Aristel Networks

DV38

INSTALLATION GUIDE

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Aristel Networks Pty Ltd
Unit 3A, 100 Station Street
Nunawading VIC 3161
Telephone: 03 9837 2300
Facsimile: 03 9872 4433

INTRODUCTION

This manual provides detailed procedures to install your new ARISTEL DV-38 Digital Key Telephone System. Please read this entire section before proceeding with the actual installation.

The National Electrical Code (NEC) requires the local telephone company (Telecom) to provide the primary protection devices for the telephone lines terminating at the customer's site. Make sure that a primary protection device has indeed been installed by the Telecom. If no such device is present, notify the Telecom before installing your Aristel system.

GENERAL DESCRIPTION

Aristel **DV-38 Fully Digital Key Phone System** is an intelligent Telecom device and based on state of the art advanced technology. This system uses digital circuitry employing PCM, TDM, 2B+D, etc. The multi-function digital key phone has very flexible programming functions. The users can simply operate the DSS keys to activate the applications as they require. The new **built-in Voice Mail** not only provides standard voice mail functions but also has the **Intelligent Recording function** – to record message during conversation. The Windows version **Customer Manager System** (CMS) is fully integrated into the system to make customer management easier and more efficient.

Aristel **DV-38 Intelligent Digital Key Telephone System**, has the listed capacities:- trunk card (basic 4 lines per card, maximum 3 cards = 12 ports) and 8~26 extension ports. It can also be equipped with the following system peripherals: SMDR interface, Door Phone Interface, Multi-Function Sensor Interface, Multi-Function Relay, Remote Programming Interface, External Music Interface, External paging interface, Voice Mail and Auto Attendant Interface, DECT Interface, ADSL/ISDN…etc.

Aristel **DV-38 Digital Intelligent Key Telephone System** uses modular PCB construction. External-Line, Internal-Line and peripherals of the main system are completely independent PCBs. All functions are able to be programmed to Macro keys, enabling complex functions to covert into single-keypad operation. This is an excellent option for the new digital age; Aristel DV-38 is the best partner to lead you into the diverse broadband world of telecommunications

Aristel **DV-38 Digital Intelligent Key Phone System**

- Multiple Processors.
- Time Division Multiplexing.
- Unique ARISTEL ASIC Chip “A-SERIES”

SYSTEM CONFIGURATION

System Capacity and Specifications

DV-38		Basic Capacity	Expandable Capacity	Max. Capacity
CO Line	POTS	4	8	12
	ISDN (BRI)	0	0 ~ 6	6
Key phone	Digital	8/0	16/0	24/0
	Analog	0/8	0/16	0/24
Single Line Phone		0	2	2
Voice Service interface	Auto Attendant	0	4/0	4/0
	Voice Mail	0	0/4	0/4
	Recording Extension	0	26	26
Door Phone interface		0	2	2
Relay Switches		0	2	2
Sensor		0	2	2
Fax Monitor		1	2	3
RS232 For SMDR		0	1	1
Remote Programming		0	1	1
UPS interface		1	0	1
Speed Dial		1000 sets	0	1000 sets
Caller ID card		0	12	12
Power Failure Transfer Phone		1	2	3
External Music		1	0	1
External Paging		0	1	1
DSS64 consoles		N/A	N/A	4

KEY TELEPHONE SPECIFICATION

DIGITAL KEY TELEPHONE

Key Phone Model	DKP30	DKP31	DKP32	DKP33	DKP50	DKP51	DKP52	DKP53
DSS Function Key	12 Keys	12 Keys	12 Keys	12 Keys	25 Keys	25 Keys	25 Keys	25 Keys
2 * 16 digits LCD Display	…	✓	…	✓	…	✓	…	✓
Back-Light LCD Display	…	…	…	…	…	Option	…	Option
Hands-Free Dialing	✓	✓	✓	✓	✓	✓	✓	✓
Direct intercom	✓	✓	✓	✓	✓	✓	✓	✓
Outgoing Call Hands-Free	…	…	✓	✓	…	…	✓	✓
Internal/External Direct Dial	✓	✓	✓	✓	✓	✓	✓	✓
Photo Interrupt Hook Switch	✓	✓	✓	✓	✓	✓	✓	✓
Digital Volume Control	8 Levels	8 Levels	8 Levels	8 Levels	8 Levels	8 Levels	8 Levels	8 Levels
OHCA Function	…	…	✓	✓	…	…	✓	✓
One Touch Paging	✓	✓	✓	✓	✓	✓	✓	✓
Last Number Redial	✓	✓	✓	✓	✓	✓	✓	✓
Name Speed Dial	…	✓	…	✓	…	✓	…	✓
Calculator	…	…	…	…	…	✓	…	✓
Individual Speed Dial	✓	✓	✓	✓	✓	✓	✓	✓
Difference Ringing Frequencies	✓	✓	✓	✓	✓	✓	✓	✓
Dual Color Tri Status LED	8 keys	8 keys	8 keys	8 keys	16 keys	16 keys	16 keys	16 keys
One Digit Auto Answer	✓	✓	✓	✓	✓	✓	✓	✓
Incoming LED Indication	✓	✓	✓	✓	✓	✓	✓	✓

Remarks: Postfix W= White Color, C= Dark Grey Color, B= Back-Light LCD Display

SYSTEM MODEL DESCRIPTION

Model	Description	Remark
D1-408DK	**Main Service Unit -** Consisting of Plastic Cabinet + D1MBUB + D1PWUA + D1TKUC + D1DLUB	Standard Shipment
D1CBMA	**Main Service Unit -** Consisting of (Plastic Cabinet + D1MBUB + D1PWUA)	Standard Shipment
D1MBUB	**Mother Board Unit**	Spare Part
D1PWUA	**Power Unit**	Spare Part
D1TKUC	**Trunk Unit -** Consisting of 4 PSTN ports with Polarity Reverse, one Fax port Connector、one PFT port connector and Interface for D1MDCA and D1CIDA Connections.	Expansion Card
D1DTKA	**ISDN Trunk Card -** Consisting of 2 BRI S/T interface	Optional Card
D1DLUB	**Digital Key Station Unit –** Consisting of 8 Digital Key Station ports	Expansion Card
D1STUB	**Key Station Unit –** Consisting of 8 Analog Key Station ports	Expansion Card
D1SLCB	**Single Line Station Card –** Consisting of 2 Single Line Station Ports	Expansion Card
D1RSCC	**RS232 Card –** Providing 1 RS232 port and working for SMDR	Optional Card
D1VSCA	**Voice Service Card –** Consisting of 2 Voice Channels (60 sec. per channel) for Auto Attendant applications	Optional Card
D1VSCB	**Voice Service Expansion Card -** Additional 2 Voice Channels (60 sec. per channel) for Auto Attendant applications	Optional Card
D1MFCA	**Multi Function Card** – (2 Doors + 2 Relays + 2 Sensors + 1 External Paging)	Optional Card
D1MDCA	**Meter Pulse Detection Card -** 12KHz/16KHz Meter Pulse Detection	Optional Card
D1CIDC	**FSK/DTMF CLI Interface -** One Channel of POTS Caller Number Identification Card	Expansion Card
D1RPCA	**Remote Programming Card -** Providing 1 standard modem port 2400 bps) and working for Remote maintenance	Optional Card
D1VMCA	**Built-in Voice Mail Card -** 2 ports of Voice Mail with 6.5 hours recording time	Optional Card
D1VMEA	**Voice Mail Expansion Card -** one port of Voice Mail	Optional Card
D1VMFA	**Expansion Flash Memory -** Software control with 4 hours store memory	Optional Card
WP5007	**25-Pair Amphenol Cable –** (for Station Wiring Connection)	Optional Required

FEATURE LIST

System Features List

- 3 Parties Conference
- 5 Different Trunk Access Codes
- Account Code
- ❖ Auto Attendant
- Auto Accessing Trunk
- Automatic Answer
- Auto Pick Up
- ❖ Automatic Call Distribution (ACD)
- ❖ Automatic Transfer
- ❖ Baby Listening
- Be/Internal/External/Group Paging
- ❖ Built-in Voice Mail
- ❖ Caller's Number Identification (Caller ID)
- Call Limit Time Duration
- Call Park
- Call Split
- Data Monitor
- Console Grouping
- Date/Time Setting
- Day Time Schedule
- Day/Night Service
- Direct Intercom Dialing
- ❖ Direct Inward Dialing (DID)
- Direct Inward Station Access (DISA)
- ❖ Door Phone Connection
- ❖ Door Switch Control
- EMI Filter
- ❖ Environment Monitor
- External Call Forward (ECF)
- Fax Monitor
- Flexible Function Key Assignment
- Forced Account Code
- Headset Function
- Hot Line
- ❖ Hotel/Motel Function w/o PC
- Illegal Outgoing Protection
- Intercom Busy Reminder
- Incoming Hunting
- Incoming Paging
- Intercom Hunting
- Internal/External Music Source
- Internal/External Paging
- ❖ ISDN Compatible
- Key Station Short Protection
- LCR (Least Cost Routing)
- Lightning Protection
- Manual Line
- Message Waiting
- ❖ Metering Pulse Detection
- Name Speed Dialing (Phone Book)
- One Touch Operation
- Polarity Reverse
- Power Failure Telephone
- Private Line
- Programming Help List
- ❖ Remote Programming
- ❖ Remote Relay Control
- ❖ Security/Fire Alarm System
- Single Digit Dialing
- SLT Hold Message/Function Capability
- ❖ Station Loud Bell
- ❖ SOS
- ❖ Station Message Details Report (SMDR)
- System Alarm
- Toll Restriction
- Tone/Pulse Dialing
- Trunk Grouping
- ❖ Trunk Loud Bell
- Trunk Queuing
- Unsupervised Conference

❖ Means the optional function.

Station Features List

- 16×2 Dot-Matrix LCD Display
- 5 Different Numbers Auto Redial
- 9 Different Ringing Frequencies on Key Station
- Adjustable LCD Angle (DKP50)
- ❖ Back Light LCD Display
- ❖ Calculator Function (Display Phone)
- Call Forward/Call Follow Me
- Call Forward To Individual Speed Dial
- Call Pick Up
- Call Transfer
- Camp On
- Conference
- Day/Night Service Indication
- Digital Volume Control (8 Levels)
- Do Not Disturb
- Dual-Color/Tri-Status BLF Indication
- Ergonomics Receiver Handset
- Handsfree Dialing
- ❖ Handsfree Conversation
- Hold/Exclusive Hold
- Last Number Redial
- Macro Key Setting
- Message Text
- Monitor
- ❖ Off Hook Call Announcement (OHCA)
- Override
- Page/Be Paged
- Station Lock/Unlock
- Station Name Setting
- Station Operation Help List
- Station Lock/Unlock
- Station Name Setting
- Station Operation Help List

❖ means the optional function.

ENVIROMENTAL REQUIREMENT

- The Key System Unit (KSU) should be installed at a clean, dry and secure location accessible only by authorized personnel. The location must have adequate ventilation and a temperature range between 0 ~ 45^{o}C with a 10 ~ 90% non-condensing relative humidity.

- The installation site should have sufficient room to mount the KSU along with the necessary connecting blocks and ancillary equipment on a wall. The installation site should not be in areas subject to static electricity (*e.g.* Dry copiers), or vibration (*e.g.* Heavy machinery).

- A dedicated earthed power outlet for the KSU (either 240VAC/50Hz or 110VAC/60Hz) and a 10 Amp circuit are required. An integral earth is required in the AC power cord. If a music source or optional external paging equipment is installed, it must be connected to an AC circuit *separate* from the KSU's dedicated AC line. ONLY THE KSU'S POWER SUPPLY SHOULD BE CONNECTED TO THE DEDICATED AC OUTLET.

EQUIPMENT REQUIREMENT

Prior to installation, carefully inspect all packages for evidence of damage. Compare the equipment received against equipment ordered to ensure that ALL components have been received.

The following materials are required (not provided) for installation:

- Exterior grade plywood back board for the KSU.
- 1 Male-Tail per extension board for Station wiring.
- Appropriate mounting hardware.

POWER SUPPLY AND KSU INSTALLATION

- Attach the plywood back board to the selected location with the appropriate fasteners.
- A surge protector should be installed at the dedicated AC outlet.
- Connect Male-Tail, and connect the plug to each station board for station wiring; also connect the wire to the RJ-11 for connector on each trunk card for the CO lines wiring.
- Plug in the power cord of the power supply to an AC Power Outlet and then turn on the power of the system.

