

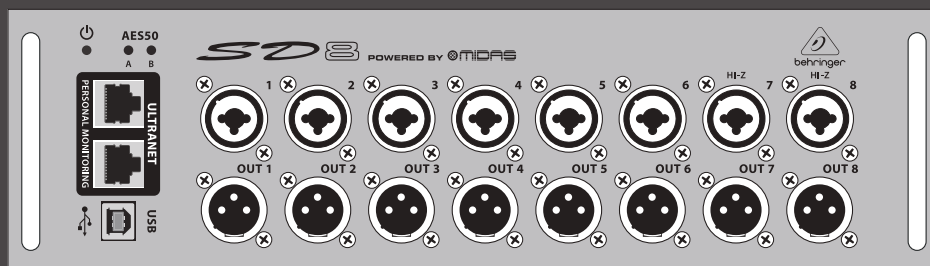
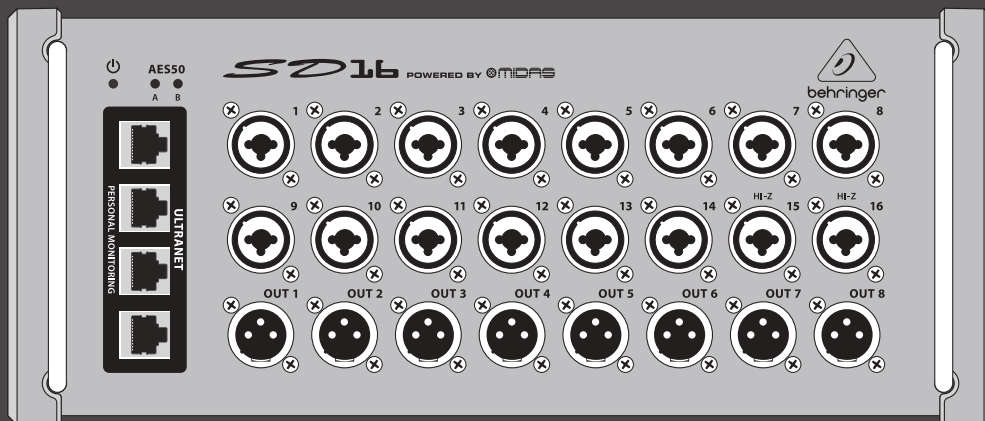
EN

ES

FR

DE

PT



Quick Start Guide



DIGITAL SNAKE SD16/SD8

I/O Stage Box with 16/8 Remote-Controllable
MIDAS Preamps, 8 Outputs, AES50 Networking and
ULTRANET Personal Monitoring Hub

EN

EN

Important Safety Instructions

ES



Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.



This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.



This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

**Caution**

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.

**Caution**

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

**Caution**

These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.

When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.

LEGAL DISCLAIMER

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LIMITED WARRANTY


For the applicable warranty terms and conditions and additional information regarding MUSIC Group's Limited Warranty, please see complete details online at music-group.com/warranty.


ES Instrucciones de seguridad




 Las terminales marcadas con este símbolo transportan corriente eléctrica de magnitud suficiente como para constituir un riesgo de descarga eléctrica. Utilice solo cables de altavoz profesionales y de alta calidad con conectores TS de 6,3 mm o de bayoneta prefijados. Cualquier otra instalación o modificación debe ser realizada únicamente por un técnico cualificado.

 Este símbolo, siempre que aparece, le advierte de la presencia de voltaje peligroso sin aislar dentro de la caja; este voltaje puede ser suficiente para constituir un riesgo de descarga.

 Este símbolo, siempre que aparece, le advierte sobre instrucciones operativas y de mantenimiento que aparecen en la documentación adjunta. Por favor, lea el manual.

 **Atención**
Para reducir el riesgo de descarga eléctrica, no quite la tapa (o la parte posterior). No hay piezas en el interior del equipo que puedan ser reparadas por el usuario. Si es necesario, póngase en contacto con personal cualificado.

 **Atención**
Para reducir el riesgo de incendio o descarga eléctrica, no exponga este aparato a la lluvia, humedad o alguna otra fuente que pueda salpicar o derramar algún líquido

sobre el aparato. No coloque ningún tipo de recipiente para líquidos sobre el aparato.



