Setting new standards
TouchMonitor TM7/TM9

RTW
EYES ON YOUR AUDIO

TouchMonitor TM7/TM9
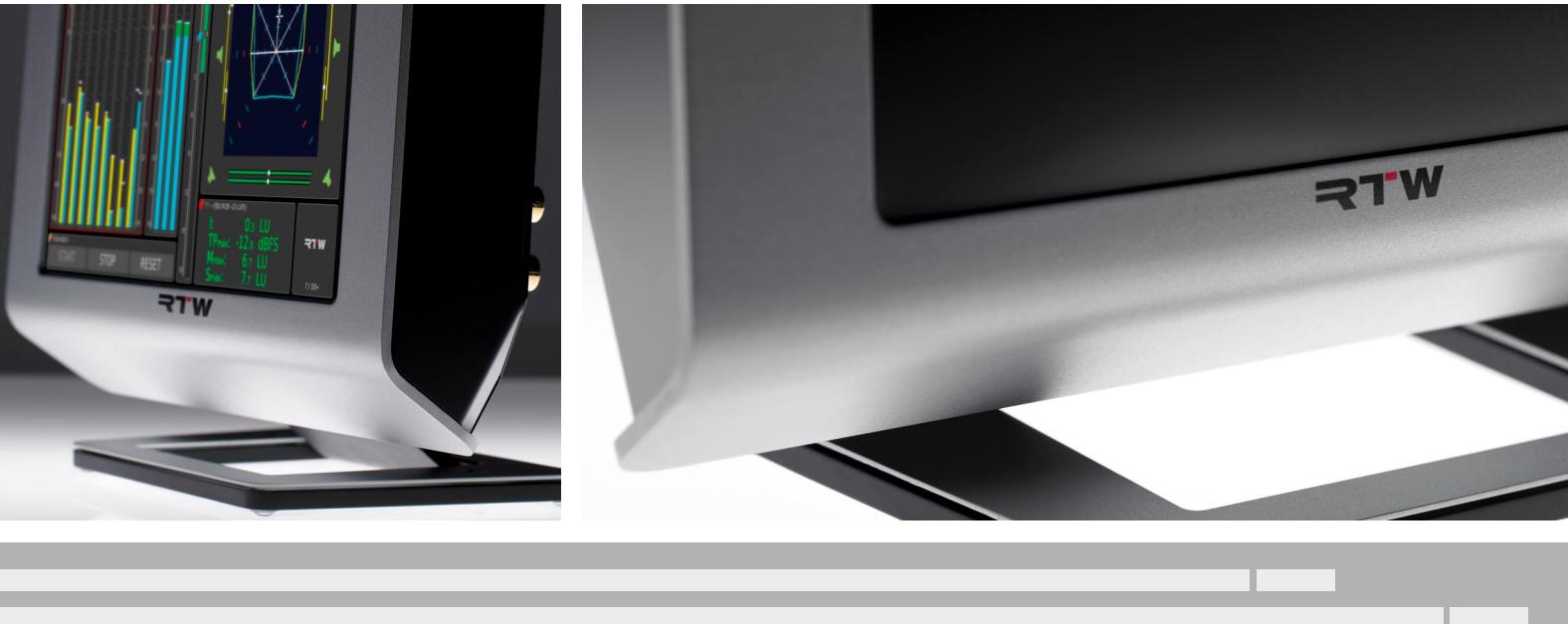
The Sight of Sound

In an ideal world, the human ear would be the best instrument any of us could use for quality control and impartial judgment of our daily work. However, it is just not that simple. The introduction of HD, surround sound and immersive audio, as well as loudness control issues have triggered an increasing demand for quality control and monitoring of audio signals.

Fast perception and accurate assessment of audio levels using visual representation methods are indispensable elements of daily work. Sub-optimal monitoring conditions, stress and aural fatigue are just a few of a large number of reasons why relying just on one's ears is not enough.
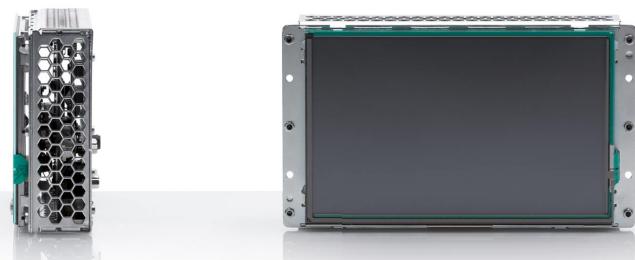
Introducing: The TouchMonitor

The TouchMonitor range is RTW's answer to growing requirements in today's production, post-production, and broadcast world. Equipped with high-grade 7" or 9" touch screens and an easy-to-use GUI, TouchMonitor enters a new level of professional audio metering in terms of precision, performance, efficiency and flexibility.

