

PROFESSIONAL **MICROPHONES**

WIRED MICROPHONES

Live performance, broadcast, installation, accessories, info

WIRELESS MICROPHONES

Accessories, info, application charts



Electro-Voice

FOR NEARLY 100 YEARS, ELECTRO-VOICE HAS DESIGNED AND ENGINEERED LEADING-EDGE SOUND REINFORCEMENT SOLUTIONS

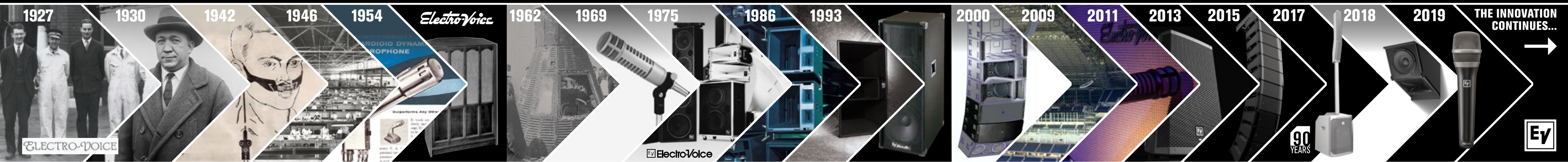
**PRODUCTS THAT EMPOWER THE PERFORMER,
EXCEED THE EXPECTATIONS OF THE AUDIO PROFESSIONAL
AND ELEVATE THE AUDIENCE EXPERIENCE.**

We have a passion for sound quality without compromise that we share with our users. This is built upon generations of hands-on professional knowledge — all geared towards producing a portfolio of best-in-class speakers and microphones that combine performance, reliability and value. Most importantly, our customers trust us to deliver on our deep understanding of what makes good sound. That's the challenge that drives us forward as leaders in the industry we helped create.

Electro-Voice stands apart as one of the few companies to design all components in-house — enclosures, waveguides, drivers — ensuring excellent quality for every audio application, from a standalone loudspeaker to a networked sound system. Our products literally speak for themselves: we strive for complete transparency and linearity in our transducers, so the need for external processing is minimized. Ultimately, it's our track record of patents that proves the point: we invent, others imitate.

We're devoted to the art and science of audio, always focused upon innovative ways to create a sensory experience that is second to none. We know our users can hear, feel and appreciate the difference.

THAT IS WHY WE LIVE FOR SOUND.





MICROPHONES

Electro-Voice lays claim to over 90 years of unmatched innovation in microphone design and manufacturing. Back in 1927, company founders Al Kahn and Lou Burroughs started out as true pioneers, establishing the industry standard for audio engineering excellence and reliability while continuously developing with breakthrough technologies, such as the humbucking coil for noise cancellation and Variable-D for proximity control.

Over nine decades later, Electro-Voice microphones continue to deliver the sound of history's most significant events. We've helped the world hear everything from the very first radio broadcasts to John Glenn's first orbit of the Earth; from Elvis and the Beatles to the largest world tours with today's biggest artists; from Knute Rockne using his "Electric Voice" at Notre Dame to the state-of-the-art wireless microphone systems at top sporting events; from Presidential inaugurations to tonight's evening news; from Dr. Martin Luther King's "I Have A Dream" speech to the Next Big Thing rehearsing in the garage next door.

Staying true to its roots as a great American brand, Electro-Voice continues to reach new heights. We were the first to advance microphone technology by defying the physics of acoustics with Variable-D proximity control, with N/Dym neodymium magnetic structures in dynamic mic capsules, and the first to bring fast, automatic channel-coordination to wireless microphones with ClearScan. But that's just the beginning—our engineers are constantly working on new ways to capture the full richness and nuance of your tone.

Whether you're outfitting a world tour, a house of worship, a professional studio or a school auditorium, Electro-Voice microphones offer great sound, durability, ergonomics and style. From time-tested classics to our latest innovations, every product is built to withstand both the rigors of performance and the scrutiny of your listeners. At Electro-Voice, making you sound your best—from soundcheck to encore, night after night, year after year—is both a longstanding tradition and our passion.





WIRED

MICROPHONES

LIVE PERFORMANCE MICROPHONES

Electro-Voice is a proven leader in the design and manufacture of live performance microphones. Preferred by performers the world over since the company was founded in 1927, Electro-Voice microphones have long been the choice of the music industry's greatest artists. Why do so many top-name performers choose Electro-Voice?

Trusted by artists and their skilled engineers and technicians, our legendary capsules are engineered to deliver the highest quality tone and clarity in any performance situation.

Rugged design and construction ensures that Electro-Voice capsules—the heart of any microphone's performance—remain unfazed by treatment that would ruin lesser brands.

Superior polar pattern design enables exceptional control of gain before feedback in both mains and monitors.

Performances that are sonically spectacular for both the audience and the artist. The Electro-Voice sound is synonymous with the highest quality and musicality.





The PL Series is a comprehensive family of vocal and instrument microphones for the professional live sound and studio community. Comprised of three vocal models and three instrument models, the PL Series' exceptional durability, sonic performance and contemporary styling meet the needs of today's sound system professional.

PL24S

ENTRY-LEVEL DYNAMIC VOCAL MICROPHONE

The PL24S is a professional-grade supercardioid dynamic vocal microphone designed for live sound applications. With its balanced frequency response, the PL24S's sonic performance is robust and articulate, delivering all-around vocal clarity in any live sound situation with the added benefit of a silent on/off switch.

- **Balanced blend** of controlled lows, palatable mid-range, and smooth high frequency content
- **Powerful neodymium magnet** structure
- **Memraflex grille** resists denting
- **Supercardioid** polar pattern
- **Dynamic** element

Mic application type	Vocal
Element type	Dynamic
Polar pattern	Supercardioid
Frequency response	80-16,000 Hz
Impedance	600 Ω
Sensitivity	2.2 mV/Pa
Power requirement	None / Passive
Connector type	3-pin XLR



PL44

MID-LEVEL DYNAMIC VOCAL MICROPHONE

The PL44 is a professional-grade supercardioid dynamic microphone designed for plug-and-play placement of vocals in any mix. Its high-mid frequency content design precisely lifts vocals in the mix to where they need to be, resulting in fast and effective vocal placement.

- **Voice-contoured for transparency** and high-mid lift
- **Powerful neodymium magnet** structure
- **Memraflex grille** resists denting
- **Supercardioid** polar pattern
- **Dynamic** element

Mic application type	Vocal
Element type	Dynamic
Polar pattern	Supercardioid
Frequency response	80-18,000 Hz
Impedance	600 Ω
Sensitivity	2.2 mV/Pa
Power requirement	None / Passive
Connector type	3-pin XLR



PL80a

PREMIUM DYNAMIC VOCAL MICROPHONE

The PL80a is a premium-grade supercardioid dynamic microphone designed to elegantly capture the character of vocals in live sound applications. Its EQ-friendly sonic contour adapts well to any vocal texture, allowing vocals to sit nicely in the mix without sounding harsh. Also available in classic beige PL finish (PL80c).

- **Incredible vocal power and clarity**
- **Robust, forgiving, EQ-friendly performance**
- **Superior off-axis rejection**
- **Supercardioid** polar pattern
- **Exceptionally cooperative** tonal characteristics
- **Memraflex grille** resists denting

Mic application type	Vocal
Element type	Dynamic
Polar pattern	Supercardioid
Frequency response	80-16,000 Hz
Impedance	600 Ω
Sensitivity	2.2 mV/Pa
Power requirement	None / Passive
Connector type	3-pin XLR



PL33

DYNAMIC KICK DRUM AND INSTRUMENT MICROPHONE

The PL33 is a supercardioid dynamic microphone designed to deliver the power, punctuation and snap of kick drums in sound reinforcement systems or recording studios of any size. Its frequency response is strategically crafted to deliver great kick drum sound with little, if any, additional EQ-ing.

- **Voiced specifically for kick drums** and low-frequency instruments
- **Powerful neodymium magnet** structure
- **Memraflex grille** resists denting
- **Supercardioid** polar pattern
- **Dynamic** element

Mic application type	Instrument
Element type	Dynamic
Polar pattern	Supercardioid
Frequency response	20-10,000 Hz
Impedance	150 Ω
Sensitivity	0.63 mV/Pa
Power requirement	None / Passive
Connector type	3-pin XLR



PL35

DYNAMIC TOM, SNARE AND INSTRUMENT MICROPHONE

The PL35 is a professional-grade supercardioid dynamic microphone designed to deliver the power, punctuation and natural tones of tom and snare drums in sound reinforcement systems or recording studios of any size. Delivery includes the unique DRC-1 drum rim clamp.

- **Voiced specifically for snare drums and tom-toms**
- **Powerful neodymium magnet** structure
- **Complete with DRC-1 drum rim**
- **Supercardioid** polar pattern
- **Excellent isolation** from surrounding drums
- **Dynamic** element

Mic application type	Instrument
Element type	Dynamic
Polar pattern	Supercardioid
Frequency response	50-16,000 Hz
Impedance	600 Ω
Sensitivity	2.2 mV/Pa
Power requirement	None / Passive
Connector type	3-pin XLR



PL37

CONDENSER OVERHEAD AND INSTRUMENT MICROPHONE

The PL37 is a tight-cardioid condenser microphone designed to capture the crisp detail of cymbals, hi-hats and percussion instruments on stage or in the studio. The PL37 delivers the dialed-in tone and detailed response to percussive transients that professional drummers and sound system engineers require.

- **Small diaphragm condenser**
- **Voiced for drum overheads**, hi-hat and acoustic stringed instruments
- **Memraflex grille** resists denting
- **Tight cardioid** polar pattern

Mic application type	Instrument
Element type	Condenser
Polar pattern	Tight cardioid
Frequency response	50-16,000 Hz
Impedance	200 Ω
Sensitivity	6 mV/Pa
Power requirement	11 to 52 VDC
Connector type	3-pin XLR



ND SERIES MICROPHONES

YOUR SOUND STARTS HERE



INSTRUMENT MICS

INSTRUMENTS	ND44	ND46	ND66	ND68
Choirs (overhead stereo pair)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Choirs (spaced area placement)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Studio. Acoustic instruments	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Orchestra (areas or close mic)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Brass/woodwinds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Acoustic guitar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mandolin	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Dulcimer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Violin, viola, cello	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Acoustic upright bass	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Guitar amp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bass amp	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Leslie cabinet (top)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Leslie cabinet (low rotor)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Acoustic piano	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Kick drum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Snare drum	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mounted tom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Floor tom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hi-hat	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Drum kit overhead	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Conga	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Timbale	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cymbal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Percussion array	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Each ND Series model is equipped with features that are unique to both its price point and its particular application – all designed to offer superior sound quality, acoustic control and robustness. At the heart of the new dynamic models is a new large-diaphragm capsule design which takes the technology of the original N/Dym capsule to new levels of sonic performance.

Vocalists can select a specific ND Series model to provide optimal results according to singing style and stage volume. Sound engineers and musicians will benefit from an easy set-up due to innovative mechanical solutions that solve typical instrument mic placement challenges.

HANDHELD VOCAL MICS

LEAD & BACKGROUND VOCAL	ND76	ND76S	ND86	ND96
Cardiod polar pattern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supercardioid polar pattern	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

*with extremely high gain-before-feedback

ND SERIES

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ND76

DYNAMIC CARDIOID VOCAL MICROPHONE

The ND76 is designed to be a workhorse for excellent all-around voice applications. The ND76 capsule is precisely tuned to deliver crisp, clear, and balanced vocal presence, as well as superior isolation from sound on the stage.

- **Excellent all-around vocal performance** delivering a crisp, clear and balanced sound
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Shock-mounted capsule** minimizes handling noise
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



ND76S

DYNAMIC CARDIOID VOCAL MICROPHONE WITH ON/OFF SWITCH

The ND76S is workhorse dynamic cardioid vocal microphone with a near-silent on/off switch which allows users the convenience of turning on and off the mic as needed. ND76S is the switched variant of the ND76.

- **Excellent all-around vocal performance** delivering a crisp, clear and balanced sound
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Shock-mounted capsule** minimizes handling noise
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting
- **On/off switch**



ND86

DYNAMIC SUPERCARDIOID VOCAL MICROPHONE

The ND86 is designed for excellent acoustic control in even the largest of venues: present with a smooth and detailed sound

- **Excellent acoustic control** in even the largest of venues: present with a smooth and detailed sound
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Shock-mounted capsule** minimizes handling noise
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



ND96

DYNAMIC SUPERCARDIOID VOCAL MICROPHONE

The ND96 is designed for excellent acoustic control on very loud stages with special structural and acoustical designs to create performance characteristics allowing the microphone's gain before feedback in a mix to be significantly louder than most microphones.

