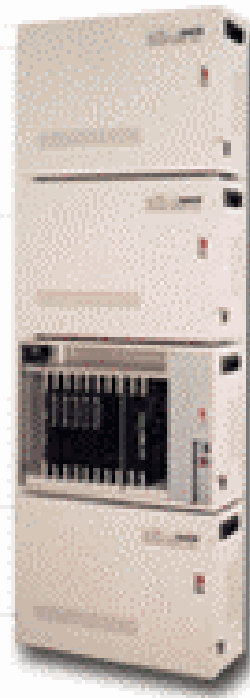


# Aristel

## AV-64/256 Installation Manual



Arista Systems Corporation

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**SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE****Introduction**

This manual provides detail procedures for installing the Aristel AV-64/256. Read this entire section before proceeding with the actual installation. The National Electrical Code (NEC) requires the Local operation telephone company (teleco) to provide primary protection devices on telephone lines terminated at customer's site. Check the entry point to see that a primary protection device is installed. If no such device is presented , notify the telecom before proceeding with installation.

**1. Site Requirement**

The KSU should be installed in a clean, dry, secure location that prevent access by unauthorized personnel. This location must have adequate ventilation and have a temperature range that does not exceed 32 to 113 degree F (0 to 45 degree C) with a 10 to 95% non-condensing, relative humidity.

The installation site should provide ample room to mount the KSU on the wall along with the necessary connecting blocks and any ancillary equipment. The installation site should not be located in areas subject to static electricity (e.g. dry-copiers), or vibration (e.g. heavy machinery).

The customer must provide a dedicated NEMA 5-15R outlet with 115VAC/60Hz (230VAC/50Hz) and a 15 Amp circuit. A separate earth ground is required in addition to the third wire ground on the AC circuit. If a music source or optional external paging equipment is installed, it must be connected to separate AC circuit other than the system's dedicated AC line.

**ONLY THE POWER SUPPLY SHOULD BE CONNECTED TO THE DEDICATED AC OUTLET.**

**2. Equipment Requirement**

Before installing the equipment, carefully inspect packages for evidence of external damage or possible damage to the contents. Then compare the equipment received to a list of equipment order to ensure that all components are on site.

The following materials are required to install the system:

- ♦ Exterior grade plywood back board for the KSU.
- ♦ 20-pairs Amphenol cable (WP5007) with male connector at one for connection to Amphenol female connector on internal station interface (A2STUA or A2HYUA or A2SLUA or A4STUA or A4HYUA or A4SLUA).
- ♦ Two-pairs or three-pairs (for OHCA station) twisted station cable.
- ♦ Grounding wire (14 AWG).
- ♦ Connection blocks (66M1-50 type) with bridging clips.
- ♦ Modular station jacks (625A4, 625F4, or equivalent with screw terminals).
- ♦ Appropriate mounting hardware.

### **3. Power supply and KSU installation**

- ♦ Attach the plywood backboard in the designation location with appropriate fasteners.
- ♦ A surge protector should be installed at the dedicated AC receptacle.
- ♦ Connect 20-pairs male Amphenol cable to the female Amphenol connector on internal station interface (A2STUA or A2HYUA or A2SLUA or A4STUA or A4HYUA or A4SLUA). Punch the twisted 1-pair or 2-pairs or 3-pairs from the end of male Amphenol cable to the connecting blocks to the terminals.
- ♦ Connect the plugs from RJ11 jack on CO Line Interface to the exchange CO Line for connecting external CO Line.

## 4. System Modules

### 4.1 AV-64

Model	Description	Remark
A2CBPA	<b>MAIN CABINET</b> , consisting of (Metal Cabinet) + (A2PSUA)	Standard Shipment
A2PSUA	<b>SWITCHING POWER SUPPLY UNIT</b>	Standard Shipment
A4MBUA	<b>MOTHER BOARD UNIT</b>	Standard Shipment
A4MPUA	<b>MAIN AUXILIARY UNIT</b>	Standard Shipment
A4IPUA	<b>MAIN PROCESSING UNIT</b>	Standard Shipment
A2TKUA	<b>TRUNK UNIT</b> , consisting of 4 CO Line Ports and 2 Ports per Line	Expansion Card
A2DTKA	<b>ISDN TRUNK UNIT</b> , consisting of 4 ISDN CO Line Ports (EURO ISDN S <sub>0</sub> interface, 2B+D/port)	Expansion Card
A2STUA	<b>KEY STATION UNIT</b> , consisting of 8 Key Station Ports and One Port per Station	Expansion Card
A2HYUA	<b>HYBRID STATION UNIT</b> , consisting of (2 Key Station Ports) + (6 Single Line Station Ports) and One Port per Station	Expansion Card
A2SLUA	<b>SINGLE LINE STATION UNIT</b> , consisting of 8 Single Line Station Ports and One Port per Station	Expansion Card
A2VSUA	<b>VOICE SERVICE UNIT</b> , consisting of 4 Voice Channels (60 seconds per channel)	Optional Card
A2MFCA	<b>MULTI FUNCTION CARD</b> , consisting of (4 Sensors) + (4 Relays)	Optional Card
A2MDCA	<b>METERING DETECTION CARD</b> (for both 12KHz and 16KHz Metering Pulse)	Optional Card
A2RSCA	<b>RS232 CARD</b> (for SMDR, Serial Port Design)	Optional Card
A2RPCA	<b>REMOTE PROGRAMMING CARD</b> (standard Modem design)	Optional Card
CPIC	<b>CROSS POINT IC</b> (IC MT8816AE)	Expansion Part

**NOTE.**

There are 10 I/O slots on A2MBUA for I/O interfaces (A2TKUA, A2DTKA, A2STUA, A2HYUA, A2SLUA and A2VSUA) to add on.

## 4.2 AV-256

Model	Description	Remark
A2CBPA	<b>MAIN CABINET</b> , consisting of (Metal Cabinet) + (A2PSUA)	Standard Shipment
A2PSUA	<b>SWITCHING POWER SUPPLY UNIT</b>	Spare Part
A4MBUA	<b>MOTHER BOARD UNIT</b> (8 I/O Interface Slots)	Standard Card
A4MPUA	<b>MAIN PROCESSING UNIT</b>	Standard Card
A4IPIUA	<b>INTERFACE PROCESSING UNIT</b>	Standard Card
A2TKUA	<b>TRUNK UNIT</b> , consisting of 4 CO Line Ports and 2 Ports per Line	Expansion Card
A2DTKA	<b>ISDN TRUNK UNIT</b> , consisting of 4 ISDN CO Line Ports (EURO ISDN S <sub>0</sub> interface, 2B+D/port)	Expansion Card
A2STUA	<b>KEY STATION UNIT</b> , consisting of 8 Key Station Ports and One Port per Station	Expansion Card
A2HYUA	<b>HYBRID STATION UNIT</b> , consisting of (2 Key Station Ports) + (6 Single Line Station Ports) and One Port per Station	Expansion Card
A2SLUA	<b>SINGLE LINE STATION UNIT</b> , consisting of 8 Single Line Station Ports and One Port per Station	Expansion Card
A2VSUA	<b>VOICE SERVICE UNIT</b> , consisting of 4 Voice Channels (60 seconds per channel)	Optional Card
A2MFCA	<b>MULTI FUNCTION CARD</b> , consisting of (4 Sensors) + (4 Relays)	Optional Card
A2MDCA	<b>METERING DETECTION CARD</b> (for both 12KHz and 16KHz Metering Pulse)	Optional Card
A2RSCA	<b>RS232 CARD</b> (for SMDR, Serial Port Design)	Optional Card
A2RPCA	<b>REMOTE PROGRAMMING CARD</b> (standard Modem design)	Optional Card
CPIC	<b>CROSS POINT IC</b> (IC MT8816AE)	Expansion Part

### NOTE.

One CPIC must be added on each A2STUA, A2HYUA, A2SLUA and A2VSUA if one of them is used in AV-256.

## 5. TYPES OF KEY TELEPHONE

Model	Description	Color
<b>15 Buttons Key Telephone</b>		
KP10XW	<b>STANDARD PHONE</b> (without LCD and Handsfree)	White
KP10XHW	<b>STANDARD HANDSFREE PHONE</b> (without LCD, but with Handsfree)	White
KP10XLW	<b>SMALL LCD PHONE</b> (with Small LCD, but without Handsfree)	White
KP10XLBW	<b>BIG LCD PHONE</b> (with Big LCD, but without Handsfree)	White
KP10XDW	<b>SMALL LCD DELUXE PHONE</b> (with Small LCD and Handsfree)	White
KP10XDBW	<b>BIG LCD DELUXE PHONE</b> (with Big LCD and Handsfree)	White
KP10XC	<b>STANDARD PHONE</b> (without LCD and Handsfree)	Charcoal
KP10XHC	<b>STANDARD HANDSFREE PHONE</b> (without LCD, but with Handsfree)	Charcoal
KP10XLC	<b>SMALL LCD PHONE</b> (with Small LCD, but without Handsfree)	Charcoal
KP10XLBC	<b>BIG LCD PHONE</b> (with Big LCD, but without Handsfree)	Charcoal
KP10XDC	<b>SMALL LCD DELUXE PHONE</b> (with Small LCD and Handsfree)	Charcoal
KP10XDBC	<b>BIG LCD DELUXE PHONE</b> (with Big LCD and Handsfree)	Charcoal
<b>25 Buttons Key Telephone</b>		
KP10SW	<b>STANDARD PHONE</b> (without LCD and Handsfree)	White
KP10SHW	<b>STANDARD HANDSFREE PHONE</b> (without LCD, but with Handsfree)	White
KP10LW	<b>SMALL LCD PHONE</b> (with Small LCD, but without Handsfree)	White
KP10LBW	<b>BIG LCD PHONE</b> (with Big LCD, but without Handsfree)	White
KP10DW	<b>SMALL LCD DELUXE PHONE</b> (with Small LCD and Handsfree)	White
KP10DBW	<b>BIG LCD DELUXE PHONE</b> (with Big LCD and Handsfree)	White
KP10SC	<b>STANDARD PHONE</b> (without LCD and Handsfree)	Charcoal
KP10SHC	<b>STANDARD HANDSFREE PHONE</b> (without LCD, but with Handsfree)	Charcoal
KP10LC	<b>SMALL LCD PHONE</b> (with Small LCD, but without Handsfree)	Charcoal
KP10LBC	<b>BIG LCD PHONE</b> (with Big LCD, but without Handsfree)	Charcoal
KP10DC	<b>SMALL LCD DELUXE PHONE</b> (with Small LCD and Handsfree)	Charcoal
KP10DBC	<b>BIG LCD DELUXE PHONE</b> (with Big LCD and Handsfree)	Charcoal
<b>64 Buttons Console Phone</b>		
DSS64W	<b>DSS CONSOLE PHONE</b> (with 64 DSS buttons only)	White
DSS64C	<b>DSS CONSOLE PHONE</b> (with 64 DSS buttons only)	Charcoal



## 6. SPECIFICATION

### 6.1 AV-64 GENERAL SPECIFICATION

CO Line	0~20
Key Telephones	0~80
Single Line Telephones	0~80
Auto Attendant	0~12
Door Phones	0~2
Relay Switches	0~4
Sensor Interfaces	0~4
Fax Monitor	0~5
System Battery Charger Interface	0~1
RS232 for SMDR	0~1
Remote Programming	0~1
Speed Dial	0~1200
External Music	0~1
External Paging	0~1
Intercom Paths (Local)	0~32

### 6.2 AV-256 GENERAL SPECIFICATION

CO Line	0~40
Key Telephones	0~255
Single Line Telephones	0~255
Auto Attendant	0~40
Door Phones	0~2
Relay Switches	0~16
Sensor Interfaces	0~16
Fax Monitor	0~10
System Battery Charger Interface	0~1
RS232 for SMDR	0~4
Remote Programming	0~1
Speed Dial	0~1200
External Music	0~1
External Paging	0~1
Intercom Paths (Local)	0~48

## 7. AV64/256 ELECTRICAL & OTHER SPECIFICATIONS

Input AC Voltage		115 VAC $\pm$ 10% (50/60 Hz)/0.57Amps 230 VAC $\pm$ 10% (50/60 Hz)/0.28Amps
Power Consumption	System	40 W
	Key Telephone	2.0 W max.
	SLT	0.85 W
	Door Phone	0.5 W
System Power Back-Up Battery		1 ~ 2 Hour (24 VDC $\times$ 6.5AH)
Loop Resistance	Key Telephone	40 $\Omega$ max.
	Door Phone	40 $\Omega$ max.
	SLT	400 $\Omega$ max.
	External Paging	600 $\Omega$ max.
	CO Line	1.5K $\Omega$ max.
Dialing Signal	Outgoing Dialing	Tone / Pulse
	Intercom Dialing	Tone / Pulse / Digital
Wiring Installation	CO Line	2 wires
	Relay Switch	2 wires
	Key Telephone	4 / 6 wires
	Sensor	2 wires
	SLT	2 wires
	External Music	2 wires
	Door Phone	2 wires
	External Paging	2 wires
	Fax Machine	2 wires
	SMDR	6 wires
Relay Switch	Type	SPDT
	Power Consumption	7A, 110VAC / 240 VAC
	Function	Door Switching, Paging, Music on Hold, ..., etc.
System Dimension (mm, W $\times$ D $\times$ H)		555 $\times$ 228 $\times$ 400
Key Telephone Dimension (mm)		230L $\times$ 180W $\times$ 75H
Working Temperature		0 $^{\circ}$ C ~ 45 $^{\circ}$ C (32 $^{\circ}$ F ~ 113 $^{\circ}$ F)
Working Humidity		10% ~ 90% relative non-condensing
Switch Mode		Space Division Matrix (SDM)
Control Mode		8/16 bits CPU, Registered Program

## 8. FEATURES LIST

### System Features List

Alarm	Help List
Attendant Console Assignment	Hold Recall
Auto-Attendant	Host PABX Access
Automatic S.O.S Security System	Hot Line
Automatic Line Access	I/O Terminal
Automatic Number Redial	Illegal Dialing Prevention
Background Music	Incoming Paging
Be Paged	Message Waiting
Call Duration Time Restriction	Metering Detector
Call Forwarding (Follow Me)	Monitoring Level
Call Pick Up	Music On Hold
Call Forwarding (All / No Answer / Busy)	Night Transfer
Calling Proof	On Call Programming
Camp On	One Touch Dialing
Date/Time Setting	Overriding Level
Day/Night Service	Paging/Meet Me Paging
Day Time Schedule	Password Protection
Dialing Signal (Pulse/DTMF)	Pause
Direct Transfer	Polarity Reverse Detection
Direct Intercom Calling	Programmable DSS Key
Direct Inward Station Access (DISA)	Relay Control
Door Switch (Open/Close)	Remote Programming
Door Phone Connection	Remote Maintenance
Dual-Direction Amplifier	Reset Security Code
Easy Installation And Operation	Sensor Detection
Exclusive Hold Recall	SLT Programming Digit
Fax Monitor	SLT Message Waiting Type
Flash Time Setting	SLT Connection
Flexible Ringing	SLT Hold Operation
Flexible Expansion	SLT Busy Remind Tone Flag
Flexible Function Key Setting	Speed Dial For Both System And Private
Forced Account Code	Station Message Detail Record (SMDR)

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Switching Link Maintenance	Door Phone Call Signaling
System Battery Back Up For	Dual Color LED
Data	Flash (Open Loop Time Flash)
System Data Initial	Forced Account Code
System Data Print Out	Door Phone
Text Message	External Music Source
Time-Reminding Service	External Paging Equipment
Toll Restriction	
Trunk Administration	
Trunk Queuing	
Varying Range For Time Setting	

### Station Features List

8 Segments Volume Control	Forced Account Code
9 Segments Ringing Frequency	Handsfree
Absent Message	Intercom Calling
Access To System Programming	Last Number Redial
Account Code	LED Indication For Door Switch
Answer Call Waiting	Sensor
Auto-Answer	Macro Key Assignment
Automatic Line Access	Monitor
Automatic Call Back (Camp On)	Movable LCD Display
Back Ground Music	Multi-Conference
Bottom Back Cabling	Music On Hold
Calculator Function At Anytime	One Touch Dialing
Call Pick-Up	Outward Dialing
Call Forward (Follow Me)	Override (Barge In)
Call Waiting	Paging/Meet Me Paging
Call Door Phone	Photo Interrupted For Hook
Camp On	Switch
Check In	Privacy Release
Check Out	Pulse/Tone Conversion
Day/Night Service Indication	Save Number Redial
Direct Call Transfer	Speed Dialing
Direct Call Attendant	Speed Dial Number Storage
Direct Intercom Calling	Station Lock/Unlock
Do Not Disturb (DND)	Station Morning Call Service
Door Switch Sensor Control	Toll Restriction

