

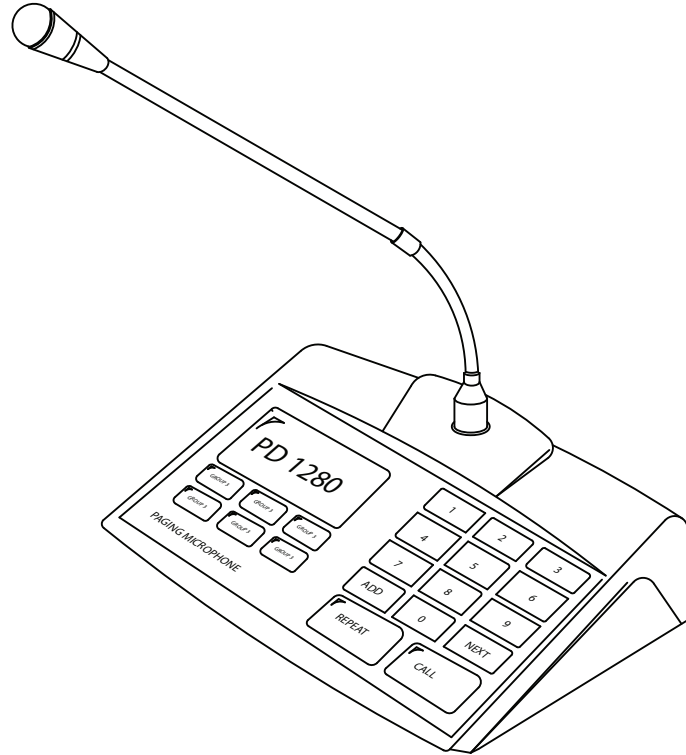


# INSTRUCTION MANUAL

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## PD1280

### Digital Paging Microphone



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Thank you for choosing another quality product from Amperes Electronics

### *Product in Summary*

Amperes has upgraded the protocols in PD series paging microphones, MatriMix as well as PMX system. With this harmonised data, all the equipments can be used or interchanged seamlessly. As such, the firmware of TD6240 has been upgraded as well, to cater for the needs.

We shall endeavor to make products with contemporary needs and yet expandable for future upgrades. We are sure you make the right decision to choose Amperes, which is not only offerint the product that meets your budget, but perform beyond your expectation.

We appreciate that you read through the manual to avoid any mishandling as well as to explore the full potential this unit can offer. Keep this manual for future reference and we believe that you are getting an optimum product in its class.



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In our support towards environment, we shall no longer print manuals to be accompanied with each product. Please view through browser and print them only when necessary.



## Product Descriptions

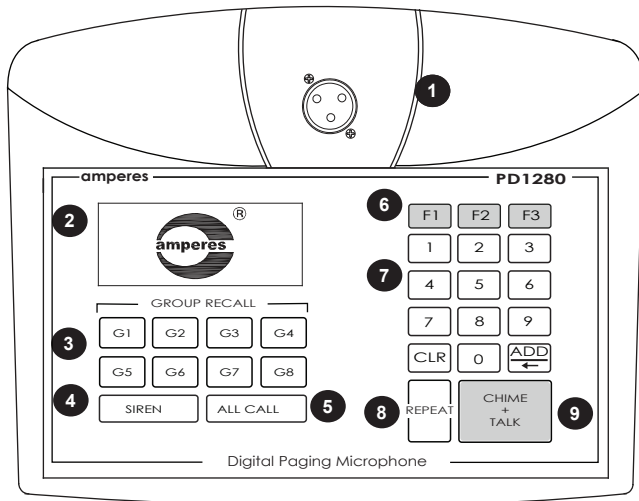
PD1240 and PD1280 shall be the next generation of desktop paging microphones for Amperes. They are enhanced versions of the popular PD2400 series, featuring soft touch sensor buttons to meet today's aesthetic demand.

Common specifications from PD2000 series are included but further improved with better sound delivery, thanks to the embedded sound processor. Features available include priority level assignment, multipoint paging setup, chime and microphone volume controls as well as illuminated gooseneck microphone.

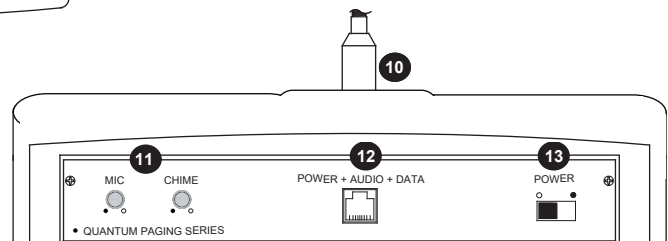
The search for contemporary design with unsurpassed features ends with PD1280. It is suitable for large scale installations, of up to 256 zones, multi point paging stations with 9 priority levels, soft touch buttons and big LCD graphic panel for ease of monitoring and programming.

## Parts Identification

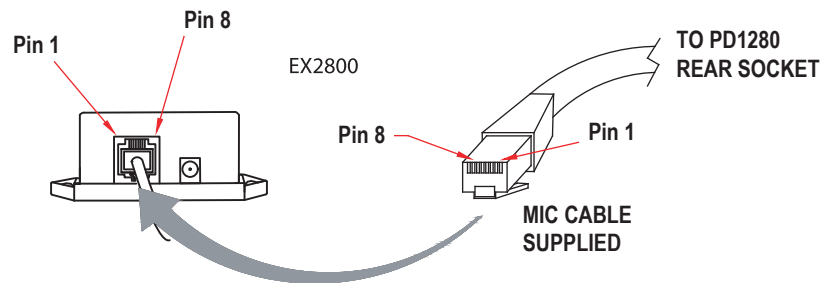
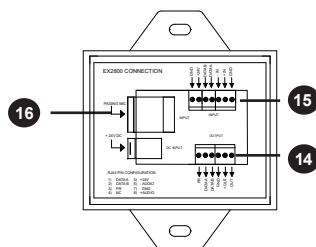
Top View



Rear view



EX2800



Pin 1 - Data A  
 Pin 2 - Data B  
 Pin 3 - Relay Trigger Signal  
 Pin 4 - NC

Pin 5 - +24V Supply  
 Pin 6 - Audio -ve output  
 Pin 7 - Ground  
 Pin 8 - Audio +ve output

### 1. PAGING MICROPHONE INLET

XLR inlet for gooseneck microphone. Use only condenser microphone supplied or those operates under 3 to 9 V.

### 2. LCD DISPLAY

Factory default display is with back light. User has the option to turn off. Please refer to setup section.

### 3. GROUP CALL

It is used for programming & recall zone grouping during G1 ~ G8 button.

