INTERNATIONAL LIMITED WARRANTY

ARX Systems (ARX) warrants to the first purchaser of any ARX equipment that it is free from defects in materials and workmanship under normal use and service. ARX's sole obligation under this warranty shall be to provide, without charge, parts and labour necessary to remedy defects, if any, which appear within twelve (12) months from date of purchase, and for a further twelve (12) months supply parts only.

This is our only warranty. It does not cover finish or appearance items, or if the equipment has been, in ARX's sole judgement:

• Subjected to misuse, abuse, negligence or accident;

• Repaired, worked on, or altered by persons not authorized by ARX;

• Connected, installed, adjusted or used for a purpose other than that for which it was designed.

This warranty gives you and us specific legal rights and you may also have other rights which may apply.

Warranty Service Procedure

Should it become necessary to have your equipment serviced under the terms of the warranty, please follow these steps:

1. Call your ARX distributor for a Return Authorization (RA) number;

2. *Carefully* repack the unit, in its original packaging where possible, including a note with a description of the problem, and a copy of the receipt showing date of purchase. Attach these to the actual unit itself. Don't forget to write your name and address clearly, and include a phone number where you can be contacted during normal business hours. Make it easy for our service technicians to contact you if they have a question. Also, use *plenty* of packing material - better to be safe than sorry.

3. Send the unit freight prepaid to ARX Systems, at the address given you with your RA number. We will pay the return freight when the serviced unit is returned to you.

4. We strongly recommend you insure the package. We can't fix it if it gets lost! Send it by UPS, Fedex, DHL or any similar service that can track the package. Parcel Post is *not* recommended

If Warranty Registration Card is missing, you can register online by going to the ARX website (either Australia, USA or International) and click on the **Online Warranty Registration** button on the front page

BSX16™

2:16 Active Broadcast Splitter

OWNER'S MANUAL

www.arx.com.au ®

⚠ IMPORTANT - PLEASE READ THIS FIRST ⚠

THIS IS A SINGLE VOLTAGE UNIT. IT IS ESSENTIAL THAT YOU CHECK THAT THE VOLTAGE MARKED ON THE REAR OF THE CHASSIS IS THE SAME AS THE AC POWER COMING FROM THE AC CONNECTOR ON THE WALL, BEFORE CONNECTING IT TO AC POWER.

DAMAGE CAUSED BY CONNECTING TO THE WRONG AC VOLTAGE IS NOT COVERED BY YOUR WARRANTY

WARNING SYMBOLS USED ON THIS EQUIPMENT

⚠ This symbol is intended to alert you to the presence of important operating instructions contained in this owner's manual

⚡ This symbol is intended to alert you to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

⚠ This symbol indicates that a Slow Blow fuse is used in this equipment. Replace with same type and value only

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

⚡ TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK OF UNIT
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED PERSONNEL

WARNING
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

⚠ **ATTENTION**
RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

Manufactured in Australia

CE C ⚡ N1819

RoHS

Complies with 89/336/EEC EMC Directive, amended by 92/31/EEC and 93/68/EEC; meets the following standards:EN 55013 : 1990, Sections 3.2 and 3.5, EN 55020 : 1988, Sections 4.3, 5.4, 6.2, 7.0, 8.0., and EN 60950 : 1994 Low Voltage Directive