- **Exceptionally high gain-before-feedback** with excellent acoustic control on very loud stages
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Vocal presence emphasis** switch selects between alternate sonic signatures
- **Shock-mounted capsule** minimizes handling noise
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



ND44

DYNAMIC TIGHT CARDIOID INSTRUMENT MICROPHONE

Designed for excellent performance on drums and other rhythm section instruments, the ND44 capsule is precisely tuned to deliver the aggressive and punctuated sound these instruments produce, as well as excellent isolation from the sound of other nearby instruments. Its rotating low-profile head and drum rim clamp make mic placement easy anywhere on a drum set.

- **Aggressive and punctuated sound** with excellent acoustic control
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Easy mic placement** with low-profile pivoting head
- **DRC-2 drum rim clamp** with easy-to-use finger loop design
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



ND46

DYNAMIC SUPERCARDIOID INSTRUMENT MICROPHONE

Designed for capturing a wide of variety instrument sounds, the ND46 capsule is tuned to deliver a lively and balanced sound, as well as excellent isolation from the sound of other nearby instruments, and its unique locking pivoting head makes mic placement easy and precise.

- **Excellent acoustic isolation** with deep lows and top-end punctuation
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Extremely high SPL handling**
- **Tight cardioid polar pattern**
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



ND66

CONDENSER CARDIOID INSTRUMENT MICROPHONE

The small diaphragm condenser ND66 is vividly captures the dynamic nature of percussive and stringed instruments, and delivers a clean, crisp and detailed sound. With the its exclusive locking rotating head, achieve ideal mic placement in virtually any situation by merely pushing a button, rotating the head into position, then releasing the button to lock the head's position.

- **Premium small-diaphragm condenser** element
- **Clean, crisp and detailed** condenser sound
- **Easy mic placement** with locking pivoting head
- **Selectable -10 and -20 dB pads**
- **Selectable 75 Hz and 150 Hz high-pass filters**



ND68

DYNAMIC SUPERCARDIOID BASS DRUM MICROPHONE

The ND68 is a high-performance kick drum and low-frequency instrument microphone. Its supercardioid polar pattern provides excellent acoustic isolation from nearby instruments, and its voicing characteristics deliver a deep low end, relaxed midrange, as well as high-frequency content for aggressive top-end punctuation.

- **Excellent acoustic isolation** with deep lows and top-end punctuation
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Voiced specifically for kick drums** and low-frequency instruments
- **Extremely high SPL handling**
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting

Mic application type	Vocal	Vocal	Vocal	Vocal
Element type	Dynamic	Dynamic	Dynamic	Dynamic
Polar pattern	Cardioid	Cardioid	Supercardioid	Supercardioid
Frequency response	Close: 30 Hz-17 kHz Far: 70 Hz-17 kHz	Close: 30 Hz-17 kHz Far: 70 Hz-17 kHz	Close: 30 Hz-17 kHz Far: 70 Hz-17 kHz	Close: 30 Hz-15 kHz Far: 140 Hz-15 kHz
Impedance	350 Ω	350 Ω	350 Ω	350 Ω
Sensitivity	2.4 mV/Pa	2.4 mV/Pa	2.4 mV/Pa	3.3 mV/Pa
Power requirement	None / Passive	None / Passive	None / Passive	None / Passive
Connector type	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR

Mic application type	Instrument	Instrument	Instrument	Instrument
Element type	Dynamic	Dynamic	Condenser	Dynamic
Polar pattern	Tight cardioid	Supercardioid	Cardioid	Supercardioid
Frequency response	80Hz-16.5kHz	70 Hz-18 kHz	50 Hz-20 kHz	20 Hz-11 kHz
Impedance	350 Ω	350 Ω	200 Ω	1500 Ω
Sensitivity	2.4 mV/Pa	2.4 mV/Pa	10 mV/Pa	0.8 mV/Pa
Power requirement	None / Passive	None / Passive	48 VDC	None / Passive
Connector type	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR

RE PERFORMANCE SERIES

REFINED DESIGN, PURE PERFORMANCE

With sonic quality and versatility proven at the highest levels, the Performance Series from EV's RE class of microphones are trusted industry standards for both stage and studio use. These premium-grade handheld and stand-mount microphones boost your stage and studio sound from good to great, delivering the depth, personality and sheen required for professional performances and recording.



RE320

VARIABLE-D VOCAL AND INSTRUMENT MICROPHONE

The RE320 delivers exceptional performance for a wide variety of uses. Satisfying the critical demands of music producers and performers, RE320's open, detailed, and natural performance provides the versatility required for professional vocal or instrument production in the studio or on stage. Its high-output neodymium capsule produces loads of gain and is an ideal match for any grade of input processing preamps.

- **Open, detailed, and natural tonal reproduction**
- **Vivid, high-definition transient response**
- **Substantial integrated pop filters**
- **Dual-voicing switch** selects from two response curves
- **Variable-D** minimizes proximity effect
- **Humbucking coil** guards against line hum



RE420

PREMIUM CONDENSER CARDIOID VOCAL MICROPHONE

The RE420 is a premium-grade, high-performance, condenser cardioid vocal microphone. Designed to reveal the exceptional detail and vivid clarity synonymous with condenser elements, it skillfully delivers the lyrical finesse required by expressive vocal performers. The sonic signature is rich, detailed and full-bodied, with a warm and clear low end, natural and present midrange, and an open, crisp and detailed high end.

- **Premium condenser** element delivers a highly-detailed, rich, and full bodied sound
- **Cardioid polar pattern** provides excellent acoustic isolation with a comfortable working range
- **Multi-stage pop filter** minimizes breath blasts and plosives
- **Selectable high-pass filter** reduces undesirable low frequency content when engaged
- **Vibration-absorbing internal shock mount** minimizes handling noise



RE520

PREMIUM CONDENSER SUPERCARDIOID VOCAL MICROPHONE

The RE520 is a premium-grade, high-performance, condenser supercardioid vocal microphone. Designed to reveal the exceptional detail and vivid clarity synonymous with condenser elements, it elegantly delivers the lyrical finesse required by expressive vocalists, while controlling off-axis sound from near-by sources. The sonic signature is detailed, full and vivid, with a warm and clear low end, natural and present midrange, and an open, crisp and detailed high end.

- **Premium condenser** element delivers a highly-detailed, full, and vivid sound
- **Supercardioid polar pattern** provides excellent acoustic isolation and feedback control
- **Multi-stage pop filter** minimizes breath blasts and plosives
- **Selectable high-pass filter** reduces undesirable low frequency content when engaged
- **Vibration-absorbing internal shock mount** minimizes handling noise



RE920

PREMIUM CONDENSER INSTRUMENT MICROPHONE

Featuring a specially designed instrument-mount for clipping to musical instruments, the cardioid condenser RE920 is a premium-grade solution for micing drums, brass, woodwinds and stringed instruments. Terminated in a TA4F connector for use with EV and Telex bodypack transmitters, it can also be hard-wired with an optional TXA XLR preamp.

- **Unidirectional horn and drum mic**
- **Back-electret condenser** element
- **TA4F connector** for wireless bodypacks
- **High SPL** handling
- **Custom clip securely mounts** to a variety of instruments
- **A wired solution** when coupled with a TXA

Mic application type	Vocal / Instrument	Vocal	Vocal	Instrument
Element type	Dynamic	Condenser	Condenser	Condenser
Polar pattern	Cardioid	Cardioid	Supercardioid	Cardioid
Frequency response	30-18,000 Hz (kick curve) 45-18,000 Hz (general curve)	50-20,000 Hz	40-20,000 Hz	80-18,000 Hz
Impedance	150 Ω	200 Ω	200 Ω	1000 Ω
Sensitivity	2.5 mV/Pa	5.6 mV/Pa	5.6 mV/Pa	1.3 mV/Pa
Power requirement	None / Passive	48 VDC	48 VDC	5 VDC
Connector type	3-pin XLR	3-pin XLR	3-pin XLR	TA4F

WIRED
MICROPHONES

BROADCAST MICROPHONES

Led by the industry-standard RE20 and RE27N/D Variable-D vocal microphones, Electro-Voice broadcast studio and field production microphones confidently uphold their legendary reputation for excellence. These number-one choices for voiceover and interview work in radio, podcasting, and television continue to define the sound and the reliability demanded by broadcast professionals around the world.

In broadcast field production, where unquestioned reliability and spot-on sonic performance are prime requirements, Electro-Voice mics are the industry's go-to workhorses. For decades, you've seen Electro-Voice microphones in the hands of reporters and news correspondents across the globe, capturing interviews ranging from the President of the United States to the family next door. EV's RE50 and 635A mics are famous in broadcast, television and radio in-the-field broadcasts, setting the world standard for ENG (electronic news gathering) and EFP (electronic field production). Extremely rugged and able to withstand high humidity, temperature extremes and corrosive environments, such as salt air, Electro-Voice field production microphones combine excellent sound performance with our legendary "Buchanan Hammer" durability.



RE BROADCAST SERIES

STUDIO PRODUCTION CLASSIC ICONS



Building on a long legacy of outstanding performance and reliability, Electro-Voice studio production microphones have earned their place at the top of the expanding broadcast industry. From the top-name radio station's announcers booth to the grass-roots podcast and recording studio, EV radio, media, and content creation microphones are the number-one choice for anyone who makes their living with their voice. Led by the legendary RE20 Variable-D vocal microphone, our studio broadcast line sets the standard professionals everywhere depend on.

WHY VARIABLE-D MATTERS

In addition to merely capturing sound, directional microphones have a byproduct called proximity effect. This causes your voice to become unnaturally bass-heavy when speaking close to the mic, and to sound significantly thinner when you move farther away – consistent tone therefore becomes a moving target. Unlike any other directional mics, Variable-D mics minimize those dramatic shifts, allowing you to move freely around the mic with the confidence that your vocal tone will remain even and true.



RE20
BROADCAST AND PODCAST MICROPHONE WITH VARIABLE-D

The RE20 is truly an industry standard, a firm favorite among broadcasters, podcasters, and sound engineers worldwide. Its Variable-D acoustic design and heavy-duty internal pop filter excel for close-in voice work, while an internal element shock mount reduces vibration-induced noise. Available as RE20 with classic finish, or RE20-BLACK with an elegant, low-reflection dark charcoal finish.

- **Smooth, controlled, and ultra-natural** tonal reproduction
- **Voice tailored frequency response**
- **Substantial integrated pop filters**
- **Bass roll-off switch**
- **Variable-D** minimizes proximity effect
- **Humbucking coil** guards against line hum

RE27N/D
BROADCAST AND PODCAST MICROPHONE WITH VARIABLE-D

The RE27N/D is a high-performance, neodymium-equipped industry-standard broadcast and podcast microphone. Superb vocal resolution and depth have made the versatile RE27N/D a favorite of broadcasters, podcasters and recording studios around the world.

- **Open, crisp, and detailed** tonal reproduction
- **Highly-defined vocal characteristic**
- **Substantial integrated pop filters**
- **3 voice-shaping filter switches**
- **Variable-D** minimizes proximity effect
- **Humbucking coil** guards against line hum

RE320
BROADCAST AND PODCAST MICROPHONE WITH VARIABLE-D

RE320 is designed to deliver exceptional performance for a wide variety of uses. Broadcasters, podcasters, and voice actors around the World trust that their vocal sound will be open, detailed, and natural with RE320's Variable-D performance. With its neodymium capsule producing loads of gain, the RE320 is an ideal match for any grade of input processing preamps.

- **Open, detailed, and natural** tonal reproduction
- **Vivid, high-definition transient response**
- **Substantial integrated pop filters**
- **Dual-voicing switch** selects from two response curves
- **Variable-D** minimizes proximity effect
- **Humbucking coil** guards against line hum

Mic application type	Vocal	Vocal	Vocal
Element type	Dynamic	Dynamic	Dynamic
Polar pattern	Cardioid	Cardioid	Cardioid
Frequency response	45 Hz-18,000 Hz	45 Hz-20,000 Hz	30-18,000 Hz (kick curve) 45-18,000 Hz (general curve)
Impedance	150 Ω	150 Ω	150 Ω
Sensitivity	1.8 mV/Pa	2.5 mV/Pa	2.5 mV/Pa
Power requirement	None / Passive	None / Passive	None / Passive
Connector type	3-pin XLR	3-pin XLR	3-pin XLR

RE BROADCAST
SERIES

FIELD PRODUCTION RUGGED DEPENDABILITY



There's a reason that EV's RE series field production mics are legendary as broadcast workhorses. Designed for ENG (electronic news gathering) and EFP (electronic field production), the top-notch television and radio microphones deliver the excellent sound performance that broadcast professionals demand, and they are also extremely rugged, built tough to hold up to years of work in the field. Able to withstand adverse conditions including high humidity, temperature extremes and corrosive environments, such as salt air, these mics are ready to work no matter where the story takes you.