Tri-Status LED Indication

Trunk Queuing

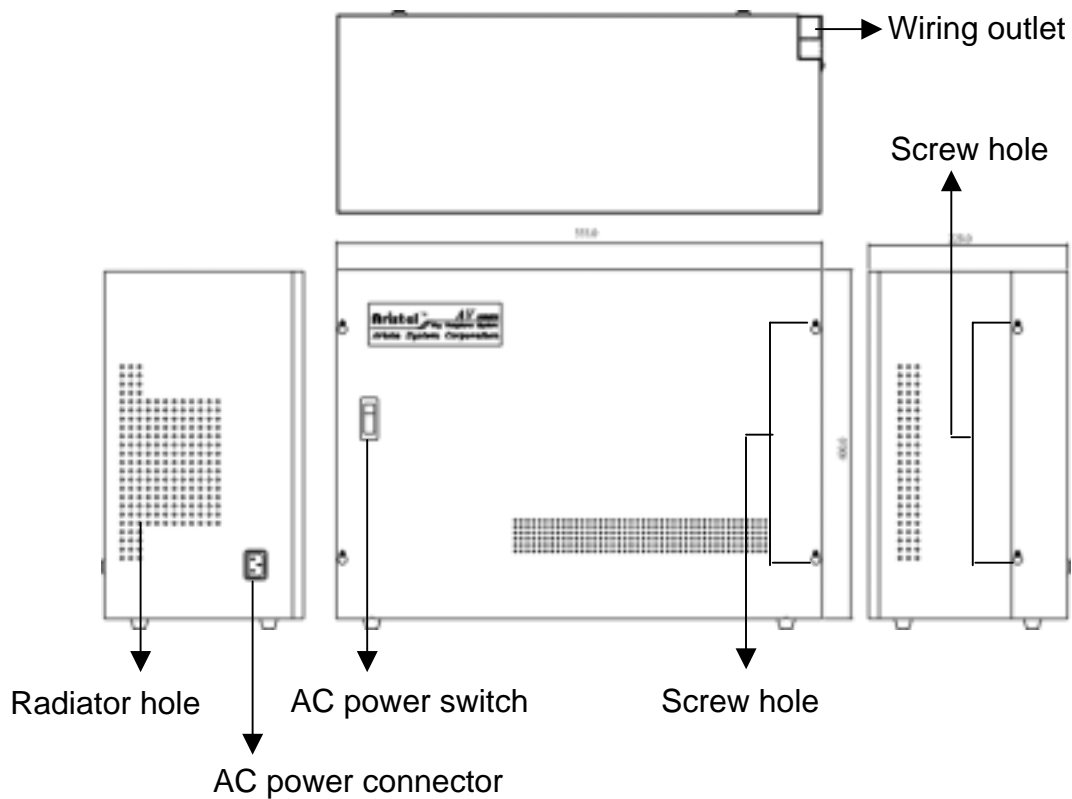
Volume Digital Control

Zone Paging

Mean have to add optional  
equipment

## 9. PCB and CABINET LAYOUT

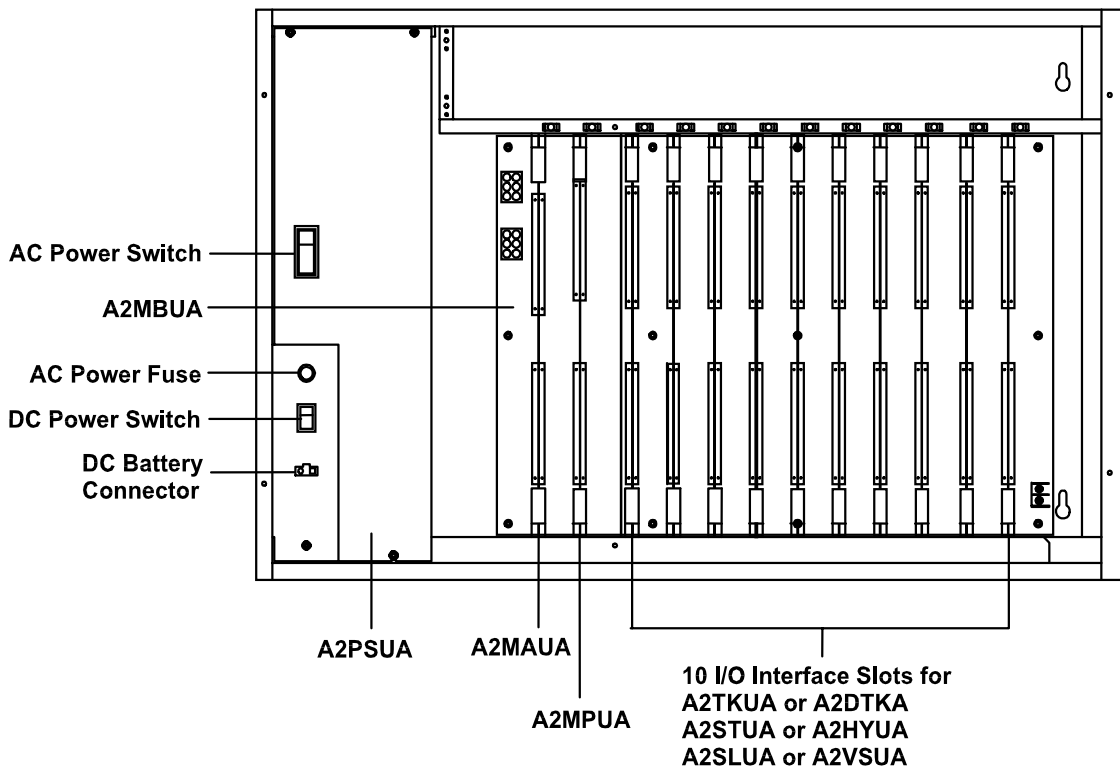
### 9.1 System Three-Dimensional Layout (AV64/256 ; One Cabinet)



**Figure 1.1 AV64/256 System Three-Dimensional Layout**

1. **System dimension** : 555mm W × 228mm D × 400mm H
2. **System AC Power** : 115/230VAC ± 10%, 60/50 Hz

## 9.2 AV64 System Inter-Circuit Layout



**Figure 1.2 AV-64 Installation Layout**

1. AV-64 Max. Capacity: 80 Ports / 10 Slots
2. CO Line Max. Capacity: 20
3. Intercom Line Max. Capacity: 80

9.3 AV256 System one cabinet Inter-Circuit Layout

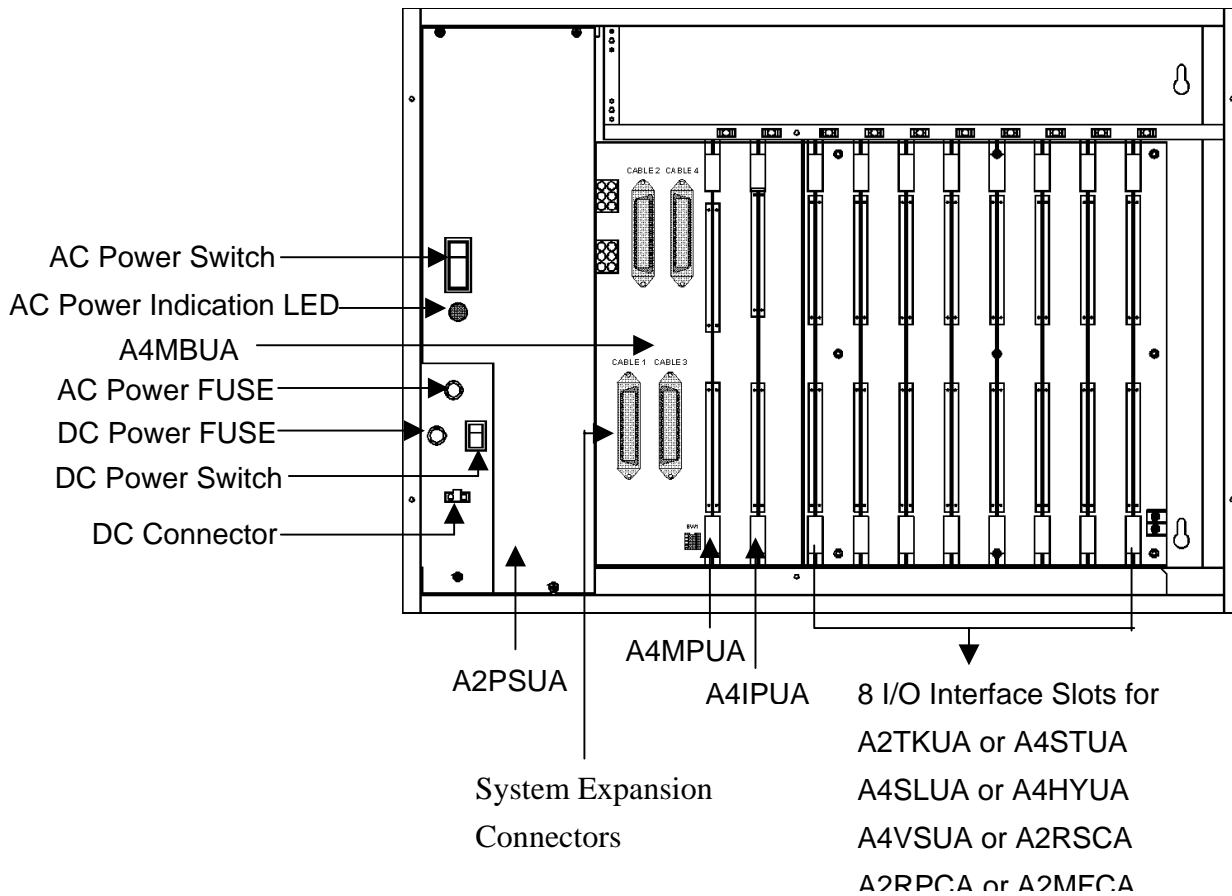
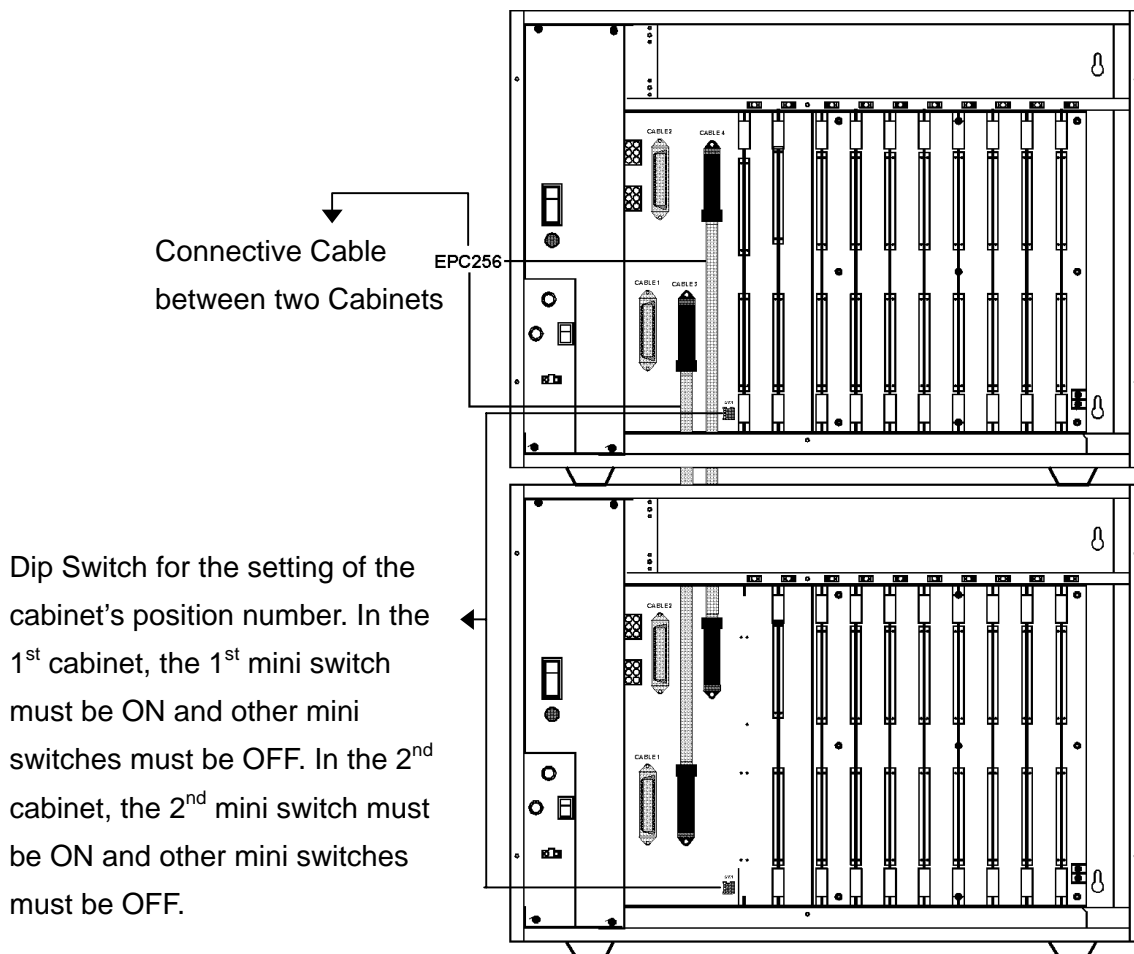


Figure 1.3 AV-256 (one cabinet) Installation Layout

1. AV-256 (one cabinet Max. Capacity): 64 Ports / 8 Slots
2. CO Line (one cabinet Max. Capacity): 20
3. Intercom Line (one cabinet Max. Capacity): 64



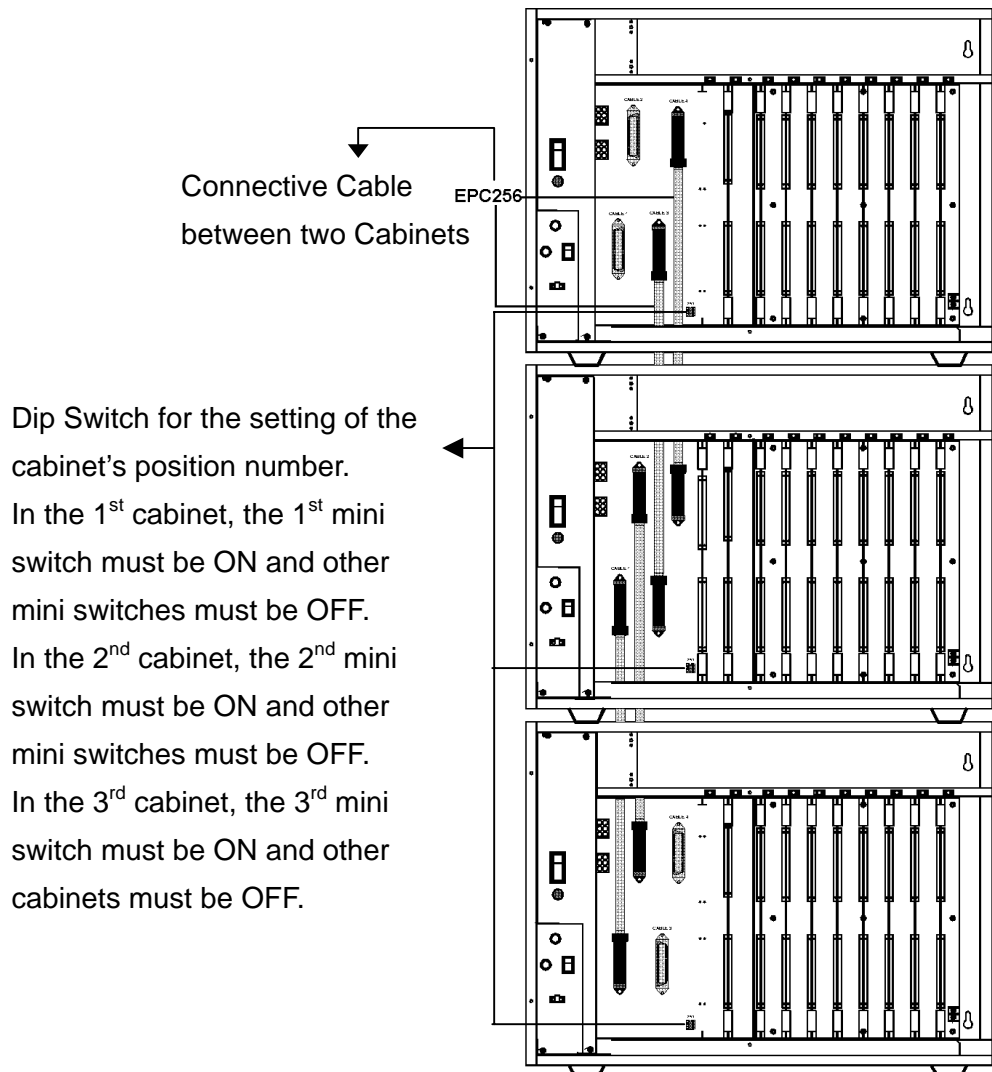
### 9.3.1 AV256 System two cabinets Inter-Circuit Layout



**Figure 1.4 AV256 (two cabinets) Installation Layout**

1. AV-256 (two cabinets Max. Capacity): 128 Ports / 16 Slots
2. CO Line (two cabinets Max. Capacity): 40
3. Intercom Line (two cabinet Max. Capacity): 128

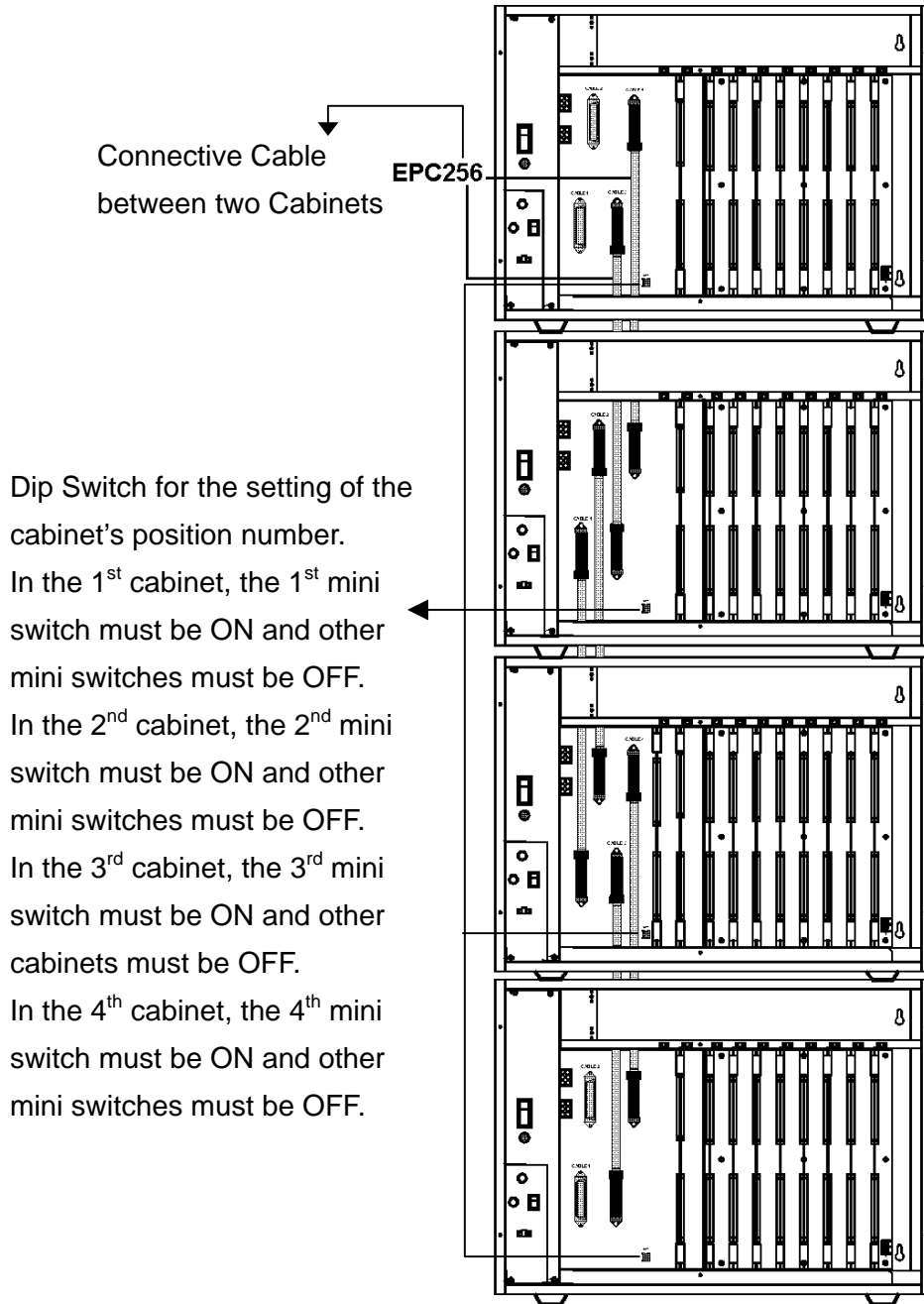
### 9.3.2 AV256 System three cabinets Inter-Circuit Layout



