

TECH NOTE

Fastrack VS Verion 2.1 and later

YAMAHA 02R96 DIGITAL AUDIO MIXER



The Fastrack VS hybrid editing system interfaces to the Yamaha 02R96 Digital Audio Mixer with a 6-pin DIN to 9-pin RS-422 serial control cable and Yamaha 02R96 audio mixer Serial protocol. Direct control of each individual fader and the learning of manual adjustments are possible.

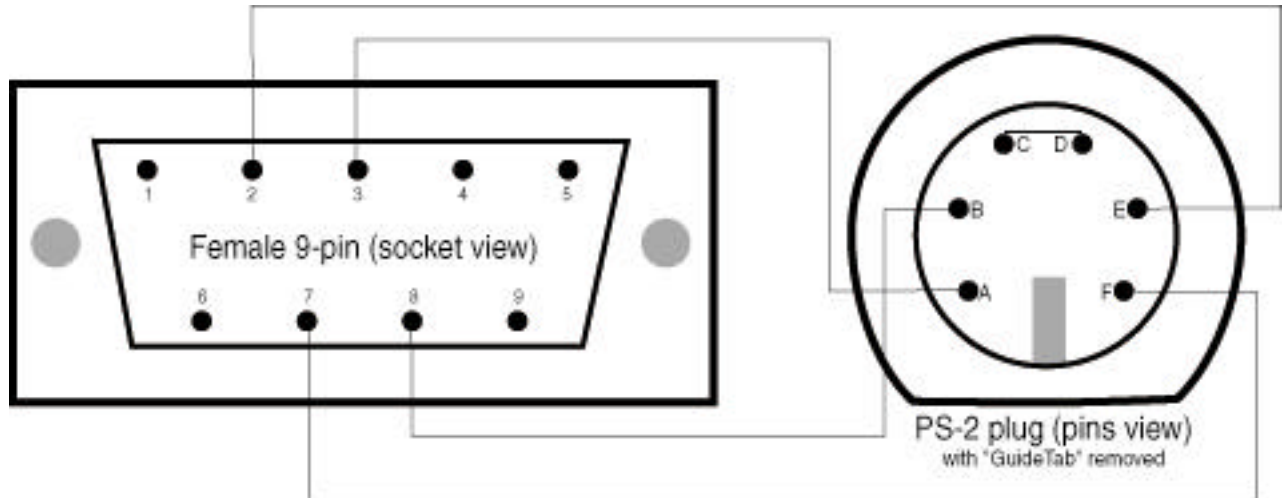
START WITH A FRESH 'MEMORY'

Since Fastrack directly controls the motorized faders on the 02R96 audio mixer, first ensure that there are no memories regarding their initial levels. Clear all settings and/or preferences by recalling Scene Memory 0. Use the Scene Memory increment/decrement buttons to select scene memory 0 "0 Initial Data." Press the Recall button, confirm with ENTER.

INTERCONNECT CABLE ADAPTER

An interconnect cable adapter can be constructed using a PS-2 mouse/keyboard plug and wire and a Serial RS-422 female connector. This adapter connects between the TO HOST/ Serial port on the Yamaha 02R96 and a serial (male-male) cable attached to the Fastrack serial breakout (or use a male connector if your cable is long enough to reach the Fastrack serial breakout).

Since the numbering on PS-2 connectors varies or is frequently missing, please refer to the *letter* positions noted here for the PS-2 plug (the 9-pin conforms to standards). Both 9-pin connector and PS-2 plug are viewed from the "front."



Serial 9-pin	PS-2 plug
2	E
7	F
3	A
8	B
	C & D jumpered

Note: The jumper between the top two pins on the PS-2 plug is essential for status reporting from the 02R mixer to Fastrack so it can "learn" manual changes to fader levels.