### 4. SIREN BUTTON

Press this siren button the LCD shall show the 'Siren Active', after that press the 'Chime & Talk' button shall activate the EP1200A to siren mode.

### 5. ALL CALL BUTTON

Mic shall be activated instantly without chime, triggering all normal zones. Note that making ALL CALLs will not trigger the overriding relay at the zone selectors, thus the volume controllers set at minimum shall not be overridden.

### 6. F1 ~ F3 BUTTON

This button for future add-on other function.

### 7. KEYPAD

Zone selections and programming are done via these keypad.

### 8. REPEAT BUTTON

Press repeat button for recall previous zone selection.

### 9. CHIME AND TALK BUTTON

Select the zones required before pressing this button. A chime shall start (if selected) and followed by mic activation, which is indicated by the illuminated by the illuminated ring at the microphone.

### 10. GOOSENECK MICROPHONE

This detachable condenser mic comes with illuminated ring when the mic is in active mode and ready for paging.

### 11. CHIME & MIC VOLUME CONTROL

Individual volume for chime and microphone output level can be adjusted according to site requirement.

### 12. OUTPUT CONNECTION

Connect the RJ45 cable to EX2800 for power, data and audio. If the paging mic is located near the decoder at the rack (within 50m), the cable can be connected directly to TD6240 / MxP2288 without using EX2800.

### 13. POWER SWITCH

Switch for 24V power to unit.

### 14. DATA / AUDIO OUTPUT (EX2800)

Data and audio are linked to TD6240 decoder unit using 2 pair screen cable. Please refer to 'Connecting the Unit' for detailed connection diagram.

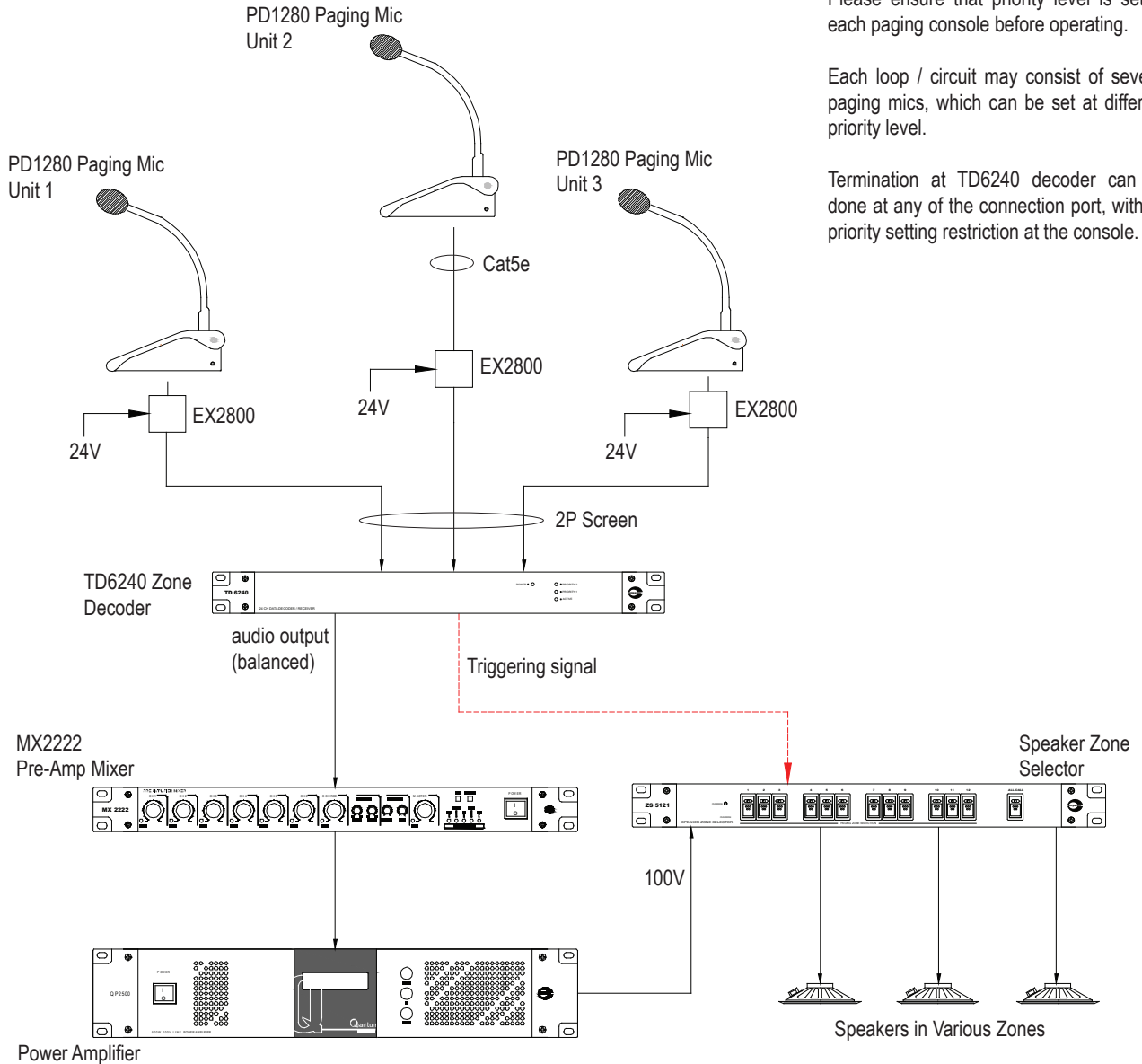
### 15. DATA / AUDIO INPUT LINK / DC SUPPLY (EX2800)

Data and audio from other EX2800 (if any) are fed to this port forming a circuit. This connection is applicable only if multipoint paging setup is established. Use a DC24V power adaptor supplied for powering the unit.

### 16. PAGING MIC CONNECTION (EX2800)

Connect to the paging mic via this RJ45 connector. For pin configuration, refer to the diagram.

# Application Schematic



Please ensure that priority level is set at each paging console before operating.

Each loop / circuit may consist of several paging mics, which can be set at different priority level.

Termination at TD6240 decoder can be done at any of the connection port, without priority setting restriction at the console.

