





# **Important Safety Information**

#### 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 IN WATER.

Do not use the product near water. For example, near a bathtub, wash bowl, 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.

#### 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 manufacturer'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 WITH 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 surges.

# 14. REFER ALL SERVICING TO QUALIFIED PERSONNEL. SERVICING IS REQUIRED WHEN THE APPARATUS HAS BEEN DAMAGED IN ANY WAY. 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 DROPPED.

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.



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 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 applicance.



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#### What's in the Box

- XA series hardware device
- Hard copy of the Quick Start Guide
- USB drive with XConsole software, User manual and Spec Sheet
- Detachable IEC 90-240 VAC (50-60Hz) power cable

#### What you need to Provide

- PC computer with a processor 1GHz or higher
- 500 MB of free space
- 1 GB graphics card
- 4 GB of RAM
- RS232 or USB cable

#### **Getting Help**

Additional Help Files and video tutorials are available at our website: www.xilica.com For further technical support, please email: support@xilica.com and we'll connect you with a solutions engineer. Alternatively, you can call our worldwide offices for immediate assistance: North America & Rest of World: +1 905-770-0055

Europe: +31 29940-1100 China & Hong Kong SAR: +852 2604-9382



· Č	Model name	
· <b>)</b> .	USB Port	A standard Type B USB connector. The device driver must be installed prior to usage.
· 📺 -	RS232 Port	A standard female DB9 socket. A straight through cable is required for PC connection.
· <b>.</b>	Mute (channel) buttons	Mute or unmute input and output channels. When and input channel is muted, a red LED will come on for indication.
		When the <b>&lt;<menu< b=""> or <b>Menu&gt;&gt;</b> key is held down, the <b>Mute buttons</b> select the corresponding channel for the LCD menu display and is acknowledged by a green LED below the button. The last modified menu will be displayed on the LCD. Multiple channels can be linked or unlinked by pushing the desired channels. This eases programming for same parameters across multiple channels. Multiple inputs can be linked together multiple outputs can be linked together. Inputs and outputs are linked separately.</menu<></b>
·).	Channel menu LED	Indicates the activated channels for data modification.
· .	Peak Level LED	Indicates the current peak level of the 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.
	LCD Display	The LCD display shows all of the necessary information to control the settings of the unit from the front panel.
<b>.</b>	Menu Buttons	There are six menu buttons: <b>&lt;<menu< b=""> (Menu down), <b>Menu&gt;&gt;</b> (Menu up), <b>&lt;<cursor< b=""> (Cursor down), <b>Cursor&gt;&gt;</b> (Cursor Up), <b>Enter</b> and <b>Exit</b>. <b>&lt;<menu< b="">: Go to previous menu screen <b>Menu&gt;</b>: Go to next menu screen <b>&lt;<cursor< b="">: Go to previous cursor in the menu screen <b>Cursor&gt;</b>: Go to next cursor in menu screen <b>Enter</b>: Enter enters the <b>system menu</b> from the main menu and is used in the system menu to proceed with selected actions <b>Exit</b>: Exit to <b>main menu</b></cursor<></b></menu<></b></cursor<></b></menu<></b>
· 🍎 .	Jog wheel	Scroll through menu options using the jog wheel. 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.



#### XConsole PC software

The XA series is shipped with Xilica's XConsole software. 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 from one screen. Programs can be recalled and stored to and from a PC's hard drive, thus expanding the storage to become virtually limitless.

XConsole can be connected to the XA series via RS232 or USB. USB requires the installation of an additional driver. The user is given an option to install this driver during the installation of XConsole. If the user did not install the driver at the time of installing XConsole, they may run the USB driver installer from the provided software.

#### **Power On Devices**

1. Upon powering up the unit, the following initialization screen will display on the LCD:

\*\*\*\*\* XILICA XA \*\*\*\*\* XA-4080 v9.00B

The initialization process takes several seconds. The unit will start up and display the device model and firmware version.

2. After the initialization process is complete, the XA will display the following:

\*\*\*\*\* XILICA XA \*\*\*\*\* P01\*

The screen displays 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.

3. The XA series processor is now ready to operate.

### Operating Channel menus Channel linking

While holding down the **<<Menu** or **Menu>>**, more than one channel from the same input or output group can be selected to link the channels together. The green LEDs below the for the **mute** buttons are lit for the linked channels.

Any modification of the data for the selected linked channel will be applied to the linked channels as well. To cancel linking, simply deselect the desired channel while the **<<Menu** or **Menu>>** key is still pressed, or simply press the **Exit** key to deselect all channels.

# Input/output signal



#### LEVEL

The level (or gain) ranges from -40dB to +15dB in 0.25dB steps.

#### POL

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



#### DELAY

The maximum delay permitted is 40ms, in steps approximately 10ms. The delay time unit can be set to ms, ft or m in the **System menu.** Please refer to Page 12.

# Input/output equalizer



#### 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 five types of EQ that can be used are: parametric (PEQ), low shelf (LO-SHF), high shelf (HI-SHF), first degree all-pass (AP-1), and second degree all-pass (AP-2).

