



FlexStar

48 - 120 channels



At a glance:



48 - 120 Channel FlexStar Array

48 - 120 microphones

1.8m - 3.2m diameter

recommended mapping frequencies: 100Hz - 10kHz

recommended measurement distance: 5 ...500m

average map dynamic: 12...15dB

This array has been designed for the following applications:

environmental applications

pass-by applications

windtunnel measurements

building acoustics

airplane fly-overs

This FlexStar array is available as a 48 - 120 channel measurement system with eight to twelve arms, mainly designed for outdoor applications.

Depending on the array geometry (microphone placing and channelcount) as well as a signal's spectral composition, the recommended measurement distance varies between five and 500 meters. Longer ranges are possible with consideration of wind and other influences.

The lightweight carbon structure array-body is designed as slim as possible to ensure easiest handling and accurate microphone positioning.

The wiring of the microphones is enclosed in and protected by the array-body which guarantees best possible acoustic transparency to measure accurate sound levels. The array is foldable and fits in a mid-size station wagon. This array design is optimized for portability, best map dynamic and spatial resolution, depending on the user's wishes. As this microphone array has 20dB backfield suppression by design it can be used in most outdoor applications.

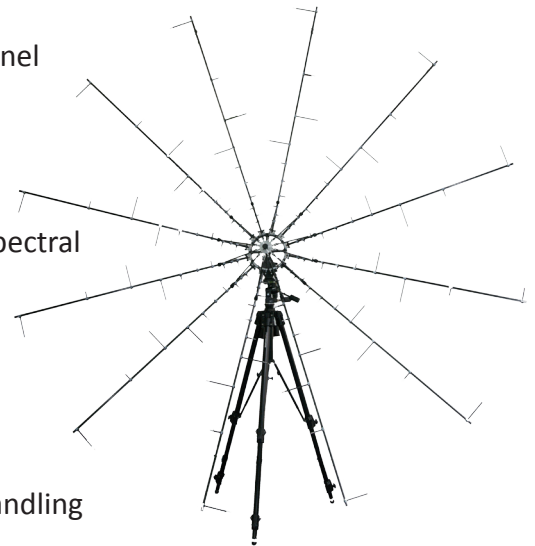
The built-in studio microphones have an extremely linear frequency response. All are carefully hand selected and calibrated to ensure stable sound pressure levels (+/- 0.5 dB). To allow long distances the array is connected to the data recorder via two differential SymBus microphone connector cables (max. 20m).

The array comes with an integrated fixed focus Ethernet camera, delivered in different sensor sizes, resolutions and frame rates.

The included high-end tripod allows set-up in almost any measurement environment imaginable. Array and tripod are supplied in transport bags.

This array construction allows customized array geometries such as spiral or wheel (both available as logarithmic geometries), double ring and the like.

With this system, high quality acoustic images are acquired within seconds.





Array Description



page 2

Technical Characteristics:

Carbon structure array-body diameter:

- 48 channels: ~1,9m
- 72 channels: ~2,3m
- 96 channels: ~2,8m
- 120 channels: ~3,2m

length of one arm:

- 48 channels: ~0,9m
- 72 channels: ~1,1m
- 96 channels: ~1,3m
- 120 channels: ~1,5m

Weight:

- 48 channels: ~7,5kg
- 72 channels: ~7,5kg
- 96 channels: ~8,5kg
- 120 channels: ~8,5kg

SymBus microphone connectors via differential conditioning

Advanced disturbance tolerant $\frac{1}{4}$ " symmetrically buffered electret pressure receivers (based on Sennheiser microphone capsule 4211)

Number of microphones: 48 - 120

Frequency response of microphones: 100hz...20kHz (\pm 3dB)

Dynamic range of microphones: 28...130dB (A-weighted)

Acoustic maps from 23dB - 130dB

Max. equivalent sound level: 130dB

Symmetrical output resistance: 100 Ω

Recommended measurement distance: 5...500m

Recommended mapping frequencies: 100Hz...10kHz

Single map dynamic: 12 - 15dB (CBF) using HDR 20 - 40dB

Connecting Array Cable length to data recorder: 1...20m

Video camera: Ethernet connector; different frame rates and resolutions available

Ingress protection code: IP20

Operating environment: 0°...45°C, up to 80% r.h.

Components:

- Array mounted on camera quick release plate
- High end Manfrotto tripod with three-way head and bag
- Protective transport box