**Figure 1.5 AV256 (three cabinets) Installation Layout**

1. AV-256 (three cabinets Max. Capacity): 192 Ports / 24 Slots
2. CO Line (three cabinets Max. Capacity): 40
3. Intercom Line (three cabinets Max. Capacity): 192

**9.3.3 AV256 System four cabinets Inter-Circuit Layout**



**Figure 1.6 AV256 (four cabinets) Installation Layout**

1. AV-256 (four cabinets Max. Capacity): 256 Ports / 32 Slots
2. CO Line (four cabinets Max. Capacity): 40
3. Intercom Line (four cabinets Max. Capacity): 256

9.4 AV64/256 System Wall Mounting Installation

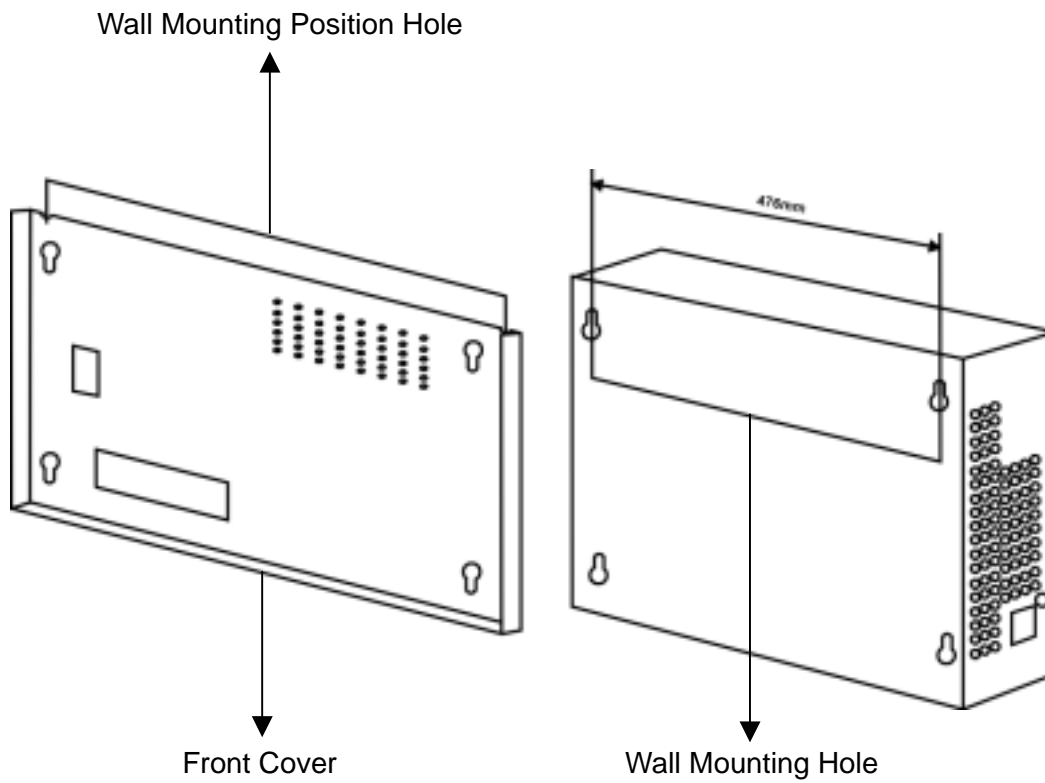


Figure 1.7 AV64/256 System Wall Mount Layout

9.5 A2MBUA (Mother Board Unit ; for AV64)

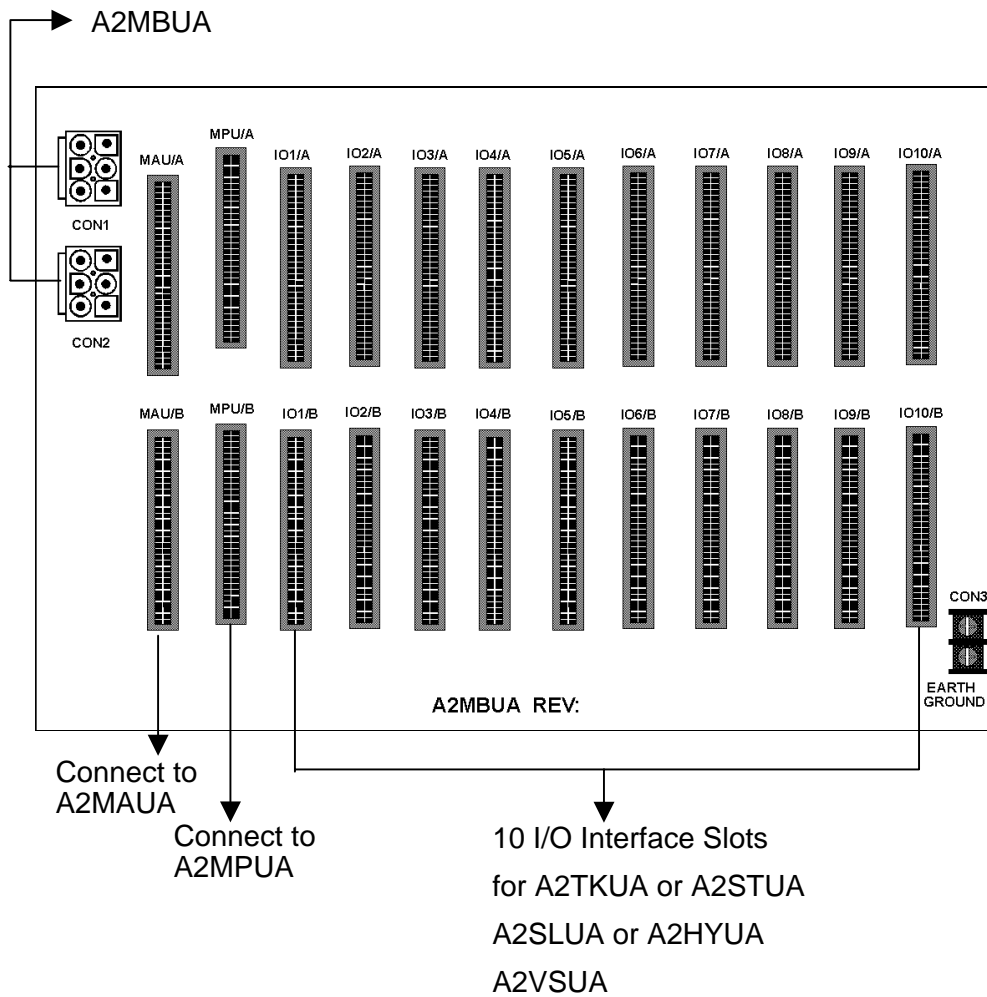


Figure 1.8 A2MBUA (for AV64)

9.6 A4MBUA (Mother Board Unit ; for AV256)

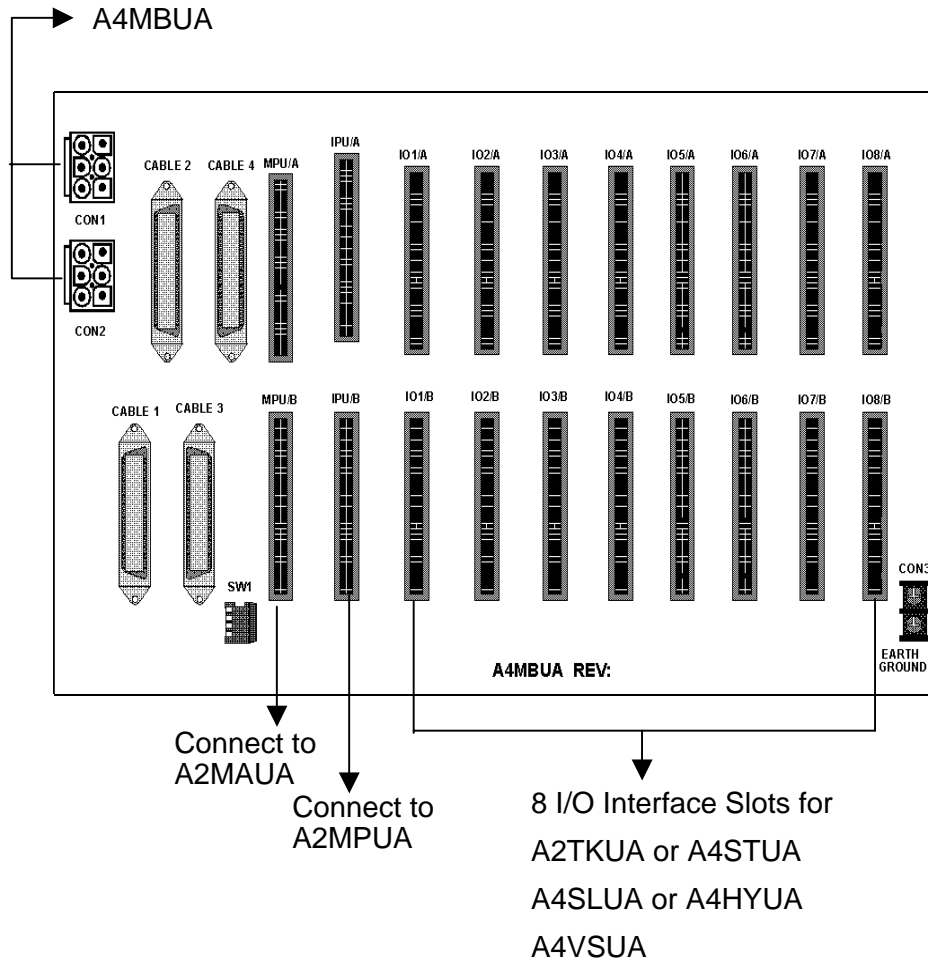


Figure 1.9 A4MBUA (for AV256)

9.7 A2PSUA /A2PWUA (Switching Power Supply)

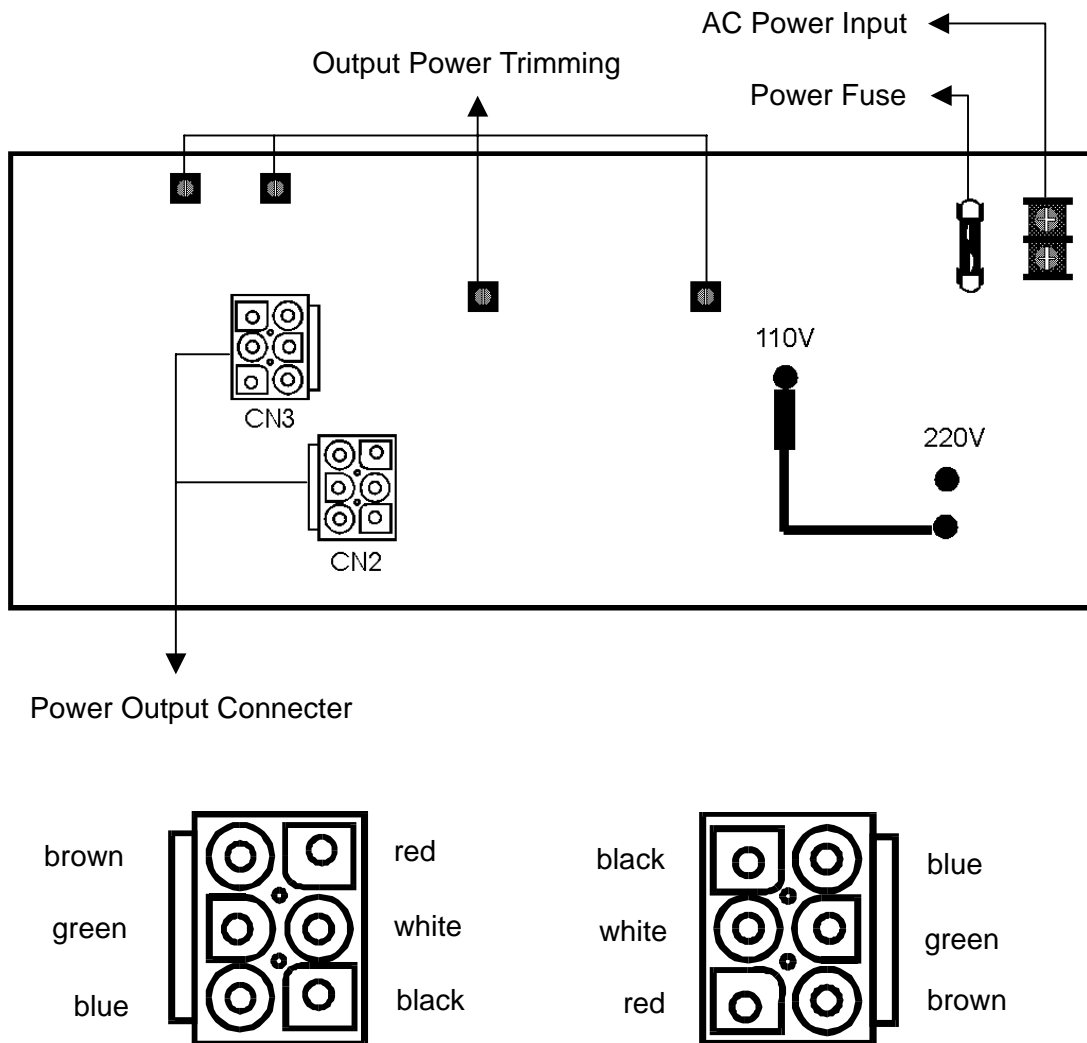


Figure 1.8 A2PSUA / A2PWUA Module Layout

PS : A2PSCA for AV64 ; A2PWUA for AV256

9.8 A2MPUA (Main Processing Unit ; for AV64)

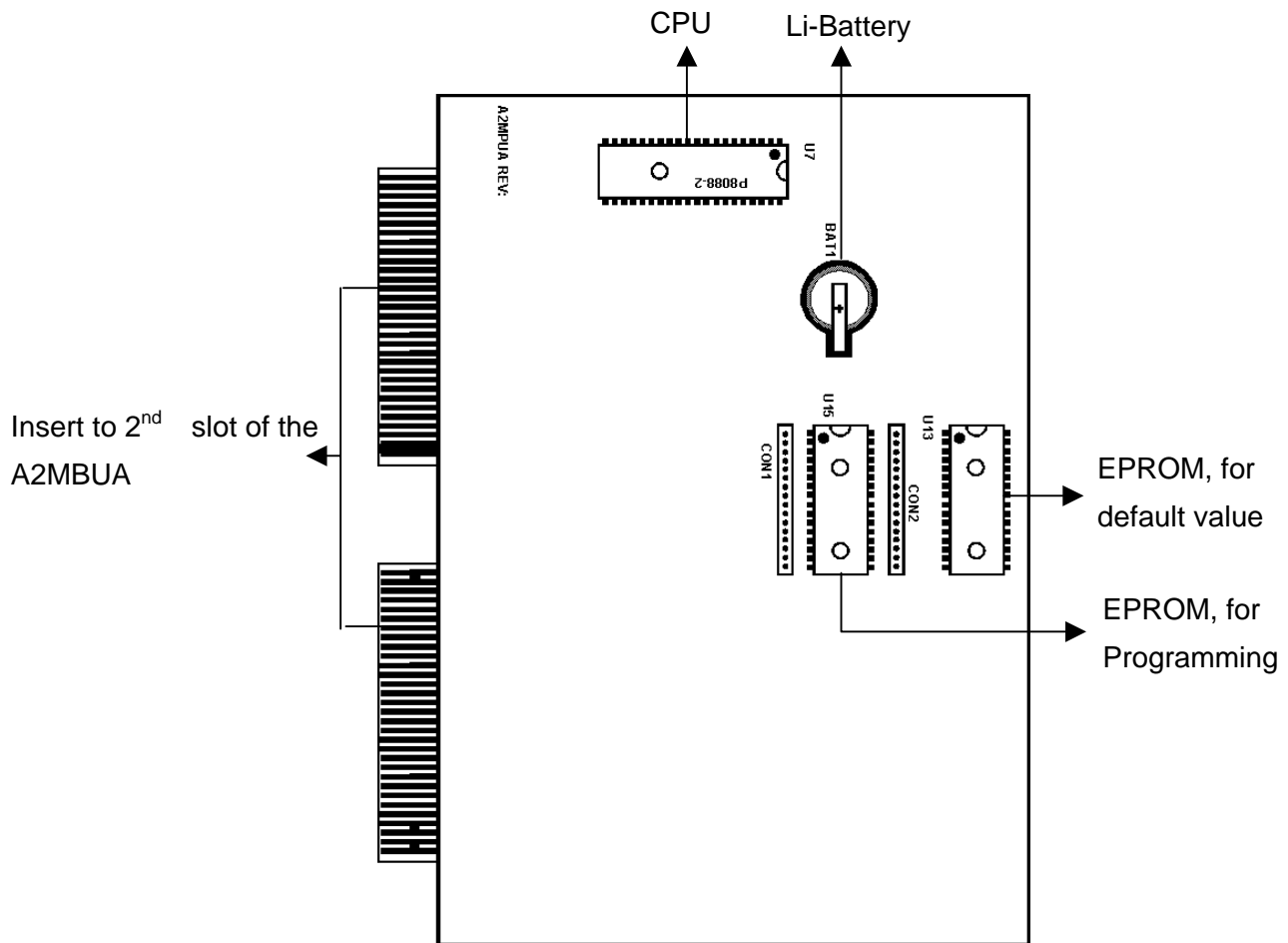


Figure 2.1 A2MPUA (for AV64)