Other complementary equipment may be required in the system such as :  
 EP1200 for Emergency Paging and overriding  
 AX3800 / AC3801 Amplifier Changeover Panel for standby amp fault changeover  
 BC9740 / PS9400 Battery Charger and Power Supply  
 VR7600 Zone Volume control panel

Note on priority setting :

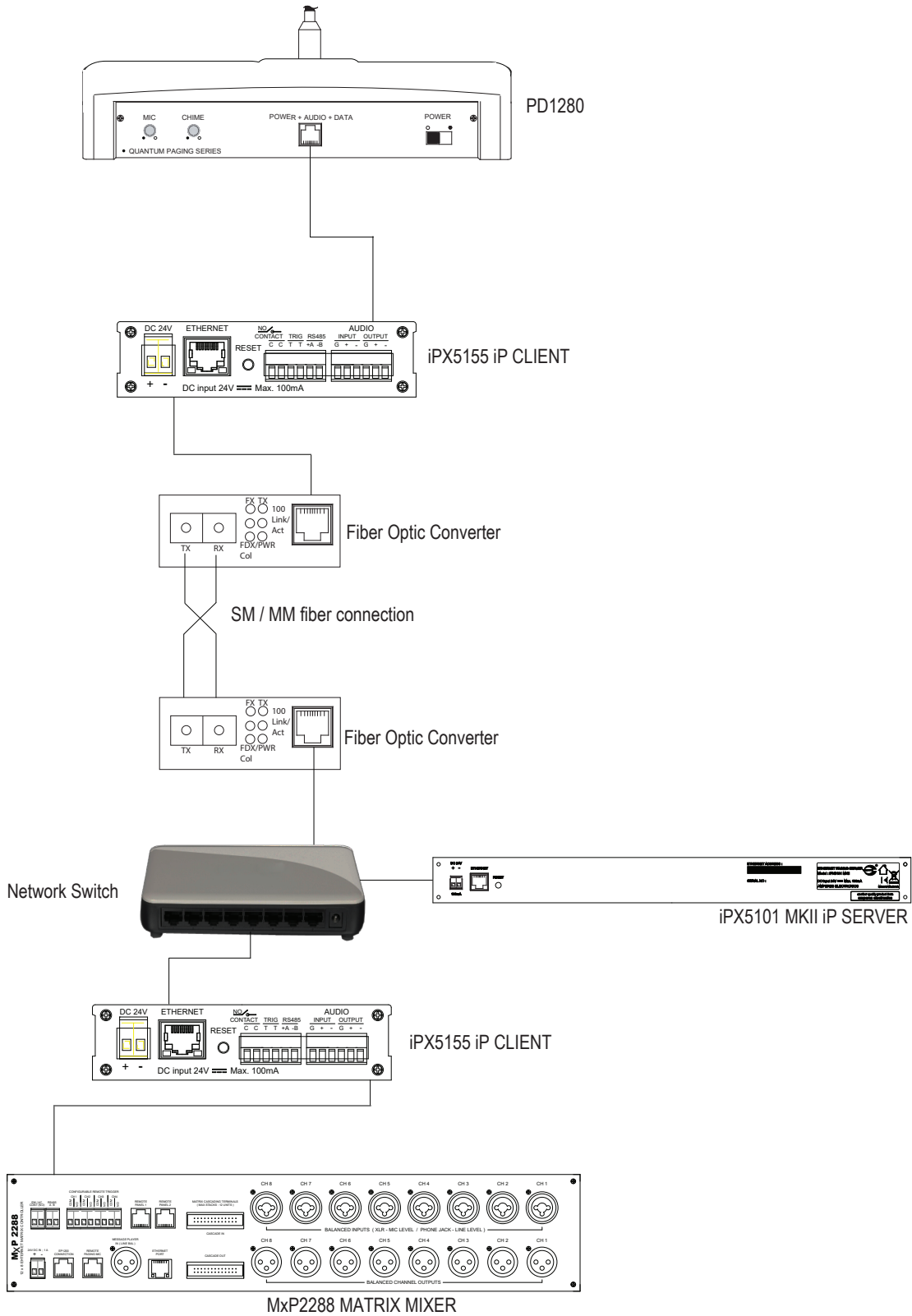
If the system consist of several paging mic with same priority ;  
 The one activated earlier shall remain active and the other shall remain in busy mode. It is as first come first serve mode.

If the system consist of several paging mic with different priority :  
 The one with higher priority shall override the unit with lower priority even though the latter is in paging mode.  
 If lower priority unit would have busy LED blinking when the higher priority is active.

Priority 1 ( highest ) ..... Priority 9 ( lowest )



