



***TECH NOTE***

***Super Edit™ Version 8.0 (VPE)  
or Version 2.0 (DPE) and later***

**YAMAHA 03D SERIAL AUDIO MIXER**



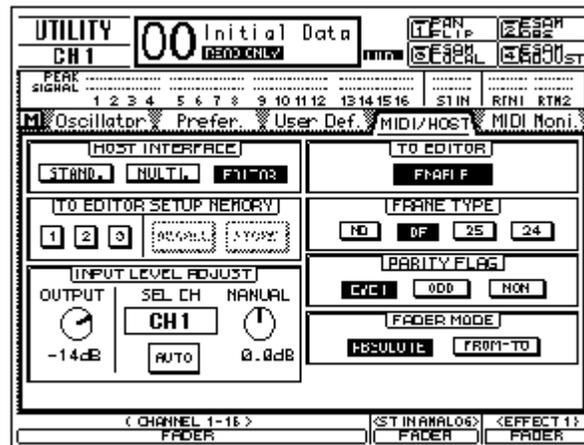
The DPE/VPE editing systems interface to the 03D Serial Audio Mixer with a single RS-422 control cable and Yamaha 03D audio mixer serial protocol. The 03D must contain the optional “03D VEK for Video Editing” edit suite software in order to be controlled serially. Additional information is available on the Yamaha website. The "Yamaha 03D Video Edit Suite Software Owner's Manual" contains essential information on the operation of this audio mixer.

Note: The 03D serial interface is a virtual machine based system, therefore no distinction is made between channels 1, 2, and multi-channel commands.

## Mixer Setup

ESAM II protocol is an option to the 03D 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 control cable from the DPE/VPE "Audio CTL" port to the 9 pin **"TO EDITOR"** serial port on the rear of the 03D console.
2. At the 03D 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:
  - A. Select **"EDITOR"** as Host Interface.
  - B. Set the **"TO EDITOR"** parameter to **"ENABLE"**.
  - C. Set the **"FRAME TYPE"** (ND, DF, 25 OR 24).
  - D. Set the **"PARITY FLAG"** to **"ODD"** [NOTE: the default is NONE, need to change]
  - E. Set the **"FADER MODE"** to:
    - a. **"ABSOLUTE"**: the input level can be adjusted manually (not recommended).
    - b. **"FROM-TO"**: the faders indicate transitions but cannot be manually adjusted except when **"DISABLE"** is ON (recommended).



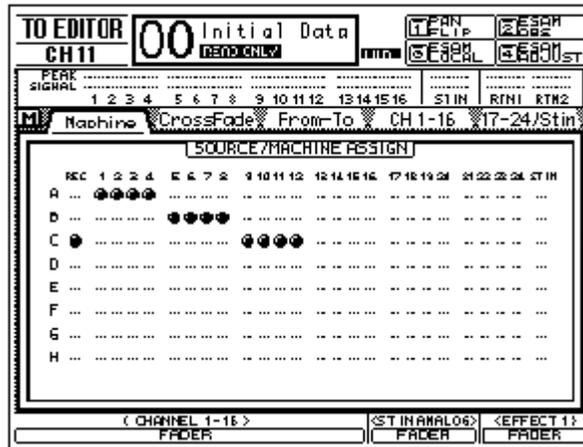
Note: In the above illustration, the Host Interface is correctly set to EDITOR, the MIDI/HOST set to ENABLE, but the PARITY FLAG still needs to be set to ODD and the FADER MODE to FROM-TO.

NOTE: It is recommended that any one of the [AUTOMIX] menus be open during editor control. This will enable "physical" control of the 03D from the editor. Electronic control will still occur while in any other menus, but [AUTOMIX] menus allow control of the motorized faders and physical settings to match the electronic settings of the 03D.

NOTE: Check communication by pressing [SHIFT]+[RESET] causing "HOST" to flag on the 03D display (top of the window between current memory and 2.ESAM/LOCAL).