#### FRQ

The EQ centre 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 12.





#### 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 first degree all-pass (AP-1) filter, the bandwidth will set the phase shift at the centre frequency. The phase shift is gradually changed from 180 degrees above the centre frequency to the specified value.

EQ1 11: \_\_\_\_\_ LEVEL: 0.00dB

#### LVL

The EQ level (or gain) ranges from -30dB to +15dB in 0.25dB steps.

## Input/output crossover



#### TYPL:

The three 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 12.



#### SLPL:

The filter slope for low frequency crossover point (high pass) ranges from 6 to 48dB/octave. The available slopes are 12, 24, 36, or 48dB/octave.



# TYPH:

The three 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 12.



#### 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 48dB/octave.

Filter configuration	Low crossover point	High crossover point	
None	FTRL Off	FTRH Off	<b>↑</b>
Highpass	FTRL not Off	FTRH Off	FRQL
Lowpass	FTRL Off	FTRH not Off	FRQH
Bandpass	FTRL not Off	FTRH not Off	

# Input/output channel name

11: \_\_\_\_\_ Name NAME:

#### NAME

A six character name can be assigned to each channel.

# **Output limiter**

01: \_\_\_\_\_ Limit THRESH: +20.0dB

#### THRESH

A limiter threshold ranges from -20dBu to +20dBu in 0.5dB steps.



#### ATTACK

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

01:\_\_\_\_\_ Limit RELEASE: 8XAtck

#### RELEASE

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

#### **Output source**

#### IN1-4

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. **(Number of inputs is dependent on the model.)** 

#### **Operating the System menu**

The **System menu** allows the user to control and change parameters that are related to the system behaviour 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 settings.

#### Preset recall

The XA has a built-in non-volatile memory that can store up to 30 different preset set-ups.



#### Ρ

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

#### **Preset store**

The XA has a built-in non-volatile memory that can store up to 30 different program (or preset) set-ups. 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	Store	
	P:1		

#### Ρ

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

#### NAM

A descriptive name of up to twelve characters can be assigned to each program.

#### **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 names are copied.



#### Source

This is the channel to be copied from.

SYSTEM Copy Target: In2

#### Target

This is the channel to be copied to.

# **General settings**

SYSTEM Generl FREQ MODE: All

#### FREQ MODE

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

SYSTEM Generl DELAY UNIT: ms

#### **DELAY UNIT**

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

#### **Communication settings**

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

SYSTEM Comm DEVICE ID: 1

#### DEVICE ID

This control assigns a device ID from 1 to 16 to the unit. This ID is only useful when a network of more than 1 unit is used in conjunction with 1 or more XPanels.

SYSTEM Comm BAUD RATE: 115200

#### **BAUD RATE**

This sets the baud rate of the serial communication. XConsole uses a baud rate of 115200. It should be left unchanged for most users.

#### 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 parameters and/or system abuse. The security 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 re-entering the password or power-cycling the device, the locks are automatically enabled again.

#### **Factory settings**



#### CURRENT

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

# **ISO** settings

SYSTEM ISO	SYSTEM ISO
THRESHOLD: 102	BYPASS: On

This internal system optimizer reduces ground floor noise if no signal is present. If unwanted noise gate effects are audible at low sound levels, it can be switched to bypass mode.

### INFO

This menu contains 3 info screens:

SYSTEM Info NAM: \_\_\_\_\_

The first screen displays the device name.

SYSTEM Info FIRMWARE: v9.00

The second screen displays the Firmware version.

SYSTEM Info CODE: 11110000

And the third and last screen 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.

# Quick reference

Parameters	Menu < <menu>&gt;</menu>	Field < <cursor>&gt;</cursor>	Min	Max	Steps	Units
Level	Signal	LEVEL	-40	+15	0.25	dB
Polarity	Signal	POL	+/-			
Delay	Signal	DELAY	0	8, 640	1	21us steps
EQ number	EQ	EQ#	1	8	1	
EQ bypass	EQ	BYPASS	Off/On			
EQ type	EQ	TYPE	PEQ / Lo-Shf / Hi-Shf / AP-1 / AP-2			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
XOver low type	XOver	FTRL	Off / Butterworth / Linkwitz-Riley / Bessel		/ Bessel	
XOver low freq	XOver	FRQL	20	30,000	1	Hz
XOver low slope	XOver	SLPL	6	48	6	dB/octave
XOver high type	XOver	FTRH	Off / Butterworth / Linkwitz-Riley / Bessel		/ Bessel	
XOver high freq	XOver	FRQH	20	30,000	1	Hz
XOver high slope	XOver	SLPH	6	48	6	dB/octave
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	Off	+15	0.25	dB
Channel name	Name	NAME	6 characters			



# **Customer Support**

If you'd like to contact us regarding product support or technical designs, email support@xilica.com and we'll connect you with a solutions engineer Alternatively, if you'd like to speak to someone, you can call the following numbers for immediate assistance:

North America & Rest of world:	+1 905-770-0055
Europe:	+31 29940-1100
China & Hong Kong SAR:	+852 2604-9382

#### www.xilica.com



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