

SOUNDFIELD

MARK V

M I C R O P H O N E  
S Y S T E M



The SoundField MKV is a unique product offering a previously unobtainable degree of accuracy in the generation of phase-coherent, truly coincident stereo and mono microphone patterns. The user, via the control unit, is able to electronically steer and move the microphone both in real and post production time whilst a fully three dimensional output signal is available for surround sound use.

In addition to the usual polar pattern and angle controls, the SoundField system offers three unique additional controls: AZIMUTH, ELEVATION and DOMINANCE. The AZIMUTH allows the electronic rotation of the microphone to any horizontal position through a full 360 degrees. The ELEVATION allows vertical positioning of the microphone up or down by  $\pm 45$  degrees and the DOMINANCE gives the effect of moving the microphone closer to or further away from the sound source, rather like the zoom lens on a camera.

*This combination of controls allows the SoundField user to replicate absolutely any microphone configuration, ie. polar patterns from omni through all cardioids to figure of eight, at any stereo crossed pair angle, pointing in any direction.*

elevation, dominance, polar pattern and angle controls.

For instance, if in a choral recording the soloist's vocal is too distant in the mix, the microphone can be easily manipulated and repositioned closer to the vocal at the post production stage, without any risk of a popping effect.

Alternatively, if a drum kit recorded with the SoundField set to an equivalent crossed pair of cardioid microphones with an angle of 90 degrees now needs more ambience, the stereo image can be widened and the microphone pulled back further away from the kit. Even the polar pattern response can be altered, or if necessary, the microphone can be aimed off axis from the kit.

**The result** - the sound you really want without the need to re-record.

Because of these unique capabilities, the SoundField is now used in literally hundreds of major recording studios throughout the world as the main microphone for virtually every application.

Why? - Because just one SoundField is capable of replacing every single microphone - or even group of microphones for vocals, brass and drums, or in fact any acoustic instrument.

## DESCRIPTION

Combining acoustic, electronic and mechanical design excellence, the SoundField MKV is the most comprehensive "single point source" recording microphone system in the world. It is used by international recordists to capture the "ambience" of the worlds top opera houses and theatres in classical recording, and also by many major record producers in demanding high-technology studio applications

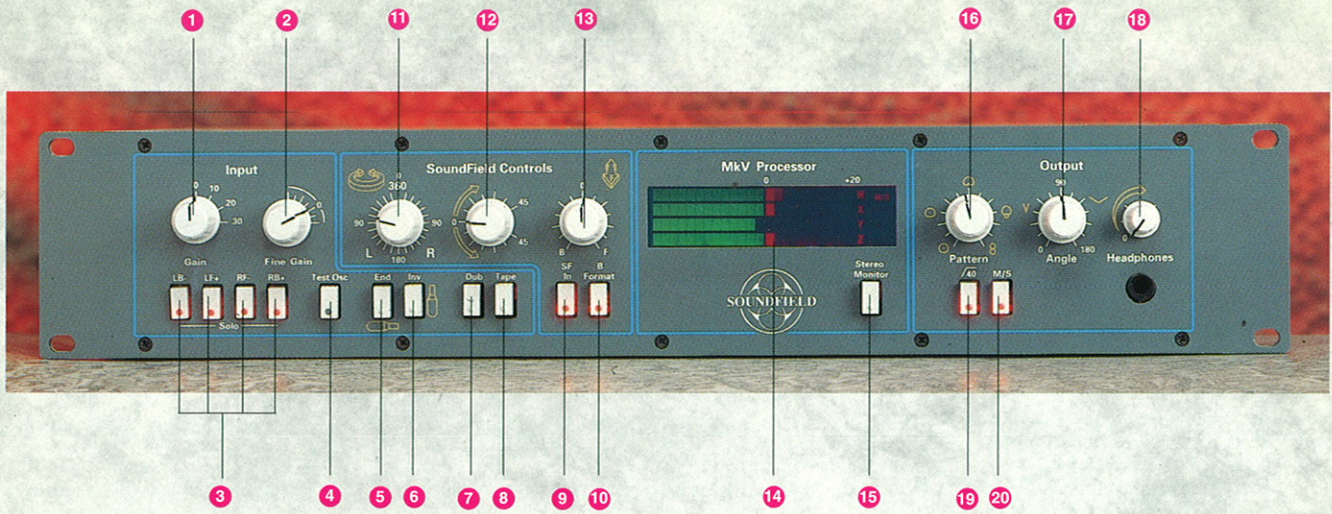


In addition to the Left/Right stereo outputs, the SoundField control unit also has a four channel 'B Format' output. These B-format signals carry three dimensional information from the entire sound environment and can be recorded on four channels of a multi track recorder. They can then be replayed through the SoundField MKV control unit in a post production environment for re-mixing utilizing the azimuth,

## SOUNDFIELD TECHNOLOGY

The SoundField range of microphones are based on a fully patented design of four separate capsules in a tetrahedral array and a control unit incorporating advanced electronic circuitry. They are the result of many years research by audio engineers, scientists and mathematicians in conjunction with the National Research Development Corporation of Great Britain and stem from the most exhaustive study ever conducted into psychoacoustics.





