



## SoundField Technology: How Does It Work?



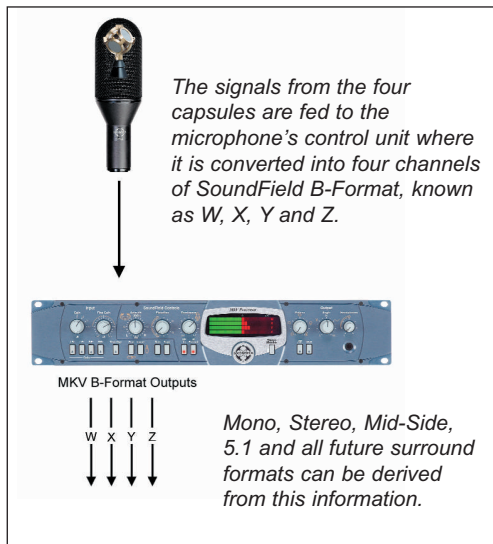
SoundField's Patented Capsule Array

Each SoundField system consists of a four capsule microphone and a control unit. The microphone can be situated up to 100m from its control unit.

The capsules are placed tightly together to eliminate the phase problems associated with 'spaced' multi-microphone set-ups.

From a 'single point source' sound is received from all directions, reproducing a realistic listening experience.

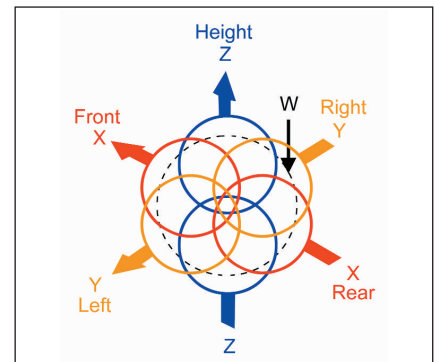
The four outputs from the capsules of SoundField microphones (called SoundField A-Format) are converted by the MKV, portable ST350 and SPS422B processors into four components known as SoundField B-Format. These convey all of the information of the entire soundfield, and are the three directional vectors - front/rear, left/right, up/down - the fourth being the central point from which the other three components are referenced.



B-Format is three dimensional acoustical information and consists of three figure of eight polar patterns called X, Y and Z plus one omni called W.

X gives Front to Rear depth information, Y gives Left to Right horizontal information and Z gives vertical height information. From the omni W sub-bass (LFE) is extracted.

SoundField are the only microphones in the world that generate B-Format.



The four channels of the B-Format signal are represented by three bidirectional and one omnidirectional pick-ups, all centred at a single point in space, and are labelled W (pressure), X (front/rear), Y (left/right), and Z (up/down). These signals contain all of the information required to reproduce a soundwave and are the essential elements needed to create any conventional mono, stereo, or surround format where the microphone positions and polar patterns can be fully variable. By recording the four B-Format outputs from a MKV, portable ST350, SPS422B, Digital DSF-1 or DSF-2 these components can be preserved for subsequent production and processing of current and all future surround formats.