PCB AND CABINET LAYOUT

■ SYSTEM INTER-CIRCUIT LAYOUT

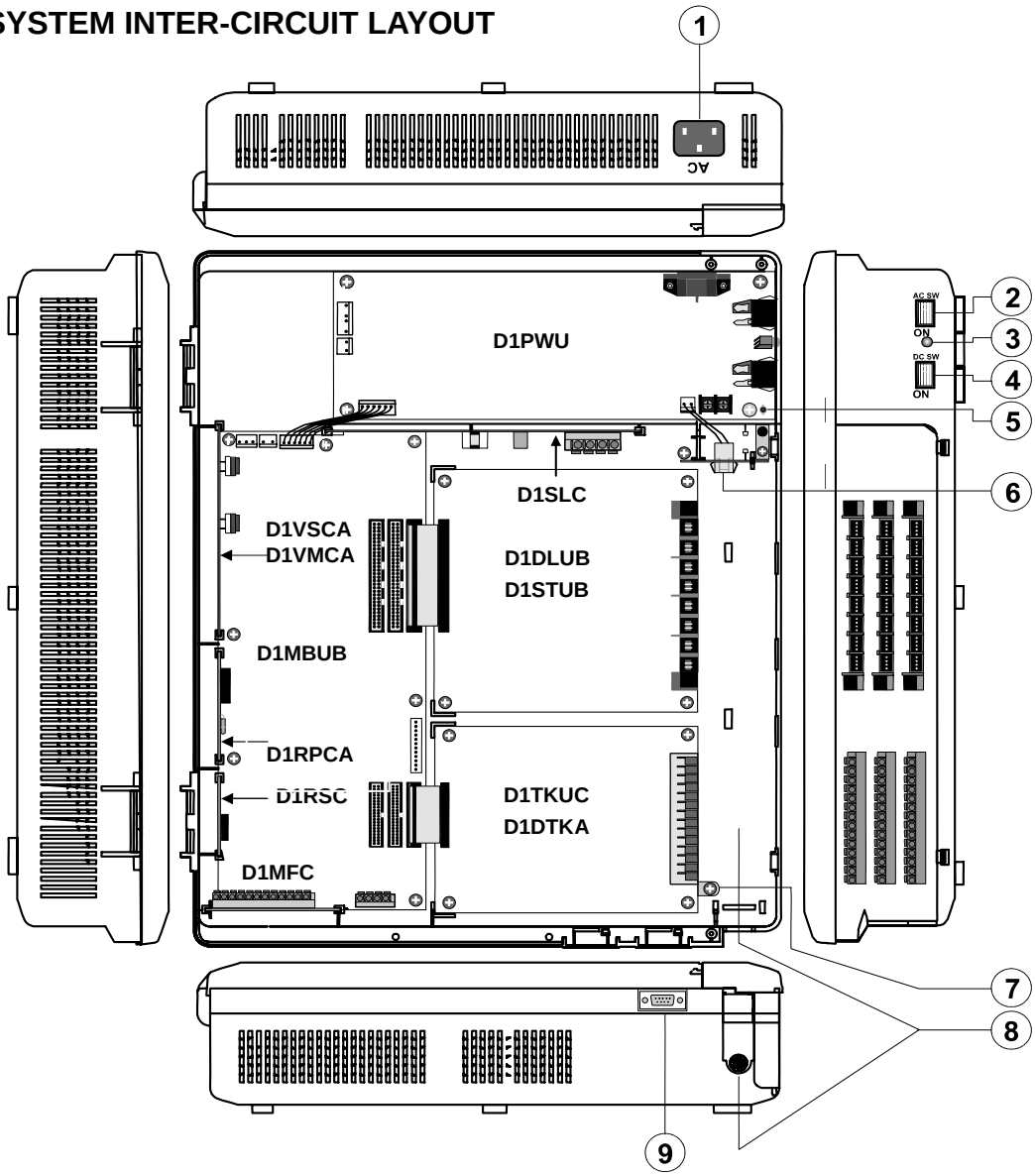


Figure 1. System Inter-Circuit Layout

1. AC Power Inlet.
2. AC Power Switch.
3. Power Indicator (LED Type) .
4. DC Power Switch.
5. For D1SLCB Earth Grounding.
6. 2-Wire Female Connector. (For External Battery Box Connection) .
7. Earth Ground (For Lightning Protection Ground) .
8. Wiring Area and the Cable Outlet.
9. RS232 (Female DB9) for the connection to the D1RSCC.

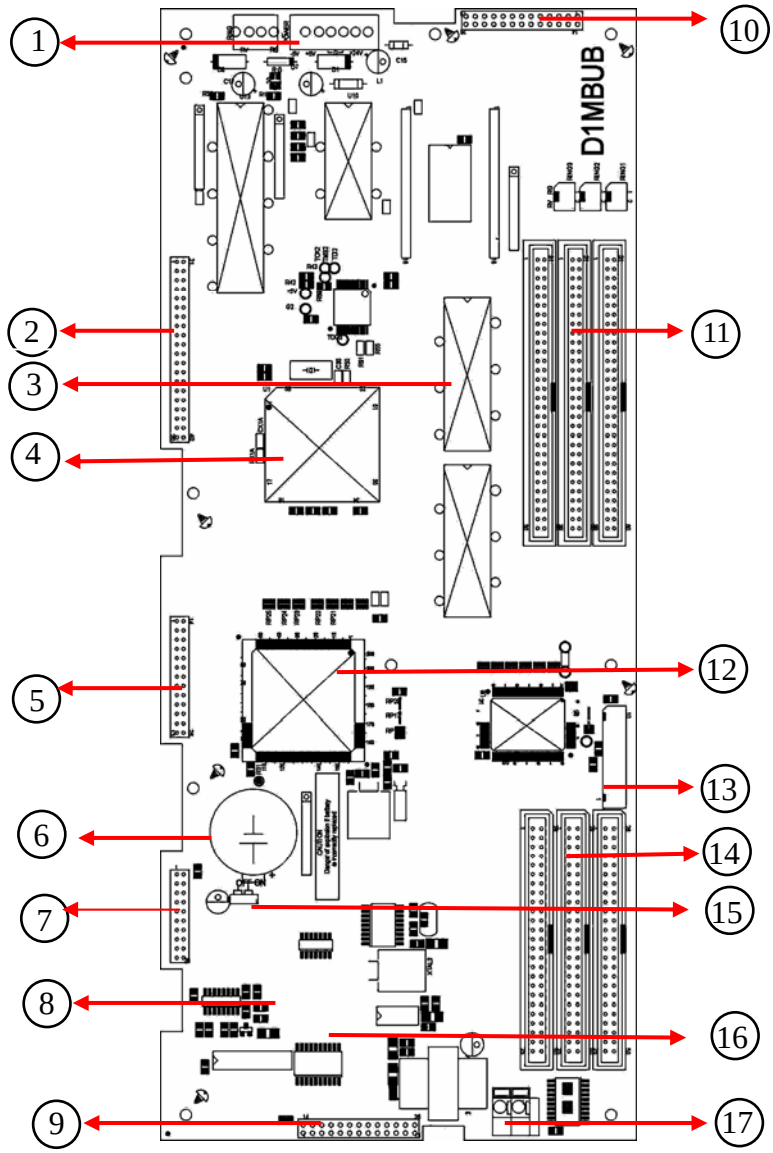
D1MBUB (Mother Board Unit)

Product: DV-38 Mother Board Unit
Item: D1MBUB
Size: 310 mm x 130 mm

Function:

1. The motherboard control entire system functions and audio switching.
2. Motherboard supports External Music Source Input Terminal.
3. System programming Auto-Protection by Li Battery.

The installation site of D1MBUB



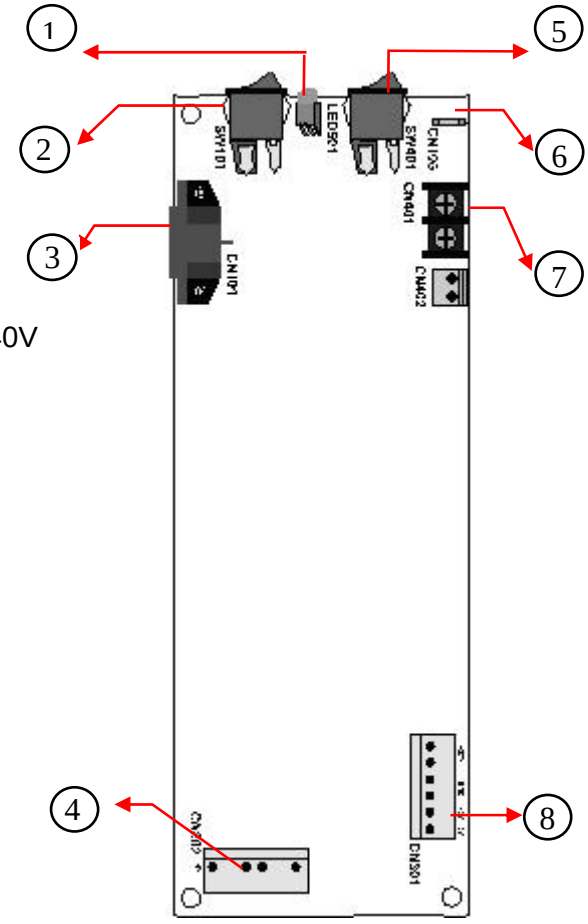
1. POWER: 6 pins Wafer Connector to connect with D1PWUA by 6 wires cable [HD-3903-10, VH Type]
2. VSC: 20Px2 Wafer Connector for D1VMCA or D1VSCA connections.
3. EPROM: Flash Memory EPROM “MX28F2000” which stored the system software.
4. CPU: Intel 80188 Processor.
5. RPC: 20Px2 Wafer Connector Either D1RPCA or D1RSCB connections.
6. BAT: “3 VDC, 180mA/H” Li-Battery to back-up system programming data during AC power failure.
7. RSC: 10Px2 Wafer Connector for D1RSCC connection.
8. SVR: Variable Resistor to adjust the volume of the Internal Melody Source that use for [BGM] and [MOH] applications.
9. MFC: 13Px2 Wafer Connector for D1MFCA connection.
10. SLC: 13Px2 Wafer Connector for D1SLCB connection.
11. STA1~3: 30Px2 Header Connector for both D1DULB and D1STUB connection.
12. ASIC: Aristel proprietary ASIC.
13. LCD: Additional LCD connector for engineering system maintenance.
14. JP1: 3 Pins Wafer Jumper to turn ON/OFF Li battery power.
15. TKU1~3: 25Px2 Header Connector for both D1TKUC and D1DTKA connection.
16. JP2: 3 Pins Wafer Jumper for Internal/External music selection.
17. EX-MUSIC: The input terminal for External Music Source connection.

D1PWUA (POWER BOARD UNIT)

Product: DV-38 POWER UNIT
Item: D1PWUA
Size: 270 mm x 95 mm

Function:

1. To supply entire system power.
2. The input AC Voltage ranges are AC110V~240V
3. Support 24V Battery Charger for external Back-up Battery.



The installation site of D1PWUA

Figure 3. D1PWUA (POWER UNIT)

1. LED501: Power Indicator.
2. SW101: AC Power Switch.
3. CN101: AC Power Inlet.
4. CN802: 4 Pins Connector. (Reserved for further Applications)
5. SW401: External backup battery Power Switch.
6. CN105: Earth Terminal for D1SLCB Grounding.
7. CN402: External Battery Connector; Left Side is (+), Right side is (-).
8. CN301 : 6 Pins Connector for D1MBUB connection.

D1TKUC (TRUNK UNIT, 4 TRUNK PORTS)

Product: DV-38 TRUNK UNIT
Item: D1TKUC
Size: 162 mm x 122 mm

Function:

1. Support Polarity Reverse detection for each CO lines.
2. A maximum of 3 D1TKUC boards can be installed onto the DV-38 main frame.
4. Support either D1CIDC or D1MDCA connections on each CO line.

The installation site of D1TKUC, D1DTKA

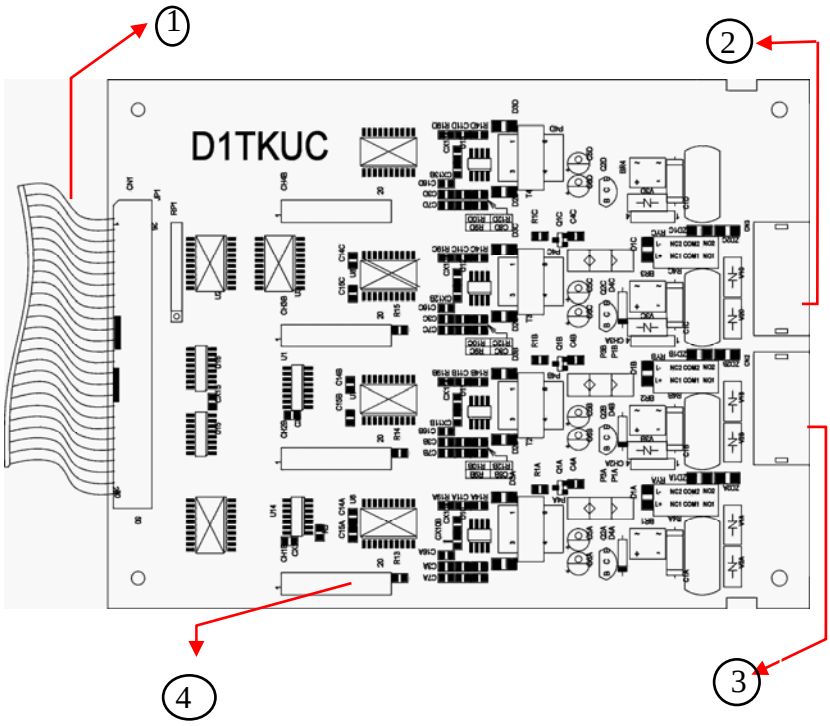


Figure 4. D1TKUC (TRUNK UNIT, 4 TRUNK PORTS)

1. CN1: 60-Wires rainbow Cable to connect to TKU1~3 positions where upon the D1MBUB.
2. CN3: The socket for both Power Failure standard Phone and FAX connections.
3. CN2: The RJ socket for POTS CO lines connections.
4. CH1~4B: Connectors for each CO lines to interface either D1CIDC or D1MDCA.