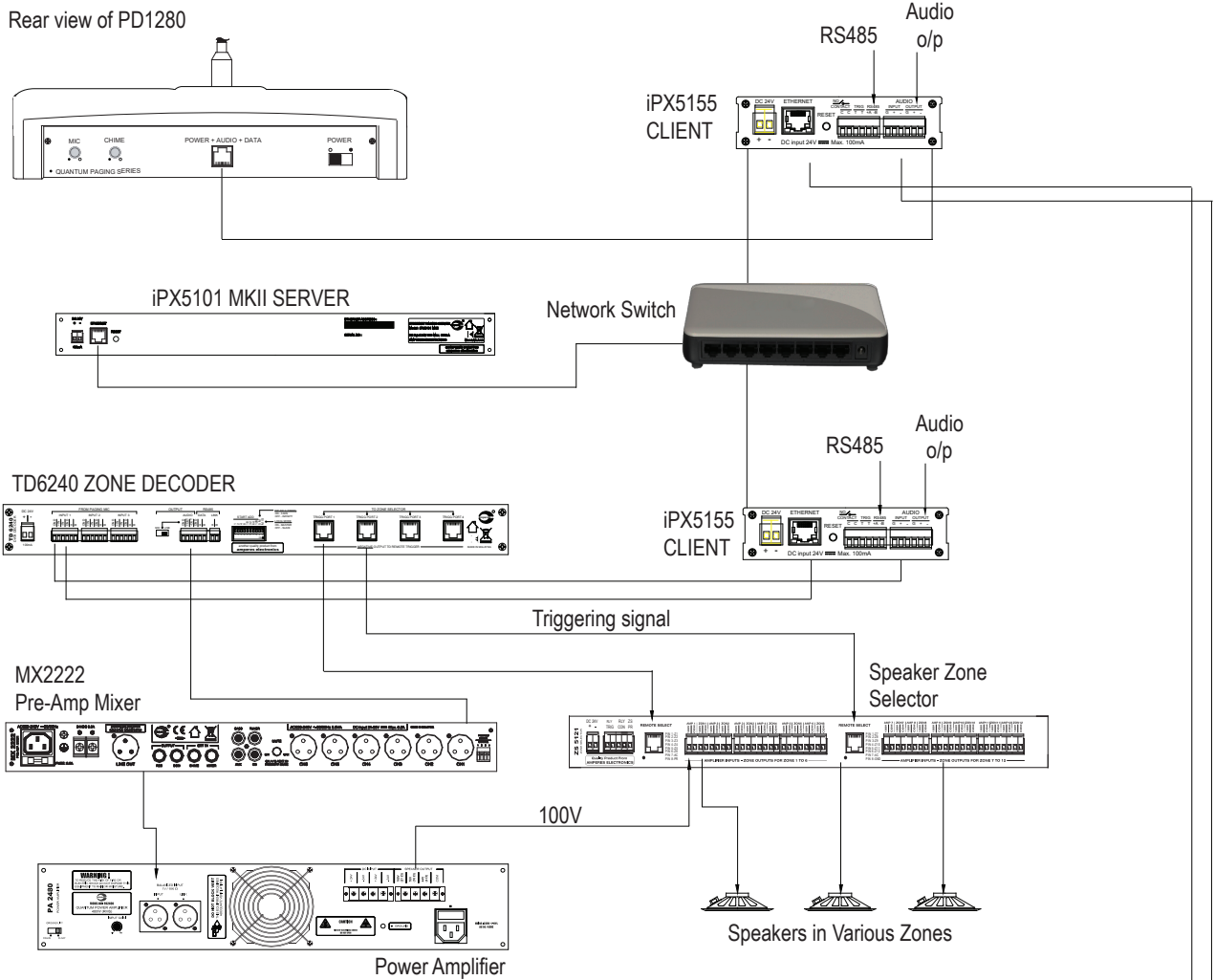
# Remote Connectivity via Fiber



The Diagram shows the connectivity using Fiber Optic for long distance mic connectivity with IP setup. Multipoint paging setup is possible and the paging mic shall operate in similar manner as of using conventional system.

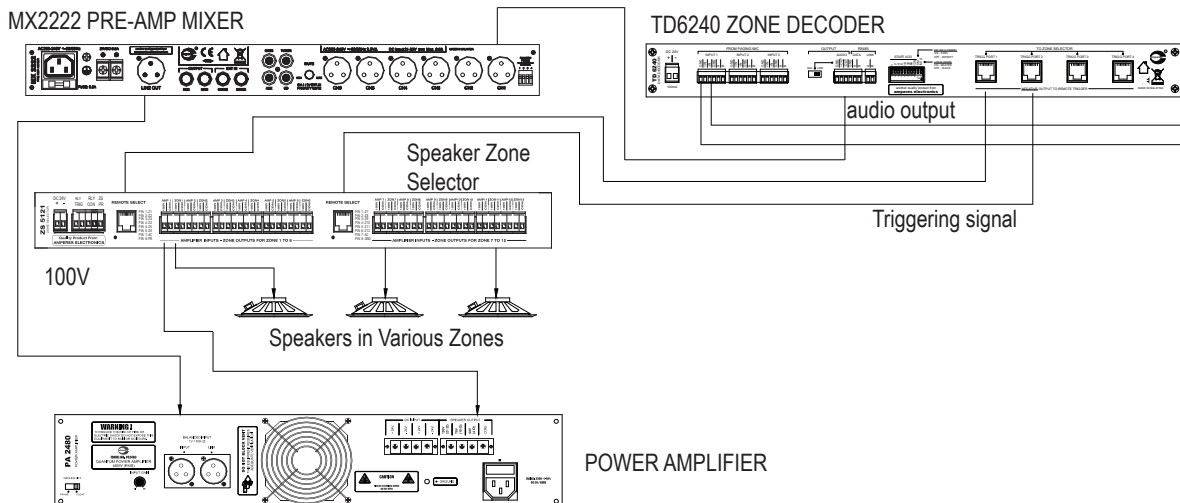


# Connecting to IP Paging System

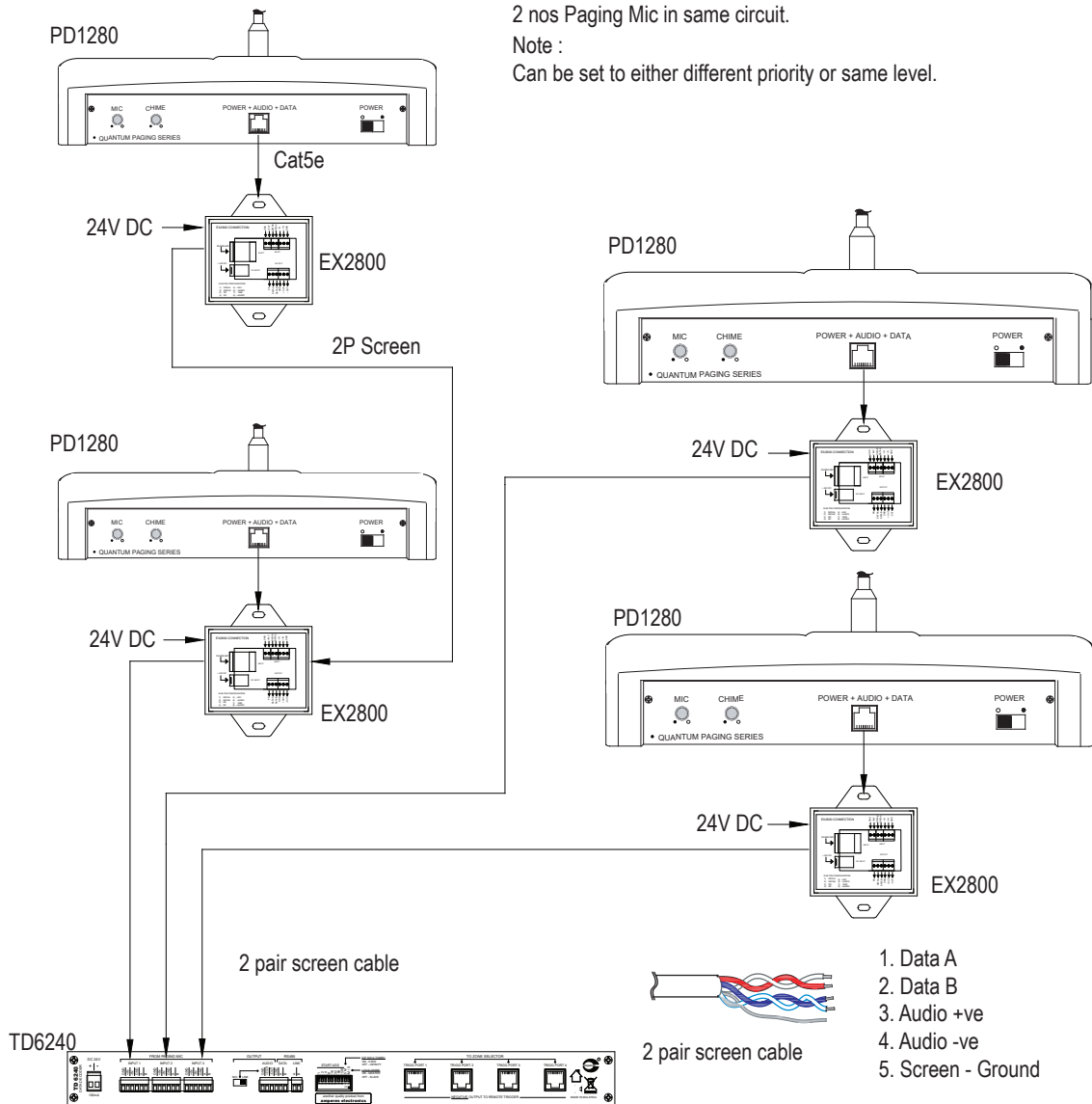


LOCAL

REMOTE



# Connecting The Unit (Multi Point)



2 nos Paging Mic in same circuit.