MIXER CONNECTIONS

Connect an RS-422 (9 pin) serial control cable from a Fastrack VS "COM" or "P#" port to 9pin end of the above adapter. Connect the P/S2 (or mini-DIN) 6-pin adapter plug to the "**TO HOST**" / **SERIAL** port on the rear of the 02R96 console.

02R96 MIXER SETUP

In the SETUP dialogue menu, select the MIDI/HOST tab and set the following:

RX Port: SERIAL
TX Port: SERIAL

To navigate within the menus, pressing the > and < keys move left right, the wheel changes selections to alternatives, and ENTER makes the selection.

In the MIDI dialogue menu, select the SETUP tab and set the following:

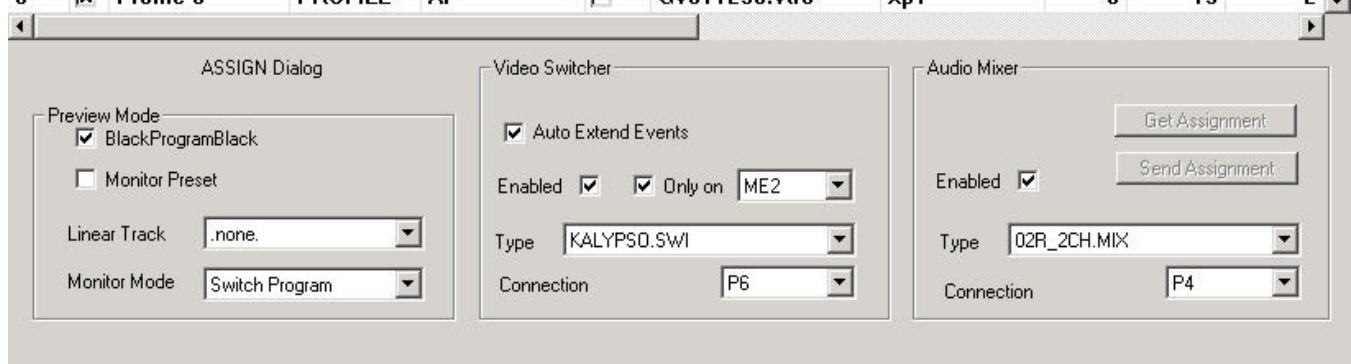
Receive: Ch. 1
Transmit: Ch. 1

And select Program Changes, Parameter Changes and Control Changes (darkened indicates ON) under both Receive and Transmit. DO NOT SELECT ANYTHING concerning ECHO.

FASTRACK VS SETUP

Assign the following audio Start and Count values in the Source Assignment page [**SHIFT**]+[**ASGN**] in Fastrack VS for the 02R96_2ch setup (**two channels** per device in this example):

Track	On	Name	Class	Device	Auto	Port	Pool	V-Switcher		AudioMixer
								Video	Start	Count
1	<input checked="" type="checkbox"/>	Profile 1	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr1	xp1	1	1	2
2	<input checked="" type="checkbox"/>	Profile 2	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr2	xp1	2	3	2
3	<input checked="" type="checkbox"/>	Profile 3	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr3	xp1	3	5	2
4	<input checked="" type="checkbox"/>	Profile 4	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr4	xp1	4	7	2
5	<input checked="" type="checkbox"/>	Profile 5	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr5	xp1	5	9	2
6	<input checked="" type="checkbox"/>	Profile 6	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr6	xp1	6	11	2
7	<input checked="" type="checkbox"/>	Profile 7	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr7	xp1	7	13	2
8	<input checked="" type="checkbox"/>	Profile 8	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr8	xp1	8	15	2



Note: Under Audio Mixer (upper right), the two columns represent the **Start** number for the first fader of each source, and the **Count** for each source (1=mono, 2=stereo, 4, etc). The next Start depends on the prior Count.