D1DTKA (ISDN BRI Trunk Unit)

Product: DV-38 ISDN TRUNK UNIT
Item: D1DTKA (ISDN BRI CARD)
Size: 162 mm x 122 mm

Function

1. Supports 2 lines of 2B+D interface which support 4 voice channels.
2. The system provides 3 slots of ISDN Trunk Unit connector. (Maximum expansion capability: 6 lines for 2B+D or 12 lines for Voice channel.)

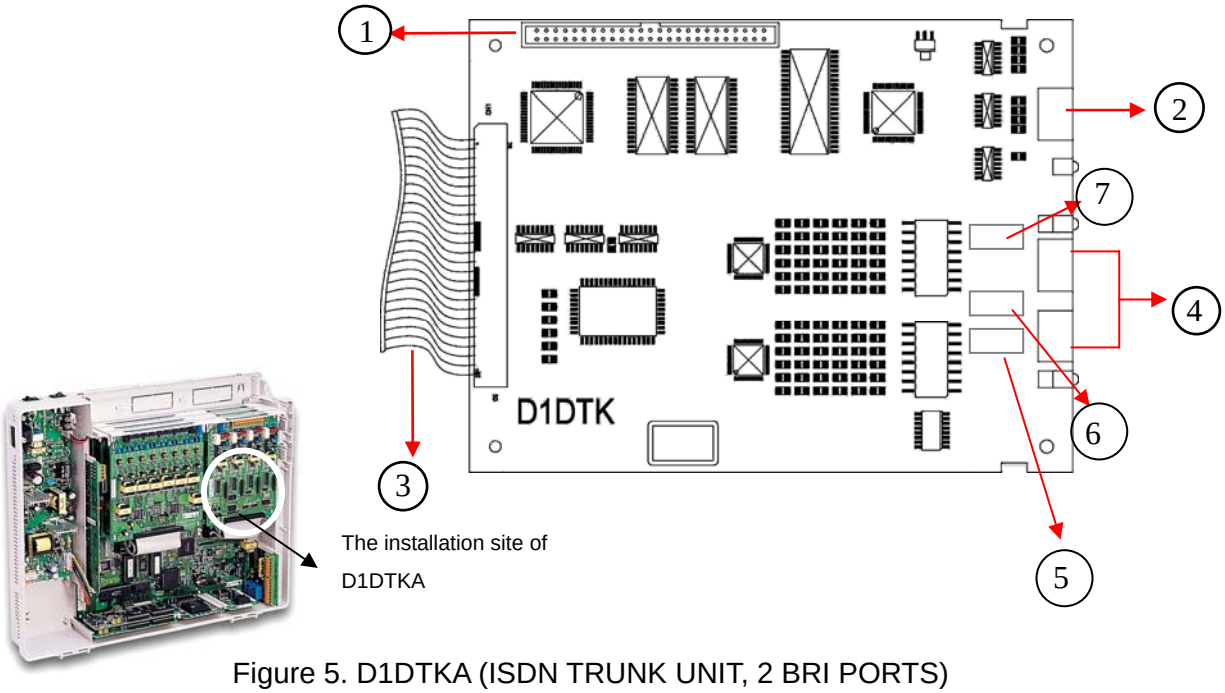


Figure 5. D1DTKA (ISDN TRUNK UNIT, 2 BRI PORTS)

1. Test Connector for engineer testing.
2. Test Connector for engineer testing.
3. Flat cable connect to D1MBUB.
4. RJ-45 connector to connect to ISDN BRI Line.
5. JP1 jumper for first line-line termination enable/disable. **DO NOT ALTER**
6. JP2 jumper for second line-line termination enable/disable. **DO NOT ALTER**
7. JP3 jumper for DTKA card of TKU slot number. **See table on next page.**

JP1: Short: line termination enable (default).

N/C: line termination disable.

JP2: Short: line termination enable (default).

N/C: line termination disable.

JP3: please see below table for reference.

Link # 0	Link # 1	Slot number of TKU
IN	IN	1
REMOVED	IN	2
IN	REMOVED	3

D1DLUB (Digital Key Station Unit, 8 Key Station ports)

Product: DV-38 DIGITAL KEY STATION UNIT
Item: D1DLUB
Size: 162 mm x 155 mm

Function:

1. Supports 8 ports of digital Key Phone interface.
2. Totally 3 pieces of D1DLUB could be installed onto the DV-38 main frame (24 Extensions Maximum).
4. D1DLUB fully compatible with DV-Series Key Telephones. Ex: DKP-30, DKP-31, DKP-32 DKP-33, DKP-50, DKP-51, DKP-52, DKP-53.

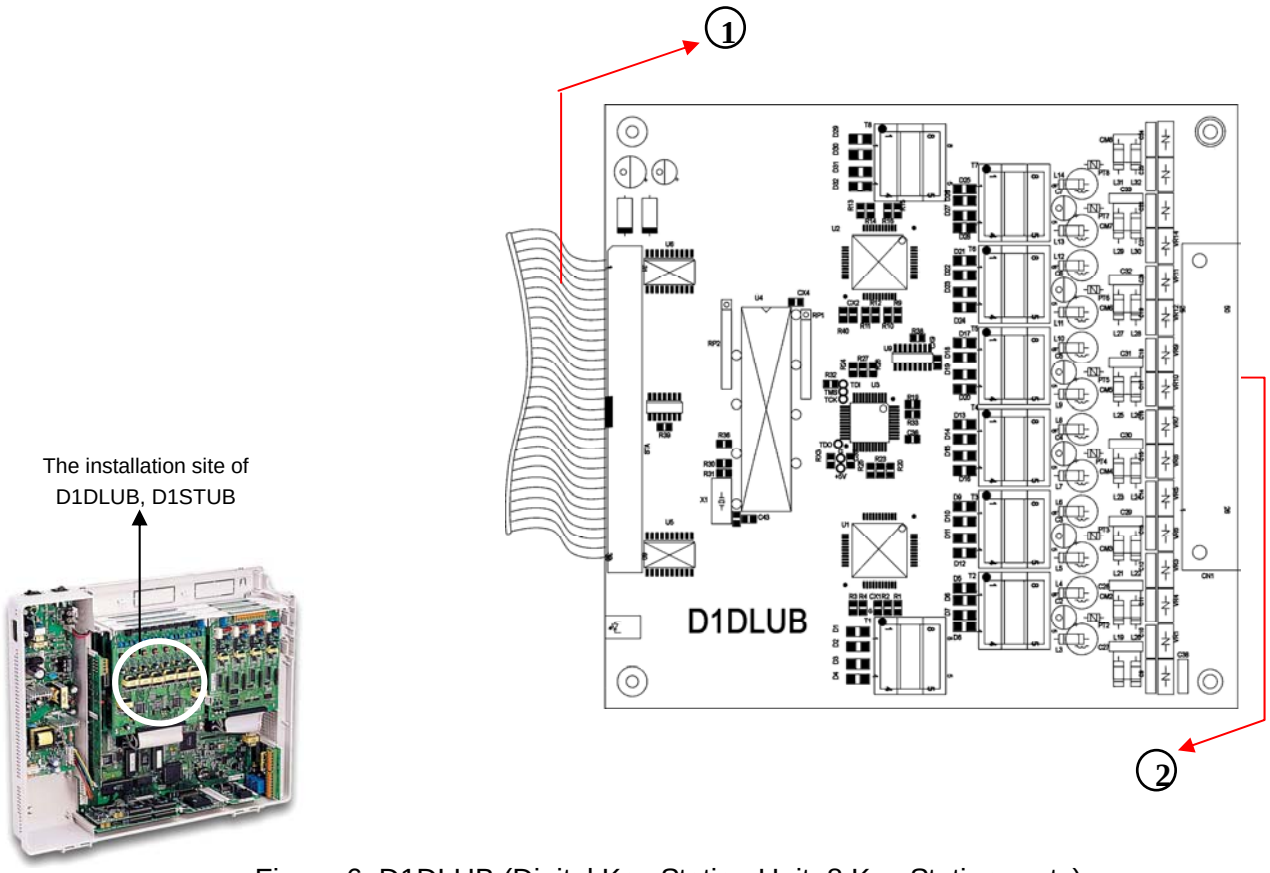


Figure 6. D1DLUB (Digital Key Station Unit, 8 Key Station ports)

1. STA: 60-wires Rainbow Cable to connect to SAT1~3 positions where upon the D1MBUB.
2. CN1: Am phenol Connector Key Station Wiring.

D1STUB (Analog Key Station Unit, 8 Key Station ports)

Product: DV-38 ANALOG KEY STATION UNIT
Item: D1STUB
Size: 162 mm x 155 mm

Function:

1. Supports 8 ports of digital Key Phone interface.
2. Totally 3 pieces of D1STUB could be installed onto the DV-38 main frame (24 Extensions maximum).
3. D1STUB fully compatible with AV-Series Key Telephones. Ex: KP-10 Series , KP-20 Series or KP30 Series.

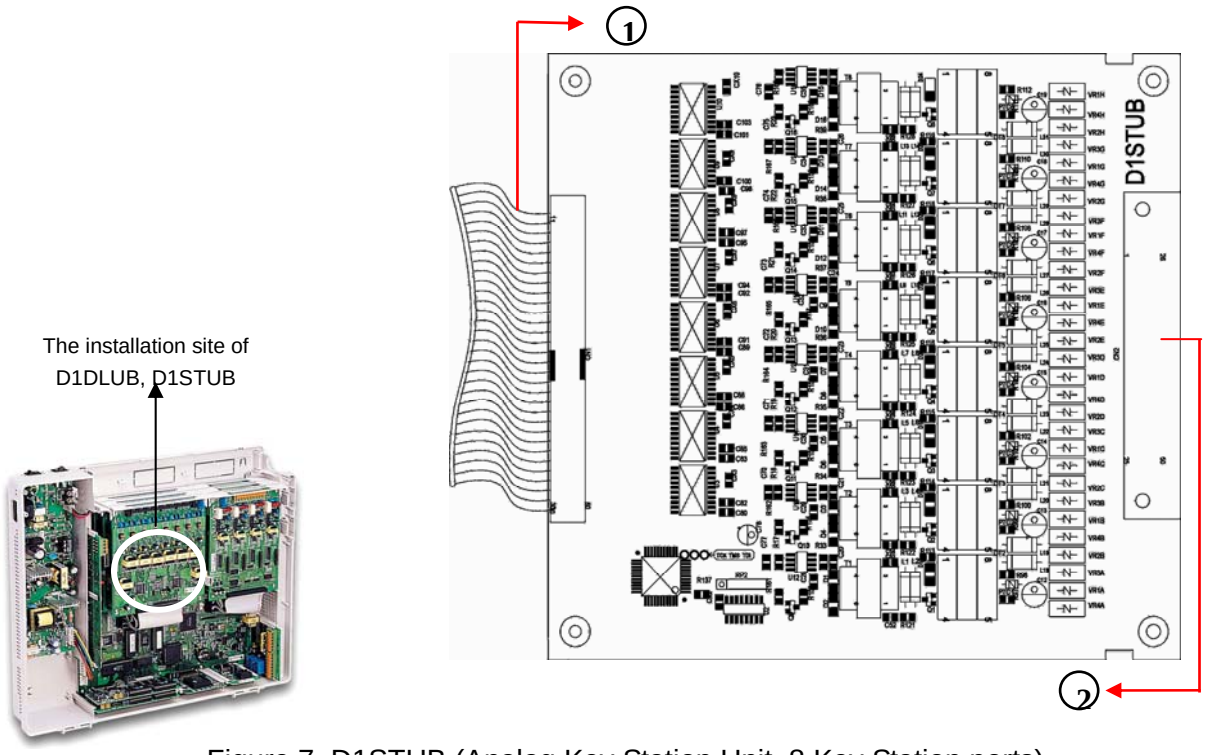


Figure 7. D1STUB (Analog Key Station Unit, 8 Key Station ports)

1. CN1: 60-wires Rainbow Cable to connect to STA1~3 positions where upon the D1MBUB.
2. CN2: Am phenol Connector for analogue Key Station Wiring.