Complies with Australian Standard AS/N25 1053

Our policy is one of continuous improvement, and therefore designs may change without notice. However, unless otherwise stated, specifications will always equal or exceed those previously given.
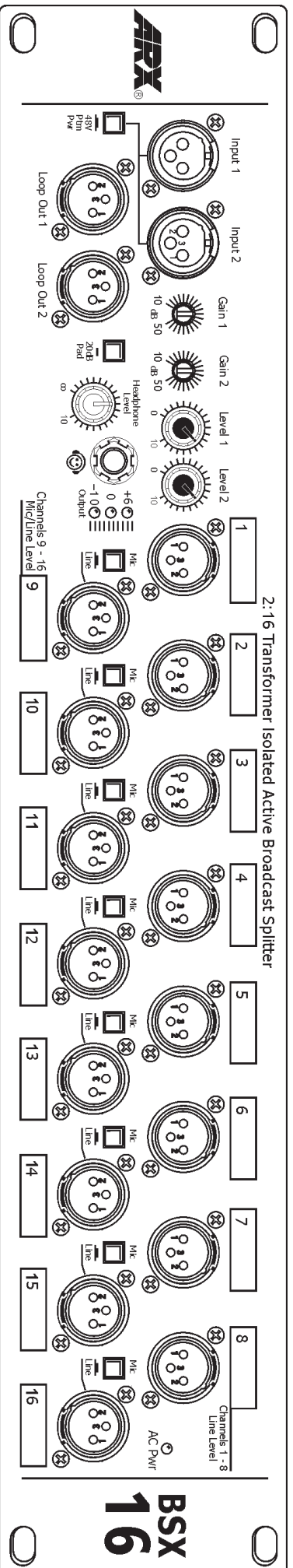
Specifications

Inputs	2 x XLR Balanced Mic/ Line inputs with hardwired XLR loop through outputs
Signal to Noise ratio (Gain set @ 20 dB)	–88dB Unweighted, –94dB 'A' weighted
Distortion @ Unity Gain	0.05%, 1 KHz
Input Gain	10dB through to 50dB
Input Impedance	4 K Ohm
Input Headroom	+21dB
Input Pad	–20dB attenuation
Maximum Output	+21dB
Output Impedance	300 Ohm Transformer Balanced
Output Level (Max)	+20dB Line Out Level –10dB Mic Output level
Frequency Response	40Hz – 20KHz ±0.5 dB
Dynamic Range	109 dB
Phantom Power	Switchable Global +48VDC slow turn on/turn off
Transformer Type	Low noise shielded
16 Transformer Isolated Outputs	Outputs 1 - 8 are Line Level (0dB) Outputs 9 - 16 are Switchable Mic (-30dB) Line (0dB) Output Level
Headphone Output	500mW @ 8 ohms output
Headphone Connector	6.5mm TRS Jack wired mono
LED output level indicators:	-10dB, 0dB, +6dB
Output to PA system or Self Powered Loudspeakers at Line Level	Balanced Male XLR, Output Impedance 300 Ohms, Max Output + 21dB
AC Mains Input	Fused IEC socket
AC Power	100-120V AC 2 amp 220-240V AC 10 VA. Replace fuse with correct value only: 100–120 V AC 2 amp, 220–240 V AC 1 amp
Size	2 RU - 19"W x 3½"H x 8"D, 482 x 89 x 200 mm
Weight	12 lbs (5.5 Kg)

Complete online documentation is available on the ARX website: **www.arx.com.au/bsx16.htm**

Specific queries can be emailed to the factory at **info@arx.com.au**

2:16 Transformer Isolated Active Broadcast Splitter

BSX16

Input 1   Input 2   Loop Out 1   Loop Out 2   Gain 1   Gain 2   Level 1   Level 2   Headphone Level   Output

Channels 9 - 16 Mic/Line Level

Channels 1 - 8 Line Level

1 2 3 4 5 6 7 8

9 10 11 12 13 14 15 16

Front Panel Connections

- 1 and 2 XLR Input connectors Pin 3 –, Pin 2 +, Pin 1 Ground
- 1 and 2 Input Gain trim controls
- 1 and 2 Output level controls to Mix the Mic levels
- 1 and 2 Output Loop XLR connectors
- 1–16 Balanced XLR Output splits. Pin 3–, Pin 2 +, Pin 1 No Connection
- Mic / Line switches for outputs 9–16
- Numbered marker panels for labelling individual splits
- 'SilentSwitch' 48v Phantom Power switching
- –20dB pad switch
- LED metering: –10, 0, and +6dB
- AC Power connected LED
- Headphone level control and 6.5mm socket

Rear Panel Connections

- Balanced XLR Output to PA system Pin 3 –, Pin 2 +, Pin 1 Ground
- IEC 3 pin AC connector and integral fuseholder. Replace fuse with correct value only: 100–120 V AC 5 amp, 220–240 V AC 3 amp.

BSX16

2:16 Transformer Isolated Active Broadcast Splitter

Output to P.A. System

Balanced Output

Hand made in Australia!