Note :

Can be set to either different priority or same level.



2 pair screen cable

Cable Size shall be according to the distance from the paging mic and the equipment rack.

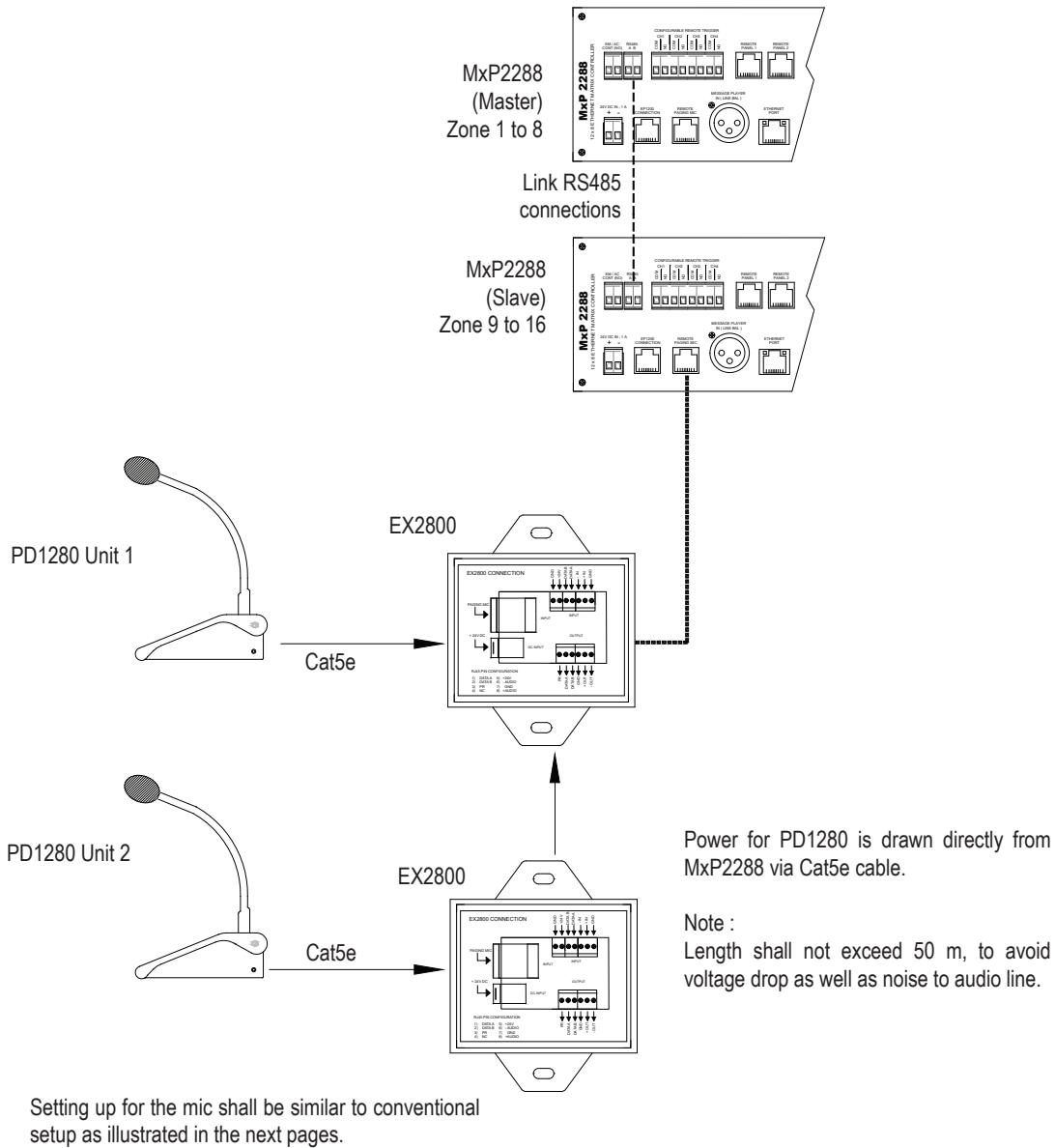
## Connecting to MatriMix MxP2288

Since that MxP2288 MatriMix system is capable to cater for larger quantity of zones ( 8 input to 128 outputs ), PD1280 has to be used as the paging mic for the system. More than one PD1280 can be installed.

There is some minor difference when using PD1280 in Matrix environment as compared with the conventional one :

- Direct connection to MxP2288 if only one PD1280 and one Matrix is used.
- Power directly from MxP2288 ( length do not exceed 50 m )

An illustration of two PD1280 connected to two MxP2288.



## Unit Startup

Device Int..

Upon powering, the LCD display shall show 'Device Initialising'.



Remote MIC



Mic is ready for paging.

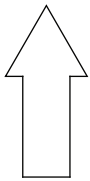
## Setup Menu



1) Press "0" button momentarily ( 3 seconds )  
to enter Setup mode

2) Press "Add" button for next

3) Press CLR for Exit setup mode



When using for the first time, a sample setup is required such as:

- 1) Setting priority level
- 2) Optional setting for chime output, grouping, time out etc.

