

## Overview

The intuitive TouchFlow Operation™ interface is optimized for touch-panel control and provides an easy-to-use digital mixing console environment for a broad spectrum of users and uses. The TF5 Digital Mixing Console features a 32 + 1 fader configuration that can adapt to a variety of channel layouts. This console is ideal for applications from live sound to fixed installations.



Rear Panel

## Features

- 32 + 1 fader configuration
- Input channels: 40 mono, 2 stereo, 2 return.
- Busses: 20 Aux (8 mono, 6 stereo), Stereo, Sub, 4 matrix.
- Local I/O: 32 mic/line + 2 stereo line in, 16 out.
- Recallable “D-PRE” Microphone Preamplifiers provide an ideal sonic foundation.
- Intuitive user interface optimized for touch panel operation.
- Traditional Overview and Selected Channel Interfaces
- “1-knob COMP™” & 1-knob EQ™ make it easy to dial in the ideal sound.
- “QuickPro Presets™” provide instant access to pro sound setups.
- “GainFinder™” supports precision gain setup
- “DCA Roll-out” enhances group control.
- “SENDS ON FADER” buttons instantly bring the specified AUX or FX bus levels up on the faders for easy verification and adjustment.
- Seamlessly integrated remote control and offline editing via an Apple iPad® or other computing device.
- Direct 2-track recording to USB storage devices, or serious multitrack recording to a DAW via USB.
- Multitrack recordings can be used for “virtual sound checks” when performers aren’t available.
- 1 expansion slot for NY64-D audio interface card
- Other features: 8 Powerful Processing/Effect Units, User Defined Knobs, User Defined Keys, 8 DCA groups, and more.

# Specifications

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## Functional Specifications

|                                 |  |                               |                                 |                                  |   |
|---------------------------------|--|-------------------------------|---------------------------------|----------------------------------|---|
| <b>Mixing Capacity</b>          | Input Mixing Channels                  | 40 mono + 2 stereo + 2 return | <b>Output Channel Functions</b> | Number of Inserts                | 0 (Insert Effect on AUX 9/10-19/20)         |
|                                 | AUX Buses                              | 20 (8 mono + 6 stereo)        |                                 | Quick Pro Preset                 | Yes   |
|                                 | Matrices                               | 4                             | <b>FX</b>                       | Number of FXs                    | 2 for Input Channels + 6 for AUX 9/10-19/20 |
|                                 | Stereo Buses                           | 1                             |                                 | Number of FX Programs            | 20  |
|                                 | Mono Buses                             | 1                             | <b>GEQ</b>                      | Available Channels               | Stereo, AUX1-8                              |
|                                 | FX Buses                               | 2                             | <b>Dante</b>                    | Number of I/O Channels           | 40 in / 24 out (with NY64-D)                |
|                                 | Cue Bus                                | 1                             |                                 | Dante Patch from Console         | No  |
| <b>Local Connectors</b>         | Analog Input                           | 32 mic/line + 2 stereo line   | <b>Recording</b>                | USB Memory Recording             | Yes   |
|                                 | Analog Output                          | 16                            |                                 | DVS Recording                    | Yes (Nuendo Live bundled)                   |
|                                 | NY Slots                               | 1                             | <b>Monitor</b>                  | Solo Mode                        | No  |
|                                 | Word Clock I/O                         | No                            |                                 | Oscillator                       | Sine Wave / Pink Noise / Burst Noise        |
|                                 | MIDI I/O                               | No                            | <b>Other Functions</b>          | Port to Port                     | No  |
|                                 | USB for File Save/Load                 | 1                             |                                 | GPI/MIDI                         | No  |
|                                 | USB for 2 Track Rec/Play               | 1                             |                                 | Wireless Mic Monitoring          | No  |
|                                 | USB for Multitrack Rec/Play to/from PC | 1                             |                                 | RTA                              | Yes   |
|                                 | Ethernet                               | Yes                           |                                 | Output Port Delay                | No  |
|                                 | Foot Switch                            | Yes                           |                                 | Cascade                          | No  |
|                                 | Phones                                 | 1                             |                                 | User Level                       | Yes   |
| AC Inlet                        | 1                                      | Help File                     | Yes                             |                                  |   |
| <b>Scene Memory</b>             | Number of Scenes                       | 200                           | <b>User Interface</b>           | Display                          | 7 inch Touch Panel                          |
|                                 | Recall Safe                            | Yes                           |                                 | Faders                           | 32 + 1                                      |
|                                 | Focus Recall                           | No                            |                                 | Channel Encoder                  | No  |
|                                 | Fade Time                              | No                            |                                 | Channel Name / Color Display     | Yes   |
|                                 | Preview                                | No                            |                                 | Custom Fader Banks               | Yes   |
|                                 | Selective Load / Save                  | No                            |                                 | User Defined Keys                | 6   |
|                                 | Global Paste                           | No                            |                                 | User Defined Knobs               | 4   |
|                                 | Tactile Control Keys                   | No (on-screen)                |                                 | Touch and Turn Knob              | Yes   |
| <b>Input Channel Functions</b>  | Gain Compensation                      | No                            | Monitor Level Knob              | Yes (by User Defined Knob)       |   |
|                                 | Digital Gain                           | Yes (-24dB ~ +10dB)           | iPad Stay                       | Yes                              |   |
|                                 | HPF                                    | 20Hz ~ 600Hz                  | Rack-mounting                   | No                               |   |
|                                 | PEQ                                    | 4 Band Full PEQ               | <b>Software</b>                 | Editor                           | TF Editor                                   |
|                                 | Dynamics 1                             | Gate                          |                                 | StageMix                         | TF StageMix                                 |
|                                 | Dynamics 2                             | Comp                          |                                 | MonitorMix                       | Yes   |
|                                 | Input Delay                            | No                            |                                 | Nuendo Live: Control integration | No  |
|                                 | Pan                                    | Center Nominal                |                                 | Console File Converter           | No  |
|                                 | DCA Group                              | 8 (Input DCA)                 |                                 |                                  |   |
|                                 | DCA Rollout                            | Yes (Unscrollable)            |                                 |                                  |   |
|                                 | Number of Inserts                      | 0                             |                                 |                                  |   |
|                                 | Direct Out                             | Yes                           |                                 |                                  |   |
|                                 | Quick Pro Preset                       | Yes                           |                                 |                                  |   |
| <b>Output Channel Functions</b> | PEQ                                    | 4 Band Full PEQ               |                                 |                                  |   |
|                                 | GEQ                                    | Yes                           |                                 |                                  |   |
|                                 | Dynamics 1                             | Compressor                    |                                 |                                  |   |
|                                 | Output Channel Delay                   | No                            |                                 |                                  |   |