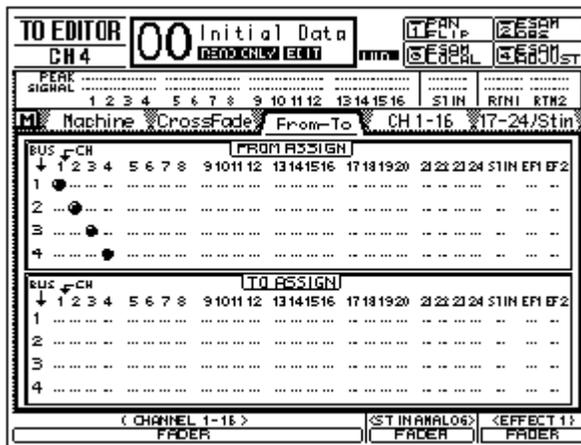
- Press the [AUTOMIX] button until the “MACHINE” tab is selected. Assign input channels to the virtual machines using the up/down cursor keys. Select A through H, and press the [SEL] buttons above the faders for the appropriate input channels to the virtual machine; set the RECORD machine by highlighting the machine desired and pressing the [ENTER] key. A "dot" will appear next to the machine letter, under the REC column (C in the illustration below). All sources need to be assigned, including AUX and BLK, or green key selection will default to the RECORD machines E-E signal.

[Note: Super Edit NLE does not allow E-E signals for the RECORD machine, a Profile limitation, hence monitoring MUST be done via ST OUT for RECORD, described later]



Note: This illustration shows 4 channels per machine, with C being the RECorder.

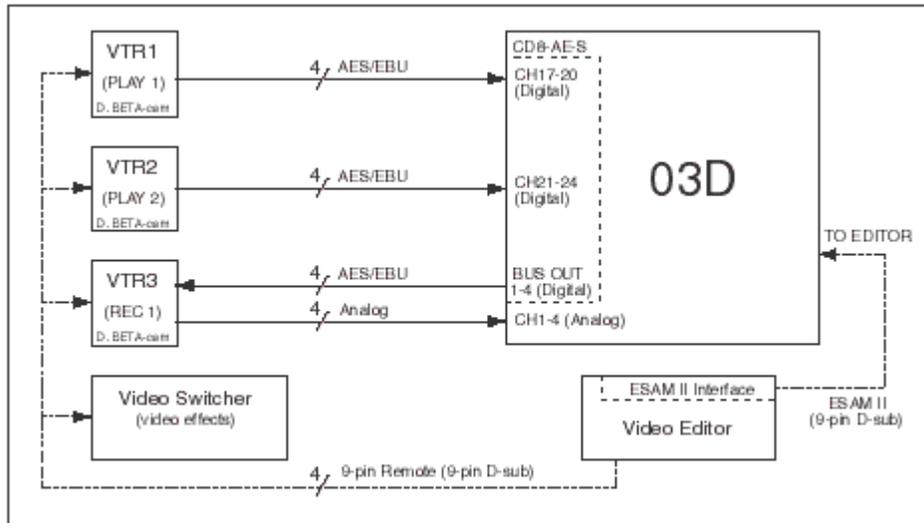
- Assign the input channels of the virtual Machines in the “FROM ASSIGN” to the Bus Outputs by repeatedly pressing the [AUTOMIX] button until the “From-To” tab is selected.



Note: This illustration shows channels 1-4 going to Busses 1-4 respectively.