Assign the following audio Start and Count values in the Source Assignment page [**SHIFT**]+[**ASGN**] in Fastrack VS for the 02R_4ch setup (**four channels** per device in this example):

Track	On	Name	Class	Device	Auto	Port	Pool	V-Switcher		AudioMixer
								Video	Start	Count
1	<input checked="" type="checkbox"/>	Profile 1	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr1	xp1	1	1	4
2	<input checked="" type="checkbox"/>	Profile 2	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr2	xp1	2	5	4
3	<input checked="" type="checkbox"/>	Profile 3	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr3	xp1	3	9	4
4	<input checked="" type="checkbox"/>	Profile 4	PROFILE	XP	<input type="checkbox"/>	GV011250:Vtr4	xp1	4	13	4
5	<input type="checkbox"/>		none		<input type="checkbox"/>					
6	<input type="checkbox"/>		none		<input type="checkbox"/>					
7	<input type="checkbox"/>		none		<input type="checkbox"/>					
8	<input type="checkbox"/>		none		<input type="checkbox"/>					

The screenshot shows the 'ASSIGN Dialog' with three main sections: 'Preview Mode', 'Video Switcher', and 'Audio Mixer'.
 - **Preview Mode:** Includes checkboxes for 'BlackProgramBlack' (checked) and 'Monitor Preset' (unchecked). It also has dropdowns for 'Linear Track' (set to '.none.') and 'Monitor Mode' (set to 'Switch Program').
 - **Video Switcher:** Includes a checked 'Auto Extend Events' checkbox, 'Enabled' (checked), and 'Only on' (set to 'ME2'). It also has dropdowns for 'Type' (set to 'KALYPSO.SWI') and 'Connection' (set to 'P6').
 - **Audio Mixer:** Includes 'Get Assignment' and 'Send Assignment' buttons, 'Enabled' (checked), and dropdowns for 'Type' (set to '02R_4CH.MIX') and 'Connection' (set to 'P4').

Note: Notice the different TYPE of audio mixer selected: 02R_4CH.MIX for four channels of audio.

