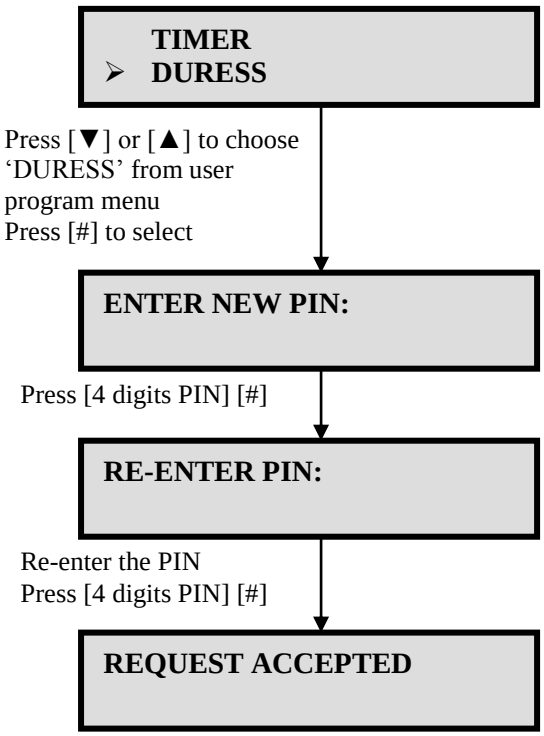
Notes:

* Installer access will be automatically disabled by system after 3 hours.

3.0.5 TIMER


➢ TIMER
DURESS
Press [▼] or [▲]
to choose 'TIMER'
from user program menu
Press [#] to select
➢ ZONE TIMER
OUTPUT TIMER
If ZONE TIMER
is selected
If OUTPUT TIMER
is selected
If DATE & TIME
is selected
➢ ARM TIMER
DISARM TIMER
➢ ON TIMER
OFF TIMER
DATE:
dd-mm-yy
Press [▼] or [▲]
to choose arm or disarm timer
Press [#] to select
Press [▼] or [▲]
to choose on or off timer
Press [#] to select
Press [dd][mm][yy] [#]
dd = date
mm = month
yy = year
SELECT:
- TMR 1
TIME:
hh:mm
Press [▼] or [▲]
to choose timer 1 to timer 4
to edit or delete
Press [#] to select
Press [hh][mm]
hh: hour (24 hours format)
mm: muinute.
➢ EDIT SETTING
DELETE SETTING
SELECT:
➢ MONDAY
Press [▼] or [▲]
to choose edit or delete timer
Press [#] to select
Press [▼] or [▲]
to choose day.
Press [#] to select
➢ DAILY
SCHEDULE
REQUEST ACCEPTED
Press [▼] or [▲]
to choose daily or scheduled timer
Press [#] to select
If 'Scheduled'
is selected
If 'Daily'
is selected
DATE:
dd-mm-yy
Press [#] after pressing date,
month and year
TIME:
00:00
Press [#] after pressing hour
and date
REQUEST ACCEPTED

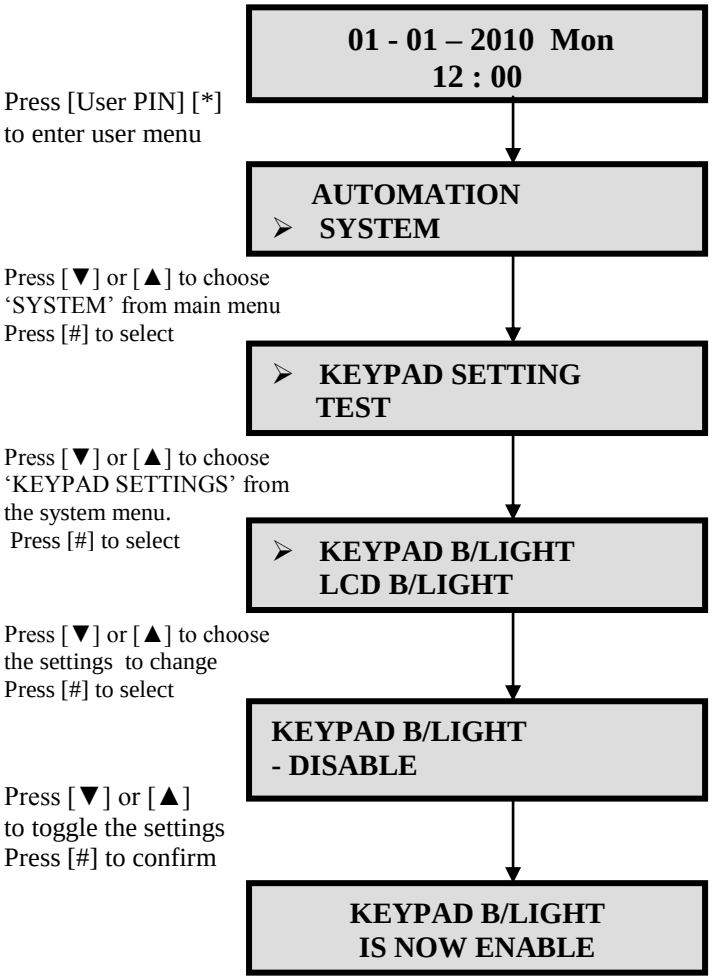
3.0.6 DURESS



The Default Duress Code is **2222**.

CHAPTER 4: KEYPAD SETTINGS

COMMAND	INFORMATION
Door Chime	This options will toggle the door chime to Enable/ Disable
Keypad Back Light	This options will toggle the keypad back light to Enable/ Disable
Pre-warn Tone	This options will toggle the pre-warn tone to Enable/ Disable
Key press Tone	This options will toggle the key press tone to Enable/ Disable
Fast Key	This options will toggle the fast key function to Enable/ Disable
LCD Backlight	This options will toggle the LCD backlight to Enable/ Disable
Keypad Tamper	This options will toggle the keypad tamper to Enable/ Disable
Speaker	This option will toggle the speaker to Enable/Disable
Volume Control	This option allow user to adjust the speaker volume from level 0-8



4.0.1 QUICK CHIME ENABLE

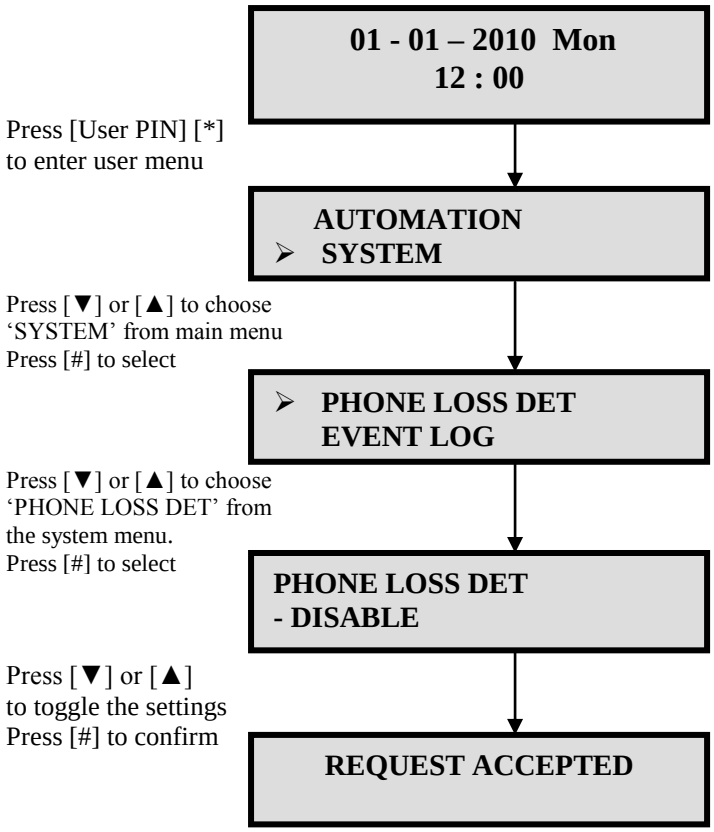
COMMAND	INFORMATION
Press and hold the button **[7]** for 2 seconds	Enabling / Disabling Chime

4.0.2 QUICK VOLUME CONTROL

COMMAND	INFORMATION
Press and hold the button **[◄]** for 2 seconds	Enter to VOLUME CONTROL settting menu

- Press [▼] or [▲] to increase or decrease the volume
- Then press [#] to accept the changes.

4.1 PHONE LINE LOSS DETECTION

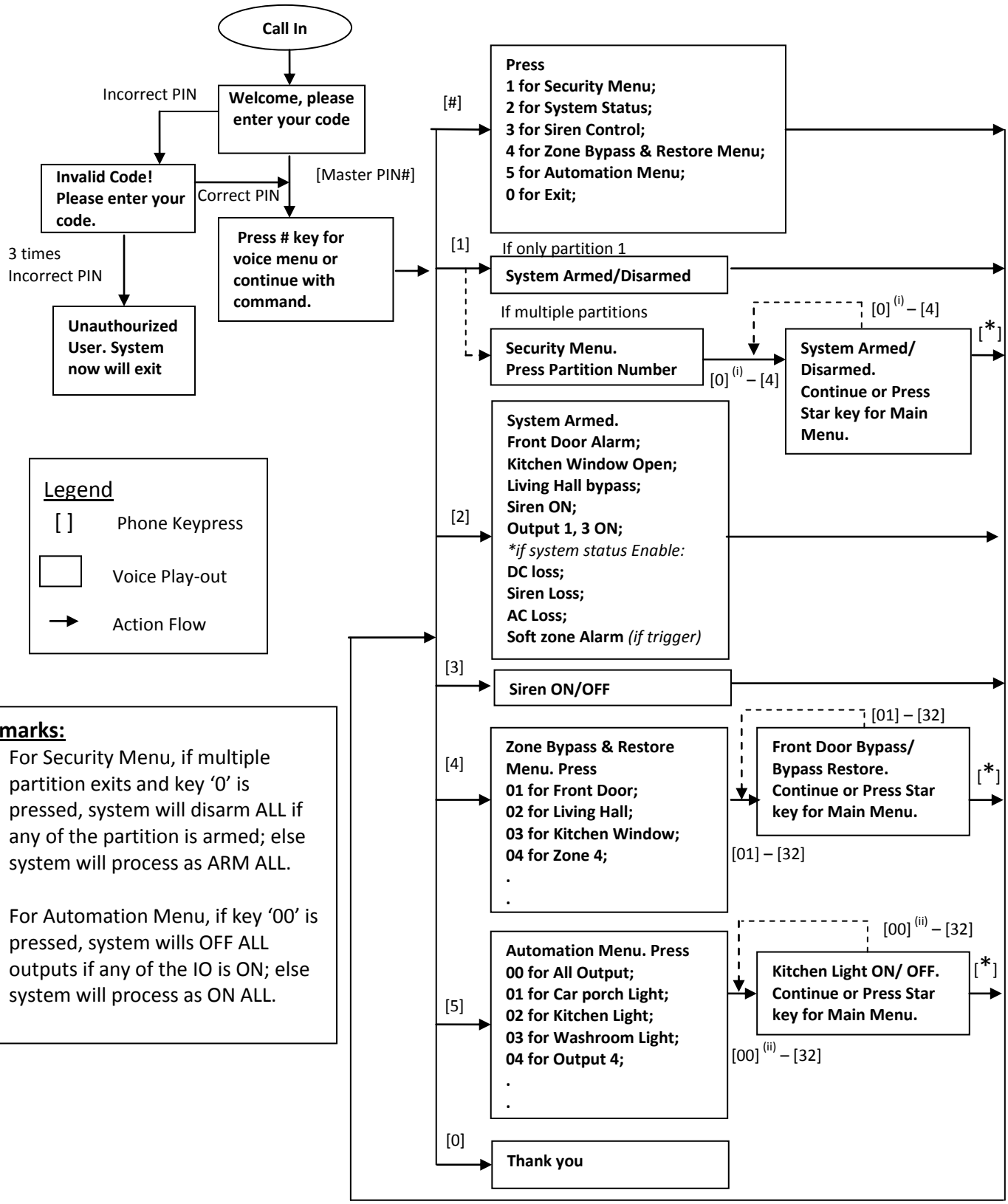


CHAPTER 5: SECURITY & AUTOMATION CONTROL THROUGH TELEPHONE

5.0 SYSTEM CONTROL THROUGH TELEPHONE

User also can control the alarm system and the home automation through the telephone. For system control by using telephone, there are two types of system interface. One is with voice guided interface (Main board with voice module) and secondly is with beepers guided interface (Main Board without voice module).

5.1 SYSTEM CONTROL WITH VOICE INTERFACE THROUGH CALL-IN

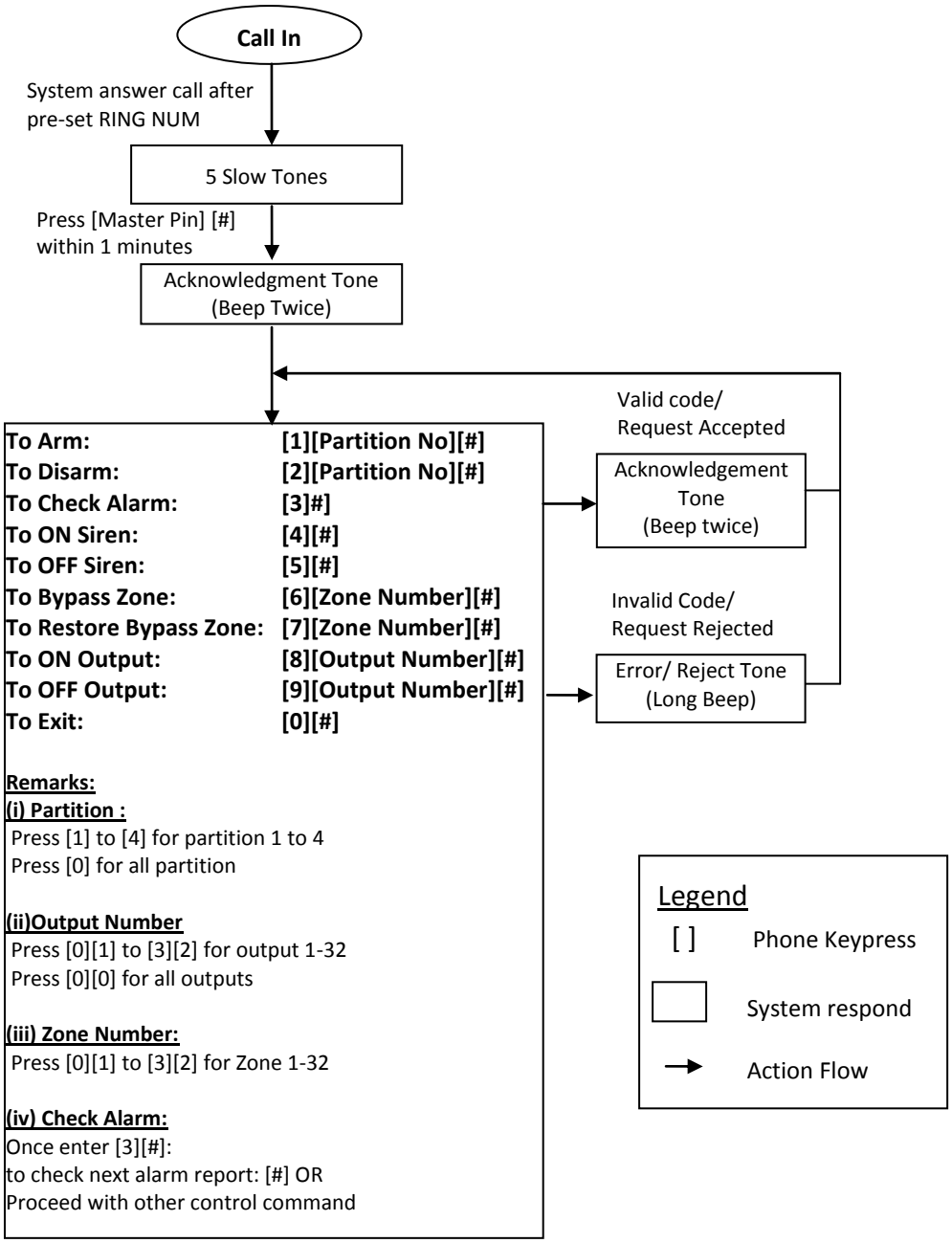


Remarks:

(i) For Security Menu, if multiple partition exits and key '0' is pressed, system will disarm ALL if any of the partition is armed; else system will process as ARM ALL.

(ii) For Automation Menu, if key '00' is pressed, system wills OFF ALL outputs if any of the IO is ON; else system will process as ON ALL.

5.2 SYSTEM CONTROL WITH BEEPER INTERFACE THROUGH CALL-IN



CHAPTER 6: WHEN THERE IS AN EMERGENCY

6.0 EMERGENCY ALARM

In order to access this function, the system must be in normal mode

COMMAND	INFORMATION
If there is a 'FIRE'  Press [*****] for 2 seconds	➢ Alarm will be triggered ➢ A message will be sent to the Central Monitoring Station (CMS) ➢ An alert tone or voice reporting will be sent through telephone
If there is a 'EMERGENCY'  Press [**0**] for 2 seconds	
If there is a 'PANIC'  Press [**#**] for 2 seconds	

6.1 DURESS ALARM (CALLING FOR HELP)

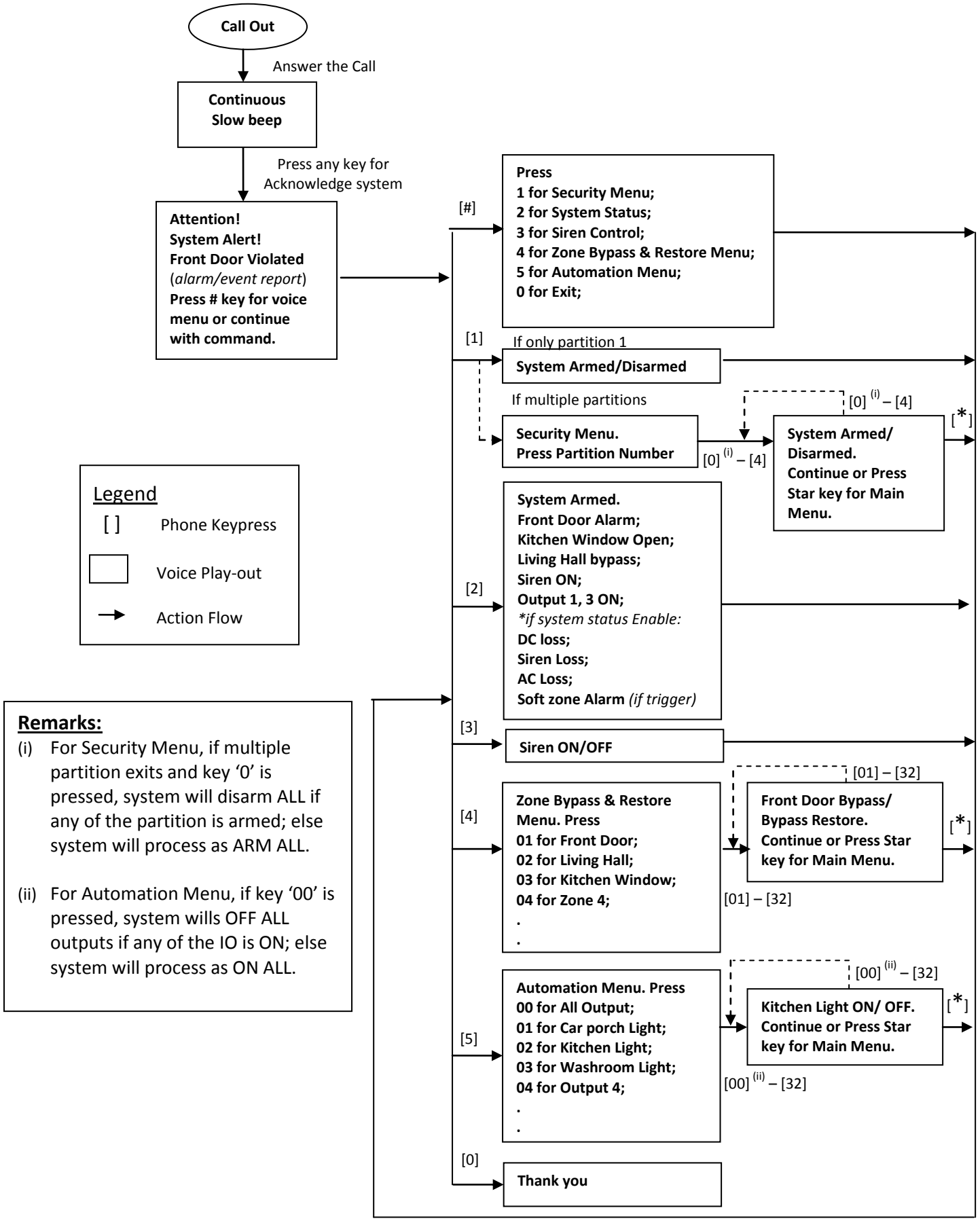
In the event where the user is forced by an intruder or robber to disarm the alarm system, user can disarm the alarm system by using Duress Code. By pressing Duress Code, user can access the menu to disarm the system. At the same time, a silent signal will be sent to any designated telephone number or central monitoring station (CMS) to call for help. (* Provided the system is connected to CMS). The siren and strobe will not be activated. To enter the duress menu, press [4 digit Duress Code] [#].