## Specifications

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### General Specifications

|                                  |   |   |
|----------------------------------|---|---|
| <b>Sampling frequency rate</b>   | Internal  | 48 kHz  |
| <b>Signal delay</b>              | Less than 2.6 ms, INPUT to OMNI OUT, Fs=48 kHz  |   |
| <b>Fader</b>                     | 100 mm motorized, Resolution = 10-bit, +10 dB to -138 dB, -∞ dB all faders  |   |
| <b>Total harmonic distortion</b> | Less than 0.05% 20 Hz–20 kHz @+4 dBu into 600 Ω, INPUT to OMNI OUT, Input Gain=Min. (Measured with a -18 dB/octave filter@80 kHz) |   |
| <b>Frequency response</b>        | +0.5, -1.5 dB 20 Hz–20 kHz, refer to +4 dBu output @1kHz, INPUT to OMNI OUT   |   |
| <b>Dynamic range</b>             | 110 dB typ., DA Converter, 107 dB typ., INPUT to OMNI OUT, Input Gain=Min.  |   |
| <b>Hum &amp; noise level</b>     | Equivalent input noise  | -128 dBu typ., Input Gain=Max. (Measured with an A-Weight filter) |
|                                  | Residual output noise   | -85 dBu, ST master off (Measured with an A-Weight filter)         |
| <b>Crosstalk</b>                 | -100 dB (Measured with a -30 dB/octave filter@22 kHz), adjacent INPUT/OMNI OUT channels, Input Gain=Min.                          |   |
| <b>Power requirements</b>        | 100–240 V 50/60 Hz  |   |
| <b>Power consumption</b>         | 120 W   |   |
| <b>Dimensions (W x H x D)</b>    | 866 mm x 225 mm x 599 mm (34.1" x 8.9" x 23.6")   |   |
| <b>Net weight</b>                | 20.0 kg (44.1 lbs)  |   |
| <b>Accessories</b>               | Quick Guide, Power Cord, Nuendo Live  |   |
| <b>Options</b>                   | Expansion Card, Foot Switch (FC5)   |   |
| <b>Others</b>                    | Operating temperature range: 0–40 °C, Storage temperature range: -20–60 °C  |   |

