

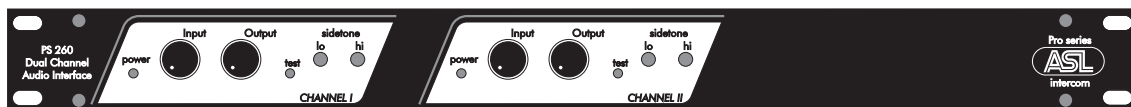
## PRO SERIES

### USER MANUAL

FOR THE

*PS 260*

### DUAL CHANNEL AUDIO INTERFACE



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## 1.0 GENERAL DESCRIPTION

The PS 260 is designed to interface the ASL intercom system (party line) to external audio equipment or 4-wire communication systems.

For example a fixed cabled (4-wire) intercom system can temporarily be extended with a portable ASL set, for use on location or a (4-wire) camera CCU can be connected to the ASL intercom system.

Other applications include injection of external audio signals and monitoring of the intercom line by external equipment e.g. recorders, paging systems, etc.

The PS 260 includes two separate interfaces which are completely identical. Each interface is power supplied via the intercomline.

The two-stage sidetone circuit (level, hi) allows you to obtain an input/output separation better than 30 dB from 20Hz to 20KHz.

The built in testtone generator helps you to adjust or check the sidetone level at any time.

## 2.0 UNPACKING

The shipping carton contains the parts listed below

- \* The PS 260
- \* User manual

If any are missing, contact your dealer.

ASL has taken great care to ensure this product reaches you in flawless condition.

After unpacking the unit please inspect for any physical damage to the unit, and retain the shipping carton and relevant packing materials for use should the unit need returning.

If any damage has occurred, please notify your dealer so that a written claim can be initiated. Please also refer to the guarantee section of this manual.

## 3.0 MECHANICAL INSTALLATION

The PS 260 will interface between ASL partyline (3-wire intercom) and external 4-wire systems.

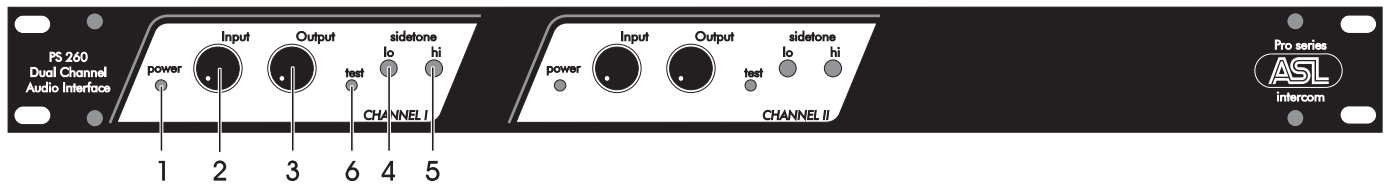
To connect the PS 260 with ASL partyline system, use professional flexible microphone cable with 2 wires and 1 shield only.

Connect the partyline system cable into the intercom line connector on the rear. To connect the PS 260 with the external 4-wire system, connect the output of this system with the input of the PS 260 and the input of the system with the output of the PS 260.

There are no separate power connections to install since the necessary DC voltages are derived from the ASL partyline.

The PS 260 is fully protected against mis-wiring (reverse power) or short circuit in the interconnecting cables.

## 4.0 FRONT PANEL CONTROLS



The PS 260 consists of two separate interface modules in one housing. Each module interfaces between ASL 3-wire systems and 4-wire systems. The signal on the audio wire of the ASL 3 wire system is converted in a balanced signal and appears on the audio output connector.

### 1 POWER indicator led

This led illuminates if line power is supplied by the power supply or master station of the ASL partyline intercom system in which the PS 260 is used.

### 2 INPUT LEVEL control knob

This knob controls the level of the input signal before it is placed on the intercom line.

### 3 OUTPUT LEVEL control knob

This knob controls the level of the intercomline signal appearing at the output connector.

### 4 SIDETONE LEVEL trimmer

This trimmer controls the level of the input signal appearing at the output.

### 5 SIDETONE HI trimmer

This trimmer controls the input/output separation in the high frequency range.

Signals offered to the audio input are placed on the audio wire of the 3-wire intercom line connector.

To avoid that signals on the audio input are being placed on the audio output connector, there is a sidetone available.