Atención

Las instrucciones de servicio deben llevarlas a cabo exclusivamente personal cualificado. Para evitar el riesgo de una descarga eléctrica, no realice reparaciones que no se encuentren descritas en el manual de operaciones. Las reparaciones deben ser realizadas exclusivamente por personal cualificado.

1. Lea las instrucciones.
2. Conserve estas instrucciones.
3. Preste atención a todas las advertencias.
4. Siga todas las instrucciones.
5. No use este aparato cerca del agua.
6. Limpie este aparato con un paño seco.
7. No bloquee las aberturas de ventilación. Instale el equipo de acuerdo con las instrucciones del fabricante.
8. No instale este equipo cerca de fuentes de calor tales como radiadores, acumuladores de calor, estufas u otros aparatos (incluyendo amplificadores) que puedan producir calor.
9. No elimine o deshabilite nunca la conexión a tierra del aparato o del cable de alimentación de corriente. Un enchufe polarizado tiene dos polos, uno de los cuales tiene un contacto más ancho que el otro. Una clavija con puesta a tierra dispone de tres contactos: dos polos y la puesta a tierra. El contacto ancho y el tercer contacto, respectivamente, son los que garantizan una mayor seguridad. Si el enchufe suministrado con el equipo no concuerda con la toma de corriente, consulte con un electricista para cambiar la toma de corriente obsoleta.
10. Coloque el cable de suministro de energía de manera que no pueda ser pisado y que esté protegido de objetos afilados. Asegúrese de que el cable de suministro de energía esté protegido, especialmente en la zona de la clavija y en el punto donde sale del aparato.
11. Use únicamente los dispositivos o accesorios especificados por el fabricante.



12. Use únicamente la carretilla, plataforma, trípode, soporte o mesa especificados por el fabricante o

suministrados junto con el equipo. Al transportar el equipo, tenga cuidado para evitar daños y caídas al tropezar con algún obstáculo.

13. Desenchufe el equipo durante tormentas o si no va a utilizarlo durante un periodo largo.

14. Confíe las reparaciones únicamente a servicios técnicos cualificados. La unidad requiere mantenimiento siempre que haya sufrido algún daño, si el cable de suministro de energía o el enchufe presentaran daños, se hubiera derramado un líquido o hubieran caído objetos dentro del equipo, si el aparato hubiera estado expuesto a la humedad o la lluvia, si ha dejado de funcionar de manera normal o si ha sufrido algún golpe o caída.

15. Al conectar la unidad a la toma de corriente eléctrica asegúrese de que la conexión disponga de una unión a tierra.

16. Si el enchufe o conector de red sirve como único medio de desconexión, éste debe ser accesible fácilmente.



17. Cómo debe deshacerse de este aparato: Este símbolo indica que este aparato no debe ser tratado como basura orgánica, según lo indicado en la Directiva WEEE (2012/19/EU) y a las normativas aplicables en su país. En lugar de ello deberá llevarlo al punto limpio más cercano para el reciclaje de sus elementos eléctricos / electrónicos (EEE). Al hacer esto estará ayudando a prevenir las posibles consecuencias negativas para el medio ambiente y la salud que podrían ser provocadas por una gestión inadecuada de este tipo de aparatos. Además, el reciclaje de materiales ayudará a conservar los recursos naturales. Para más información acerca del reciclaje de este aparato, póngase en contacto con el Ayuntamiento de su ciudad o con el punto limpio local.

