

HEAVYWEIGHT MASTERING CHAMPION

The Finalizer 96K gives you the ability to insert external devices by using either the analog inputs or digitally via AES/EBU, S/PDIF or Tos-link.

For Connecting the Digital Master Fader or a momentary switch for Autofade start/stop or bypass



The internal auto-sensing power supply automatically accepts and adjusts itself to 100-240V, 50/60Hz.

Analog balanced I/O.

Accurate sample rate synchronization can be provided via Finalizer 96K word clock sync input.

The MIDI section in the Finalizer 96K is very useful for controlling any parameter from a sequencer or controlling the Finalizer 96K's parameters from a remote MIDI controller.

TECHNICAL SPECIFICATIONS:

DIGITAL INPUTS AND OUTPUTS

CONNECTORS:	XLR (AES/EBU), RCA Phono (S/PDIF), Optical (Tos-link, ADAT)
FORMATS:	AES/EBU (24 bit), S/PDIF (20 bit), EIAJ CP-340, IEC 958, EIAJ Optical (Tos-link), ADAT Lite pipe
OUTPUT DITHER:	HPF/TPDF dither 8-24 bit, mono, stereo, inverted
WORD CLOCK INPUT:	RCA Phono, 75 ohm, 0.6 to 10 Vpp
SAMPLE RATES:	32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
PROCESSING DELAY:	0.2 ms @ 48 kHz, 0.1 ms @ 96 kHz
FREQUENCY RESPONSE DIO:	DC to 23.9 kHz \pm 0.01 dB @ 48 kHz DC to 47.9 kHz \pm 0.01 dB @ 96 kHz
COMPRESSOR THD+N:	-130 dB (0.00003%) @ 10 dB Compression, 20 Hz-20 kHz
SAMPLE RATE CONVERSION TYPE:	Asynchronous.
DYNAMIC RANGE:	130 dB
THD+N:	-106 dB 44.1 to 48 kHz @ 1 kHz, -2 dBFS
INPUT RATE RANGE:	31 kHz to 49 kHz

ANALOG INPUTS

CONNECTORS:	XLR balanced (pin 2 hot)
IMPEDANCE:	20 Kohm
MAX. INPUT LEVEL:	+22 dBu (balanced)
MIN. INPUT LEVEL (FOR 0 dBFS):	-10 dBu
SENSITIVITY:	@ 12 dB headroom: -22 dBu to +10 dBu
A TO D CONVERSION:	24 bit (6.144 MHz delta sigma @ 48/96 kHz)
A TO D DELAY:	0.8 ms @ 48 kHz, 0.4 ms @ 96 kHz.
DYNAMIC RANGE:	>103 dB (unweighted, BW=22 kHz), >106 dB(A)
THD:	-95 dB (0.0018 %) @ 1 kHz, -6 dBFS (FS @ +16 dBu)
FREQUENCY RESPONSE:	10 Hz to 20 kHz: +0/-0.2 dB @ 48 kHz 10 Hz to 45 kHz: +0/-1 dB @ 96 kHz

CROSSTALK:

<-80 dB, 10 Hz to 20 kHz, typical -100 dB @ 1 kHz

ANALOG OUTPUTS

CONNECTORS:	XLR balanced (pin 2 hot)
IMPEDANCE:	100 ohm (active transformer)
MAX. OUTPUT LEVEL:	+22 dBu (balanced)
FULL SCALE OUTPUT RANGE:	-10 dBu to +22 dBu
D TO A CONVERSION:	24 bit (6.144 MHz delta sigma @ 48/96 kHz)
D TO A DELAY:	0.57 ms @ 48 kHz, 0.28 ms @ 96 kHz
DYNAMIC RANGE:	>100 dB (unweighted, BW=22 kHz), >104 dB(A)
THD:	-82 dB (0.008 %) @ 1 kHz, -6 dBFS (FS @ +16 dBu)
FREQUENCY RESPONSE:	10 Hz to 20 kHz: +0/-0.5 dB @ 48 kHz 10 Hz to 45 kHz: +0/-3 dB @ 96 kHz

CROSSTALK:

<-60 dB, 10 Hz to 20 kHz, typical -90 dB @ 1 kHz

EMC

COMPLIES WITH: EN 55103-1, EN 55103-2, Class B of FCC rules/part 15, Class B of CISPR 22

SAFETY

CERTIFIED TO: IEC 65, EN 60065, UL 1419 and CSA E65

ENVIRONMENT

OPERATING TEMPERATURE: 32° F to 122° F (0° C to 50° C)
STORAGE TEMPERATURE: -22° F to 167° F (-30° C to 70° C)
HUMIDITY: Max. 90 % non-condensing