### 6 SIDETONE TEST knob

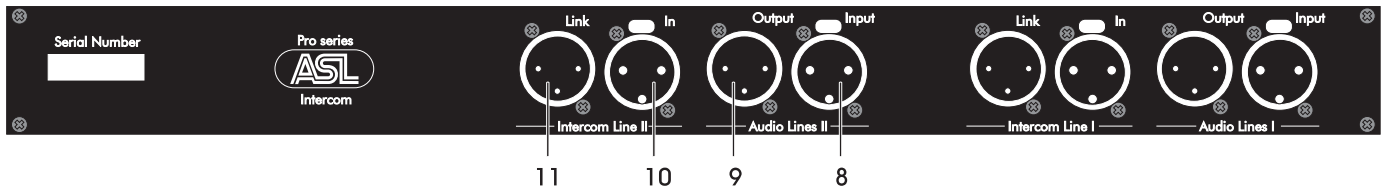
This hidden push button switch activates a test tone generator which adds a 200 Hz tone to the input signal. It allows you to adjust or check the sidetone trimmer settings at any time. The switch can be reached with a match or a small screwdriver.

Note: Make sure you are not disturbing any communication because the test-tone is placed on the intercomline which implies that all stations on that channel can hear the test tone.

Sidetone adjustment procedure.

- Connect a monitor amplifier to the audio output.
- Turn up output level approx. half way.
- Set sidetone trimmers in start position
  - level : turn fully clockwise.
  - hi : turn fully anti clockwise.
- Activate the testtone generator.
- Decrease test tone level by turning the level trimmer anti clock wise and adjust for minimum level.
- Decrease the remaining high frequencies by turning the hi trimmer clockwise and adjust for minimum level.
- Repeat the last two mentioned procedures, until you are sure you have obtained the best settings possible.

## 5.0 REAR PANEL CONTROLS



At the rear panel you will find the connectors for interconnecting the PS 260 with the ASL intercom system(s) and the connectors for connecting 4-wire systems or audio equipment.

### 8 AUDIO INPUT connector

This XLR-3 connector is for placing an audio signal on the intercomline. It is electronically balanced in the standard version.

An extra balancing transformer is optional (PS 260/T).

Pin assignments :

1. 0V / ground shield
2. signal +
3. signal -

### 9 AUDIO OUTPUT connector

This XLR-3 connector is for monitoring the intercom line.

It is transformer balanced and capable of driving a 600 ohms load.

Pin assignments :

1. 0V / ground shield
2. signal +
3. signal -

### 10 INTERCOM IN connector

This XLR-3 connector is for connecting the intercom line.

Pin assignments :

1. 0V / ground shield
2. +30V power wire
3. audio wire

### 11 INTERCOM LINK connector

This output is for extending the intercom line to other user stations. It is linked to the intercom line input connector and has the same pin assignments.

## 6.0 SUM OUTPUT(S)

The PS 260 offers you the possibility of monitoring both intercomlines with one interface.

When one interface monitors two intercom lines, both audio signals of the intercomlines will appear on the audio output connector

Changing procedure :

- a. Unscrew the upper cover plate and slide it backwards.
- b. Place the unit in front of you, facing the front panel.
- c. Depending on which kind of monitoring you need, the following procedures should be followed (next column)
- d. Screw the cover plate back in place.

### Connection A

- function : Output of interface 1, monitors intercom lines 1 + 2
- action : Connect the left tag of interface 1 with the right tag of interface 2.

### Connection B

- function : Output of interface 2, monitors intercom lines 1 + 2.
- action : connect the left tag of interface 2 with the right tag of interface 1.

### Connection A + B

- function : Outputs of interface 1 and 2 monitor intercom lines 1 + 2
- action : cross connect the tags.

For the PRO Series Intercom system the interconnecting cables are of the shielded two-conductor microphone cable type and the intercom line connectors are of the XLR-3 type. Audio and Call signals are on XLR pin 3, DC power is on XLR pin 2. XLR pin 1 is connected to the shield of the cable which functions as the common return for audio and power.

Since the audio signal is transferred in an **unbalanced** ★ way, certain rules have to be obeyed when installing the cables of an intercom network. This is to avoid earth loops and to minimize power loss and the possible effect of electromagnetic fields.

