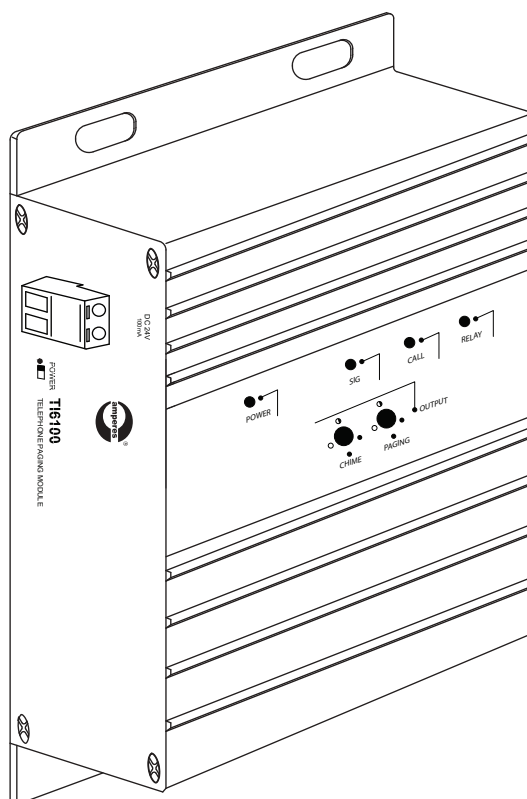




INSTRUCTION MANUAL

TI6100

Telephone Paging Interface



Thank you for choosing another quality product from Amperes Electronics.

TI6100 is an interface for PABX to PA systems, allowing paging from any keyphone extension to speakers. This would eventually turn every phone extension into paging mic.

To connect the PABX, allocate an extension for TI6100, and the output from the interface shall be line audio, which is to be fed to pre-amplifier mixer while the dry contact can be used to trigger zone selector.



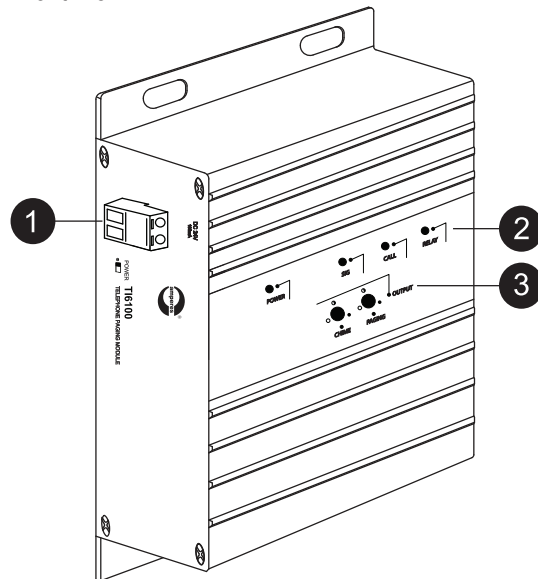
View catalogue and for latest updates



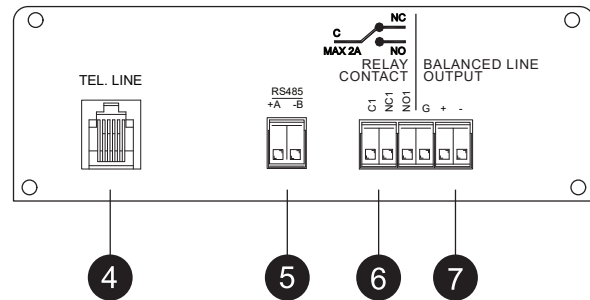
VER 3 / 2022

Parts Identification

Front View



Rear View



1. POWER PORT

24V DC power supply input.

2. INDICATOR LEDS

POWER - This blue LED stay lit when TI6100 is turned on.

SIG - When TI6100 is broadcasting announcement this LED will blink accordingly.

CALL - This LED blinks once when TI6100 receives an incoming call.

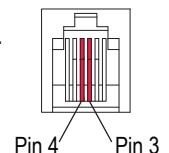
RELAY - This LED stay lit during active paging session to indicate that TI6100 RELAY CONTACT port is activated. If caller hang up, this LED will go off.

3. VOLUME CONTROL

To adjust paging and chime volume levels.

