XD Series
Loudspeaker Management System

User Manual

XILICA Audio Design

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK, DO NOT
REMOVE COVER (OR BACK).
NO USER - SERVICEABLE PARTS
INSIDE. REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk to persons.

The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Important Safety Instructions

1. READ THESE INSTRUCTIONS
All the safety and operating instructions should be read before the product is operated.

2. KEEP THESE INSTRUCTIONS
The safety and operating instructions should be retained for future reference.

3. HEED ALL WARNINGS
All warnings on the product and in the operating instructions should be adhered to.

4. FOLLOW ALL INSTRUCTIONS
All operating and use of instructions should be followed.

5. DO NOT USE THIS APPARATUS NEAR WATER
Do not use the product near water. For example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, and the like.

6. CLEAN ONLY WITH DRY CLOTH
Unplug the unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

7. DO NOT BLOCK ANY VENTILATION OPENINGS
Slots and openings in the cabinet back or bottom are provided for ventilation, to ensure reliable operation of the limit and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or similar surface. This product should never be placed near or over a radiator or heat source. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacture's instructions have been adhered to.
8. DO NOT INSTALL NEAR ANY HEAT SOURCES

This Product should be situated away from heat sources such as radiators, stoves, or other products (including amplifiers) that produces 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 prongs 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. ONLY USE ATTACHMENTS/ACCESSORIES SPECIFIED BY THE MANUFACTURER.

12. USE ONLY WITH 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 TO AVOID INJURY FROM TIP-OVER.
Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury to someone, and serious damage to the appliance. A unit and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

13. UNPLUG THIS APPARATUS DURING LIGHTNING STORMS OR WHEN UNUSED FOR LONG PERIODS OF TIME.
For added protection for this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power line surges.

14. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL. SERVICING IS REQUIRED WHEN THE APPARATUS HAS BEEN DAMAGED IN ANYWAY, SUCH AS WHEN THE 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 FROPPED.

15. WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

16. APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

Table of Contents

1.0   Introduction

The XD series is a digital loudspeaker management system designed for the touring or fixed sound installation markets. The absolute latest in available technology is utilized with 40-bit floating point processors and high performance 24-bit Analog Converters. The high-bit DSP prevents noise and distortion induced by truncation errors of the commonly used 24-bit fixed-point devices. A complete set of parameters include I/O levels, delay, polarity, 8 bands of EQ per channel, 31 bands of GEQ per input, multiple crossover selections including FIR linear phase filters and full function limiters. Precise frequency control is achieved with its 1 Hz resolution. Inputs and outputs can be routed in multiple configurations to meet any requirement. The XD Series can be controlled or configured in real time on the front panel or with the intuitive PC GUI accessed via the RS-232, USB or Ethernet interface. Software upgrade for CPU and DSP via PC keeps the device current with newly developed algorithms and functions once available. Multiple setup storage and system security complete this professional package.

Shipped contents:

- XD unit
- User Manual
- XConsole Software
- Power cord

2.0   Features

> Up to 8 Inputs and 8 Outputs with flexible routing

> 40-bit floating point DSP

> 96kHz Sampling Rate

> High Performance 24-bit A/D Converters

> 1 Hz Frequency Resolution

> 8 Equalizers (Magnitude or Phase) for each Input and Output

> 31 Bands GEQ for each Input

> Multiple Crossover types including FIR linear phase filters

> Full Function Limiters

> Precise Level, Polarity and Delay

> Digital (AES-EBU) or Analog Inputs and Outputs

> CPU and DSP upgrade via PC

> Individual Channel Buttons with Linking capability

> 4-Line x 26 Character Backlit LCD Display

> Full 5-segment LED's on every Input and Output

> Storage of up to 30 Preset Setups

> Security Lock for Individual Menu

> RS-232, USB and Ethernet Interface for PC Configuration

> Mic Preamps + Phantom Power for each Input Channel[1]

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[1] For XD-4080M and XD-8080M only.