PCMCIA INTERFACE

CONNECTOR: PC Card, 68 pin type 1 cards
STANDARDS: PCMCIA 2.0, JEIDA 4.0
CARD FORMAT: Supports up to 2 MB SRAM

CONTROL INTERFACE

MIDI: In/Out/Thru: 5 Pin DIN
GPI, PEDAL, FADER: 1/4" phone jack

GENERAL

FINISH: Anodized aluminum front
Plated and painted steel chassis

LCD:

DIMENSIONS: 56 x 128 dot graphic LCD-display
19" x 1.75" x 8.2" (483 x 44 x 208 mm)
WEIGHT: 5.2 lb. (2.35 kg)
MAINS VOLTAGE: 100 to 240 VAC, 50 to 60 Hz (auto-select)
POWER CONSUMPTION: <20 W
BACKUP BATTERY LIFE: >10 years

WARRANTY

PARTS AND LABOR: 1 year

Note: Due to continuous development and standardization all specifications are subject to change without notice.



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ULTIMATE SOUND MACHINES

Finalizer **96K**
STUDIO MASTERING PROCESSOR

96K

WIDER FREQUENCY RANGE • HIGHER RESOLUTION



THE NEW WORLD HEAVYWEIGHT MASTERING CHAMPION

Introducing Finalizer™96K

The latest progression in TC's Multi-Award winning mastering technology - the Finalizer 96K - delivers unprecedented levels of clarity, warmth and punch to your mix.

With an all new set of advanced features and enhancements, including 96kHz processing, Finalizer 96K truly puts the world of professional mastering within reach of every studio - large or small.

Inserted between the stereo output of your mixer or workstation and your master recording media, the Finalizer 96K dramatically rounds out your material, creating that "radio ready" sound - previously unattainable outside a professional mastering house.



The PCMCIA card slot of the Finalizer 96K supports up to 2MB SRAM. The Card easily fits into your pocket.

The Compare button allows you to adjust the Finalizer 96K's signal to the same level as the bypassed signal - great for fast and accurate comparison.

Use the Navigation controls to move around quickly inside the Finalizer 96K's intuitive software interface.

TC Electronic has lifted the performance of Studio Mastering Processors to an even higher level with the introduction of the new Finalizer 96K. This powerful Studio Mastering Processor is the result of an intense research process, creativity and thoroughly knowledge about recording. Since many of TC Electronic's engineers have a background in recording, they know what is important for mastering engineers, studios and YOU!

TRUE 24BIT/96KHZ PERFORMANCE

New features have been added to the Finalizer 96K. It has been updated with new true 24bit resolution A/D and D/A converters. Sample Rate Converter translates AES/EBU, S/PDIF and Tos input to the Finalizer's internal or external rate. Sample Rate Conversion is within the input range 31-49kHz. The ADAT interface enables you to freely choose 2 ADAT channels and direct them to other channels on the ADAT. This enables you to bounce tracks while processing the sound with the Finalizer's unique features. Now it is easy for you to finalize your mix and turn it into a masterpiece.

SIMPLE VERSATILITY

The Finalizer 96K gives you all the features you need to add the finishing touch to your mix. The Finalizer 96K's multiband processor will make your mix sound punchier and crisper. With the Finalizer 96K, now you can easily turn demo tapes into finished recordings. You decide how you want your precious recording to sound and the Finalizer 96K will take you there.

If you prefer using an external device and insist on using it, the Finalizer 96K gives you the ability to insert it, using the analog inputs or Digitally via AES/EBU, S/PDIF or Tos-link. The Finalizer 96K also gives you the choice of inserting internal effects, this is useful for you when you for example want to refine the overall EQ before compressing the signal.

ESSENTIAL FOR YOUR STUDIO

When you use the Finalizer 96K you can easily enhance the Dynamics of your mix while you mix. Inserted between the Stereo output of your

mixer or DAW and your DAT or CDR, it enhances the dynamics and ensures optimal Analog to Digital conversion. Please see illustration below.