DIGITAL SNAKE SD16/SD8 Hook-up

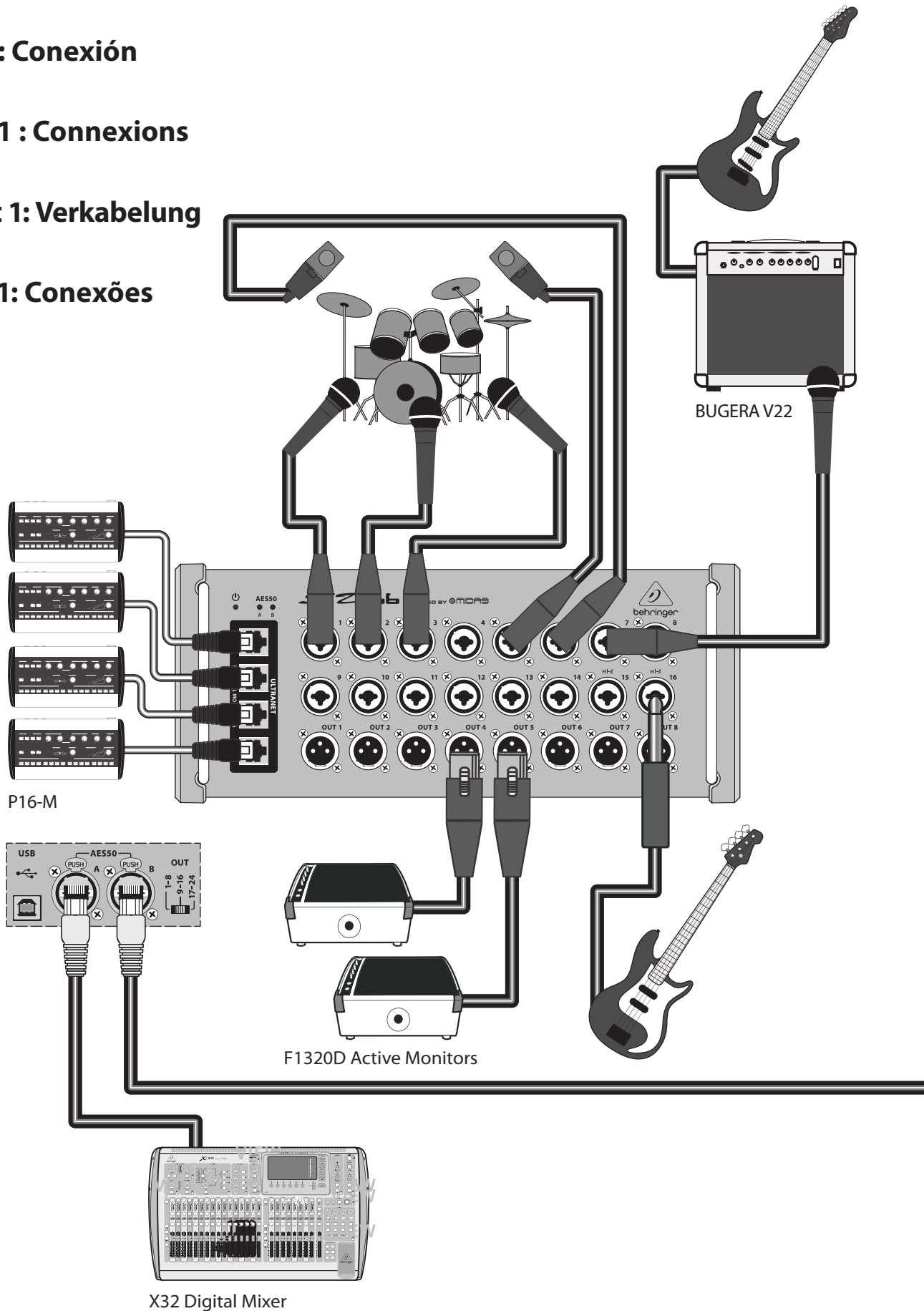
EN Step 1: Hook-Up

ES Paso 1: Conexión

FR Étape 1 : Connexions