Simple and flexible

The graphical user interface used in the TouchMonitor range is controlled simply by using your finger. Instruments can be scaled, randomly positioned and combined in almost every way for optimized use of available screen space. Even multiple instruments of the same type, assigned to different input channels and configurations, can be displayed simultaneously. Plus, a comprehensive on-screen help feature supports the user, allowing him to make setup changes with ease.

Facts and Figures

- Easy and fast touch screen control with on-screen help
- Highly flexible screen layout options with scalable instruments
- Powerful DSP platform for parallel display of multiple instruments
- Up to 16 channel audio interfacing including analog, AES3 and AES3id (depending on selected hardware version)
- 3G-SDI interface for up to 32 audio input signals (hardware version for TM7, additional option for TM9)
- 32 channel audio interfaces for Dante™/ST 2110 or Ravenna/AES67/ST 2110 AoIP network connection
- Fully scalable, modular software approach for flexible configuration and easy on-site upgrades
- Ethernet/LAN, USB, VGA and GPIO ports
- Available as table-top or OEM units
- Adapters for mounting TM7 into 19" environments

Standard Software (all models)

- 4-channel PPM and TruePeak with Peak Hold
- 2-channel Stereo Correlator
- 2-channel AES Status Monitor (with digital I/O)

Available software modules (all models)

- Multichannel
- Loudness (ATSC, EBU, ITU, ARIB, OP-59, AGCOM, CALM, LEQ(M), TASA, SAWA, Custom) and SPL
- RTA - Real Time Analyzer
- SSA - Surround Sound Analyzer
- Radar Display
- RTW Premium PPM plus Vectorscope and Moving Coil
- TCR - Time Code Reader
- BLITS - Black & Lane's Ident Tones for Surround
- Logging Data Server with Chart
- ISA - Immersive Sound Analyzer

Audio I/O options

TouchMonitor TM7 and TM9 perfectly integrate with today's analog and digital audio and video studio environments. Depending on the selected I/O option, they can handle up to 16 input signals in analog, AES3, and AES3id formats. 3G/HD/SD-SDI interface options in different types for TM7 and TM9 are also available increasing the number of input channels for simultaneous processing and display. And devices with AoIP interfaces can measure up to 32 audio channels of a Dante™/ST 2110 or Ravenna/AES67/ST 2110 audio network.

TouchMonitor TM7

HW20711
16-channel audio interface with 8-channel analog inputs and 4 x AES3 In/4 x AES3 Out

HW20712
16-channel audio interface with 8-channel analog inputs and 4 x AES3id In/4 x AES3id Out

HW20714
8-channel audio interface and 3G-SDI interface with 4 x AES3 In/4 x AES3 Out and 3G/HD/SD SDI In/Through

HW20715
16-channel audio interface with 8 x AES3 In/8 x AES3 Out

HW20717
32-channel audio interface with 32 Dante™ AoIP network channels

HW20718
32-channel audio interface with 32 Ravenna/AES67/ST 2110 AoIP network channels

TouchMonitor TM9

HW20911
16-channel audio interface with 8-channel analog inputs and 4 x AES3 In/4 x AES3 Out (expandable with HW20930)

HW20912
16-channel audio interface with 8-channel analog inputs and 4 x AES3id In/4 x AES3id Out (expandable with HW20930)

HW20913
16-channel audio interface with 8 x AES3 In/8 x AES3 Out (expandable with HW20930)

HW20914
16-channel audio interface with 8 x AES3id In/8 x AES3id Out (expandable with HW20930)

HW20915
16-channel audio interface with 16-channel analog inputs (expandable with HW20930)

Option: 3G-SDI Interface HW20930
3G/HD/SD-SDI audio interface option with deembedder for up to 32 channels (retrofittable)

HW20917
32-channel audio interface with 32 Dante™ AoIP network channels

HW20918
32-channel audio interface with 32 Ravenna/AES67/ST 2110 AoIP network channels

Build your meter!

A totally modular software concept means that you have to purchase features that you actually require. This puts you in control, defining the functionality of an individual TouchMonitor that suits your needs best. New instruments and functions can be added as software modules (licences) to the device at any time. Many display functions from RTW products well known and used for years are available to choose from as well as new instruments for loudness measurement.


Standard Software

Every TouchMonitor comes with a basic software package allowing for PPM, True Peak Meter, and correlation measurements of up to four input channels in up to four audio groups at a time. The PPM supports various analog and digital scale types. Any channel or channel pair out of the input channels provided by the hardware can be routed to the instruments. Storing individual presets with different routings lets you access any single input channel or input channel pair without having to repatch input connections.

