

What is DeltaBeam™ Technology?

DELTA BEAM™

DeltaBeam™ Technology is a unique, ground-breaking optimization of acoustic, analog and digital design that produces unmatched directional performance, operating versatility and ease of use.

- Provides an adaptive array to substantially reduce background acoustic interference.
- Improves sensitivity and pickup distance as compared to currently-available professional microphone technology.
- Provides a tool for the discrimination of specific sources, even in very high-noise environments.
- Provides greatly increased off-axis rejection, even for very loud interference.
- Provides outstanding low-frequency directionality (an amazing 78 dB maximum rejection at 200 Hz!) in a mic only 14 inches long.
- Minimizes the audibility of proximity effect.
- Minimizes nearfield effect on the low-frequency directionality of the array.
- Reduces susceptibility to mechanical noise, wind noise and racking as compared to currently-available professional microphones.

Incorporated in the AT895 design are: DSDA-PRO™ software (U.S. Patent No. 5,825,898) by Lamar Signal Processing, Ltd., a wholly-owned subsidiary of Andrea Electronics Corporation; DeltaBeam™ (U.S. Patent pending) and MicroLine® technologies by Audio-Technica. "DSDA-PRO" is a trademark of Lamar Signal Processing, Ltd.; "DeltaBeam" is a trademark of and "MicroLine" is a registered trademark of Audio-Technica.

AT895 System Components, Accessories and Accessory Kits

All AT895 components and accessories are interchangeable and available separately to augment systems or to be used as "field spares."

Basic System Components

AT895MIC Adaptive-array Microphone.

AT895CP Control Pack with attached belt clip.

AT895 Microphone Accessories

AT895PG Pistol-grip shock mount.

AT895SC Shock-mount Stand Clamp with 3/8"-16 threaded metal insert and 5/8"-27 threaded stud adapter for mounting the AT895 on a microphone stand.

AT895Z Zeppelin-type windscreen reduces on-axis wind noise while protecting the microphone.

AT895CP Control Pack Accessories

AT895BH Click-on Battery Housing holds three 9V batteries for self-contained AT895 operation.

AT895PS1 Switching Power Supply (90-263V AC input, 47-63 Hz), UL/CSA/TÜV-approved, with detachable "120V" 3-pin IEC power cord. Output 9V DC regulated, 1.5A max. Attached output cable is 6'/1.8 m long, terminating in an XLR4F-type connector.

AT895RP Rack-mount Plate for mounting one or two AT895CP Control Packs in a 1U 19" rack space.

Cables

AT895C-xx Special 6-conductor, shielded Cable with XLR7F-XLR7F connectors for use between the AT895 Microphone and AT895CP Control Pack. Available in 1.5'/0.4 m (C-1.5), 10'/3 m (C-10), 25'/7.6 m (C-25), 50'/15.2 m (C-50) and 100'/30.4 m (C-100) lengths. Custom lengths are available on special order from the A-T Service Department.

Conversion Kit

AT895CK Conversion Kit adds the components needed for an AT895/MK system to function as an AT895/RK system. Includes AT895BH Battery Housing, AT895PG Pistol-grip shock mount, AT895Z Zeppelin-type windscreen, AT895CC Carrying Case and AT895C-10 special 10'/3 m Cable.

Fisher Boom Kit

AT895FBK Fisher Boom Kit adapts the AT895 for use with a Fisher boom. Includes mounting bracket adapter and special 30'/9.1 m cloth-covered cable.

Carrying Case

AT895CC All-weather, protective carrying case with pressure equalization vent, custom-fitted to hold all AT895/RK System components.

AT895 Specifications†

Elements (5)

Fixed-charge back plate permanently polarized condenser

Pickup Pattern Modes

Full-field adaptive, Planar-adaptive, Line + Gradient

Frequency Response

60-12,000 Hz

High-pass Filter (Low-end Roll-off)

80 Hz, 18 dB/octave

Band-pass Filter

300-5,500 Hz, 6 dB/octave

Open Circuit Sensitivity

-23 dBV (70 mV) at 1 Pa*, 1 kHz

Output Impedance

450 ohms

Maximum Input Sound Level

117 dB SPL, 1 kHz at 1% T.H.D.

Noise, Typical (A-weighted)

24 dB

Dynamic Range (Typical)

93 dB, 1 kHz at Max SPL

Signal-to-Noise Ratio†

70 dB, 1 kHz at 1 Pa*

Monitor Headphone Output (Typical)

120 mW max. at 1 kHz, 1% T.H.D., into 20 ohm (each channel) stereo headphones

Monitor Headphone Jack

1/4" TRS, signal on both Tip and Ring

External Power Requirements

9-15V DC, 250 mA typical

Battery Requirement (AT895BH)

Three 9V (NEDA type 1604), not included

Battery Life, Typical (AT895BH)

Alkaline: 4-6 hours; Lithium: 10-12 hours

Weight

AT895 Microphone (less cable)

16.7 oz (473 g)

AT895CP Control Pack

10.0 oz (284 g)

AT895BH Battery Holder

(with typical batteries)

7.6 oz (215 g)

AT895PG Pistol Grip

10.0 oz (284 g)

AT895Z Zeppelin Windscreen

5.0 oz (142 g)

Dimensions

AT895 Microphone

14.00" (355.6 mm) long

2.75" (69.9 mm) max. diameter

1.18" (30.0 mm) handle diameter

AT895CP Control Pack

4.16" (105.7 mm) long

3.34" (84.8 mm) wide

0.98" (24.9 mm) high

AT895BH Battery Holder

4.13" (104.9 mm) long

3.28" (83.3 mm) wide

1.27" (32.3 mm) high

Output Connector (Control Pack)

Integral 3-pin XLRM-type

Cable

6-conductor shielded cable with

XLR7F-type connectors

AT895/RK: 10' (3.0 m) long

AT895/MK: 25' (7.6 m) long

†In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

*1 Pascal = 10 dynes/cm² = 10 microbars = 94 dB SPL

†Typical, A-weighted, using Audio Precision System One.