4. TELEPHONE LINE

Connect a telephone extension line to this RJ11 port. Only Pin 3 and Pin 4 of the RJ11 port are in used. An extension line consists of a Tip and Ring wires. There is no polarities on the Pin 3 and Pin 4 hence the Tip and Ring wires can be terminated at any of these pins.



5. RS485 PORT

Use for updating firmware from a PC to TI6100.

6. RELAY CONTACT

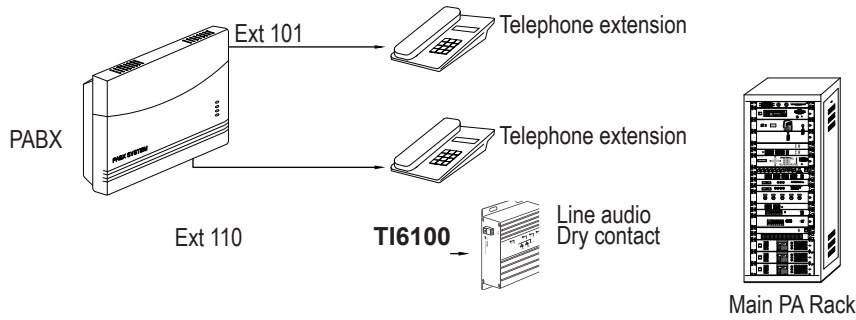
This ports provides a dry contact which can be used to activate ALL CALL on zone selector or activate paging on IP based paging client.

7. BALANCED LINE OUTPUT

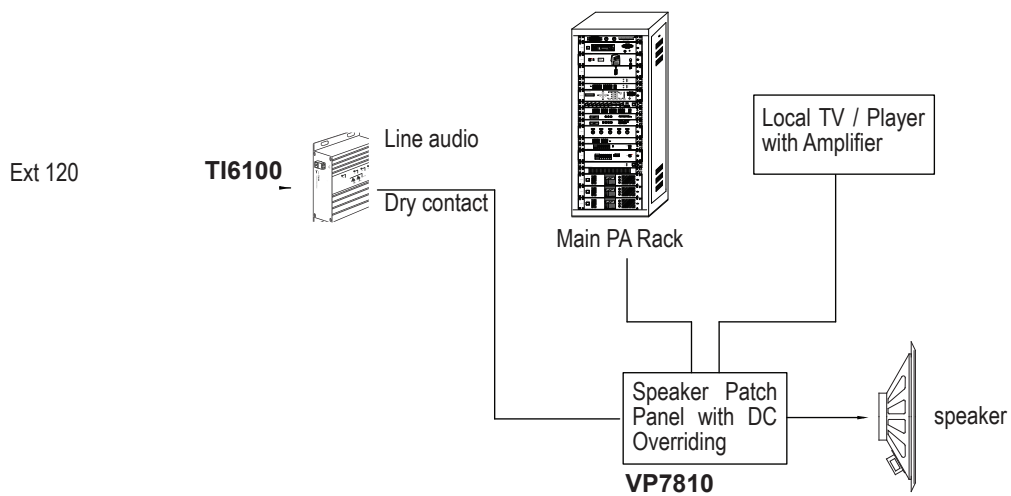
Audio output from TI6100 is with balanced line level. We can connect a pre-amplifier, mixer or amplifier to this port.

Application Schematic

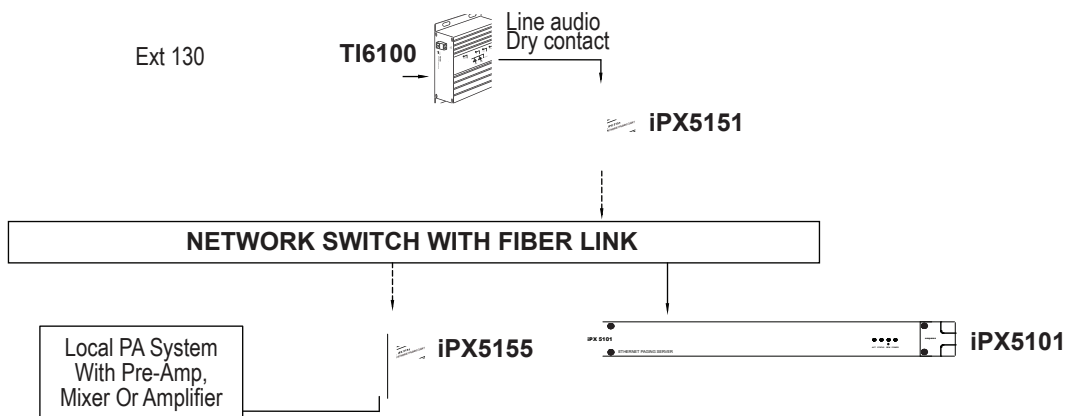
Paging with ALL CALL overriding (refer to page 4)