3.0   Front Panel Functions
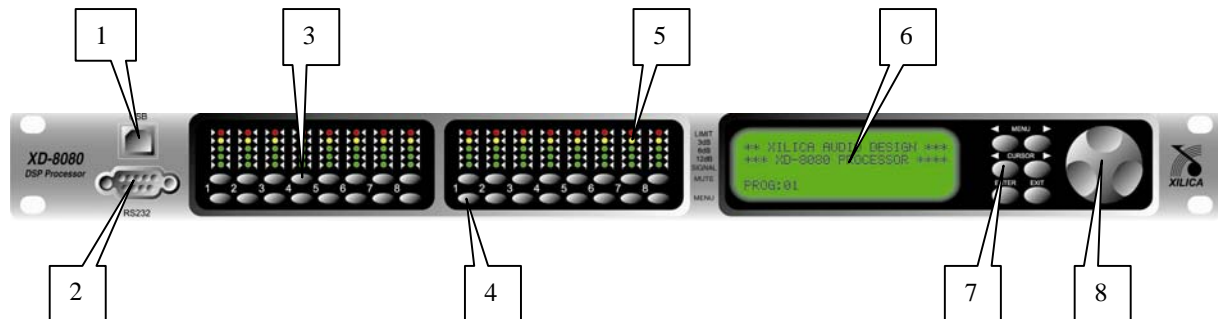
1. **USB** – a standard Type B USB connector. Device driver from the provided software CD must be installed prior to usage.

2. **RS232** – a standard female DB9 socket. A straight through cable is required for PC connection.

3. **Mute Buttons** – Mute or un-mute input and output channels. When an input channel is muted, a red LED will come on for indication.

4. **Channel Menu Buttons** – Selects the corresponding channel for the LCD menu display and is acknowledged by a green LED. The last modified menu will be displayed on the LCD. Linking multiple channels is accomplished by pressing and holding the first channel key, then pushing the other desired channels. This eases programming for same parameters across multiple channels. Multiple Inputs can be linked together and multiple outputs can be linked together. Inputs and Outputs are linked separately.

5. **Peak Level LED** – Indicates the current peak level of the Signal:
   Signal, -12dB, -6dB, -3dB, Over/Limit. The Input **Limit** LED references to the device's maximum headroom. The Output **Limit** LED references to the threshold of the output limiter.

6. **LCD** – Shows all the necessary information to control the unit.

7. **Menu Buttons** – There are 6 menu keys: **<<Menu** (Menu Down), **Menu>>** (Menu Up), **<<Cursor** (Cursor Down), **Cursor>>** (Cursor Up), **Enter** and **Exit**. The functions of each key is explained below:

   <<Menu: Go to previous menu screen.

   Menu>>:   Go to next menu screen.

   <<Cursor: Go to previous cursor in the menu screen.

   Cursor>>:   Go to next cursor in the menu Screen.

   Enter: **Enter** enters the **System Menu** from the main menu and is used in the **System Menu** to proceed with selected actions.

   Exit: Exit to the **Main Menu**.

8. **Rotary Thumb Wheel** – Changes parameter data values. The wheel has travel velocity sensing which ease large incremental data modifications. For modifying delay and frequency (1 Hz resolution), pressing the **Enter** key simultaneously will increment/decrement the data value by 100X.

4.0   Rear Panel Functions
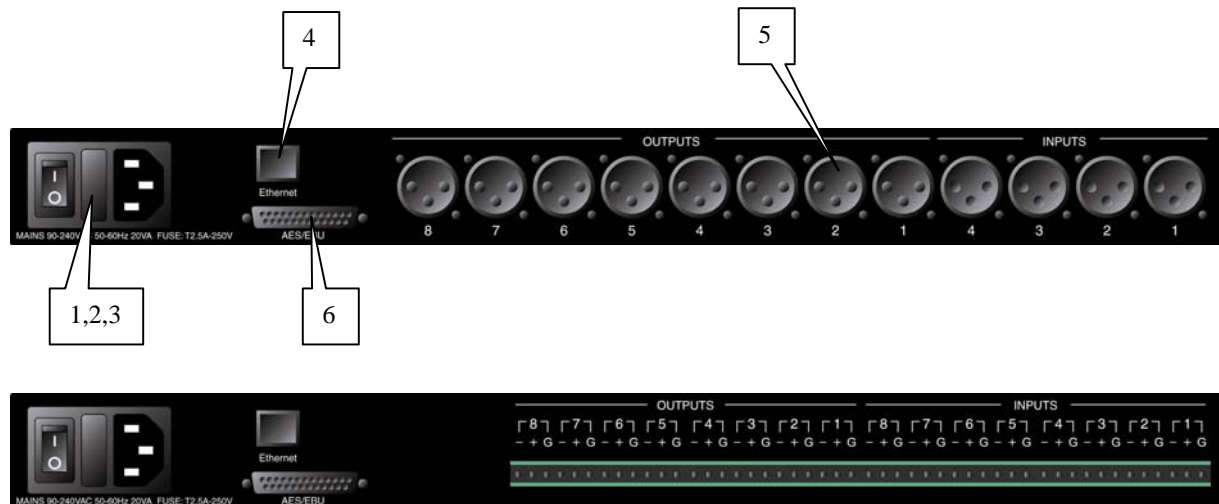
1. **Main Power** – Connects via a standard IEC socket. A compatible power cord is supplied with the unit. The voltage input is 90-240VAC, 50-60Hz.