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Experience Total Rejection



AT895

Adaptive-array Microphone System

Most people don't like rejection.

But if you're a sound engineer in

a challenging audio environment,

off-axis rejection is exactly what

you need.

Enter the AT895 Adaptive-array

Microphone System . . .



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AT895

Adaptive-array Microphone System

The AT895 System is the newest, most effective means of highly-directional, quality audio acquisition.

Utilizing Audio-Technica's proprietary DeltaBeam™ technology, the AT895 System manipulates the amplitude and phase of its 5-element array by acoustical, analog and digital means, providing off-axis rejection of up to an astounding 80 dB.

The system continuously adapts to a changing soundscape, and is especially effective at suppressing unwanted low-frequency information. Background interference, mechanical noise, wind noise, proximity effect – all are minimized automatically. And, unlike some attempts at directive devices, the audio quality remains wideband and natural.

The AT895 provides great operating versatility and ease of use with three polar-pattern choices, three EQ selections and three powering options. Functioning equally well for handheld interview use and long-range sound pickup, the AT895 excels at tasks from ENG to sports broadcast to film production to surveillance operations.



AT895 Microphone and AT895CP Control Pack with AT895BH Battery Housing



AT895 Microphone with AT895PG Pistol-grip Shock Mount

The AT895 System is the newest, most effective means of highly-directional, quality audio acquisition.

A New Solution for Audio Acquisition

High-directivity, wideband audio quality, and the ability to suppress unwanted low-frequency information make the AT895 the best solution for many broadcast, film/video and surveillance/security applications.

Sports

In field sports such as football, soccer, rugby and field hockey, the AT895 delivers vivid audio of player contact, ball strikes and sideline conversations. In golf coverage, it eliminates wind noise rumble while providing precise directivity. And the AT895 is especially effective for sports common to international athletic competitions such as track and field, rowing, equestrian events and tennis.

Radio/TV/Film

The AT895's ability to attenuate audio clutter that masks desired sounds is invaluable for a multitude of field production situations such as interviewing, sound effects gathering and dialogue acquisition.

Surveillance/Security

The same capabilities that make the AT895 such an effective tool in broadcast also apply to security applications. Used alone or in conjunction with surveillance cameras, the AT895 provides exact audio pickup in locations such as hotels, casinos, banks, schools and amusement parks.

The Basic System

Two components are at the heart of every AT895 System: the AT895 Microphone and the AT895CP Control Pack.

AT895 Microphone

The AT895 Microphone itself is "all analog," housing one Audio-Technica MicroLine® element, four A-T cardioid elements mounted in a co-planar diamond configuration, and five mic preamps. The five amplified analog signals from the microphone elements are sent individually down a special detachable cable to the AT895CP Control Pack.

AT895CP Control Pack

The AT895CP Control Pack provides all the power, Digital Signal Processing, and control for the AT895. Output from the Control Pack is analog at mic-level (-23 dBV).

The lightweight, sturdy metal housing accepts a quick-change, click-on Battery Housing for totally self-contained operation, if desired. The Control Pack also operates on external 12-14V DC – from an Anton/Bauer or similar-type battery source, or from an AC adapter – via an industry-standard 4-pin XLR-type connection.

Control features on the AT895CP are:

- Three-position Mode (pickup pattern) switch which provides Full-field Adaptive, Planar-adaptive and Line + Gradient settings.
- Audio filter switch with Flat, High-pass and Band-pass settings.
- Monitor headphone jack with volume control.
- LCD battery condition indicator.
- Power switch with LED indicator.

Two System Configurations

The AT895 is available as the AT895/RK "Remote Kit" for field use, and as the AT895/MK "Mount Kit" for fixed-install applications.

AT895/RK Remote Kit includes:

- **AT895MIC** Adaptive-array Microphone
- **AT895CP** Control Pack with attached belt clip
- **AT895BH** Click-on Battery Housing
- **AT895PG** Pistol-grip shock mount
- **AT895Z** Zeppelin-type windscreen
- **AT895C-10** Special 6-conductor shielded Cable, 10' long
- **AT895CC** Carrying Case

AT895/MK Mount Kit includes:

- **AT895MIC** Adaptive-array Microphone
- **AT895CP** Control Pack
- **AT895SC** Shock-mount Stand Clamp
- **AT895PS1** Multi-input AC Power Supply with "120V" IEC detachable power cord
- **AT895C-25** Special 6-conductor shielded Cable, 25' long

All components and accessories are interchangeable and available separately to augment systems or to use as "field spares."

AT895 vs. Typical Shotgun Performance¹

Compare acceptance angles (at 3 dB down):							
Microphone	200 Hz	400 Hz	1 kHz	2 kHz	4 kHz	8 kHz	
Shotgun	60°	60°	60°	50°	30°	20°	
AT895	20°	20°	20°	20°	60°	50°	

Compare polar patterns at 200 Hz:		Compare maximum off-axis rejection:	
Microphone	200 Hz Rejection at 90°/270°	Microphone	Maximum Off-axis Rejection
Shotgun	15 dB	Shotgun	30 dB
AT895	70 dB	AT895	80 dB

¹Compared to typical performance of a professional-quality 15.5" line + gradient microphone (measurement conditions: 1 Pa at 0.5 m). Due to the adaptive nature of its digital processing, AT895 performance in actual field conditions will vary with the environment encountered.

Total Rejection