Paging with Local Speaker overriding (refer to page 5)



Remote Paging via IP Network (refer to page 6)



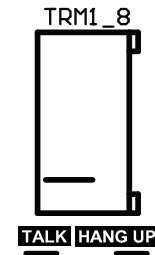
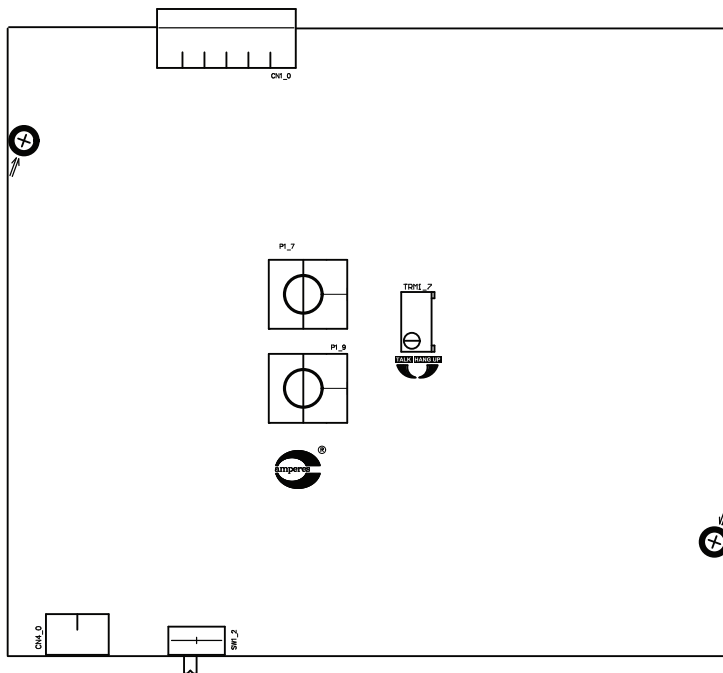
Note: TI6100 and iPX series devices require 24V DC power to operate

Operating The Unit

When a dial-through activates TI6100, a chime up melody will be played on the TI6100 audio output port. The same melody also been sent to caller handset. The caller can start talking when the melody finished playing.

The TI6100 RELAY CONTACT provides a Normally - Open and a Normally - Close contacts for triggering external devices like zone selector, speaker patch panel or iPX paging client. The contact stays activated as long as a paging session is active.

If the caller stops talking for 5 seconds, TI6100 will assume call is ended. A chime down melody will be played. The RELAY CONTACT is deactivated once the melody is ended.



Clockwise to increase
Talk detection sensitivity

Anti-clockwise to increase
Hang up detection sensitivity.