All the tools you need are provided in one unit. You can simultaneously:

- ▶ **CONVERT:** 24bit/96kHz resolution A/D and D/A converters, Format conversion (AES/EBU, S/PDIF and Tos-link) ADAT interface (track bounce)
- ▶ **SAMPLE RATE CONVERSION:** Within the range of 31-49kHz
- ▶ **SHAPE:** Five band 24bit Stereo Digital Equalizer
- ▶ **ENHANCE:** Choose between Dynamic EQ, Stereo Adjust, Digital Radiance Generator™ and Spectral Stereo Image
- ▶ **NORMALIZE:** Real-time Gain Maximizer
- ▶ **EXPAND:** Variable Slope multiband Expander
- ▶ **SQUEEZE:** Multiband Compressor
- ▶ **TRIM:** Variable Ceiling multiband Limiter prevents *overs*
- ▶ **FADE:** Manual or Auto Fade Tool
- ▶ **DITHER:** Maintain the highest resolution at the digital AES/EBU and S/PDIF outputs, Tos-link and ADAT
- ▶ **BALANCE:** L/R balance in 0.1dB steps

ANALYZER FUNCTIONS

The Finalizer 96K features a wide range of extremely useful analyzer functions: Phase Correlation Meter, Level Flow Meter, Peak Hold Meter and Digital I/O Status. Even a Calibration Tone Generator is included in the Finalizer 96K.

WIZARD - MAKING IT EASY

The successful Wizard function is part of the Finalizer 96K, it immediately calculates an optimal setting for your material. The more experienced user may *tweak* the signal path extensively with more than 90 parameters to choose from. All of the Finalizer's functions are easily monitored on the graphic LCD and on the seven precision LED meters.

DITHERING

The use of dithering is very important when interfacing digitally between audio equipment. When resolution is changed from higher to lower, dithering is necessary to minimize distortion. In the Finalizer 96K you have the user friendly TPDF Dithering. The output resolution of the Finalizer 96K is 24bit, when the receiver of the Finalizer signal has a lower resolution, output Dither must be applied to equal the resolution of the receiver. You can Dither from 8-22bits. If your low level signals are in Stereo, Uncorrelated Dither is the best choice, if they are in Mono, Correlated Dither will be the most unobtrusive. If the low level signals are unfocused, Inverse Dither may be your best choice.

RECALL

The Recall page takes you step by step through a carefully selected list of 30 presets suitable for any type of source material. There are presets for: Classical, Rock, Commercials, Jazz, Techno, Live, etc.



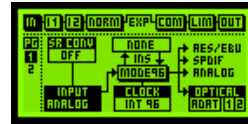
WIZARD

When you want to create your own special preset, call up the Wizard. Answer just four basic questions about your source material and the type of processing you require, the Wizard will optimize your material fast and easy.



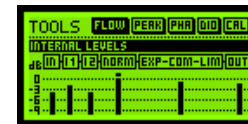
INPUT & OUTPUT

The In & Out blocks now share the same flowchart that shows the signal path from input through inserts to output. A very intuitive interface gives you the best possible overview and makes instant connection changes.



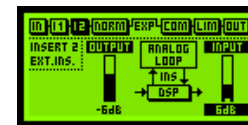
TOOLS

The Phase Correlation Meter will tell you whether your signal is stereo, mono or out of phase. The Level Flow Meter shows you the level in each block of the Finalizer 96K. This gives you a quick way of viewing headroom throughout the entire signal path. The Digital Status Tool lets you decide how the status bits are handled through the Finalizer 96K, this is great when converting from S/PDIF to AES/EBU or vice versa.



INSERTS

The Insert block give you the ability to insert external devices either using the analog inputs or digitally via AES/EBU, S/PDIF or Tos-link. The Finalizer 96K also gives you the choice of inserting internal effects e.g. if you want to adjust the Stereo Image.



EQUALIZER

With the high quality 5 band Stereo Digital EQ, you can adjust the spectral content of your mix and simultaneously preserve or enhance the transparency and energy of your mix.



SPECTRAL STEREO IMAGE

The Spectral Stereo Image allows you to control the Stereo content in three bands independent of the Dynamics crossover. Use this for enhancing the Stereo Image in a specific frequency range, e.g. widening the vocal area without removing the punch of the bassdrum.



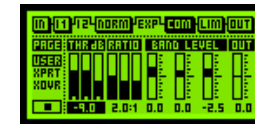
NORMALIZER

In this block, the signal's gain is optimized to ensure maximum utilization of headroom. A logical graphic display makes the adjustment a breeze. You can choose between hard or soft limiting to avoid clipping. Simply recall a preset you like, normalize the gain and the signal is now suitable for the thresholds in the following dynamics blocks. You are up and running.



COMPRESSOR/LIMITER/EXPANDER

With the Finalizer 96K properly used multiband Compression becomes a desirable form of EQ. Features like variable crest factor, absolute Digital ceiling and variable clipper provide you with a unique set of mastering tools.



CROSSOVER

The Compressor, Limiter and Expander share three user-definable frequency bands. This feature allows you to treat the lows (kick), mids (vocal) and highs (cymbals) independently without the 'pumping' or 'breathing' associated with conventional full range compressors.

