



## *TECH NOTE*

*Fastrack VS Verion 1.0 and later*

# YAMAHA 03D SERIAL AUDIO MIXER

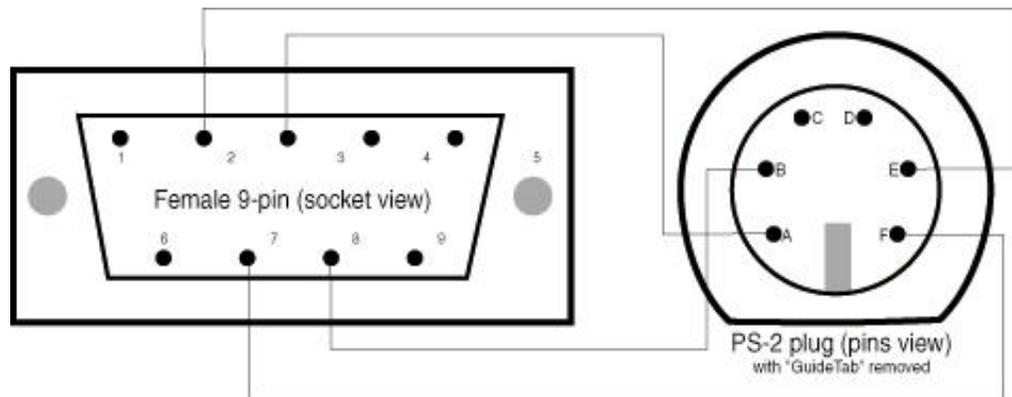


The Fastrack VS hybrid editing system interfaces to the 03D Serial Audio Mixer with a 6-pin DIN to 9-pin RS-422 serial control cable and Yamaha 03D audio mixer serial protocol. The 03D must contain the optional "03D VEK for Video Editing" edit suite software in order to be controlled serially as a HOST by the Fastrack VS. The "Yamaha 03D Video Edit Suite Software Owner's Manual" contains essential information on the operation of this audio mixer.

## Interconnect Cable

An interconnect cable can be constructed using a PS-2 mouse/keyboard plug and wire and a Serial RS-422 female connector. This cable connects between the HOST port on the Yamaha O3D 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."



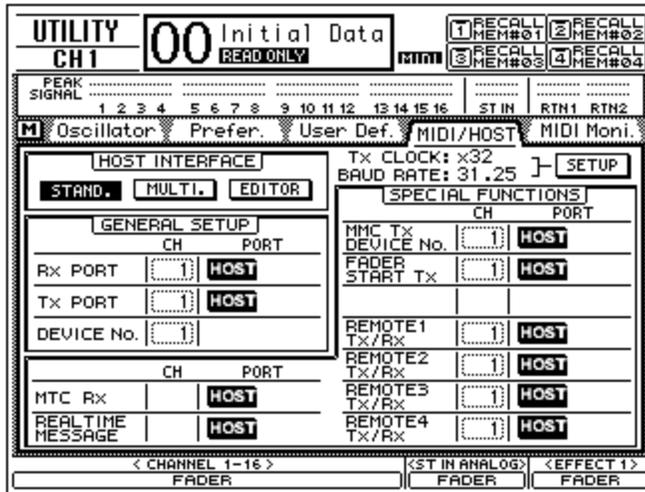
Serial 9-pin	PS-2 plug
2	E
7	F
3	A
8	B

## Mixer Setup

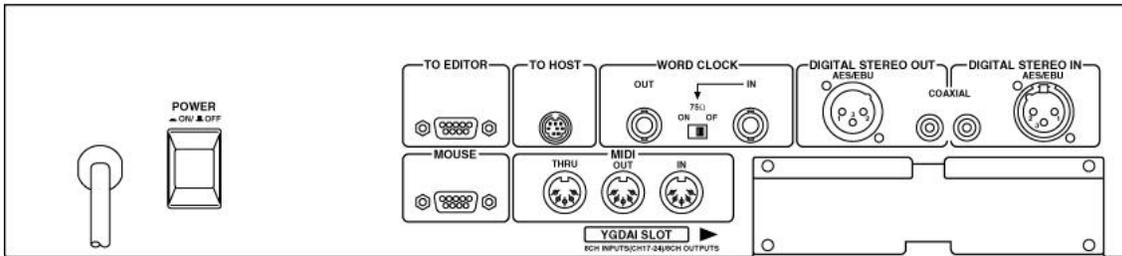
ESAM II protocol is an option to the O3D Mixer and needs to be installed at the Yamaha factory or customer installed using a serial terminal. Consult with your Yamaha representative.

