

第三方控制协议说明

自从 XILICA NEUTRINO A 系列音频矩阵问世以来，在工程上常常受控于第三方中控设备，但以前 A 系列音频矩阵提供两种方式获取的控制代码都非常‘繁杂’，且很长，对现场中控人员应用起来很不便。针对此现象，XILICA 研发人员设计了一种新的控制代码，使得更加直观简便。。。当然音频矩阵里面的系统设计都得事先做好，将所有要被控制的控件进行命名(同一台 Neutrino A 系列矩阵上控件名是唯一的，每台 Neutrino A 系列矩阵可控 100 个控件)。

注意: Neutrino A 系列矩阵固件版本得 5.3.8 或以上!!! 如果你的软件或 Neutrino A 系列矩阵固件版本过低，请将其升级到相应版本。软件下载地址: WWW.XILICA.COM。软件名称: XilicaDesigner3.2.0(如软件版本有更新殊不另外通知)

Ethernet 连接，请使用 **TCP #10007** 端口发送代码，在与中控设备建立连接后，如果相隔 **60 秒** 没有对 Neutrino A 系列矩阵有任何命令动作，那么音频矩阵将自动断开连接，得重新发送连接请求后才能使功能命令生效。为此，建议在中控上做一个定时(每 60s 内)发送给矩阵的固定命令: **KEEPALIVE** (此命令可见最后的命令表格)。

代码格式: (详细命令请见后面列表)

COMMAND	1 white space	[CONTROL OBJECT/GROUP]	1 white space	[DATA]	<CR>
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COMMAND: 功能命令;

1 white space: 一个空格;

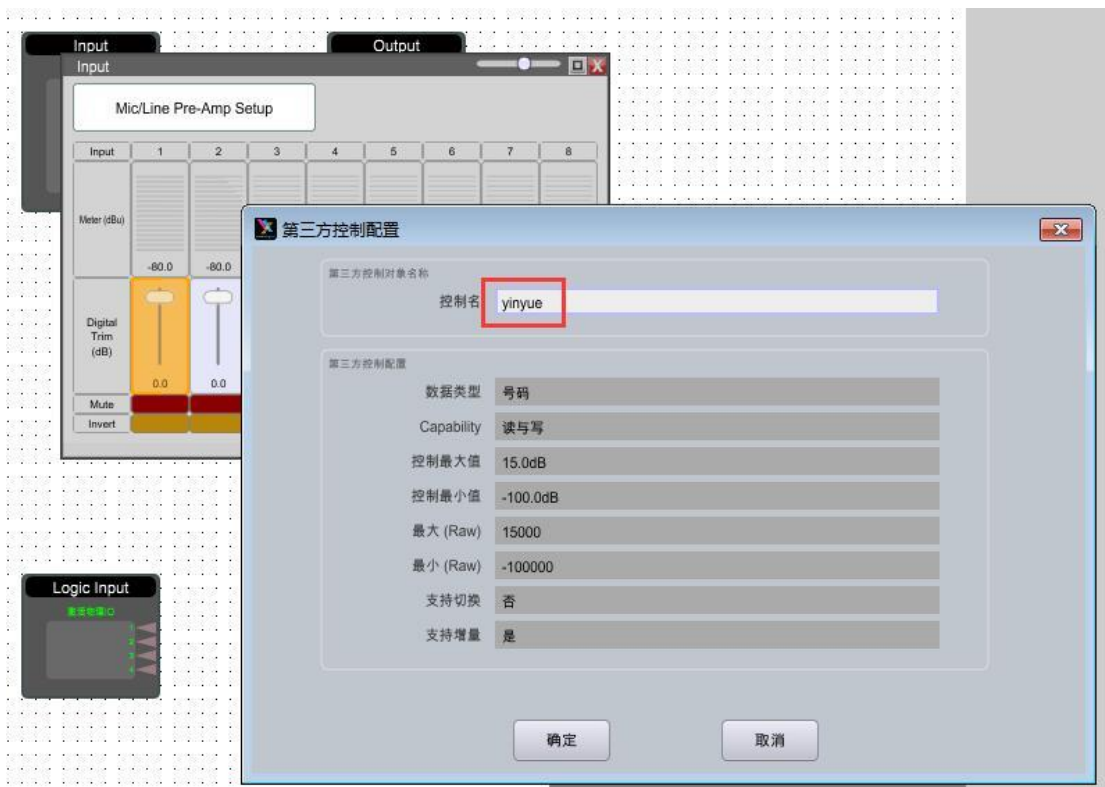
CONTROL OBJECT/GROUP: 控制对象/组名称;