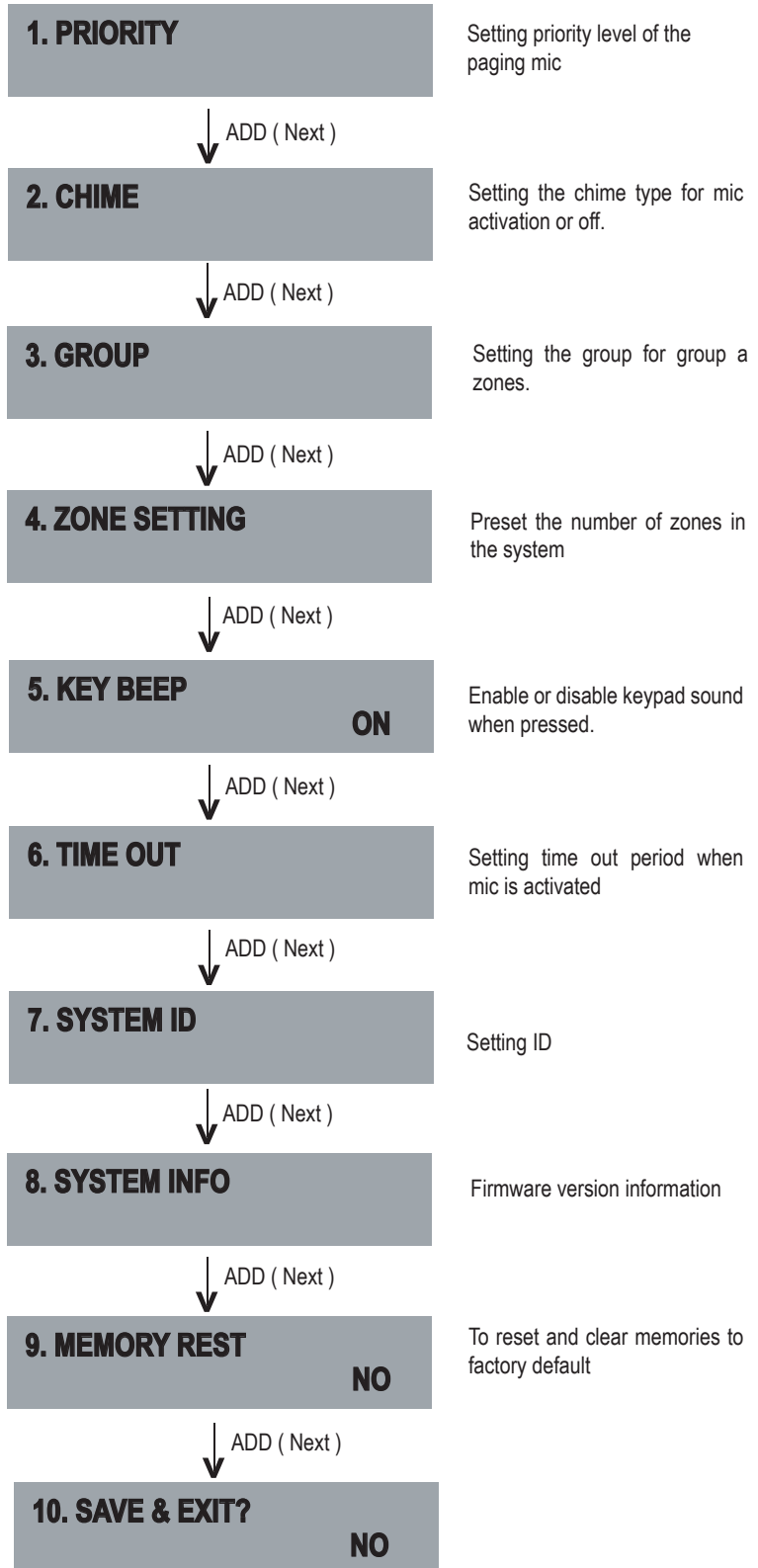
# Unit Setup - Main Menu

To enter the Setup Main Menu, press '0' momentarily for 3 seconds and the first setup menu - 1. PRIORITY shall appear.

Use Add (Next) button to scroll down the menu, or CLR (Prev) to view previous screen.

To enter a specific sub menu, press '0' button.

If no entry is made within 15 seconds, the setup menu shall exit automatically and return to ready mode.



## Setup - Sub Menu

### 1. PRIORITY

Press " 0 " to enter this sub menu from the main directory.

This menu is to set the Priority level of the paging mic. Priority 1 is highest while No Priority is considered normal and is used in single point paging setup. Maximum can set 10 level priority.

#### 1. PRIORITY

↓ Press "0" for Enter

#### 1.1 Priority set :

1

Factory default setting is 1

↓ Press 'ADD' to select value

#### 1.1 Priority set :

2

Once priority level is determined, press '0'

↓ Press "0" for Save

Return to PRIORITY menu

### 2. CHIME

Press " 0 " to enter this sub menu from the main directory.

This menu is to set the chime type when the paging mic is on and followed by closing chime.

#### 2. CHIME

↓ Press "0" for Enter

#### 2.1 1st Chime :

↓ Press "0" for Enter

#### 2.1 1st Chime :

UP

↓ Press 'ADD' to select Tone  
Press '0' for Save

#### 2.2 2nd Chime :

↓ Press 'ADD' to select 2nd Chime  
Press "0" for Enter

#### 2.2 2nd Chime :

Down

↓ Press 'ADD' to select Tone  
Press '0' for Save

Press 'CLR', Return to main menu



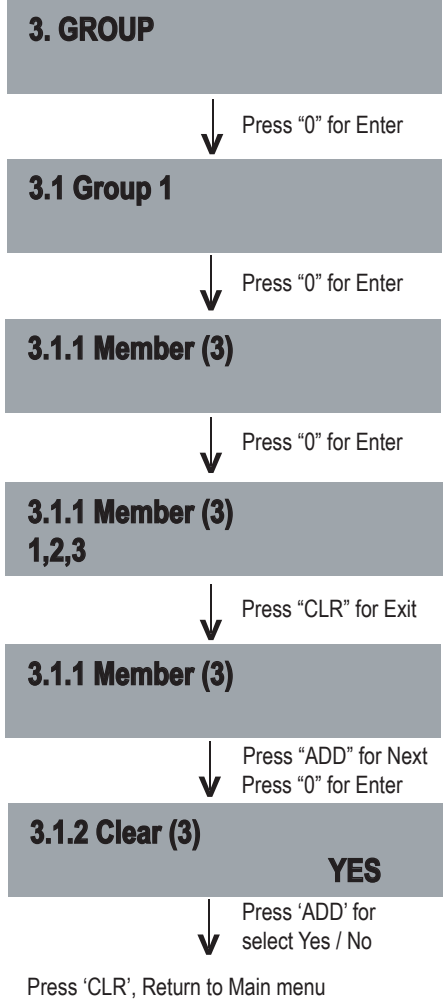
## Setup - Sub Menu (continued)

### 3. GROUP

Press " 0 " to enter this sub menu from the main directory.

This menu is to create group of zones and group names in the system.

We recommend this setting to be done to enable faster response during paging.