1. Connect the serial control cable from a Fastrack VS "COM" port to the 6-pin "TO HOST" serial port on the rear of the O3D console.
2. At the O3D control panel "SETUP" section (top, left of the mixer), press the [UTILITY] button until the "MIDI / HOST" tab is selected.

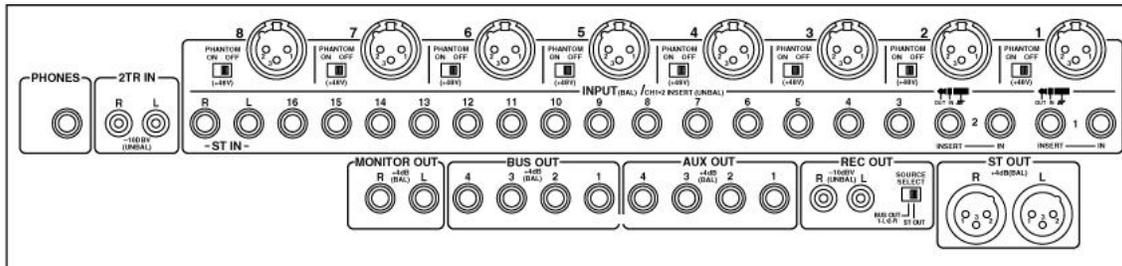
3. At the “MIDI / HOST” tab, use the cursor buttons (under the PARAMETER wheel) to select, and then press the [ENTER] button, to accept the following: (Note: One error in the image above - the Baud Rate needs to be set to 38.4)



**Rear view of the 03D panel**



Optional AES YGADI inputs/outputs (not shown) would be at lower right of above image.



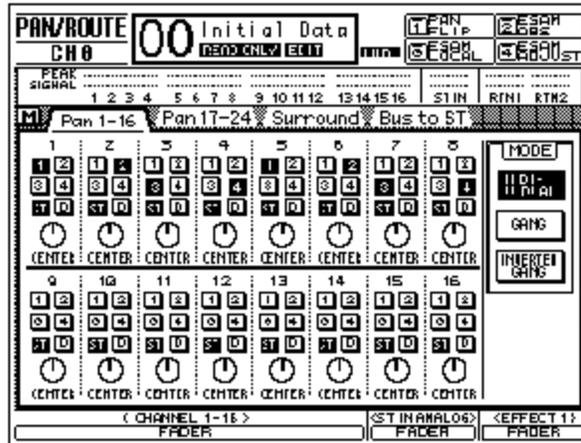
Monitoring to amplifier and speakers is from the MONITOR OUT (1/4" TRS) connections  
 Program Out is from the ST OUT (XLR) connections

- Analog inputs 1-8 use balanced XLR connections
- Analog inputs 9-16 use 1/4" TRS (tip/ring/sleeve) connections.
- Monitor outs uses 1/4" TRS connections.
- Bus outs use 1/4" TRS connections.
- ST Out uses XLR and is the PROGRAM OUT to any/all record channels.

## MONITORING

The 03D has a monitoring bus that can be remotely controlled as a preview bus; therefore, all audio previews should be done utilizing this preview switcher in the 03D.

Set each source's BUS Out and monitoring in the [PAN/ROUTE] section as below for four channels per source:



The BUS Outputs (1-4) are fed to the RECORD device for recording (or AES Out if the YGADI option is installed) and the MONITOR OUT connected to amplifier and speakers. The ST OUT is the signal that is monitored on the MONITOR OUT (when set in [Bus to ST] to OFF {not highlighted}), allowing preview monitoring to be controlled via the 03D mixer. The MONITOR OUT has a volume control knob for convenient speaker volume adjustment.

## Fastrack VS Setup

Assign the following audio cross-points in the Source Assignment page [**SHIFT**]+[**ASGN**] in Fastrack VS for the 03D setup (**four channels** per device):

