



**Electro-Voice**

# BROADCAST MICROPHONES

Studio Production



Field Production





## RE20

Since its debut in 1968, the RE20 is easily the single, most-heard radio host's microphone of all time, delivering a vocal tone that has become synonymous with the sound of the modern FM radio personality. A true industry standard and firm favorite of broadcasters and sound engineers worldwide for its smooth and linear characteristics on voice, the RE20's reputation is that of a "must-have" mic for any studio. Central to RE20's popularity is Electro-Voice's exclusive Variable-D™ technology for minimizing proximity effect tonal shifts, allowing the host to move freely around the mic without ever sounding "off-mic".

- The classic sound of the FM radio personality
- Variable-D™ minimizes proximity effect
- True cardioid with no coloration at 180° off-axis
- Extensive internal pop filtering
- Humbucking coil
- Bass roll-off switch (bass tilt 4.5dB @ 400Hz - 100Hz)

## RE27N/D

Due to its high-performance dynamic neodymium power plant and extensive filtering options, the RE27N/D offers flavors and performance challenging those of the highest-end studio condensers available. Deploying the same Variable-D™ technology as the RE20, the RE27N/D delivers exceptional depth, clarity, and resolution, while the radio personality works freely around the mic.

- Variable-D™ minimizes proximity effect
- Dynamic neodymium element brings 6 dB more sensitivity than RE20
- Extensive internal pop filtering
- Humbucking coil
- Three selectable shaping filters:
  - 6 dB from 250 Hz -100 Hz
  - 12 dB from 1 kHz -100 Hz
  - 3 dB high frequency roll-off



## RE320

Drawing from characteristics found in the RE20 and RE27N/D, the RE320 is a true hybrid, built to handle a wide variety of tasks very well. Powered by a modified RE27N/D engine design, the Variable-D™ RE320 deploys a high resolution diaphragm, delivering exceptional transient response and robust tonal balance. Extending its use in modern radio productions, RE320's filtering switch options create two distinctly different sonic signatures: one with a flat and linear articulation, and the other with a low-mid dip, extended low frequency sensitivity, and enhanced energy between 3.5kHz - 5kHz.

- Variable-D™ minimizes proximity effect
- Extensive internal pop filtering
- Humbucking coil
- Two selectable shaping filters:
  - Essentially flat from 45 Hz - 18 kHz
  - 30 Hz - 18 kHz with low-mid dip @ 380 Hz, and added energy between 3.5 kHz - 5 kHz



635A 635A/B 635N/D-B



## 635 Group

For decades, the classic 635 group of live interview microphones have been the most popular ENG mics in the world. Delivering the great sound and rugged durability industry professionals have come to expect from Electro-Voice, the elegant 635 models continue being the top choice of news crews and engineering managers. From the industry standard 635A in fawn beige, and its semi-gloss black sibling 635A/B, to its neodymium-based high-output 635N/D-B version, this classic group of day-in/day-out performers have cemented their place in field reporting history.

- Omnidirectional polar pattern
- Dynamic element with internal shock inhibitor
- Incredibly robust and durable
- Linear frequency response
- Four-stage pop and dust filter
- High-output neodymium magnet in 635N/D-B

## RE50 Group

The RE50-B is a go-to standard for news crews needing all of its robust performance features. Because its omnidirectional element uniformly captures near-field dialog while remaining unaffected by far-field ambience, the RE50B's ease-of-use and audio intelligibility are second to none. Its robust handle size not only provides the interviewer more to hold on to, but also serves as further isolation from handling noise. The RE50N/D-B delivers all of the extraordinary performance of the RE50-B, with the added benefit of a higher-output neodymium element for cameras and recording devices requiring its higher output.

- Omnidirectional polar pattern
- Dynamic element
- Extremely low handling noise via Dyna-Damp™ "mic-in-a-mic" shock-mount system
- Linear frequency response
- Four-stage pop filter controls wind and P-pop noise
- Withstands high humidity, temperature extremes and corrosive salt air

RE50-B

RE50N/D-B



635L 635L/B RE50L RE50N/D-L



**Extended-length models.** Interviewing styles vary, as do the preferences of various reporters assigned to a camera and sound crew. Many times, a reporter or producer may prefer a microphone with a longer reach in order to keep the reporter's hand out of the shot. The 635 and RE50 models are available in longer-handled versions for those whom prefer the added reach and ease of use.

- Each model has an overall length of 9.5" and offers identical sonic performance to the regular-sized version.

# Accessories, Techs, and Specs



## Requisite Accessories:



Designed specifically as a studio suspension mounting system for the RE20, RE27N/D, and RE320, the optional 309A is a robust solution for eliminating mechanical vibrations from transferring into the microphone. Its dual pivoting mechanisms allow for horizontal adjustment of the microphone angle, as well as adjustability at the point where the mount joins the microphone boom arm allowing the user to swing the microphone into position.