9.9 A2MAUA (Main Auxiliary Unit ; for AV64)

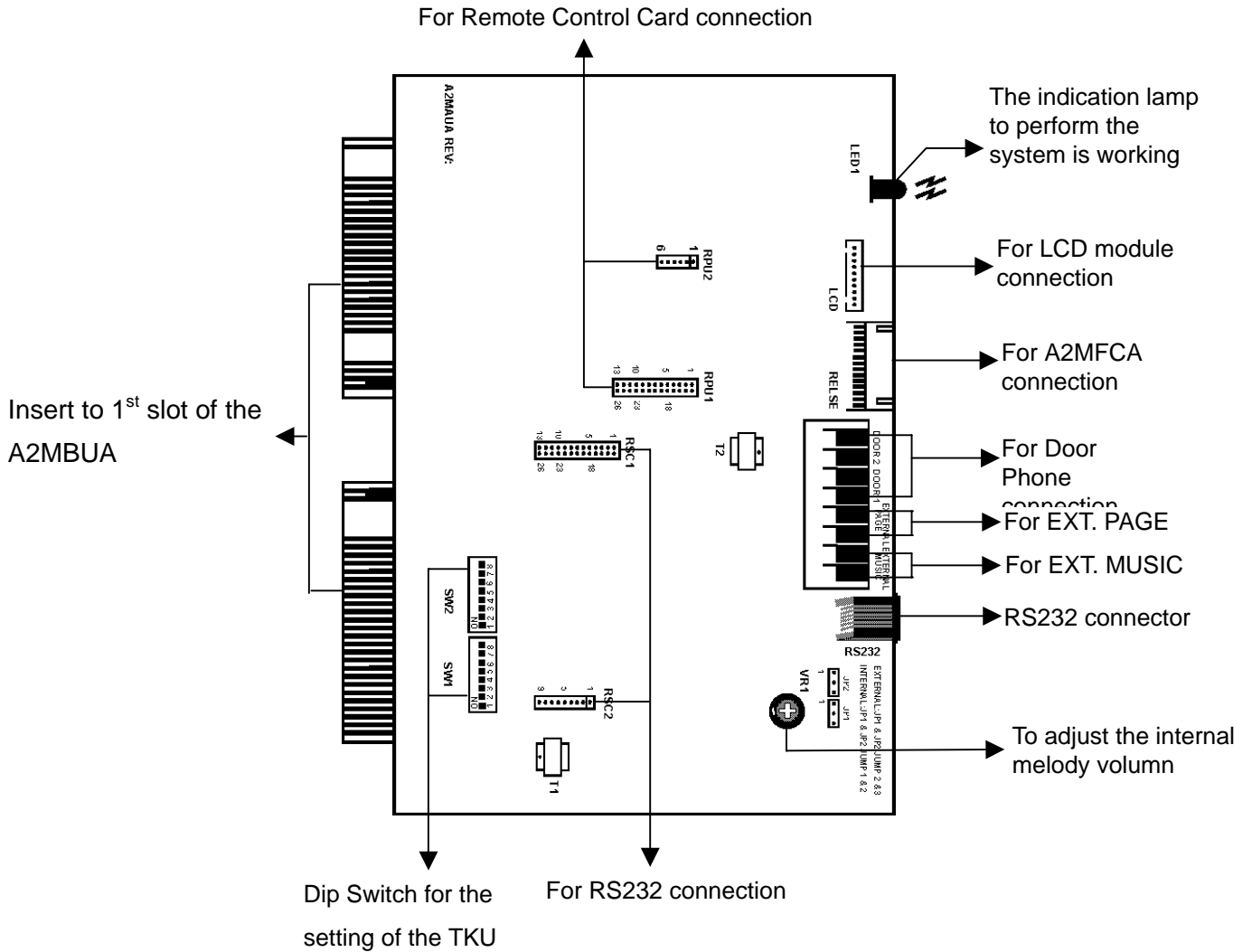


Figure 2.2 A2MAUA (for AV64)

TKU	SW1	SW2
1 pcs.	11111111	11111111
2 pcs.	00001111	11111111
3 pcs.	00000000	11111111
4 pcs.	00000000	00001111
5 pcs.	00000000	00000000

9.10 A4MPUA (Main Processing Unit ; for AV256)

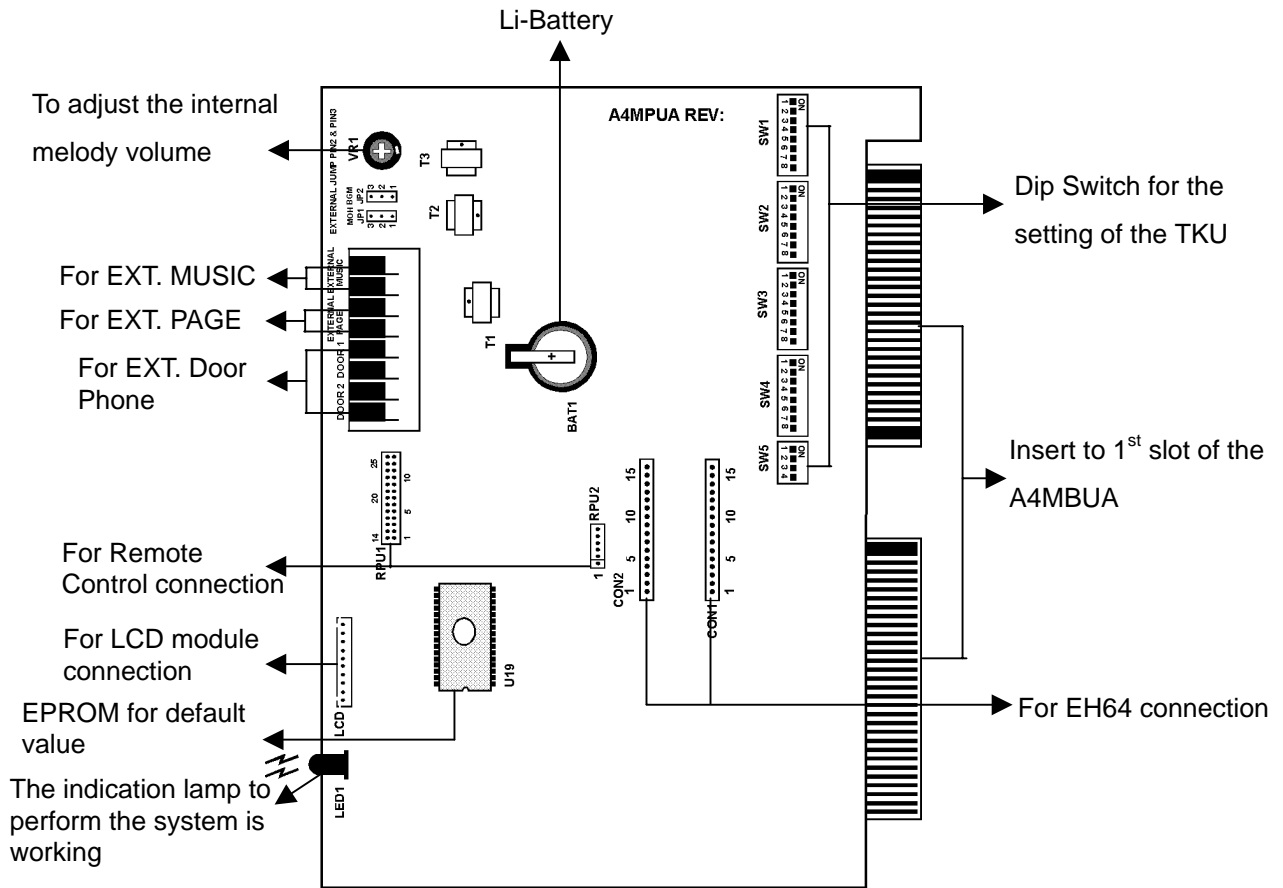


Figure 2.3 A4MPUA (for AV256)

TKU	SW1	SW2	SW3	SW4	SW5
1 pcs.	11111111	11111111	11111111	11111111	1111
2 pcs.	00001111	11111111	11111111	11111111	1111
3 pcs.	00000000	11111111	11111111	11111111	1111
4 pcs.	00000000	00001111	11111111	11111111	1111
∴	∴	∴	∴	∴	∴
10 pcs.	00000000	00000000	00000000	00000000	0000

9.11 A4IPUA (Interface Processing Unit ; for AV256)

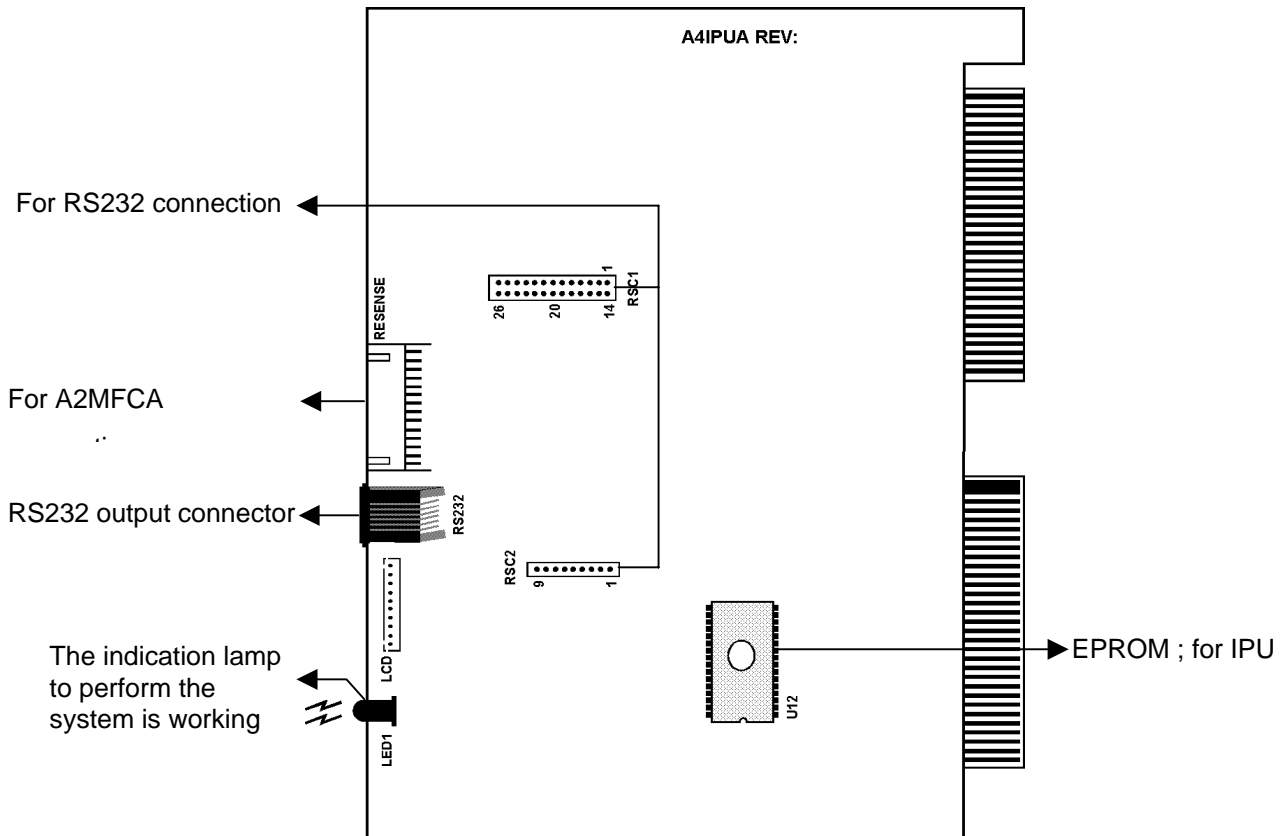


Figure 2.4 A4IPUA (AV256)

9.12 A2TKUA (TRUNK UNIT, 4 TRUNK PORTS; For AV64/256 )

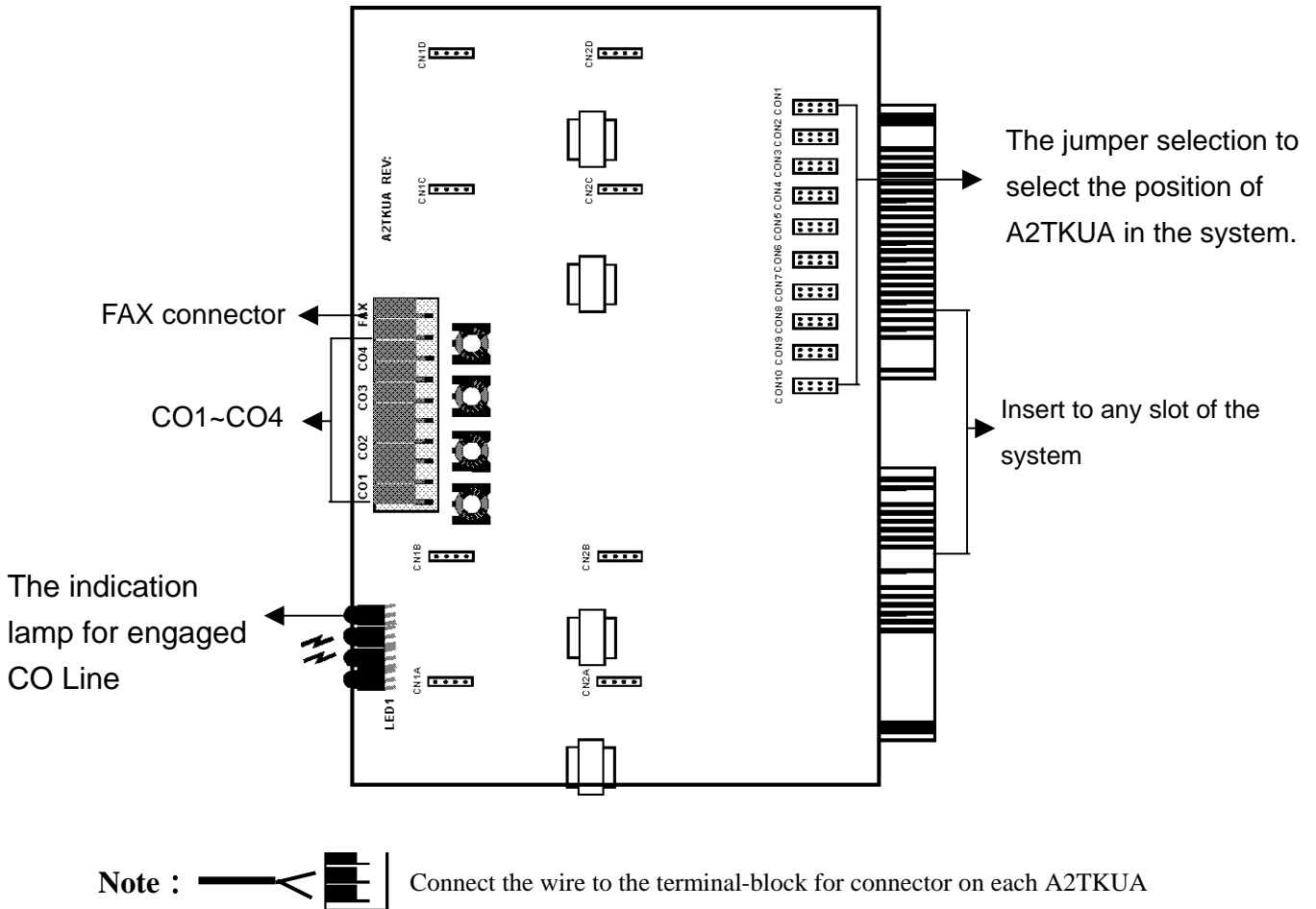


Figure 2.5 A2TKUA (for AV64/256)

Note: If A2TKUA is installed in the first position among A2TKUA cards, it's CON1 must be all shorted by jumpers. If A2TKUA is installed in the second position among A2TKUA cards, then it's CON2 must be shorted by jumpers, and so on for CON3 and CON4 to CON5 are for the future use. CON6 ~CON10 reserve for AV256.