These rules are:

- **Use high quality (multipair) cable.**  
For interconnecting user stations, power supplies and accessories in an ASL Intercom network, use high quality shielded two-conductor (minimum 2x 0.30 mm<sup>2</sup>) microphone cable only.  
In case of a multi channel intercom network, use high quality microphone 'multipair' cable only, each pair consisting of two conductors (minimum 2x 0.15 mm<sup>2</sup>) with separate shield. Multipair cable should also have an overall shield.
- **Use flexible cables.**  
Use flexible single and multipair microphone cable instead of cable with solid cores, especially when the cable is subjected to bending during operation or installation.
- **Separate cable screen to XLR pin 1.**  
The screen of each separate microphone cable and/or the screen of each single pair in a multipair cable, should be connected to pin 1 of each XLR-3 connector. Do not connect this cable screen to the metal housing of the connector or to metal wall boxes (outlets). See page 12 for Earthing Concept.
- **Cable trunks, connection boxes and overall multipair cable screen to clean earth.**  
Metal cable trunks, metal connection boxes and overall multipair cable screen should be interconnected and, at one point (the 'central earthing point') in the intercom network only, be connected to a clean safety earth. See page 12 for Earthing Concept.
- **Keep metal connection boxes and cable trunks isolated from other metal parts.**  
Metal housings for intercom cables and connectors should be mounted in such a way that they are isolated from other metal cable and connector housings and from any other metal construction parts.
- **Keep cables parallel as much as possible**  
When two (multi channel) units in a network are connected by more than one cable, make sure that these cables are parallel to each other over the whole distance between those units. When using multipair cable, parallelism is ensured in the best possible way.
- **Avoid closed loops.**  
Always avoid that cables are making a loop. So-called 'ring intercom' should not physically be cabled as a ring. All cable routes should have a 'star' configuration, with the central earthing point (usually close to the power supply position) as the centre of the star.
- **Keep cables away from electromagnetic sources.**  
Keep intercom cables away from high energy cables, e.g. 110/220/380V mains power or dimmer controlled feeds for spotlights.  
Intercom cables should cross high energy cables at an angle of 90° only.  
Intercom cables should never be in the same trunking as energy cables.
- **Place power supplies in a central position.**  
In order to avoid unacceptable power losses, place the power supplies as close as possible to where most power consumption occurs or, in other words, most user stations are placed.
- **Connect ASL power supply to a 'clean' mains outlet.**  
The ASL power supply may be connected to the mains power outlet to which other audio equipment is connected. Avoid using mains outlets which also power dimmer controlled lighting systems.

In case of more complex installations, don't hesitate to contact us. Please send us a block diagram of the planned network with a list of all user stations and their positions, and we are happy to advise you on cabling lay-out.

★ See Party Line, Technical Concept

## 8.0 PARTY LINE, TECHNICAL CONCEPT

ASL's PRO Series offers a complete two way ('full duplex') communications system.

Users of the system are connected via a 'party line'.

Master stations (with built-in power supply), beltacks, speaker stations and power supplies are interconnected via standard microphone cable. One wire is used as an audio line, one as a power line and the screen of the cable functions as earth/return.

Current drive is used for signal transfer. Each station utilises a current amplifier to amplify the microphone signal and place it on the common audio line where, due to the constant line impedance (situated in the power supply between XLR pin 3 and 1), a signal voltage is developed which can be further amplified and sent to headphones or loudspeakers.

This principle has three advantages:

- the use of a single audio line allows several stations to talk and listen simultaneously.
- due to the high bridging impedance offered by each station, the number of stations 'on line' has no influence on the level of the communications signal.
- power and audio to the intercom stations use the same cable.

The Call signal is also sent as a current on the audio line. It develops a DC potential over the line impedance which will be sensed by each station and interpreted as a Call signal.

## 9.0 GUARANTEE

This unit is warranted by ASL Intercom to the original end-user purchaser against defects in workmanship and materials in its manufacture for a period of one year from the date of shipment to the end-user.

Faults arising from misuse, unauthorised modifications or accidents are not covered by this warranty. If the unit is faulty, it should be sent in its original packing to the supplier or your local ASL dealer, with shipping prepaid. A note must be included stating the faults found and a copy of the original suppliers invoice.