6.2 TELEPHONE ALERT TO USER

In case of any intrusion or emergency, this system will acknowledge users with an alarm report. The panel will contact the user through fixed telephone or mobile line. If the user is unable to reply the phone call, this system will call the user again. The default dialing attempts are 5 times. After 30 minutes, the system will call again. The number of repetition calls after 30 minutes depend on the redial attempt set in the installer programming. The reporting comes in two reporting interface – no voice or beeper interface reporting and voice interface reporting (if voice module is installed).
System will report the status of the system to user when an event happened accordingly to the list below:

Reporting / Zone indication	Description
Zone xx Violated	Zone has been violated
Zone xx Restored	Alarm in zone xx has been restored
Emergency	Emergency occurring
Fire	Fire occurring
Panic	Panic occurring
Help	Duress Code has been entered
AC Loss	AC loss
AC Restore	AC restored
Zone Bypass	Zone has been bypassed
Zone Bypass Restored	Zone has been restore from bypass
Tamper	Tamper occurring
System Armed	System has been armed
System Disarmed	System has been disarmed
Bell Loss	Bell loss
Bell Restored	Bell restored
DC Loss	Battery loss/ low battery
DC Restored	Battery restored.
System Reset	System has been re-power on.

6.2.1 SYSTEM CALL-OUT WITH VOICE INTERFACE

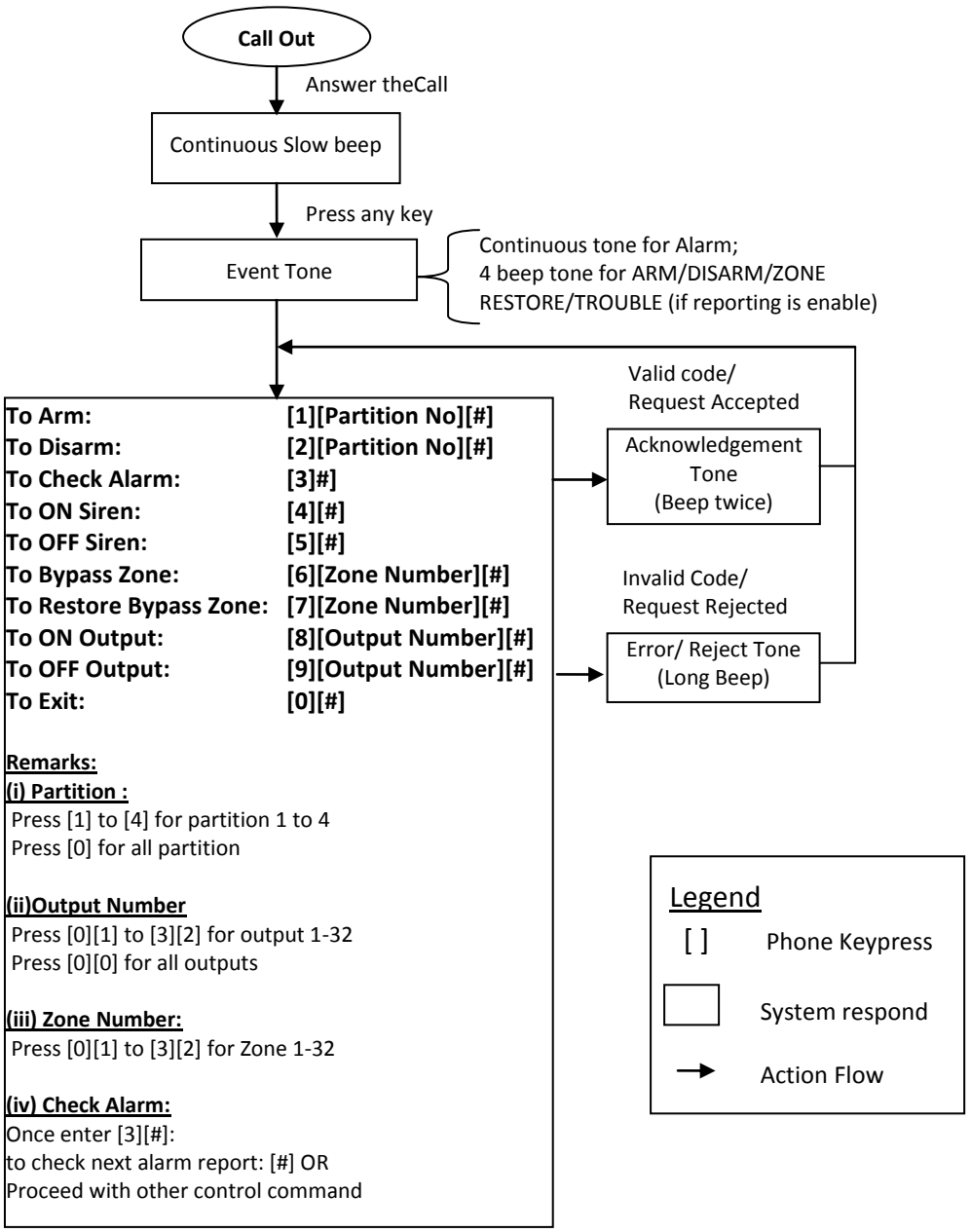


Remarks:

(i) For Security Menu, if multiple partition exits and key '0' is pressed, system will disarm ALL if any of the partition is armed; else system will process as ARM ALL.

(ii) For Automation Menu, if key '00' is pressed, system wills OFF ALL outputs if any of the IO is ON; else system will process as ON ALL.

6.2.2 SYSTEM CALL-OUT WITH BEEPER INTERFACE



For Alarm Report:

Zone	Beeper Reporting Format	Example	
Zone 1-9 Alarm	Normal beep base on zone number	Zone 2 alarm	Beep…Beep…
Zone 10-19 Alarm	Long beep once, follow by normal beep base on zone number	Zone 13 alarm	BEEP…….Beep…Beep…Beep…
Zone 20-29 Alarm	Long beep twice, follow by normal beep base on zone number	Zone 20 alarm	BEEP…….BEEP…….
Zone 30-32 Alarm	Long beep three times, follow by normal beep base on zone number	Zone 31 alarm	BEEP……BEEP…….BEEP……. beep…
Softzone & Tamper	Continuous 6 beep		

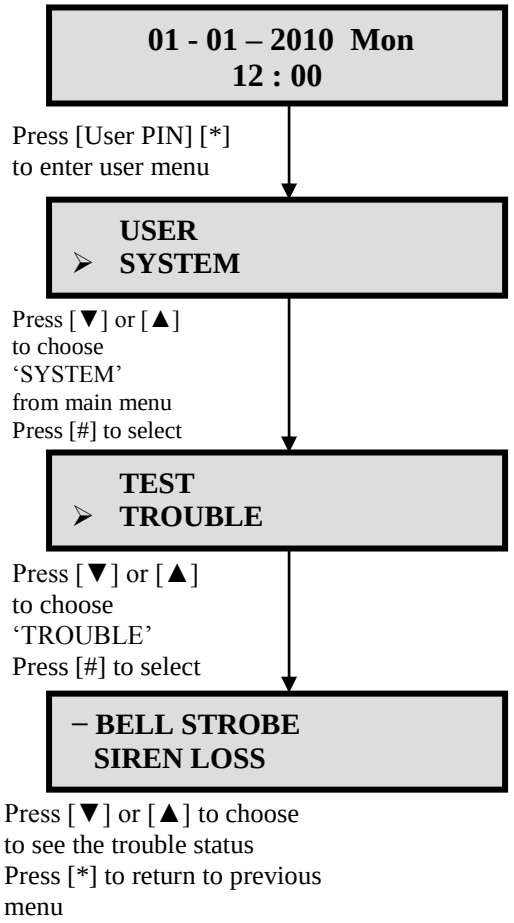
AX1 Telephony beeper reporting format

CHAPTER 7: SYSTEM CHECKING

7.0 TROUBLE

TROUBLE	CAUSES
DC Loss (Low Battery)	The Backup battery is weak or the backup battery not connected
Bell Strobe Siren Loss	Either bell, Strobe or Siren is loss.
External Communication Error	Unable to call out either due to no reply by user during reporting. Will be cleared when key "6" is press (clear alarm memory).
Internal Communication Error	Avan Touch keypad, IO Expander and Zone Expander cannot communicate with control panel due to main board or connection failure
AC Loss	No power supply detected
Phone Line Loss	No phone line connected to the system
Tamper	Tamper occurred and has not been cleared by alarm memory clear

7.0.1 TROUBLE VIEWING BY USING KEYPAD

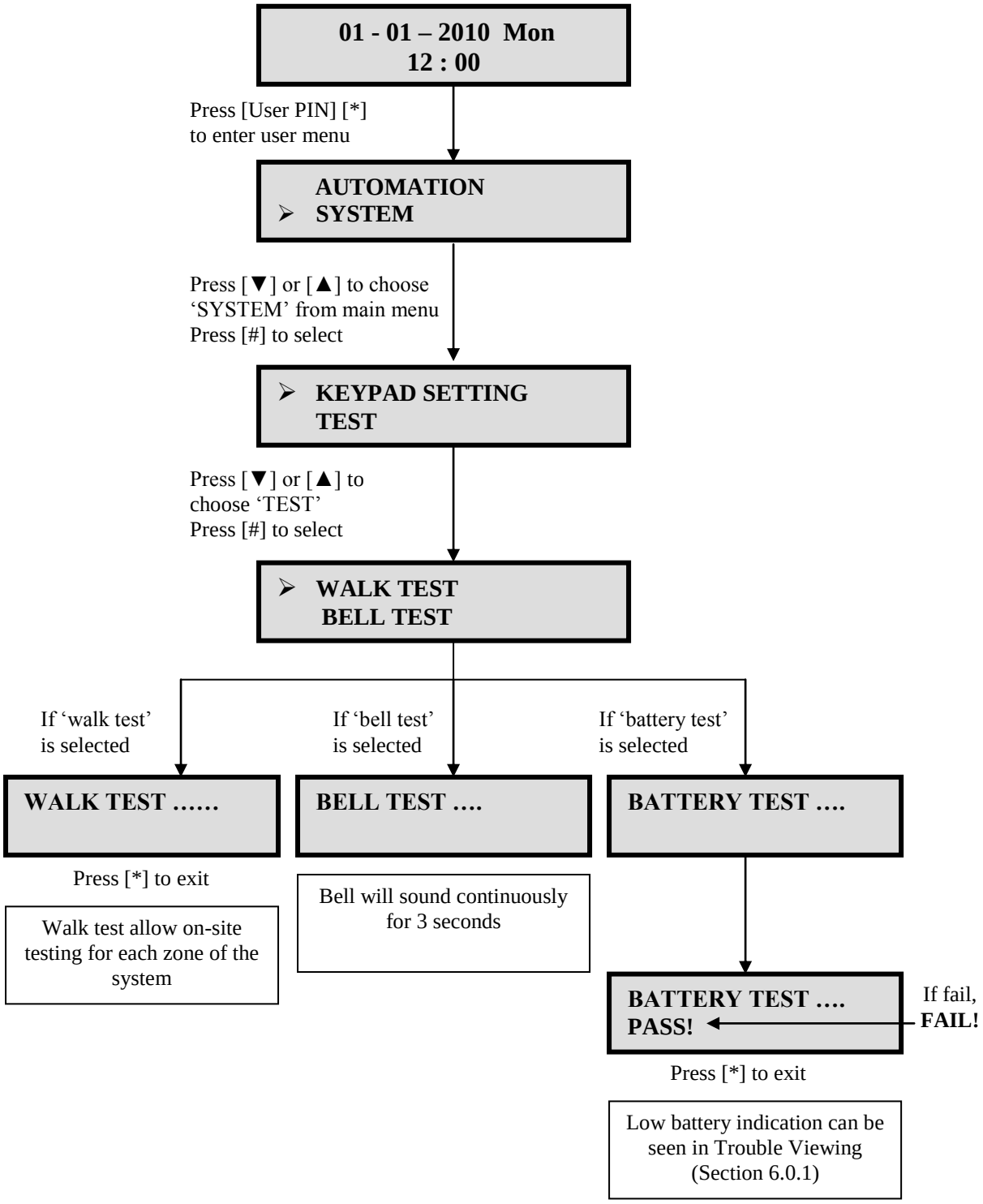


7.0.1.1 QUICK VIEW TROUBLE

COMMAND	INFORMATION
Press and hold the button **[8]** for 2 seconds	View trouble condition

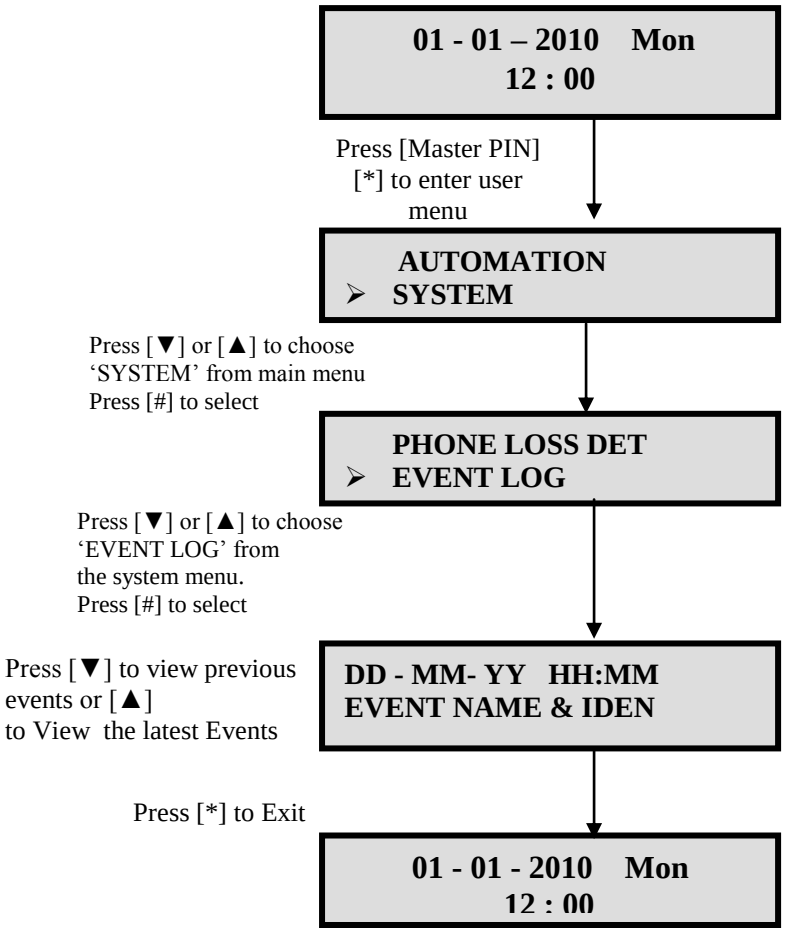
7.1 TESTING SYSTEM BY USING KEYPAD

Users are advised to test the system frequently. System must be tested at least once every three months. If the system is not functioning accordingly, please contact the nearest dealer for technical assistance.



7.2 EVENT LOG VIEWING

AX1 main panel able to store up to 1000 events, which include user's access and function used, alarm memory and trouble. Upon overflow of 1000 events, the latest event (event 1001) will replace the 1st event in the memory. The event log's data in AX1 main panel is inerasable due to security constraint. Master User is able to retrieve the full range of Event Log data by access to menu "EVENT LOG" under User menu as shown below:



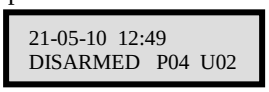
Description

[DD - MM- YY]
DD = date
MM = month
YY = year

[HH:MM]
HH: hour (24 hours format)
MM: muinute

[EVENT NAME & IDEN]
(Please refer to table 6.2.1.1 & 6.2.1.2)

Example:



LCD shows the event of User 2
Disarmed Partition 4 at 12:49, 21/5/10

7.2.1 Event Log Display Format

The event description contains data displayed in the following format :

DD - MM- YY HH:MM **EVENT NAME & IDEN**

DD	:	Date (01-31)
MM	:	Month (01-12)
YY	:	Year (00-99)

HH	:	Hour (00-23)
MM	:	Minutes (00-59)

The following are the description for the Event Name and the IDEN indication:

No	Event Name	Description
1	**ARMED**	System Armed
2	**DISARMED**	System Disarm
3	**ALARM**	Alarm Triggered
4	**ALARM-R**	Alarm Restore
5	**ALARM:EMERGENCY**	Emergency Alarm Triggered
6	**ALARM:PANIC**	Panic Alarm Triggered
7	**ALARM:FIRE**	Fire Alarm Triggered
8	**ALARM:TAMPER**	Tamper Alarm Triggered
9	**DURESS**	Duress code Entered
10	**PHONE LINE LOSS**	Phone Line Loss Alarm
11	**BYPASS**	Zone Bypass
12	**BYPASS-R**	Zone Bypass Restore
13	**AC LOSS**	AC Power Loss
14	**AC RESTORE**	AC Power Restore
15	**DC LOSS**	DC Power Loss
16	**DC RESTORE**	DC Power Restore
17	**BELL/ST/S LOSS**	Bell/Strobe/Siren Loss
15	**BELL/ST/S-R**	Bell/Strobe/Siren Restore
16	**SYSTEM POWER ON**	System Is Powered On
17	**ALARM CLEAR**	Alarm has been Cleared

Table 7.2.1.1: The Description of Event Name

No	IDEN	Description
1	**ALL**	All Partition
2	**P01 - P04**	Partition 1 - Partition 4
3	**P0N**	More than 1 selected Partitions
4	**Z01 – Z32**	Zone 1 - Zone 32
5	**U01 – U16**	User 1 - User 16 [**Master** (U01), **User** 2 to 12 (U02-U12) and **Guest** 1 to 4 (U13 - U16)]
6	**DUR**	Duress code
7	**FAS**	Fast key
8	**TMR**	Timer
9	**PHN**	Phone
10	**KSW**	Key switch

Table 7.2.1.2: The Description of IDEN indication

7.2.2 Event Log Example

* Date & Time for System re-power **ON** will always log to **default** value **[**01-01-10, 12:00**].**

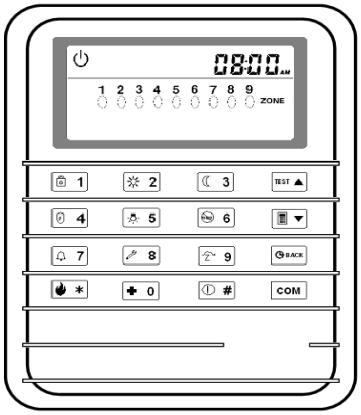
7.1.2.1 ARM PARTITION 1 BY MASTER USER (U01)

DD - MM- YY HH:MM **ARMED P01 U01**

7.2.2.2 BYPASS ZONE 10 THROUGH FAST KEY

DD - MM- YY HH:MM **BYPASS Z10 FAS**

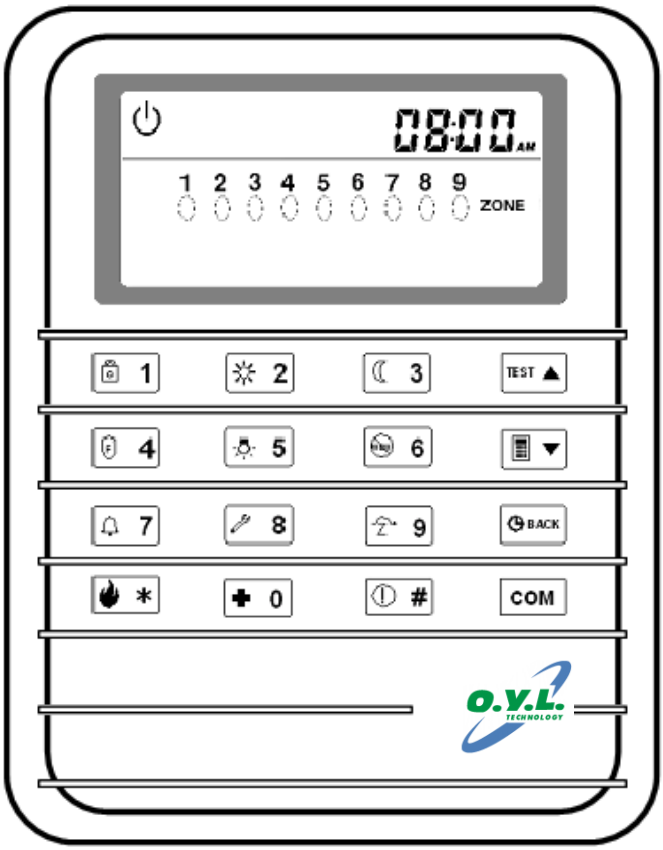
Ax1



ICON KEYPAD

USER MANUAL

ICON KEYPAD OUTLOOK



Key Indication

1 Auto-Home Arming	2 Day Arming	3 Night Arming	TEST Testing Mode
4 Force Arming	5 Home Automation	6 Clear Alarm Memory	Keypad Settings
7 Door Chime on/off	8 View Trouble	9 Zone Bypass Mode	BACK View Timer Mode
* Fire/ Cancel	0 Emergency	# Panic/ Enter	COM Command/ Memory

ARMING MODE

ARMING TYPE	ZONE STATUS	INFORMATION	WHEN TO USE
Auto home Arming	Normal Status	To arm the system with delay time in order for the user to exit the house To arm the system in delay time with the interior zone bypassed provided that the user does not leave the premises	When user leaves the house and no one is at home.
Day Arming	Normal Status	The perimeter zone is armed instantly while the user stays at home The interior zones are automatically bypassed	When user is at home.
Force Arming	Normal Status or Abnormal Status	To force arm the system instantly regardless of the zone status. The interior zones are not bypassed	When there are zone still open & user is at home.
Night Arming	Normal Status	The perimeter zone is armed instantly while user stays at home. The interior zones are automatically bypassed. The delay zones become instant zones.	When everyone come back to home & user want to sleep.