Track	On	Name	Class	Device	Auto	Port	Pool	Crosspoints				
								V	A1	A2	A3	A4
1	<input checked="" type="checkbox"/>	PRD1	PROFILE	PDR	<input type="checkbox"/>	B021390:1	PROFILE	0	1	2	3	4
2	<input checked="" type="checkbox"/>	PRD2	PROFILE	PDR	<input type="checkbox"/>	B021390:2	PROFILE	1	5	6	7	8
3	<input checked="" type="checkbox"/>	PRD3	PROFILE	PDR	<input type="checkbox"/>	B021390:3	PROFILE	2	9	10	11	12
4	<input checked="" type="checkbox"/>	PDR4(rec)	PROFILE	PDR	<input type="checkbox"/>	B021390:4	PROFILE	3	13	14	15	16
5	<input checked="" type="checkbox"/>	DVR-20	VTR	DVR-20	<input checked="" type="checkbox"/>	COM3	Tape	11				
6	<input type="checkbox"/>	Omneon1017	VDCP	4F6D	<input type="checkbox"/>	COM10	Omneon	13				
7	<input type="checkbox"/>	Omneon1036	VDCP	4F6D	<input type="checkbox"/>	COM6	Omneon	10				
8	<input type="checkbox"/>	Omneon	VDCP	4F6D	<input type="checkbox"/>	COM7	Omneon	12	1	2	3	
1.1	<input type="checkbox"/>		none		<input type="checkbox"/>	COM3						
1.2	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.3	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.4	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.5	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.6	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.7	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.8	<input type="checkbox"/>		none		<input type="checkbox"/>							
2.1	<input type="checkbox"/>		none		<input type="checkbox"/>							
2.2	<input type="checkbox"/>		none		<input type="checkbox"/>							

Note: Track 8 is not in use, hence the audio crosspoints of 1, 2, 3 are not conflicting

Assign the following audio cross-points in the Source Assignment page [**SHIFT**]+[**ASGN**] in Fastrack VS for the 03D setup (**two channels** per device):

Track	On	Name	Class	Device	Auto	Port	Pool	Crosspoints				
								V	A1	A2	A3	A4
1	<input checked="" type="checkbox"/>	PRD1	PROFILE	PDR	<input type="checkbox"/>	B021390:1	PROFILE	0	1	2		
2	<input checked="" type="checkbox"/>	PRD2	PROFILE	PDR	<input type="checkbox"/>	B021390:2	PROFILE	1	3	4		
3	<input checked="" type="checkbox"/>	PRD3	PROFILE	PDR	<input type="checkbox"/>	B021390:3	PROFILE	2	5	6		
4	<input checked="" type="checkbox"/>	PDR4(rec)	PROFILE	PDR	<input type="checkbox"/>	B021390:4	PROFILE	3	7	8		
5	<input checked="" type="checkbox"/>	DVR-20	VTR	DVR-20	<input checked="" type="checkbox"/>	COM3	Tape	11				
6	<input type="checkbox"/>	Omneon1017	VDCP	4F6D	<input type="checkbox"/>	COM10	Omneon	13				
7	<input type="checkbox"/>	Omneon1036	VDCP	4F6D	<input type="checkbox"/>	COM6	Omneon	10				
8	<input type="checkbox"/>	Omneon	VDCP	4F6D	<input type="checkbox"/>	COM7	Omneon	12	1	2	3	
1.1	<input type="checkbox"/>		none		<input type="checkbox"/>	COM3						
1.2	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.3	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.4	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.5	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.6	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.7	<input type="checkbox"/>		none		<input type="checkbox"/>							
1.8	<input type="checkbox"/>		none		<input type="checkbox"/>							
2.1	<input type="checkbox"/>		none		<input type="checkbox"/>							
2.2	<input type="checkbox"/>		none		<input type="checkbox"/>							