9.13 A2STUA (KEY STATION UNIT, 8 KEY STATION PORTS ; for AV64)

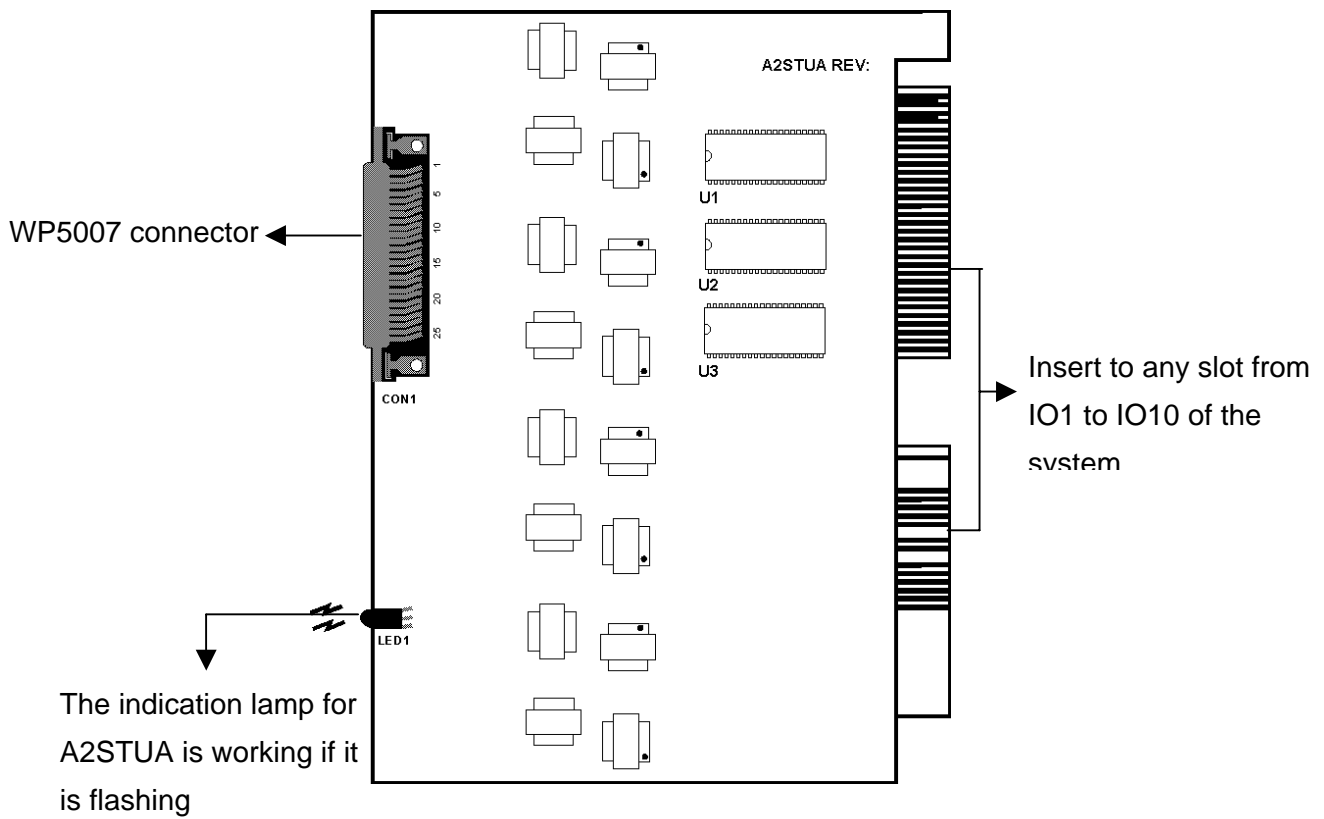
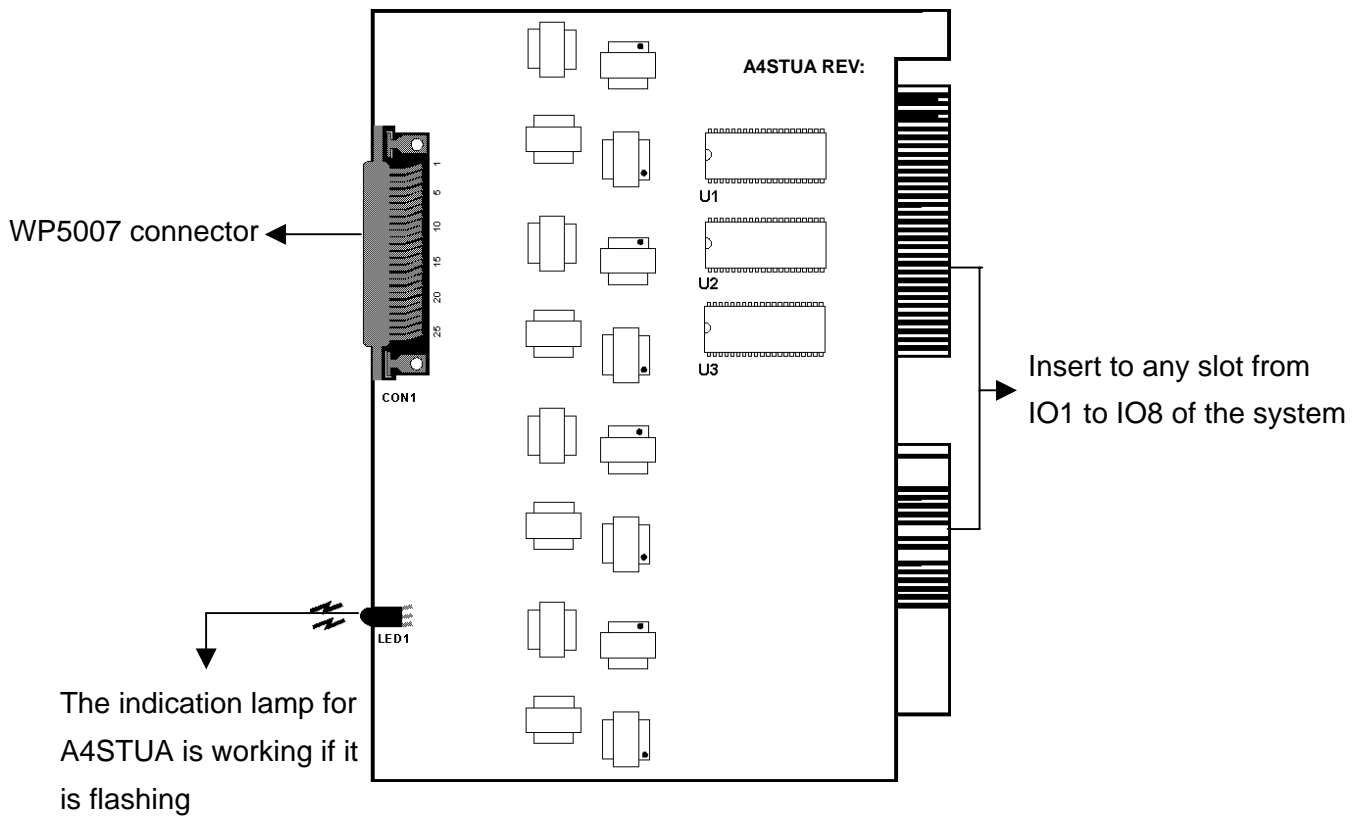


Figure 2.6 A2STUA (for AV64)

PS : WP5007 refer to WP5007 wiring (Page37).

**9.14 A4STUA (KEY STATION UNIT, 8 KEY STATION PORTS ; for AV256)**



**Figure 2.7 A4STUA (for AV256)**

PS : WP5007 refer to WP5007 wiring (Page37).

9.15 A2SLUA (Single Line Station Unit ; for AV64)

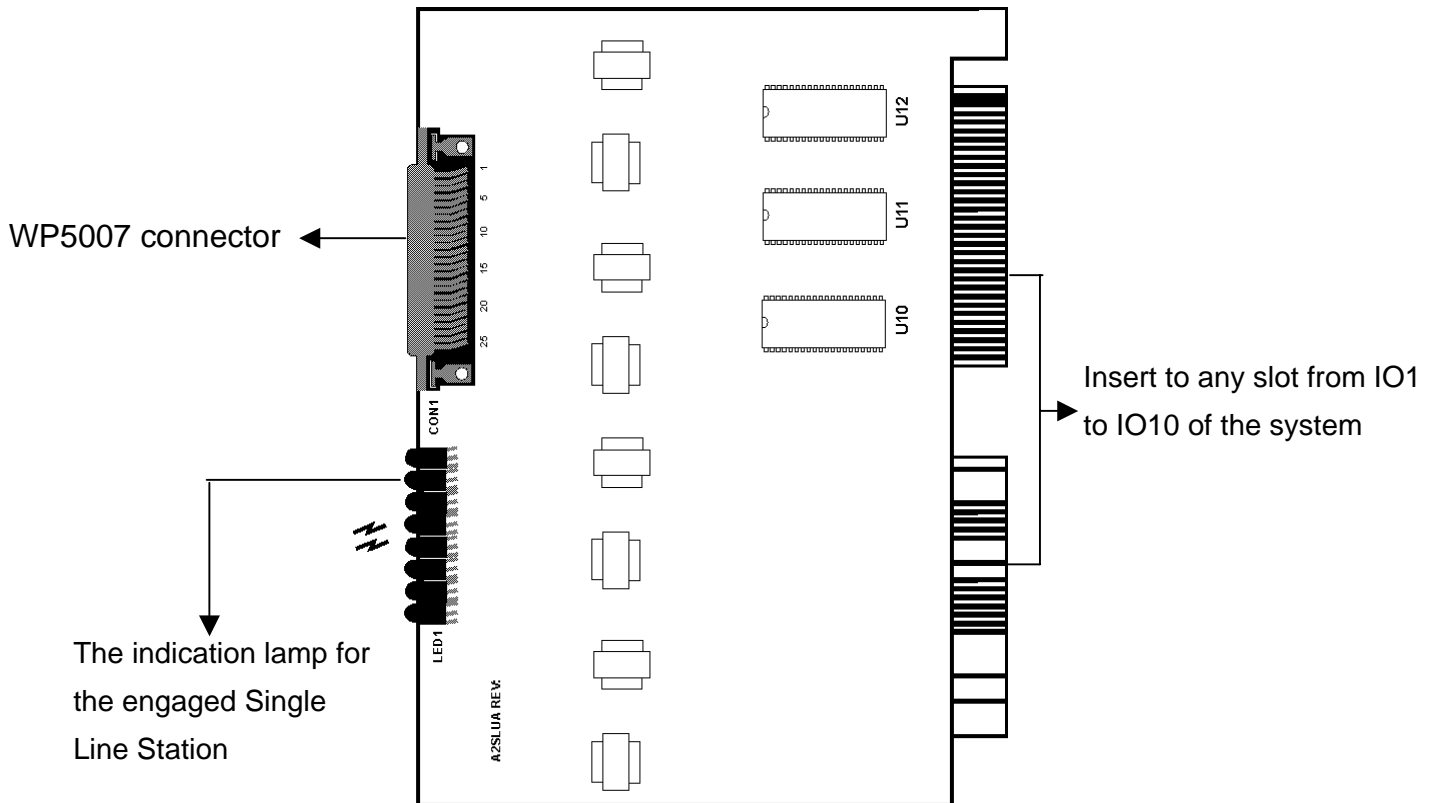
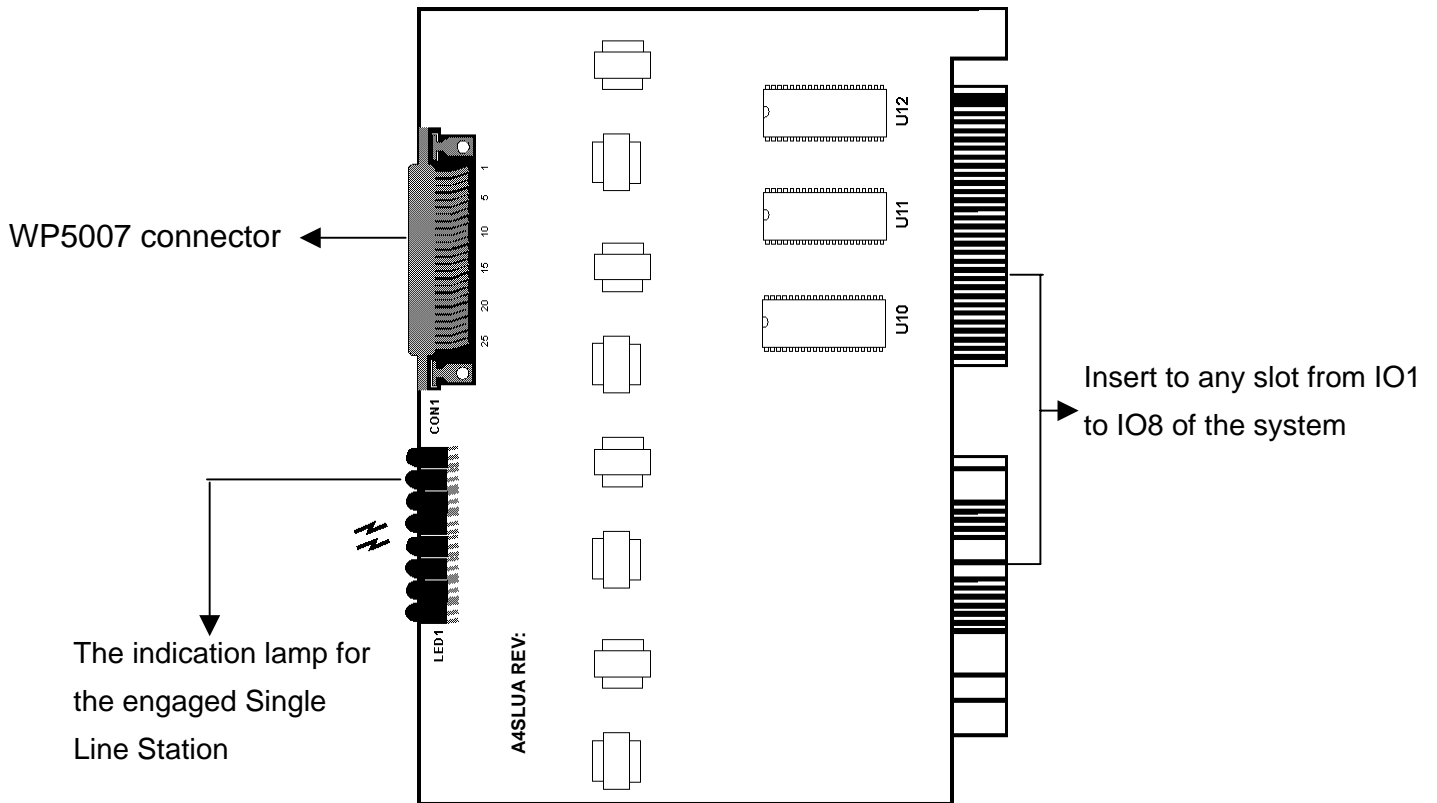


Figure 2.8 A2SLUA (for AV64)

PS : WP5007 refer to WP5007 wiring (Page37).

**9.16 A4SLUA(Single Line Station Unit ; for AV256)**



**Figure 2.9 A4SLUA (for AV256)**

PS : WP5007 refer to WP5007 wiring (Page37).



9.17 A2HYUA (Hybrid Station Unit ; for AV64)

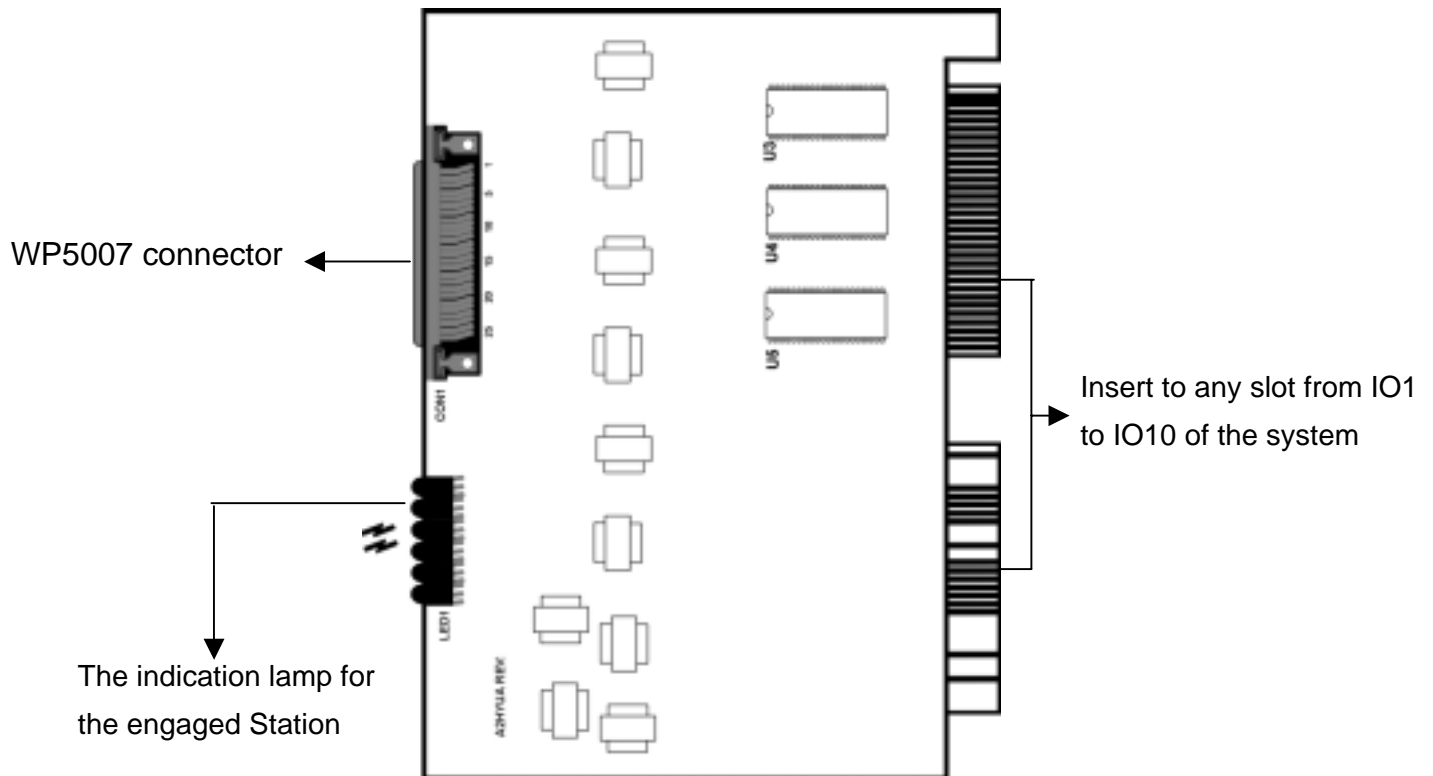
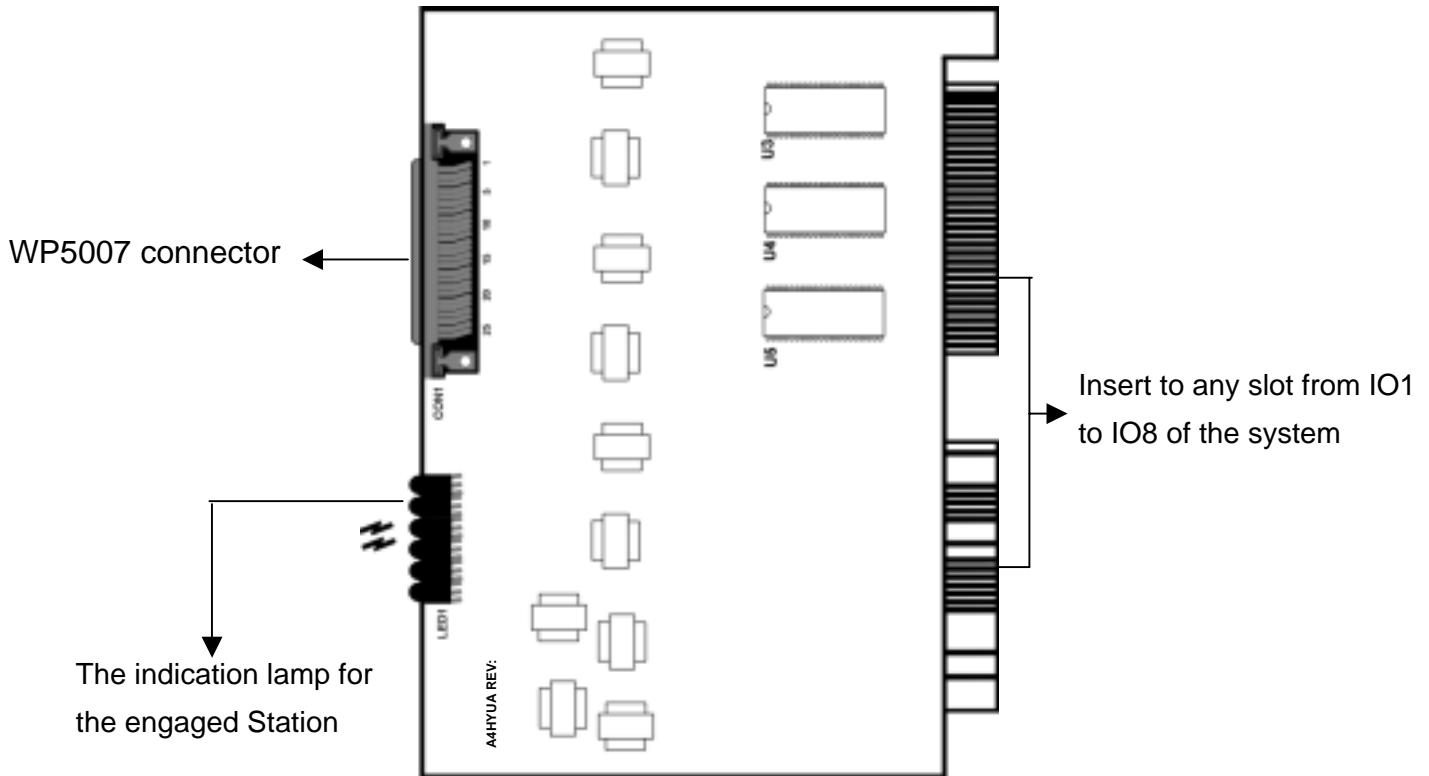


Figure 3.0 A2HYUA (for AV64)

Consisting of (2 Key Station Ports) + (6 Single Line Station Ports) and One Port per Station.