2. **Main Fuse** – T2.5A-250V. Slow blow type.

3. **Power switch** - Controls power On/Off.

4. **Ethernet** – RJ45 connector for Ethernet control. The device should be connected to a router/switch/hub via a straight through CAT-5 cable.

5. **Analog Inputs and Outputs -** Separate 3-pin connectors[2] are provided for each audio input and output. The device's output stage employs the balanced impedance topology. All I/O connectors have pin 1 as ground (shield), pin 2 as + and pin 3 as -.

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[2] XLR connectors for XD-4080, Euro Connectors for XD-8080

6. **AES-EBU Inputs and Outputs –** Standard DB25 female connector[3]

Pin Description	Revision A	Revision B (Yamaha Standard)
Input 1 +	14	1
Input 1 -	2	14
Input 2 +	3	2
Input 2 -	16	15
Input 3 +		3
Input 3 -		16
Input 4 +		4
Input 4 -		17
Output 1+		5
Output 1 -	8	18
Output 2 +	9	6
Output 2 -	22	19
Output 3 +	23	7
Output 3 -	11	20
Output 4 +	12	8
Output 4 -	25	21
Ground	1 4 7 10 13 15 18 21 24	10 11 12 13 22 23 24 25
No Connect		9

---

[3] Revision A or B can be found when powering on the unit, it is appended to the version number.

5.0 Powering Up the Device

- After powering up the unit, the following initialization screen is displayed on the LCD:

```
***** XILICA XD-4080 *****
* LOUDSPEAKER CONTROLLER *
XD-4080   v9.00B
------ INITIALIZING ------
```

- The initialization process takes several seconds and during that period the unit boots and displays the device model and firmware version.

- After the initialization process is finished the XD displays its main screen:

```
***** XILICA XD-4080 *****
* LOUDSPEAKER CONTROLLER *
DEVICE: _____
PRESET:01 _____
```

- This screen shows the current program number and program name assigned to the unit. If the program number ends with *, it means that no program is assigned, the last data before previous power down is recalled instead.

- Now the XD is ready to operate.

6.0   Operating the Channel Menus

Channel Linking – If the user presses one of the Input or Output **Channel Menu** button, holds it down and press any other **Channel Menu** button(s) in the same group (Input or Output group), then the channels are linked together. The green menu LEDs for the linked channels are lit. Any modification of the data for the selected channel will be applied to the linked channels as well. To cancel the linking, just press any other **Channel Menu** key or the **Exit** key after releasing the held key.

6.1   Input Microphone Gain[4]

```
IN_1:_____    MENU:Mic Gain
LEVEL:0dB
```

LEVEL:
The level (or gain) ranges from 0dB to +45.00dB in 3dB steps. This level will only have an affect on the input channel when Mic Input is selected from the System Menu. Please refer to page 26 for more details.

6.2   Input/Output Signal

```
IN_1:_____    MENU:Signal
LEVEL:0.00dB
POL  :+
DELAY:0 (000.000ms)
```

LEVEL:
The level (or gain) ranges from -40.00dB to +15.00dB in 0.25dB steps.

POL:
The polarity (or phase) can be normal (+) or inverted (-).

---

[4] For XD-4080M / 8080M only.

DELAY:

The maximum delay permitted is 62400 samples, each sample is approximately 10us (1/96k). The equivalent delay time is displayed to the right in parenthesis. The delay time unit can be set to ms, ft or m in the **System Menu**. Please refer to page 23 for more details.