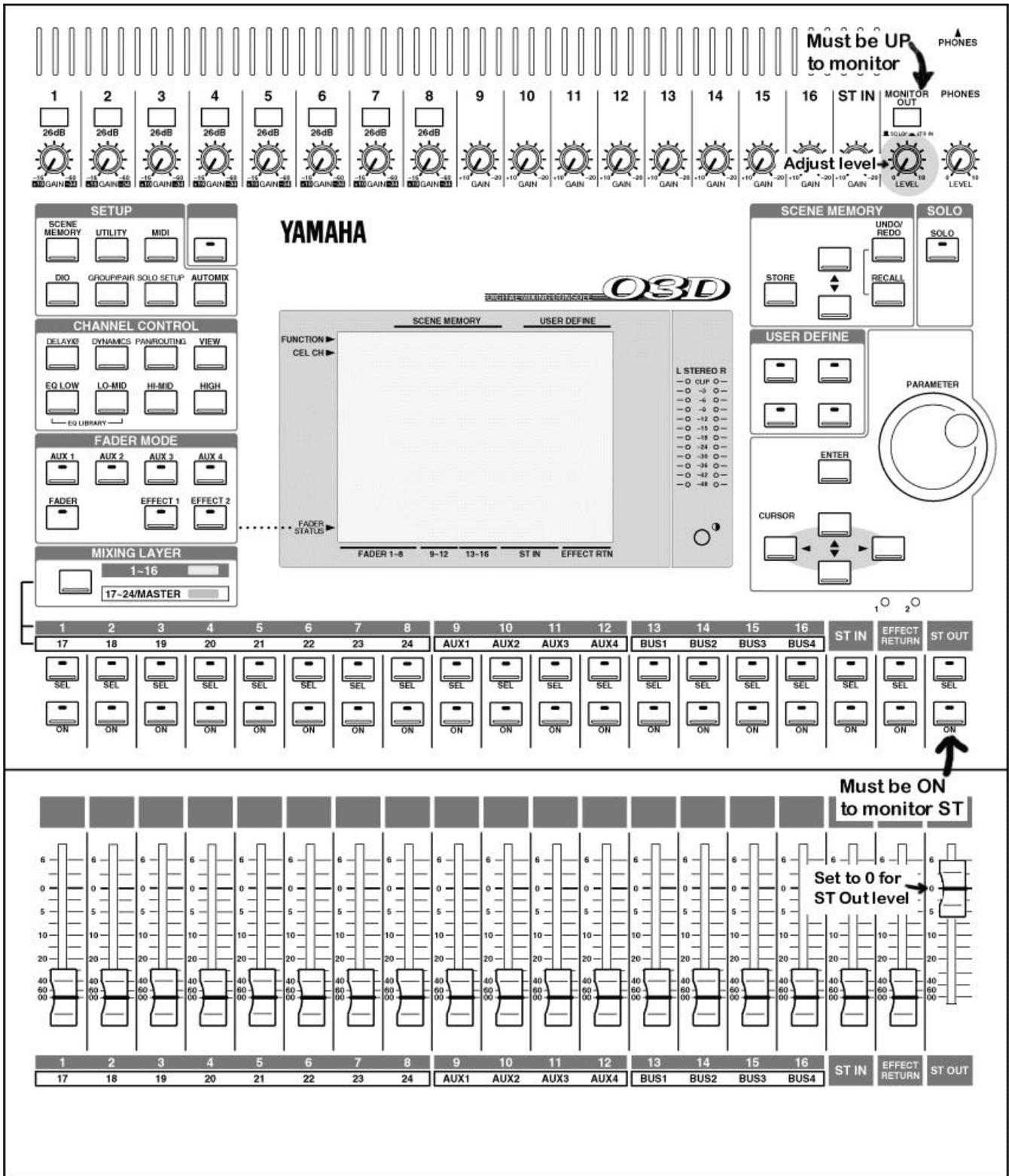
## AUDIO MIXER SETTINGS

Shift INIT brings up the Settings window. Lines 25 through 28 are for Audio Mixer configuration.

The Values (third column) need to be set as below for Yamaha 03D control. Line 25 (Type) will consist of a drop down menu, chose YAMAHAHOST. Line 26 needs to be filled in manually (COM8 shown here, your port number may vary. Use the COM port number connected to the Yamaha HOST port). Line 28 (DeviceFile) also has a drop down menu, chose 03D.HST.

	Section	Name	Value	Comment
012	Shotlist	Params		Custom
013	Keyboard	Port	COM1	normally COM1
014	Keyboard	JogFactor	300	
015	Keyboard	VariFactor	300	
016	Keyboard	ShuttleFactor	300	
017	Keyboard	TableFileName	L2_KeyTableV1.ini	
018	Jogger	Port	COM2	normally COM2
019	VideoSwitcher	Type	PROFILE	GVG and SONY depend on swi files in the swit
020	VideoSwitcher	Connection	B021390	COM10 is Port H
021	VideoSwitcher	Parity	ODD	
022	VideoSwitcher	IniFile		located in the Switcher directory
023	VideoSwitcher	PvwBus	0	
024	VideoSwitcher	PgmXpt	0	
025	AudioMixer	Type	YAMAHAHOST	depend on swi files in the switcher directory
026	AudioMixer	Connection	COM8	
027	AudioMixer	Parity	NONE	
028	AudioMixer	Devicefile	03D.HST	located in the Mixer directory
029	Jobs	CurrentMovieName	INT1:/default/gw88	the default name for the complex movie
030	Jobs	TempClipsDirectory	INT1:/temp	the default directory for the temporary files on

### Yamaha 03D Audio Mixer Control Panel



Note: The 03D ST OUT is used for monitoring (VU meters active) and Program Output. Ensure the ST fader is up to 0 level, the ST ON lamp is illuminated, and the MONITOR OUT button is in the UP position.