PS : WP5007 refer to WP5007 wiring (Page37).

**9.18 A4HYUA (Hybrid Station Unit ; for AV256)**



**Figure 3.1 A4HYUA (for AV256)**

Consisting of (2 Key Station Ports) + (6 Single Line Station Ports) and One Port per Station.

PS : WP5007 refer to WP5007 wiring (Page37).

9.19 A2VSUA (Voice Service Unit ; for AV64)

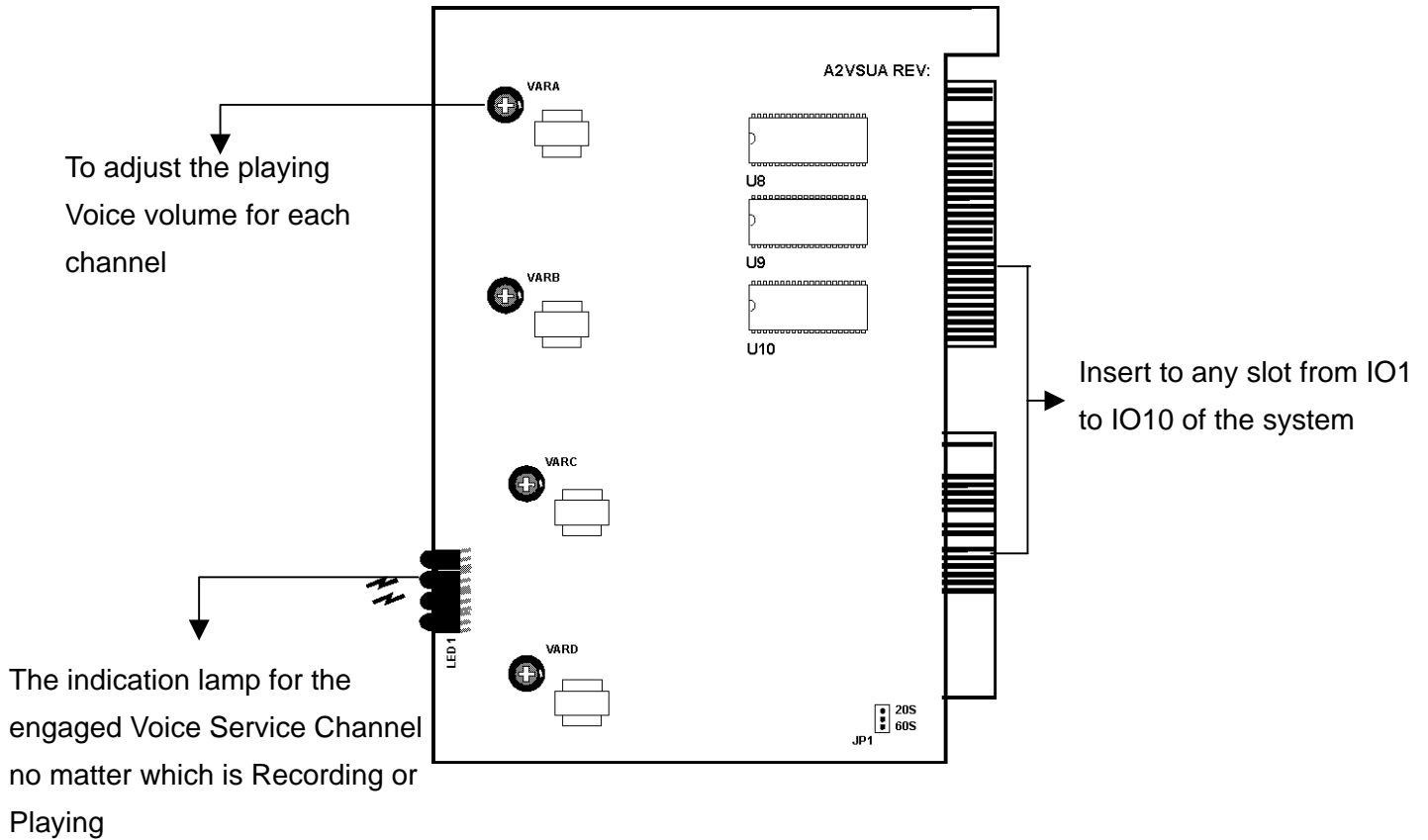
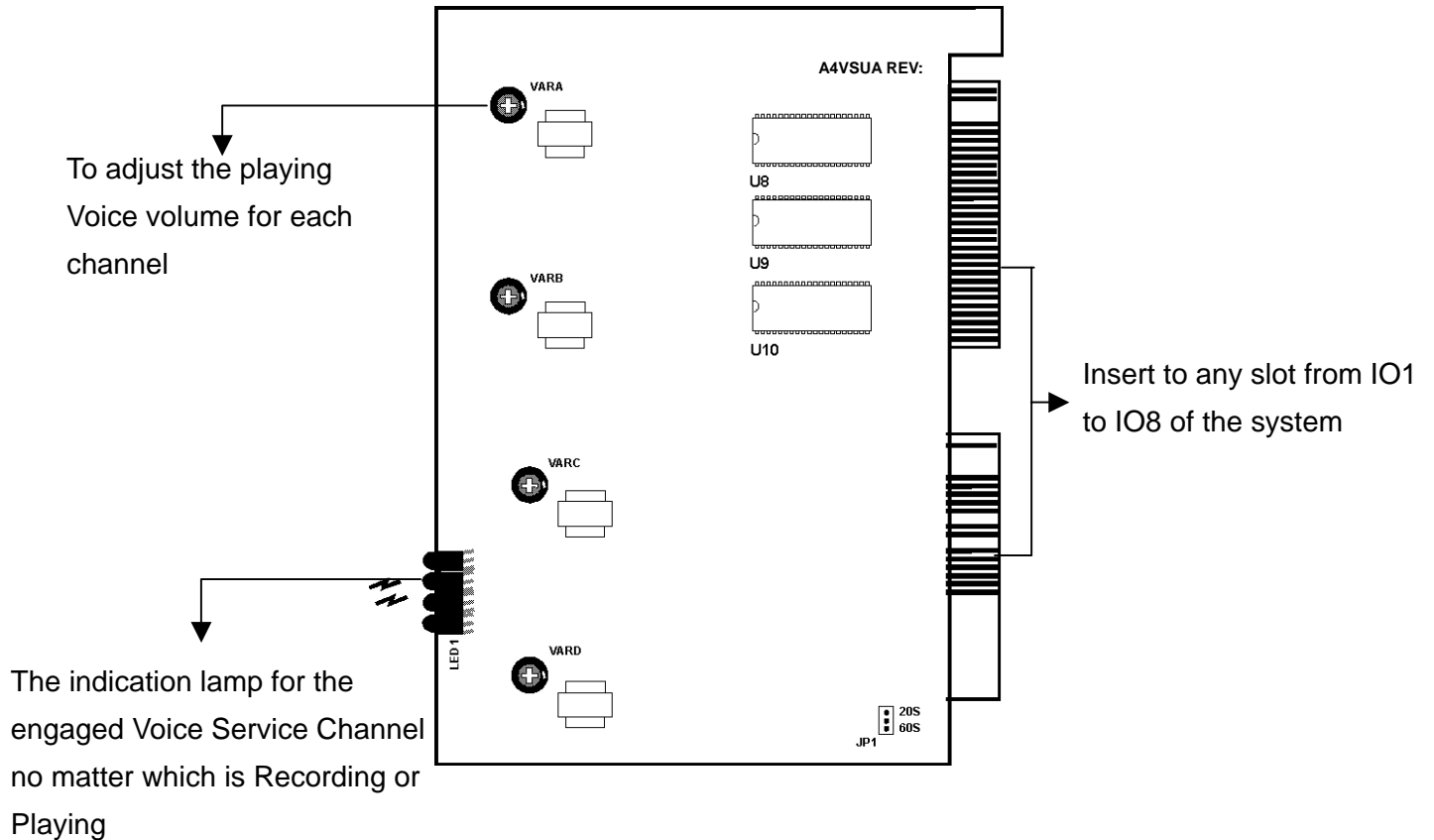


Figure 3.2 A2VSUA (for AV64)

PS: consisting of 4 Voice Channels (60 seconds per channel)

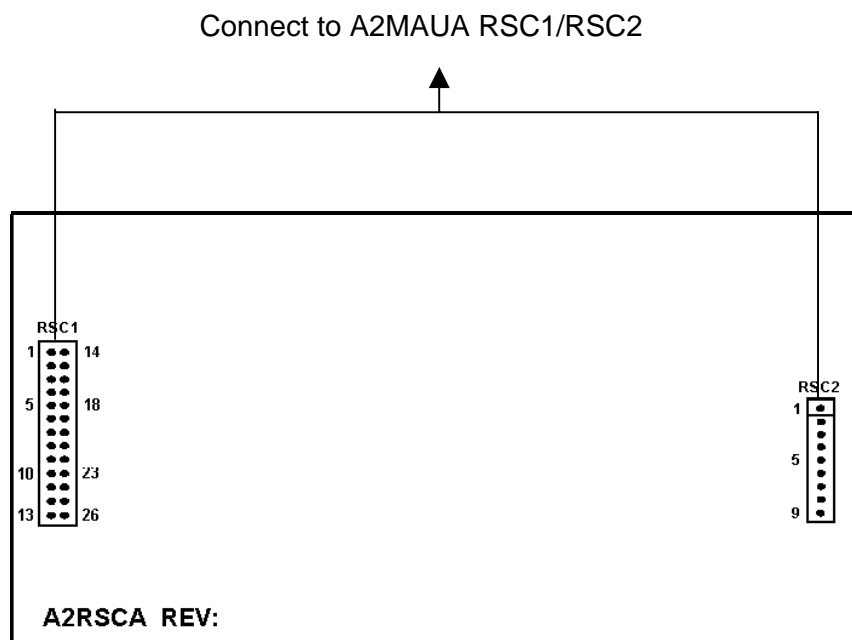
**9.20 A4VSUA (Voice Service Unit ; for AV256)**



**Figure 3.3 A4VSUA (for AV256)**

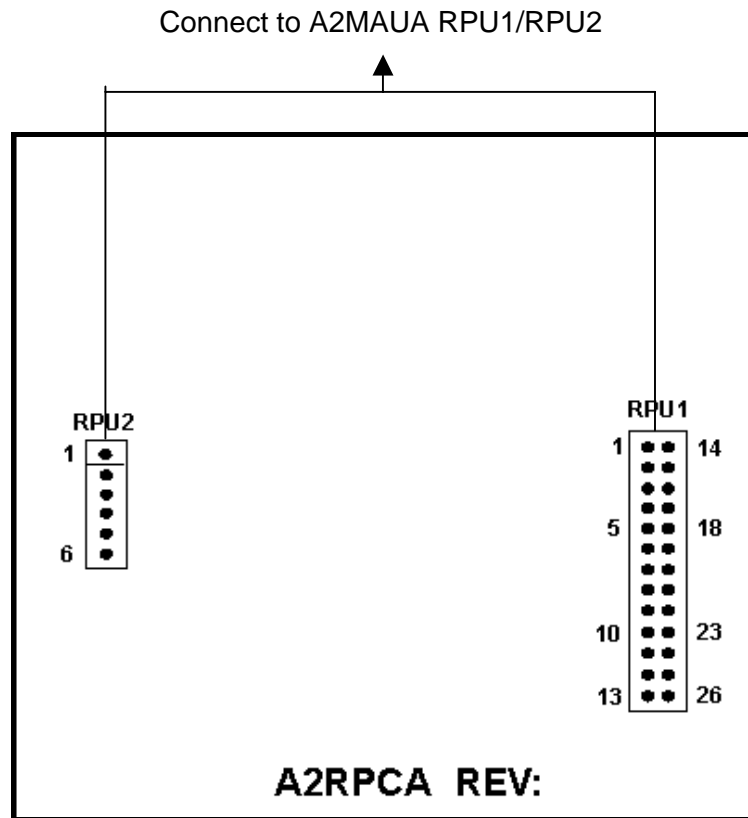
PS: consisting of 4 Voice Channels (60 seconds per channel)

**9.21 A2RSCA (RS232 CARD, for SMDR, Serial Port Design ; for AV64/256)**



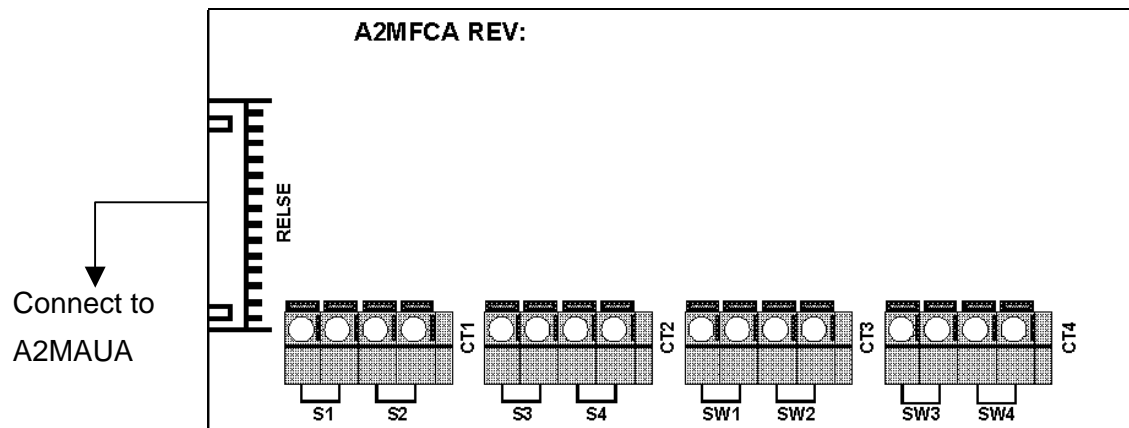
**Figure 3.4 A2RSCA (for AV64/256)**

**9.22 A2RPCA (Remote Programming Card ; for AV64/256)**



**Figure 3.5 A2RPCA (for AV64/256)**

### 9.23 A2MFCA (Multi Function Card ; for AV64/256)



**Figure 3.6 A2MFCA (for AV64/256)**

Note : S1~S4 ; for external sensors connection. S1 is for the 1<sup>st</sup> sensor, S2 is for the 2<sup>nd</sup> sensor, S3 is for the 3<sup>rd</sup> sensor and S4 is for the 4<sup>th</sup> sensor.

SW1~SW4 ; for the external devices connection to system's relays for switches control. SW1 is for the 1<sup>st</sup> relay, SW2 is for the 2<sup>nd</sup> relay, SW3 is for the 3<sup>rd</sup> relay and SW4 is for the 4<sup>th</sup> relay.