DATA: 数据串;

CR: 回车键结束语;

先在软件中新建项目，做好系统设计，将你要控制的控键命名。

控件命名如下图：(选中控件：按住 Ctrl 键+鼠标左键点击需要控制的控件，选中控件后，鼠标右击此控件会弹出更改菜单“创建第三方控制对象名称”。



举例说明：

输入通道 1 静音	SETRAW mute1 1
输入通道 1 非静音	SETRAW mute1 0
输入通道 1 音量设为'-10dB'	SET gain1 -10
输入通道 1 音量设为'0dB'	SET gain1 0
输入通道 1 音量设为'10dB'	SET gain1 10
输入通道 1 音量增加'3dB'	INC gain1 3
输入通道 1 音量减少'3dB'	DEC gain1 3
预设调用‘预设 1’	PRESET 1
预设调用‘预设 2’	PRESET 2

组控：

Neutrino A 系列矩阵允许组控，即同时控制多个同类型的控件。采用组控时，你必须先创建一个组，然后将各个控件添加到组中(添加的控件必须是同类控件)。

‘\$’符号是用来区分控制对象和控制组的，是组名的特征。假如要同时控制输入 1 和输入 2 的静音。

先创建组名：	> CREATE group1
添加输入 1 静音控件到组：	> JOIN \$group1 “mute1”
添加输入 2 静音控件到组：	> JOIN \$group1 “mute2”
输入 1、2 静音命令：	> SETRAW \$group1 1

4条独立的命令组成一个命令包，每条命令间采用‘回车键’结束。

(注意：如果 A 矩阵与中控断开连接，直接发送 SETRAW \$group1 1 是无效的；在创建组名、添加控件到组等已经发送过的命令，期间 A 系列矩阵一直保持与中控的连接状态时，此时就可以只发送‘SETRAW \$group1 1’静音命令了)

Commands List

SET <CONTROL OBJECT/GROUP> <DATA - number/string/Boolean>		
Examples	SET gain1 -3.2	Set "gain1" to -3.2 dB
	SET polarity1 TRUE	Set "polarity1" to ON position
	SET filter1 "Butterworth"	Set "filter1" to Butterworth Filter
	SET \$group1 -15.7	Set all parameters in group1 to -15.7dB

SETRAW <CONTROL OBJECT/GROUP> <DATA - number >		
Examples	SETRAW gain1 -3200	Set "gain1" to -3.2 dB
	SETRAW polarity1 1	Set "polarity1" to ON position
	SETRAW filter1 1	Set "filter1" to Butterworth Filter
	SETRAW \$group1 1000	Set all parameters in group1 to +1.0dB

GET <CONTROL OBJECT/GROUP>		
Example	GET EQslope	Get "EQslope" formatted value
	GET \$group1	Get formatted value for all parameters in group1

GETRAW <CONTROL OBJECT/GROUP>		
Example	GETRAW EQslope	Get "EQslope" raw value
	GETRAW \$group1	Get raw value for all parameters in group1

INC <CONTROL OBJECT/GROUP> <DATA - number>		
Example	INC fader3 0.5	Increase "fader3" by 0.5 dB
	INC \$group1 1	Increase all parameters in group1 by 1dB