D1SLCB (Single Line Station Card, 2 SLT Station Ports)

Product: DV-38 SINGLE LINE STATION CARD
Item: D1SLCB
Size: 195 mm x 69 mm

Function:

1. D1SLCB provides 2 SLT Stations Ports. It is installed on a special socket instead of occupying Extension ports socket.
2. All of single line station can be connected to SLT ports. EX, SLT, Modem, Wireless Phone.

The installation site of D1SLCB

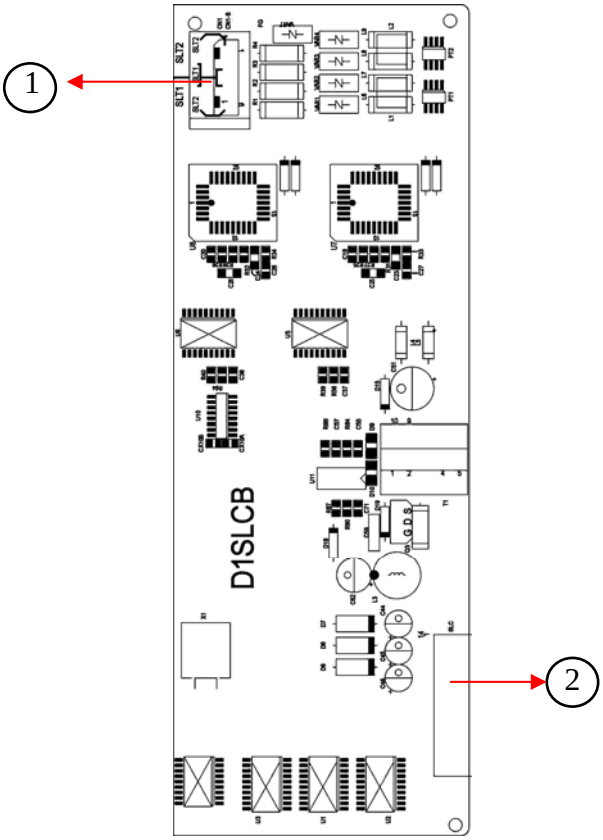


Figure 8. D1SLCB (Single Line Station Card, 2 SLT Station Ports)

1. CN1_B: 6 Pins Wafer Connector for both Single Line Telephone Ports connections.
2. SLC: Wafer Connector to connect to [SLC] Position where upon the D1MBUB.

D1RSCC (RS232 Card, 2400bps Serial RS232 Port)

Product: DV-38 RS232 CARD
Item: D1RSCA
Size: 51.5 mm x 69 mm

Function:

2400bps Serial interface is used for SMDR and Aristel's WinSM applications.

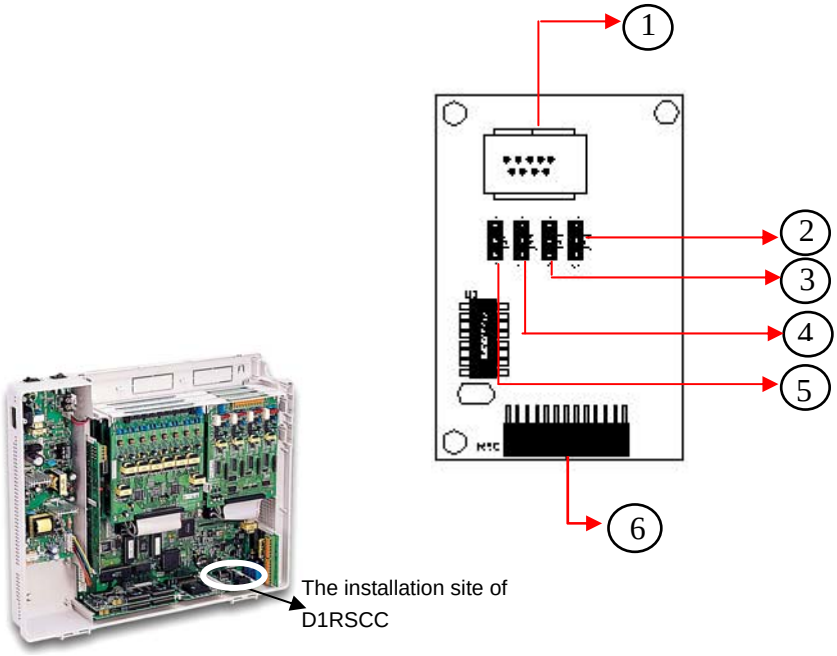
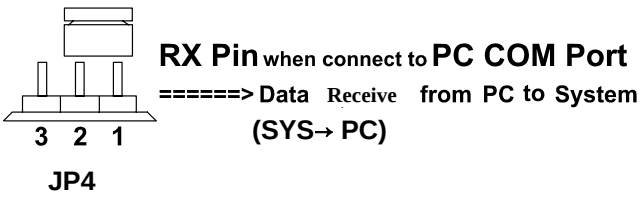
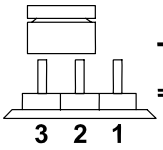


Figure 9. D1RSCC (RS232 Card, 2400bps Serial RS232 Port)

1. CN: 10-Pins Male Wafer Connector. Connect to the position of Point 9 in Figure 1 by the special DB9 Cable [FD-10-9-400, Male Type] for the connection of either PC COM Port or Serial Printer.
2. RSC: 26-Pins Connector to connect to [RSC] position where upon the D1MBUB.
3. Jumper Setting.

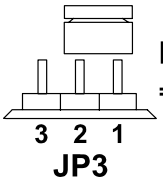
   3.1 JP4: 3-Pins Jumper Selection.



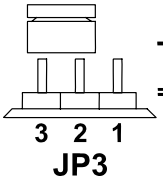


TX Pin when connect to SERIAL PRINTER
======> Data Transmit from Serial System to Printer
(SYS← Serial Printer)

3.2 JP3: 3-Pins Jumper Selection.

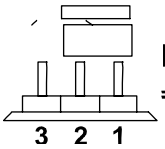


RX Pin when connect to PC COM Port
======> Data Receive from PC to System
(SYS ← PC)

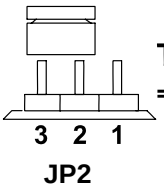


TX Pin when connect to SERIAL PRINTER
======> Data Transmit from Serial System to Printer
(SYS → Serial Printer)

3.3 JP2: 3-Pins Jumper Selection.

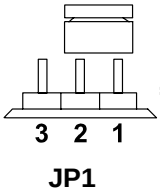


DSR Pin when connect to PC COM Port
======> Data Receive from P to System
(SYS← PC)

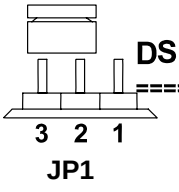


TX Pin when connect to SERIAL PRINTER
======> Data Transmit from Serial System to Printer
(SYS→ Serial Printer)

3.4 JP1: 3-Pins Jumper Selection.



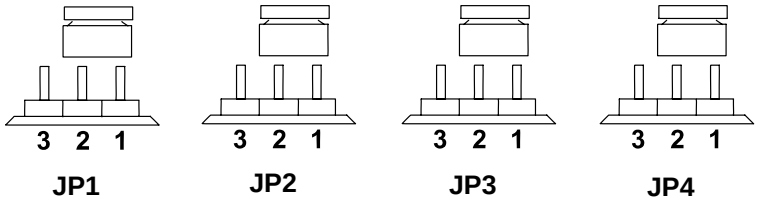
RX Pin when connect to PC COM Port
======> Data Receive from PC to System
(SYS→ PC)



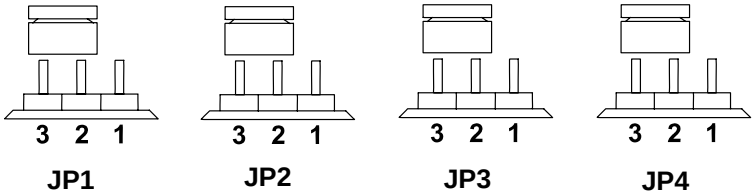
DSR Pin when connect to SERIAL PRINTER
======> Data Receive from Serial Printer to System
(SYS ← Serial Printer)

CAUTION!

A. If the system's RS232 is connected to PC, please make ALL jumpers to be [PIN1 + PIN2] SHORTED.



B. If the system's RS232 is connected to Serial Printer, please make ALL jumpers to be [PIN2 + PIN3] SHORTED.



C. Note : Some serial printers have already changes the TX. Rx. DTR. DSR mode. If those didn't change, the system of mini jumper must change to pin1 & pin2.

D1VSCA/B (Voice Service Card, 2 Voice Channel)

Product: DV-38 D1VSCA/D1VSCB
Model: D1VSCA/D1VSCB
Size: 138 mm x 69 mm

Function:

1. D1VSCA is consisting of 2 voice service channels which provide 60 seconds nonvolatile memory space in each.
2. Each channel could be pre-recorded the voice for Auto-Attendant and Emergence Call applications.

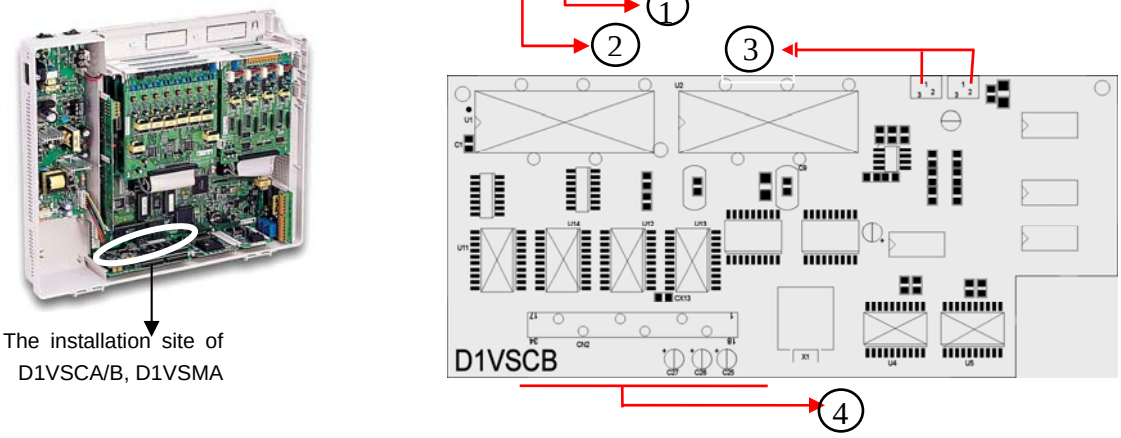


Figure 10. D1VSCA/B (VOICE SERVICE CARD, 2 VOICE CHANNEL)

1. VSC: 26-Pin Connector to connect to [VSC] position where upon D1MBUB.
2. Expansion Connector for D1VSCB connection.
3. Variable Resistors. To adjust the Playing Volume of each voice channel.
4. The expansion Connector to connect both D1VSCA and D1VSCB for channel expansion.

D1MFCA (Multi Function Card, 2 Sensor + 2 Relays + 2 Door Phones)

Product: DV-38 MULTI FUNCTION CARD
Item: D1MFCA
Size: 83.5 mm x 69 mm

Function:

1. The Multi Function Card provides 2 ports of Door Phone interface, 2 ports multi function Relay Switch, 2 Ports of Multifunction Sensor interface, 2 ports of External Paging interface.
2. Multi function card is an important interface of communicating others related products in our DV-38 .ex, Sensor Control, Relay Control, External Paging, Fire Alarm, and Emergency Alarm. .etc.

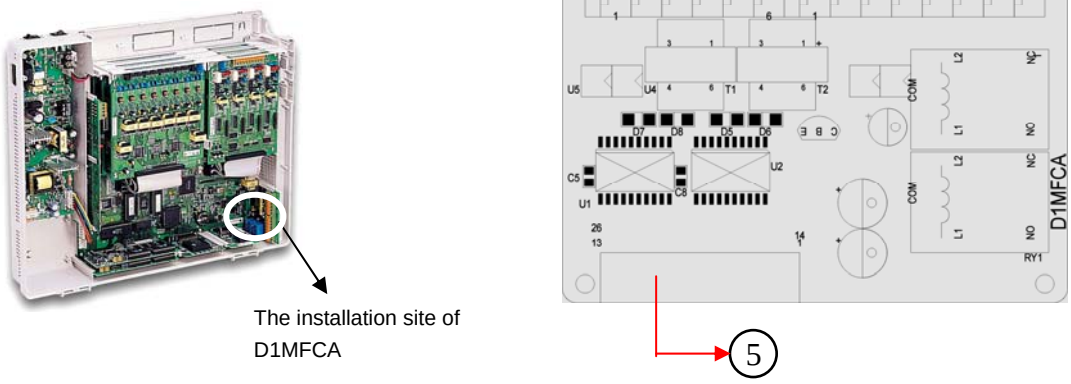


Figure 11. D1MFCA (Multi Function Card, 2 Sensor + 2 Relays + 2 Door Phones)

1. SEN2: Terminal-Block Connector for the 2nd Sensor Connection.
2. SEN2: Terminal-Block Connector for the 1st Sensor Connection.
3. External Page: Terminal-Block Connector for External Page Connection.
4. DOOR2: Terminal –Block Connector for the 2nd Door Phone Connection.
5. DOOR1: Terminal –Block Connector for the 1st Door Phone Connection.
6. SW2: Terminal-Block Connector for the 2nd Relay Connection.
7. SW1: Terminal-Block Connector. For the 1st Relay Connection
8. AUX: The Connector to connect [MFC] position where upon the D1MBUB.