Designed and Manufactured by

ARX Systems,
Melbourne, Australia
® www.arx.com.au

CAUTION
RISK OF ELECTRIC SHOCK - DO NOT OPEN
TO PREVENT ELECTRIC SHOCK, DO NOT REMOVE COVER OR BACK OF UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

ATTENTION
RISQUE DE CHOC ELECTRIQUE - NE PAS OUVRIR

RISK OF FIRE - REPLACE FUSE WITH CORRECT VALUE ONLY

100-120 VAC 3 A
220-240 VAC 5 A
20 WATTS, 50 - 60 Hz

N1819   CE   RoHS

220-240V   A021-001

Connecting the BSX16

Like so many good ideas, setting up your **BSX16** is very straightforward.

⚠️⚡ **1. Firstly,** connect the unit to AC power.

Please Note: It is essential that you check that the voltage marked near the AC power. See Page 2 for more details.

connector on the rear of the chassis is correct for your area before connecting it to AC power. See Page 2 for more details.

2. You can connect 1 or 2 microphones to the 2 XLR inputs of the **BSX16** and it will sum (mix) the outputs together.

The Phantom Power switch toggles 48V Phantom power on or off to both inputs

3. Set the Input Gains to the 1 o'clock position initially to set levels, (a 20dB Pad switch is available on the front panel if using mics with a very high output) and then start connecting the Outputs of the **BSX16** to the Inputs of the video cameras, recorders, mixers etc as required.

4. Note that the Splitter Outputs **1 to 8** of the **BSX16** are Line Level, and the Splitter Outputs **9 to 16** are switchable Mic or Line, so you have the flexibility to connect to the Inputs of any equipment. Each Output is transformer balanced and isolated for low noise operation.

4. Bring up the Level controls on the **BSX16** to the level required. Visual confirmation that it is working is provided by the 3 LEDs on the front panel, and audio confirmation is obtained by plugging a set of Headphones in to Jack socket on the front panel. A traditional "Check 1–2" into one of the mics will confirm everything is working!

5. The Balanced Male XLR Output on the rear of the **BSX16** is designed to connect to a PA system if needed.

When illuminated, the LED on the Right Hand side of the front panel acts as an indicator that the unit is connected to AC mains power.

Introduction

Thank you for choosing this **BSX16 – 2 in, 16 out Transformer Isolated Active Broadcast Splitter.** As with all ARX equipment, it has undergone extensive factory calibration and 'burn in' before shipping. To ensure continued trouble free use, please familiarise yourself with the contents of this manual before using the **BSX16**

About the BSX16

The **BSX16** Active Splitter has been developed to deliver the performance required by the increasingly sophisticated level of today's standards of E.N.G and broadcast audio production.

16 Output splits

The **BSX16** is a single channel 16 way active press/broadcast splitter with transformer balanced and isolated Output Splits. Although a single channel unit, there are Dual inputs with individual Gain and Level controls, for use when using lecterns with dual microphones. Dual Loop Outputs are available to connect the **BSX16** to additional units, or for the dual inputs to continue on to a mixing console. An additional XLR PA Output connector is available on the rear panel for basic system connection.

Numbered marker panels above or below each split provide a space where individual connections can be noted.

Splits 1–8 are at Line level, and splits 9–16 are switchable mic or line level. There is a – 20 dB input Pad switch, plus silently switchable 48V Phantom power, LED metering (–10dB, 0dB and +6dB) and a separate Post-Fade headphone level control and socket, for signal monitoring.

Internals

Internally, powerful RF input filtering removes both common mode and differential interference at ultrasonic frequencies and above. High CMRR is achieved by the use of precision components throughout.

The **BSX16**'s internal transformer based power supply is double shielded to get the maximum benefit from the ultra low noise design of the circuitry.

To sum up, this feature packed two RU device is the answer wherever multiple transformer output splits from up to 2 input signals are required. The ultra low noise design and intuitive, 'user friendly' layout of the **BSX16** provide flawless audio performance in any professional application.

Every **BSX16** is hand soldered, with a 48 hour burn in followed by a 100% re-test and visual PCB QC check prior to shipping. Which is why we say…

You'll never compromise on quality when you choose ARX