Optional Software Modules

SW20001: Multichannel Mode
- Full parallel access to all hardware input channels
- More than 4 different input channels and more than 4 audio groups can simultaneously be displayed
- 3.1, 5.0, 5.1, 7.1 Cinema, 7.1 DD+, and Multichannel
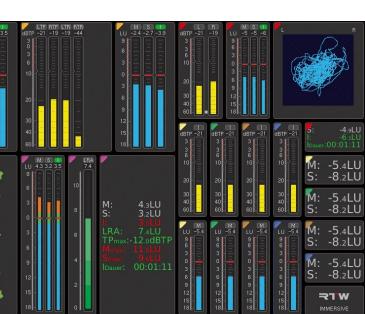
SW20002: Loudness and SPL Display
- Loudness bargraphs conforming to EBU R128, ITU-R BS.1770-4/1771-1, ATSC A/85, ARIB, OP-59, AGCOM, CALM, LEQ(M), TASA, SAWA, Custom
- Summing loudness bargraphs and numerical displays conforming to standards named above
- Measurement of Loudness Range (LRA)
- SPL bargraphs
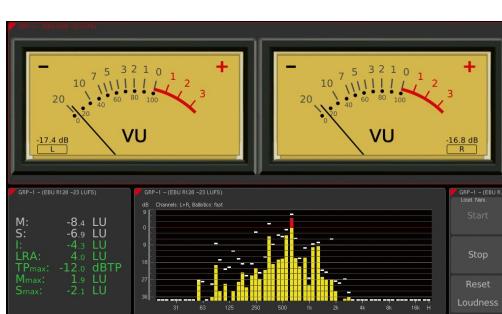
SW20003: RTA - Real Time Analyzer
- Display of the frequency distribution of single channels, channel pairs or groups on 31, 61 or 120 filter bands
- Selectable frequency range: Norm or LF
- Additional HF band showing content above 20 kHz

SW20005: Radar Display (SW20002 required)
- High-resolution, circular loudness display according to loudness radar meter by TC electronic®
- Predictable loudness management in broadcast, film, post-production and music
- Displays instant loudness, loudness history and true peak level acc. to ITU, EBU, ATSC, ARIB, OP-59, AGCOM, CALM

SW20004: SSA - Surround Sound Analyzer
(SW20002 required)
- Unique, dynamic display of all relevant surround parameters
- Intuitive visualization of overall acoustic image
- Based on loudness measurements

SW20006: RTW Premium-PPM plus Vectorscope
- Advanced PPM scale selection, gas-plasma emulation
- Audio Vectorscope (up to 4 instances)
- Moving Coil instruments (PPM, VU, Loudness, BBC mode)
- Multicorrelator (requires SW20001)

SW20008: TCR - Time Code Reader
- Decoding of SDI-embedded timecode
- Decoding of LTC timecode
- Timecode display
- Loudness recalculation (requires SW20002)

SW20013: BLITS - Black & Lane's Ident Tones for Surround
(SW20001 required)
- Generation of line test signals acc. to EBU 3304, GLITS and BLITS definition
- Stereo and multichannel
- Automatic and significant analysis of BLITS multichannel signals

SW20014: Logging Data Server
(SW20002 required)
- Export of measured data via IP address or USB stick
- Communication with RTW LQL PC software
- Advanced graphical presentation
- Chart instrument for the display of the course of a measurement directly on the TM.

SW20015: ISA - Immersive Sound Analyzer
(SW20001, SW20002 and SW20004 required)
- Dynamic display of all relevant parameters of 5.1.2, 5.1.4, 7.1.2 or 7.1.4 audio signals
- Intuitive readable visualisation of the spatial overall balance of the immersive sound image across two layers (beds)
- Cross-group measurement of the total loudness

Product Line-up

TouchMonitor TM7 table-top unit
7" touch screen 16 : 9 TFT, main unit with table-top frame, table-stand, power supply. Order number: **20700 + HW...** Audio interface selection required!

TouchMonitor TM7 OEM unit
7" touch screen 16 : 9 TFT, main unit w/o table-top frame/psu for panel-mounting. Order number: **20700OEM + HW...** Audio interface selection required!