NOTE: Zone refers to the designated areas that are protected by the AX1 system. Zone status refers to the condition of the area. Normal status means door, window or detectors are in good/close condition. While abnormal status means the door/window may have been opened or the detector is not functioning.

SOUND INDICATION

Sound Indication	Description
Acceptance / Acknowledgement tone	2 fast beeps
Error tone	Continuous buzz for about 2 seconds
Entry delay	Continuous beep for the delay programmed by installer.
Exit delay	Continuous beep for the delay programmed by installer.
Door chime	1 Beep
Alarm	Chirp (1 second ON/ 4 seconds OFF) Pulse (2 seconds ON/ 2 seconds OFF) Continuous Tone Silent

LIGHT INDICATION

No	Light	Description	Action to be taken
1	Fast Flash	Indicates that the designated zone has been previously triggered by alarm	• Press 6 and hold for 2 seconds to clear the alarm.
2	On	Indicates that there are either faulty detectors or window/door are not properly closed	• Users have to check and close the windows/ door. • User can bypass the particular zone. Please refer to section 1.0.5

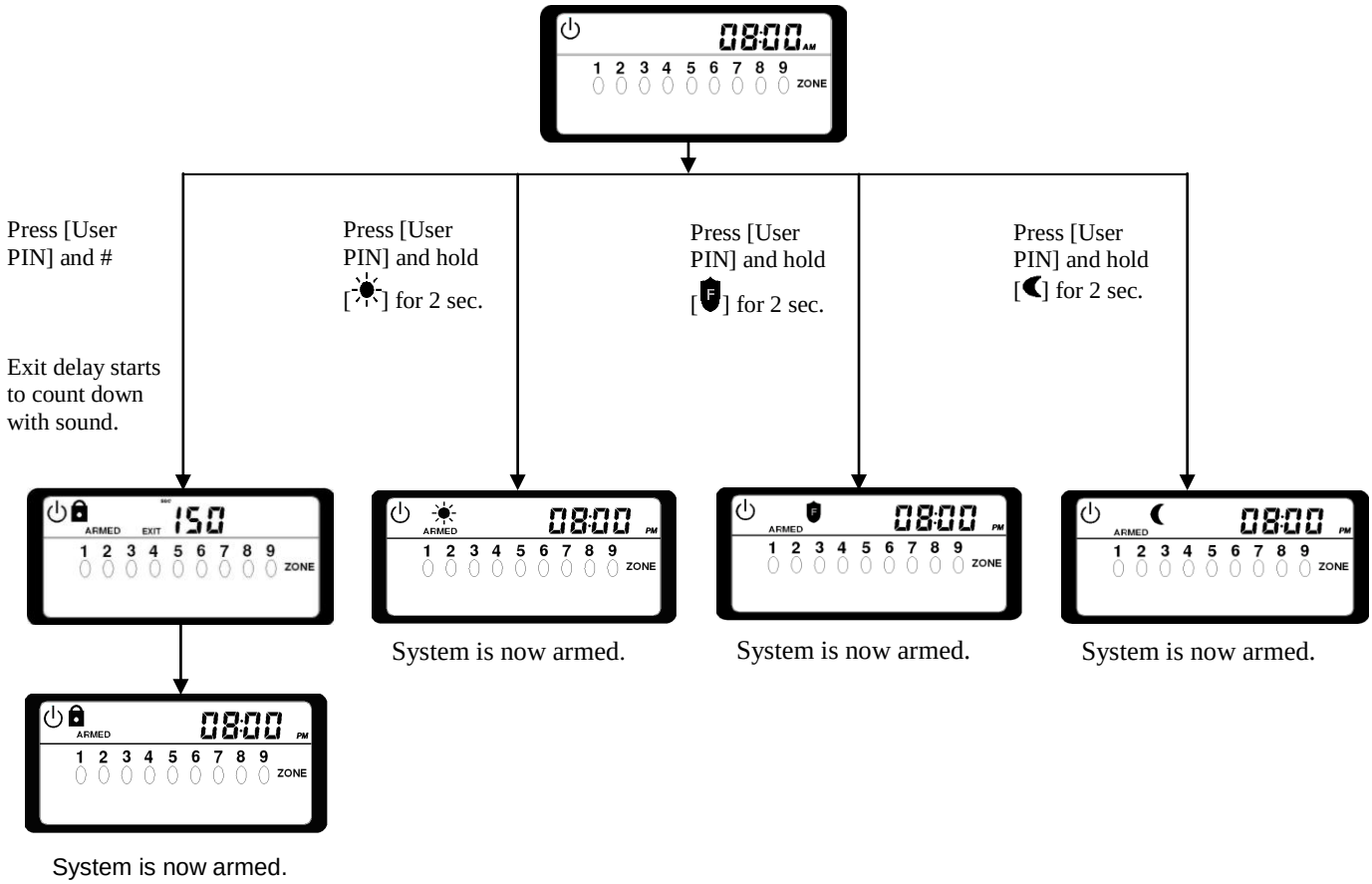
KEYPAD NAVIGATION KEY FUNCTION

Arrow Up - Scroll Up
Arrow Down - Scroll Down
BACK - Exit to previous menu
" # " Key - Enter
"* " Key - Exit

CHAPTER 1: ALARM SYSTEM CONTROL

1.0 ALARM SYSTEM CONTROL USING ICON KEYPAD

1.0.1 ARMING

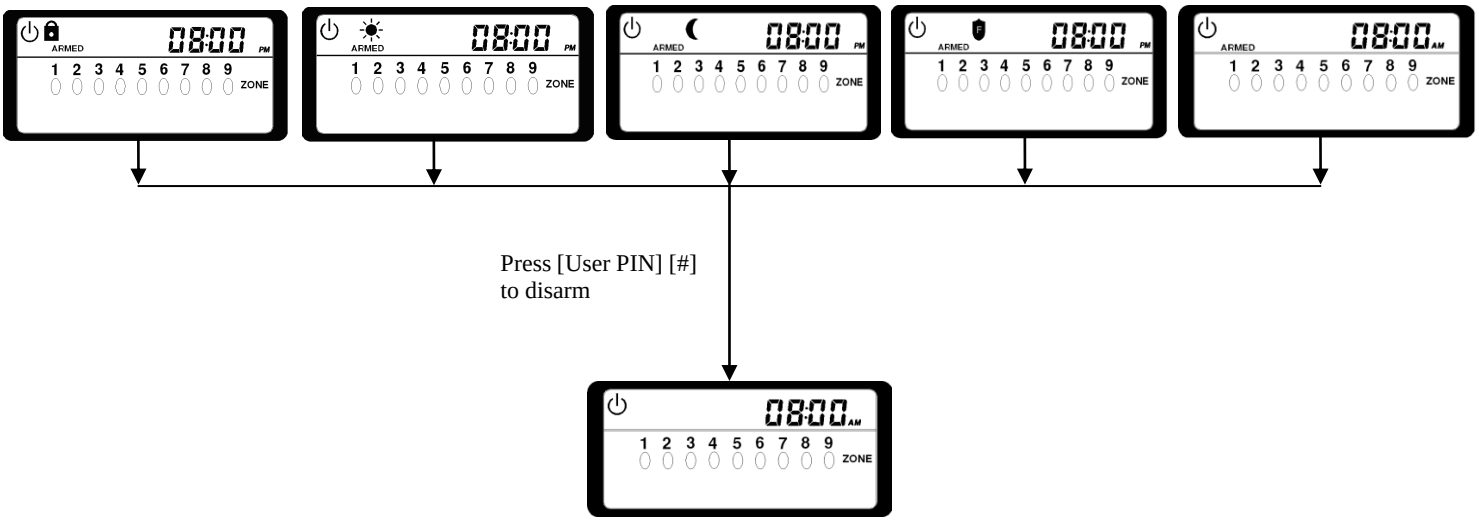


1.0.1.1 QUICK ARMING

Command	Information
Press and hold the button [🔒] for 2 seconds	Auto Home Arming
Press and hold the button [☀] for 2 seconds	Day Arming
Press and hold the button [☾] for 2 seconds	Night Arming
Press and hold the button [F] for 2 seconds	Force Arming

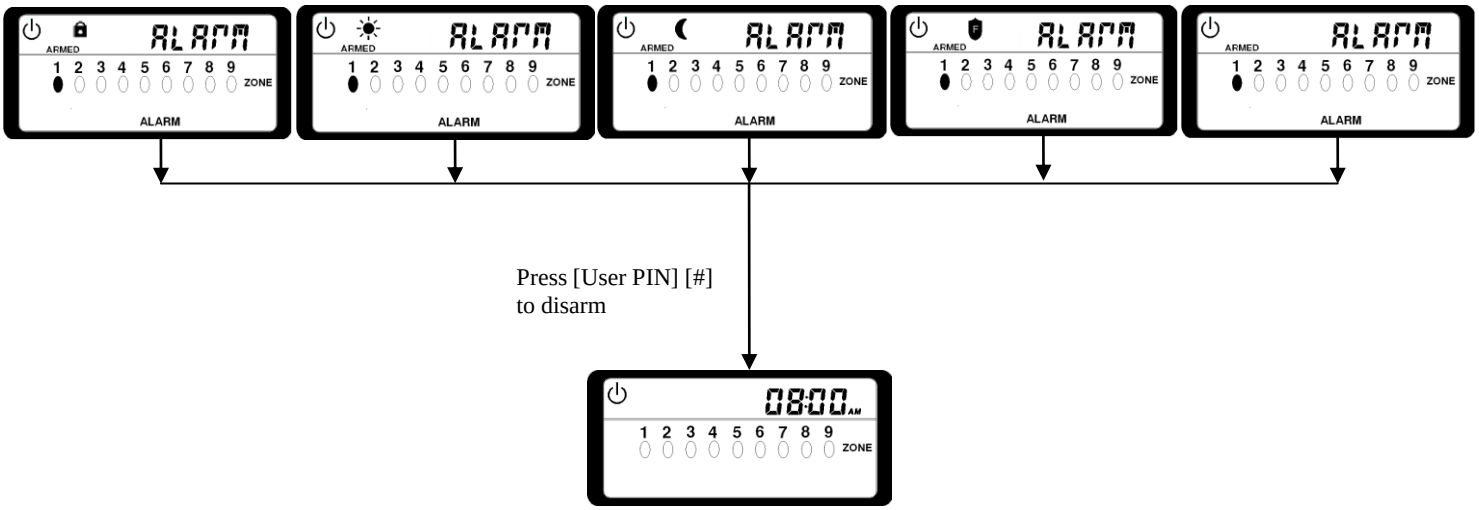
1.0.2 DISARMING

1.0.2.1 IN ARMED MODE



System is now disarmed

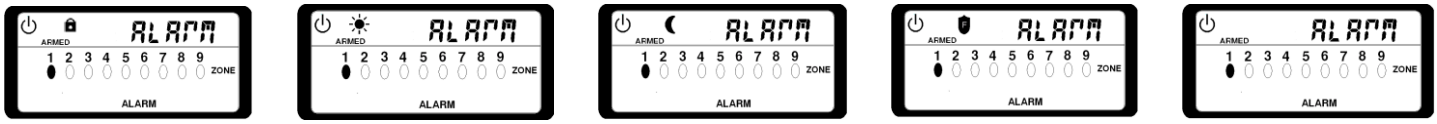
1.0.2.2 IN ALARM MODE



System is now disarmed

1.0.3 ALARM REPORT

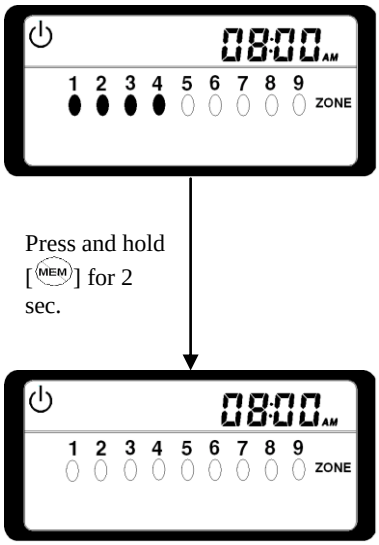
When alarm occurs, the strobe lights and the bells will be turned on. If the system is disarmed, it could only turn off the bell but not the strobe light. Screen will be displayed as below based on the arming type. Fast flashes indicate that the designated zone has been triggered by alarm.



During the state of alarm, only PIN entry is allowed. In other words, only DISARM is allowed.

1.0.4 CLEAR ALARM MEMORY

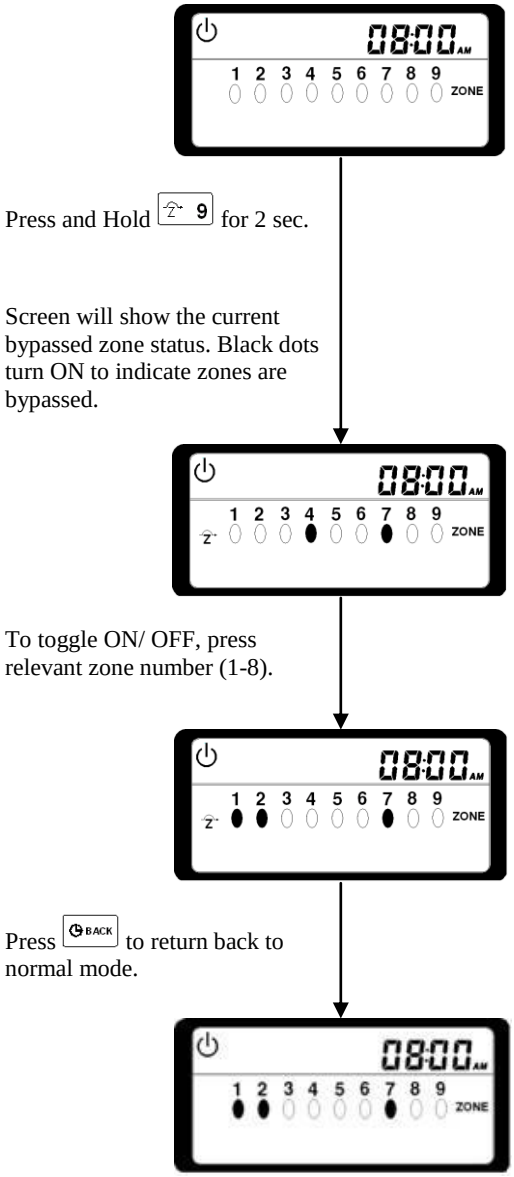
When alarm occurs, the strobe lights and the bells will be turned on. If the system is disarmed, it could only turn off the bell but not the strobe light. Thus, the user needs to clear the alarm memory to turn off the strobe light. Besides that, once the alarm memory is cleared, the auxiliary power supply 1 will be reset for 3 seconds before restoring it again.



Alarm Cleared

1.0.5 BYPASSING ZONE

Bypassing a zone means removal of one or more protection zones from the system. In order to perform bypassing, the system must be in normal mode. Once the system is disarmed, the entire zone will be unbypassed.



1.0.5.1 QUICK BYPASSING ZONE

Command	Information
Press and hold 9 for 2 seconds	Bypassing zone

CHAPTER 2: HOME AUTOMATION CONTROL

2.0 INTRODUCTION

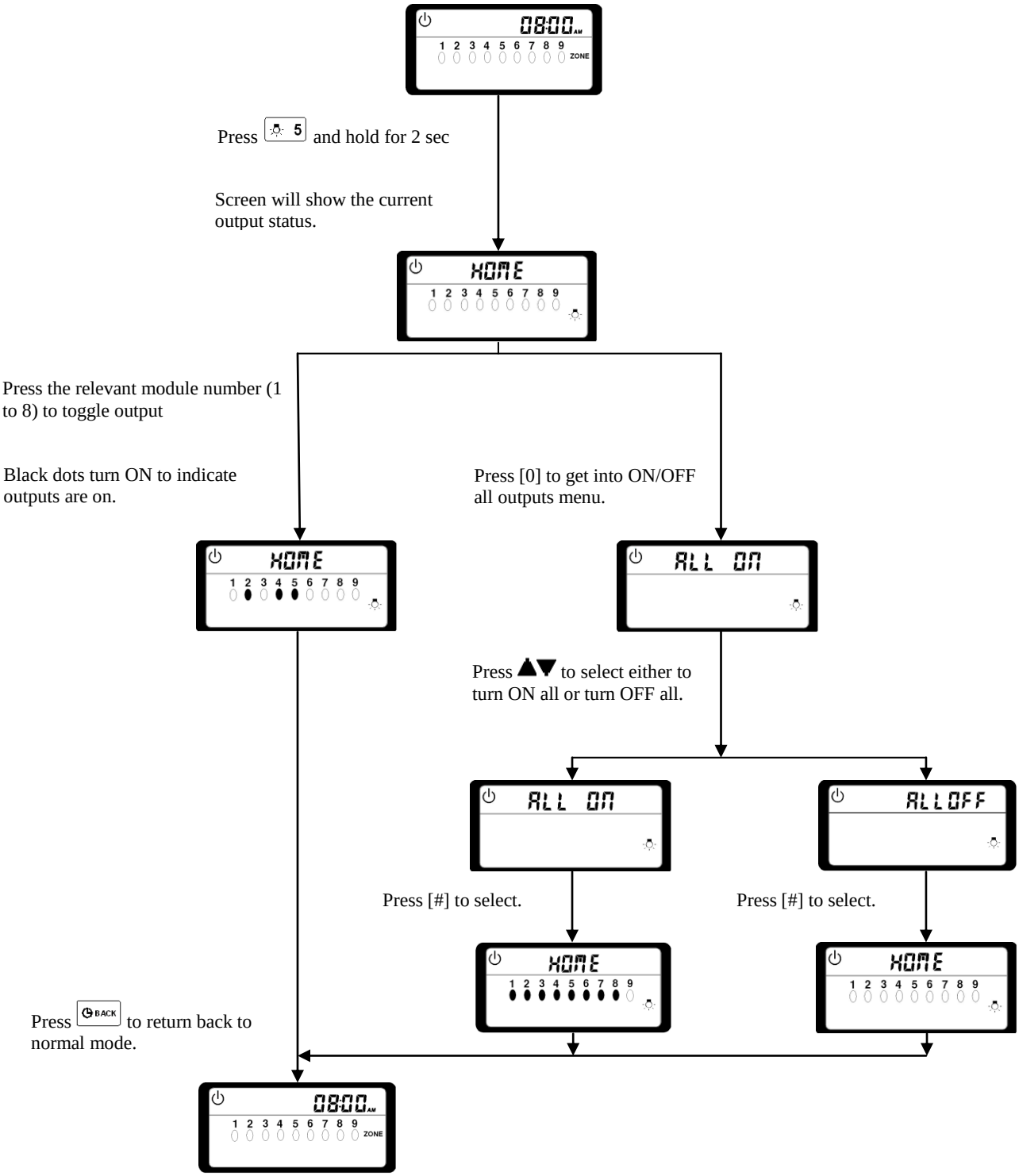
The system can support up to 8 outputs and can be controlled during system in normal and armed state only. The outputs can be electrical appliances such as air-conditioners, fans or lights. The outputs can be configured as event-triggered outputs or normal outputs which are controlled either by ICON keypad, real time clock timer or telephone remote control.

