

# RTW Surround Control 30900

Maintaining standards in a surround environment is rapidly becoming an issue for broadcasters. Any operator worth his corn knows that ears do not tell the whole story and if accurate and reliable monitoring and metering tools are provided, they tend to get used. **ROB JAMES** has a solution.



**I**N THE CONTROL SECTIONS of the broadcast and film consoles I grew up with, monitoring and metering were always inextricable. Current working practices have seen workstations ousting consoles in many applications and this has led to a thriving market in monitor controllers, although it is surprising that there are so few off-the-shelf combined metering and monitoring units.

RTW is well known for precision metering and a foray into monitoring control combined with metering seems a natural progression. The Euro 6400 (plus VAT) Surround Control 30900 is the central control unit of a complete surround monitoring and metering system. The main user interface comes courtesy of the included 30050 remote control and a further two Euro 980 (plus VAT) 30050 remote controls can be added and these operate in parallel. Visuals are provided by the Euro 1100, 8.4-inch 30010 TFT Remote Display, which connects via a VGA all-lines connected DB15. While the 30010 is very handsome and has the bonus of 13 control keys taking advantage of spare lines, any standard VGA screen can be connected. Software updates are achieved via Ethernet. The mouse is USB and there's a further USB port for future use.

The 30900 controls, analyses and monitors in surround formats from 5.1 to 7.1 plus stereo and mono. There is a configurable downmix matrix for monitoring or recording, surround test signal generator and measurement microphone input for speaker calibration.

The screen is usually divided into two, vertically, with multistandard surround peak meter bargraphs on the right plus additional 2-channel PPM and one of a variety of other 'instruments' on the left. These include a surround sound analyser for 5.1, 6.1 and 7.1, 1/3- and 1/6-octave RTA, multicorrelation display, Dialnorm meter, and AES-EBU status monitor along with the familiar vectorscope.

These options are all highly configurable and seven factory and 14 user presets help keep things simple.

Audio I-O uses Tascam format DB-25 connections with one metering only, two metering/monitoring analogue inputs, two 8-channel (four AES-EBU pairs) digital inputs, and one analogue and one digital 8-channel output. Routing matrices make track configuration flexible. The inputs are selectable in operation but this unit does not sum inputs.

The 30900 can be operated in three ways — via a 30050 remote unit, a USB mouse or the control

keys on the 30010 remote display. The 30500 is compact but nonetheless positive in use. The volume knob looks odd but is actually very practical because the shaft encoder 'gearing' is user selectable to Low, Medium or High. When turned slowly individual steps are always at 0.5dB intervals and it's nicely detented for a satisfyingly tactile action. A quick press on the knob restores the level to the preset value. Non-



illuminated buttons duplicate those at the bottom of the screen. A small inset button and indicator LEDs determine the function of buttons set around the volume knob to Solo, Cut, Swap or Phase. Solo and Cut are non-additive unless multiple keys are depressed together. At the bottom, three buttons change Input and Output selections with the Dim key in the middle. There is no separate Master Cut, although the Dim key can be programmed to be Cut.

Meticulous attention to signal levels is the key to successful operation with any monitoring/metering combination. Once source levels are correctly set, calibrating the speakers using an instrument mic is simple. Output levels can be trimmed from the remote. Used with pink noise, the spectrum analysers give you an objective view of speaker and room performance.

The PPM section has up to three groups. Group 1 is always present and represents the current channel format of the entire unit. The other two can be shown or hidden and the display is automatically scaled to suit. Group 2 options are Left and Right or L&R external source PPMs with or without M&S meters. Group 3 is the SPL meter and a variety of scale options are available in the menus.

By far the most interesting instrument is the Surround Sound Analyser, which employs a number of strategies to display the complexities inherent in a

surround sound field. The main display is a polygon of varying size and shape — size indicates overall volume and shape shows distribution and gives an indication of dominance with the apex of triangles on each side of the square. Extra lines show the relative level of the front centre channel and two further displays can be overlaid onto this. The Dominance Indicator (DMI) adds a white cross-hair that moves according to where the single most dominant sound is coming from. The Phantom Source Indicator (PSI) adds lines on each side of the square that vary in length with level and have a marker showing the position of possible phantom sources. All this is difficult to describe, but surprisingly effective in practice. The geometric shapes are a lot more informative than an amorphous blob and the extra indicators provide reassuring confirmation of what your ears are telling you. This is a powerful problem analyser when combined with the channel and phase swap keys.

The other instruments are all pretty familiar and are as configurable as you might expect.

For broadcast and surround mastering the 30900 is a natural. A pervasive air of understated class characterises the construction. On-screen graphics are clear and to the point, not flashy and this is a major plus. This rich combination of monitor control with metering could have easily become too complex for simple operation but RTW has managed the marriage admirably. The Linux-based operating system could be faster when changing screens but, once used to the delay, it soon became second nature to shift focus to another issue for a second or so.

It is also available in another version, the 30960, complete with built-in 6.5-inch screen. This fits directly into the 3U racks found in video studios.

In the time available, I barely scratched the surface of the 30900's manifold possibilities. Monitoring and metering should be instinctive and 'invisible' until something goes wrong. Once I had it set up the way I wanted, the 30900 quickly faded into the background.

Unless you really need to be able to sum inputs, monitor control will be more than adequate for most purposes and checking and calibrating speaker levels is so much easier this way than poking around with a tweaker. The Surround Sound Analyser became indispensable. This combination of tools gave me the clearest representation yet of a complex surround mix. If I could afford it, I'd keep it. ■

## PROS

Well chosen combination of features; nicely engineered; excellent Surround Sound Analyser; good long-term investment.

## CONS

Only one key for master Cut or Dim; no summing; cost.

## Contact

RTW, GERMANY  
Website: [www.rtw.de](http://www.rtw.de)