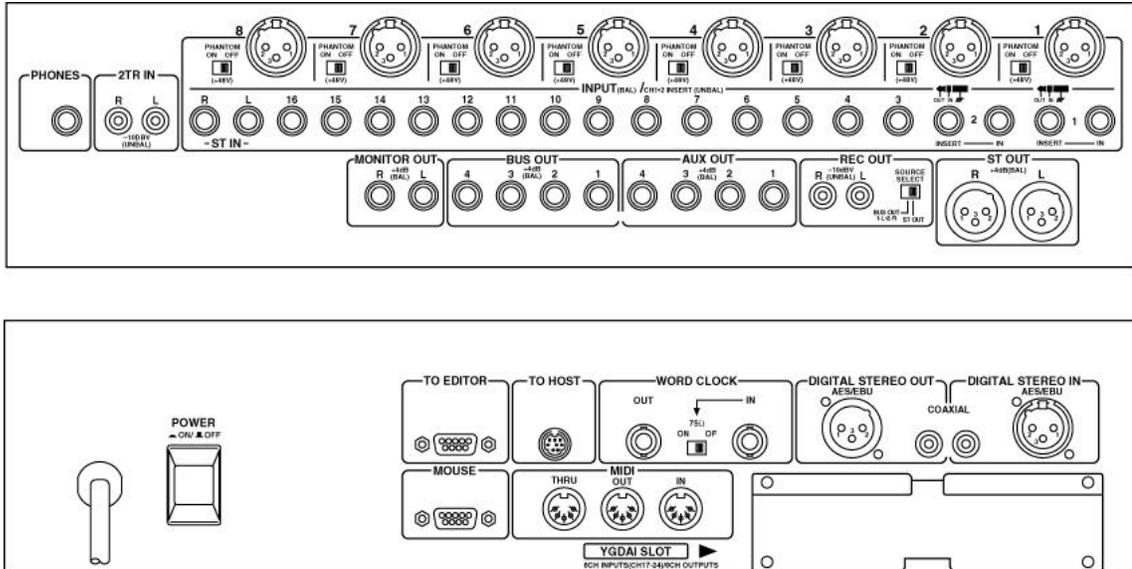
Using the cursor keys (up/down), select Bus 1 - 4 in “FROM ASSIGN.” Press the [SEL] button above the faders for the appropriate output channels of the virtual machines. These settings enable editor control of source selection, transitions and preview monitoring.

AES (digital audio) Inputs (YGADI Option required):



Optional AES YGADI inputs/outputs

Rear view of the 03D panel

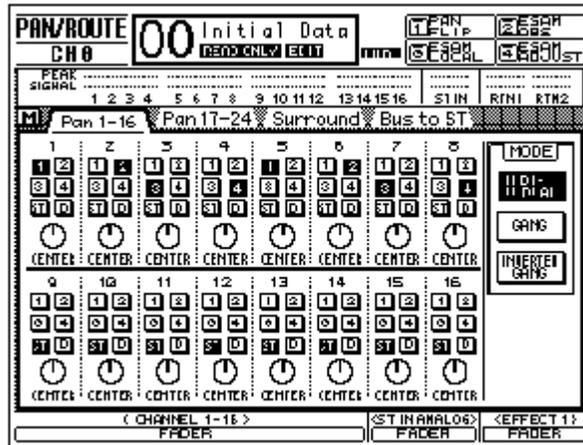


- Analog inputs 1-8 use balanced XLR connections
- Analog inputs 9-16 use 1/4" TRS (tip/ring/sleeve) connections.
- Monitor outs uses 1/4" TRS connections.
- Bus outs use 1/4" TRS connections.
- ST Out uses XLR, but is not used in normal operations.

## MONITORING

The 03D has a monitoring bus that can be remotely controlled as a preview bus; therefore, all audio previews can be done on either the preview switcher in the 03D (recommended for Super Edit NLE option) or the E-E (audio) preview in the R-VTR.

Set each machine's BUS Out and monitoring in the [PAN/ROUTE] section. The Pan 1-16 tab below shows faders 1-4 feeding BUS Outs 1-4 (and centered; should be panned if using Stereo Pairs). Note that RECORDER (shown below as faders 9-12) is set to ST OUT.



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 (needed if the RECORD machine does not have E-E, as in Super Edit NLE with the Profile). The MONITOR OUT has a volume control knob for convenient speaker volume adjustment.

## SOLO/SETUP

Set as follows:

### SOLO/SETUP

Status: Recording Solo  
Listen: AFL  
Sel Mode: Mix Solo

### MONI SETUP

Listen: AFL  
Sel Mode: Mix Mon  
Moni Source Select: Stereo Out

Faders for the BUS Outputs are displayed when the [17-24/Stin] tab is selected in the [AUTOMIX] section. Set the levels to 0, then set the Master Level Protect to ON in the [UTILITY/PREFER] menu.