RE50B

HANDHELD INTERVIEW MICROPHONE

The RE50B is the industry standard for handheld interview mics in broadcast television production. Used on interviews with everyone from the President of the United States to the family next door, the RE50B is heard and seen in the reporting of news correspondents around the globe. RE50B has the standard length 7.75" handle.

- **Natural sounding omnidirectional polar pattern**
- **Dynamic element**
- **Extremely low handling noise** via Dyna-Damp "mic-in-a-mic" shock-mount system
- **Four-stage dust and pop filter** eliminates wind noise and p-pops
- **Withstands high humidity, temperature extremes and corrosive salty air**
- **7.75" handle length**



RE50L

HANDHELD INTERVIEW MICROPHONE WITH LONG HANDLE

The RE50L delivers all of the dependable performance of the RE50B with the added interviewing convenience of its longer 9.5" handle.

- **Natural sounding omnidirectional polar pattern**
- **Dynamic element**
- **Extremely low handling noise** via Dyna-Damp "mic-in-a-mic" shock-mount system
- **Four-stage dust and pop filter** eliminates wind noise and p-pops
- **Withstands high humidity, temperature extremes and corrosive salty air**
- **9.5" handle length**

Mic application type	Voice	Voice
Element type	Dynamic	Dynamic
Polar pattern	Omnidirectional	Omnidirectional
Frequency response	80 Hz to 13,000 Hz	80 Hz to 13,000 Hz
Impedance	150 Ω	150 Ω
Sensitivity	1.8 mV/Pa	1.8 mV/Pa
Power requirement	None / Passive	None / Passive
Connector type	3-pin XLR	3-pin XLR

WIRED
MICROPHONES

INSTALLATION MICROPHONES

Electro-Voice remains on the cutting edge of installed sound technology through innovative adaptation of our legendary RE and PolarChoice condenser capsules. These premium-grade elements are world-renowned for their superb sonic performance.

Electro-Voice's breakthrough PolarChoice technology sets new standards in installed sound convenience, reliability and performance. Designed for versatility and error-free setup, each PolarChoice model incorporates four switchable polar patterns strategically designed for installation-specific applications. Selection and deployment is as easy as choosing the best physical design for the situation and setting the polar pattern switch for the appropriate coverage. Should installation conditions change, a simple switch of the pattern is all it takes to meet the new requirements.



PolarChoice

WIRED SOLUTIONS

FLEXIBLE RELIABILITY



Available in a variety of boundary, podium and desktop models, EV's PolarChoice installation microphones feature user-selectable polar patterns—omnidirectional, cardioid, supercardioid and hypercardioid (figure "8" on the PC Boundary)—that allow a single mic to be used in multiple situations. Deploying EV's exclusive RF Shield technology, PolarChoice microphones now maximize protection from destructive RF and GSM interference.



PC Boundary

MULTI-PATTERN BOUNDARY LAYER MICROPHONE

The PC Boundary is a very low-profile area microphone that can be used on any surface and with virtually any mic mixer. Featuring multiple on-board polar patterns—three directional and one omni—the PC Boundary is ideal for any installation where premium-grade area coverage and protection from RF/GSM interference are required.

- **Easy switching** between omni, cardioid, supercardioid or figure "8" polar patterns
- **Versatility** for different acoustic environments
- **Consistent microphone voicing** across all four patterns
- **Easy-to-use mute switch**, programmable for either latching on/off or momentary operation
- **RF Shield guards** against RF/GSM interference



PC Desktop

MULTI-PATTERN DESKTOP MICROPHONE

The PC Desktop is a free-standing tabletop microphone with a dual-section gooseneck, an elegant base and RF Shield protection from RF/GSM interference. With easy switching between four polar patterns—omni, cardioid, supercardioid or hypercardioid—the PC Desktop is always the right microphone, even under a variety of conditions.

- **Easy switching** between omni, cardioid, supercardioid or hypercardioid polar patterns
- **Mute switch with LED can be programmed** as either push on/off or push-to-mute
- **Smooth, uniform frequency response** in all patterns
- **Extended low-frequency response and switchable high-pass filter**
- **RF Shield guards** against RF/GSM interference

Available with 12" or 18" gooseneck



PC Plus

MULTI-PATTERN PODIUM MICROPHONE

The PC Plus with dual-section gooseneck is the first podium microphone that has the flexibility to be installed into any environment. Delivering RF/GSM protection via RF Shield and four switchable PC polar patterns, it can be mounted via a standard three-pin XLR connector or permanently flush-mounted to a podium or tabletop.

- **Easy switching** between omni, cardioid, supercardioid or hypercardioid polar patterns
- **Mute switch with LED can be programmed** as either push on/off or push-to-mute
- **Smooth, uniform frequency response** in all patterns
- **Extended low frequency response and switchable high-pass filter**
- **RF Shield guards** against RF/GSM interference

Available with 12" or 18" gooseneck



PC/XLR

MULTI-PATTERN GOOSENECK MICROPHONE WITH XLR

The PC/XLR podium microphone with dual-section gooseneck is designed for installation into an existing three-pin XLR-F jack. Offering RF/GSM protection via RF Shield and four switchable PC polar patterns, it can be mounted into flush-mount, recessed or standard connectors on a podium or tabletop.

- **Easy switching** between omni, cardioid, supercardioid or hypercardioid polar patterns
- **Smooth, uniform frequency response** in all patterns
- **The most natural-sounding podium mic on the market**
- **Mates well with the CPSM recessed shock mount accessory**
- **RF Shield guards** against RF/GSM interference

Available with 12" or 18" gooseneck

Mic application type	Boundary	Gooseneck	Gooseneck	Gooseneck
Element type	Dual condenser	Dual condenser	Dual condenser	Dual condenser
Polar pattern	Omni, Cardioid, Supercardioid, Figure 8	Omni, Cardioid, Supercardioid, Hypercardioid	Omni, Cardioid, Supercardioid, Hypercardioid	Omni, Cardioid, Supercardioid, Hypercardioid
Frequency response	50 Hz to 20,000 Hz	50 Hz to 20,000 Hz	50 Hz to 20,000 Hz	50 Hz to 20,000 Hz
Impedance	200 Ω	200 Ω	200 Ω	200 Ω
Sensitivity	31.5 mV/Pa	5.6 mV/Pa	5.6 mV/Pa	5.6 mV/Pa
Power requirement	12-52 VDC	12-52 VDC	12-52 VDC	12-52 VDC
Connector type	3-pin XLR	3-pin XLR	3-pin XLR and 3-pin Phoenix	3-pin XLR

RE INSTALL SERIES

SONIC INTEGRITY



The RE Installation series is a group of sonically superior microphone solutions that are optimized for installation. Featuring EV's premium-performance condenser capsules, the practical RE Installation series lets professional sound contractors offer their customers EV quality for great sound and worry-free reliability.



RE90B HALF-CARDIOID PATTERN BOUNDARY LAYER MICROPHONE

A boundary microphone with "half-cardioid" pick-up pattern, built-in equalization and RF Shield protection from RF/GSM interference, the RE90B is ideal for video and teleconferencing systems, boardrooms, classrooms or houses-of-worship. Delivers every word fully and naturally.

- **Boundary layer** microphone
- **Half-cardioid polar pattern**
- **Ultra-thin profile** (16 mm) housing
- **Rubber non-slip bottom pad** and strong steel screen
- **Integrated pop filter**
- **RF Shield** guards against RF/GSM interference

Also available in white (RE90BW)



RE90P CARDIOID PATTERN GOOSENECK MICROPHONE

A podium microphone with dual-section gooseneck and RF Shield protection from RF/GSM interference, the RE90P achieves sonically superior performance at a very affordable price. Featuring EV's premium performance RE90 capsules and in-line preamps, these goosenecks deliver the great sound and reliability that professional sound contractors demand.

- **Podium** microphone
- **Ultra-thin dual-section gooseneck is strutted, yet flexible**
- **Uniform frequency response** and polar pattern
- **RF Shield** guards against RF/GSM interference

Available with 12" or 18" gooseneck



RE90H CARDIOID PATTERN HANGING MICROPHONE

Compact hanging-style condenser microphone with RF Shield protection from RF/GSM interference. Ideal for choral, instrumental, vocal groups and live theater. Controlled cardioid polar response for distant sound pick-up without feedback. 25' braided and shielded cable with built-in preamp.

- **Hanging** installation microphone
- **Internal preamp**
- **Very uniform** polar pattern
- **Integrated 25' shielded low-noise cable**
- **RF Shield** guards against RF/GSM interference

Also available in white (RE90HW)



RE92H CARDIOID PATTERN HANGING MICROPHONE WITH HPF

Designed specifically for applications where the condenser microphone needs to be suspended from above the sound source. The RE92H is ideal for theater, house of worship or any application where a small, high-quality mic needs to be "heard but not seen."

- **Hanging** installation microphone
- **Wide, smooth frequency response**
- **Cardioid** polar pattern
- **12 dB/octave switchable high-pass filter**
- **Transformerless** differential output to drive long cables
- **RF Shield** guards against RF/GSM interference

Also available in white (RE92HW)



RE92L CARDIOID PATTERN LAVALIER MICROPHONE

The RE92L is a professional-quality miniature cardioid electret condenser lavalier microphone. Its excellent sound quality and small size make it the perfect choice for miking speech in house of worship, broadcast, presentation and theater applications. Terminated with three-pin XLR.

- **Wide, smooth frequency response**
- **Tight cardioid** polar pattern
- **Super-low noise** condenser capsule
- **4' cable** terminates at in-line preamp
- **12 dB/octave switchable high-pass filter**
- **XLR output**

Mic application type	Boundary	Gooseneck	Hanging	Hanging	Lavalier
Element type	Condenser	Condenser	Condenser	Condenser	Condenser
Polar pattern	Half cardioid	Cardioid	Cardioid	Cardioid	Cardioid
Frequency response	80 Hz to 15,000 Hz	70 Hz to 15,000 Hz	75 Hz to 15,000 Hz	40 Hz to 20,000 Hz	40 Hz-20,000 Hz
Impedance	200 Ω	200 Ω	200 Ω	200 Ω	250 Ω
Sensitivity	25 mV/Pa	4.5 mV/Pa	27 mV/Pa	5.6 mV/Pa	5.6 mV/Pa
Power requirement	9-52 VDC	9-52 VDC	9-52 VDC	24-52 VDC	24-52 VDC
Connector type	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR	3-pin XLR

PAGING MICROPHONES

RELIABLE WORKHORSES



With robust durability and clear voice intelligibility at the heart of these paging and critical communications microphones, each model in the Electro-Voice and Telex paging microphone lines rise to all challenges, delivering on the reliable workhorse reputation they have earned.

785L

GOOSENECK PAGING MICROPHONE, NO SWITCH

The Telex-branded 785L is a dynamic, omnidirectional, low-impedance gooseneck paging microphone without switch for single zone paging. Designed for applications where ruggedness, dependability and durability are the main requirements. Microphone housing is constructed of die-cast zinc alloy to stand up to the toughest abuse and conditions. Features a recessed aluminum grille with a windscreen and durable satin-chrome finish.

- **Heavy duty**, three-hole mounting flange
- **Extra-strength** 16" steel-tubing flexible gooseneck arm
- **No switch**
- **1 meter (40") shielded 2-conductor cable**

SR785L

GOOSENECK PAGING MICROPHONE, SWITCH NORMALLY CLOSED

The Telex-branded SR785L is a dynamic, omnidirectional, low-impedance gooseneck paging microphone with normally-closed switch for single zone paging. Designed for applications where ruggedness, dependability and durability are the main requirements. Microphone housing is constructed of die-cast zinc alloy to stand up to the toughest abuse and conditions. Features a recessed aluminum grille with a windscreen and durable satin-chrome finish.