**THIS PRODUCT WAS DESIGNED, DEVELOPED AND MANUFACTURED BY :**

**AMPCO SOUND LAB BV  
MAARSSSEN (UTRECHT) HOLLAND**

## 10.0 TECHNICAL SPECIFICATIONS PS 260

### INPUT AMPLIFIER

input impedance	min. 10Kohm
input level	+30 to - 10 dBm
frequency response	60Hz - 20KHz (-3dB)

### INTERCOM LINE DRIVER

Max. output current	3mA rms
output impedance	> 150 Kohm

### OUTPUT AMPLIFIER

output impedance	< 25 ohms
maximum load	600 ohms
max. output level	+20 to -20 dBm
frequency response	40 Hz - 20 KHz

### SIDETONE

rejection	min. 30 dB (20Hz - 20 KHz)
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### DIMENSIONS AND WEIGHT

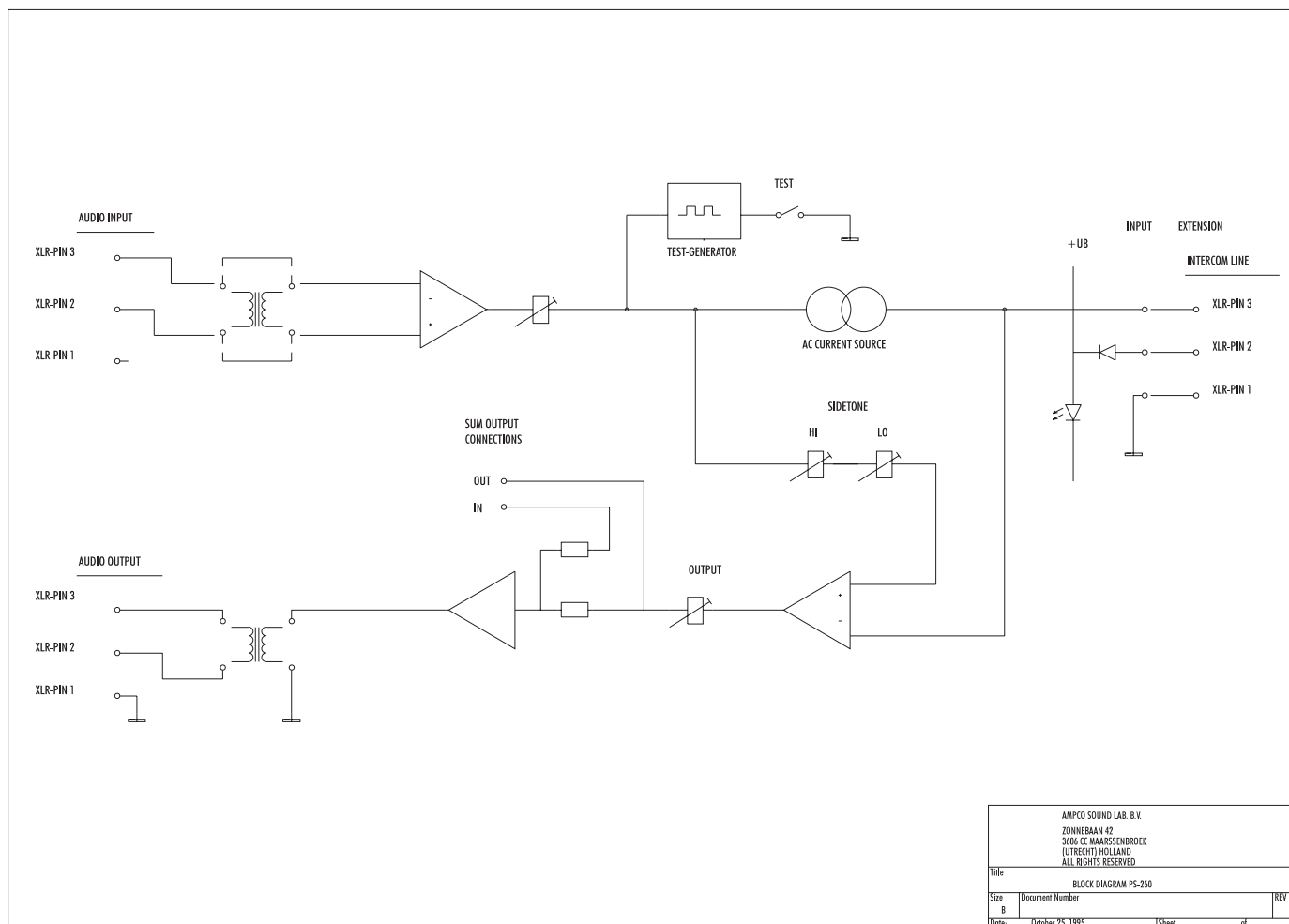
width	19" (483mm)
height	1U (44.5mm)
depth	126mm
weight	1565 grams