Although the RE20, RE27N/D, and RE320 contain extensive internal pop filtering, there may be times when additional protection from plosives is required. The optional WSPL-2 is designed to effortlessly slip onto the microphone to further attenuate wind blasts.

## Replacement Clips:

Model SAPL-2 for the RE20, RE27N/D, and RE320

Model 311 for the 635A, 635A/B, 635N/D-B, 635L, and 635L/B

Model 323S for the RE50-B, RE50N/D-B, RE50L, and RE50N/D-L

## Variable-D™: The Basics

A fundamental principal of acoustical behavior is that the volume and perceived frequency content of a sound is influenced by the distance between the source and the point of perception. When near to the source, a listener will hear a sound's full low-frequencies, defined midrange and articulate high end. But as distance increases, low-frequency content will fall off dramatically, with a corresponding "thinning-out" of the overall sound. Because microphones serve as the point of perception at the front-end of the audio signal chain, this phenomenon greatly influences how microphones are used and perform.

Normal directional microphones (cardioid, supercardioid and hypercardioid) generate increased bottom-end when used close-up. This is typically called the "proximity effect." While some vocalists like this effect and use it to enhance their performance, it is attainable only in close-up situations where the microphone capsule is within a couple of inches of the performer's mouth. When the distance between the microphone and the source is extended, the sound quality changes dramatically, losing a substantial amount of the low-frequency content— thus changing the tone of the performance drastically.

Electro-Voice's exclusive Variable-D™ eliminates this disadvantage. On the rear side of the diaphragm there are perforated pipes (interference ducts) with precise sonic slots at set distances. The ducts provide maximum damping that is completely uncolored and undistorted at 180° off-axis, ensuring the same frequency response as if the source was nearly on-axis. This characteristic is particularly beneficial when the performer (announcer, vocalist or instrumentalist) moves around while addressing the microphone. And, this same attribute is why radio announcers and DJs have chosen Electro-Voice Variable-D™ microphones for decades.

|                      | RE20v            | RE27N/D          | RE320   | RE50B<br>RE50L <sup>▲</sup>                | RE50N/D-B<br>RE50N/D-L <sup>†</sup>         | 635A & 635 A/B<br>635L & 635L/B <sup>‡</sup> | 635N/D-B         |
|----------------------|------------------|------------------|---|--|---|--|------------------|
| Mic Type             | Vocal/Instrument | Vocal/Instrument | Vocal/Instrument                                  | Handheld                                   | Handheld                                    | Handheld                                     | Handheld         |
| Element              | Dynamic          | Dynamic          | Dynamic   | Dynamic                                    | Dynamic                                     | Dynamic                                      | Dynamic          |
| Polar Pattern        | Cardioid         | Cardioid         | Cardioid  | Omni                                       | Omni  | Omni   | Omni             |
| Frequency Response   | 45 – 18,000 Hz   | 45 – 20,000 Hz   | 45 – 18,000 Hz (flat)<br>30 – 18,000 (alt filter) | 80 – 13,000 Hz                             | 80 – 13,000 Hz                              | 80 – 13,000 Hz                               | 80 – 13,000 Hz   |
| Impedance            | 150 Ω            | 150 Ω            | 150 Ω   | 150 Ω                                      | 150 Ω                                       | 150 Ω  | 150 Ω            |
| Open Circuit Voltage | 1.5 mV/Pascal    | 2.5 mV/Pascal    | 2.5 mV/Pascal                                     | 1.6 mV/Pascal                              | 2.2 mV/Pascal                               | 1.4 mV/Pascal                                | 2.8 mV/Pascal    |
| Power Requirements   | Passive          | Passive          | Passive   | Passive                                    | Passive                                     | Passive                                      | Passive          |
| Connector Type       | Three-pin XLR    | Three-pin XLR    | Three-pin XLR                                     | Three-pin XLR                              | Three-pin XLR                               | Three-pin XLR                                | Three-pin XLR    |
| Case Material        | Steel            | Steel            | Metal   | Aluminum                                   | Aluminum                                    | Steel  | Steel            |
| Finish               | Fawn Beige       | Satin Nickel     | Semi-gloss black                                  | Semi-gloss black                           | Semi-gloss black                            | Fawn Beige or<br>Semi-gloss black            | Semi-gloss black |
| Overall Length       | 9.53" (216.7 mm) | 9.53" (216.7 mm) | 9.53" (216.7 mm)                                  | 7.75" (197mm)<br>9.52 (242mm) <sup>▲</sup> | 7.75" (197mm)<br>9.52" (242mm) <sup>†</sup> | 5.94" (151mm)<br>9.55" (243mm) <sup>‡</sup>  | 5.84" (148mm)    |