### Analog Input Characteristics

| Input Terminals  | GAIN  | Load Impedance | For Use With Nominal     | Input Level              |                  |                  | Connector  | Balanced / Unbalanced |
|------------------|-------|----------------|--------------------------|--------------------------|------------------|------------------|--|-----------------------|
|                  |       |                |                          | Sensitivity <sup>1</sup> | Nominal          | Max. before clip |  |                       |
| INPUT 1-32 (TF5) | +66dB | 7.5K Ω         | 50-600 Mics or 600 Lines | -82dBu (61.6μV)          | -62dBu (0.616mV) | -42dBu (6.16mV)  | Combo Jack (XLR-3-31 type <sup>2</sup> or TRS phone <sup>3</sup> ) | Balanced              |
|                  | -6dB  |                |                          | -10dBu (245mV)           | +10dBu (2.45V)   | +30dBu (24.5V)   |  |                       |
| ST IN 1,2        | —     | 10k            | 600 Lines                | -30dBV (31.6μV)          | -10dBV (316mV)   | +10dBV (3.16V)   | RCA Pin Jack   | Unbalanced            |

\*1 Sensitivity is the lowest level that will produce an output of +4dBu (1.23V) or the nominal output level when the unit is set to maximum gain. (All faders and level controls are at maximum position.)

\*2 1: GND, 2: HOT, 3: COLD

\*3 Tip: HOT, Ring: COLD, Sleeve: GND

\*4 In these specifications, 0dBu = 0.775Vrms.

\*5 +48V DC (phantom power) can be supplied to INPUT XLR type connectors via each individual software controlled switch.

### Analog Output Characteristics

| Output Terminals    | Source Impedance | For Use With Nominal | Output Level   |                  | Connector                            | Balanced / Unbalanced |
|---------------------|------------------|----------------------|----------------|------------------|--------------------------------------|-----------------------|
|                     |                  |                      | Nominal        | Max. before clip |                                      |                       |
| OMNI OUT 1-16       | 75Ω              | 600 Lines            | +4dBu (1.23 V) | +24dBu (12.3 V)  | XLR-3-32 type <sup>1</sup>           | Balanced              |
| PHONES <sup>5</sup> | 100Ω             | 40 Phones            | 3mW            | 75mW             | Stereo Phone Jack (TRS) <sup>2</sup> | Unbalanced            |

\*1 1: GND, 2: HOT, 3: COLD

\*2 Tip: LEFT, Ring: RIGHT, Sleeve: GND

\*3 In these specifications, 0dBu = 0.775Vrms.

\*4 All output DA converters are 24bit, 128times oversampling.

\*5 The position of the level control is lowered by 16dB from the maximum.