INCRAW <CONTROL OBJECT/GROUP> <DATA - number>		
Example	INCRAW fader3 500	Increase "fader3" by 0.5 dB
	INCRAW \$group1 1000	Increase all parameters in group1 by 1dB

DEC <CONTROL OBJECT/GROUP> <DATA - number>		
Example	DEC fader3 0.5	Decrease "fader3" by 0.5 dB
	DEC \$group1 1	Decrease all parameters in group1 by 1dB

DECRAW <CONTROL OBJECT/GROUP> <DATA - number>		
Example	DECRAW fader3 500	Decrease "fader3" by 0.5 dB

	DECRAW \$group1 1000	Decrease all parameters in group1 by 1dB
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TOGGLE <CONTROL OBJECT/GROUP>		
Example	TOGGLE mute1	Toggle "mute1" state
	TOGGLE \$group2	Toggle all parameters in group2

PRESET <DATA - number/string>		
Example	PRESET 4	Recall preset #4
	PRESET "preset name"	Recall preset with name "preset name"

SUBSCRIBE <CONTROL OBJECT/GROUP> <DATA - string>*		
Example	SUBSCRIBE meter6	Subscribe to "meter6" via TCP Unicast
	SUBSCRIBE meter6 "TCP"	Subscribe to "meter6" via TCP Unicast
	SUBSCRIBE meter6	Subscribe to "meter6" via UDP Broadcast

* <DATA - string> is optional, TCP Unicast will be used by default

UNSUBSCRIBE <CONTROL OBJECT/GROUP>		
Example	UNSUBSCRIBE meter6	Unsubscribe "meter6"
KEEPALIVE		
Example	KEEPALIVE	No operation. Can be used by external controller to keep the TCP connection alive.

INTERVAL <DATA - number>		
Example	INTERVAL 100	Set subscription interval to minimum 100ms. * Subscription data could be delayed longer than the specify interval due to CPU usage, but it is guarantee to wait for the configured interval time before attempting to sent out subscription data. * The minimum value is 100 ms.

LOGIN <DATA - string>		
Example	LOGIN "password"	Login for external control with "password"

REBOOT		
Example	REBOOT	Remotely reboot device

REFRESH		
Example	REFRESH	Get formatted data value for all control

CREATE <CONTROL GROUP>		
Example	CREATE group1	Create a group with the name "group1 " This is the only exception where CONTROL GROUP does not require a '\$' sign in the syntax because he '\$' sign will be

REMOVE <CONTROL GROUP>		
Example	REMOVE \$group1	Remove the group with name "group1 "

JOIN <CONTROL GROUP> <DATA - string>		
Example	JOIN \$group1 "gain1 "	"gain1 " will join group1

LEAVE <CONTROL GROUP> <DATA - string>		
Example	LEAVE \$group2 "mute2"	"mute2" will leave group2

Data String

<u>Filter Type</u>
Butterworth, LR, Bessel
<u>Filter Slope</u>
6db/Oct, 12db/Oct, 18db/Oct, 24db/Oct, 30db/Oct, 36db/Oct, 42db/Oct, 48db/Oct
<u>AFS Sensitivity</u>
Very Low, Low, Medium, High, Very High
<u>AFS Type</u>
Dynamic, Fixed
<u>Control Ramp Type</u>
Linear, Log, Audio

Error Codes

Error	Description
101	Invalid Command
102	Bad Arguments
103	Invalid Data Format
104	Control Object Not Found
105	Parameter Not Found
106	Data Value Not Found
107	Max Subscription Reached
108	Password Error
109	Not Yet Login
110	Command Not Supported for Control Object
111	Invalid Group Name
112	Max Control Group Reached
113	Max Control Object in Group Reached
114	Object Already in Group
115	Object Not in Group
116	Conflicting With Other Objects in Group
117	Invalid Preset #
118	Invalid Preset Name