6.3   Input/Output Equalizer

```
IN_1:_____   MENU:EQ          IN_1:_____   MENU:EQ
EQ#:1      FRQ:1000Hz           EQ#:1      FRQ:1000Hz
BYP:Off    BW :0.33 Q=4.36      BYP:Off    DEG:15.5 deg
TYP:PEQ    LVL:0.00dB           TYP:PEQ    LVL:0.00dB
```

EQ#:
Each input channel has 8 bands of equalization. This control selects one of the 8 available bands.

BYP:
This control will un-bypass (Off) or bypass (On) the currently selected band.

TYP:
The 5 types of EQ that can be used are: parametric (PEQ), low shelf (LO-SHF), high shelf (HI-SHF), 1st degree all-pass (AP-1), and 2nd degree all-pass (AP-2).

FRQ:
The EQ center frequency ranges from 20Hz to 30kHz in either 1Hz steps or 1/36 octave steps. The frequency steps can be selected in the **System Menu**. Please refer to page 23 for more details.

BW:
The EQ bandwidth ranges from 0.02 to 3.61 octaves in steps of 0.01 octave. The equivalent Q value is automatically shown besides the octave value. For 1st degree all-pass (AP-1) filter, the bandwidth will sets the phase shift at the centre frequency. This phase shift is gradually changed from 180 degrees above the centre frequency to the specified value.

LVL:
The EQ level (or gain) ranges from -30.00dB to +15.00dB in 0.25dB steps.

6.4   Input Graphic Equalizer

```
IN_1:_____   MENU:GEQ
GEQ#  :1 (f=20Hz)
LEVEL :+0.25dB
BYPASS:Off
```

GEQ#:
The graphic equalizer has 31 bands of equalization from 20Hz to 20kHz.
This control selects one of the 31 available bands. The frequency
corresponding to each band is also shown.

LEVEL:
The GEQ level (or gain) ranges from -30.00dB to +15.00dB in 0.25dB steps.

BYPASS:
This control will un-bypass (Off) or bypass (On) the entire GEQ for this
channel.

6.5   Input/Output IIR Crossover

```
IN_1:_____   MENU:XOvr IIR
TYPL:Off      TYPH:Off
FRQL:1000Hz   FRQH:1000Hz
SLPL:24dB     SLPH:24db
```

TYPL:
The 3 available filter types for the low frequency crossover point (high pass)
are: Butterworth, Linkwitz Riley or Bessel.

FRQL:
The filter cut-off frequency for the low frequency crossover point (high pass)
ranges from 20 to 30kHz in either 1Hz steps or 1/36 octave steps. The

frequency steps can be selected in the **System Menu**. Please refer to page 23 for more details.

SLPL:
The filter slope for low frequency crossover point (high pass) ranges from 6 to 48dB/octave. If the selected filter type is Linkwitz Riley, the available slopes are 12, 24, 36 or 48 dB/octave only.
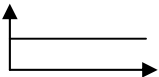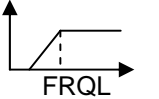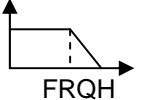
TYPH:
The 3 available filter types for the high frequency crossover point (low pass) are: Butterworth, Linkwitz Riley or Bessel.

FRQH:
The filter cut-off frequency for the high frequency crossover point (low pass) ranges from 20 to 30kHz in either 1Hz steps or 1/36 octave steps. The frequency steps can be selected in the **System Menu**. Please refer to page 23 for more details.

SLPH:
The filter slope for high frequency crossover point (low pass) ranges from 6 to 48dB/octave. If the selected filter type is Linkwitz Riley, the available slopes are 12, 24, 36 or 48 dB/octave only.

Filter configuration	Low crossover point	High crossover point	
None	FTRL Off	FTRH Off	
Highpass	FTRL not Off	FTRH Off	FRQL
Lowpass	FTRL Off	FTRH not Off	FRQH
Bandpass	FTRL not Off	FTRH not Off	FRQL FRQH

6.6   Input Compressor

```
IN_1:_____      MENU:Comp
THRESH :0.0dBu
ATTACK :10ms    RATIO: 1:40
RELEASE:8x (80ms)
```

THRESH:
The compressor threshold ranges from -20 to +20dBu in 0.5dB steps.