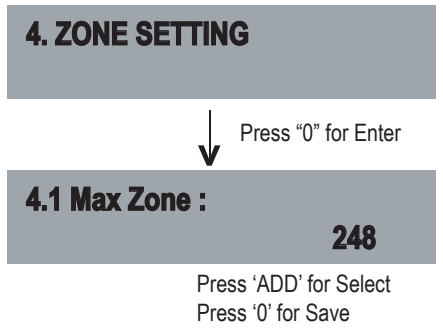


### 4. ZONE SETTING

Press '0' to enter this sub menu from the main directory.

This is to set the maximum number of zones available in the system.

We recommend this setting to be done to enable faster response during paging.



Factory default setting is 248

## Setup - Sub Menu (continued)

### 5. KEY BEEP

Press '0' to enter this sub menu from the main directory.

This is to set the maximum number of zones available in the system.

We recommend this setting to be done to enable faster response during paging.

**5. KEY BEEP**

Press "0" for Enter

**5. KEY BEEP**

**ON**

Press "ADD" for Select On / Off  
Press "0" for Save

### 6. TIME OUT

Press '0' to enter this sub menu from the main directory.

This is to set the duration that the mic to be in active mode.

Setting the timeout would prevent the mic being turned on and left idle after an announcement is made.

There are time when the mic is required to be active for a longer period of time, such as making a long speech or performing a prayer using the PA system

**6. TIME OUT**

Press "0" for Enter

**6.1 Timeout**

**1 min**

Press "ADD" for Select  
Press "0" for Save

### 7. SYSTEM ID

Press '0' to enter this sub menu from the main directory.

To setup name & address

**7. SYSTEM INFO]**

Press "0" for Enter

**7.1 Name:**

**REM MIC**

Press "0" for Enter

**7.1 Name:**

**A**

Press "ADD" for Select  
Press "0" to Next

**7.1 Name:**

**AMPERES**

Press "0" to Save  
Press "ADD" for Next

**7.2 Address:**

**1**

Press "CLR" for Exit

Return to Main Page

## Setup - Sub Menu (continued)

### 8. SYSTEM INFO

Press '0' to enter this sub menu from the main directory.

To check the firmware version of the paging mic.

This is an important info when interfacing with external equipment, to check the compatibility as well as when servicing is required.

**8. SYSTEM INFO**

↓ Press '0' for Enter

**8.1 Firmware** **v0 2.12**

↓ Press "ADD" to Next

**8.2 Update**

### 9. MEMORY RESET

Press '0' to enter this sub menu from the main directory.

Selecting this menu would revert whatever setup done earlier to factory default setting, such as zone groupings, chime setting, etc.

**9. MEMORY REST**

↓ Press '0' for Enter

**9. MEMORY REST** **NO**

Press "ADD" to Select Yes / No

### 10. SAVE AND EXIT

**10. SAVE AND EXIT**

↓ Press '0' for Enter

**10. SAVE AND EXIT** **NO**

Press "ADD" to Select Yes / No  
Press "0" for Enter

## Zone Grouping (group setting)

Zone grouping enable easy access to a group of zones for paging. Press button '1' for group (1), press 'ADD' button to add the group.

Example of application :

All lobbies of different floors can be lumped under single group to allow simultaneous paging to all the floors.

**Dialing**  
**1,2,3,4,**

↓ Press G1 Button momentarily (2 seconds)

**Saving**  
**Group 1**

**To Recall :**

Press 'G1' and Press 'Chime + Talk'

# Operating the Unit

A successful paging can only be achieved if TD6240 is connected, without it would be an incomplete installation. Initial setup such as priority level should be set.

PD1280 can be linked to TD6240 for zone decoding, or used in MatriMix system for matrix installations.

Follow the simple steps below to begin paging

## 1. DIRECT ZONE PAGING

Direct zone paging is when the user selects the required zone and presses CHIME + TALK button.

A chime shall be broadcasted followed by an illuminated ring at the gooseneck mic.

To end paging, simply press the CHIME + TALK button again which would be followed by a downward chime.

Example :

Performing a paging to zone 1 and 15.

Press button "1"

Press button "ADD"

Press button "1" and "5"

Press "CHIME + TALK"

Talk when the LED ring at the mic is lit and to end, press "CHIME + TALK"

## 2. ALL CALL PAGING

To make an ALL CALL paging, simply press the "ALL CALL" button, without having to press "CHIME + TALK" button.

Paging mic is ready for announcement once the LED ring is lit.

To end paging, simply press the "ALL CALL" button again.

In ALL CALL paging, all normal zones shall be activated. This is however, would not energise 24V DC overriding supply to override volume controllers. To enable overriding, we recommend the usage of EP1200A.

Example :

Making call to all normal zones (not overriding external volume controllers).

Press "ALL CALL"

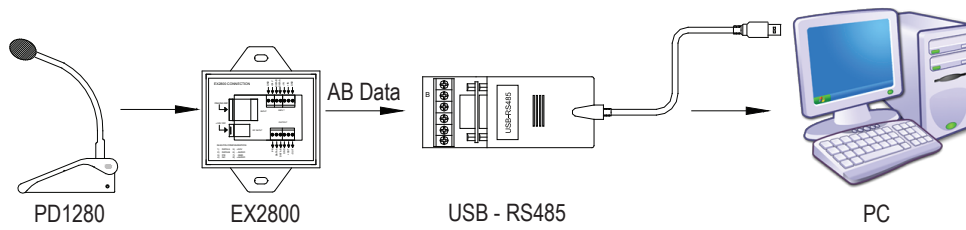
Talk when the LED ring at the mic is lit and to end, press "ALL CALL"

## Technical Specifications

	<b>PD1280</b>
Operating Voltage	24V DC via EX2800 with Local Power Adaptor
Power Consumption	1.3W
Zone Selection	Numerical Keypad with Group, All Call
Switching Selection	Sensor Touch Keypad
Microphone	Gooseneck Condenser Capsule ; Unidirectional
Output Impedance	600 Ohm
Output Level	1.2V Balanced Line Output
Output Controls	Chime, Mic Volume
Data Connections	RS485 ; 19.2 Kbps
Cabling to Decoder	2 Pair Screen ; 22 AWG / Cat 5e Decoder
Recommended Operating Distance	500m Max
Compatible Interfacing Device	MxP2288, TD6240, TD6400
Chime	4 Tones Up and 4 Tones Down
Indicators	Zones, Power, Audio, Data, Gooseneck Ring LED
Displays	LCD Display ; White Back Illumination
Frequency Response	100 - 12 KHz
S/N Ratio	>65 dB @ 1 KHz
Gooseneck mick length	370 mm
Dimension (W x H x D)	230 x 192 x 65 mm (Excluding Mic)
Weight	0.85 kg

## Communication Ports

The communication ports available are RS232 and RS485.  
RS485 is used for communication with PC for bootloading / firmware upgrades the system.