DE Schritt 1: Verkabelung

PT Passo 1: Conexões

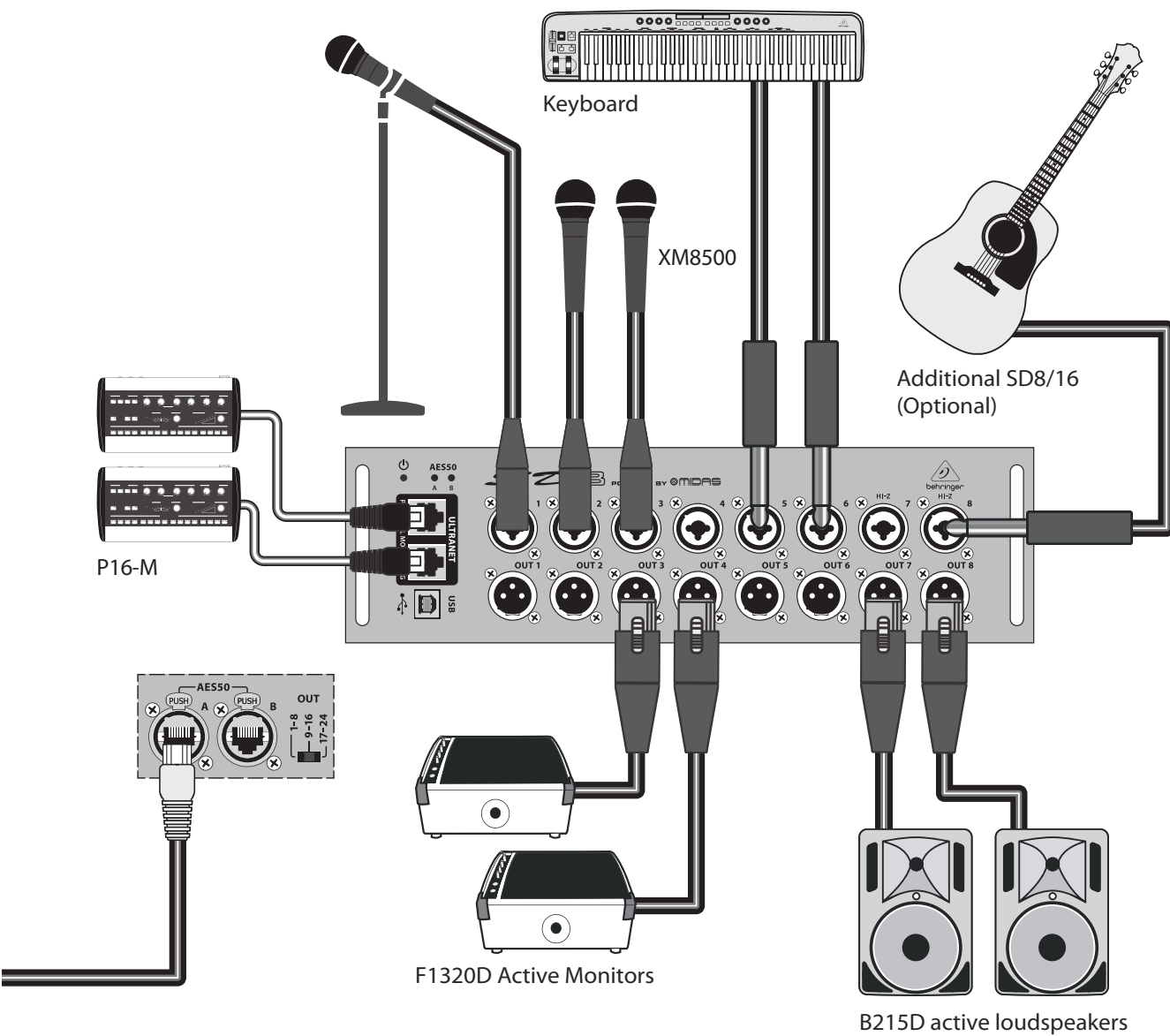


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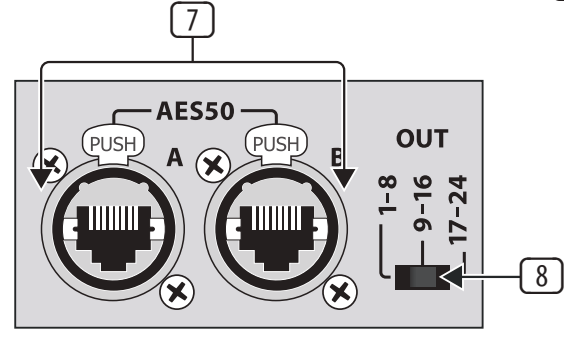