### Digital Input/Output Specifications

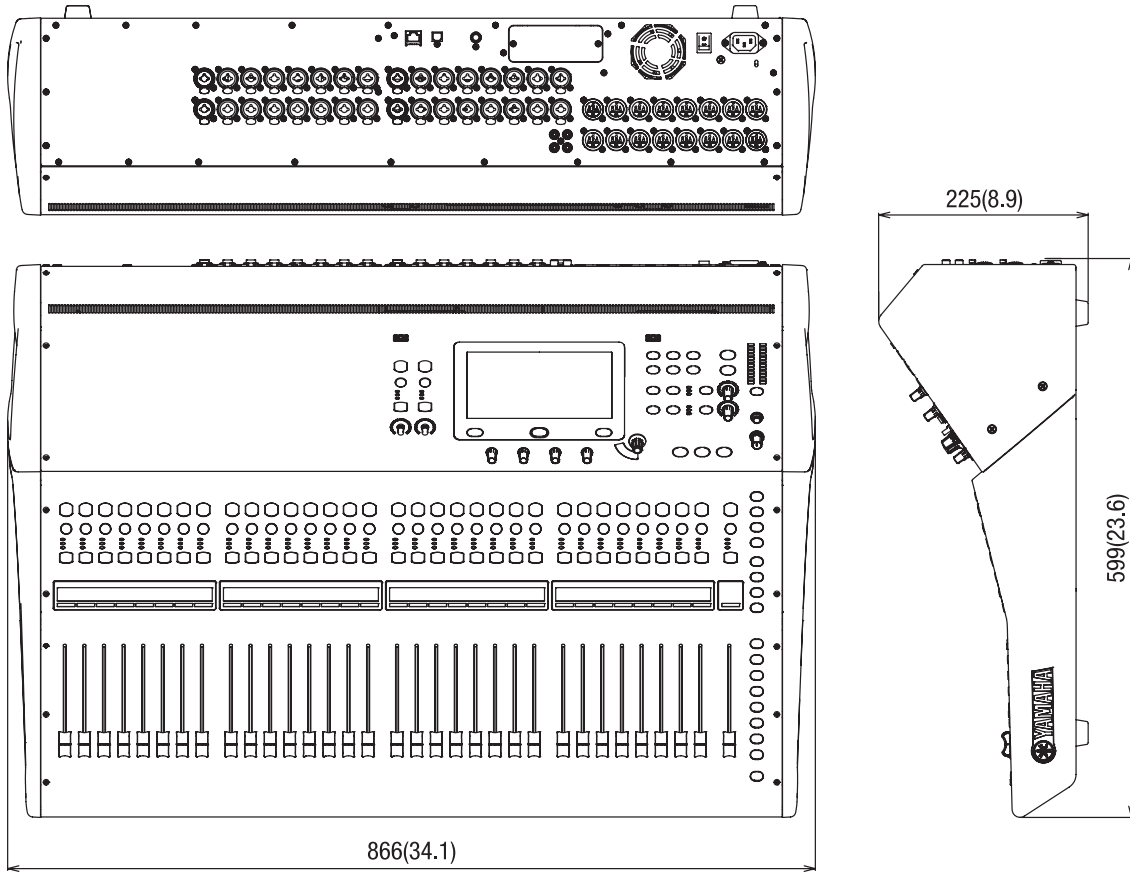
| Terminals     | Format | Data length | Audio  | Connector    |
|---------------|--------|-------------|--|--------------|
| USB (TO HOST) | USB    | 24bit       | 34ch input / 34ch output, PCM                          | USB (B type) |
| iPad          | USB    | —           | Playback: MP3 or WAV file data / Record: WAV file data | USB (A type) |

### Control I/O Specifications

| Terminals | Format    | Level               | Connector |
|-----------|-----------|---------------------|-----------|
| NETWORK   | IEEE802.3 | 10BASE-T/100Base-TX | RJ-45     |
| FOOT SW   | —         | —                   | TS Phone  |

## Dimensions

Unit: mm (inch)



## Options

- I/O Rack Tio1608-D
- Dante Interface Card NY64-D
- Foot Switch FC5

## Software

- TF Editor
- TF StageMix
- MonitorMix
- Steinberg Nuendo Live

## Architectural and Engineering Specifications

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The Yamaha TF5 Digital Mixing Console shall feature an intuitive TouchFlow Operation™ interface that is optimized for touch-panel control. It shall be an easy-to-use digital mixing console for a broad spectrum of applications from live sound to fixed installations. With 32 + 1 faders it shall provide a mixing capacity of up to 40 mono and 2 stereo inputs, 2 returns, 20 auxiliary buses, and 4 matrix buses. It shall include recallable class-A D-PRE microphone preamplifiers, 1-knob COMP compression, and 1-knob EQ equalization facilities. For optimum live-sound workflow it shall include 8 powerful effect processors, and Flex12 EQ that allows up to 12 of 31 available EQ bands to be applied to the main L/R bus and auxiliary buses 1 through 8. The mixing console shall be compatible with TF Editor, TF StageMix, MonitorMix, and other Yamaha support software running on external computing devices. Physical controllers other than faders shall include Touch and Turn knobs and, 6 User Defined Keys, and 4 User Defined Knobs. Local I/O shall include 32 microphone/line and 2 stereo line inputs, plus 16 line outputs. An optional NY64-D Dante I/O card shall provide Dante connectivity with the Tio1608-D I/O rack unit. Dimensions shall be 866 (W) x 225 (H) x 599 (D) mm. Weight shall be 20 kg.