- **Heavy duty**, three-hole mounting flange
- **Extra-strength** 16" steel-tubing flexible gooseneck arm
- **Switch normally closed**
- **1.3 meter (52"), shielded 4-conductor (2 shielded) cable**

SR785LN/O

GOOSENECK PAGING MICROPHONE, SWITCH NORMALLY OPEN

The Telex-branded SR785LN/O is a dynamic, omnidirectional, low-impedance gooseneck paging microphone with normally-open switch for single zone paging. Designed for applications where ruggedness, dependability and durability are the main requirements. Microphone housing is constructed of die-cast zinc alloy to stand up to the toughest abuse and conditions. Features a recessed aluminum grille with a windscreen and durable satin-chrome finish.

- **Heavy duty**, three-hole mounting flange
- **Extra-strength** 16" steel-tubing flexible gooseneck arm
- **Switch normally open**
- **1.3 meter (52"), shielded 4-conductor (2 shielded) cable**

MP785

3-ZONE GOOSENECK PAGING MICROPHONE

The Telex-branded MP785L is a dynamic, omnidirectional, low impedance gooseneck paging microphone with three color-coded push button switches to select the paging zones. Any and all zones may be called by depressing the appropriate buttons. Designed for applications where ruggedness, dependability and durability are the main requirements. Microphone housing is constructed of die-cast zinc alloy to stand up to the toughest abuse and conditions. Features a recessed aluminum grille with a windscreen and durable satin-chrome finish.

- **Heavy duty**, three-hole mounting flange
- **Extra-strength** 16" steel-tubing flexible gooseneck arm
- **3-zone color coded** push button switches
- **1.3 meter (52"), shielded 5-conductor cable**

Mic application type	Gooseneck	Gooseneck	Gooseneck	Gooseneck
Element type	Dynamic	Dynamic	Dynamic	Dynamic
Polar pattern	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
Frequency response	100 Hz-10,000 Hz	100 Hz-10,000 Hz	100 Hz-10,000 Hz	100 Hz-10,000 Hz
Impedance	150-200 Ω	150-200 Ω	150-200 Ω	150-200 Ω
Sensitivity	1.26 mV/PA (-58 dBV/PA)	1.26 mV/PA (-58 dBV/PA)	1.26 mV/PA (-58 dBV/PA)	1.26 mV/PA (-58 dBV/PA)
Power requirement	None / Passive	None / Passive	None / Passive	None / Passive
Connector type	Unterminated	Unterminated	Unterminated	Unterminated
Zones	Single-zone	Single-zone	Single-zone	Three-zone



US600EL
PTT HAND MICROPHONE

Electro-Voice branded hand microphone built to withstand rough usage and atmospheric extremes. Designed for maximum noise rejection in high ambient areas, it allows effective use without "close talking" techniques. An excellent choice for critical communication applications.

- **Tailored frequency response** for voice intelligibility
- **Durable** polycarbonate housing
- **Withstands harsh environments**
- **1.8 meter (6 ft.) 4-Conductor, 2 Shielded, PVC Black cable**
- **Smooth push-to-talk switch**
- **Supplied with panel mounting bracket**



US602FL
NOISE-CANCELLING PTT HAND MICROPHONE

Electro-Voice branded noise-cancelling hand microphone featuring clear speech transmission in high ambient noise level environments, convenient grip-to-talk activation and noise-canceling dynamic design. Perfect for police, marine and mobile paging applications.

- **Noise-cancelling** for voice intelligibility in noisy spaces
- **Durable** polycarbonate housing
- **Withstands harsh environments**
- **1.8 meter (6 ft.) 4-Conductor, 2 Shielded, PVC Black cable**
- **Smooth push-to-talk switch**
- **Supplied with panel mounting bracket**



450D
PTT HAND MICROPHONE

Telex branded dynamic hand microphone with push-to-talk switch for paging. Features a molded Cyclocac housing in pebble-grain black finish and an unterminated black neoprene coil cord relieved at the housing by spring-type strain relief.

- **Tailored response** for voice intelligibility
- **Rugged ABS construction**
- **Two-position momentary slide switch**
- **Unterminated, 4-conductor, 2 shielded, black neoprene, coiled cord**
12" (304mm) Retracted
6" (1.8m) Extended

Mic application type	Handheld	Handheld	Handheld
Element type	Dynamic	Dynamic	Dynamic
Polar pattern	Omnidirectional	Noise-cancelling	Omnidirectional
Frequency response	100 Hz-7,000 Hz	200 Hz-5,000 Hz	100 Hz-8,000 Hz
Impedance	150 Ω	150 Ω	200 Ω
Sensitivity	1.8mV/Pa (-55dB)	1mV/Pa (-60 dB)	1.26 mV/PA (-58 dBV/PA)
Power requirement	None / Passive	None / Passive	None / Passive
Connector type	Unterminated	Unterminated	Unterminated
Zones	Single-zone	Single-zone	Single-zone



NC450D
NOISE-CANCELLING PTT HAND MICROPHONE

Telex branded dynamic hand microphone with push-to-talk switch for paging. NC450D's noise-canceling design makes it particularly effective for use in noisy locations. Its excellent voice response characteristics also make it an excellent choice in quiet areas. 200 Ω impedance matches low impedance inputs.

- **Tailored response** for voice intelligibility
- **Rugged ABS construction**
- **Two-position momentary slide switch**
- **Unterminated, 4-conductor, 2 shielded, black neoprene,coiled cord**
12" (304mm) Retracted
6" (1.8m) Extended
- **Soft rubber lip guard**
- **Noise-cancelling**

Mic application type	Handheld	Plate Mount	Plate Mount
Element type	Dynamic	Dynamic	Dynamic
Polar pattern	Noise-cancelling	Omnidirectional	Omnidirectional
Frequency response	100 Hz-8,000 Hz	100 Hz-10,000 Hz	100 Hz-10,000 Hz
Impedance	200 Ω	150-200 Ω	150-200 Ω
Sensitivity	0.61 mV/Pa (-64dB)	1mV/Pa (-60 dB)	1mV/Pa (-60 dB)
Power requirement	None / Passive	None / Passive	None / Passive
Connector type	Unterminated	Unterminated	Unterminated
Zones	Single-zone	Single-zone	Single-zone



WP300
WALL PLATE MICROPHONE

Telex branded dynamic, omnidirectional wall plate microphone that is ideal for security monitoring, fast-food and retail outlets, warehouses and public-usage applications. Mounts onto a standard single-gang electrical box.

- **Rugged build** sustains harsh environments
- **Omnidirectional** for accurate area pickup
- **Durable** satin finish face
- **Rubber shock mount**



WP300S
WALL PLATE MICROPHONE WITH PTT SWITCH

Telex branded dynamic, omnidirectional wall plate microphone that is ideal for security monitoring, fast-food and retail outlets, warehouses and public-usage applications. Mounts onto a standard single-gang electrical box. The front plate, finished in brushed satin-chrome, includes a double-pole, double-throw switch for push-to-talk and line-shorting capabilities.

- **Rugged build** sustains harsh environments
- **Omnidirectional** for accurate area pickup
- **Durable** satin finish face
- **Rubber shock mount**
- **Double-pole double-throw switch for push-to-talk**

WIRED ACCESSORIES

Genuine high-quality Electro-Voice wired microphone parts for direct replacement of standard equipment or optional accessories.

SHOCK MOUNTS

309A



Fitments	RE20 / RE20-BLACK
	RE27N/D
	RE320

Note Replacement elastic bands
PART # 71220X

CPSM



RE90P
PC12/XLR
PC18/XLR

SAPL-3



PL37 (stock replacement)

SPECIALTY ADAPTERS

DRC-1



Fitments	Designed for PL35 (stock replacement)
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Note

DRC-2



Designed for ND44 (stock replacement)

Also an optional accessory for ND46 and ND66

STAND ADAPTERS

323S



Fitments	RE50B
	RE50N/D-B
	RE50L
	RE50N/D-L

BK-1

SAND-1



ND46
ND66

SAPL-1



All PL Series and ND Series handhelds

SAPL-2



PL33
RE20 / RE20-BLACK
RE27N/D
RE320
ND68
N/D868

FOAM WINDSCREENS

376 (grey) 379-1 (black) 379-2 (red)



Fitments	General purpose
	Fits most vocal models in:
	N/Dym Series
	ND Series
	PL Series
	Cobalt Series

WSPL-1 (black)



PL Series vocal
RE410 / RE420
RE510 / RE520
RE50B
RE50N/D-B
RE50L

WSPL-2 (black)



RE20 / RE20-BLACK
RE27N/D
RE320
PL33
ND68
N/D868

WSPL-3 (black)



PL35

WSPL-4 (black)



PL37

INFO

WIRED MICROPHONES

WIRED GUIDELINES

DECADES OF ENGINEERING EXCELLENCE

In 1934, just six years into its existence as a pioneer in electro-acoustical solutions, Electro-Voice invented the humbucking coil for microphones — still an industry standard almost 80 years later. This invention marked the start of EV's success in building microphones, and the company continued to drive audio technology ahead, rising to the challenges of rapidly changing times.

During World War II, EV worked with the U.S. Military on the development of the T-45 noise-canceling microphone, a helmet-attached device that raised the success rate of combat communications from 20% to 90%, saving many lives in the process. With reliability and performance proven in the most critical environments, EV microphones later accompanied U.S. astronauts on the earliest space missions and many thereafter. At the same time, EV mics continued to perform at the highest level on live stages around the world during the heyday of Jazz and the birth of Rock 'n' Roll.

EV continues to add to this long list of historic achievements in audio, setting new standards for the microphone designs of today. We were the first manufacturer to use neodymium-based magnet structures (N/Dym) in microphones, thus achieving higher output and condenser-like qualities, such as substantially faster transient response, crystal clarity and reliable performance. Our goals in developing microphone technologies have always been the same: providing the highest sound quality, achieving better and more comfortable handling for the user, and extending our tradition of legendary reliability and support. A host of patented technologies attest to EV's success in meeting these goals.

VARIABLE-D

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 mid-range 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 patented Variable-D eliminates this disadvantage. On the rear side of the diaphragm there is a perforated pipe (interference duct) with precise sonic slots at set distances. The duct provides 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.

An added benefit of the Variable-D technology's low-frequency stabilization is the resulting personality of the low-frequency content. Variable-D microphones produce a tight low-end that is unmatched by any other microphone technology, and this is why models such as the RE20 and RE27N/D are revered not only as the number-one announcer's mic, but also as the go-to mic for capturing kick drums, low-frequency instruments and guitar amplifiers.

For decades, the RE20, RE27N/D and RE320 Variable-D microphones have been the chosen industry standard for broadcast show hosts, podcasters, vocal booths, voice-over studios, and professional touring or rental companies, trusted for their unparalleled acoustical performance and robust durability.

GENERAL MICROPHONE USE GUIDELINES

- 1) Always point the microphone at the desired sound source and away from sources of unwanted sound.
- 2) The microphone should be located close to the sound source to minimize interference from other potential sound sources, increase gain-before-feedback and increase the low frequency (bass) content of the signal.
- 3) Use the three-to-one rule when using multiple microphones: place each microphone three times farther away from other microphones as it is from the desired sound source. (If the microphone is 1' away from a sound source, the other should be 3' away from the next closest microphone).
- 4) Minimize over-handling of the microphone (e.g. where possible put it on a stand instead of hand-held) to reduce unwanted mechanical noise.

MICROPHONE TECHNIQUES FOR MUSICAL INSTRUMENTS

Miking techniques are a matter of personal preference. Choosing the right microphone for your application is a good place to start, and the suggested mic notes in each application below indicate EV mics that are either designed for the application or have been recommended by experienced professionals for their performance as described. These are merely guidelines to assist in the choice and placement of the microphone to achieve optimal performance.