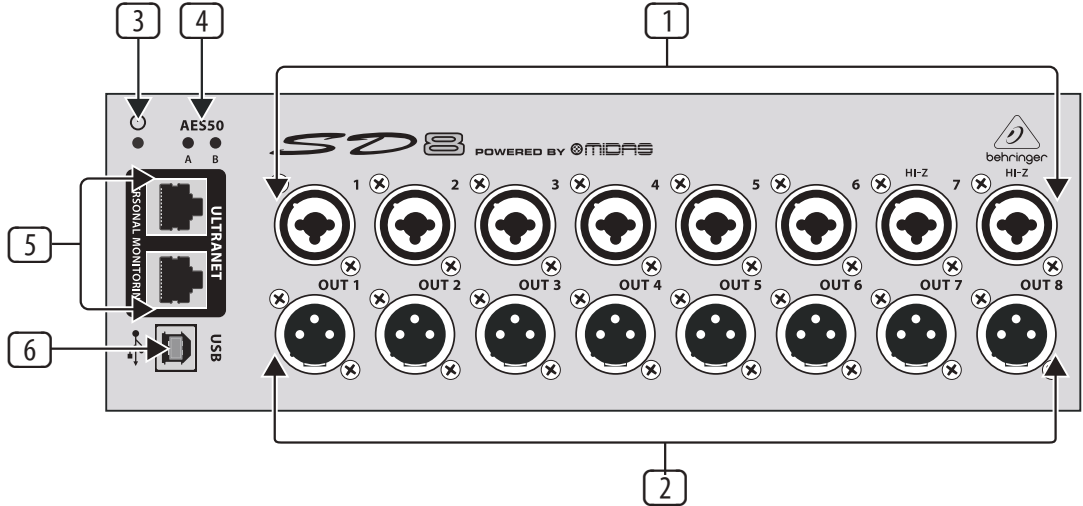
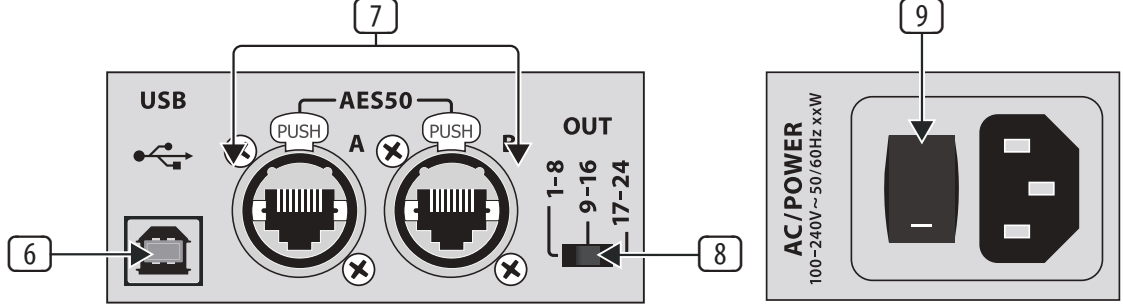
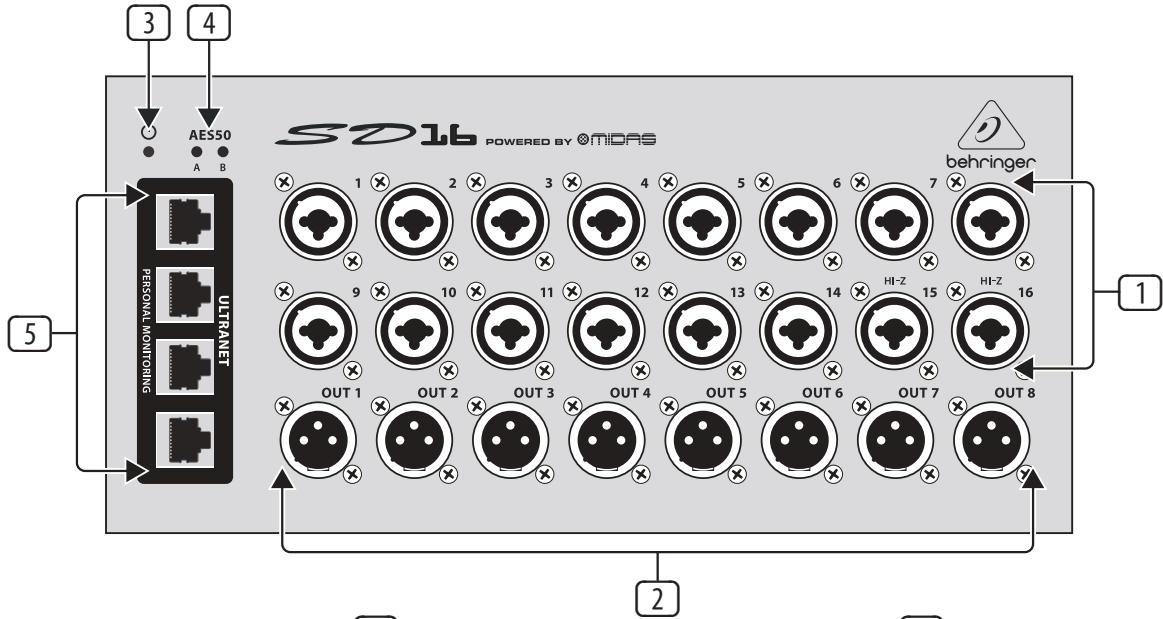
P16-M