Recommended air conditioner with memory backup or last state memory in Malaysia is as below:

- Wall Mounted Split Air Conditioner (Brand : Acson)
  Model: AWM101 – (1.0 HP)
  AWM151 – (1.5 HP)
  AWM201 – (2.0 HP)
  AWM251 – (2.5 HP)
  AWM301 – (3.0 HP)

- Ceiling Cassette Split Air Conditioner (Brand : Acson)
  Model: ACK15B – (1.5 HP)
  ACK20B – (2.0 HP)
  ACK25B – (2.5 HP)
  ACK30B – (3.0 HP)

2.1 AUTOMATION CONTROL USING ICON KEYPAD

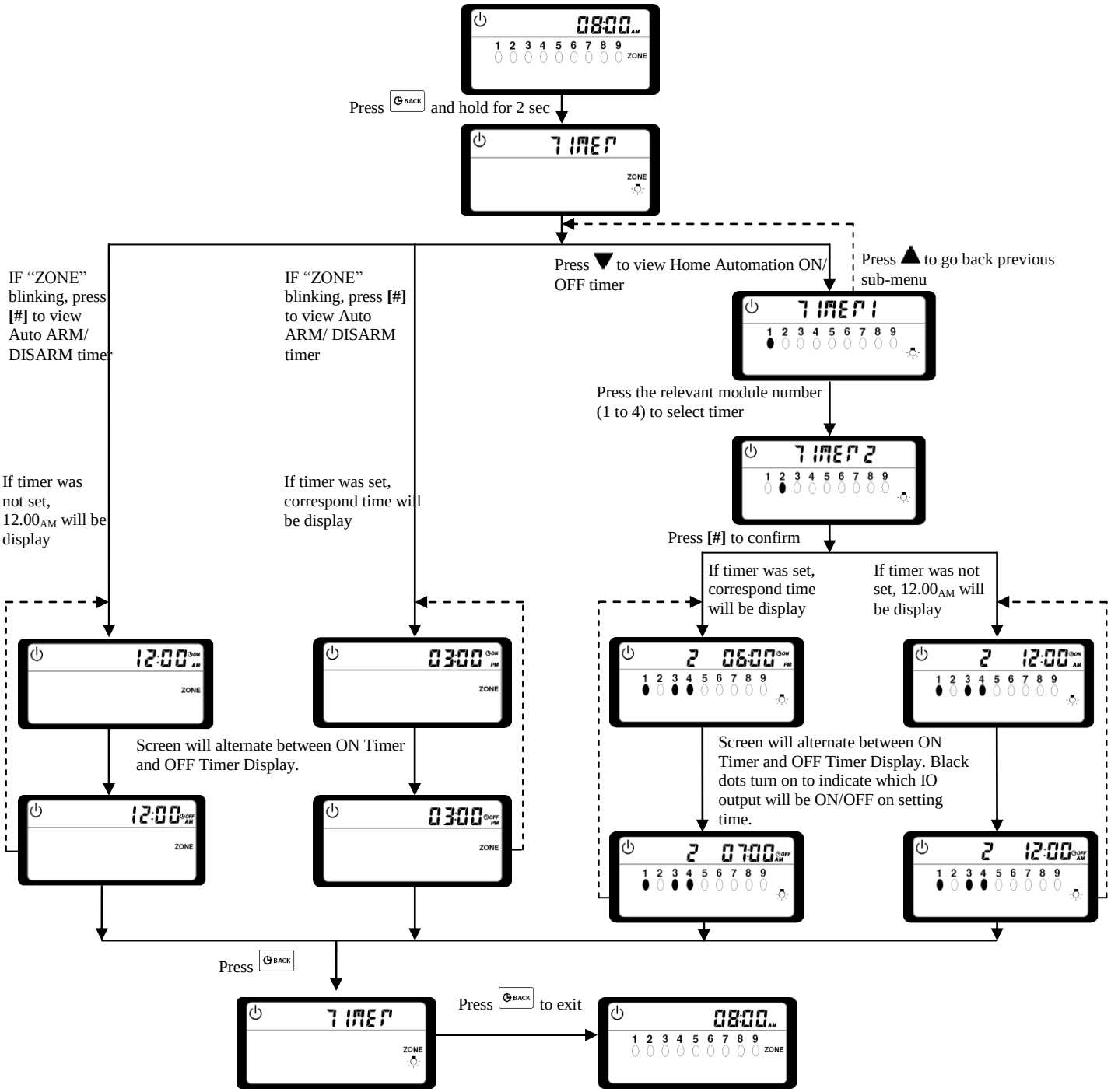


Note:

- When “ALL ON" is displayed, press the ▼ button to select “ALL OFF”.
- Press the ▲ button to view “ALL ON” again.
- Pressing ▲ while display shows “ALL ON” or pressing ▼ while display shows “ALL OFF” will result in error tone.
- If system does not connect to any output, indicator light will show “ON” (black dot).

CHAPTER 3: VIEW TIMER MODE

This feature enable user to view the timer that has been set earlier for Home Automation ON/ OFF and also Auto ARM/ DISARM



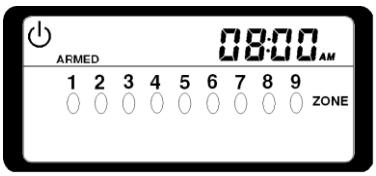
Note:

- Pressing ▲ while in "ZONE" is flashing or pressing ▼ while icon is flashing will result in error tone.
- Timer will be displayed in a 12 hour format. If timer was not set, 12.00_{AM} will be display.
- For Home Automation ON/ OFF timer, IO output status can only be shown after the intaller setting (refer installer manual: command [80] – Timer Trigger I/O Module Output)

CHAPTER 4: USER PROGRAMMING

Only user who has Master PIN can access to user programming mode. If there's any mistake made while programming or if the control panel rejects the command, keypad will sound an error tone and user has to re-enter the command again. There are 10 menus in user programming

- Edit Master PIN, User PIN and Guest PIN
  - Master user can edit their existing Master PIN from this menu.
  - User can edit or delete their existing PIN or create new PIN for other users from this menu.
  - User can edit their access level from this menu.
  - Guest can edit or delete their existing PIN from this menu.
  - Guest can edit their access level and guest hour from this menu.
  - The guest PIN is only valid when the guest time has not expired.
  - User 1 – Master PIN, User 2 to 7 – User PIN, User 8 – Guest PIN
  - Same PIN cannot be repeated to different user or guest.
  - PINs can be set to 4 to 6 digits.
- Edit Duress Code
  - User can edit or delete their existing duress code from this menu.
  - **CODE must be set in 4 digit, else error tone sound.**
- Edit IO Module ON Timer
  - This feature is to set the timer to turn ON the outputs automatically.
  - Timer set must be in a 12 hour format.
  - The system support 4 IO timers, so user can set 4 different time to turn ON the outputs.
  - If IO ON setting time reach, and arming accepted, keypad will show:



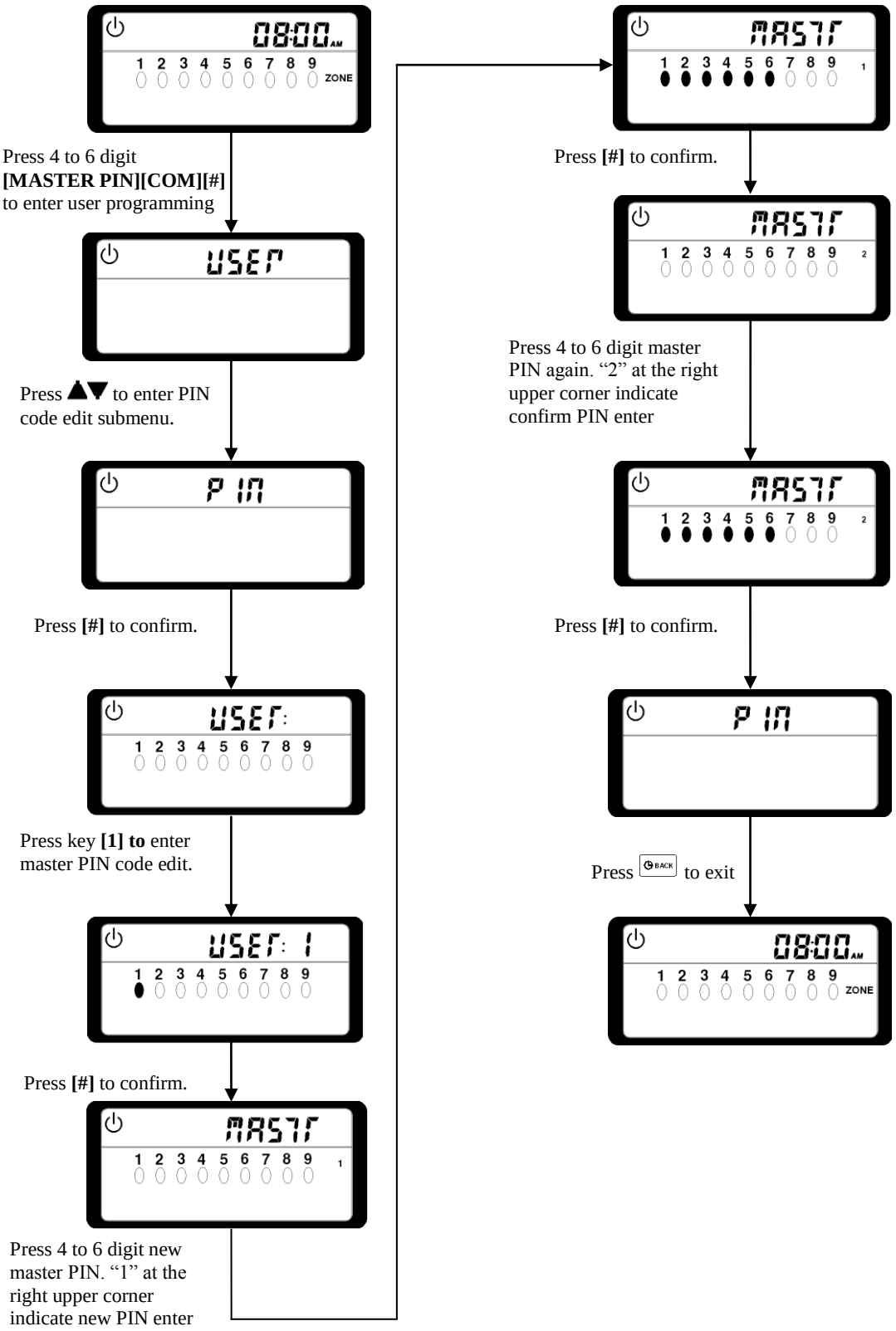
- Edit IO Module OFF Timer
  - This feature is to set the timer to turn OFF the outputs automatically.
  - Timer set must be in a 12 hour format.
  - The system support 4 IO timers, so user can set 4 different time to turn OFF the outputs.
- Edit Real Time Clock
  - User can edit the real time clock from this menu.
  - Time set must be in a 12 hour format.

- Edit Auto Arm Timer
  - This feature enable user to set timer to auto Arm the system.
  - Time set must be in a 12 hour format.
- Edit Auto Disarm Timer
  - This feature enable user to set timer to auto Disarm the system.
  - Time set must be in a 12 hour format.
- Installer Access
  - Enabling or disabling the installer access.
  - Installer access will be disabling automatically every 3 hours.
- Fast Key Access
  - Enabling or disabling the fast key access.
- Phone Line Loss Detection
  - Enabling or disabling the Phone Line loss Detection.
- PC COM
  - Enabling or disabling the PC Communication.

User can press ▲▼ to scroll up and down to view the menu. To enter submenu, scroll until desired menu and press **[#]**. The 10 submenus are in loop so scrolling down all the way will bring you back to the first menu again. The opening screen with words “USER” will not be displayed again.

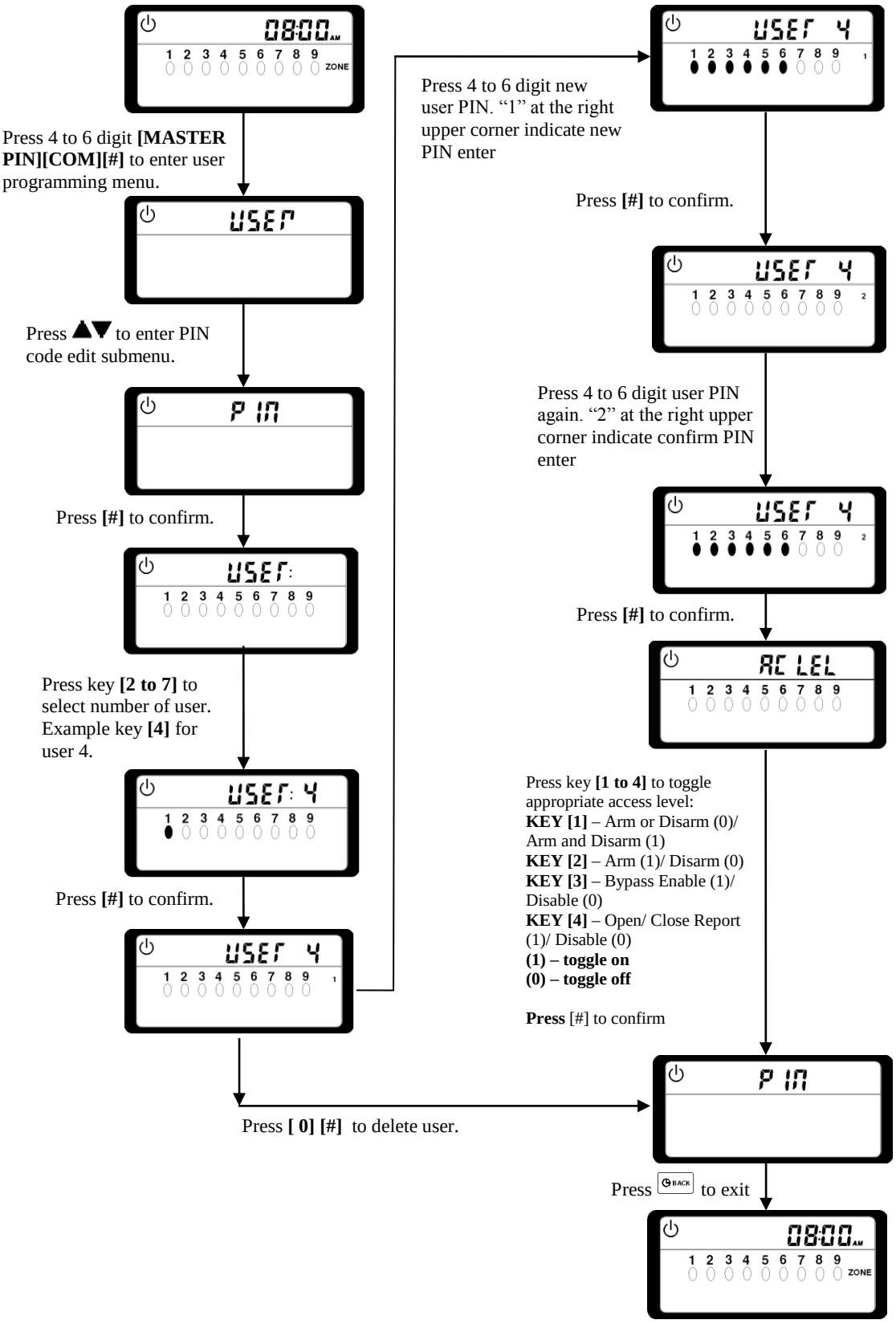
4.0 USER SETTING EDIT

4.0.1 MASTER USER

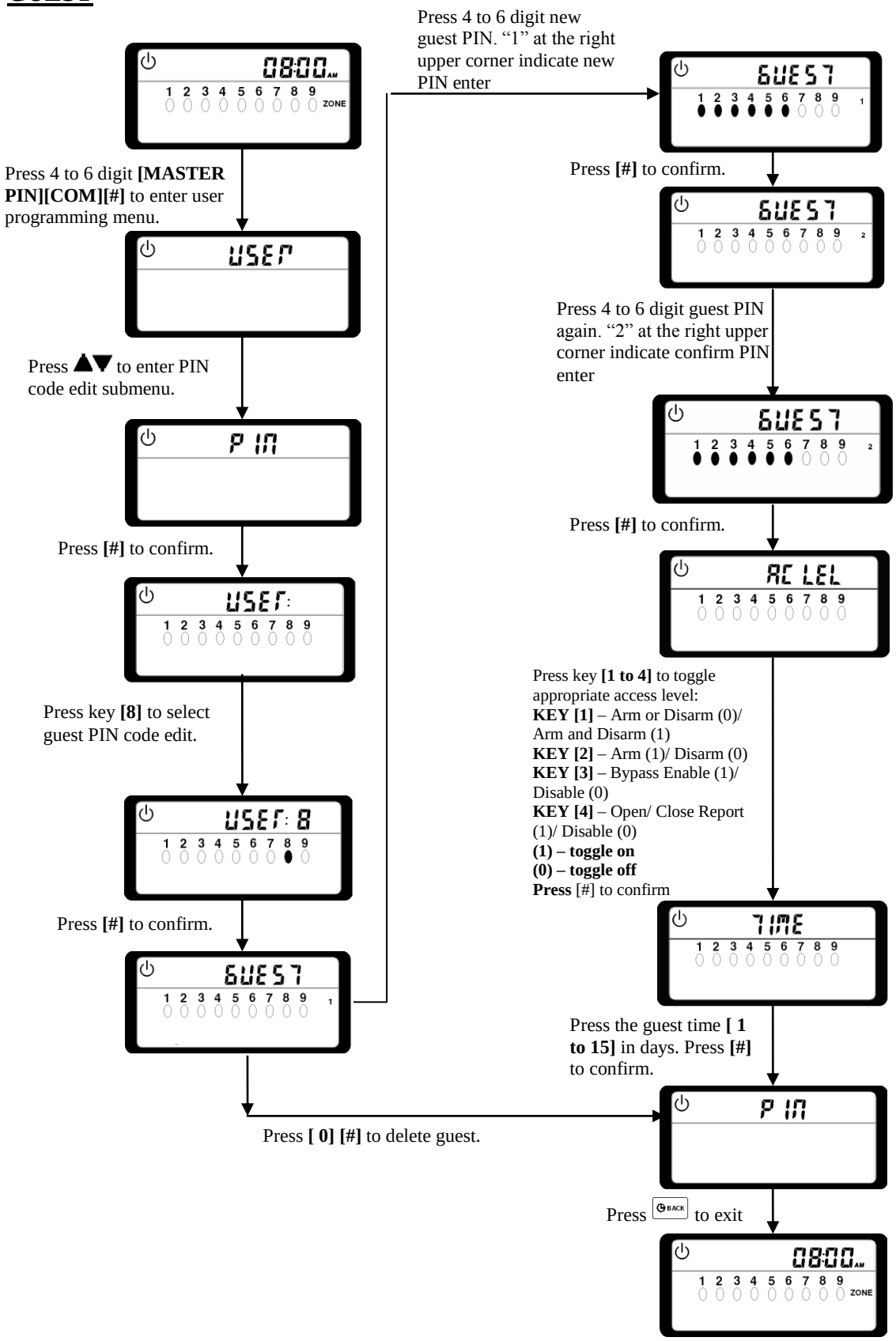


- Pin "000000" is not allowed to be used as password.

