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S502

ORTF Stereo Microphone
Instruction Manual
Classical Music Recording
Field Recording
Studio Recording
Drum set overhead live sound/recording

S502, ORTF Stereo

The S502 combined a pair of matched cardioid capsules in the ORTF arrangement - the most popular stereo recording microphone technique for loudspeakers as well as headphones reproductions.

Based on the successful S241 and S125 true condenser technology, Superlux exercise the same precision 1/2" gold coated diaphragm for the most precision sound pick-up. Simple and straightforward design provides experienced engineers the most convenient solution for stereo recording.

S502 includes followings:

- A3 plastic carrying box
- HM-30 shock mount clip
- 2 x S20 foam screen
- FM0.6AMM 0.6m Y-Splitter Cable, 5-pin female XLR plug convert to 2 3-pin XLR male plug.

Optional Accessories:

- FM10AMM: 10 meters, stereo XLR5F/XLR5M cable
- FM20AMM: 20 meters, stereo XLR5F/XLR5M cable
- FM30AMM: 30 meters, stereo XLR5F/XLR5M cable

Features

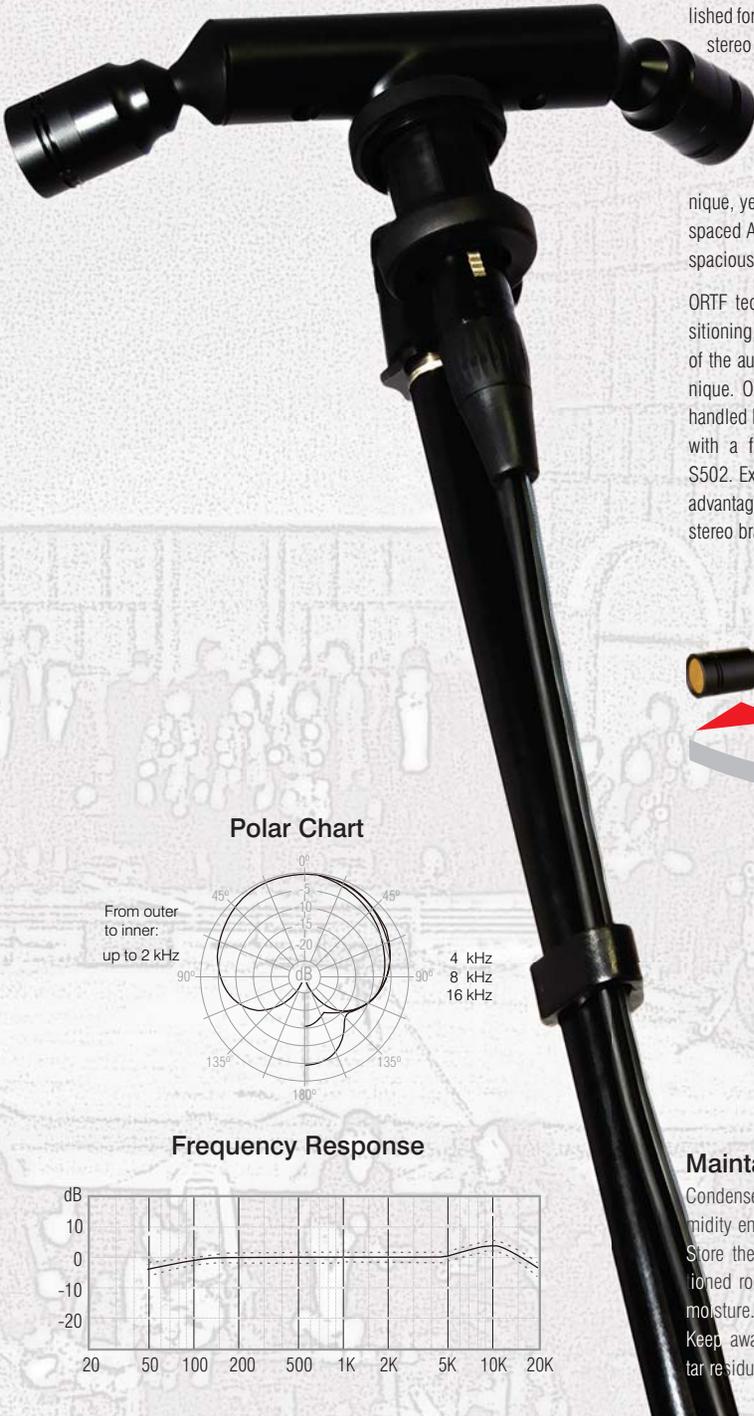
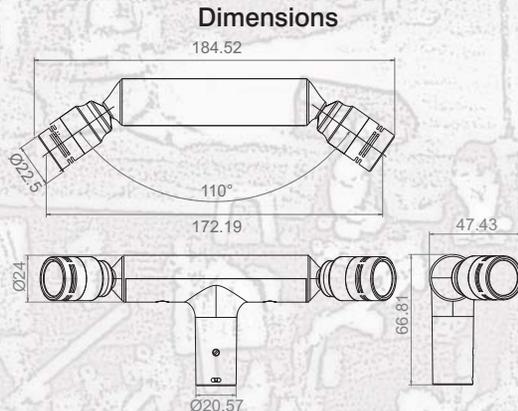
- Ture condenser, precision 1/2" capsules
- Fix capsules for ORTF standard
- Sturdy metal body
- 5 pin, balanced output
- Standard phantom power operation
- Shock mount included
- XLR 5 pins female to 2 x XLR 3 pins male plug cable included
- Excellent stereo image