F1320D Active Monitors

X32 Digital Mixer



DIGITAL SNAKE SD16/SD8 Controls



EN Step 2: Controls

- 1 **MIDAS**-designed mic/line combo inputs accept balanced XLR and ¼" male plugs. Channel 15 and 16 on the SD16 and channel 7 and 8 on the SD8 accept high impedance signals for direct connection of guitars and basses.
- 2 **XLR** outputs accept balanced XLR female plugs.
- 3 **POWER LED** lights when the unit is powered on.
- 4 **AES50 LEDs** light green when the corresponding AES50 port is connected and synchronized, and light red when connected but not synchronized.
- 5 **ULTRANET** ports allow direct connection of up to 4 (SD16) or 2 (SD8) P16-M personal mixers. The ports provide phantom power, allowing the P16-M units to operate without additional power supplies.
- 6 **USB** port can be used to connect a PC for updating the firmware.
- 7 **AES50** ports provide connection between the stage box and an X32 series mixer, and also allows other SD16/SD8 units to be daisy chained. Port A should be used to connect the X32 and additional stageboxes can be daisy chained via port B. See 'Step 3: Channel Management' for details.
- 8 **OUTPUT** select switch determines which group of 8 AES50-A channels appear at the physical XLR output jacks. When using multiple stage boxes, this allows different output signals to be sent to each unit.
- 9 **POWER** switch turns the unit on and off.

DIGITAL SNAKE SD16/SD8 Channel Management

EN Step 3: Channel Management

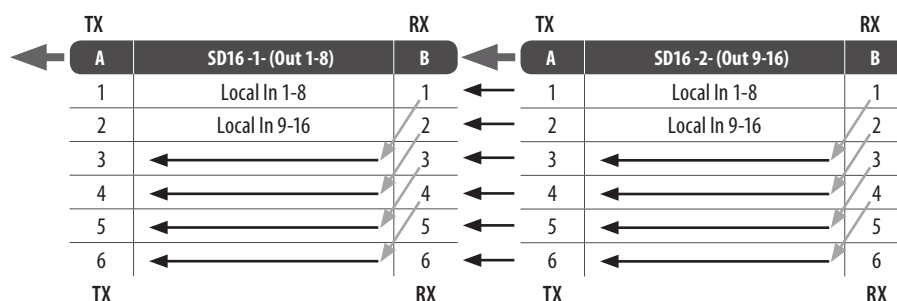
Signals are routed to and from the SD8/16 and a mixer or S16/DL16 via CAT-5e cable, with maximum cable runs up to 100 meters. The clock source is always received on AES50 port A, and the P-16 ULTRANET signals are carried on AES50-A channels 33-48. The 8 analog outputs can carry AES50-A channels 1-8, 9-16, or 17-24, selectable via the 3-position switch on the side of the stagebox.

Model	44.1/48 kHz	Output Switch			XLR analog	P-16 Ultranet
	clock sync	Out 1-8	Out 9-16	Out 17-24	out 1-8	out 1-16
SD16 SD8	AES50-A	x			= AES50-A, ch01-ch08	= AES50-A, ch33-ch48
	AES50-A		x		= AES50-A, ch09-ch16	
	AES50-A			x	= AES50-A, ch17-ch24	

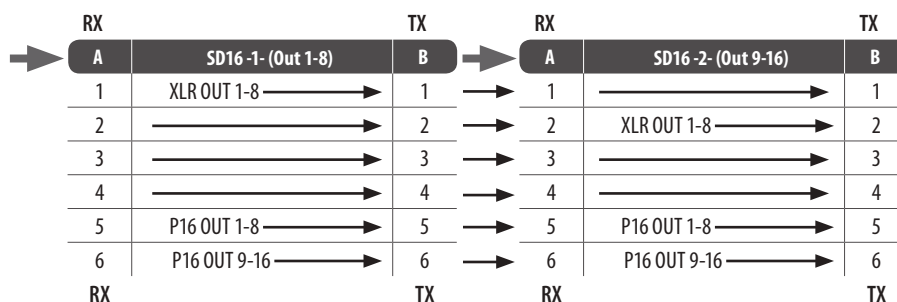
When chaining multiple SD8 or SD16 units, the signals from the second stagebox in the chain are sent via AES50-A to the next stagebox's AES50 port B. The signals from the second stagebox are shifted up by 8 or 16 channels when merged with the first stagebox (see chart for details). The output select switch would typically be set to the '9-16' position to allow different signals to be sent from the 2 stageboxes.