D1MDCA (Metering Pulse Card)

Product: DV-38 Metering Pulse CARD
Item: D1MDCA
Size: 91 mm x 21 mm

Function:

Provide signal channel of the POTS CO line 12/16KHz Metering Pulse detection.

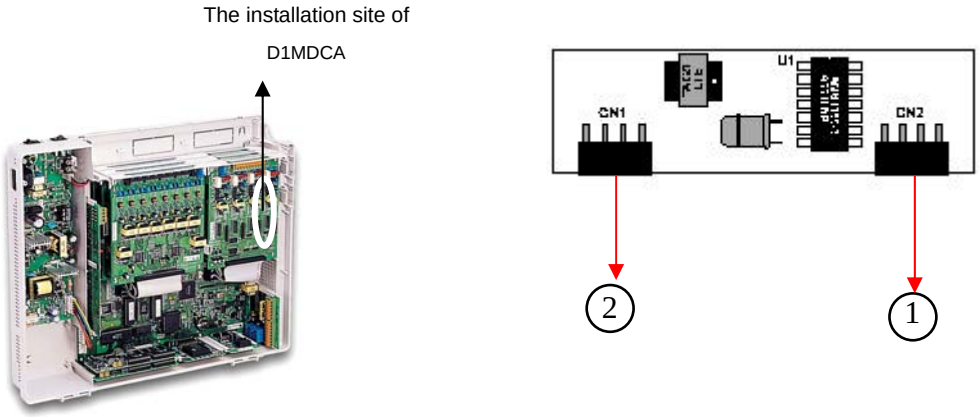


Figure 12. D1MDCA (Metering Pulse Card)

1. CN2: To connect to the position [CH1~4B] where upon the D1TKUC.
2. CN1: To connect to the position [CH1~4A] where upon the D1TKUC.

D1CIDC (CALLER ID Card)

Product: DV-38 CALLER ID CARD
Item: D1CIDC
Size: 91 mm x 21 mm

Function:

Provide signal channel of the POTS CO line DTMF/FSK Calling Line Identification detection.

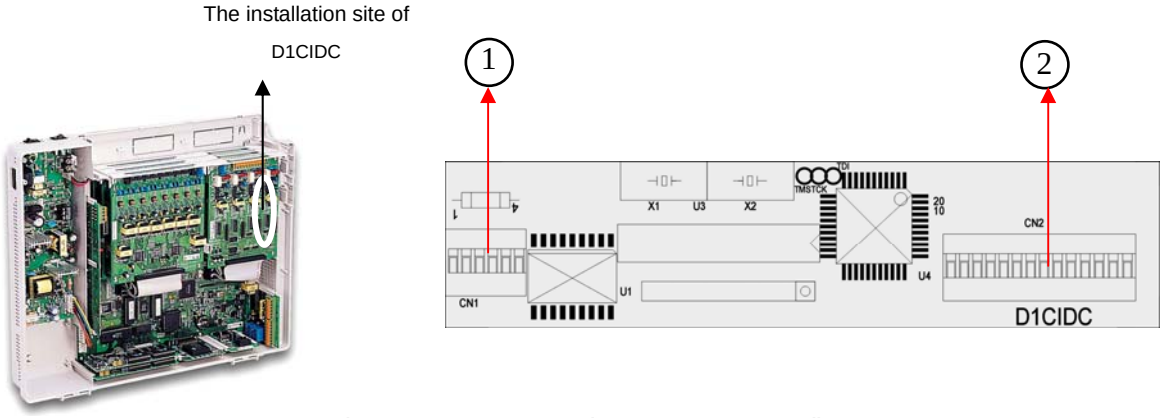


Figure 13. D1CIDC (CALLER ID Card)

1. CN2: To connect to the [CH1~4B] position where upon the D1TKUC.
2. CN1: To connect to the [CH1~4A] position where upon the D1TKUC.

D1RPCA (Remote Programming Card, 2400bps Standard Modem)

Product: DV-38 REMOTE PROGRAMING CARD
Item: D1RPCA
Size: 70.5 mm x 69 mm

Function:

1. Standard 2400bps Modem.
2. Cooperate with Aristel's Win-SM for system remote programming and Maintenance.

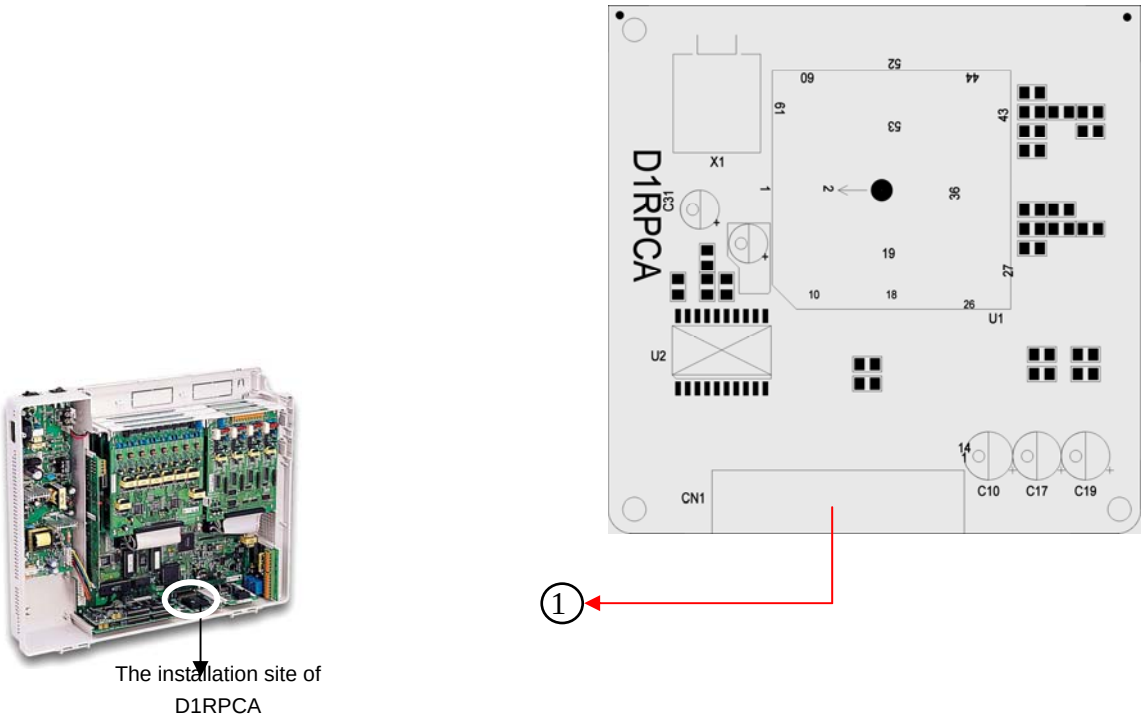


Figure 14. D1RPCA (Remote Programming Card)

1. RPC: 26-Pin Connector to connect to [RPC] position where upon the D1MBUB.

D1VMCA (Voice Mail Card)

Product: DV-38 VOICE MAIL CARD
Item: D1VMCA
Dimension: 225 mm x 124 mm

Function:

1. Support 2 basic Voice mail on board and could be expanded up to 4 ports by D1VMEA.
2. On board Flash memory chip to stores the voice message.

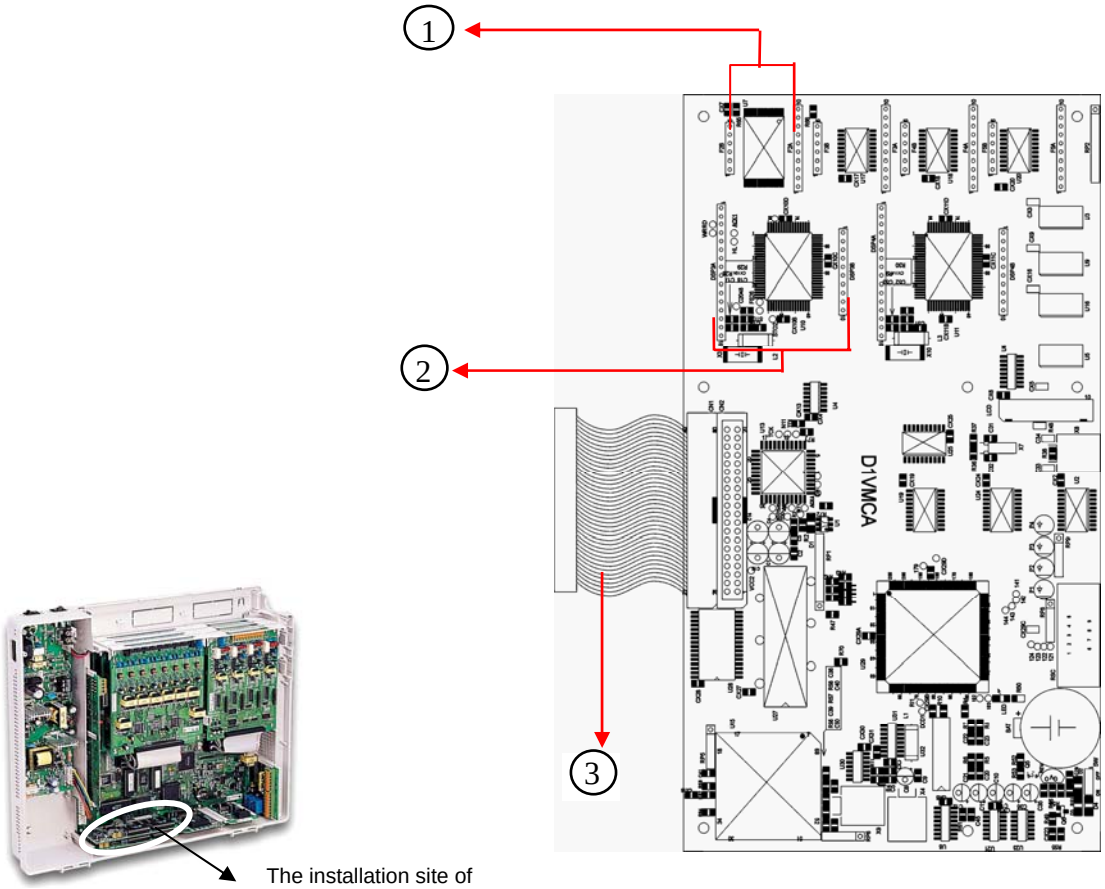


Figure 15. D1VMCA (Voice Mail Card)

1. Expansion Flash Memory for D1VMCA
2. Expansion Voice Mail Port for D1VMCA
3. Flat cable connector to connect to the [VSC] position where upon the D1MBUB.

D1VMEA (Voice Mail Expansion Card)

Product: DV-38 Voice Mail Expansion Card
Item: D1VMEA
Dimension: 41 mm x 41 mm

Function:

1. Signal channel of Voice Mail for port expansion where upon the designated socket.
2. Basic 2 channels on one board, Maximum capability can be expanded to 4 channels.