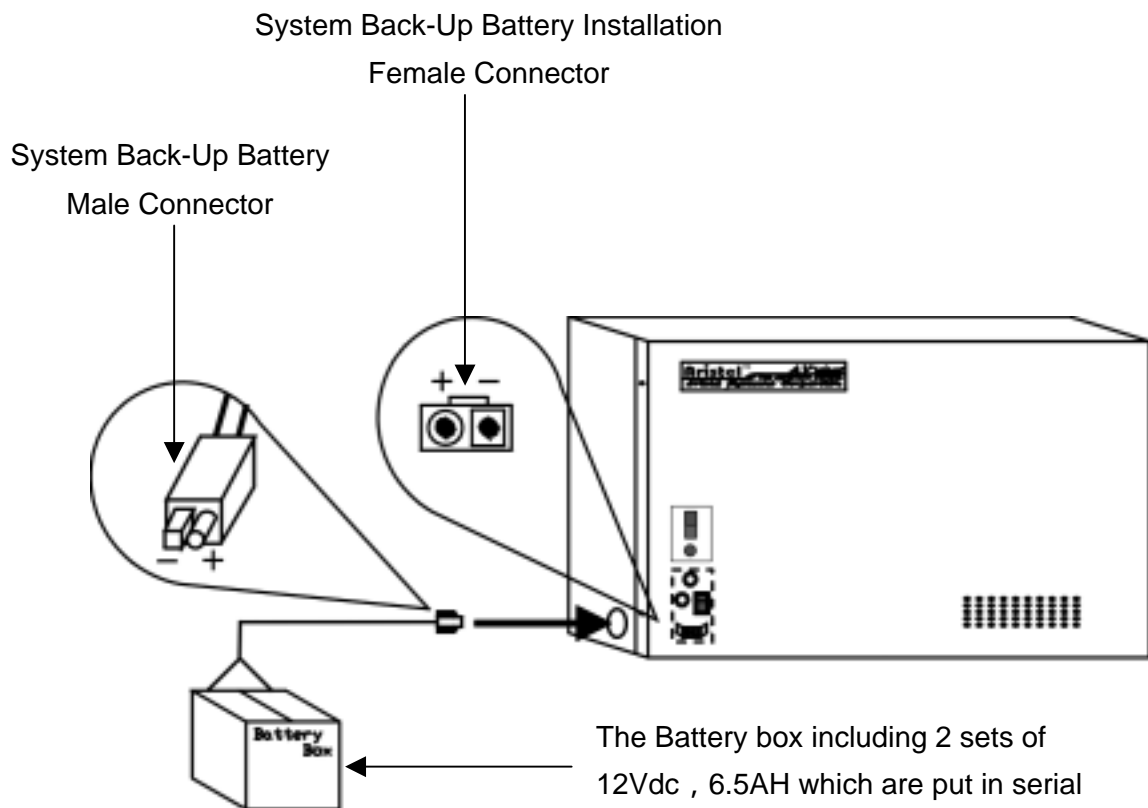
**9.24 WP5007 Wiring****50 Pins Female Amphenol Connector Layout**

	Status		Status
Pin1	AT1 (for ST1)	Pin26	AR1(for ST1)
Pin2	BT1 (for ST1)	Pin27	BR1(for ST1)
Pin3	AT2 (for ST2)	Pin28	AR2 (for ST2)
Pin4	BT2 (for ST2)	Pin29	BR2 (for ST2)
Pin5	AT3 (for ST3)	Pin30	AR3 (for ST3)
Pin6	BT3 (for ST3)	Pin31	BR3 (for ST3)
Pin7	AT4 (for ST4)	Pin32	AR4 (for ST4)
Pin8	BT4 (for ST4)	Pin33	BR4 (for ST4)
Pin9	AT5 (for ST5)	Pin34	AR5 (for ST5)
Pin10	BT5 (for ST5)	Pin35	BR5 (for ST5)
Pin11	AT6 (for ST6)	Pin36	AR6 (for ST6)
Pin12	BT6 (for ST6)	Pin37	BR6 (for ST6)
Pin13	AT7 (for ST7)	Pin38	AR7 (for ST7)
Pin14	BT7 (for ST7)	Pin39	BR7 (for ST7)
Pin15	AT8 (for ST8)	Pin40	AR8 (for ST8)
Pin16	BT8 (for ST8)	Pin41	BR8 (for ST8)
Pin17	No Connection	Pin42	No Connection
Pin18	No Connection	Pin43	No Connection
Pin19	No Connection	Pin44	No Connection
Pin20	No Connection	Pin45	No Connection
Pin21	No Connection	Pin46	No Connection
Pin22	No Connection	Pin47	No Connection
Pin23	No Connection	Pin48	No Connection
Pin24	No Connection	Pin49	No Connection
Pin25	No Connection	Pin50	No Connection



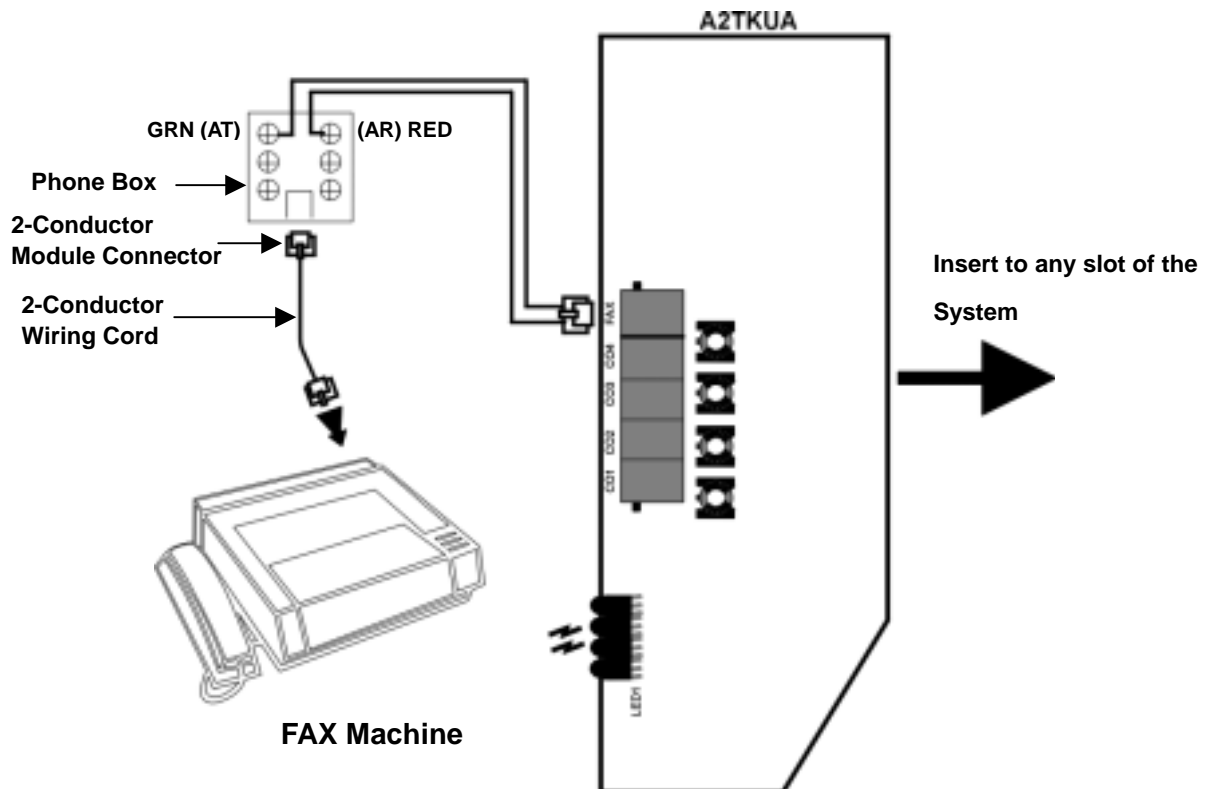
## 10. System Installation

### 10.1 System Back-up Battery Installation



**Figure 3.7 Battery Back-Up Installation Layout**

## 10.2 FAX machine Installation



**Figure 3.8 FAX Machine Installation Layout**

- There is one FAX path in each A2TKUA interface card. The path is controlled by FAX Monitor ability. The FAX path is paralleled with the fourth trunk (CO4) in each A2TKUA.
- Using 2-conductor wiring cable to the fifth RJ11 Jack (FAX) on A2TKUA.

### 10.3 Key Telephone Installation

#### 10.3.1 General key Station Installation

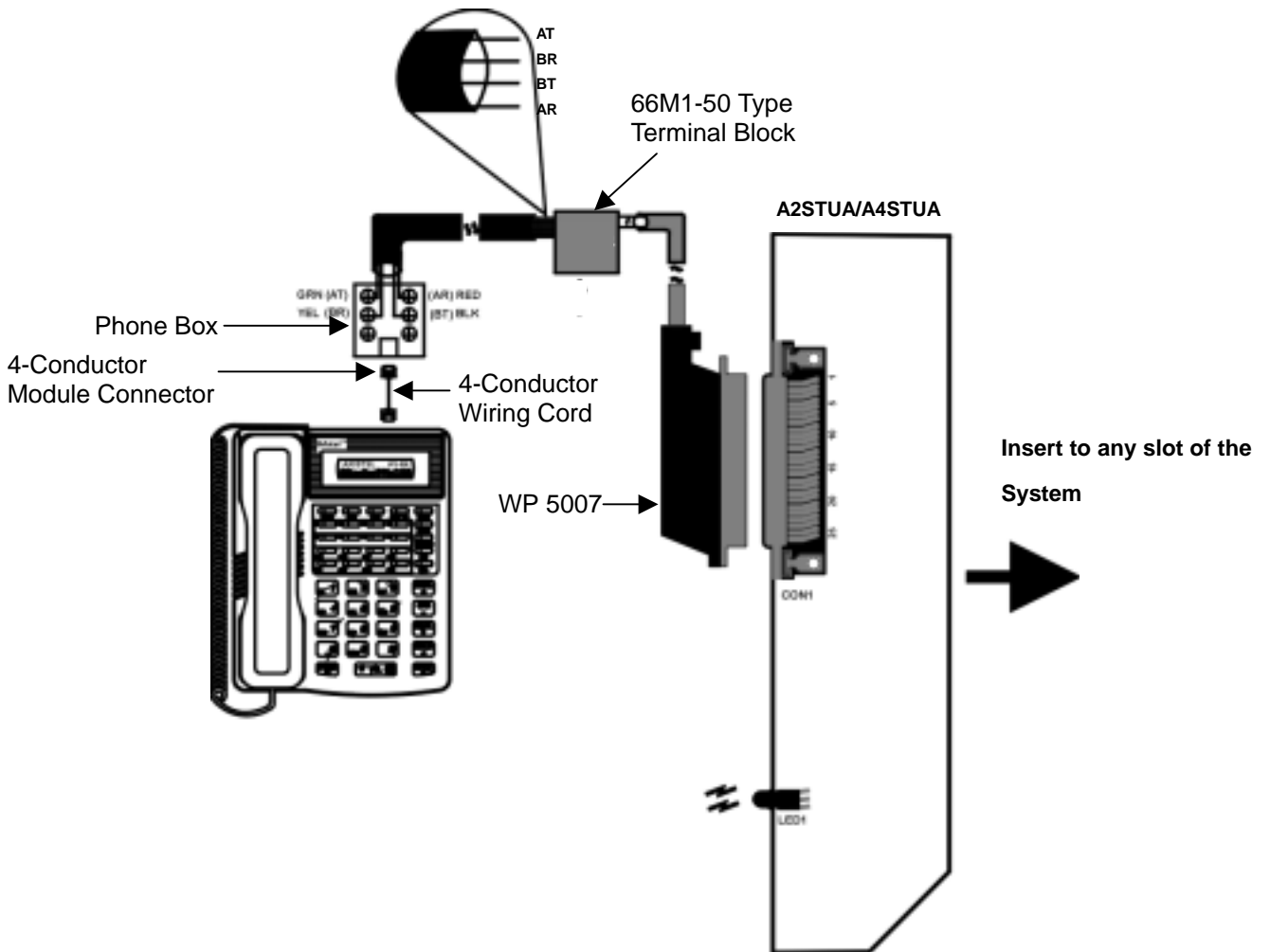


Figure 3.9 General Key Station Installation Layout

### 10.3.2 OHCA Key Station Installation

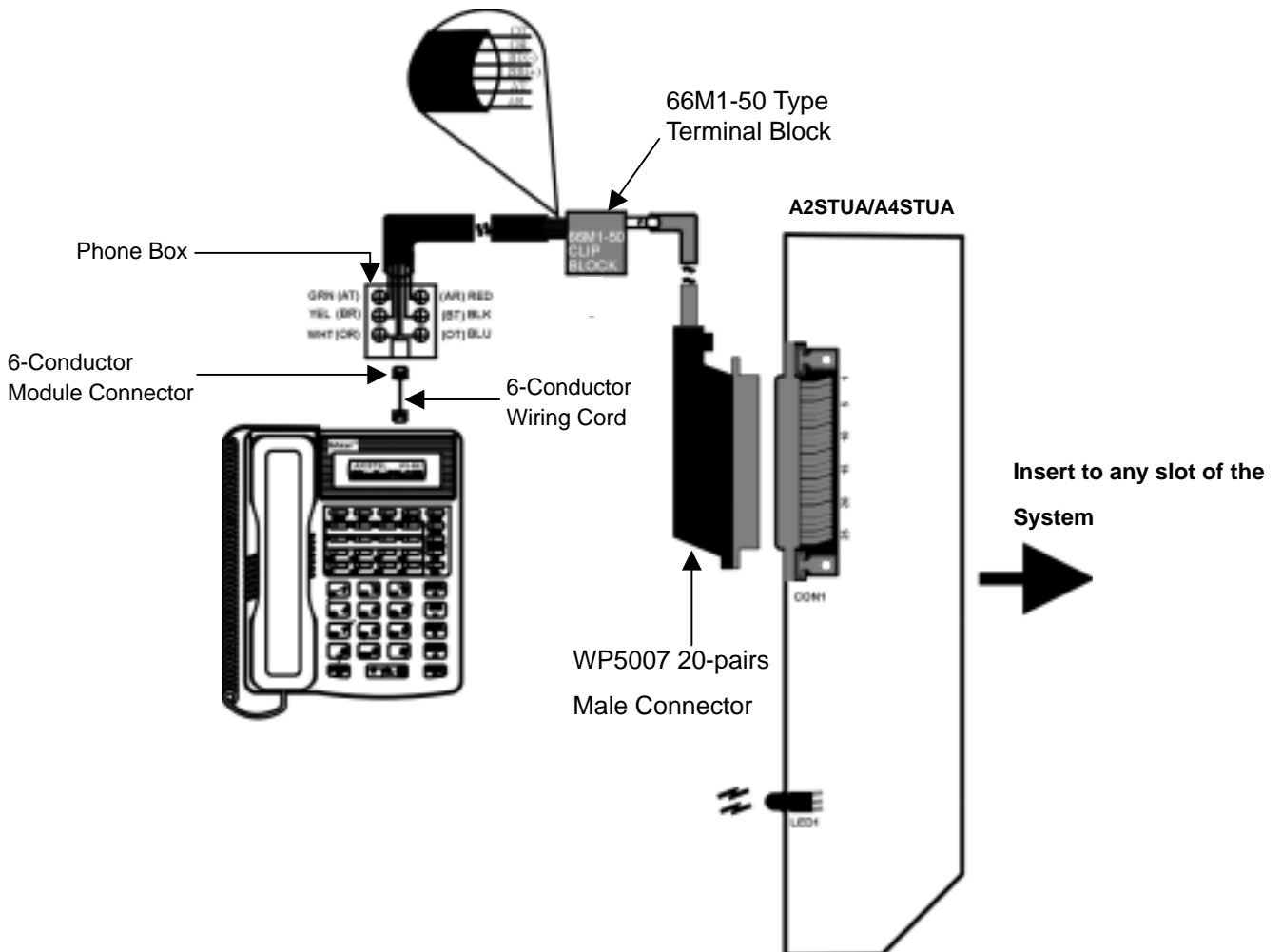


Figure 4.0 OHCA Key Station Installation Layout

- The Key Telephone for OHCA installation must be **KP10D** (LCD+Handsfree) or **KP10SH** (Standard Phone with Handsfree).
- OR/OT: Audio Pair of OHCA, OR = Receiving (White Color), OT = Transmission (Blue Color). **This Audio pair is and must be come from “AT8” and “AR8” which is for the eight (8th) Key Station.**