## THE CONTROLS

- 1 **GAIN SWITCH** 0 to +30dB Microphone Input Gain in 10dB steps.
- 2 **GAIN TRIM** Fine gain adjustment -10dB to +10dB.
- 3 **CAPSULE SOLO** Each of the four microphone capsules may be solo-ed as required. This facility is useful for checking the continuity of connection cables.
- 4 **TEST OSC** This button controls the test oscillator which is used to calibrate the console input gain to match the output of the SoundField system. It provides a continuous 0dBm 1KHz signal at the B-Format W output, whilst X,Y, & Z have differing pulse rates to assist in track identification.
- 5 **END** Switches the SoundField MKV for endfire use.
- 6 **INVERT** Reverses Left/Right to allow for the microphone being suspended in an inverted position.
- 7 **DUB** Allows B-Format replay to include the Gain Trim for re-mixing purposes.
- 8 **TAPE** Allows the B-Format replay signal to be monitored.
- 9 **SOUNDFIELD IN** Routes the signal through the SoundField control section.
- 10 **B-FORMAT** Connects the SoundField controls into the B-Format signal path.
- 11 **SOUNDFIELD AZIMUTH** Allows a simulated pair of microphones to be electronically rotated through a full 360 degrees.
- 12 **SOUNDFIELD ELEVATION** This control simulates tilting the stereo microphone system up or down by  $\pm 45$  degrees.
- 13 **SOUNDFIELD DOMINANCE** This control provides an effect similar to moving the microphone forward or backward.
- 14 **LCD BARGRAPH DISPLAY** Shows B-Format signals X,Y,Z&W or Stereo L/R & M/S depending on the stereo monitor switch.
- 15 **STEREO MONITOR** Switches bargraph display from B-Format to stereo (Left/Right M/S)
- 16 **POLAR PATTERNS** Continuous adjustment from omni-directional through sub-cardioid, cardioid, hyper-cardioid to figure of eight.
- 17 **ANGLE** Continuous adjustment of the angle between LEFT and RIGHT in a stereo pair from 0 degrees to 180 degrees.
- 18 **HEADPHONES** Controls signal level to the stereo output headphone socket.
- 19 **HIGH PASS FILTER** Used to remove rumble and wind noise from the stereo output signals.
- 20 **M/S** Switches the microphone outputs into M and S mode. Left = Middle. Right = Side.

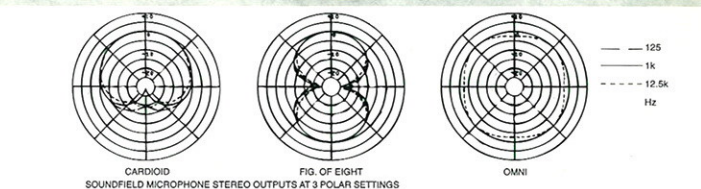
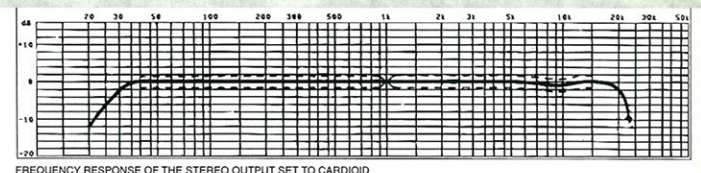
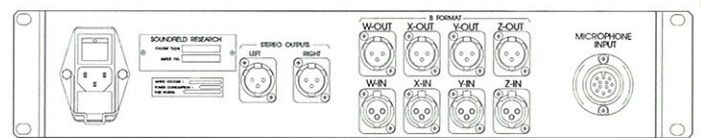
## MAIN FEATURES

- The only truly coincident stereo microphone in the world.
- The most accurate polar patterns in the world.
- Equally level frequency response to both on and off axis sounds.
- Totally steerable, horizontally and vertically, both live and in post production.
- Variable zoom, forwards or backwards, both live and in post production.
- Variable polar pattern and stereo capsule angle, both live and in post production.
- Remotely switchable for vertical or end-fire use.
- Remotely switchable X-Y, M-S output.
- Extremely low noise performance for digital recordings.
- Perfect mono compatibility from the stereo output.
- Ambisonic/Surround Sound Recording.

### SPECIFICATION ( $\pm 2dB$ )

|  |  |
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| Microphone front sensitivity at 0dB, trim 0      | 122dB  |
| Microphone acoustic line up at 30dB gain, trim 0 | 90dB SPL   |
| Maximum input for less than 0.5% THD             | 145dB SPL  |
| Frequency Range                                  | 20Hz - 20kHz   |
| Equivalent self noise, IEC 179 (Cardioid)        | 16 -17dB - A SPL   |
| Control Unit outputs at line-up                  | 0dBu, Balanced   |
| Maximum Output levels                            | 22dBu  |
| Minimum load                                     |  |
| B-Format & Stereo outputs                        | 600 ohms   |
| Monitor/Headphone outputs                        | 400 ohms per side  |
| Output connections                               |  |
| Left/Right                                       | Two balanced male XLR connectors                             |
| B-Format   | Four balanced male XLR connectors (Signal referenced ground) |
| Output impedance                                 |  |
| Left/Right                                       | 100R balanced  |
| B-Format   | 100R balanced  |
| Powering   | Mains 100V to 240V (UL Approved)                             |

Specifications subject to change without notice.



### MKV SYSTEM COMPRISES:

MKV Microphone  
MKV Control Unit  
Leather Microphone Case  
Shock Mount Assembly  
Foam Windshield  
20 Metre 12 pin Microphone Cable.

### OPTIONAL EXTRAS

10,20,50 & 100 metre cable.  
Rycote Windshield, Windjammer,  
Pistol Grip & Mount.



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