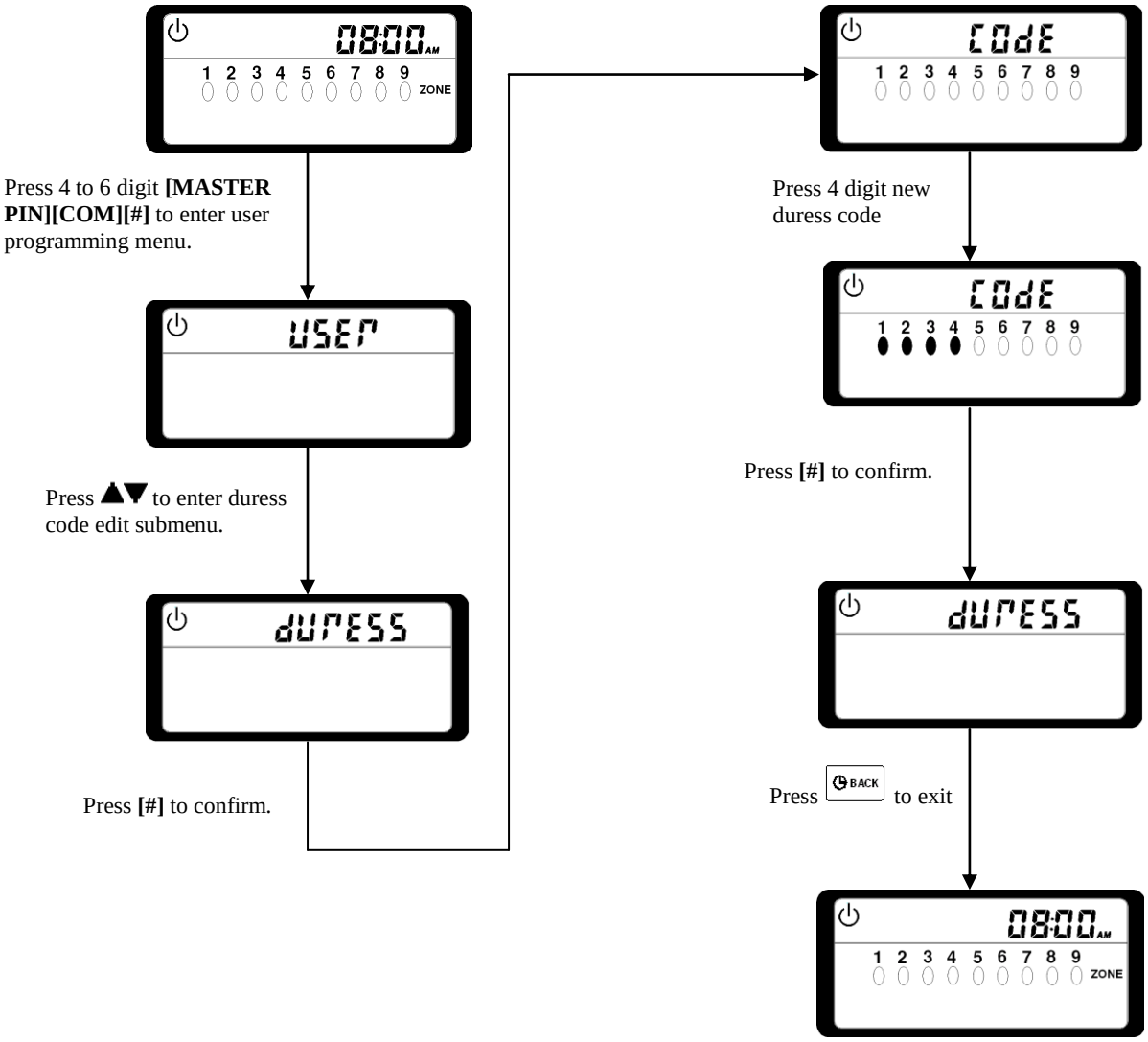
4.0.2 USER


08:00
1 2 3 4 5 6 7 8 9
ZONE
Press 4 to 6 digit [MASTER PIN][COM][#] to enter user programming menu.
USER
Press ▲▼ to enter PIN code edit submenu.
PIN
Press [#] to confirm.
USER:
Press key [2 to 7] to select number of user. Example key [4] for user 4.
USER: 4
Press [#] to confirm.
USER 4
Press 4 to 6 digit new user PIN. "1" at the right upper corner indicate new PIN enter
USER 4
Press [#] to confirm.
USER 4
Press 4 to 6 digit user PIN again. "2" at the right upper corner indicate confirm PIN enter
USER 4
Press [#] to confirm.
ACCESS LEVEL
Press key [1 to 4] to toggle appropriate access level:
KEY [1] – Arm or Disarm (0)/ Arm and Disarm (1)
KEY [2] – Arm (1)/ Disarm (0)
KEY [3] – Bypass Enable (1)/ Disable (0)
KEY [4] – Open/ Close Report (1)/ Disable (0)
(1) – toggle on
(0) – toggle off
Press [#] to confirm
Press [0] [#] to delete user.
PIN
Press BACK to exit
08:00
1 2 3 4 5 6 7 8 9
ZONE

4.0.3 GUEST


08:00
1 2 3 4 5 6 7 8 9 ZONE
Press 4 to 6 digit [MASTER PIN][COM][#] to enter user programming menu.
USER
Press ▲▼ to enter PIN code edit submenu.
PIN
Press [#] to confirm.
USER:
1 2 3 4 5 6 7 8 9
Press key [8] to select guest PIN code edit.
USER:8
Press [#] to confirm.
GUEST
1 2 3 4 5 6 7 8 9 1
Press 4 to 6 digit new guest PIN. "1" at the right upper corner indicate new PIN enter
Press [#] to confirm.
Press 4 to 6 digit guest PIN again. "2" at the right upper corner indicate confirm PIN enter
Press [#] to confirm.
ACCEL
Press key [1 to 4] to toggle appropriate access level:
KEY [1] – Arm or Disarm (0)/ Arm and Disarm (1)
KEY [2] – Arm (1)/ Disarm (0)
KEY [3] – Bypass Enable (1)/ Disable (0)
KEY [4] – Open/ Close Report (1)/ Disable (0)
(1) – toggle on
(0) – toggle off
Press [#] to confirm
TIME
Press the guest time [1 to 15] in days. Press [#] to confirm.
Press [0] [#] to delete guest.
Press BACK to exit

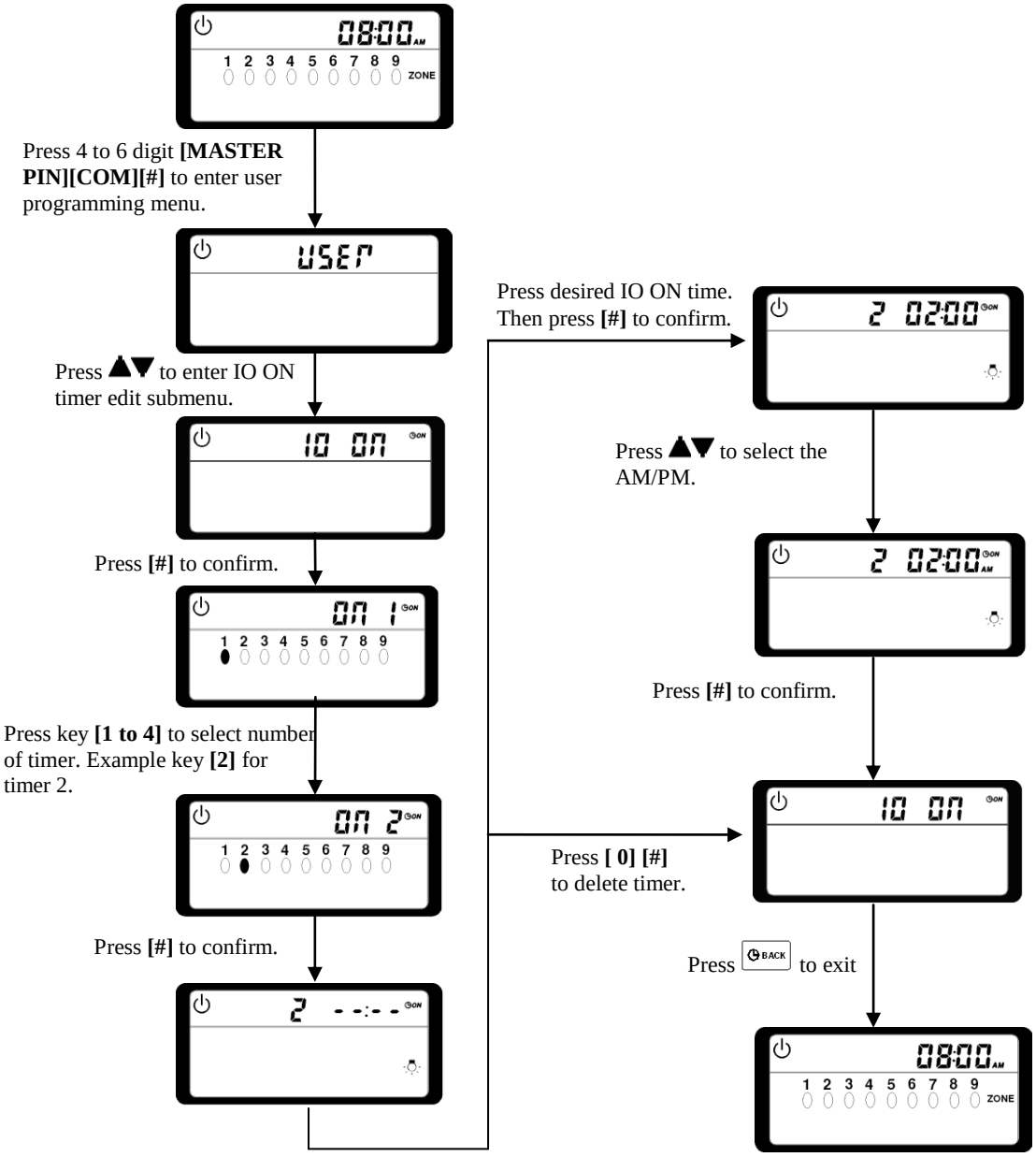
4.0.4 DURESS



- DURESS code default value: "**2222**"

4.0.5 TIMER

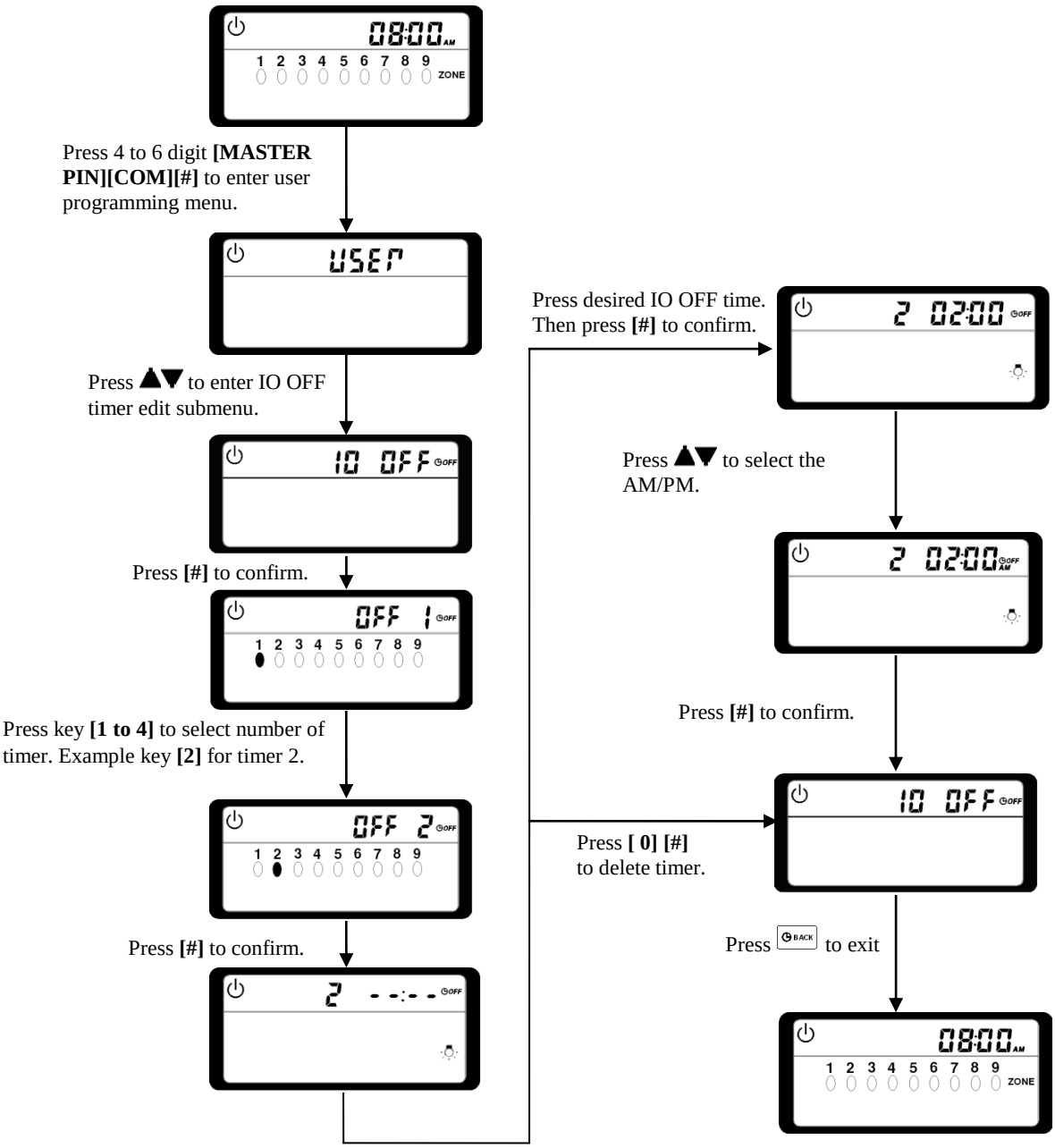
4.0.5.1 IO ON



Note:

- Only 12 hour format time can be entered.
  e.g. 04:59 → accepted 12:00 → accepted
  04:69 →rejected 13:00 → rejected
  Initially "--:--"will be shown, once first number is pressed, it will appear on the left most position and the other 3 positions will be displayed as dashes. e.g. "2 -:--"
- Unacceptable numbers will result in an error tone and display will show "--:--".
- Wrong entered number can be erased by pressing [*] and display will return back to "--:--".
- After enter the time, "AMPM" will appear but "AM" will start flashing. The one selected will be flashing.
- Pressing ▲ while in "AM" is flashing or pressing ▼ while "PM" is flashing will result in error tone.
- The IO ON setting time can be view from "View Timer Mode" (refer section chapter 3)

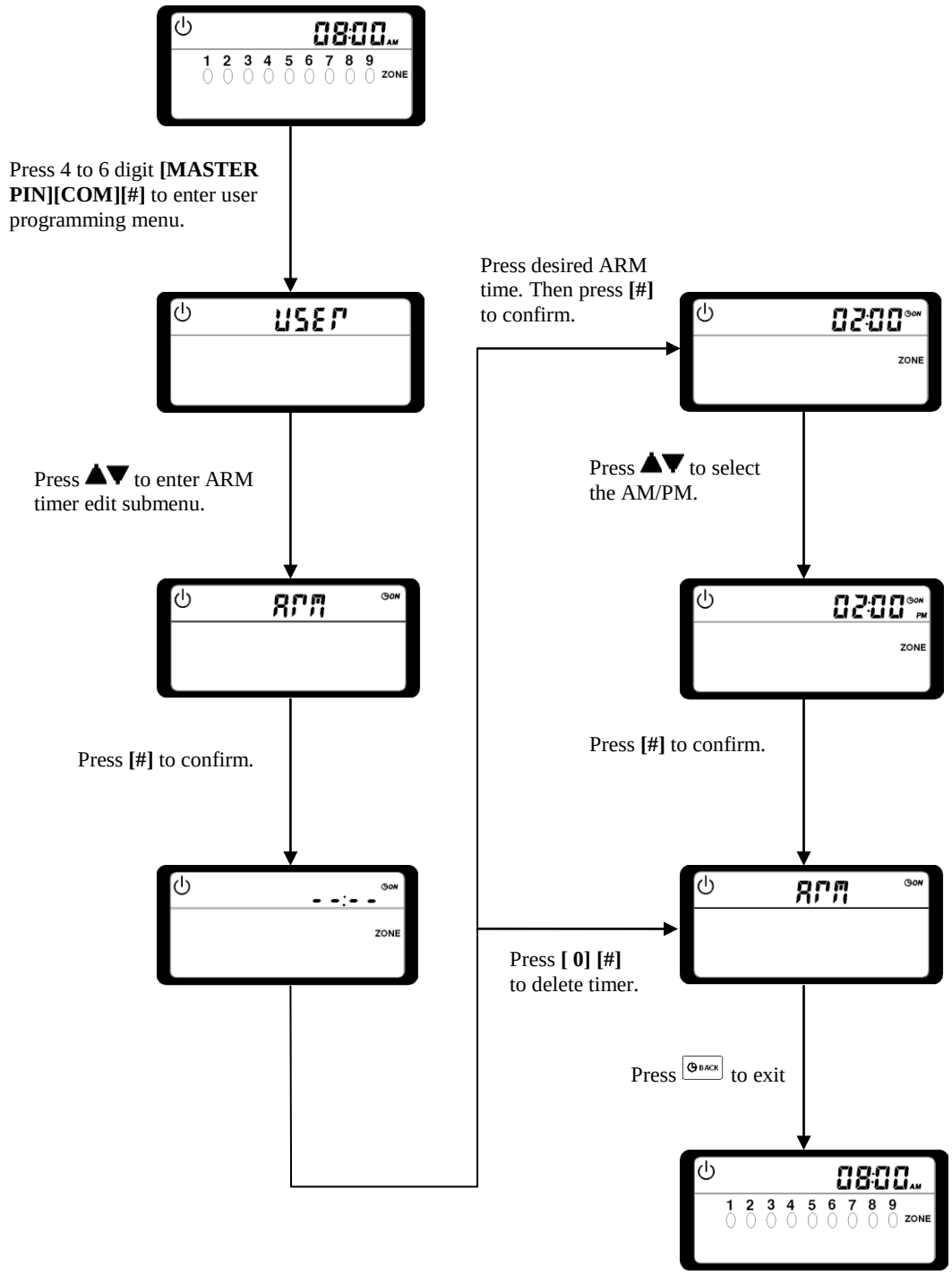
4.0.5.2 IO OFF



Note:

- Same time entry rules as the IO ON timer editing.

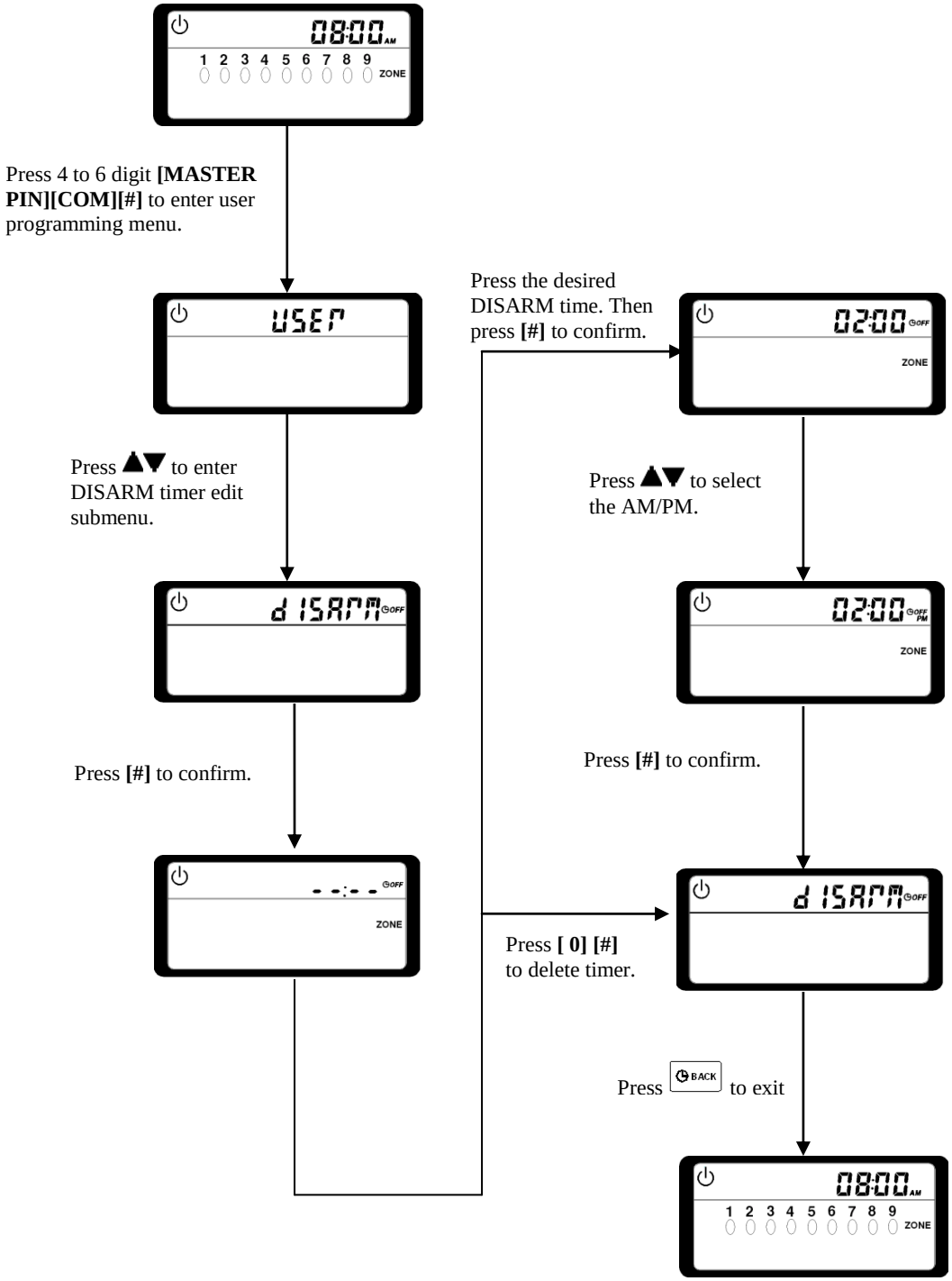
4.0.5.3 ARM



Note:

- Same time entry rules as the IO ON timer editing.