ATTACK:
The compressor attack time ranges from 0.3 to 1ms in 0.1ms steps, then ranges from 1 to 100ms in 1ms steps.

RELEASE:
The compressor release time can be set at 2X, 4X, 8X, 16X or 32X the attack time.

RATIO:
The compressor ratio is the slope in which the signal is compressed. It ranges from 1:1 to 1:40.

6.7   Input/Output Channel Name

```
IN_1:_____      MENU:Name
NAME:_____
```

NAME:
A 6 characters name can be assigned to each channel.

6.8 Output Limiter

```
OUT_1:_____  MENU:Limit
THRESH :0.0dBu
ATTACK :10ms
RELEASE:8x (80ms)
```

THRESH:
The limiter threshold ranges from -20 to +20dBu in 0.5dB steps.

ATTACK:
The limiter attack time ranges from 0.3 to 1ms in 0.1ms steps, then ranges from 1 to 100ms in 1ms steps.

RELEASE:
The limiter release time can be set at 2X, 4X, 8X, 16X or 32X the attack time.

6.9 Output Source

```
OUT_1:_____   MENU:Source
1:0.00   4:Off     7:Off
2:Off    5:Off     8:Off
3:Off    6:Off
```

1-8:
This sets the input channel source for the current output channel. It can be used to mix the input source (in dB) or disable it (Off). If more than one input sources are enabled, they will be added together as the source for the current output channel.[5]

---

[5] 5 to 8 available for XD-8080 model only.

6.10 Output FIR Crossover

```
OUT_1:_____  MENU:XOvr FIR
TYPL:Off        TYPH:Off
FRQL:1000Hz   FRQH:1000Hz
```

TYPL:

The only available filter type for low frequency crossover point (high pass) is FIR.

FRQL:

Filter cut-off Frequency of low frequency crossover point (high pass). Ranges from 20 to 30kHz in either 1Hz steps or 1/36 octave steps. The frequency steps and FIR Taps can be selected in the **System Menu**.

TYLH:

The only available filter type for high frequency crossover point (low pass) is FIR.

FRQH:

Filter cut-off Frequency of high frequency crossover point (low pass). Ranges from 20 to 30kHz in either 1Hz steps or 1/36 octave steps. The frequency steps and FIR Taps can be selected in the **System Menu**.

7.0   Operating the System Menus

The **System Menus** allow the user to control and change parameters that are related to the system behavior and general operation. It can be accessed by pressing the **Sys** key in the main menu (when no Input/Output or System Menu is activated). All System Menus require pressing the **Enter** key to confirm and save the settings.

7.1   Preset Recall

The XP has a built in non-volatile memory that can store up to 30 different preset setups.

```
SYSTEM-SETUP MENU:Recall
PRESET:1
NAME:_____
```

PRESET:
This control selects which program to recall from the non-volatile memory. The program name is displayed to the right of the program #.

NAME:
This shows the name of the program. This is read-only, the user has no access to them.

7.2 Preset Store

The XP has a built in non-volatile memory that can store up to 30 different program (or preset) setups. A program can be stored using this menu. The old program with the same program number will be replaced. Once the program is stored in the flash memory, it can be recalled at a later time, even after power down.

```
SYSTEM-SETUP MENU:Store
PRESET:1
NAME:_____
```

PROG:
This control selects which location in the non-volatile memory to save the program to.

NAME:
A descriptive name of up to 12 characters can be assigned to each program.

7.3 FIR Taps Settings

```
SYSTEM-SETUP MENU:FIR Taps
1:50      4:50
2:50
3:50
```

1-4:
Number of FIR Taps for each pair of output channels (ie. Output 1&2, Output 3&4, Output 5&6, Output 7&8).[6] The sum of all taps cannot exceed 1500 and maximum taps per pair is 1200.