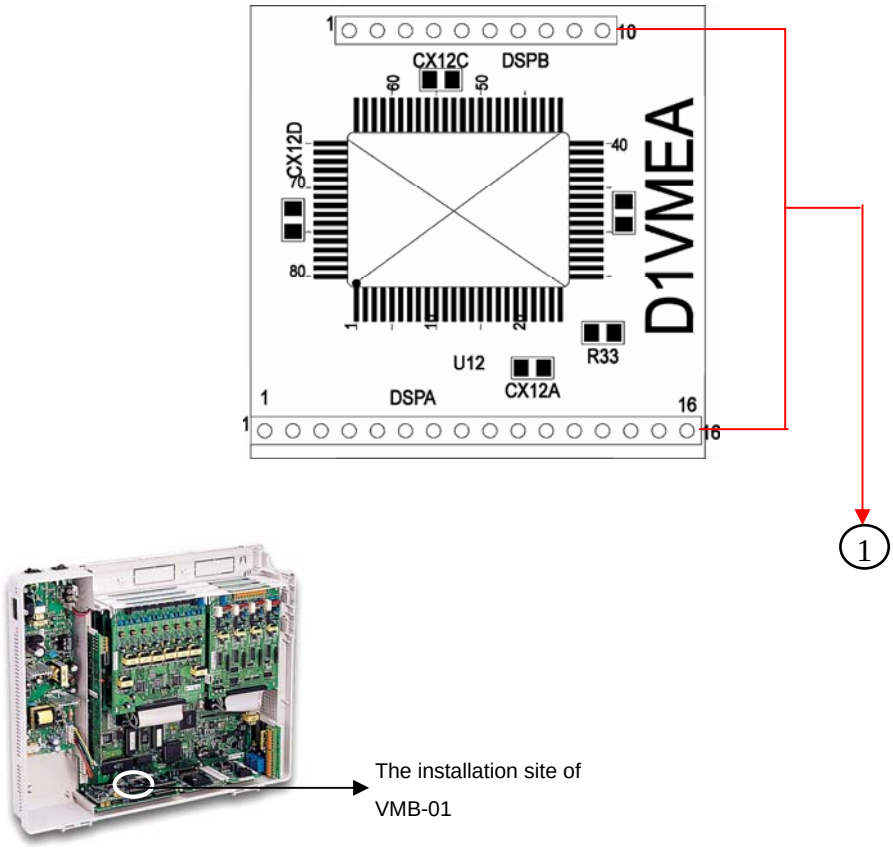


Figure 16. D1VMEA (Voice Mail Expansion Card)

1. Connect to the [DSP3A] , [DSP4A] and [DSP3B] , [DSP4B] positions where upon the D1VMCA.

D1VMFA (Expansion Flash Memory)

Product: DV-38 Expansion Flash Memory
Item: D1VMFA
Size: 30 mm x 25 mm

Function:

1. Each Expansion Flash Memory Card provides 8 hours memory space.
2. 2. 6 hours basic capacity on the D1VMCA, 3 expansion flash memory cards could expand the memory up to 30 hours Maximum (6+24=30 hours).

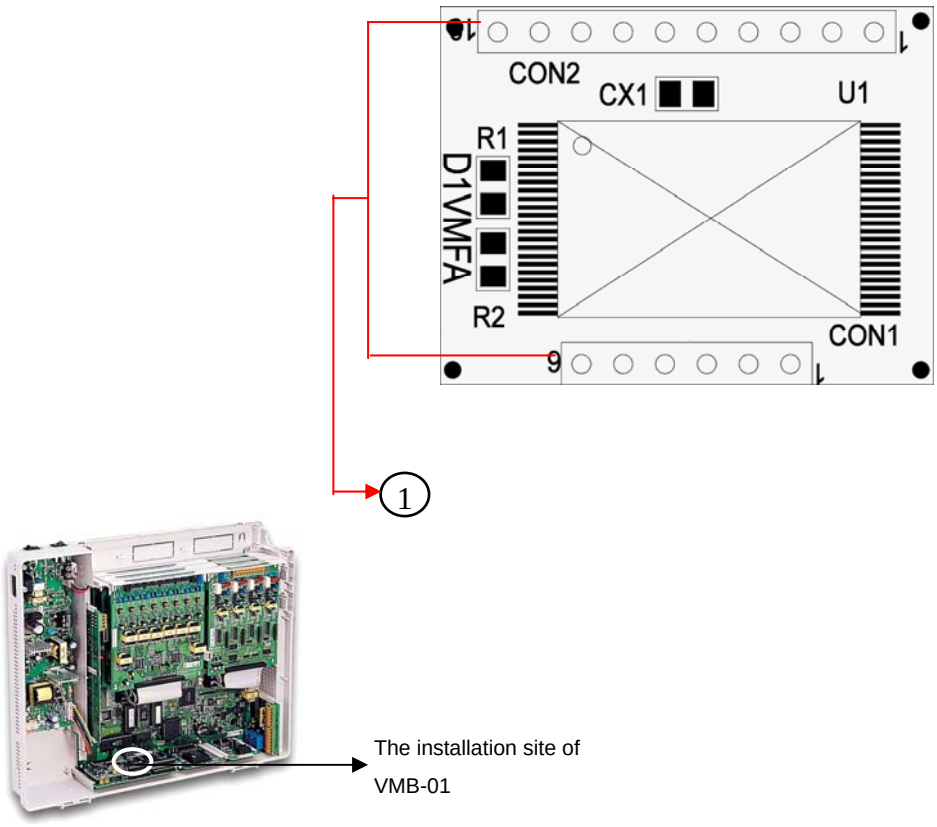


Figure 17. VMB-04 (Expansion Flash Memory)

1. Connect to the [F2A] ~ [F5A] and [F3B] ~ [F5B] positions where upon the D1VMCA.

INSTALLATION AND WIRING

AC POWER AND DC BATTERY BACK-UP INSTALLATION

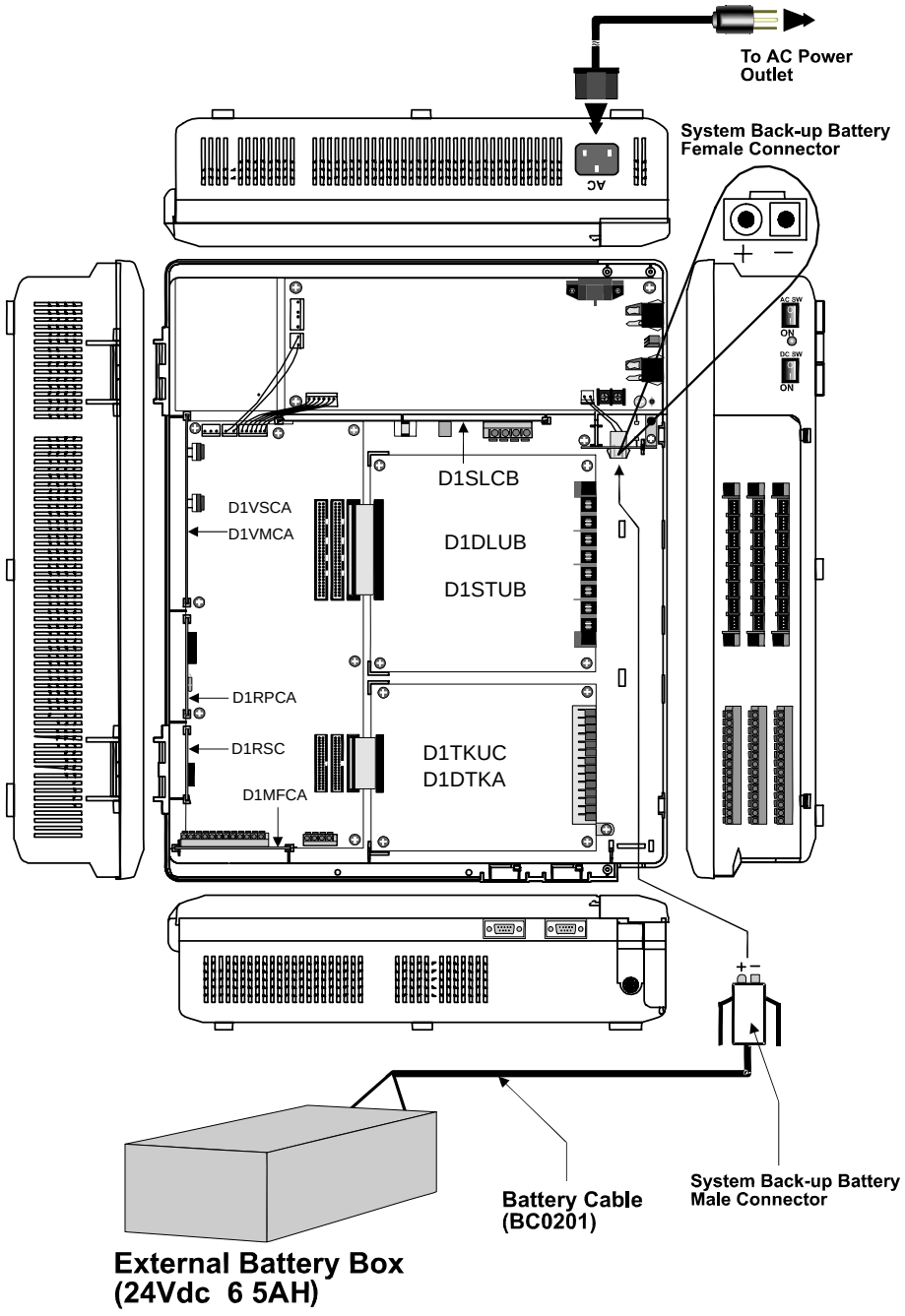


Figure 18. AC Power and DC Battery Back-Up Installation

NOTE. AC Power input to the system can be either 115VAC or 230VAC. The system can detect the input voltage automatically.

CAUTION
There are Hazardous voltages present in the Power Supply. We recommend that the Power be switched off before opening any covers.

D1MBUB JUMPER SETTING

Please refer Figure 2 the D1MBUB plot for detail positions.

1. Li Battery installation and jumper setting.

1.1 [JP1] – Li Battery power ON/OFF.

To turn ON Li-Battery Back-Up **To turn OFF Li-Battery Back-Up**

1.2 [BAT] – Battery Holder.

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

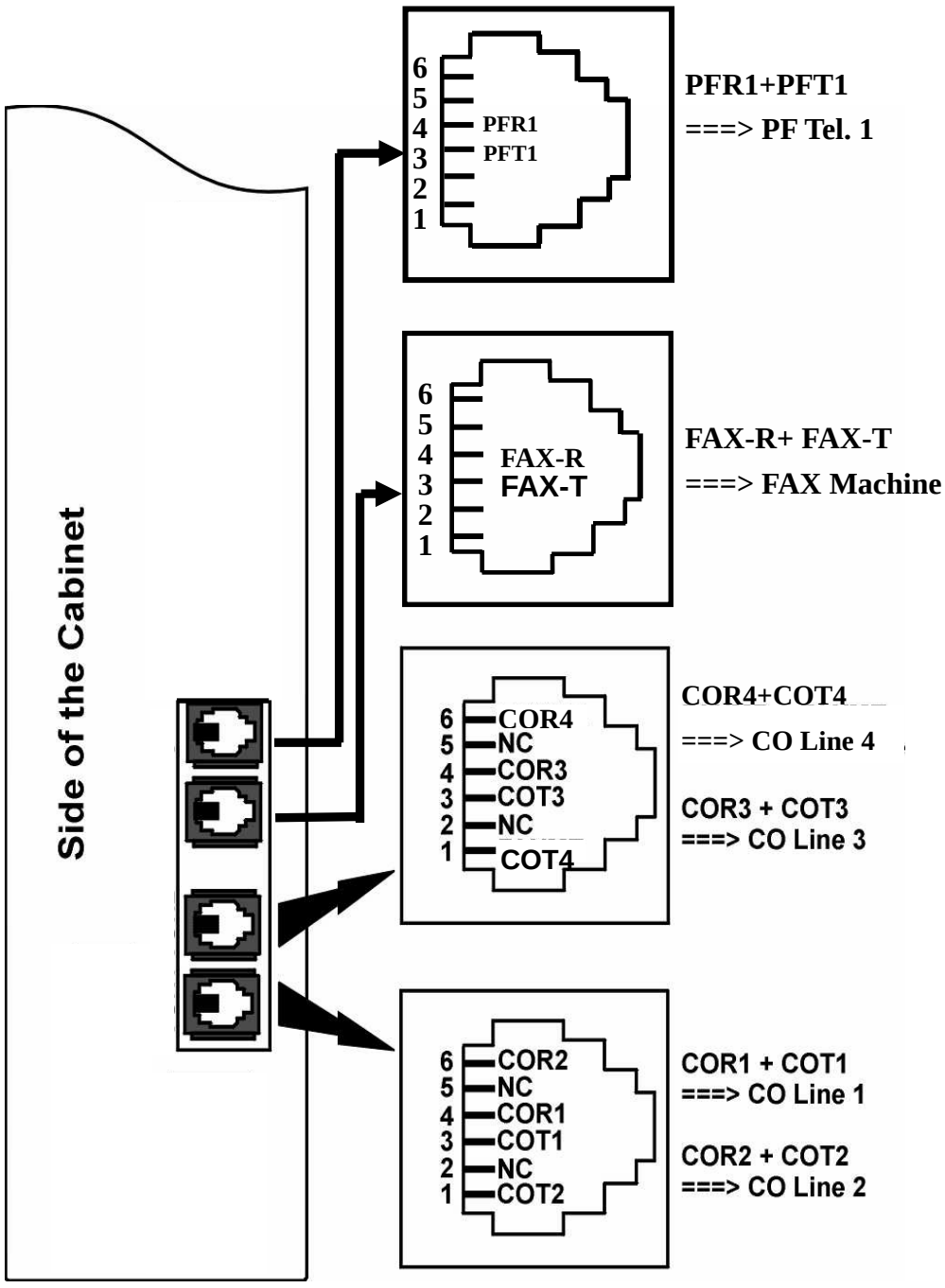
2. Music source selection and volume control for both MOH and BGM.

2.1 [JP2] - Music Source Selection.

External Music Source **Internal Music Source**

2.2 [VR1] – Volume Control.