ORTF Stereo Skill:

- When recording with ORTF microphone, keep the microphone at least 1 meter away from the ensemble.
- Adjust the microphone position so that the room space could be heard, while excellent direct sound is maintained.
- Keep the most of the ensembles/orchestra within 90° coverage.
- Keep the microphone high enough that each instruments/artists has an un-block direct path to the microphone.
- Set the PAN control to extreme Left and Right. Do not pan the signal in between L and R.
- Choose a high quality recorder, or mixer.
- Adjust the nominal recording level at about -18dBfs for classical music without compressor/limiter, while keep the peak at about -3dBfs to -6dBfs.
- Always use a shock mount.

Specifications

Type	Stereo 1/2" true Condenser
Acoustic	Pressure gradient
Polar Pattern	Cardioid, ref to polar chart lower right
Frequency Response	40--20,000Hz
	Low-cut -3 dB @ 30Hz
Sensitivity	-36dBV
(ref. 1Pa or 94dB SPL)	
Output Impedance	200Ω
Minimum Load Impedance	1KΩ
Equivalent Noise Level	18dB SPL
(A weighted)	
Max SPL (THD≤0.5%)	135dB SPL
Dynamic Range	117dB
Signal / Noise Ratio	76dB (IEC651 ref. to 94dB SPL)
	97dB (20dB headroom)
Power	Phantom 48 Vdc
Drain Current	2.25 mA/CH; 4.5 mA total
Pin Configuration	Pin 2/3 CH1, pin 4/5 CH2, pin 1 ground. Pin 2/4 hot.
Finish	Metal, black painted finish
Environmental conditions	The S502 operates between -10°C to +50°C (14°F to 122°F) with relative humidity between 0 to 95%
Cables	FM0.6AMM 0.6m Y-Splitter Cable, 5-pin female XLR plug convert to 2 3-pin XLR male plug.
Case	A3 plastic carrying box
Dimensions	Ref. to illustration below.
Net weight	245 grams (0.54 lbs), body only.



What is "ORTF"?

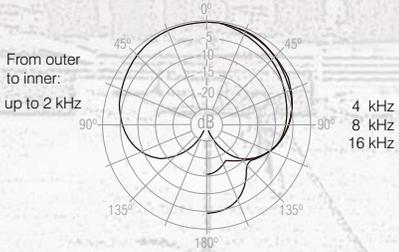
ORTF is brief from "Office de Radiodiffusion Télévision Française". This standard was established for stereo broadcasting that brings optimal stereo performance to most audio systems. 2 cardioid capsules arranged with 110° open angle and 17 cm space away.

The benefits of ORTF brings more spacious sound than coincident XY technique, yet avoid "hole in the center" problem of spaced AB technique which exhibits very good spacious sound.

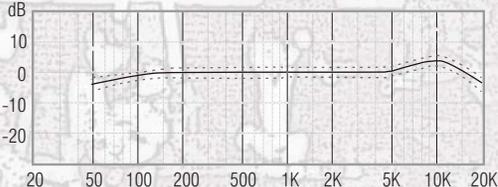
ORTF technique balanced excellent stereo positioning, and spacious sound that please most of the audience than AB or XY/MS stereo technique. ORTF is a technique that can be easily handled by beginners or video production crews with a fix ORTF stereo microphone such as S502. Experienced engineer can also takes this advantage with S502, or use a pair of S241 with stereo bracket for ORTF recording.



Polar Chart



Frequency Response



Maintainence

Condenser microphone shall be kept in low humidity environment for best sound performance. Store the condenser microphones in air-conditioned room or dehumidifier to keep away from moisture. Clean air is another important factor. Keep away from smoking environment to avoid tar residuals.