---

[6] Parameters 5 to 8 are also available for XD Series v5.xx and v6.xx. The FIR filters have been changed to dual channel structure in v7.xx

For FIR filters, the higher the taps, the higher the slope in dB for the same frequency, or the lower frequency the FIR can handle for the same slope. Generally speaking, higher frequencies require smaller number of taps, and lower frequencies require higher number of taps. For good steepness for FIR crossovers:

# of Taps	Minimum Frequency (Hz)
50	4800
100	2400
150	1600
200	1300
250	1000
300	850
350	700
400	625
450	550
500	500
550	450
600	425
650	400
700	390
750	385
800	340
850	310
900	285
950	275
1000	265
1050	250
1100	230
1150	220
1200	210

7.4 Mic Preamps[7]

An optional microphone preamp can be added to the XD series. The user can select Line input or Mic input from this menu.

```
SYSTEM-SETUP MENU:Mic
1:Line    4:Line    7:Line
2:Line    5:Line    8:Line
3:Line    6:Line
```

1-8:
The user can choose between Line input or Mic input. For Mic input, the input will receive a 30dB gain. Each input channel can be selected individually.[8]

7.5 Phantom Power

The option microphone preamp also comes with Phantom Power, which can also be enabled or disabled from this menu.

```
SYSTEM-SETUP MENU:Phantom
1:Off     4:Off     7:Off
2:Off     5:Off     8:Off
3:Off     6:Off
```

1-8:
A 48V DC voltage can be supplied to external microphone when the Phantom Power is enabled. Phantom Power cannot be enabled indivually for each input channel, all Mic input channel will automatically receive at 48V DC voltage. This will not affect Line input since they are disconnected physically.

---

[7] For XD-4080M / 8080M only, applies to Phantom Power as well.
[8] Input 5-8 only available for XD-8080 model, applies to Phantom Power as well.

7.6   Input and Output Mode

```
SYSTEM-SETUP MENU:I/O Mode
I12:A  I34:A  I56:A  I78:A
O12:A  O34:A  O56:A  O78:A
```

The user can selects analog or digital signal for input and output channel.[9]
If using AES/EBU the XD accepts any sample rate on the Inputs and will automatically up sample to its internal clock. The XD has a fixed output sample rate of 96kHz.

7.7   Copy Channels

Copy Channels from the source to the target. When the Source and Targets are both Inputs and Outputs, all audio parameters will be copied. When one of the Source or the Target is an input while the other is an output, only the Level, Polarity, Delay, EQ, Crossover, and Channel Name are copied.

```
SYSTEM-SETUP MENU:Copy
SOURCE:In1
TARGET:In2
```

SOURCE:
This is the channel to be copied from.

TARGET:
This is the channel to be copied to.

7.8   General Settings

```
SYSTEM-SETUP MENU:General
FREQ MODE :All Freq
DELAY UNIT:ms
```

---

[9] I56 and I78 available for XD-8080 revision B model only.

FREQ MODE:
This changes the frequency control mode for EQ and crossover filters. It can be 36 steps/octave or All Frequencies (1 Hz resolution).

DELAY UNIT:
This sets the time unit for input and output delay to ms, ft or m.

7.9 Ethernet Settings

```
SYSTEM-SETUP MENU:Ethernet
IP ADR :255.255.255.254
GATEWAY:255.255.255.255
SUBNET :255.255.255.255
```

IP ADR:
A unique IP address should be assigned to each unit in the network.

GATEWAY:
The gateway address of the network. Usually, this should be the IP address of your router/switch/hub address.

SUBNET:
The sets the subnet mask used by your network.

7.10 Communication Settings

NOTE: User must power cycle the unit for this settings to take effect.

```
SYSTEM-SETUP MENU:Comm
BAUD RATE:115200
DEVICE ID:1      NET ID:0
```

BAUD RATE:

The sets the baud rate of the serial communication. XConsole uses a baud rate of 115200, it should be left unchanged for most user.

DEVICE ID:
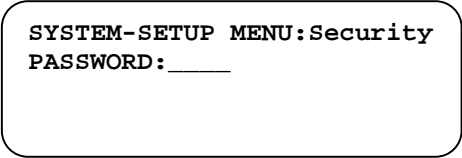This control assigns a device ID from 1 to 16 to the unit.

NETWORK ID:
This control assigns a network ID from 0 to 60000 to the unit. This ID is used for future network expansion only, please leave it at 0

7.11 Security Lock and Unlock

PASSWORD:
The password is 4 characters in length. The factory default of a new unit does not require a password.