USAGE	BEST MIC PLACEMENT	SUGGESTED EV MIC
Kick drum	Due to the unique nature of kick drums and placement, choosing a mic that is designed for kick drum and low-frequency instruments is recommended. Miking from the front of the drum (opposite the batter head) is preferred. Front heads with hole: Place the mic inside the hole so that the capsule (mesh grille area) is just inside the interior of the drum. Aim the capsule at an angle toward the spot on the batter head where the beater makes contact for desired snap (attack of the sound). Front heads without a hole: Aim the capsule directly on-axis to the front head and within 1 inch of the head, choosing a spot that is between 2" and 8" towards the center from the rim. The center of the head has the floppiest tone, and the edge will have the tightest. Kick drum with no front head: This allows the widest variety of placement options, but increases off-axis bleed and eliminates the tonal advantage of the front (resonance) head. Avoid placing the mic dead-center aiming directly into the beater because of possible wind velocity distortion. Choose a spot inside the drum between 2" and 8" from the outer shell, aiming the capsule at an angle toward where the beater strikes the batter head. Placing the mic deeper or shallower inside the drum will offer tone and attack variations.	ND68, RE320, RE20, RE27N/D or PL33
Snare drum	Place mic 1" to 3" above the batter head and 0 to 2" in from the rim depending on the desired tone. Aim each mic at the top head angled down 45°. If the drum rings, tape deadening material to the head or use damping rings. For more "snare" sound, place a second mic under the drum (aimed up at the bottom head) and reverse the phase on its input channel.	ND44, ND46, or PL35
Electric guitar	Place microphone approximately 1" to 2" from and at a 0° angle to the speaker cone. To reduce boominess, position the microphone off-axis to the cone at 45° or move the mic toward the center of the cone. You can expect a brighter tone at the voice coil (speaker center) and a darker tone the farther out from the center you go.	ND44, ND46, RE320, RE20, RE27N/D, PL33, PL35, or ND68
Tom-toms	On double-headed toms, place mic 1" to 3" over the top of the drum head at a 45° angle to the drum surface and 1/2" from the drum edge. On single headed toms, use above method or place mic inside tom from underneath at a 90° angle from the center of head, 3" to 5" away.	For smaller toms: ND44, ND46; or PL35 For floor tom: ND46, RE20, or RE320
Cymbals	Place microphone 1' to 2' above the top of the cymbals. If using a stereo pair technique, increase the overhead distance of the drum set to 2' to 3' and use the three-to-one rule as a separation concept.	ND66 or PL37
Hi-hat	Place 5" above outside edge at a 45° down-angle toward the top cymbal.	ND66 or PL37
Brass	Place microphone 6" to 24" away, on axis with the bell of the instrument.	PL80a, ND44, ND46, ND66, RE20, RE27N/D and RE320
Acoustic guitar	Place microphone out 9" to 12" from where fingerboard joins the body and aim toward sound hole.	ND66, PL37, or RE320



WIRELESS MICROPHONES

For over forty years, Electro-Voice has been in the business of providing quality wireless communications for demanding professionals. We have the hands-on experience and engineering know-how to address all of your wireless microphone system needs. Whether choosing a one-channel system or designing a large, multiple-wireless deployment, you can trust EV to provide the product, frequency coordination and system accessories for a turnkey installation. All EV wireless systems are designed to exacting standards by our expert product development team and supported from highly-trained and authorized facilities in the USA, Canada, Germany and Singapore.

KEY STRENGTHS

- Ease-of-use with frequency-scanning and system synchronization technologies
- Superior sound quality with best-in-class microphones
- Superior design, construction and warranty for maximum professional performance
- Conceived, designed and supported in the USA
- Complete range of models and accessories to fit applications and installations of all sizes and complexity
- Backed by Bosch, whose family of pro audio brands includes Electro-Voice microphones and loudspeakers, Dynacord amplifiers, mixers and DSP, and Telex and RTS intercom and critical communications systems



R300 SERIES MICROPHONES

WIRELESS MADE EASY



Designed for the price-conscious professional, the R300 wireless microphone series makes the benefits of professional wireless performance accessible to this broad category of users. Capable of simple multi-channel system arrays, and offering features such as solid metal transmitters and receivers, one-touch ClearScan and EZsync transmitter update, the R300 provides professional-class functionalities while remaining easy to set up and use.



R300-HD HANDHELD SET WITH PL22 HEAD

With its PL22 dynamic microphone, the R300-HD is the perfect all-around wireless microphone for speaking engagements, singing and emcees. The cardioid pickup pattern rejects sound from the surroundings, helps control audio feedback and still allows an experienced vocalist to work the microphone. The all metal transmitter and receiver are made to withstand rigorous daily use in virtually any environment.

- **Crisp, clear, and balanced** vocal presence
- **Thread-on dynamic cardioid capsule**
- **10 mW transmitter** output power
- **Rack-mountable** half rack space diversity receiver
- **ClearScan** selects open frequencies
- **EZsync** function links transmitter to receiver for easy system setup



R300-L BODYPACK SET WITH CARDIOID LAVALIER

The R300-L delivers a crystal clear voice via its feedback-rejecting cardioid lavalier, making it ideal for presentations of any kind and worship services. Its small, yet robust, bodypack transmitter is easily worn or concealed, and system setup is simple with its ClearScan and EZsync features. The all metal transmitter and receiver are made to withstand rigorous daily use in virtually any environment.

- **Crystal clear and intelligible** vocal sound
- **Small cardioid lavalier** microphone
- **10 mW transmitter** output power
- **Rack-mountable** half rack space diversity receiver
- **ClearScan** selects open frequencies
- **EZsync** function links transmitter to receiver for easy system setup



R300-E BODYPACK SET WITH OMNIDIRECTIONAL HEADWORN

The R300-E wireless headworn easily delivers consistent vocal clarity for presentations, lectures, and athletic instruction. The R300 bodypack transmitter is light and easy to wear, and system setup is simple with its ClearScan and EZsync features. The all metal transmitter and receiver are made to withstand rigorous daily use in virtually any environment.

- **Consistent** vocal clarity
- **Light, yet robust** headworn microphone
- **10 mW transmitter** output power
- **Rack-mountable** half rack space diversity receiver
- **ClearScan** selects open frequencies
- **EZsync** function links transmitter to receiver for easy system setup

Transmitter type	Handheld	Bodypack	Bodypack
Mic element type	Dynamic	Condenser	Condenser
Microphone type	Thread-on Head	Lavalier with TA4F	Headworn with TA4F
Polar pattern	Cardioid	Cardioid	Omnidirectional
Battery type	2 x AA	2 x AA	2 x AA
Receiver type	Antenna Diversity	Antenna Diversity	Antenna Diversity
Receiver size	1/2 Rack Space	1/2 Rack Space	1/2 Rack Space
Frequency response	80Hz-18kHz	80Hz-18kHz	80Hz-18kHz
Receiver output levels	Mic and Line	Mic and Line	Mic and Line
Receiver output connectors	XLR and 1/4" TS	XLR and 1/4" TS	XLR and 1/4" TS

CONSUMER ALERT

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at www.fcc.gov/cgb/wirelessmicrophones



RE3 SERIES MICROPHONES

ROCK-SOLID RF



Built upon robust and dependable UHF radio technology, RE3 wireless offers users of any level trouble-free operation of complex, multi-channel system arrays with tuning bandwidths up to 36 MHz in ten different system configurations. Solid metal bodies and best-in-class microphone heads deliver superior performance and the convenience of wireless freedom in a variety of frequency bands (regional restrictions may apply). RE3 sets contain eight groups of pre-coordinated intermod-free channels with up-to 22 channels per group.

Setup is quick and simple using the RE3 clear frequency scan and sync functions, and the radio link between the transmitter and diversity receiver delivers rock-solid system performance.



RE3-ND76 HANDHELD SET WITH ND76 HEAD

Handheld UHF wireless set featuring an ND76-RC3 dynamic microphone head for vocal performance and presentations. The ND76's crisp, clear, and balanced vocal presence is ideal for all-around voice applications.

- **Crisp, clear, and balanced** vocal presence
- **Large diaphragm dynamic capsule**
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup

Transmitter type	Handheld
Mic element type	Dynamic
Microphone type	Thread-on Head
Polar pattern	Cardioid
Battery type	2 x AA
Receiver type	Antenna Diversity
Receiver size	1/2 Rack Space
Frequency response	51Hz-16kHz
Receiver output levels	Mic and Line
Receiver output connectors	XLR and 1/4" TS



RE3-ND86 HANDHELD SET WITH ND86 HEAD

Handheld wireless set featuring an ND86-RC3 dynamic microphone head for vocal performance and presentations. The ND86's sound is present, smooth, and detailed, and its supercardioid polar pattern provides excellent acoustic control in even the largest of venues.

- **Present, smooth, and detailed** vocal sound
- **Large diaphragm dynamic capsule**
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup

Transmitter type	Handheld
Mic element type	Dynamic
Microphone type	Thread-on Head
Polar pattern	Supercardioid
Battery type	2 x AA
Receiver type	Antenna Diversity
Receiver size	1/2 Rack Space
Frequency response	51Hz-16kHz
Receiver output levels	Mic and Line
Receiver output connectors	XLR and 1/4" TS



RE3-ND96 HANDHELD SET WITH ND96 HEAD

Handheld wireless set featuring an ND96-RC3 dynamic microphone head for vocal performance and presentations. The ND96's sound is powerful, rich, and detailed, and delivers exceptionally high gain before feedback for excellent acoustic control on very loud stages.

- **Powerful, rich, and detailed** vocal presence
- **Large diaphragm dynamic capsule**
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup

Transmitter type	Handheld
Mic element type	Dynamic
Microphone type	Thread-on Head
Polar pattern	Supercardioid
Battery type	2 x AA
Receiver type	Antenna Diversity
Receiver size	1/2 Rack Space
Frequency response	51Hz-16kHz
Receiver output levels	Mic and Line
Receiver output connectors	XLR and 1/4" TS

CONSUMER ALERT

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at www.fcc.gov/cgb/wirelessmicrophones

RE3 SERIES

ROCK-SOLID RF



RE3-RE420

HANDHELD SET WITH RE420 HEAD

Handheld wireless set featuring an RE420-RC3 condenser microphone head for vocal performance and presentations. The RE420's sound is rich, detailed and full-bodied, with a warm and clear low-end, natural and open midrange, and a clear, crisp, and detailed high end.

- **Rich, detailed, and full-bodied** vocal sound
- **Shock-mounted** condenser capsule
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup



RE3-ND520

HANDHELD SET WITH RE520 HEAD

Handheld wireless set featuring an RE520-RC3 condenser microphone head for vocal performance and presentations. The RE520's sound is detailed, full, and vivid, with a tight and clear low end, natural and present midrange, and an exceptionally-detailed high end. The supercardioid pattern provides excellent acoustic isolation.

- **Detailed, full, and vivid** vocal presence
- **Shock-mounted** condenser capsule
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup



RE3-BPOL

BODYPACK SET WITH OMNI LAVALIER

Wireless bodypack set featuring an OL3 omnidirectional lavalier microphone delivering an open and natural sound for vocal presentations and performance. The OL3 delivers an open and natural sound even when the user is turning their head side-to-side, and its low-profile design eliminates unsightly presence other larger sized lavaliers present.

- **Open and natural** vocal sound
- **Low profile lavalier**
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup



RE3-BPCL

BODYPACK SET WITH CARDIOID LAVALIER

Wireless bodypack set featuring a CL3 cardioid lavalier microphone for voice performance and presentations. The CL3 a robust, general-purpose lavalier microphone. It is ideal for presentation and public speaking where its full and accurate sonic characteristics, coupled with its feedback-rejecting cardioid polar pattern deliver a clear and intelligible voice.

- **Full and accurate** vocal sound
- **Feedback-rejecting** cardioid lavalier
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup



RE3-BPHW

BODYPACK SET WITH HEADWORN MIC

Wireless bodypack set featuring the HW3 supercardioid headworn microphone for voice performance, presentations, and athletic instruction. The HW3's sound is crisp and natural, and the supercardioid polar pattern provides superb acoustic isolation and gain before feedback, making it an ideal microphone even in high SPL sound reinforcement applications.

- **Crisp and natural** vocal sound
- **Robust headworn** microphone with detachable cable
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup



RE3-BPGC

BODYPACK INSTRUMENT SET

Wireless bodypack set with the GC3 instrument cable for wireless music performance. The GC3 is a special purpose cable for connecting instruments or line level signal sources with 1/4" output jacks to the RE3-BPT bodypack transmitter.

- **Clear and natural** instrument sound
- **Robust 1/4" guitar cable**
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup



RE3-BPNID

BODYPACK SET WITH NO INPUT DEVICE

Wireless bodypack set containing no transmitter input device. Serving as an ideal foundation set, it can be completed when coupled with any Electro-Voice lavalier, headworn, or instrument input device.