Voice Sensitivity Knob

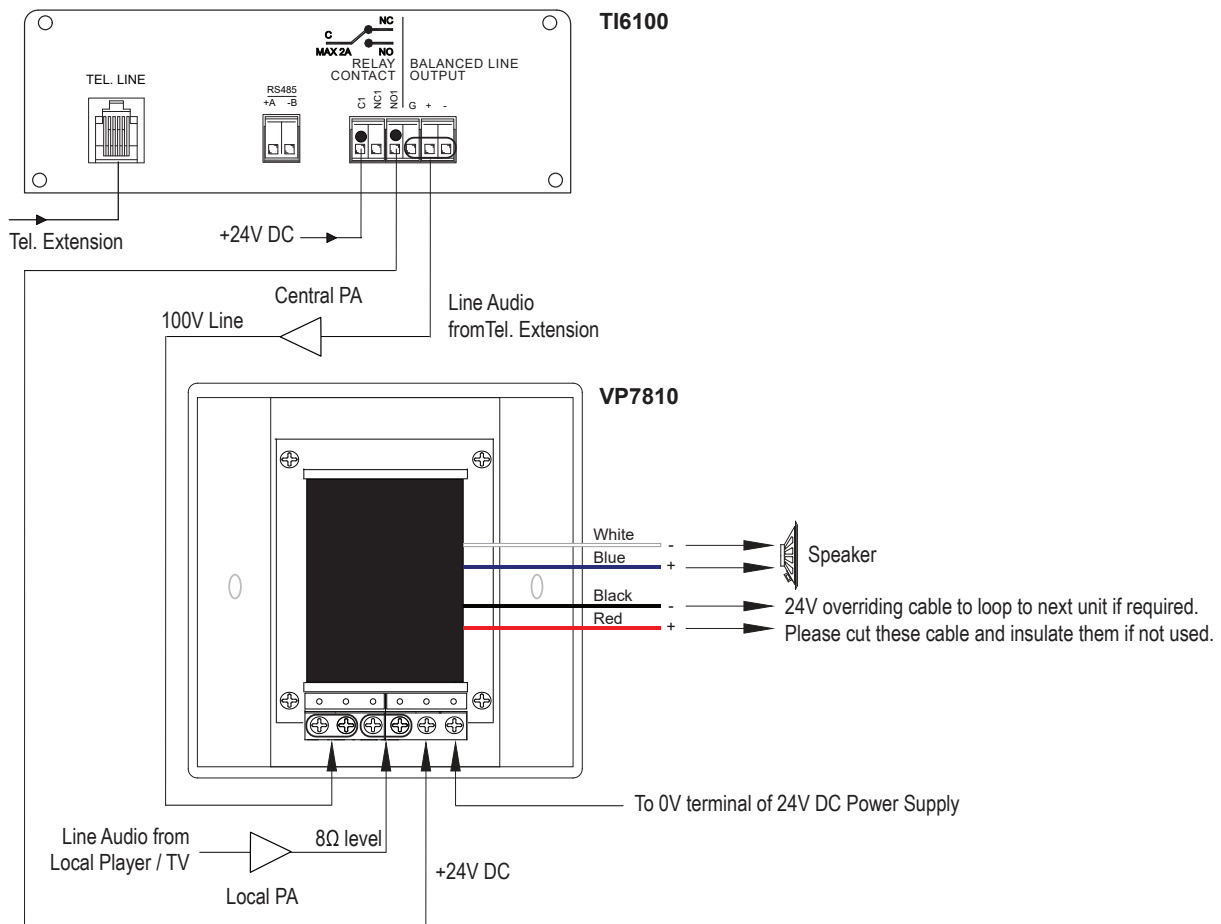
The TI6100 detects loudness and continuity of talking to determine if one is ongoing talk to the handset. Soft loudness might cause the TI6100 unable to sense the talking and it may terminate the paging.

A voice sensitivity knob is provided to increase the talk detection sensitivity. Open the TI6100 cover and adjust the knob clockwise to increase the sensitivity.

The TI6100 also rely on hand up tone to determine if one done a paging and has hung up the phone. PABX which produce long and frequent hang up tone might cause the TI6100 assume caller's paging still ongoing and shall not terminate the paging even the caller already hang up. In this case, turn the voice sensitivity knob anti-clockwise to increase the hang up detection sensitivity.