The device can be protected for unauthorized parameter and /or system abuse. The securtity settings can be controlled and stored in the device with the XConsole GUI only. When the correct password is entered in the device all the locks are disabled. After reientering the password or powercycling the device, the locks are automatically enabled again.
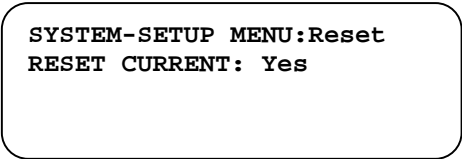
```
SYSTEM-SETUP MENU:Security
PASSWORD:_____
```

7.12 Factory Settings

CURRENT:
This resets all the current parameters back to factory default settings only, while stored presets and system settings stay untouched.

```
SYSTEM-SETUP MENU:Reset
RESET CURRENT: Yes
```

7.13 ISO Settings

```
SYSTEM-SETUP MENU:ISO
THRESHOLD: 102
BYPASS:Off
```

This Internal System Optimizer reduces ground floor noise if no signal is present. If unwanted Noise Gate effects are audible on low sound levels it can be switched to bypass mode.

7.14 INFO

```
SYSTEM-SETUP MENU:Info
DEVICE NAME: _____
FIRMWARE: v9.00
SECURE CODE: 11110000
```

This menu contains 3 info lines:

1. The first line displays the device name
2. The second line displays the Firmware version
3. The third line displays the security code.

When no password is set the factory default code is 11110000. When another combination of characters is displayed a password is set in the device and certain functions are disabled for the user to modify.

8.0   Quick Reference

Parameters	Menu <<Menu>>	Field <<Cursor>>	Min	Max	Steps	Units
Mic Level	Mic Gain	LEVEL	0	+45	3	dB
Level	Signal	LEVEL	-40	+15	0.25	dB
Polarity	Signal	POL	+ / -			
Delay	Signal	DELAY	0	62400	1	10us steps
EQ Number	EQ	EQ#	1	8	1	
EQ Bypass	EQ	BYP	Off / On			
EQ Type	EQ	TYP	PEQ / LO-SH / HI-SH / AP-1/ AP-2			
EQ Level	EQ	LEVEL	-30	+15	0.25	dB
EQ Frequency	EQ	FREQ	20	30,000	1	Hz
EQ Bandwidth	EQ	BW	0.02	3.61	0.01	Octave
GEQ Number	GEQ	GEQ#	1	31	1	
GEQ Level	GEQ	LEVEL	-30	+15	0.25	dB
GEQ Bypass	GEQ	BYPASS	Off / On			
XOver-IIR Low Type	XOver IIR	FTRL	Off / Butterworth / Linkwitz-Riley / Bessel			
XOver-IIR Low Freq	XOver IIR	FRQL	20	30,000	1	Hz
XOver-IIR Low Slope	XOver IIR	SLPL	6	48	6	dB/octave
XOver-IIR High Type	XOver IIR	FTRH	Off / Butterworth / Linkwitz-Riley / Bessel			
XOver-IIR High Freq	XOver IIR	FRQH	20	30,000	1	Hz
XOver-IIR High Slope	XOver IIR	SLPH	6	48	6	dB/octave
XOver-FIR Low Enable	XOver FIR	ENAL	Off / On			
XOver-FIR Low Freq	XOver FIR	FRQL	20	30,000	1	Hz
XOver-FIR High Enable	XOver FIR	ENAH	Off / On			
XOver-FIR High Freq	XOver FIR	FRQH	20	30,000	1	Hz
Compressor Threshold	Comp	THRESH	-20	+20	0.5	dBu
Compressor Attack	Comp	ATTACK	0.3	100	0.1/1	Ms
Compressor Release	Comp	RELEASE	2 / 4 / 8 / 16 / 32X Attack time			
Compressor Ratio	Comp	RATIO	1:1 to 1:40			
Limiter Threshold	Limit	THRESH	-20	+20	0.5	dBu
Limiter Attack	Limit	ATTACK	0.3	100	0.1/1	ms
Limiter Release	Limit	RELEASE	2 / 4 / 8 / 16 / 32X Attack time			
Source Select	Source	1, 2, 3, 4, 5, 6, 7, 8	Off	+15	0.25	dB
Channel Name	Name	NAME	6 characters			

9.0   PC Control Software

The XD series is shipped with a special PC Graphic User Interface (GUI) application - XConsole. XConsole gives the user an option to control the unit from a remote PC. The GUI application makes it much easier to control and monitor the device, allowing the user to get the whole picture on one screen. Programs can be recalled and stored from/to PC's hard drive, thus expanding the storage to become virtually limitless.