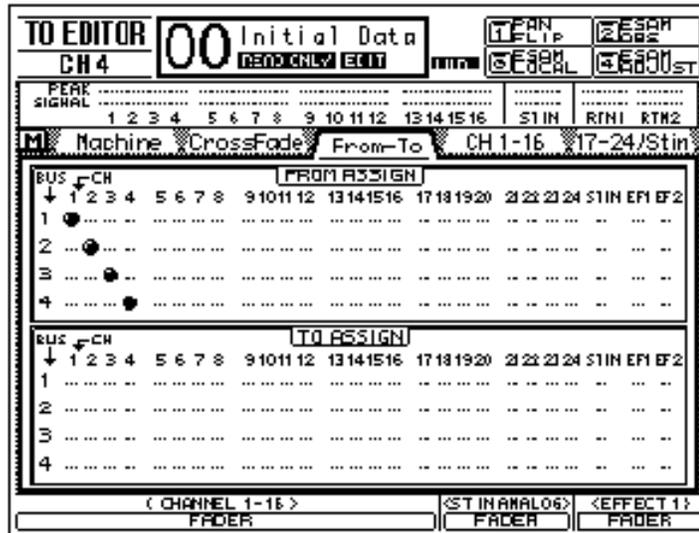
# Editor Setup

Assign the following audio cross-points in the VTR Assignment page [SHIFT]+[ASGN] in Super Edit for the 03D setup:

- AUDX 001 corresponds with (virtual) Machine A
- AUDX 002 corresponds with (virtual) Machine B
- AUDX 003 corresponds with (virtual) Machine C
- AUDX 004 corresponds with (virtual) Machine D
- AUDX 005 corresponds with (virtual) Machine E
- AUDX 006 corresponds with (virtual) Machine F
- AUDX 007 corresponds with (virtual) Machine G
- AUDX 008 corresponds with (virtual) Machine H

There is no AUDX 000 in the 03D panel setups and no silence for BLK. Assign BLK to an unused audio cross-point (typically 15-16 with faders all the way down).

Pressing green keys A, B, C, etc on the editor will then cause the currently selected 'source' to appear on the From-To page of [AUTOMIX] section (Below: Machine A with four channels 1-4 going to Busses 1-4).



Selecting AVTR on Editor, with VTR Assignment of audio crosspoint=001, will show above if VTR A has channels 1-4 assigned to Bus Outputs 1-4 respectively (stereo pairs recommend optionally)

## RECORD OPERATIONS

For a dissolve edit, the "from" mixer channels correspond to the selected VTR that will be active. The "to" defines which VTR will be faded to during a crossfade. Both are indicated by the red LEDs on the 03D panel. At the edit point the transition is started between the two active VTRs; the 03D cannot set separate durations for each channel. If a transition is aborted with an **[ALL STOP]** command, the mixer's crossfade is reset to the previous values set before the last transition.

## PRE-READ OPERATIONS

To use the RECORD machine audio as an active source (needed for PRE-READ), it will need to be physically connected to the 03D twice; first for monitoring of the RECORDER playback, and then for use as the PRE-READ source audio. Use either a "Y" cable or, if the RECORDER has AES and analog outputs (in Super Edit NLE option) use your Profile's analog and AES outputs to two inputs on the 03D; the first set in the VTR Assignment page **[SHIFT]+[ASGN]** for the REC monitor in, the other set with **INIT#108 Mixer Pre-Read Xpt =** (put in the crosspoint for the Pre-Read input).

## AMEM™ Triggers

The 03D has 50 Scene Memories that can be saved and recalled through PEGS. Scene Memory 00 (PEGS register 0) recalls all mix settings to their initial factory default values.

If a register number that has not been previously saved is sent to the 03D, the 03D acknowledges the command, but sends no Scene Memory response.

To learn an AMEM into the 03D from the VPE keyboard, press **[SHIFT][O]<sup>K2</sup>** or **SHIFT][U2]<sup>K5</sup>**

The system will prompt **LEARN AMEM nnn ?**. Enter the desired memory register (1 through 50) and press **[ENTER]**.

To recall an AMEM stored in the 03D, press **[PEGS]**

**REGISTER?** Enter a PEGS register # **1-16**. Press **[ENTER]**

**FUNCTION?** Press **[AUDIO]**. Press **[ENTER]**. Function shows "M".

**COMMAND?** Enter the number for the 03D Memory you wish to recall. Press **ENTER]**

**TIME?** Enter the desired trigger time for the recall. Press **[ENTER]**.

AMEM™ is a registered trademark of Grass Valley Group, Inc

# Yamaha 03D Audio Mixer Control Panel