- **Versatile foundation bodypack set**
- **Compatible with all Electro-Voice bodypack input devices**
- **Selectable low and high transmitter output power**
- **Half rack space diversity receiver** with rack mount
- **Frequency scanning** selects open frequencies
- **Sync function** links transmitter to receiver for easy system setup

Transmitter type	Handheld	Handheld	Bodypack	Bodypack
Mic element type	Condenser	Condenser	Condenser	Condenser
Microphone type	Thread-on Head	Thread-on Head	Lavalier with TA4F	Lavalier with TA4F
Polar pattern	Cardioid	Supercardioid	Omnidirectional	Cardioid
Battery type	2 x AA	2 x AA	2 x AA	2 x AA
Receiver type	Antenna Diversity	Antenna Diversity	Antenna Diversity	Antenna Diversity
Receiver size	1/2 Rack Space	1/2 Rack Space	1/2 Rack Space	1/2 Rack Space
Frequency response	51Hz-16kHz	51Hz-16kHz	63Hz-16kHz	63Hz-16kHz
Receiver output levels	Mic and Line	Mic and Line	Mic and Line	Mic and Line
Receiver output connectors	XLR and 1/4" TS	XLR and 1/4" TS	XLR and 1/4" TS	XLR and 1/4" TS

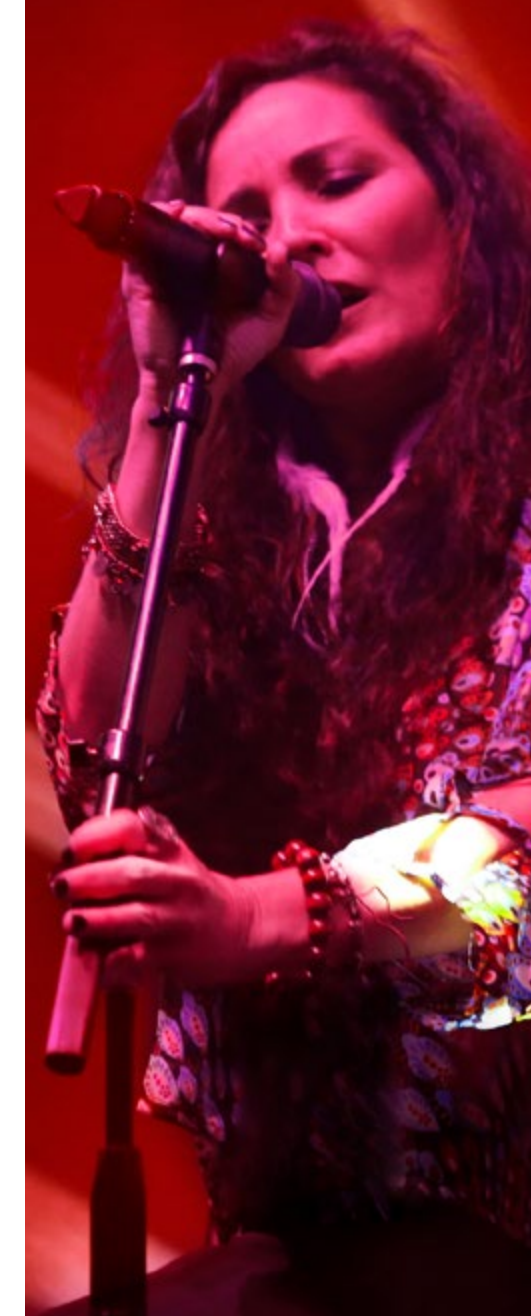
Transmitter type	Bodypack	Bodypack	Bodypack
Mic element type	Condenser	N/A	N/A
Microphone type	Headworn with TA4F	Guitar Cable with TA4F	None
Polar pattern	Supercardioid	N/A	N/A
Battery type	2 x AA	2 x AA	2 x AA
Receiver type	Antenna Diversity	Antenna Diversity	Antenna Diversity
Receiver size	1/2 Rack Space	1/2 Rack Space	1/2 Rack Space
Frequency response	63Hz-16kHz	63Hz-16kHz	63Hz-16kHz
Receiver output levels	Mic and Line	Mic and Line	Mic and Line
Receiver output connectors	XLR and 1/4" TS	XLR and 1/4" TS	XLR and 1/4" TS

CONSUMER ALERT

Most users do not need a license to operate this wireless microphone system. Nevertheless, operating this microphone system without a license is subject to certain restrictions: the system may not cause harmful interference; it must operate at a low power level (not in excess of 50 milliwatts); and it has no protection from interference received from any other device. Purchasers should also be aware that the FCC is currently evaluating use of wireless microphone systems, and these rules are subject to change. For more information, call the FCC at 1-888-CALL-FCC (TTY: 1-888-TELL-FCC) or visit the FCC's wireless microphone website at www.fcc.gov/cgb/wirelessmicrophones

RE3 SERIES

ROCK-SOLID RF



RE3 ACCESSORIES

COMPLETE YOUR SYSTEM



ANTENNA CABLES ETC

With a broad assortment of mounting brackets, cables and other system accessories exclusive to RE3, Electro-Voice helps you tailor your RE3 wireless microphone systems to the specific requirements of each and every situation.



RE3-ACC-CXUF

REAR TO FRONT MOUNT ANTENNA CABLE KIT

The CXUF is a pair of high quality, low-loss coax cables intended to relocate a wireless receiver's antenna input jacks to the front panel of a 19" rack. The threaded flange mount connectors fit securely into the openings of either the RMK1 or RMK2 rack mounting kits or AASP antenna splitter for front-mounting the stock 1/2 wave antennas or extension coax cables.

- **Two high-quality RG-58 50 Ω coax cables**
- **Female flange mount BNC** on one end for panel mounting
- **Male BNC on other end** couples to receiver antenna input jack



RE3-ACC-CXU2 RE3-ACC-CXU10

50 Ω LOW-LOSS BNC COAX CABLE

The CXU2 is an ultra-low loss, premium-grade, 2' coax patch cable for UHF wireless microphone systems. The CXU10 is an ultra-low loss, premium-grade, 10' coax cable for UHF wireless microphone systems.

- **Premium low-loss coax cable**
- **50 Ω**
- **Robust male BNC connectors**



RE3-ACC-CXU25

25', 50 Ω LOW-LOSS BNC COAX CABLE

The CXU25 is a premium-grade, very low-loss coax cable for UHF wireless microphone systems. Its high-efficiency and low-attenuation characteristics make it ideal for system installations requiring extended cable runs between antennas and receivers.

- **Premium very low-loss 50 Ω coax cable**
- **Robust BNC connectors**
- **Estimated 1.3 dB attenuation at length**



RE3-ACC-CXU50 RE3-ACC-CXU75 RE3-ACC-CXU100

ACTIVE LOG PERIODIC ANTENNA

The CXU50, CXU75, and CXU100 are ultra-low loss, premium-grade coax cables for UHF wireless microphone systems. Their high-efficiency and low-attenuation characteristics make them ideal for system installations requiring lengthy cable runs between antennas and receivers.

- **Premium ultra-low-loss coax cable**
- **Robust male BNC connectors**
- **Estimated attenuation of:**
 - 1.4 dB at 50'
 - 2.4 dB at 75'
 - 4.4 dB at 100'



RE3-ACC-HHTSA1

STAND ADAPTER FOR RE3 HANDHELD TRANSMITTER

The Electro-Voice RE3-ACC-HHTSA1 is a robust microphone stand adapter for RE3-HHT handheld transmitters. The stand adapter threads onto standard 5/8 x 27 microphone stands, as well as the Euro-style 3/8 x 16 stands when used with the included thread adapter.

- **Adapts RE3 handheld transmitter** to microphone stand
- **Threads to standard 5/8 x 27 and 3/8 x 16** *Euro stands
- **Rigid rubber gripping sides** securely hold transmitter

PRIMARY HARDWARE ACCESSORIES



RE3-ACC-AASP

2-IN X 8-OUT ANTENNA SPLITTER

The AASP is a professional, wide bandwidth, active antenna splitter designed to function as the distribution hub of RF and DC power in a multichannel wireless microphone system. Operates 470-960 MHz.

- **Active 2-in x 8-out antenna splitter**
- **Distributes DC** to power four receivers
- **Splits two antennas** into four diversity receivers
- **Selectable booster feed** for powering active antennas
- **Additional cascade output** per antenna



RE3-ACC-PASP

1 X 2 PASSIVE ANTENNA SPLITTER KIT

The PASP is a passive antenna splitter kit containing necessary items needed when splitting and sharing two incoming antenna signals between the diversity antenna jacks of two receivers. Operates 10 MHz to 1GHz.

- **Splits two antenna signals** into two diversity receivers
- **Passes 12 volt booster feed** to active antennas or boosters
- **Low insertion loss**
- **Ideal companion kit to the RMK2** dual rack mount kit
- **Also functions as a 2-in x 1-out combiner**



RE3-ACC-PLPA

PASSIVE LOG PERIODIC ANTENNA

The PLPA is a passive directional antenna, which increases the desired RF signal while rejecting unwanted RF signals. PLPA mounts on a standard threaded microphone stand for easy placement. Operates 470-960 MHz.

- **Extends system range**
- **High efficiency** with 10 dB of passive gain
- **Mounts on standard threaded microphone stand**



RE3-ACC-ALPA

ACTIVE LOG PERIODIC ANTENNA

The ALPA is an active directional antenna with switchable 3 dB and 10 dB of amplified gain, which increases the desired RF signal while rejecting unwanted RF signals. ALPA mounts on a standard threaded microphone stand for easy placement. Operates 470-960 MHz.

- **Extends system range**
- **Switchable 3 dB and 10 dB** of active gain
- **Mounts on standard threaded microphone stand**



RE3-ACC-RFAMP

ACTIVE RF ANTENNA BOOSTER

RFAMP is a 10 dB RF amplifier module designed to function as an at-antenna RF amplifier to compensate for signal loss prior to a coax run, as well as an effective means of remote mounting the RE3-RX stock 1/2 wave receiver antenna when desired. Operates 470-960 MHz.

- **10 dB RF booster amp module**
- **Powered by RE3-RX or AASP** 12v DC booster feed
- **Mounts on supplied installation flange** or on microphone stand
- **Passes booster feed** thru for cascading up to two modules
- **Effectively remote-mounts stock 1/2 wave receiver antenna**



RE3-ACC-RMK1

RACK MOUNT KIT FOR SINGLE RE3 RECEIVER

The RMK1 kit contains all necessary items to mount one RE3-RX receiver into a 19" rack. The rack ears easily mount to the receiver's threaded mounting holes using the provided screws.

- **Securely mounts receiver** into single 19" rack space
- **Mounting sockets for front mounting antennas**
- **Socket plugs** fill antenna mount holes when not used
- **Includes rack ears, cables, mounting screws, and hole plugs, and two high-quality RG-58 50 Ω front-mount cables**



RE3-ACC-RMK2

RACK MOUNT KIT FOR TWO RE3 RECEIVERS

The RMK2 kit contains all necessary items to couple and mount two RE3-RX receivers into a 19" rack. The bridging plates firmly couple two receivers together ensuring the receivers are held securely in a rack.

- **Equips two RE3 receivers for rack mounting**
- **Provides front mounting of antennas or cables**
- **Coupling plates firmly secure receivers** together
- **Two high-quality RG-58 50 Ω front-mount cables**
- **Includes rack ears, coupling plates, cables, mounting screws, and hole plugs**



RE3-ACC-BC2

TWO SLOT BATTERY CHARGER

The BC2 is a 2-sided, 2-slot battery charging station for recharging optional NiMH rechargeable cells while in either the RE3-HHT or RE3-BPT transmitters.

- **2-slot charger**
- **For only NiMH** rechargeable cells
- **Charges RE3-HHT and RE3-BPT** containing rechargeable cells
- **3-hour charging time**



RE3-ACC-PCA

POLAR CHOICE ADAPTER FOR RE3-BPT

The RE3-ACC-PCA is an accessory kit allowing the RE3 bodypack transmitter to be mounted into the Electro-Voice Polar Choice PC Boundary Sat and PC Satellite models, while also allowing the transmitter to be used in other traditional bodypack transmitter applications.

- **Adapts RE3-BPT** for use in Polar Choice Satellite microphones
- **Mounts permanently**
- **Supplied belt clip enables RE3-BPT** for use in other applications





WIRELESS HANDHELD TRANSMITTER CAPSULES

Developed as stock equipment for RE3 handheld transmitters, these microphone capsules deliver best-in-class acoustic performance for any vocal application. Deploying a commonly-used coupling standard, they are ideal solutions for any brand handheld transmitter using the 3-contact rings, 1.25" diameter by 28-thread pitch coupling convention.



ND76-RC3

WIRELESS HEAD WITH ND76 CAPSULE

The ND76-RC3 is a robust, high-performance, dynamic cardioid thread-on vocal microphone head for wireless handheld transmitters. Delivering all of the performance of the wired ND76, this microphone head electrically and mechanically adapts to Electro-Voice (and many other brands) wireless handheld transmitters that use the common 3-contact rings, 1.25" diameter by 28-thread pitch coupling convention.