XConsole can be connected to the XD series via RS232, USB or Ethernet. USB requires the installation of additional driver. The user is given an option to install it during the installation of XConsole, and if the user did not install it at that time, they may choose to do so by running the USB driver installer from the provided software.[10]

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[10] The latest version of XConsole and USB driver are available on www.xilica.com.

10.0 Specifications

Inputs and Outputs

Input Impedance: >10k Ohms
Output Impedance: 50 Ohms
Maximum Level: +20dBu
Type: Electronically balanced

Audio Performance

Frequency Response: +/- 0.1dB (20 to 30kHz)
Dynamic Range: 115dB typ (unweighted)
CMMR: > 60dB (50 to 10kHz)
Crosstalk: < -100dB
Distortion: 0.002% (1kHz @+4dBu)

Digital Audio Performance

Processor: 40-bit
Sampling Rate: 96kHz
Analog Converters: High Performance 24-bit
Propagation Delay: 1.5ms

Front Panel Controls

Display: 4 x 26 Character Backlit LCD
Level Meters: 5 segment LED
Buttons: Mute/Channel Menu Controls
Menu Controls
Dial Encoder: Embedded Thumb Wheel

Connectors

Analog Inputs: 3-pin Female XLR (Euro Connector for XD-8080)
Analog Outputs: 3-pin Male XLR (Euro Connector for XD-8080)
Digital Audio: Female DB-25
RS-232: Female DB-9
USB: Type B
Power: Standard IEC Socket

General

Power: 100-240 VAC (50-60Hz)
Dimensions: 19"x1.75"x9" (483x44x229 mm)

Weight: 10 lbs / 4.5 kg

Audio Control Parameters
Mic Gain: 0 to +45dB in 3dB steps
Gain: -40 to +15dB in 0.25dB steps
Polarity: +/-
Delay: Up to 650ms per I/O

Equalizers (8 per I/O)
Type: Parametric, Hi-shelf, Lo-shelf, Phase 1, Phase 2
Gain: -30 to +15dB in 0.25dB steps
Bandwidth: 0.02 to 3.61 octaves (Q=0.3 to 72)

31-Band Graphic Equalizers (1 per Input)
Gain: -30 to +15dB in 0.25dB steps

Crossover Filters (2 per Input/4 per Output)
Filter Types: Butterworth, Bessel, Linkwitz Riley, FIR
Slopes: 6 to 48dB/oct
Taps: 50 to 1200

Compressor (1 per Input)
Threshold: -20 to +20dBu
Attack: 0.3 to 100ms
Release: 2 to 32X the attack
Ratio: 1:1 to 1:40

Limiters (1 per Output)
Threshold: -20 to +20dBu
Attack: 0.3 to 100ms
Release: 2 to 32X the attack time

System Parameters
No. of Presets: 30
Program Names: 12 character length
Delay Units: ms, ft, m
Frequency Modes: 36 steps/oct, 1Hz resolution
Security Locks: Any individual menu

Note: Specifications subject to change without notice

11.0 Warranty

The XD Series is warranted covering materials and workmanship for a period of five (5) year, as determined by the date of retail purchase (according to the sales receipt from an authorized dealer) or the date of manufacture if the sales receipt is not available (according to the serial number). This warranty applies to the product; therefore, the remainder of the warranty period will be automatically transferred to any subsequent owner. This warranty applies only to failure of a Xilica product caused by defects in materials and workmanship during the stated warranty period. It does not apply to a unit that has been subjected to abuse, accident, modification, improper handling/installation, or repairs made without factory authorization or by anyone other than authorized Xilica Field Service Stations. This warranty is void if the serial number has been defaced, altered or removed. Products covered by this warranty will be repaired or replaced at the option of Xilica, without charge for materials or labor, provided all the terms of this warranty have been met.

For factory service, please call or email for a Return Authorization (RMA) number before shipping. If the product is shipped, the following information must be included in the package:

1. Owner's complete name, daytime phone number, return street address and return authorization number.

2. The serial number of the product being returned and a copy of the retail sales receipt, if possible.

3. A complete description of the problem(s) experienced, including a brief description of how the equipment is being used and other equipments involved.

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XILICA Audio Design

www.xilica.com