SD16 Channel Routing

To mixer



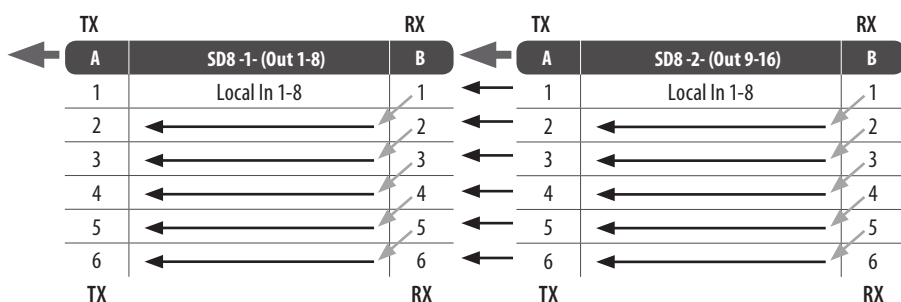
From mixer



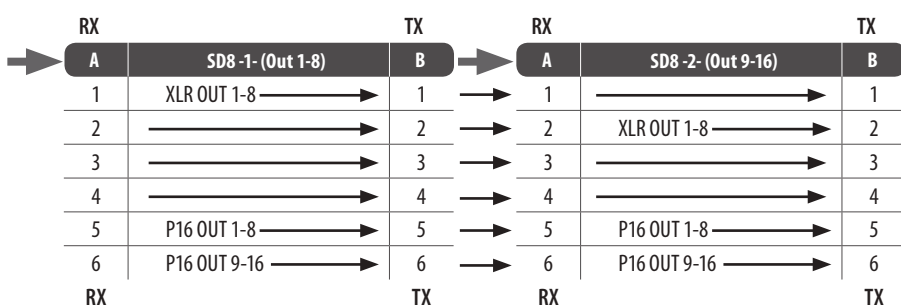
Note - each row in the above tables represents a block of 8 AES50 channels.

SD8 Channel Routing

To mixer



From mixer



MIDI Control with S16/DL16

Though the SD-series stageboxes will commonly be used with an X32/M32 digital console, it is possible to incorporate these products as part of a standalone digital snake. The SD8/16 head amp gain and phantom power settings can be remotely controlled via MIDI when used standalone with a BEHRINGER S16 or MIDAS DL16 master unit.

Note that the S16/DL16 will only accept MIDI preamp controls when its preamps are not controlled via AES50 already. Slave connection to an X32/M32 console or another S16/DL16 in SN Master mode will inhibit MIDI preamp control. MIDI channel 1 controls the SN Master unit’s local preamps (transmit and receive), while MIDI channel 2 controls the Slave unit, which in this case would be the SD8/16.

S16/DL16 MIDI Chart

"In 1-16" (FOH) SN MASTER or Ext Sync w/o AES50 preamp control				
Local	CC #	Value	Channel	Description
	80...95	0...19	1	Controls local head amps of master unit Gain In 1-16, -2.5...+45 dB, 2.5 dB steps
	96...111	0, 127	1	48V Phantom 1-16 on/off
"St 1-16" (Stage) SN MASTER or Ext Sync w/o AES50 preamp control				
Remote	CC #	Value	Channel	Description
	80...95	0...19	2	Controls remote head amps of slave unit Gain In 1-16, -2.5...+45 dB, 2.5 dB steps
	96...111	0, 127	2	48V Phantom 1-16 on/off
SLAVE or Ext Sync with AES50 preamp control				
	-			No MIDI preamp control transmission or reception in slave mode, when controlled by another S16/DL16 SN Master or X32/M32 series console