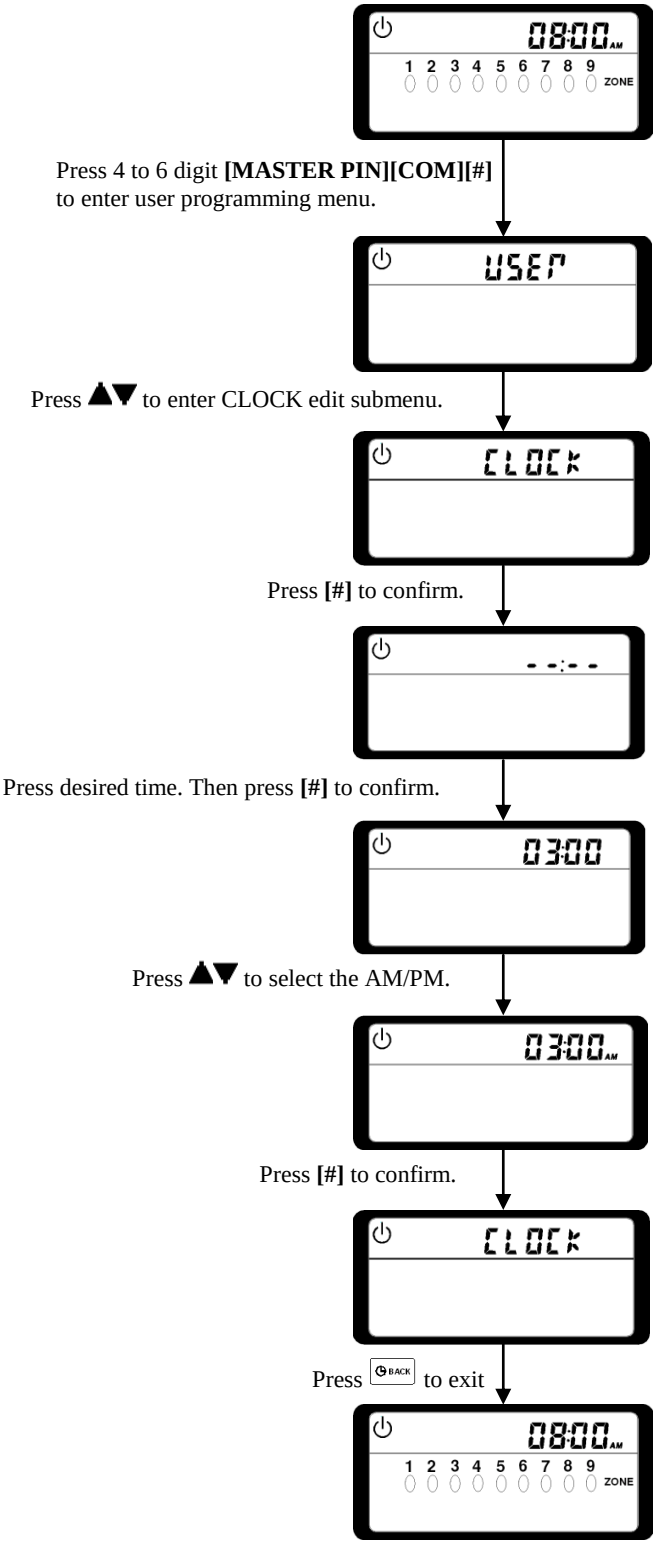
4.0.5.4 DISARM



Note:

- Same time entry rules as the IO ON timer editing.

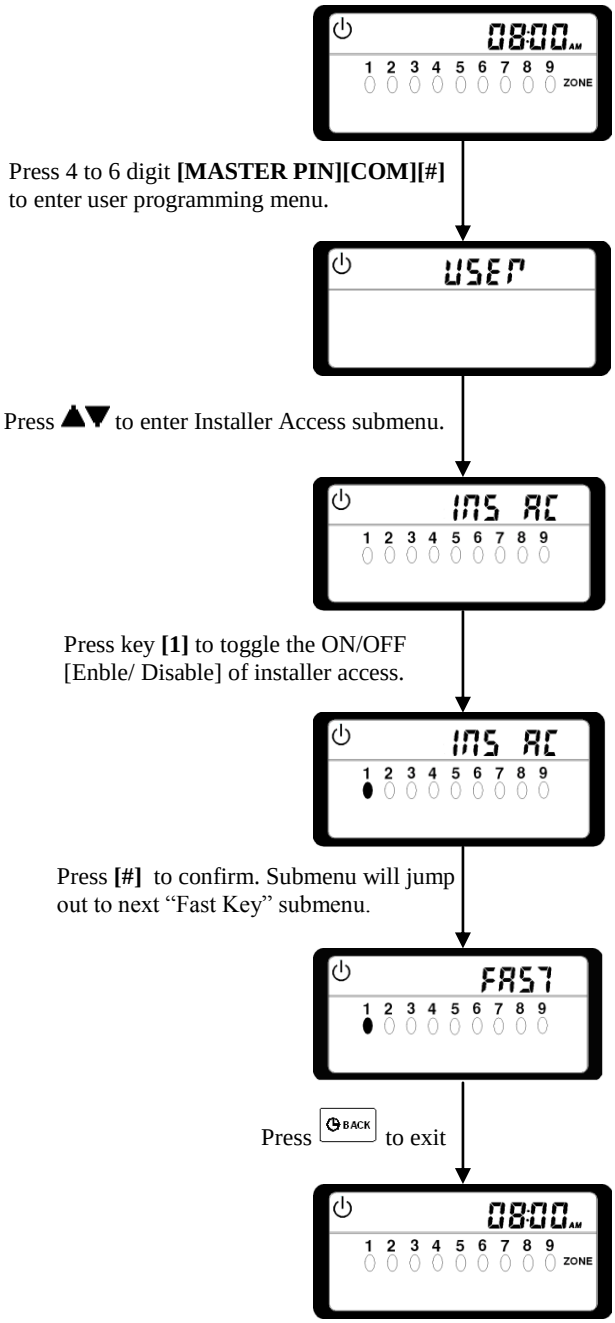
4.0.6 CLOCK



Note:

- Same time entry rules as the IO ON timer editing.

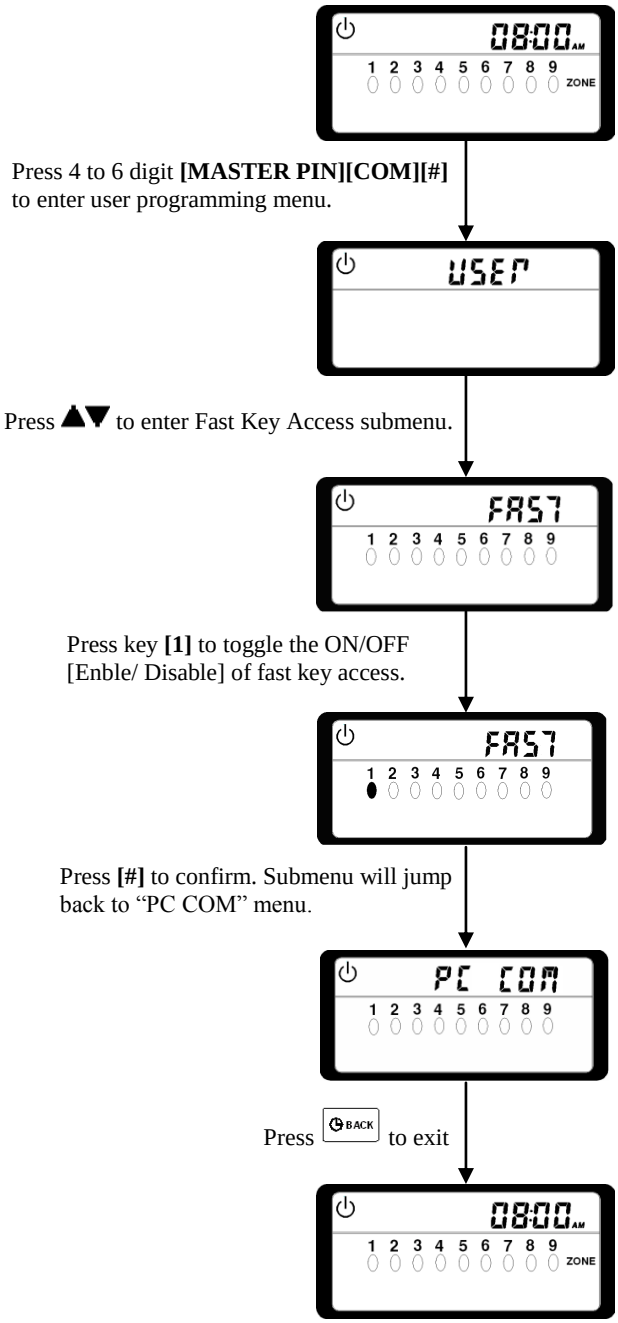
4.0.7 INSTALLER ACCESS



Note:

- Initially Installer Access will be toggling ON (able).
- Installer access will be disabling automatically every 3 hours.
- Indication Light ON means features ENABLED, OFF means DISABLED.

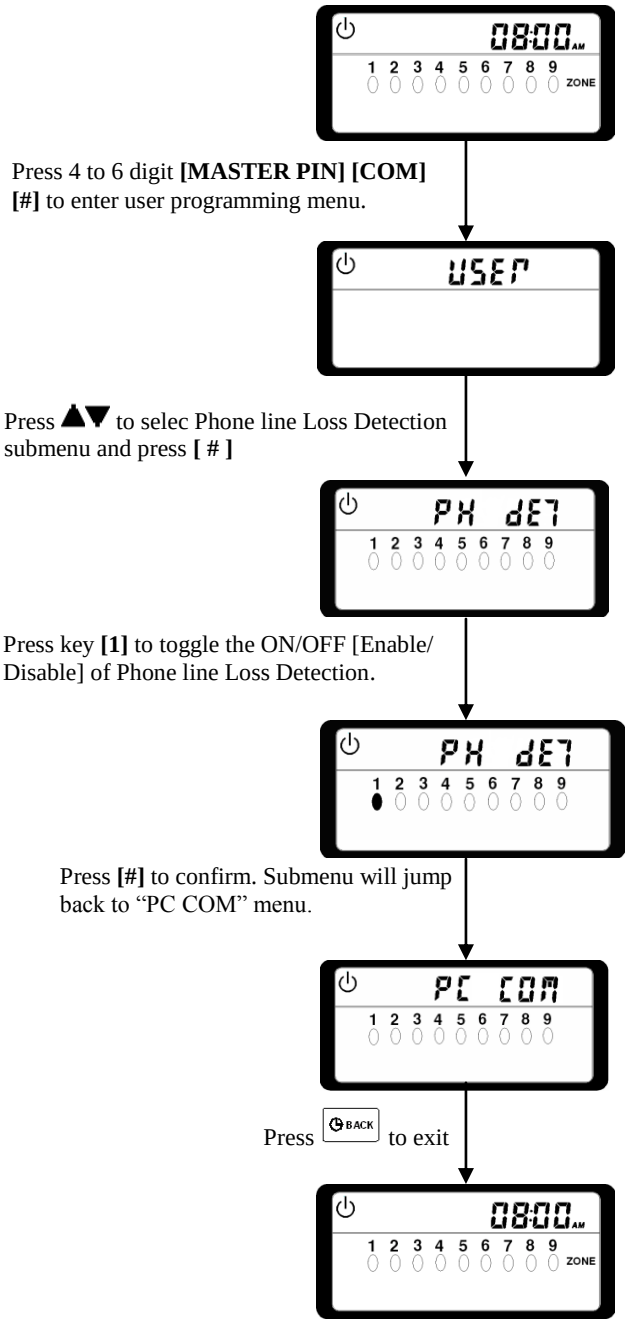
4.0.8 FAST KEY ACCESS



Note:

- Initially Fast Key access will be toggling ON (able).
- When Fast Key disable, arming mode, test mode and bypass mode only can be access by PIN code.
- Fast Key setting is an individual keypad setting.
- Indication Light ON means features ENABLED, OFF means DISABLED.

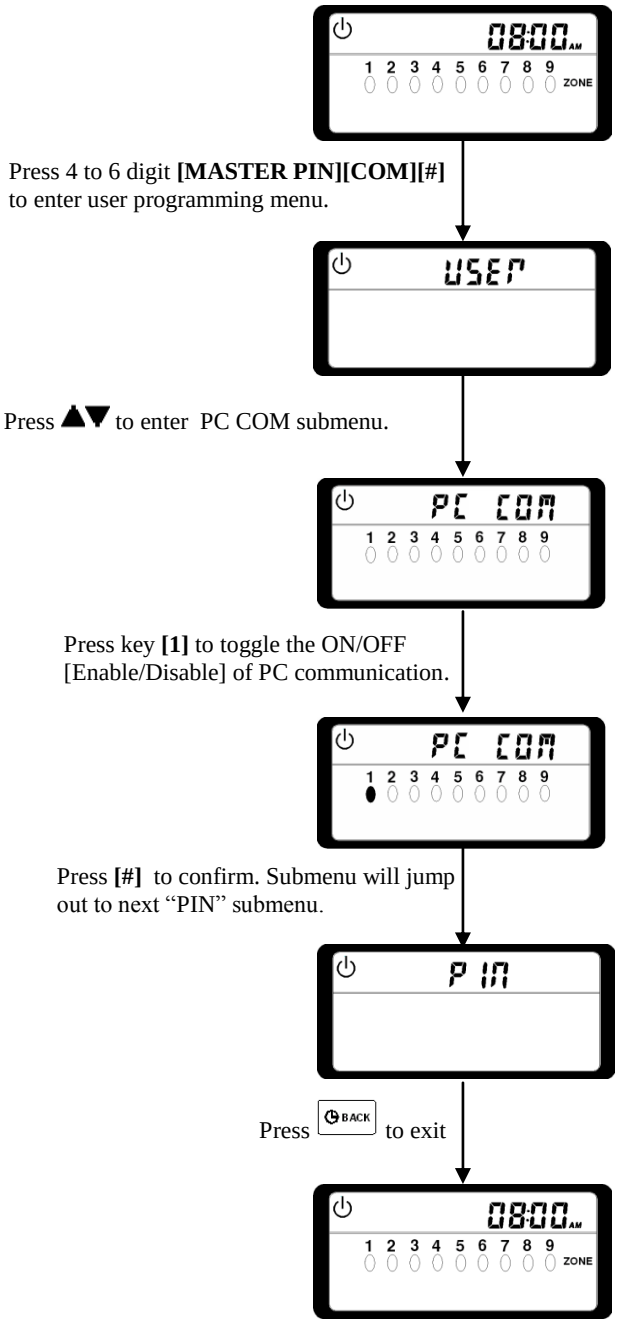
4.0.9 PHONE LINE LOSS DETECTION



Note:

- Initially Phone Line Loss Detection will be toggling OFF (Disable).
- Indication Light ON means features ENABLED, OFF means DISABLED.

4.0.10 PC COMM



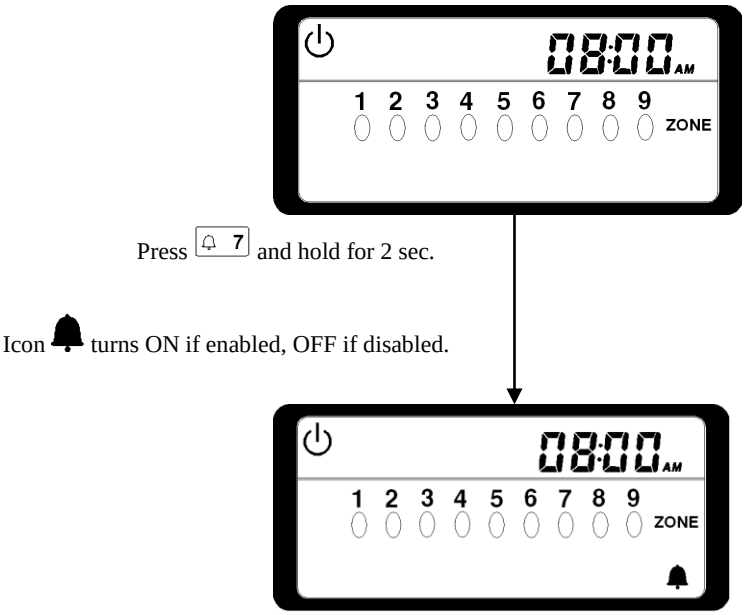
Note:

- Initially PC Com will be toggling OFF (Disable).
- Indication Light ON means features ENABLED, OFF means DISABLED.

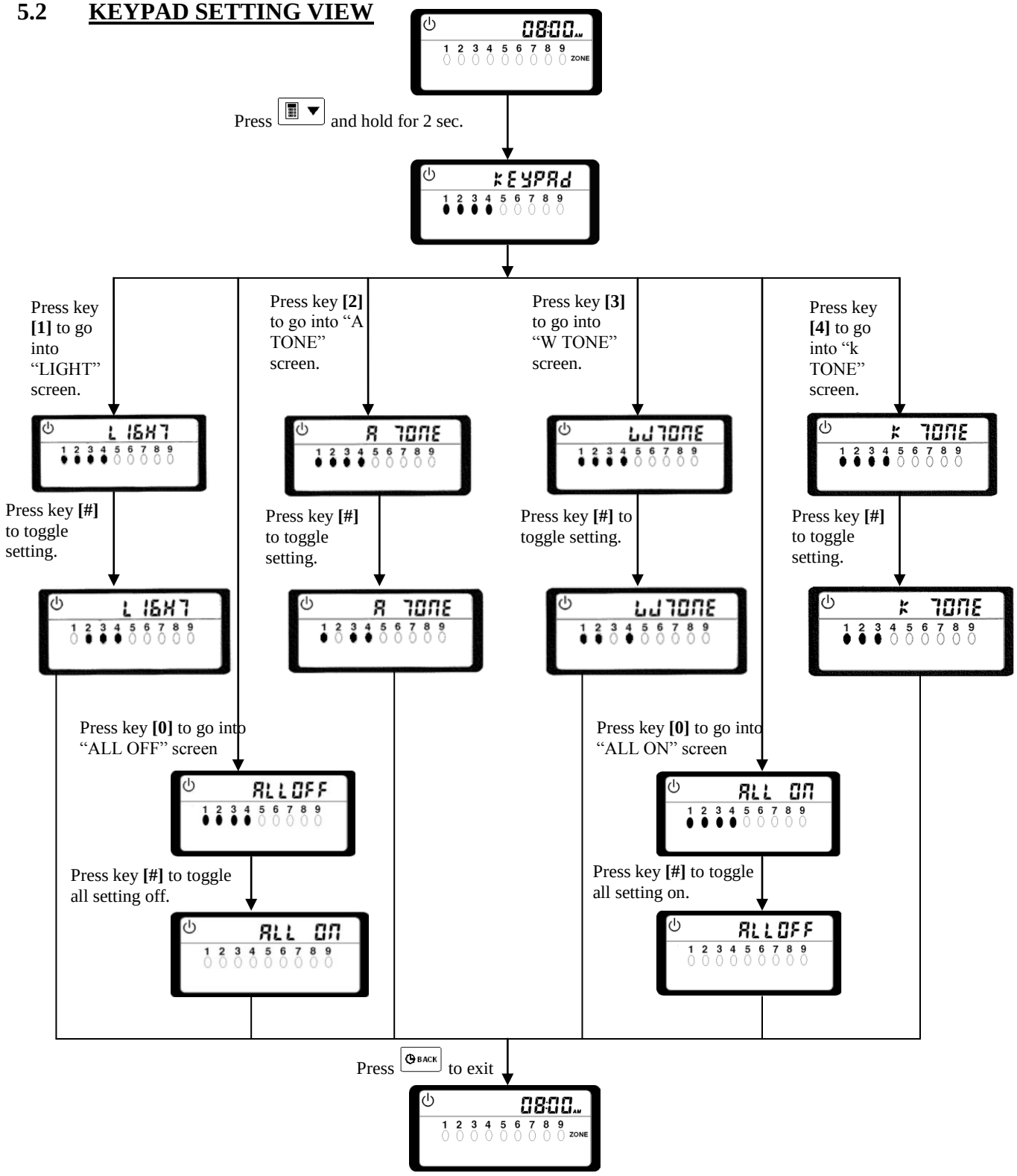
CHAPTER 5: KEYPAD SETTINGS

Command	Information
Door Chime	This options will toggle the door chime to ON/OFF
Keypad Back Light	This options will toggle the keypad back light to ON/OFF
Arm Tone	This options will toggle the arm tone to ON/OFF
Pre-warn Tone	This options will toggle the pre-warn tone to ON/OFF
Key press Tone	This options will toggle the key press tone to ON/OFF

5.1 DOOR CHIME



5.2 KEYPAD SETTING VIEW



Note:

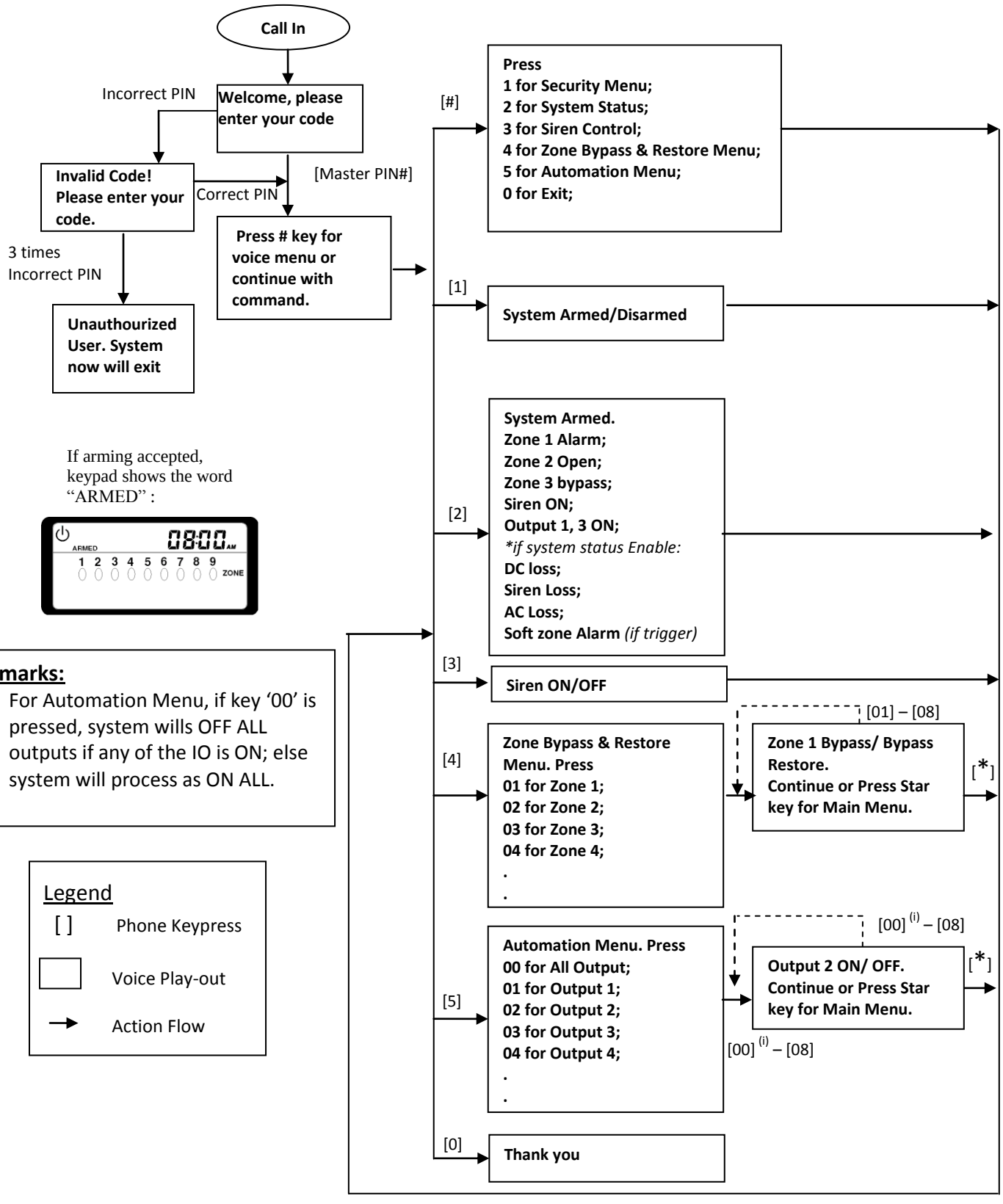
- Initially keypad setting will be all toggling ON (enable).
- Indication lights ON means features ENABLED, OFF means features DISABLED.
- If all setting currently DISABLED, key **[0]** pressed, "ALL ON" screen displayed; else "ALL OFF" screen displayed.

CHAPTER 6: SECURITY & AUTOMATION CONTROL THROUGH TELEPHONE

6.0 SYSTEM CONTROL THROUGH TELEPHONE

User also can control the alarm system and the home automation through the telephone. For system control by using telephone, there are two types of system interface. One is with voice guided interface (Main board with voice module) and secondly is with beepers guided interface (Main Board without voice module).

6.1 SYSTEM CONTROL WITH VOICE INTERFACE THROUGH CALL-IN



Remarks:

(ii) For Automation Menu, if key '00' is pressed, system wills OFF ALL outputs if any of the IO is ON; else system will process as ON ALL.

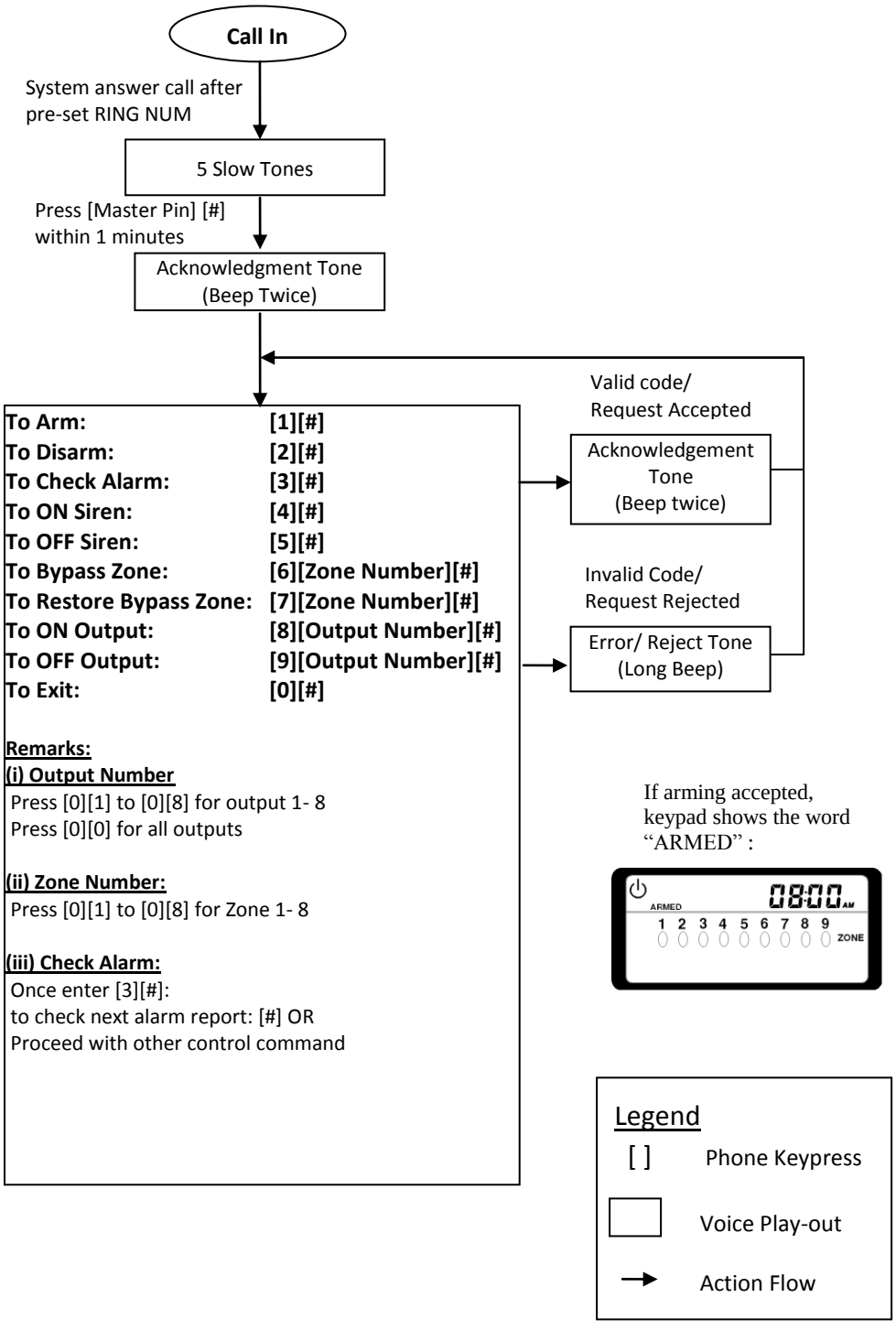
Legend

[ ] Phone Keypress

Voice Play-out

Action Flow

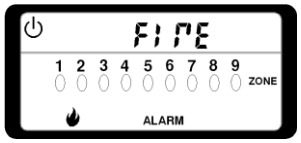
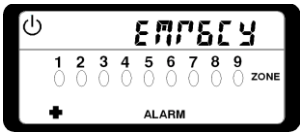
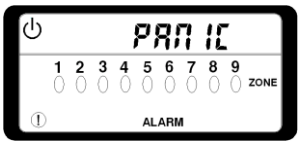
6.2 SYSTEM CONTROL WITH BEEPER INTERFACE THROUGH CALL-IN



CHAPTER 7: WHEN THERE IS AN EMERGENCY

7.0 EMERGENCY ALARM

In order to access this function, the system must be in normal mode

Command	Information
If there is a 'FIRE' Press [*****] for 2 seconds 	• Alarm will be triggered • A message will be sent to the Central Monitoring Station (CMS) • An alert tone or voice reporting will be sent through telephone
If there is a 'EMERGENCY' Press [**0**] for 2 seconds 	
If there is a 'PANIC' Press [#] for 2 seconds 	

To off the emergency alarm alert, press **[USER PIN][#]**

7.1 DURESS ALARM (CALLING FOR HELP)

In the event where the user is forced by an intruder or robber to disarm the alarm system, user can disarm the alarm system by using Duress Code. By pressing Duress Code, user can access the menu to disarm the system. At the same time, a silent signal will be sent to any designated telephone number or central monitoring station (CMS) to call for help. (* Provided the system is connected to CMS). The siren and strobe will not be activated. To set the duress code, refer to section 4.0.4

7.2 TAMPER LOSS AND PHONE LINE LOSS ALARM

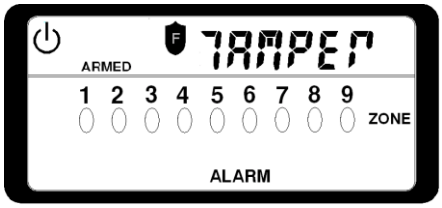


Fig 6.2(a)

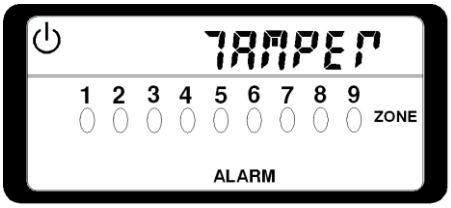


Fig 6.2(b)

Word “Alarm” flashes to indicate the alarm was triggered by the tamper switch loss. Word “Armed” and arming icon is on to indicate the tamper violation was activated on ‘arm’ (Fig 6.2(a)); else it was activated on ’24 hours’ (Fig 6.2(b)).

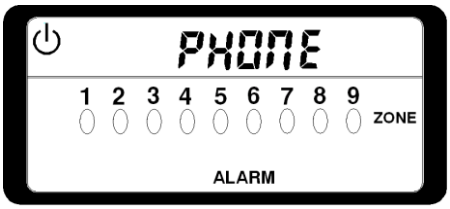


Fig 6.2(c)

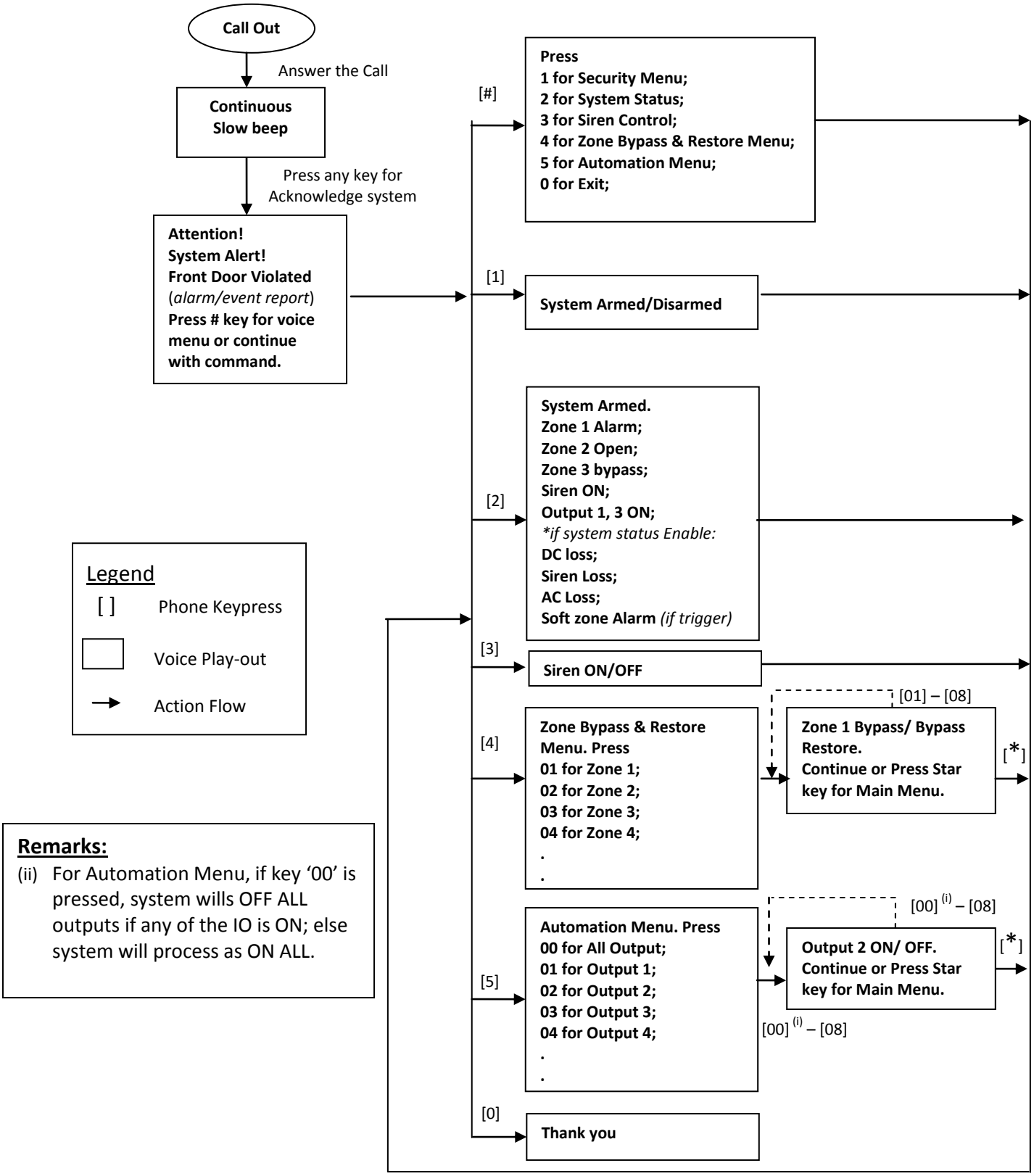
Word “**Alarm**” and “**PHONE**” flashes to indicate the alarm was triggered by the phone line loss.

7.3 TELEPHONE ALERT TO USER

In case of any intrusion or emergency, this system will acknowledge users with an alarm report. The panel will contact the user through fixed telephone or mobile line. If the user is unable to reply the phone call, this system will call the user again. The default dialing attempts are 5 times. After 30 minutes, the system will call again. The number of repetition calls after 30 minutes depend on the redial attempt set in the installer programming. The reporting comes in two reporting interface – no voice or beeper interface reporting and voice interface reporting (if voice module is installed).
System will report the status of the system to user when an event happened accordingly to the list below.

Reporting / Zone indication	Description
Zone xx Violated	Zone has been violated
Zone xx Restored	Alarm in zone xx has been restored
Emergency	Emergency occurring
Fire	Fire occurring
Panic	Panic occurring
Help	Duress Code has been entered
AC Loss	AC loss
AC Restore	AC restored
Trouble	Trouble due to battery problem and bell problem
Zone Bypass	Zone has been bypassed
Zone Bypass Restore	Zone has been unbypassed
Tamper	Tamper occurring
System Armed	System has been armed
System Disarmed	System has been disarmed

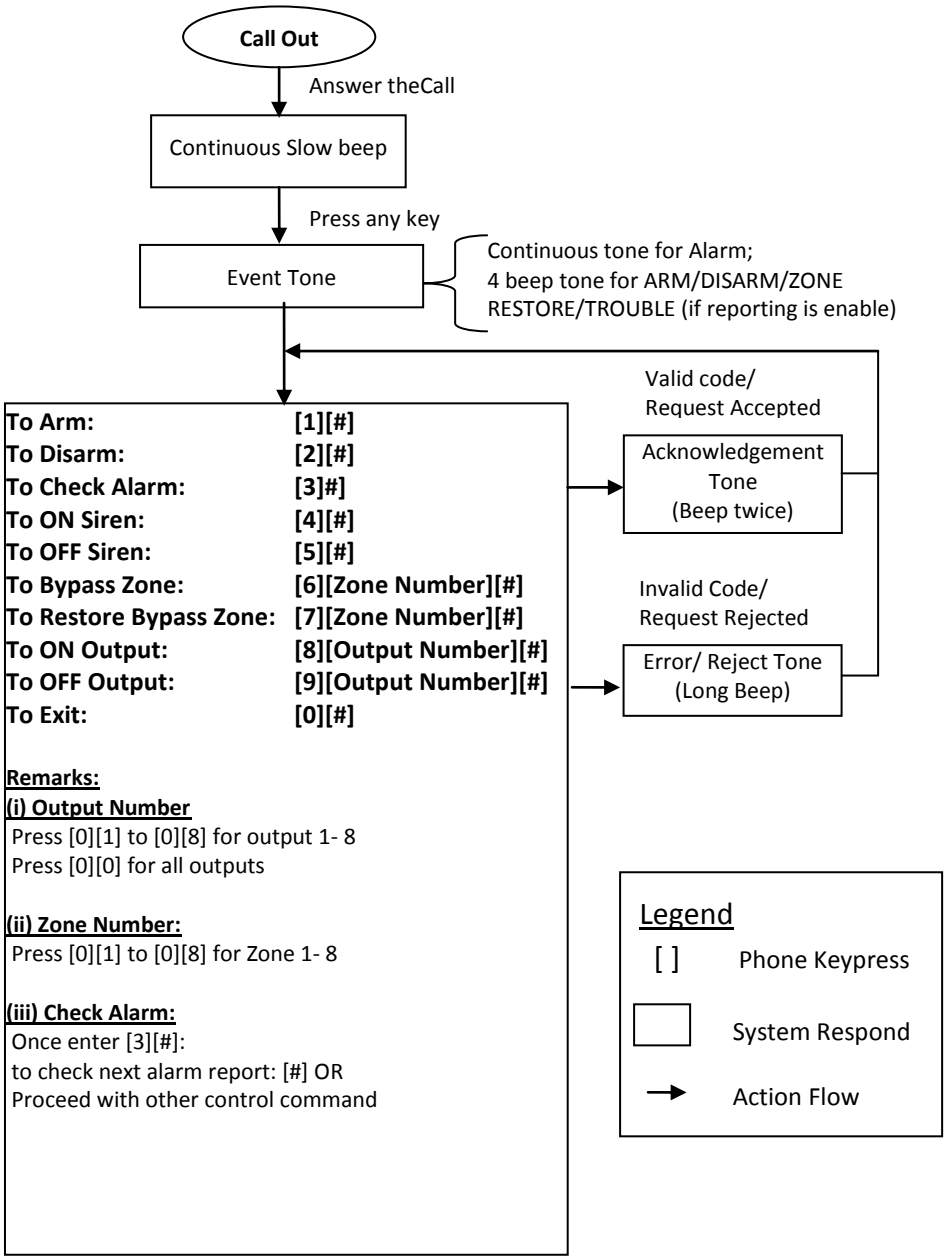
7.3.1 SYSTEM CALL OUT WITH VOICE INTERFACE



Remarks:

(ii) For Automation Menu, if key '00' is pressed, system wills OFF ALL outputs if any of the IO is ON; else system will process as ON ALL.