POTS CO LINE WIRING FOR D1TKUC



1. There are 4 CO Line Ports that can be wired on D1TKUC, each CO Line Port containing 2-wires.
2. The above diagram depicts the connection of a FAX machine working with FAX MONITOR function.
3. FAX monitor function installation is only available on D1TKUB.

D1CIDC and D1MDCA INSTALLATION

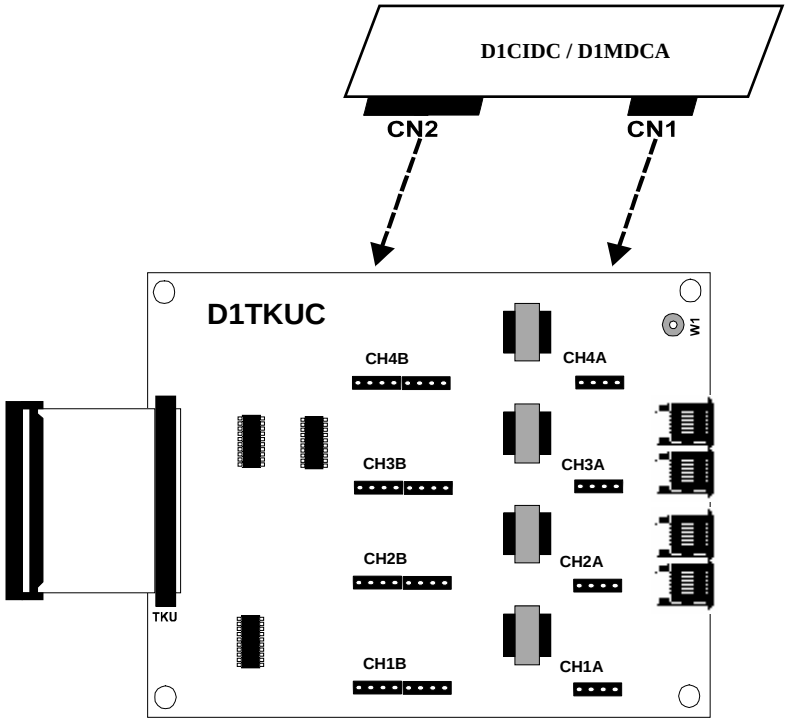


Figure 20. Metering Pulse Detection Card Installation

1. There is a maximum of 4 D1CIDC cards that can be installed in each D1TKUB, one card for one CO Line.
2. The connection for the 1st, 2nd, 3rd and 4th CO Lines are from (CH1A) +(CH1B)to (CH4A) +(CH4B).

Digital Keyphone Wiring for D1DLUB

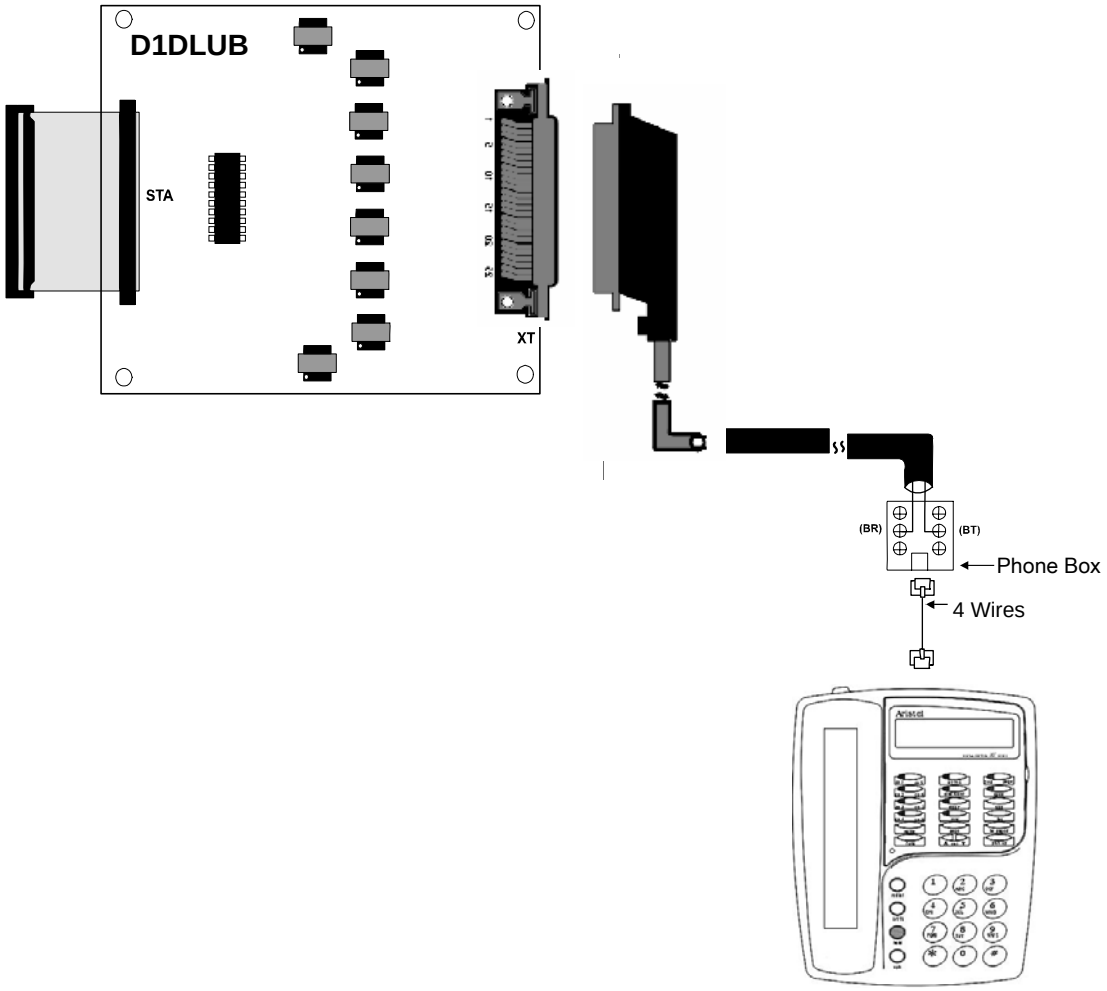


Figure 21. Digital Key Station Wiring on D1DLUB

1. (ST1)~(ST8) are all for the Digit Key Telephone connections.
2. BT/BR is the Data/Audio/Power pair (no polarity) .

Analogue Keyphone Wiring for D1STUB

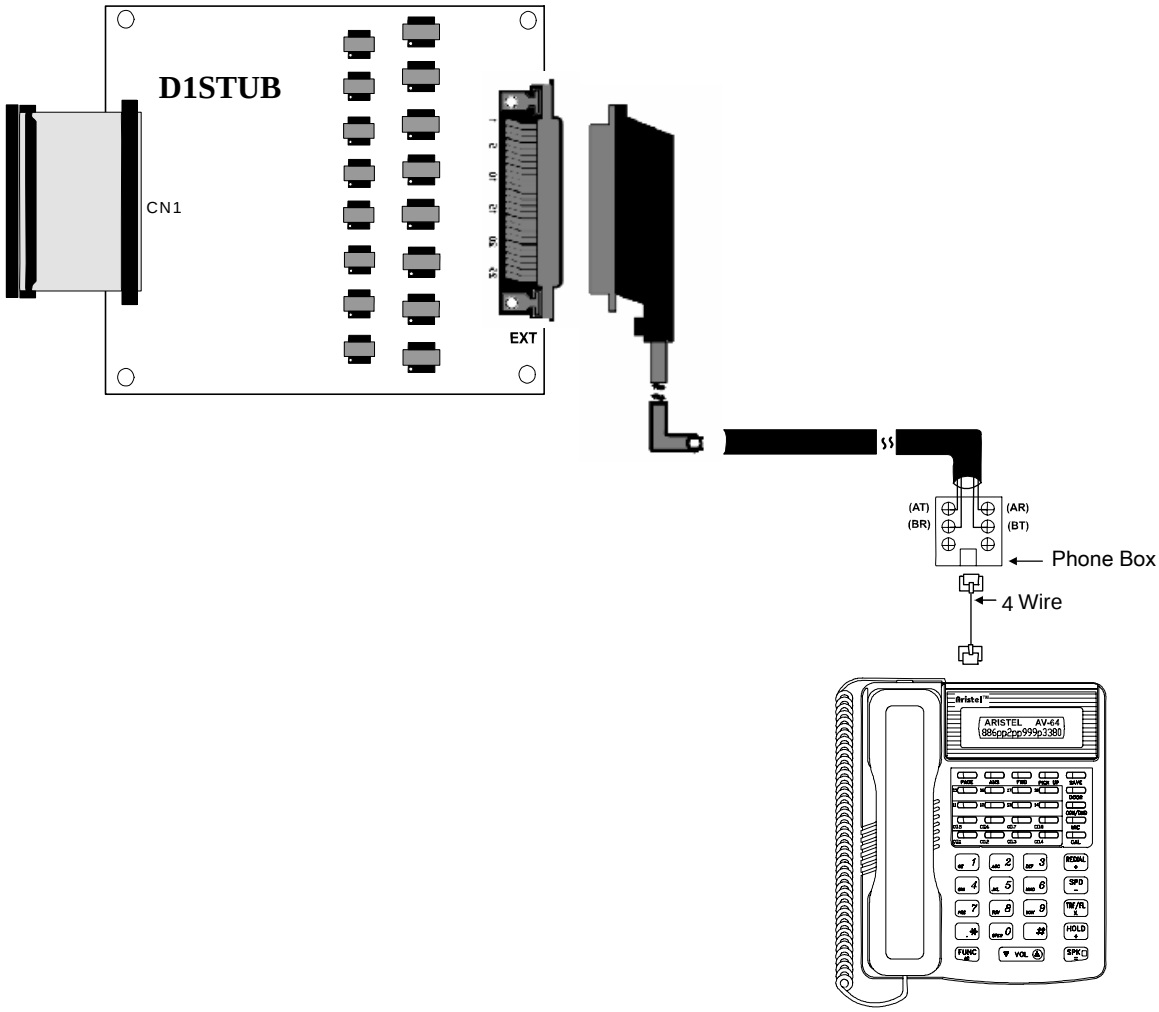


Figure 22. Analogy Key Station Wiring on D1STUB

1. (ST10~(ST8) are all for the Analogy Key Telephone connections.
2. AT/AR is the audio pair ; AT = Transmission (Green Color) , AR = Receiving (Red Color) .
3. BT/BR is the Data/Power pair ; BT=(-) Pole and Data Receiving (Black Color), BR = (+) Pole and Data Transmission (Yellow Color).

50 Pins (25 Pairs) Male Amphenol Connector Layout

Pair	D1DLUB	D1STUB
Pair 1	NC	Pair 1 for Station 1
Pair 2	Pair 2 for Station 1	Pair 2 for Station 1
Pair 3	NC	Pair 1 for Station 2
Pair 4	Pair 2 for Station 2	Pair 2 for Station 2
Pair 5	NC	Pair 1 for Station 3
Pair 6	Pair 2 for Station 3	Pair 2 for Station 3
Pair 7	NC	Pair 1 for Station 4
Pair 8	Pair 2 for Station 4	Pair 2 for Station 4
Pair 9	NC	Pair 1 for Station 5
Pair 10	Pair 2 for Station 5	Pair 2 for Station 5
Pair 11	NC	Pair 1 for Station 6
Pair 12	Pair 2 for Station 6	Pair 2 for Station 6
Pair 13	NC	Pair 1 for Station 7
Pair 14	Pair 2 for Station 7	Pair 2 for Station 7
Pair 15	NC	Pair 1 for Station 8
Pair 16	Pair 2 for Station 8	Pair 2 for Station 8
Pair 17	NC	NC
Pair 18	NC	NC
Pair 19	NC	NC
Pair 20	NC	NC
Pair 21	NC	NC
Pair 22	NC	NC
Pair 23	NC	NC
Pair 24	NC	NC
Pair 25	NC	NC

The Above pairs refer to the standard color coding as they appear when terminated on the frames.