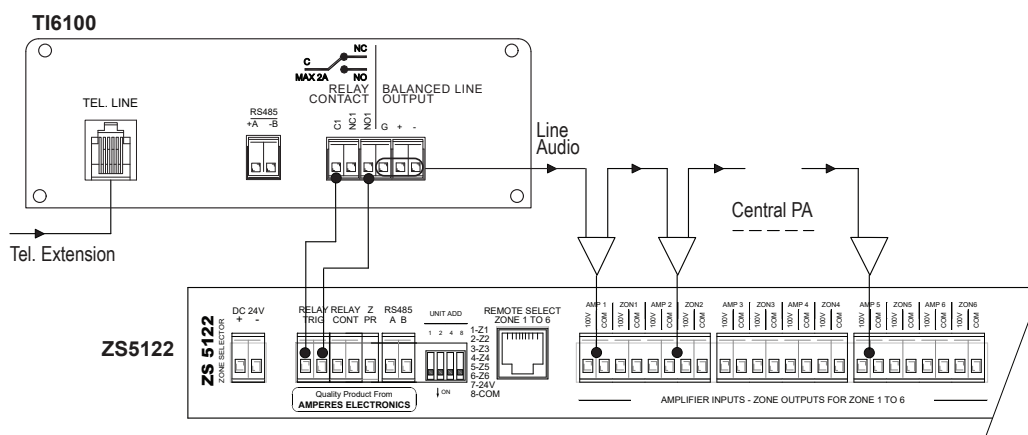
Take note that increase talking detection sensitivity shall reduce the hang up detection sensitivity and vice-versa. Hence it is advisable that we should conduct a paging and hang up testing and tune the knob to a balance sensitivity.

Paging With Local Speaker Overriding



TI6100 can work with VP7810 speaker panel patch to provide an emergency paging solution for hotel room, theater or foyer. In above example, a speaker is normally playing local player / TV station audio. When there is an emergency situation, user can dial an extension line to trigger TI6100. With TI6100 C1 port connected to +24V, the NO1 will provide a contact overriding signal to activate VP7810 and switch the sound from local audio to central audio for emergency paging.