3U Mounting Adapter TM7-MA3U
3U/42HP rack-mount panel (half-19"/ 3U) and fastening material for mounting 20700OEM into standard 19" sub-racks

VID Mounting Adapter TM7-MAVID
Half-19"/3U plug-in panel and fastening material for mounting 20700OEM into standard 19" video-rack cabinets

Mounting-Adapter TM7-MADT
Table-top frame, table-stand, and fastening material for remodelling 20700OEM to a table-top unit

Audio Interface Selection (I/O Options)	max. Channel Count (Hardware)	Inputs Analog (balanced)	Inputs Digital/Outputs Digital	Audio via Network (AoIP)	Input Option
Additional order number: **HW20711**	8 analog In, 8 digital In/8 digital Out	1 x 25-pin Sub-D	1 x 25-pin Sub-D (4 x AES3 In/Out)	---	---
Additional order number: **HW20712**	8 analog In, 8 digital In/8 digital Out	1 x 25-pin Sub-D	8 x BNC (4 x AES3id In/4 x AES3id Out)	---	---
Additional order number: **HW20714**	3G-SDI In, 3G-SDI Through (32), 8 digital In/8 digital Out	---	2 x BNC (3G-SDI In/Through), 1 x 25-pin Sub-D (4 x AES3 In/4 x AES3 Out)	---	---
Additional order number: **HW20715**	16 digital In/16 digital Out	---	2 x 25-pin Sub-D (8 x AES3 in/8 x AES3 Out)	---	---
Additional order number: **HW20717**	32 Dante™/ST 2110 AoIP	---	---	2 x RJ-45 (Dante™ network) (Link/Act 1G: Primary, Secondary)	---
Additional order number: **HW20718**	32 Ravenna/AES67/ST 2110 AoIP	---	---	2 x RJ-45 (Ravenna network) (Link/Act 1G: Primary, Secondary)	---

TouchMonitor TM9 table-top unit
9" touch screen 16 : 9 TFT, main unit with table-top frame, table-stand, power supply. Order number: **20900 + HW...** Audio interface selection required!

TouchMonitor TM9 OEM unit
9" touch screen 16 : 9 TFT, main unit w/o table-top frame/psu for panel-mounting. Order number: **20900OEM + HW...** Audio interface selection required!

19"/4U Mounting Adapter TM9-MA4U
for mounting 20900OEM into standard 19" environments. With fastening material and USB extension to front panel

Mounting Adapter TM9-MADT
Table-top frame, table-stand, housing cover and fastening material for remodelling 20900OEM to a table-top unit

Audio Interface Selection (I/O Options)	max. Channel Count (Hardware)	Inputs Analog (balanced)	Inputs Digital/Outputs Digital	Audio via Network (AoIP)	Option: 3G-SDI interface HW20930/HW20930UPG
Additional order number: **HW20911**	8 analog In, 8 digital In/8 digital Out	1 x 25-pin Sub-D	1 x 25-pin Sub-D (4 x AES3 In/4 x AES3 Out)	---	additional order/ subsequent retrofitting
Additional order number: **HW20912**	8 analog In, 8 digital In/8 digital Out	1 x 25-pin Sub-D	8 x BNC (4 x AES3id In/4 x AES3id Out)	---	additional order/ subsequent retrofitting
Additional order number: **HW20913**	16 digital In/16 digital Out	---	2 x 25-pin Sub-D (8 x AES3 in/8 x AES3 Out)	---	additional order/ subsequent retrofitting
Additional order number: **HW20914**	16 digital In/16 digital Out	---	16 x BNC (8 x AES3id In/8 x AES3id Out)	---	additional order/ subsequent retrofitting
Additional order number: **HW20915**	16 analog In	2 x 25-pin Sub-D	---	---	additional order/ subsequent retrofitting
Additional order number: **HW20917**	32 Dante™/ST 2110 AoIP	---	---	2 x RJ-45 (Dante™ network) (Link/Act 1G: Primary, Secondary)	---
Additional order number: **HW20918**	32 Ravenna/AES67/ST 2110 AoIP	---	---	2 x RJ-45 (Ravenna network) (Link/Act 1G: Primary, Secondary)	---

Standard Hardware (all models):
Table-top unit with easy-to-use graphical interface, Ethernet, 2 x USB, GPIO, VGA Out, table-stand, mains adapter. Audio Interface Selection required (I/O options)! OEM unit with easy-to-use graphical interface, Ethernet, 2 x USB, GPIO, VGA Out. Audio Interface Selection required (I/O options)!

Standard Software (all models):
Basic 4-channel PPM with analog scales (DIN +5, Nordic, British IIa, British IIb) and digital scales (0 to -60 dB, +3 to -60 dB True Peak, DIN, Nordic, British IIa and IIb), peak hold, stereo correlator. Other software modules available as licences.

The Loudness Radar Meter is trademark or registered trademark of TC Electronic A/S, 8240 Risskov, Denmark

Dimensions:	W x H x D in mm (approx.)
TM9 Table-top unit 20900:	245 x 183 x 46.5
TM7 Table-top unit 20700:	198 x 163 x 46
TM9 OEM version 20900OEM:	235 x 135 x 45
TM7 OEM version 20700OEM:	188 x 109 x 45

TouchMonitor TM7 OEM   TouchMonitor TM7   TouchMonitor TM9

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