- **Excellent all-around vocal performance** delivering a crisp, clear and balanced sound
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Shock-mounted capsule** minimizes handling noise
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



ND86-RC3

WIRELESS HEAD WITH ND86 CAPSULE

The ND86-RC3 is a robust, high-performance, dynamic supercardioid thread-on vocal microphone head for wireless handheld transmitters. Delivering all of the performance of the wired ND86, this microphone head electrically and mechanically adapts to Electro-Voice (and many other brands) wireless handheld transmitters that use the common 3-contact rings, 1.25" diameter by 28-thread pitch coupling convention.

- **Excellent acoustic control** in even the largest of venues: present with a smooth and detailed sound
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Shock-mounted capsule** minimizes handling noise
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



ND96-RC3

WIRELESS HEAD WITH ND96 CAPSULE

The ND96-RC3 is a robust, high-performance, dynamic supercardioid thread-on vocal microphone head for wireless handheld transmitters. Delivering all of the performance of the wired ND96, this microphone head electrically and mechanically adapts to Electro-Voice (and many other brands) wireless handheld transmitters that use the common 3-contact rings, 1.25" diameter by 28-thread pitch coupling convention.

- **Exceptionally high gain-before-feedback** with excellent acoustic control on very loud stages
- **Large-diaphragm dynamic capsule** creates a rich and detailed frequency response
- **Vocal presence emphasis** switch selects between alternate sonic signatures
- **Shock-mounted capsule** minimizes handling noise
- **Humbucking coil** guards against line hum
- **Memraflex grille** resists denting



RE420-RC3

WIRELESS HEAD WITH RE420 CAPSULE

The RE420-RC3 is a robust, high-performance, condenser cardioid thread-on vocal microphone head for wireless handheld transmitters. Delivering all of the performance of the wired RE420, this microphone head electrically and mechanically adapts to Electro-Voice (and many other brands) wireless handheld transmitters that use the common 3-contact rings, 1.25" diameter by 28-thread pitch coupling convention.

- **Premium condenser** element delivers a highly-detailed, rich, and full bodied sound
- **Cardioid polar pattern** provides excellent acoustic isolation with a comfortable working range
- **Multi-stage pop filter** minimizes breath blasts and plosives
- **Selectable high-pass filter** reduces undesirable low frequency content when engaged
- **Vibration-absorbing internal shock mount** minimizes handling noise



RE520-RC3

WIRELESS HEAD WITH RE520 CAPSULE

The RE520-RC3 is a robust, high-performance, condenser supercardioid thread-on vocal microphone head for wireless handheld transmitters. Delivering all of the performance of the wired RE520, this microphone head electrically and mechanically adapts to Electro-Voice (and many other brands) wireless handheld transmitters that use the common 3-contact rings, 1.25" diameter by 28-thread pitch coupling convention.

- **Premium condenser** element delivers a highly-detailed, full, and vivid sound
- **Supercardioid polar pattern** provides excellent acoustic isolation and feedback control
- **Multi-stage pop filter** minimizes breath blasts and plosives
- **Selectable high-pass filter** reduces undesirable low frequency content when engaged
- **Vibration-absorbing internal shock mount** minimizes handling noise

Mic application type	Vocal	Vocal	Vocal	Vocal	Vocal
Element type	Dynamic	Dynamic	Dynamic	Condenser	Condenser
Polar pattern	Cardioid	Supercardioid	Supercardioid	Cardioid	Supercardioid
Frequency response	Close: 30 Hz – 17 kHz Far: 70 Hz – 17 kHz	Close: 30 Hz – 17 kHz Far: 70 Hz – 17 kHz	Close: 30 Hz – 15 kHz Far: 70 Hz – 17 kHz	50 - 20,000 Hz	40 - 20,000 Hz
Sensitivity	5.6 mV/Pa	5.6 mV/Pa	4.7 mV/Pa	5.6 mV/Pa	5.6 mV/Pa
Maximum SPL	135.5 dB SPL	134.5 dB SPL	136 dB SPL	137 dB SPL	139 dB SPL
Connector type	Thread-on, 3-contact, 1.25" diameter, 28-thread pitch	Thread-on, 3-contact, 1.25" diameter, 28-thread pitch	Thread-on, 3-contact, 1.25" diameter, 28-thread pitch	Thread-on, 3-contact, 1.25" diameter, 28-thread pitch	Thread-on, 3-contact, 1.25" diameter, 28-thread pitch



WIRELESS LAVALIER AND HEADWORN MICROPHONES

Electro-Voice microphones for wireless combine EV-quality sound and durability with the freedom of movement that comes from wireless miking. These versatile performers are available in a variety of configurations, including lavalier and headworn, and can be used with any EV bodypack transmitter. Add a TXA adapter to use any of these models in XLR wired applications as well.



OLM10

OMNIDIRECTIONAL LAVALIER MICROPHONE

The OLM10 is a rugged lavalier microphone that picks up sound from all directions. The small size and wide pickup pattern make this an ideal microphone for beginners and soft speakers.

- **Back-electret omnidirectional** microphone
- **Clothing clip included** for easy mounting
- **Integrated 6' (180 cm) cable**
- **TA4F connector is compatible with all EV bodypack transmitters**
- **Use with TXA for wired XLR applications**



RE3-ACC-OL3

OMNIDIRECTIONAL LAVALIER MIC WITH TA4F

The OL3 is a robust, multi-purpose lavalier microphone. It is ideal for presentation, public speaking, and on-camera applications where its open and natural sonic characteristics deliver accurate and natural voice reproduction. The low-profile design makes it easy to physically manage, and eliminates unsightly presence other larger sized lavaliers present.

- **Small and unobtrusive** low-profile design
- **Omni-directional** polar pattern delivers an open and natural sound
- **No proximity effect**
- **Wide dynamic range** and frequency response
- **TA4F connector is compatible with all EV bodypack transmitters**



ULM18

CARDIOID LAVALIER MIC WITH TA4F

The ULM18 is a high quality directional (cardioid) condenser lavalier microphone suitable for sound reinforcement or recording of voice. Exceptionally useful for sound reinforcement applications, the ULM18's directional cardioid polar pattern reduces sound system feedback potential when used properly.

- **Superb voice intelligibility**
- **Cardioid** polar pattern helps avoid sound system feedback
- **Alligator-style clothing clip** holds the microphone securely in place
- **Detachable wire mesh windscreen**



ULM21

CARDIOID LAVALIER MICROPHONE

The ULM21 is a rugged lavalier microphone with a directional pickup pattern. The small size and pickup pattern helps reduce feedback and improve sound quality.

- **Back-electret cardioid microphone**
- **Clothing clip** attaches at microphone body to maintain cardioid polar pattern
- **Integrated 6' (180 cm) cable**
- **TA4F connector is compatible with all EV bodypack transmitters**
- **Use with TXA for wired XLR applications**



RE3-ACC-CL3

CARDIOID LAVALIER WITH TA4F

The CL3 is a robust, general-purpose lavalier microphone. It is ideal for presentation and public speaking where its full and accurate sonic characteristics, coupled with its feedback-rejecting cardioid polar pattern deliver a clear and intelligible voice. The cardioid pattern provides acoustic isolation and gain before feedback in situations where the ambient sound reinforcement system volume might cause an omnidirectional lavalier to feed back.

- **Ideal for general sound reinforcement and presentations**
- **Cardioid** polar pattern rejects ambient sounds and increases gain before feedback
- **Delivers full and accurate sound**
- **Wide dynamic range** and frequency response
- **Clothing clip** holds microphone securely and attaches easily to garments
- **TA4F connector is compatible with all EV bodypack transmitters**



RE92TX

DIRECTIONAL LAVALIER MICROPHONE

The RE92Tx is a miniature professional-quality electret condenser lavalier microphone with a cardioid pickup pattern. Designed for speech, it is an excellent choice for use in presentation, house of worship, broadcast or theater applications.

- **Back-electret condenser** element
- **Cardioid** polar pattern
- **Integrated 6' (180 cm) cable**
- **TA4F connector is compatible with all EV bodypack transmitters**
- **Use with TXA for wired XLR applications**

WIRELESS

LAVALIER AND HEADWORN MICROPHONES

WIRELESS

LAVALIER AND HEADWORN MICROPHONES



RE920

HORN AND INSTRUMENT MICROPHONE

The RE920Tx is a cardioid condenser microphone designed for wireless use with musical instruments via its specially designed instrument-mount clip assembly. Terminated in a TA4F connector for use with EV and Telex bodypack transmitters, it can also be used hard-wired with the additional TXA XLR preamp.

- **Back-electret condenser** element
- **Wired with TA4F connector**
- **Smooth audio response** and high SPL handling
- **Custom clip** for securely mounting on a variety of instruments
- **Use with TXA preamp for XLR wired applications**



RE97Tx

MICRO-HEADWORN CONDENSER MICROPHONE

The RE97Tx is an ultra-low profile, omnidirectional, back-electret condenser, headworn microphone designed for use with standard EV and Telex bodypacks. The RE97Tx is intended for spoken-word use, such as houses of worship, corporate AV, theaters, fixed install and other applications where a full-range, natural, well-balanced sound is required. The RE97Tx microphone is available in beige and black.

- **Ultra-low profile** for inconspicuous use
- **Lightweight, durable**
- **Interchangeable for left or right ear**
- **Omnidirectional** polar pattern provides clean sound and uniform response
- **Use with TXA preamp for XLR wired applications**



RE97-2Tx

TWO SIDED MICRO-HEADWORN CONDENSER MICROPHONE

The RE97-2Tx is an ultra-low profile, omnidirectional, back-electret condenser headworn microphone ideal for applications where a full-range, natural, well-balanced sound is required. The RE97 microphone element provides a clean and accurate sonic quality and uniform output. This has a two ear hook design with a band behind the head for comfort and stability. The band is fully adjustable and the hooks fold flat for storage and the boom can be on the left or right side.

- **Two ear wearing style** for stability
- **Lightweight, durable**
- **Interchangeable for left or right side** microphone boom
- **Omnidirectional** polar pattern for clean sound
- **Moisture resistant**
- **TA4F connector is compatible with all EV bodypack transmitters**



RE97LTX

MICRO-LAVALIER CONDENSER MICROPHONE

The RE97LTX is a micro-lavalier (black and beige) omnidirectional, condenser microphone designed for applications which demand a high quality microphone element that is practically invisible when worn by the speaker or performer. The RE97LTX is intended for spoken-word use in theatrical performances, fixed installations, corporate AV presentations, houses of worship or any venue.

- **Ultra-miniature** size for inconspicuous use
- **Omnidirectional** polar pattern to provide clean sound and uniform response
- **Available in black and beige**
- **Superior sound quality**
- **TA4F connector is compatible with all EV bodypack transmitters**
- **Use with TXA for wired XLR applications**



HM2

HEADWORN CONDENSER MICROPHONE

The Electro-Voice HM2 headworn microphone is the ideal microphone for anyone who requires high-quality vocals in a hands-free application. The HM2 is perfect for use by lead vocalists, singing instrumentalists, dancers, aerobic instructors and other presenters.

- **Lightweight** – 0.9 oz (25 g), less cable
- **Behind-the-head headband** is comfortable and stays in place
- **Cardioid** polar pattern for good gain-before-feedback
- Frequency response and proximity effect **equivalent to handheld vocal mics**
- **TA4F connector is compatible with all EV bodypack transmitters**



HM3

OMNIDIRECTIONAL HEADWORN MICROPHONE

The HM3 is a high quality omnidirectional condenser headworn microphone. The HM3's light weight adjustable headband fits securely over both ears, while the boom with flexible gooseneck end can be fitted to either the left or right side ear hooks.

- **Smooth and articulate** acoustical performance
- **Comfortable** double-ear headband
- **Adjustable boom** can be mounted on either ear side
- **Boom-mounted gooseneck** allows precise microphone positioning
- **TA4F connector is compatible with all EV bodypack transmitters**



HM7

HEADWORN CONDENSER MICROPHONE

The HM7 headworn microphone is the ideal microphone for singers and entertainers that really need to move during a performance. The HM7 has a supercardioid microphone that offers concert-grade vocal performance and stage-noise rejection. The rugged headband makes for a comfortable fit and the flexible boom ensures precise microphone placement.