Digital In/Out		
AES50 SuperMac networking @ 48 or 44.1 kHz, 24-bit PCM	2 x 48 channels, bidirectional	
AES50 SuperMac cable length, CAT5 shielded**	Up to 100 m	
ULTRANET networking @ 48 or 44.1 kHz, 16-bit PCM	1 x 16 channels, unidirectional	
ULTRANET cable length, CAT5 shielded	Up to 75 m	
ULTRANET phantom power for P16-M personal mixers	2 powered outputs	
Power		
Switch-mode autorange power supply	100-240 V (50/60 Hz)	
Power consumption	45 W	35 W
Physical		
Standard operating temperature range	5°C – 40°C (41°F – 104°F)	5°C – 40°C (41°F – 104°F)
Dimensions	333 x 149 x 140 mm (13.1 x 5.9 x 5.5 in)	333 x 149 x 95 mm (13.1 x 5.9 x 3.7 in)
Weight	3.2 kg (7.1 lbs)	2.5 kg (5.5 lbs)

* Incl. all channel and bus processing, excl. insert effects and line delays

** KLARK TEKNIK NCAT5E-50M recommended

Other important information

EN Important information

1. Register online. Please register your new MUSIC Group equipment right after you purchase it by visiting behringer.com. Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.

2. Malfunction. Should your MUSIC Group Authorized Reseller not be located in your vicinity, you may contact the MUSIC Group Authorized Fulfiller for your country listed under "Support" at behringer.com. Should your country not be listed, please check if your problem can be dealt with by our "Online Support" which may also be found under "Support" at behringer.com. Alternatively, please submit an online warranty claim at behringer.com BEFORE returning the product.

3. Power Connections.

Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

ES Aspectos importantes

1. Registro online.

Le recomendamos que registre su nuevo aparato MUSIC Group justo después de su compra accediendo a la página web behringer.com. El registro de su compra a través de nuestro sencillo sistema online nos ayudará a resolver cualquier incidencia que se presente a la mayor brevedad posible. Además, aproveche para leer los términos y condiciones de nuestra garantía, si es aplicable en su caso.

2. Averías. En el caso de que no exista un distribuidor MUSIC Group en las inmediaciones, puede ponerse en contacto con el distribuidor MUSIC Group de su país, que encontrará dentro del apartado "Support" de nuestra página web behringer.com. En caso de que su país no aparezca en ese listado, acceda a la sección "Online Support" (que también encontrará dentro del apartado "Support" de nuestra página web) y compruebe si su problema aparece descrito y solucionado allí. De forma alternativa, envíenos a través de la página web una solicitud online de soporte en periodo de garantía ANTES de devolvemos el aparato.

3. Conexiones de corriente.

Antes de enchufar este aparato a una salida de corriente, asegúrese de que dicha salida sea del voltaje adecuado para su modelo concreto. En caso de que deba sustituir un fusible quemado, deberá hacerlo por otro de idénticas especificaciones, sin excepción.

FR Informations importantes

1. Enregistrez-vous en ligne.

Prenez le temps d'enregistrer votre produit MUSIC Group aussi vite que possible sur le site Internet behringer.com. Le fait d'enregistrer le produit en ligne nous permet de gérer les réparations plus rapidement et plus efficacement. Prenez également le temps de lire les termes et conditions de notre garantie.

2. Dysfonctionnement. Si vous n'avez pas de revendeur MUSIC Group près de chez vous, contactez le distributeur MUSIC Group de votre pays : consultez la liste des distributeurs de votre pays dans la page "Support" de notre site Internet behringer.com. Si votre pays n'est pas dans la liste, essayez de résoudre votre problème avec notre "aide en ligne" que vous trouverez également dans la section "Support" du site behringer.com. Vous pouvez également nous faire parvenir directement votre demande de réparation sous garantie par Internet sur le site behringer.com AVANT de nous renvoyer le produit.

3. Raccordement au secteur.

Avant de relier cet équipement au secteur, assurez-vous que la tension secteur de votre région soit compatible avec l'appareil. Veillez à remplacer les fusibles uniquement par des modèles exactement de même taille et de même valeur électrique — sans aucune exception.

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION



Responsible Party Name: **MUSIC Group Services NV Inc.**

Address: **5270 Procyon Street
Las Vegas, NV 89118
USA**

Phone Number: **+1 702 800 8290**

DIGITAL SNAKE SD16/SD8

complies with the FCC rules as mentioned in the following paragraph:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Important information:

Changes or modifications to the equipment not expressly approved by MUSIC Group can void the user's authority to use the equipment.



We Hear You