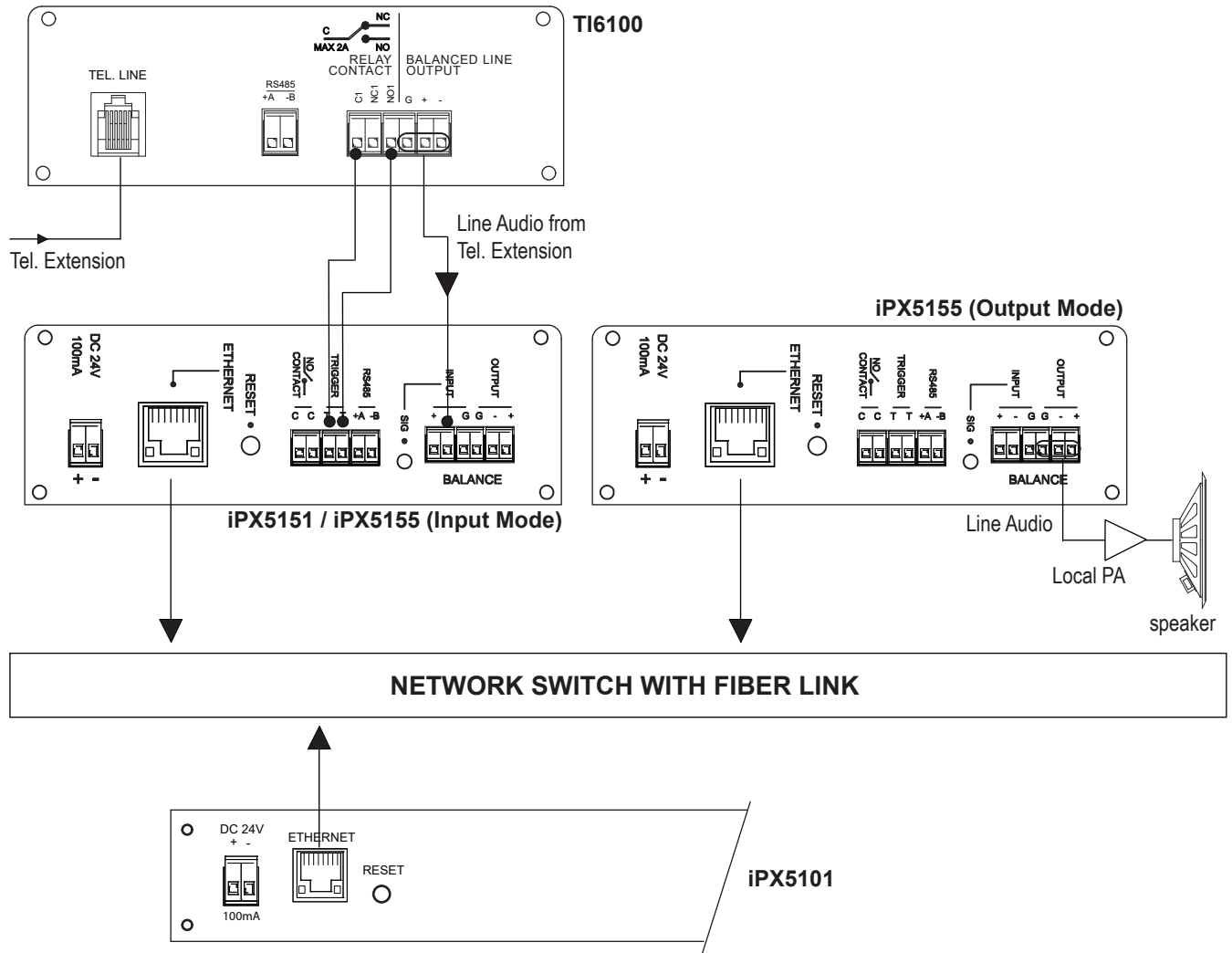
Paging With ALL CALL Overriding



To perform ALL CALL for emergency paging, we can link TI6100 C1 / NO1 port to ZS5122 RELAY TRIG port. A dial-through to activate TI6100 will activate ZS5122 ALL CALL and have the paging broadcasted via central PA to all zones. Methods of connecting zone selectors varies from one system to another, subjected to availability of other equipment within the system.

Please contact us for details.

Remote Paging Via IP Network



Using telephone extension line to perform paging to multiple buildings is achievable if all buildings have IP network linked together.

Follow diagram above to connect a TI6100 RELAY CONTACT and BALANCED LINE OUTPUT ports to a iPX5151 / iPX5155 (Paging Client) TRIGGER and BALANCED INPUT ports.

When the TI6100 is activated, this will trigger paging and have the audio transmitted to a remote building's iPX5155 which serves as a receiver to broadcast the audio to the building's local PA system.

An iPX5101 (Paging Server) must be present in the same IP system and both iPX5151 and iPX5155 need to register of the iPX5101 IP address (refer to iPX5151 and iPX5155 Configuration sections).

iPX5155 Configuration

A paging client iPX5155 can operate in either Input mode or Output mode. An iPX5155 with TI6100 is connected shall be operated in Input mode. This allows the iPX5155 to receive triggering and paging audio from the TI6100. (refer to page 6 connection diagram).

An iPX5155 that an amplifier is connected to shall be operated in Output mode such that this paging client able to send the paging audio to the amplifier to play the paging.

The screenshot shows a web-based configuration interface for the iPX5155. The title is "Paging". Below the title, there are four settings: "Paging Enabled" with a green toggle switch and a checkmark icon; "Auto Connect" with a grey toggle switch and an 'x' icon; "Paging Server IP Address" with a text field containing "192.168.0.10"; and "Operating Mode" with two radio buttons, "Input" (selected) and "Output". Below these is "Auto Override Low Priority" with a red toggle switch and a checkmark icon. At the bottom right is a green "SAVE" button.

Log in to iPX5155 (refer to iPX5155 user manual), select the Paging Configuration page and configure according to descriptions below:

Paging:

Paging Enabled: Enable this setting to allow us to configure the rest of the settings.

Auto Connect: If a paging server IP address is dynamically allocated, enable this to allow iPX5155 to search and establish a network connection with paging server. If the paging server is with fixed IP address, we may disable this setting and enter the IP address under the "Paging Server IP Address" field.

Operating Mode: The iPX5155 where a TI6100 Relay Contact and Audio output is connected to shall be operated in Input mode; the iPX5155 that an amplifier is connected to shall be operated in Output mode.

Auto Override Low Priority: Not applicable to TI6100 operation.

Remote Trigger:

Remote Trigger

Enabled	<input checked="" type="checkbox"/>
No Priority	<input checked="" type="checkbox"/>
All Call	<input type="checkbox"/>
Zones e.g. 1,2,4,5 - 10	
<hr/>	
Auto Override Low Priority	<input checked="" type="checkbox"/>

SAVE

Remote Trigger settings only applicable when iPX5155 operate in Input mode.

Enabled: Enable this setting to allow iPX5155 accept remote triggering from TI6100.

