



BS 216

DUAL CHANNEL MASTER STATION



QUICK GUIDE

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This product is designed and manufactured by:

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1.0 GENERAL DESCRIPTION

The BS 216 (19"/1RU) is designed to be a dual channel master station in an ASL intercom system. The unit is connected to it remote stations by standard microphone cable (2 conductors and 1 shield)

The built-in dual channel power supply is fully protected against short circuit or excessive thermal condition and can safely drive up to 15 Basic Series beltpacks operating at full power.

Each channel has a Volume (listen level) control, a TALK and a CALL button with LED indicators.

With a headset connected to the XLR-4 headset connector one can talk and listen to each channel separately or to both channels simultaneously. With side tone trimmers one may adjust the listen level of one's voice in one's headset.

The unique ASL Call system provides both a flashing red LED and a very distinctive sound signal. A slight touch of the CALL button makes the call LED flash, whilst holding the button for 2 seconds the call sound signal is activated.

An Aux input at the rear panel allows injecting external audio signals of line or mic level into the intercom lines. If 'mic level' is selected, +30V DC phantom power is available at the Aux input connector.

Special attention has been paid to the intelligibility of speech. By applying low noise/high speed circuitry, a speech presence filter and a specially designed headphone amplifier, communication is very comfortable even in environments with high background noise levels.

2.0 UNPACKING

The shipping carton contains the parts listed below

- * The BS 216
- * Mains power cable
- * Spare fuses

If any are missing, contact your dealer. ASL has taken great care to ensure that 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 immediately so that a written claim can be initiated. Please also refer to the warranty section of this quick guide.

3.0 MAINS POWER & SAFETY EARTH

Connecting to mains power :

The BS 216 may be connected to a mains power outlet which provides 100 – 240 V AC, 50-60 Hz and at least 60 watts. The outlet should have a clean earth. Avoid using mains power outlets which also power dimmer controlled lighting equipment.

The wires in the mains lead are color coded:
green/yellow: Earth / Safety Ground
blue: Neutral / brown: Live

In case the wires in the mains lead do not correspond with the colored markings identifying the terminals in your mains plug, proceed as follows:

- The wire which is colored green/yellow must be connected to the terminal in the plug which is marked with the letter "E", or by the ground symbol, or is colored green.

- The wire which is colored blue must be connected to the terminal which is marked with the letter "N" or is colored black.
- The wire which is colored brown must be connected to the terminal which is marked with the letter "L" or is colored red.

Safety Earth :

For personal safety and proper functioning of the BS 216 and its connected stations, the green/yellow wire of the mains lead must always be connected to the electrical installation safety earth or ground.

The green/yellow wire is in the BS 216 connected to all exposed metal surfaces. Any rack framework into which this unit might be mounted is assumed to be connected to the same grounding circuit.

4.0 WARRANTY

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

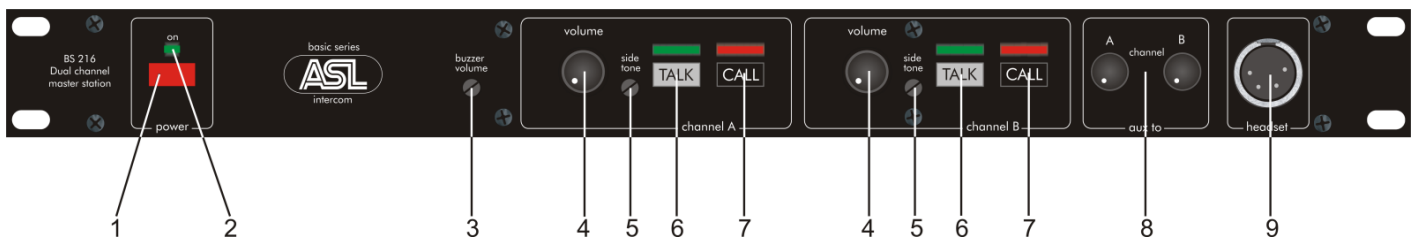
5.0 MECHANICAL INSTALLATION

For the BS 216 a vertical rack space of 1U (1.75", 44mm) is required. It is not necessary to provide rear support by extra bracing or shelving. Adequate ventilation must be provided by allowing sufficient space around the sides and rear of the unit to ensure free circulation of air.

Forced cooling is not required.

The power supply regulator is mounted on the rear of the unit; after a period of time it will feel hot to the touch. This is quite normal, and should be no cause for alarm.

6.0 FRONT PANEL CONTROLS & CONNECTOR



1 POWER ON/OFF switch

To switch mains power on or off.

2 MAINS POWER LED

This LED illuminates if line power is supplied by the internal power supply.

3 BUZZER VOLUME trimmer

To adjust the volume of the buzzer.

The internal buzzer indicates an incoming or outgoing call. It is activated by pushing a CALL button on this station or a CALL button on any other station for longer than two seconds.