### 10.3.3 Single Line Telephone Installation

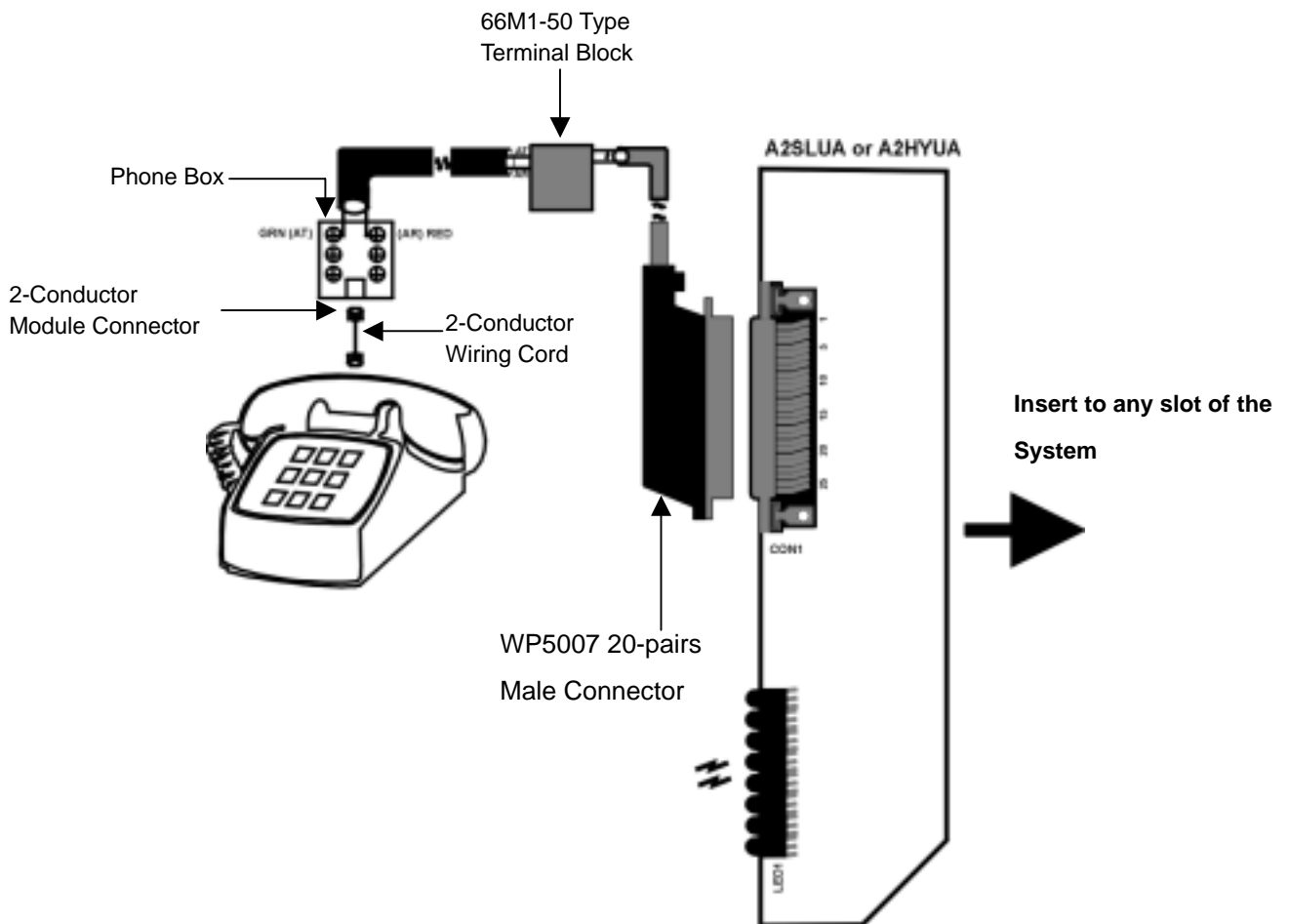


Figure 4.1 Single Line Telephone Installation Layout

### 10.4 Door Phone Installation

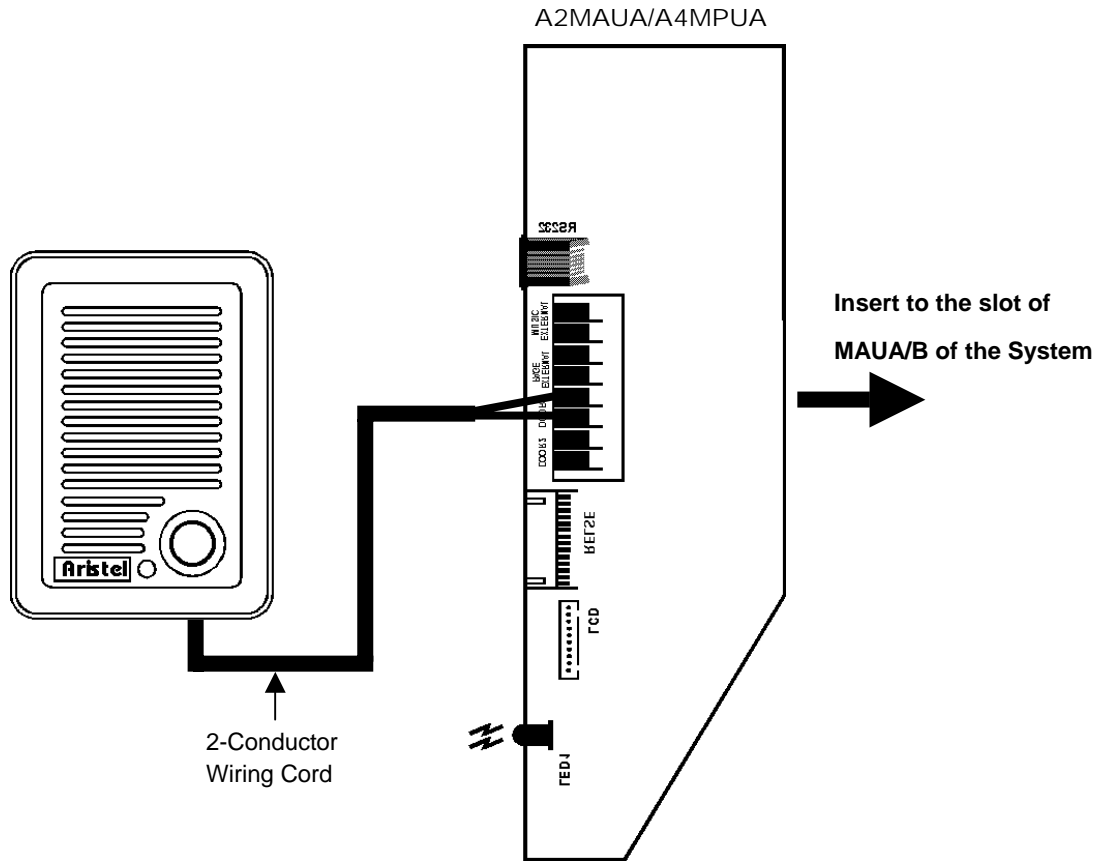
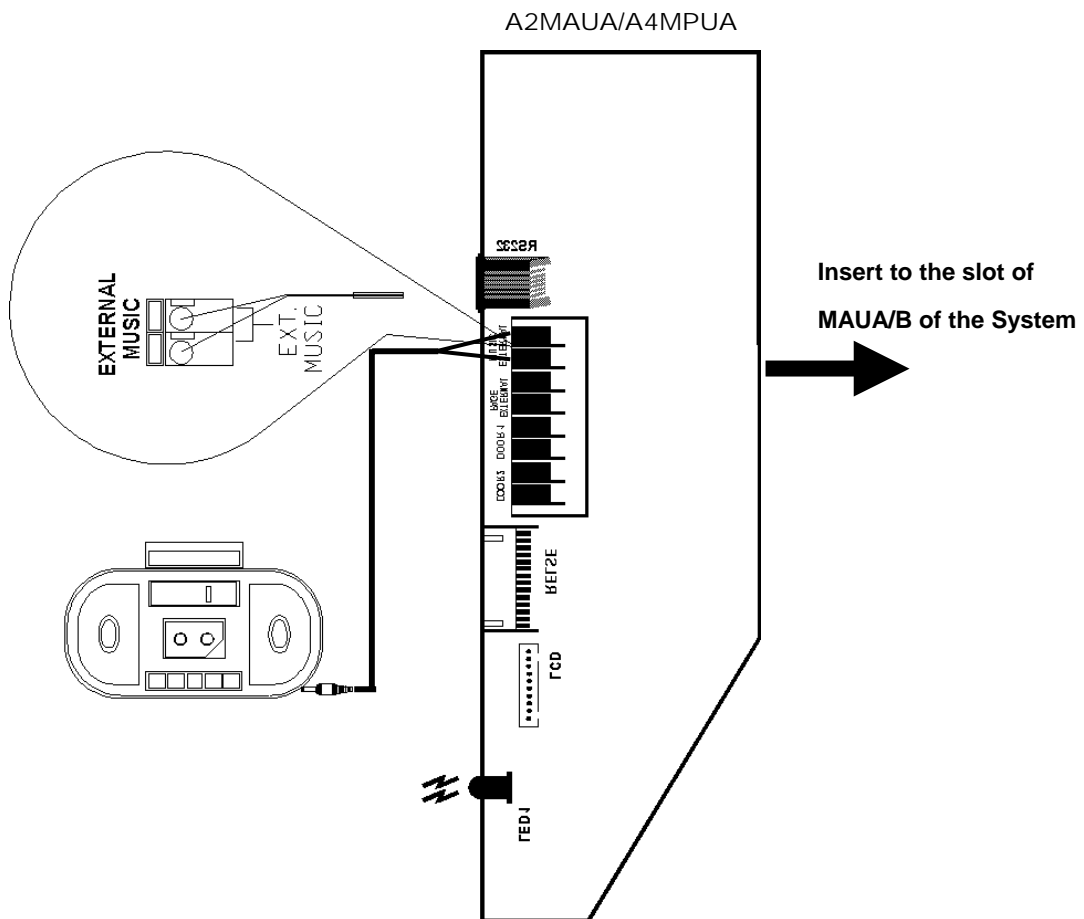


Figure 4.2 Door Phone Installation Layout

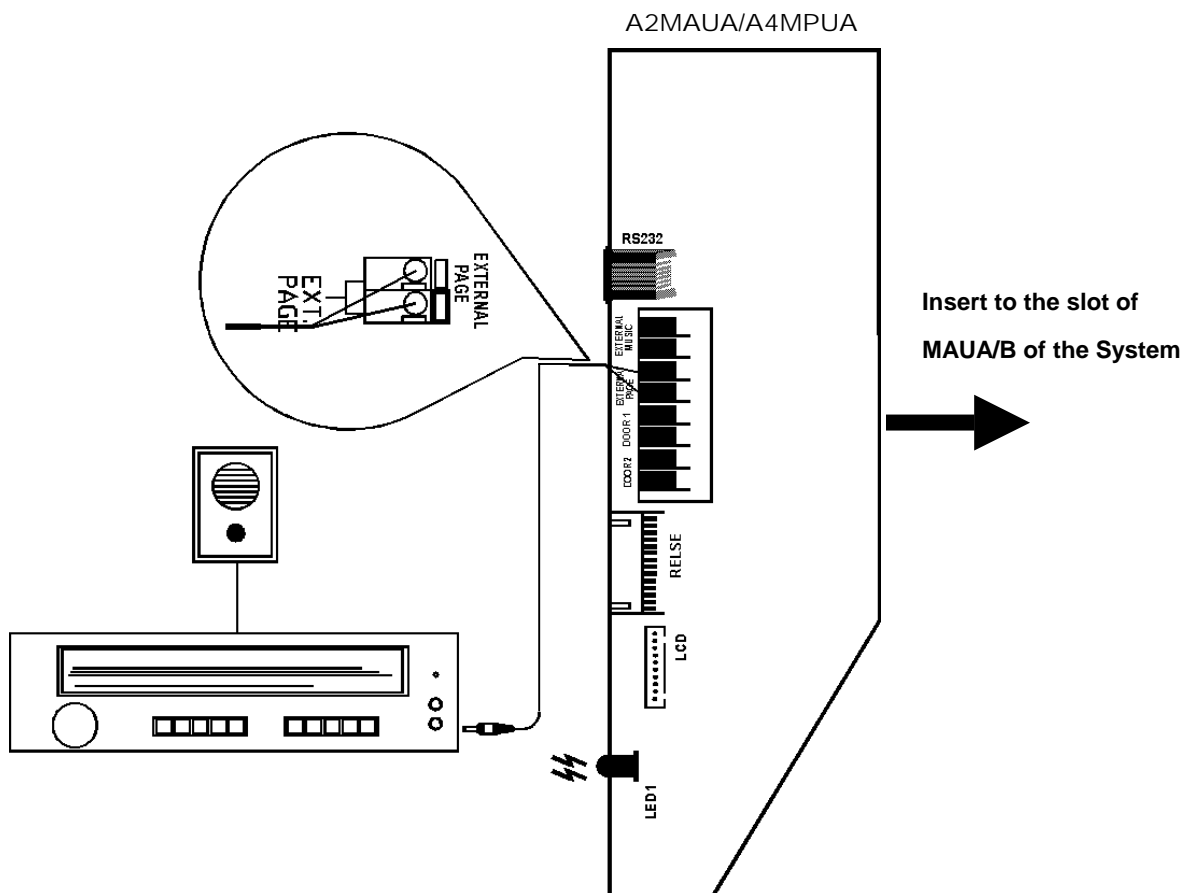
## 10.5 External Music Source Installation



**Figure 4.3 External Music Source Installation**

- There is only one External Music Interface in the system.
- Connect 2-conductor wiring cord from External Music Source to “**EXTERNAL MUSIC**” on **A2MAUA/A4MPUA**. Please refer to **Figure 4.3**.
- After External Music Source has been installed, it is necessary to select the external melody is for **Background Music** or **Music On Hold** by Jumper Selection on **A2MAUA/A4MPUA**.

## 10.6 External Paging Equipment Installation



**Figure 4.4 External Paging Equipment Installation Layout**

- There is only one External Paging Interface existed in the system.
- External Paging Equipment Installation must be cooperated with Relay Interface on **A2MFCA**.
- Connect 2-conductor wiring cord from External Paging Equipment to “External Page” connector on **A2MAUA / A4MPUA**. Please refer to **Figure 4.4**.



### 10.7 Multifunction Card Installation

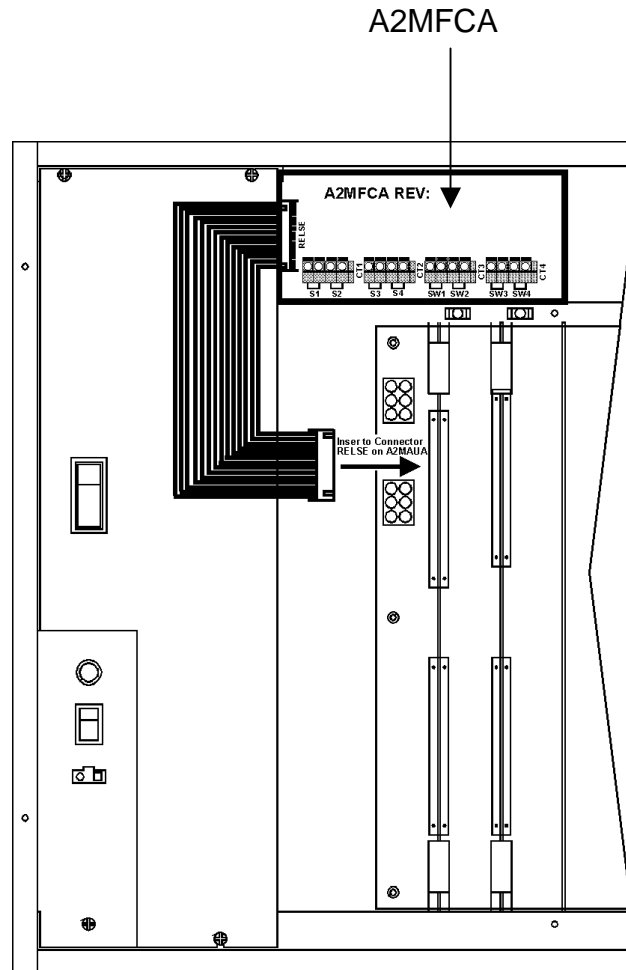
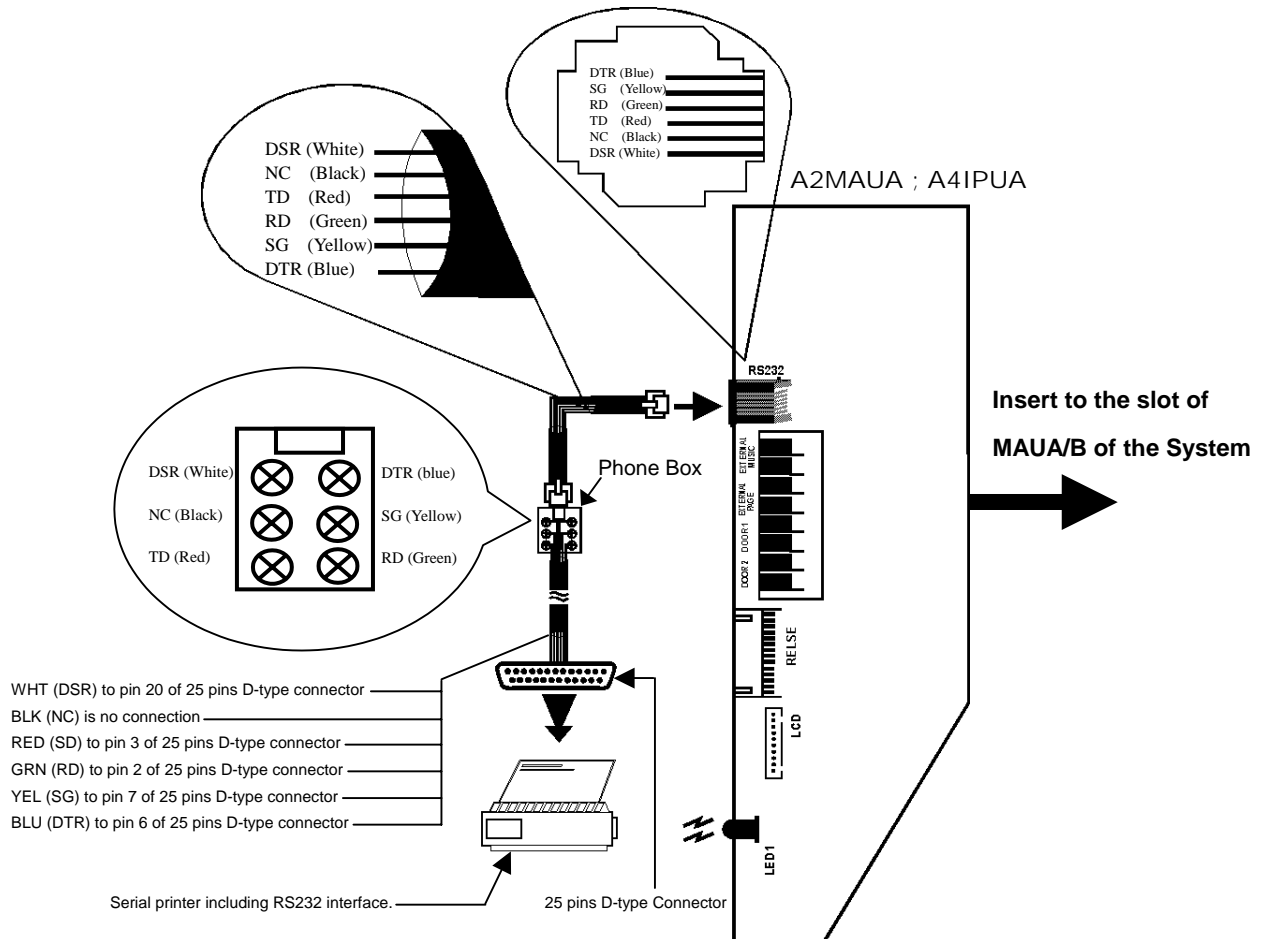


Figure 4.5 A2MFCA Installation Layout

## 10.8 RS232 Installation



**Figure 4.6 RS232 Installation Layout**

- Use 6-Conductor Wiring Cord to be connected between 6-Conductor Modular Connector and D-type Connector according to Figure 4.6.
- Connect 6-Conductor Modular Connector with 6-Conductor Wiring Cord to RS232 port on A2MAUA/A4IPUA; and connect D-type Connector to Serial Printer With RS232 Interface as in Figure 4.6.

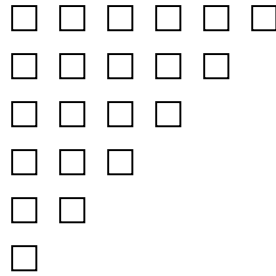
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