No Priority: Enable this setting shall make the TI6100 the lowest paging priority. Disable this setting allow us to configure level 1 to 12 which the smaller the number the higher the priority level.

All Call: Enable this setting to allow TI6100 pages to all zones. Disable this setting shall allow us to specify zone(s) to serve.

Auto Override Low Priority: Enable this setting if we want to allow a TI6100 paging to override other lower or *same priority paging devices.

* To allow same priority overriding, enable the "Same Priority Override" setting in iPX5101 paging server.

iPX5155 Configuration

Audio Configuration

Volume

80%

5 Band Equalizer

0_{dB}

0_{dB}

0_{dB}

0_{dB}

0_{dB}

100_{Hz}
250_{Hz}
1k_{Hz}
4k_{Hz}
10k_{Hz}

SAVE

Audio Configuration:

Adjust the paging sound volume and EQ settings.

Table 1: Depending on iPX5155 operation mode, some settings are only applicable to Input mode while some only to Output mode

	Settings	Input Mode	Output Mode
Paging	Paging Enabled	Enable	Enable
	Auto Connect	Enable / Disable	Enable / Disable
	Operating Mode	Input	Output
	Auto Override Low Priority	NA	NA
Remote Trigger	Enabled	Enable	NA
	No Priority	Enable / Disable	NA
	All Call	Enable / Disable	NA
	Auto Override Low Priority	Enable / Disable	NA
Audio Configuration		NA	Set to desired level

NA - Not Applicable

Paging Configuration

Paging

Paging Enabled ☒

Auto Connect ☐

Paging Server IP Address
192.168.0.101

SAVE

Remote Trigger

Enabled ☒

No Priority ☒

Auto Override Low Priority ☐

SAVE

Besides iPX5155, a TI6100 relay contact port and audio port can also connect to an iPX5151 (refer to connection diagram on Pg.6).

Login to iPX5151 (refer to iPX5151 user manual), select the Paging Configuration page and configure the settings according to below description.

Paging:

Paging Enabled: Enable this setting to allow us to configure the rest of the settings.

Auto Connect: If a paging server IP address is dynamically allocated, enable this setting to allow iPX5151 search and establish a network connection with paging server. If the paging server is with fixed IP address, we may disable this setting and enter the IP address under the "Paging Server IP Address" field.

Remote Trigger:

Enabled: Enable this setting to allow iPX5151 accept remote triggering from TI6100.

No Priority: Enable this setting shall make the TI6100 the lowest paging priority. Disable this setting allow us to configure level 1 to 12 where the smaller the number the higher the priority level.

Auto Override Low Priority: Enable this setting if we want to allow a TI6100 paging overrides other lower or *same priority paging devices.

* To allow same priority overriding, enable the "Same Priority Override" setting in paging server.

Technical Specification

Operating voltage	24V DC 1A
Power consumption (DC)	
Idle	0.92W
Active	1.13W
Current consumption (DC)	
Idle	38mA DC
Active	47mA DC
Input connection	Tel line: RJ11 RS485: Detachable mini phoenix
Input sensitivity	440mV (Vrms)
Input impedance	150 Ohm
Frequency response	800Hz - 8kHz (+/-3dB)
Output level	1.2V rms; balanced output
Volume control	Paging / Music
Relay contact	DPDT
Contact rating	3A
Indicators	Power, Signal, Call, Relay
Dimension (WxHxD)	100 x 147 x 40 mm
Weight	320 g

Note:

The above specifications are correct at time of printing but subjected to changes without prior notice due to product improvements.

Warranty Conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics Service Centres may be asked for by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP 3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor, Malaysia or its authorized dealers. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

This warranty covers only repairs and replacement of defective parts ; cost and risks 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.

This warranty does not cover damages caused by misuse, neglect, accident of the product as well as using the product with power supply voltage other than what is shown on the product, or any other power supply source / adaptor not recommended by the manufacturer.

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

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period of usage of the unit. The warranty also does not cover any damages which may inflict to people and things when using the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or on the identification label applied on the product.

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 it is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

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

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It is recommended that all services and repairs on this product be carried out by AMPERES ELECTRONICS SDN BHD or its authorized service agents.

AMPERES series must only be used for the purpose they were intended by the manufacturer and in conjunction with this operating manual.

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