AUDIO MIXER FILES

The specific mixer protocol files to be used on the Assignment Page [Shift]+[Assign] are found in the C:\Fastrack\Ftruntime\Mixer folder. The 2 channel version of the 02R96 driver is labeled 02R96_2ch.MIX. The 4 channel version is named 02R96_4ch.MIX.

```

02R96_2ch.MIX - Notepad
File Edit Format Help
[Initial]
Name=02R96_2ch
Class=YamahaHost
Address=0
Type=2
AutoLearn=1

[Connection]
Baudrate=9600
Parity=NONE

[Parameters]
FaderCount=2
FaderValueZeroDB=100

[Timing]
CommandDelay=1
    
```

```

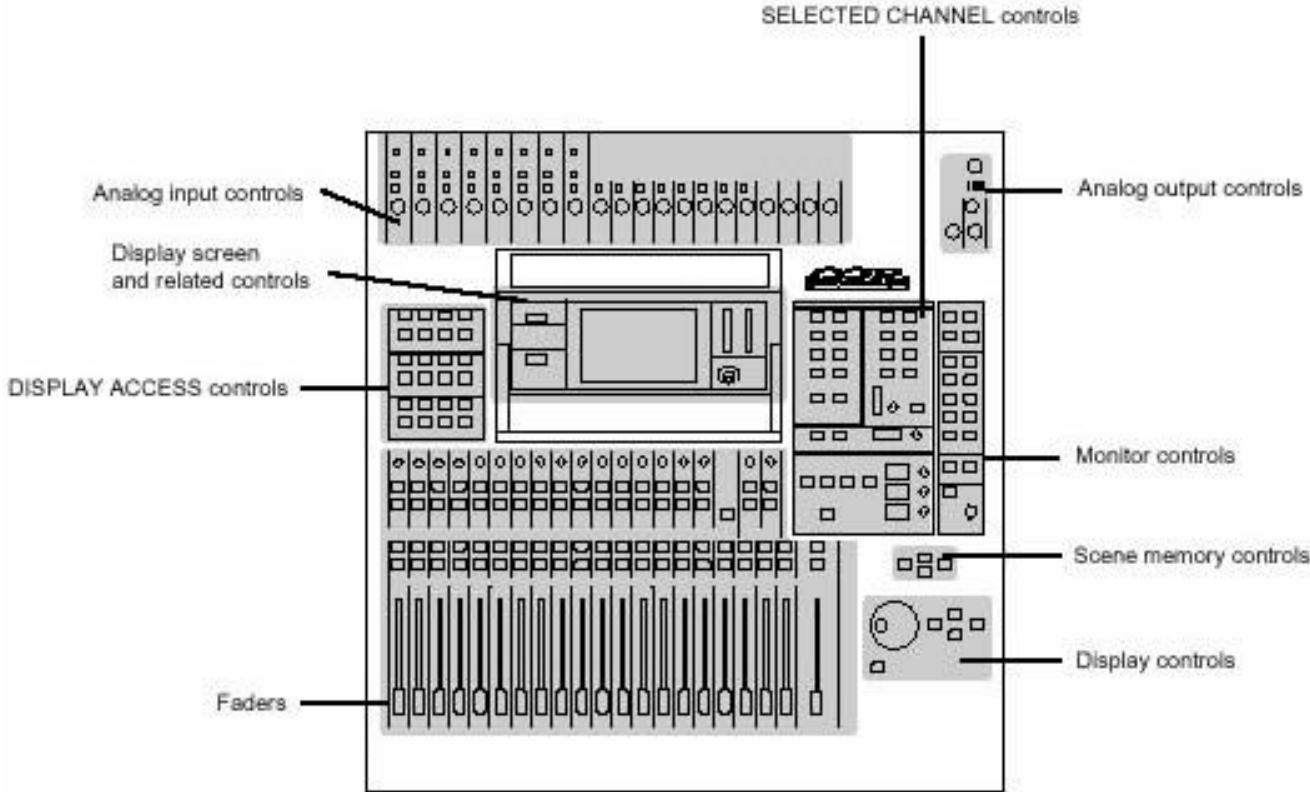
02R96_4ch.MIX - Notepad
File Edit Format Help
[Initial]
Name=02R96_4ch
Class=YamahaHost
Address=0
Type=2
AutoLearn=1

[Connection]
Baudrate=9600
Parity=NONE

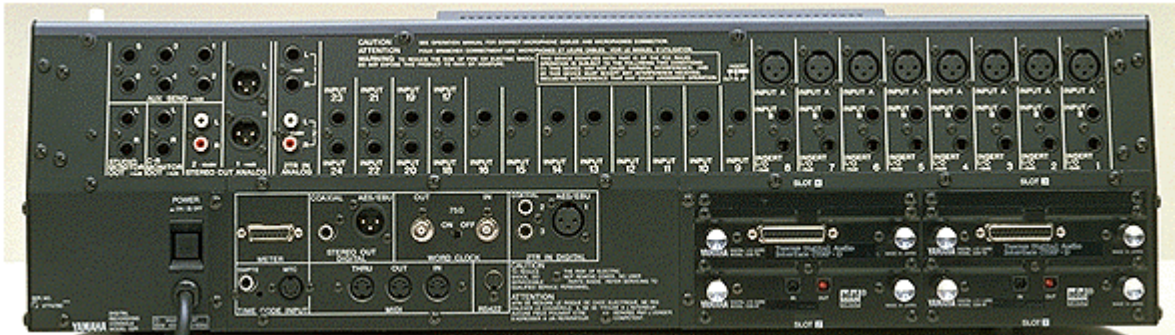
[Parameters]
FaderCount=4
FaderValueZeroDB=100

[Timing]
CommandDelay=1
    
```


MONITORING



Control Room monitor controls set to ST (Stereo) and C-R Level set to hear output



Monitoring to amplifier and speakers is from the Control Room or Studio Outs (1/4" TRS) connections Program Out is from the STEREO OUT ANALOG (XLR) connections