4 VOLUME A & B control knobs

To adjust the listen level of the headset

5 SIDE TONE trimmers

To adjust the level of one's voice as heard in one's headset. Adjustment procedure (for each channel separately):

- set the trimmer in start position: fully clockwise
- switch off the microphones of all connected stations
- push the TALK button of the channel
- turn up the volume of the channel
- speak into the headset microphone
- adjust the listen level by turning the side tone trimmer of the channel.

The trimmer operating area is between fully

clockwise and minimum level. Adjusting the side tone does not affect the level of your voice as heard by other stations.

6 TALK A & B buttons + LED's

To allow the user to talk to each channel separately or to both channels simultaneously. The large green LED's indicate if the talk button is switched On.

7 CALL A & B buttons + LED's

To activate the Call system.

By a momentary push a Call signal is sent to all stations connected to the referring intercom channel. The Call LED on this station and on all to the channel connected stations starts flashing. Pushing and holding a Call button for 2 seconds activates the call buzzer in all stations. After the CALL button is released the Call LED's continue to flash for a further 2 seconds.

8 AUX VOLUME controls A & B

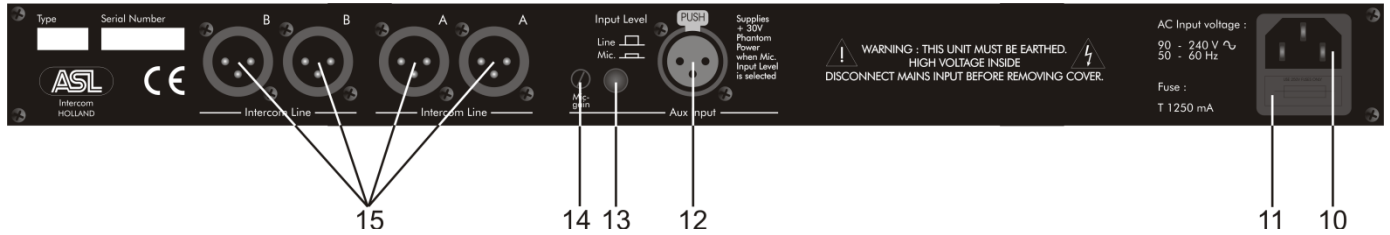
To adjust the level of the Aux input signal to each of the two intercom lines.

9 HEADSET connector (XLR-4)

To connect a headset to the BS 216. The headset impedance must be minimum 200 ohms. The headset microphone may be of the dynamic or electret type.

For pin assignment, see the BS 216 user manual.

7.0 REAR PANEL CONTROLS & CONNECTORS



10 MAINS Inlet
IEC Mains connector

11 FUSE Holder
The fuse protects the BS 216 against severe internal damage, in case of malfunction in the power section.

12 AUX INPUT connector
This aux signal input is electronically balanced and accepts mic or line level audio signals.

Pin assignment :
Pin 1. 0V / ground
Pin 2: signal +
Pin 3: signal -

13 INPUT LEVEL Switch
To select mic or line level audio. If mic level is selected, +30 V DC phantom power is supplied to pin 2 and 3 of the aux input connector

14 MIC GAIN Trimmer
To adjust the input gain when mic level is selected (see #13)

15 A & B LINE connectors (XLR-3)
To connect remote stations to the BS 216, using standard microphone cable. Pin assignment:
Pin 1: 0V / ground shield
Pin 2: +30V DC power wire
Pin 3: audio wire

8.0 INTERNAL CONTROLS

MIC GAIN. The headset mic gain is adjusted by a trimmer located on the PCB near the headset connectors

9.0 TECHNICAL SPECIFICATIONS

Intercom system

Dynamic range: 80 dB (1kHz, THD <1%)
Frequency response: 200 Hz - 15 kHz (-3 dB)
Call signal (send): +2.8 mA
Call signal threshold (receive): +2.4 V DC
Operating voltage: 24 - 32 V DC
Line impedance: 350 Ω (1 kHz), 2.2 k Ω (DC)
Audio level: nom. -18 dBu, max. 0 dBu

Switch Mode Power Supply

Mains voltage: 100 - 240 V AC, 50/60 Hz
Output voltage: +30 V DC (+/- 5%)
Max output power: 45 W

Mic Pre-amp

Gain: 40 - 60 dB (adjustable internally)
Presence filter: +6dB @ 5 kHz
Power to electret mic: +9 V DC

Headphone Driver Amp

Max. output level: 11.6 Vrms (at 200 Ω)
Max. output power: 0.7 Wrms (at 200 Ω)

Side Tone Rejection: 0 - 30 dB adjustable

Buzzer Max. SPL: 85 dBA

Aux Input

Input Impedance:
30 k Ω (line level)
4.6 k Ω (mic level)
Nominal Input Level:
0 dBu (line level)
-30 dBu (mic level)
Max. Input Level:
+22 dBu (line level)
0 dBu (mic level)
Phantom Power: +30 V DC (mic level selected)

*0 dBu is defined as 775 mV rms into open circuit.
ASL reserves the right to alter specifications without prior notice*

For safety instructions, block diagram, system configuration and party line concept & cabling, see the BS 216 User Manual. Go to www.asl-inter.com, section 'Support'