### GENERAL SPECIFICATIONS

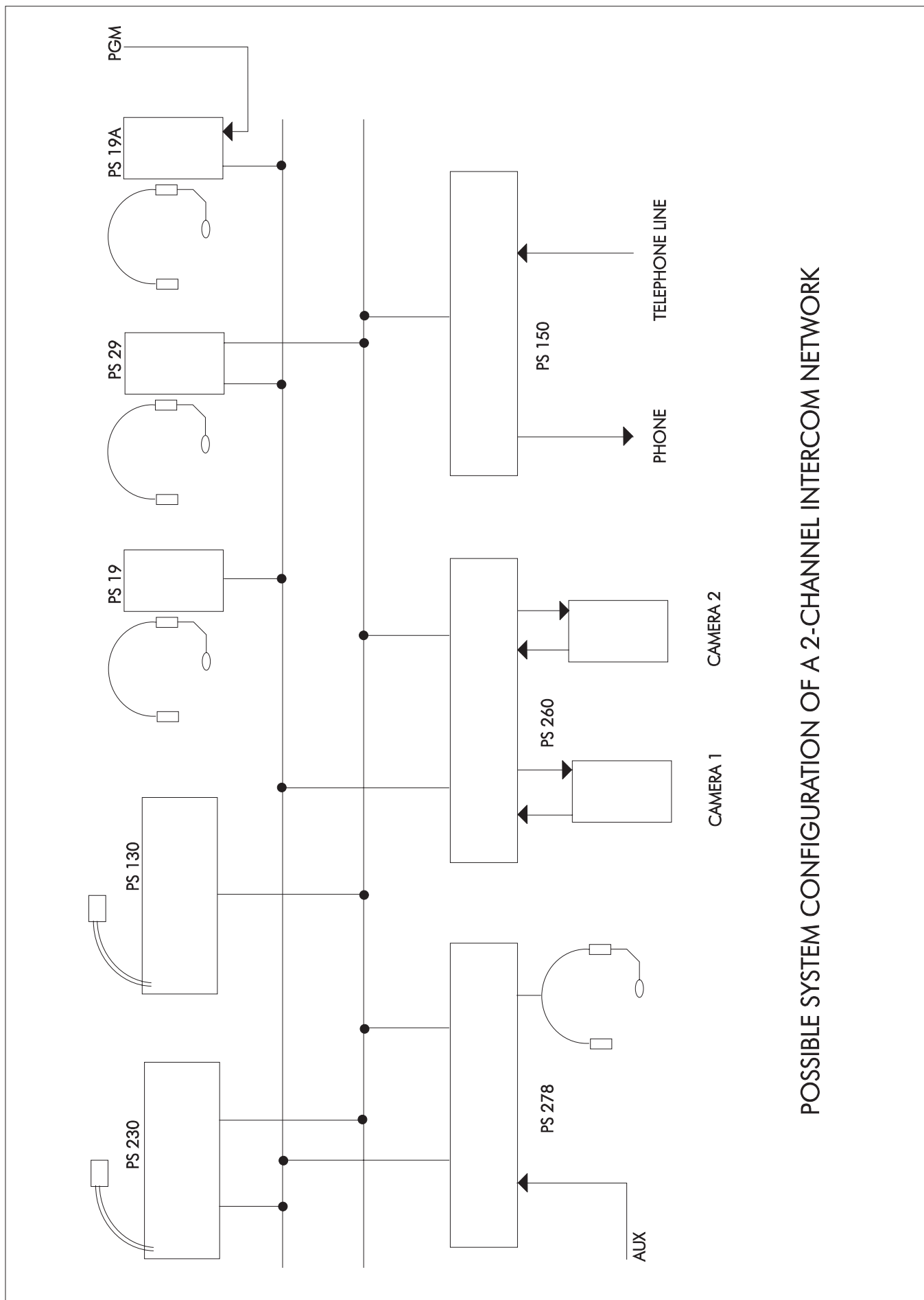
supply voltage	+30VDC (12V to 32V)
supply current	33 mA quiescent / each
audio line level	-18dBm (max. 0dBm)
signal-to-noise	80dB
station bridging impedance	> 150 Kohm

Note: 0 dBu = 775 mV into open circuit.