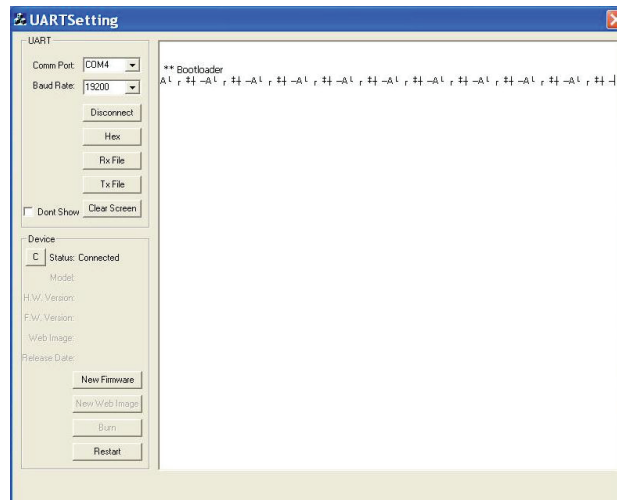


**Diagram 1: Connection diagram between PC and PD1280**

### To perform firmware update:

1. Link the PD1280 to PC as show in the Diagram 1
2. Run bootloader program at your PC and the windows should appear (Diagram 2)
3. At PD1280, press '0' button for select menu - Select menu number 8 - System Info and Select 8.2 - update
4. Press '0' and enter for update
5. Load latest firmware by click 'New Firmware' (Diagram 3)
6. Select "Burn" and the new files would be downloaded to PD1280 (Diagram 4)
7. After completing press 'Restart' and the process of firmware upgrade is completed (Diagram 5)

**Diagram 2**



If firmware upgrade is available, follow the steps below after obtaining the new firmware, which is available for download from our website USB to RS485 converter is required which is easily available from IT stores.

# Communication Ports (Continue)

Diagram 3

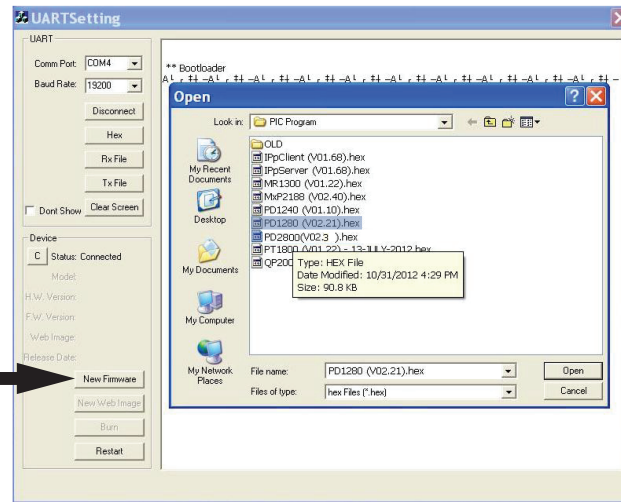


Diagram 4

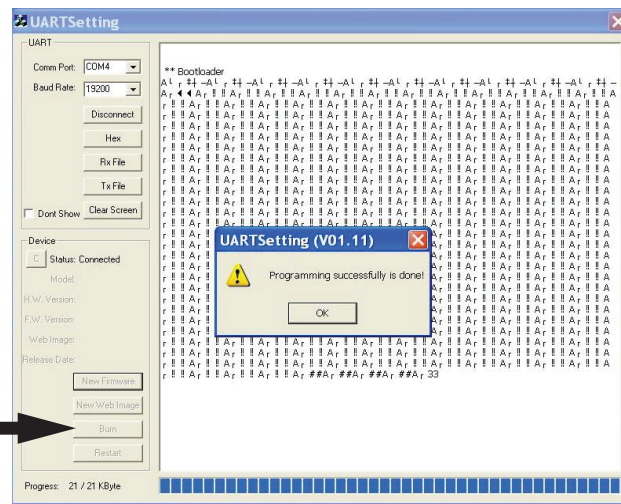
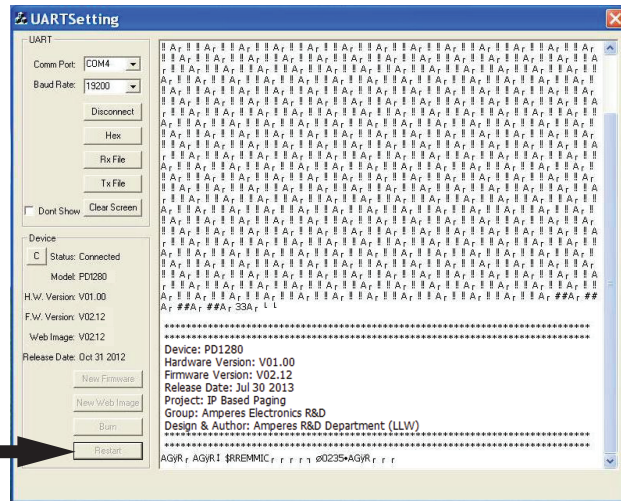


Diagram 5



## Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics authorized service centres may be asked by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

### Eligibility

Amperes Electronics' Service Center will accept any device send in for repair / checking purchased from any of our dealers. Some dealers may have the right to refuse repair / service / checking for any device not purchased from them directly.

### Coverage

This warranty covers only repairs and replacement of defective parts, due to defects of components or workmanship during product warranty period. For any product purchased exceeding the warranty period, a cost of repair shall be presented and will only proceed to rectifications upon agreed value. If the owner decides not to proceed, a minimal checking fees will be applied.

### Exclusions

This warranty does not cover damages caused by misuse, negligence in application as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adapter not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or identification labels applied to the unit or any other modifications to the physical unit other than its intended usage.

### Duration / Warranty Period

This warranty covers all the material and manufacturing defects and is valid for a period of 36 months from the date of purchase or for a specified period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

### Cost of Claiming Warranty

Cost and risk of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

### Limitations

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit, moreover the warranty does not cover any damages which may cause to the people and things during the use of the product. Our liability is limited to the cost of the product

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

The purchaser is deemed to agree to the above warranty conditions once the product packaging is unpacked., Otherwise the product shall be returned to the seller in proper original condition.

## Disclaimer

Information contained in this manual is subjected to change without prior notice and does not represent a commitment on the part of the vendor. Amperes Electronics Sdn Bhd shall not be liable for any loss or damages whatsoever arising from the use of information or any error contained in this manual.

It is recommended that all services and repairs of this product to be carried out by Amperes Electronics or its authorized service agents.

Amperes products must only be used for the purpose they were intended by the manufacturer and in conjunction with this operation manual.

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