7.3.2 SYSTEM CALL OUT WITH BEEPER INTERFACE



For Alarm Report:

Zone	Beeper Reporting Format	Example	
Zone 1-8 Alarm	Normal beep base on zone number	Zone 2 alarm	Beep…Beep…
Softzone & Tamper	Continuous 6 beep		

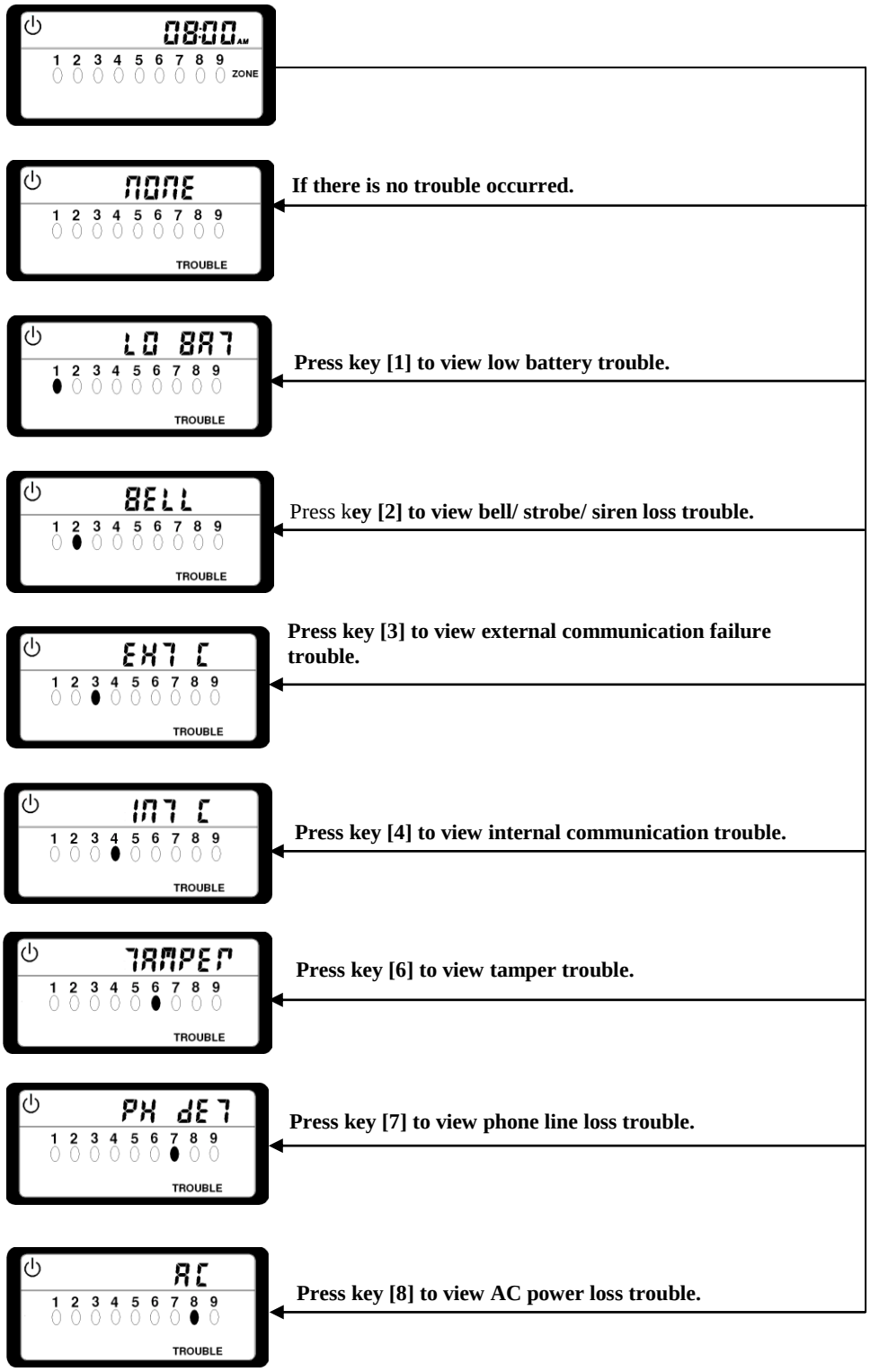
AX1 Telephony beeper reporting format

CHAPTER 8: SYSTEM CHECKING

8.0 TROUBLE VIEW

System must be in normal or armed mode in order to view trouble. Control panel will monitor a number of possible trouble conditions. If any of the conditions occur, The "TROUBLE" word will appear on keypad display. There are only 8 conditions available designated by indication lights (1 to 8, indication light 9 will remain OFF all the time. If there's no trouble, "NONE" will be displayed; all indication light will be OFF.

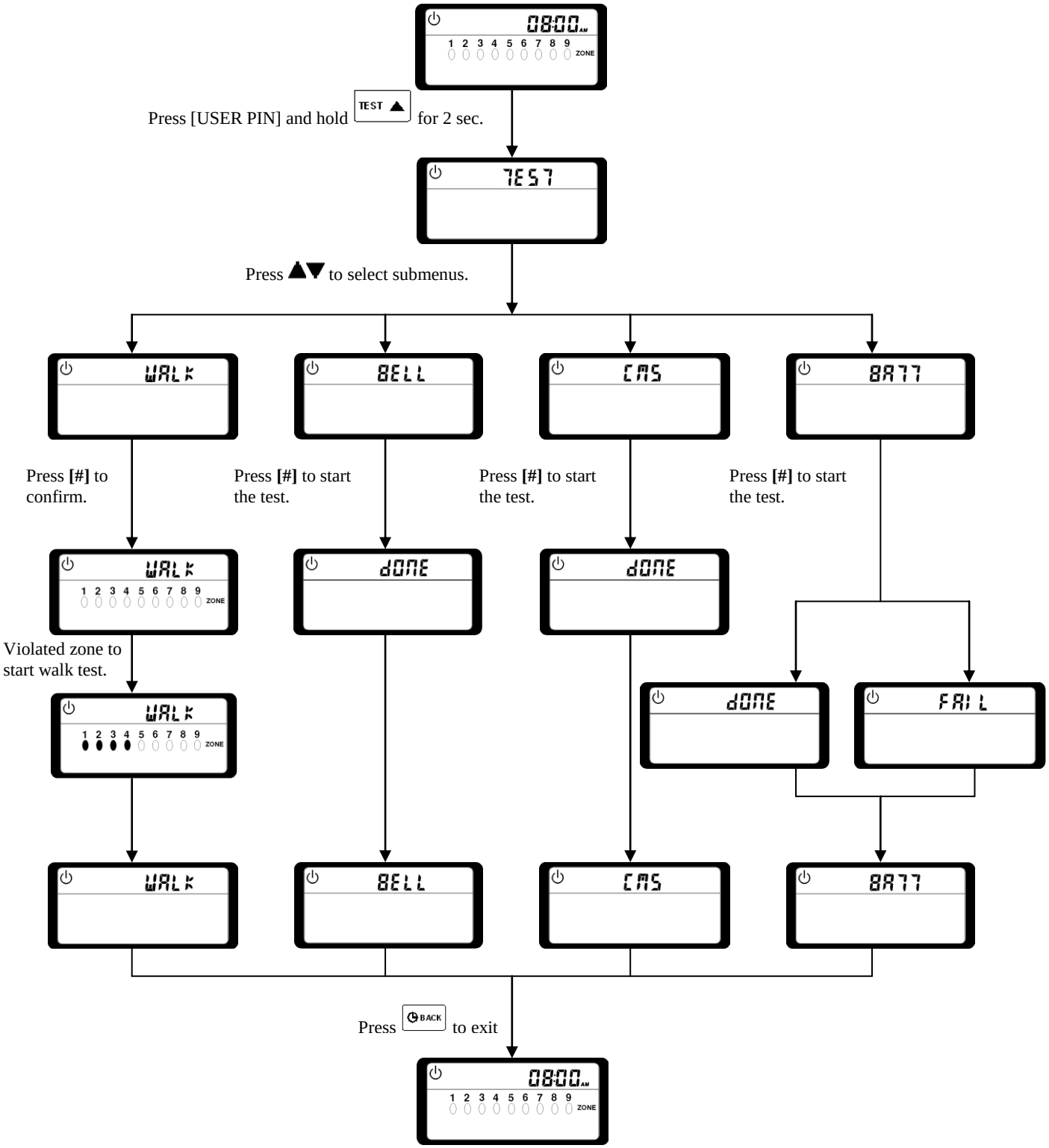
Trouble	Causes
DC Loss (Low Battery)	Backup battery weak or backup battery not available
Bell Strobe Siren Loss	Either bell, strobe or siren is loss.
External Communication Error	Unable to call out either due to no reply by user during reporting.
Internal Communication Error	ICON keypad and IO Expander cannot communicate with control panel due to main panel or connection failure.
Tamper	Tamper occurred and has not been cleared by alarm memory clear
Phone Line Loss	No phone line connected to the system
AC Loss	No power supply detected


08:00 AM
1 2 3 4 5 6 7 8 9
ZONE
NONE
TROUBLE
If there is no trouble occurred.
LO BAT
Press key [1] to view low battery trouble.
BELL
Press key [2] to view bell/ strobe/ siren loss trouble.
EXT C
Press key [3] to view external communication failure trouble.
INT C
Press key [4] to view internal communication trouble.
TAMPER
Press key [6] to view tamper trouble.
PH DET
Press key [7] to view phone line loss trouble.
AC
Press key [8] to view AC power loss trouble.

8.1 TESTING SYSTEM

Users are advised to test the system frequently. System must be tested at least once every three months. If the system is not functioning accordingly, please contact the nearest dealer for technical assistance. In order to do testing, the system must be on normal mode. There are 4 types of tests: walk test, bell test, CMS test and battery test. Arrow keys ▲▼ are allowed to scroll in both directions. 4 screens are viewed in loop.

Test	Information
Walk Test	● Walk test allow on-site testing for each zone of the system. ● Each time zone faulted, corresponding zone light will fast flash and keypad will chime until system exit walk test.
Bell Test	● Bell will sound continuously for 3 seconds. ● Screen will display "DONE" as a result. ● Screen will then return back to the selection screen automatically.
CMS Test	● Panel will generate message to CMS. ● Screen will display "DONE" as a result. ● Screen will then return back to the selection screen automatically.
Battery Test	● Battery test takes few seconds ● Low battery indication can be seen in Trouble Viewing (section 7.0) ● Screen will display "DONE" or "FAIL" as a result. ● Screen will then return back to the selection screen automatically.



8.1.1 QUICK TROUBLE VIEW

Command	Information
Press and hold TEST ▲ for 2 seconds	Test Mode

APPENDIX A

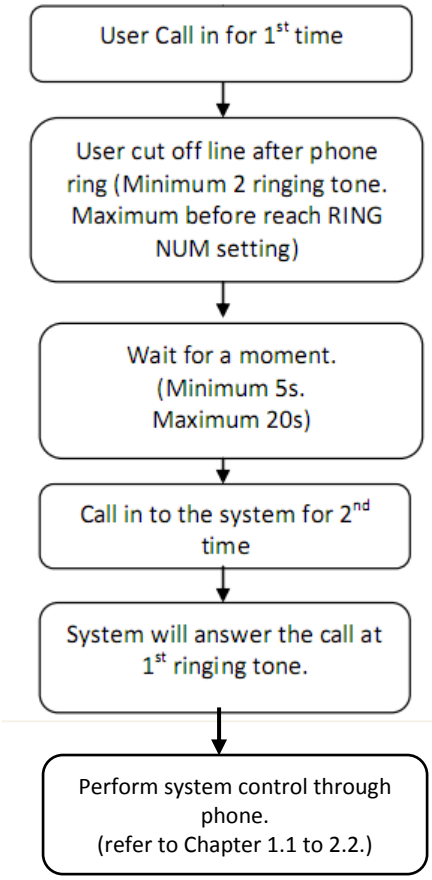
Double Call Feature

If the AX1 system is connected to the same phone line with a fax machine, an issue of who will be picking-up the line first wills occure. This is due to the fax machine also has its own preprogrammed ringing count to be operated. If the **RING NUM** in AX1 system is lower than Fax machine, fax machine has no chance to receive any fax and vice versa.
So, to use the double call feature Fax Machine Ring number must be less than AX1 Ring Number (but minimum 3 ring number).

With the Double Call feature, user has option to enable the Double Call feature which enables the AX1 system to recognize the symptom of incoming call before answer the phone. The term “double call”is refer to the action of calling the number twice with certain condition which the AX1 system will detect it as an instruction to pick-up the call. With this mechanism, the fax machine could be installed to the same phone line as the AX1 system. So, if the first call’s ring counts exceed the fax machine’s preprogrammed ringing count, the call will be answer by the fax machine; and if a double call condition is detected, only then the AX1 system will answer the call.

If Double Call feature is set to DISABLE (default), system will answer the incoming call once ringing count had been detected as per the preprogrammed number in RING NUM.

If Double Call feature is set to ENABLE, the mechanism of incoming call detection will be as show in Flow Chart 4.3.2. The first call must be at least 2 ringing tone and shall not exceed the preprogrammed RING NUM setting of the fax machine; and then user shall call into the system for the 2nd time within 20s after the 1st call ended. System will answer the incoming call at the 1st ringing tone if requirement above is fulfilled.



Flow Chart 4.3.2: Double Call Process

GLOSSARY

Arming/Disarm
To ON the alarm system and OFF the alarm system

Battery
A back up power source to provide protection for a limited time in the event of a power failure

Bypass
Removal of one or more protection zones from the system

Central Monitoring Station
Central control station to receive the alarm message from AX1 system

Chime
A beeping tune from the keypad to indicate sensor is activated

Duress Code
In the event that you are forced by an intruder to disarm your system, you disarm the system with the Duress Code which will cause the system to disarm and simultaneously send a silent distress signal to the central monitoring station (CMS). Default duress code is **2222.**

Entry Delay
The amount of time that you are allowed to enter the premises when the system is armed.

Exit Delay
The amount of time that you are allowed to leave the premises when the system is arming.

Guest PIN
A temporary four to six digit code which is used to arm and disarm the system from the keypad

User PIN
A four to six digit code which is used to arm and disarm the system from the keypad

Master PIN
A four to six digit code which can be used to program, reprogram and erase user codes, as well as arming and disarm the system from the keypad. The Master PIN is also equivalent to user 1 PIN. Default Master PIN is **111111**.

Zone
An area which is protected by a security device. Your front door may be designated as Zone 1, while the living room motion detectors maybe designated as Zone 2. Refer to the Zone Label on your keypad for the Zone Identification of your system. The designated zone number is set during installer programming.

Telephony Control

Double Call – This function is to enable both the fax machine and the AX1 system control through phone feature to be integrated together. The user can choose to use the fax machine without the AX1 system picking up when called the first time. However, when user wishes to control AX1 system through phone, user needs to do a double call. The Double Call means user need call for the first time and hang up after 2 ring count then call again the second time and the AX1 system will pick up the call.

LIMITATIONS

Even though AX1 is an advanced security system, it does not 100% guarantee protections against burglary, fire or other losses. Any alarm system whether commercial or residential is subject to compromise or failure-to-warn for a variety of reasons. These include:

- Intruders may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.
- Intrusion detectors, smoke detectors and many sensing devices will not operate without power. Devices powered by AC will not work if there is no AC power supply for any reason and their back up batteries are missing, dead or improperly installed.
- Alarm warning devices such as sirens or bells may not alert people or wake up sleeper if they are located on the other side of closed or partly closed door.
- Telephone lines needed to transmit alarm from the premise to a central monitoring station may be out or temporarily out of service. Telephone station lines are subjected to compromise by sophisticated method of attack.
- Smoke detector used in conjunction with the alarm system may not sense fires that start where smoke cannot reach the detector such as wall, roof or the other side of the door. Smoke detector also may not sense a fire on another level of residence or carelessness and safety hazards like smoking in the bed, violent explosions, escaping gas, improper storage of flammable material, overloaded electrical circuits, and children playing with matches.
- The most common cause of an alarm system not functioning properly when an intrusion or fire occurs is inadequate maintenance. Therefore, your system should be tested weekly to ensure all sensors are working properly.
- Installing an alarm system may make you eligible for lower insurance rates but an alarm system is not substitute for insurance. Homeowners, property owners and renters should continue to insure their lives and properties.

Note: Specifications subject to change without prior notice.

SYSTEM INFORMATION

MASTER USER:
ADDRESS:
TELEPHONE NUMBER:
DATE :
REMARKS :

Telephone Number 1

Receiver Number 1	
Receiver Type	User / CMS
Receiver Option	Permanent / Backup
CMS Account Number 1	

Telephone Number 2

Receiver Number 2	
Receiver Type	User / CMS
Receiver Option	Permanent / Backup
CMS Account Number 2	

Telephone Number 3

Receiver Number 3	
Receiver Type	User / CMS
Receiver Option	Permanent / Backup
CMS Account Number 3	

Telephone Number 4

Receiver Number 4	
Receiver Type	User / CMS
Receiver Option	Permanent / Backup
CMS Account Number 4	

Telephony Settings

Dial Attempt	times
Redial Attempt	times
Number of Rings before system pick-up	rings

Zone Settings

Zone	Partition	Zone Type	Zone Chime	Output Map	Description
1	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
2	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
3	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
4	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
5	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
6	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
7	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
8	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
9	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
10	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
11	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
12	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
13	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
14	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
15	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
16	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
17	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
18	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
19	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
20	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
21	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
22	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
23	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
24	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
25	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
26	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
27	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
28	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
29	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
30	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
31	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		
32	1 / 2 / 3 / 4	Light/Interior/Instant/Delay/24 Hours	Yes/No		

Output Settings

Output	Output Description
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
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30	
31	
32	

Output Timers

Timer	Daily or Scheduled	Timer ON	Timer OFF	Output No.
Timer 1	Daily / Scheduled	Date: Time:	Date: Time:	
Timer 2	Daily / Scheduled	Date: Time:	Date: Time:	
Timer 3	Daily / Scheduled	Date: Time:	Date: Time:	
Timer 4	Daily / Scheduled	Date: Time:	Date: Time:	

Arm/Disarm Timers

Timer	Daily or Scheduled	Timer ARM	Timer DISARM	Partition
Timer 1	Daily / Scheduled	Date: Time:	Date: Time:	1 / 2 / 3 / 4
Timer 2	Daily / Scheduled	Date: Time:	Date: Time:	1 / 2 / 3 / 4
Timer 3	Daily / Scheduled	Date: Time:	Date: Time:	1 / 2 / 3 / 4
Timer 4	Daily / Scheduled	Date: Time:	Date: Time:	1 / 2 / 3 / 4

System Timers

Entry Delay Timer (Partition 1)	Seconds
Entry Delay Timer (Partition 2)	Seconds
Entry Delay Timer (Partition 3)	Seconds
Entry Delay Timer (Partition 4)	Seconds
Exit Delay Timer (Partition 1)	Seconds
Exit Delay Timer (Partition 2)	Seconds
Exit Delay Timer (Partition 3)	Seconds
Exit Delay Timer (Partition 4)	Seconds
Bell Audible Time	Minutes

AX1 LCD QUICK REFERENCE

1) To arm the Alarm system & other Fast Key Functions

Key press	Option	Remark
1 and hold 2s	Auto Home Arming mode	When you leave the house
2 and hold 2s	Day Arming Mode	When you are at home day time
3 and hold 2s	Night Arming Mode	When you goto Sleep
4 and hold 2s	Force Arming	When there are zone still open
5 and hold 2s	Automation Mode	Control Lighting Menu
6 and hold 2s	Clear alarm memory	Stop Strobe light
7 and hold 2s	Chime mode	To off zone sound in keypad
8 and hold 2s	Service mode	To check system for service
9 and hold 2s	Bypass zone	To ignore this zone from security
0 and hold 2s	Emergency Alarm	To trigger Emergency alarm
* and hold 2s	Fire Alarm	To trigger Fire alarm
# and hold 2s	Panic Alarm	To trigger Panic alarm
"▲" and hold 2s	Zone Indicator	To check zone status O: on, X: off.
"▼" and hold 2s	IO Indicator	To check Automation point status. O: on, X: off, Blank: no output.
"◄" and hold 2s	Volume Control	To set speaker volume level.

2) To Disarm the Alarm system

1. [PIN CODE] + #
2. Go to DISARM , and ALL #

3) To stop the bell, siren and strobe light when alarm trigger

1. [PIN CODE] + #
2. Go to DISARM , and ALL # (Siren and bell will stop).
3. Select the "alarm report" to check for violated zone.
4. Select "Clear alarm" to resume to normal status (Strobe light will off)

3) When the system call to report

1. Pick up the call
2. Press any key to acknowledge system.
3. Listen to system reporting.
4. Follow the interactive menu.
5. Once done with the reporting and control, press **0 #** to hang up

4) When you call in to the system

1. Wait for the ring count
2. Once system accept the call press **[MASTER PIN CODE] #**
3. Follow the interactive menu

History of Version Updates

Date	Update Version	Changes
March 2011	Main Board (**MAX_R8**) LCD Keypad (**KAX_R3**) AvanTouch Keypad (**CAX_R2**)	− Password ARM/DISARM feature Added. – Double Port Feature Added. − Event Log Feature Added.
August 2011	Main Board (**MAX_R9**) ICON Keypad (**AXI_R4**) LCD Keypad (**KAX_R4**) AvanTouch Keypad (**CAX_R3**)	− Support AX1 GSM – New voice flow structure – support ACMS Event Logs feature – Fine tune on zone sensitivity