ASL reserve the right to alter specifications without further notice.

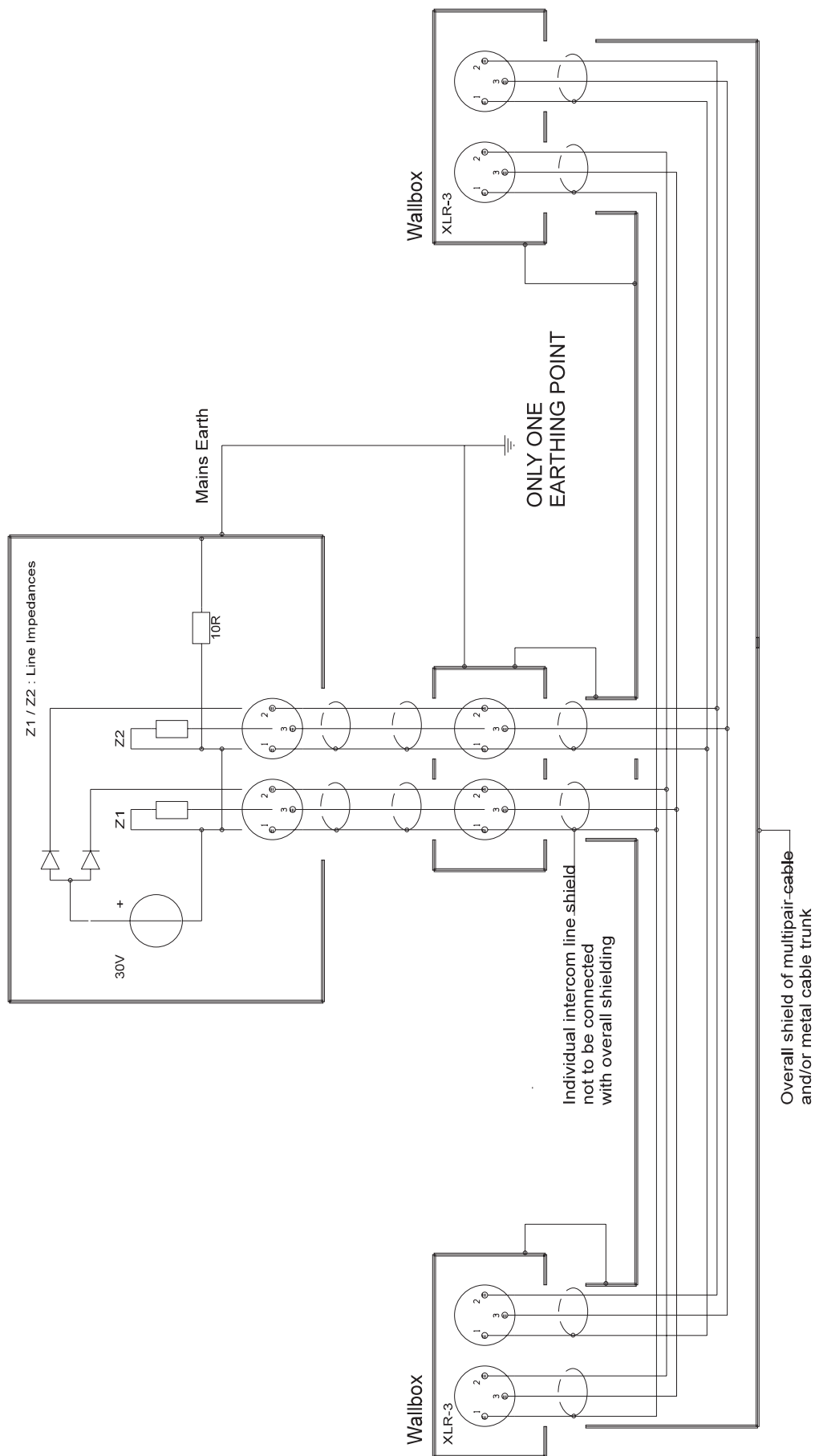






POSSIBLE SYSTEM CONFIGURATION OF A 2-CHANNEL INTERCOM NETWORK

# POWER SUPPLY



## EARTHING CONCEPT ASL INTERCOM

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