Single Line Phone Wiring For D1SLCB

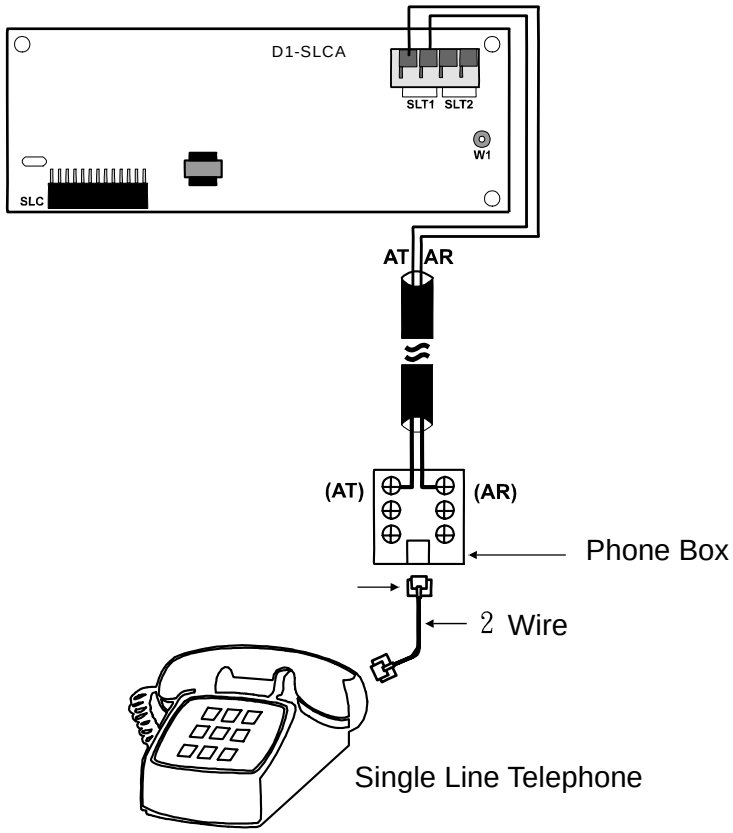


Figure 23. SLT Station Wiring on D1SLCB

1. Connect D1SLCB on D1MBUB.
2. Only for 2 SLT ports (SLT1) and (SLT2) provided on D1SLCB can connect with Single Line Telephone.
3. The wiring of (SLT2) to connect with Single Line Telephone is analogous to that of (SLT1).

2-Wires Door Phone Installation

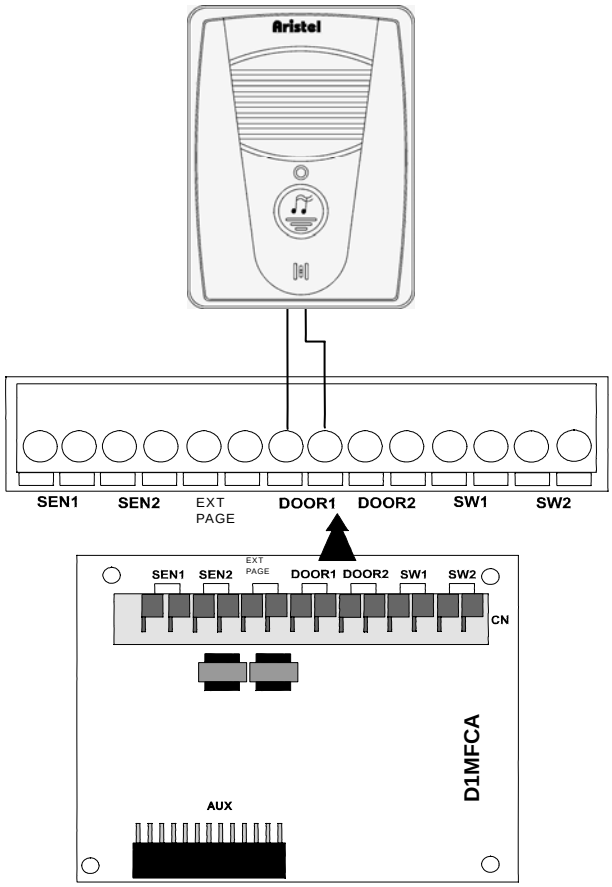


Figure 24. Door Phone Wiring on D1MFCA

1. D1MFCA is an option, which must be installed to provide 2 Door Phone Connection.
2. This option allows the user to connect any kind of external 2-Wires Door Phone device.
3. The program setting refer to Zone 602.

Sensor Installation

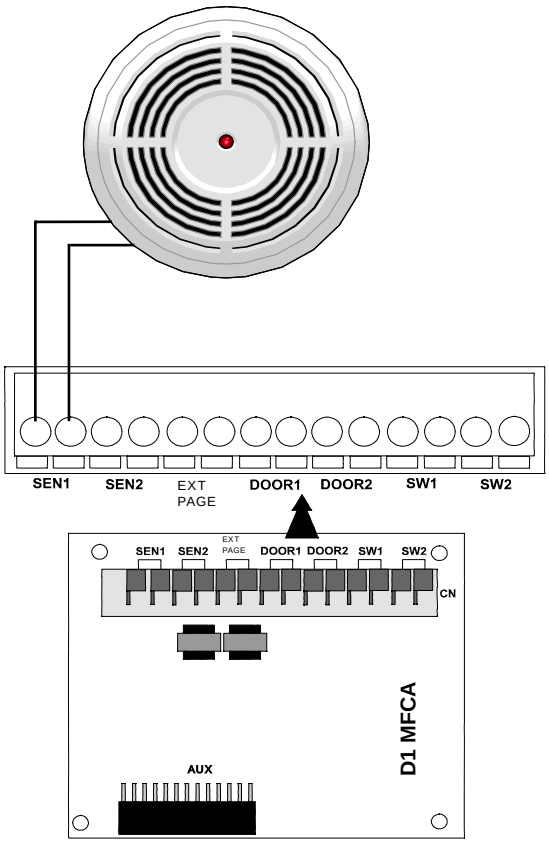


Figure 25. External Sensor Wiring on D1MFCA

1. D1MFCA is an option, which must be installed to provide 2 Sensor Connections.
2. This option allows the user to connect any kind of external SENSOR device, such as Door Sensor, Smoke Detector, or Heat Sensor, among others.

Door Switch Installation

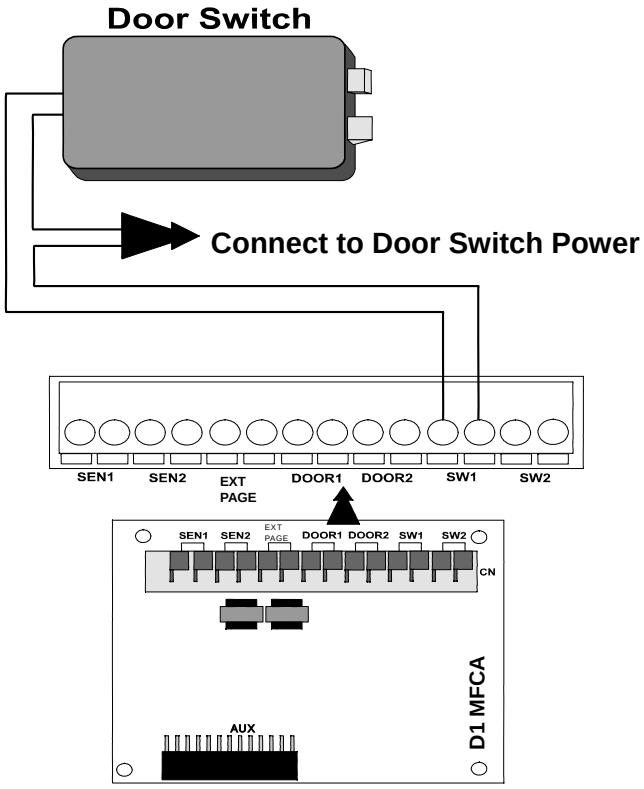
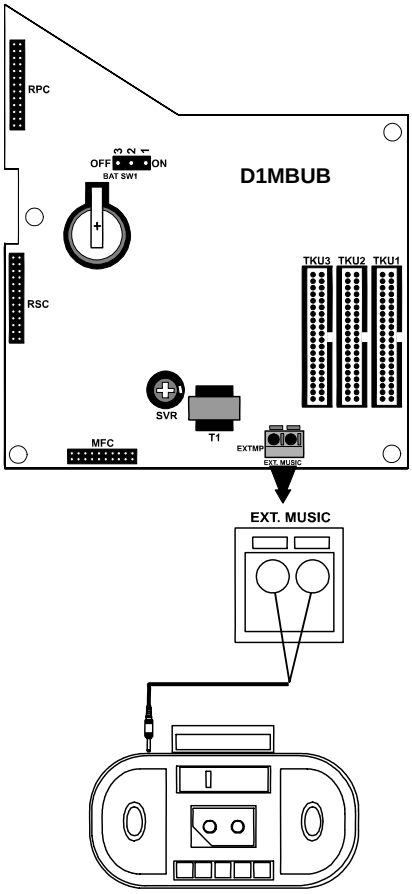


Figure 26. Door Switch Wiring on D1MFCA

1. D1MFCA is an option, which must be installed to provide 2 Relay Connections.
2. This option allows the user to connect any kind of external Relay Control device, such as Door Switch, Loud Bell among others.

External Music Source Installation



External Music Source

Figure 27. External Music Source Wiring on D1MBUB

1. Connect 2-conductor wiring cord from External Music Source to (EXMUSIC) on D1MBUB.

RS232 (Serial Printer or PC) Installation

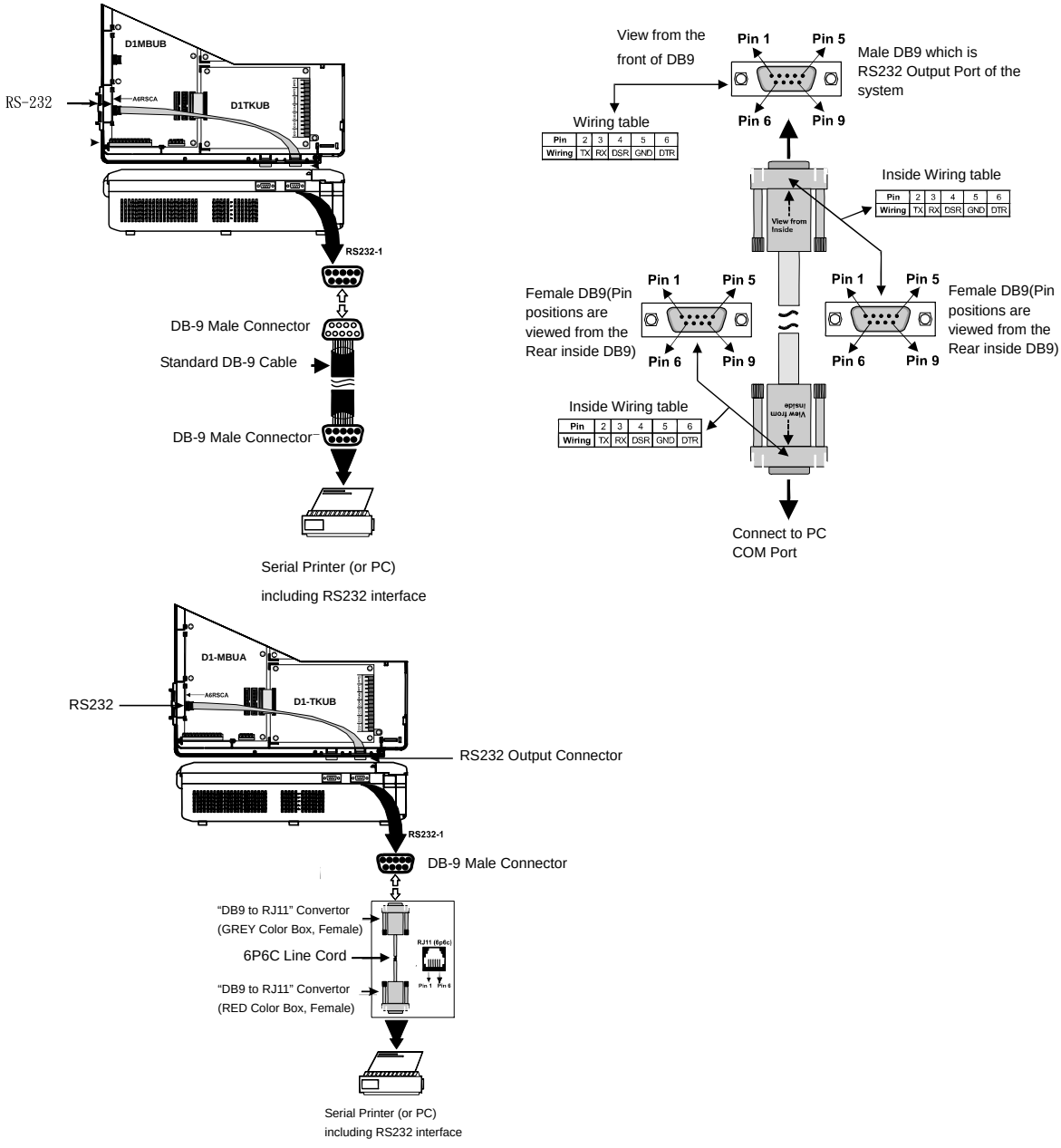


Figure 28. RS232 Wiring on D1MBUB (wired by customer)

2. Install D1RSCC (RSC) position on D1MBUB as the FIRST RS232 interface, or install D1RSCC to (RPC) position on D1MBUB as the SECOND RS232 interface.
3. Set up the jumper Selection onD1RSCC according to which one of PC or Serial Printer is connected to the system. Please refer to Figure 9. Point 2,3,4,5, on Page 29.