- **Supercardioid** pickup pattern ensures good gain-before-feedback
- **Behind-the-head headband** is comfortable and stays in place
- **Frequency response and proximity effect equivalent to premium handheld vocal mics**
- **TA4F connector is compatible with all EV bodypack transmitters**
- **Use with TXA for wired XLR applications**



RE3-ACC-HW3

HEADWORN MIC WITH TA4F

The HW3 is a general-purpose condenser supercardioid headworn vocal microphone which is ideal for presentations, vocal performances, and athletic instruction. Designed for comfort, robust durability and vocal clarity, it sustains rigorous use in a wide variety of applications while delivering crisp, clear, and balanced vocal sound.

- **Condenser supercardioid** element delivers an acoustically-isolated, full-bodied sound
- **Robust headband** fits comfortably and securely
- **Flexible gooseneck** section makes positioning easy
- **Vibration-absorbing** shock-mounted microphone head minimizes handling noise
- **Detachable cable** makes storing and transporting simple and safe
- **TA4F connector is compatible with all EV bodypack transmitters**



WIRELESS KITS, ACCESSORIES AND CABLES

With a selection of mounting brackets, cables and other accessories, Electro-Voice helps you tailor your EV wireless microphone systems to the specific requirements of each and every situation.



RM-300

SINGLE RACKMOUNT KIT

Single rackmount kit for rack mounting one R300 wireless system R300-RX diversity receiver. Also features two antenna mounting ports for front-mounting antennas when used with SFMC-300 single front mount antenna kit. Includes all required screws and hardware.

- Mounts one R300 receiver in one 19" rack space
- Includes knockouts for front mount antenna cables for use with the optional SFMC-300
- Includes screws, hardware and instructions for installation
- Powder coated steel construction



RMD-300

DUAL RACKMOUNT KIT

Dual rackmount kit for rack mounting two R300 wireless system R300-RX diversity receivers side-by-side in a 19" single rack space. Includes all required screws and hardware.

- Mounts two R300 receivers in one 19" rack space
- Includes screws, hardware and instructions for installation
- Powder coated steel construction
- No knockouts for front mounting antennas



SFMC-300

SINGLE FRONT MOUNT ANTENNA KIT

Single front mount antenna coax cable kit for R300 wireless systems when used with the optional RM-300 single rackmount kit. Contains two 20" RG-58 coax cables with the proper TNC connectors on each end to accomplish the task, along with an instruction sheet for trouble-free installation.

- Two 20" RG-58 coax cables
- Female TNC ends connect to receiver
- Male TNC ends mount in optional SFMC-300 antenna knockouts



RSB-2

REFEREE MUTE SWITCH

The RSB-2 toggle mute switch is the football standard for referee wireless systems. The RSB-2 plugs in between the lavalier or headworn microphone and the bodypack transmitter to provide a noiseless mute. Compatible with legacy EV and Telex transmitters, RE3, **but not R300**.

- **TA4 in and out connectors** for EV/Telex lavalier microphone and bodypack transmitter
- **Belt clip** for wearing on right or left side
- **Positive toggle switch** is large and easy to use without looking
- **Noiseless mute**, no clicks or pops



TXA

XLR TO TA4 ADAPTER

The TXA is designed to enable the use of lavalier, headworn and other TA4F-terminated EV professional microphones in a wired configuration. Using standard phantom power through the TXA ensures the same high-quality audio performance that you expect using EV microphones over wireless systems.

- **Adapts TA4F to XLRM**
- **Serves as inline preamp**
- **Pad and filter switches**
- **Requires 48VDC phantom power**



R300GTRCL

R300 ACTIVE GUITAR CABLE

The R300GTRCBL is an active guitar cable designed for exclusive use with the R300 body-pack transmitter. Its active circuitry creates an ideal impedance match between guitar and bass pickups, and the input circuit of the BP300 body-pack transmitter. When used as a guitar wireless system, recommended BP-300 gain switch settings are LAV position for passive pickups, or INS for active pickups.

- **Ideal impedance match** between pickup and transmitter
- **Superior dynamic and tonal performance**
- **Wireless freedom with the tone and response of a guitar cable**



RE3-ACC-GC3

INSTRUMENT CABLE, 1/4" to TA4F

The GC3 is a special purpose cable for connecting instruments or line level signal sources with 1/4" output jacks to the RE3-BPT bodypack transmitter. The cable is robust with an easy-to-grip 1/4" plug on one end, and an industry-standard 4-pin mini plug on the other.

- **Robust cable** connects instrument to RE3-BPT
- **Easy-to-grip 1/4" plug**
- **Four-pin mini plug adapts to other EV bodypack transmitters**

INFO

WIRELESS MICROPHONES



IMPORTANT WIRELESS TERMINOLOGY

A wireless system at its most basic includes a transmitter—handheld or bodypack—and a receiver. As in any other technical business, however, beneath that apparent simplicity the world of wireless comes with its own set of concepts and technical jargon. To avoid being misled by overzealous marketing materials, it's very important to understand the basics of this language and to dispel any myths or preconceived notions that create an inaccurate picture of how things work. In the following sections we'll go through the more common technical terms and try to give you an objective outlook.

WHAT IS DIVERSITY?

The term "diversity" is derived from the word "diverse", which means varied or unlike. In the world of RF, this translates into two or more unlike sources of the signal energy that is received at the receiver. Referred to as "diversity reception," this approach is used to minimize the effects of multipath delays that can create dropouts of the radio signal. By combining or selecting two or more antenna sources for the same signal, diversity reception produces a constantly usable signal. While this always requires more than one antenna, each in a different physical location, it does not necessarily require multiple receivers. There are many types of diversity circuits used in wireless microphones on the market today, including twin-receiver "switching" diversity, antenna diversity, and switching antenna diversity. Each of these methods may be effective, depending on the particular implementation of the circuitry by the manufacturer, provided that other critical areas of the receiver circuitry are not compromised. As long as two sources of signal are unlike or varied from each other, they qualify as diverse. You may hear a lot of hype about some systems claiming "true" diversity, but in reality all diversity systems use different sources of received energy from two or more antennas, and by definition any receiver using two or more varied signal inputs has diversity. Major manufacturers may differ in their particular implementation of the diversity circuitry, but from an engineering standpoint the term "true diversity" is meaningless.

WHAT IS PHASE CANCELLATION?

Phase cancellation and multipath dropouts result from the fact that it takes longer for the reflections of a given radio signal to reach the receiver's antenna than it does for the same signal to reach that antenna directly. Because of this delay, when the direct and reflected signals are combined in the receiver they are slightly out of phase. This phase difference causes the two signals to interfere with each other, resulting in diminished signal quality. Depending on the distance and geometry, the signals may temporarily be 180° out of phase, thereby canceling each other completely, which is referred to as a dropout.

A very common example of this phenomenon has occurred to most people at one time or another when listening to FM radio in their car. As you pull up to a stop light, you'll sometimes notice that the sound becomes fuzzy and fades away as you roll slowly forward. Pull up just a few feet farther and the station comes back. The difference in reception illustrates how slight changes in position can impact phase coherence, resulting in signal cancellation.

Diversity receivers are the best defense to minimize the chances of system dropouts due to phase cancellation. The likelihood of this cancellation appearing at both antennas at exactly the same time is very low. Properly separated and splayed antennas offer the best diversity performance. Antennas connected at the rear of the receiver or remoted to the front of an equipment rack should be upright and form a V-shape with 90° between them. Remote directional or log periodic antennas should be separated by at least 6', and aimed in the direction of the transmitters.

WHAT IS A SQUELCH CIRCUIT?

Good receiver design begins with the RF and IF filtering, but another important part of the receiver circuitry is the squelch system (RF detection circuitry). This circuitry acts as a "gate" that is closed to audio signals unless the presence of an RF signal is detected at the receiver. Simple gate-squelch circuits, which are the kind most commonly used in competing wireless receivers, keep the audio path closed (or grounded to be very quiet) when the RF signal is below a set threshold.

As soon as the detected RF energy reaches that threshold, the audio path is opened to audio signal. The problem with this approach is that simple gate-squelch circuits cannot tell the difference between wanted RF signal and unwanted signal—distortion, hiss and harmonics from sources such as lighting dimmers, CD or DVD players, computers, digital effects devices and electric motors. Since extraneous RF energy will open the squelch gate just as easily as desired signal, users often "crank up" the squelch level (raise the threshold). That limits sensitivity to noise, but it also reduces the range and performance of the system.

WHAT IS A COMBINATION SQUELCH CIRCUIT?

Advanced products like the RE3 and R300 use a combination of tone-code and amplitude squelch to provide maximum protection against errant signals. In this case, the tone squelch works as described in the previous section and when the tone is present the amplitude squelch remains active. In the unlikely event that random noise fools the tone detector, the signal at the intended frequency must still be high enough to register on the amplitude squelch. The use of backup amplitude squelch also reduces the chances that an errant signal will cause audio noise while the transmitter is turned off.

WIRELESS SENSITIVITY SETTINGS

Almost every wireless microphone system has a deviation control adjustment on the transmitter that is labeled, confusingly, as "sensitivity." Unfortunately, marking this adjustment as a "sensitivity" setting encourages end-users to try to use it to set their overall audio level, which is not what the control is designed to do. Audio levels are usually controlled at the mixing board, which is why wired microphones do not have a level control, but some receivers have audio output (AF) controls. Found only on wireless microphone transmitters, the deviation setting is used to maximize signal-to-noise ratio and dynamic range. In a wireless microphone system, audio information is transmitted as changes in the carrier frequency (frequency modulation or FM). The greater the changes in frequency (deviation), the better the signal-to-noise ratio will be. So, if the system's maximum deviation is +/-40 kHz, we want deviation to approach 40 kHz when the input into the microphone is at its loudest. If the "sensitivity" is set so that the maximum signal results in more than 40 kHz deviation, signal peaks will be clipped or distorted. If, on the other hand, the deviation is set too low, we are not taking the fullest possible advantage of the system's signal-to-noise performance.

HOW TO PROPERLY SET THE WIRELESS GAIN USING THE TRANSMITTER SENSITIVITY CONTROL

- 1) Disconnect the audio output of the wireless receiver from the input to the mixing console, or mute the PA system.
- 2) If the source is a microphone, sing or scream into the microphone as loudly as it will ever be used in performance in this setting. If the source is a guitar, turn the volume knobs on the guitar to full and play the loudest passage of the performance.
- 3) While the singer is singing or guitarist is playing, adjust the sensitivity on the transmitter until the receiver's audio meter peaks in the usable range (strong signal but no clipping).
- 4) Connect the audio output of the wireless receiver to the mixing console inputs (or unmute the console) and use the mixing board or amplifier to set the appropriate audio levels for the PA. For a guitar/instrument wireless system, use the receiver output level adjustment to match the "wired" instrument output level. During final sound check, adjustment of the receiver's AF (audio frequency) output level may be necessary.

WHAT OTHER CONSIDERATIONS SHOULD I THINK ABOUT?

When selecting a wireless system, consider the long-term use for the system and always purchase a complete solution. For example, if you intend to eventually add more systems, make sure you select a system that will allow for the total number of future systems you may need. Also, don't forget to consider what microphones are compatible with the system and at the availability of accessories, such as antenna splitters, antenna amplifiers, extension or remote antennas and low-loss coaxial cable. Electro-Voice has a complete line of wireless accessories for UHF systems. These accessories allow the system to be tailored for the individual application and allow the user to get the most from their investment.

WIRELESS MICROPHONE ANTENNA GUIDE

ANTENNA TYPES

Most products ship with 1/4 wave or 1/2 wave antennas to be mounted directly on the receiver or the rackmount hardware. These antennas are not ground independent, meaning that they cannot be mounted remotely at the end of a run of coaxial cable. For remote mounting, use directional log periodic antennas such as the RE3-ACC-ALPA or RE3-ACC-PLPA for RE3 series, or the LPA-500 for R300.

REMOTE MOUNTING

Antennas should be mounted with a direct line-of-sight to the performance area, and also above the cast and crew. One of the best places for mounting antennas is 10' in the air at the side of the stage. All coaxial cable has signal loss, so keep the cable runs to minimum and use low-loss cables to keep the maximum performance range. The RE3-ACC-CXU for RE3 or CXU for R300 cables from EV are very low-loss cables that will help maintain range.

ANTENNA DISTRIBUTION

When racking multiple receivers together, it is best to use an antenna distribution system, such as the RE3-ACC-AASP (for RE3) or APD4+ (for R300). Both the RE3-ACC-AASP and APD4+ provide power and antenna connectors for four half-rack receivers and can be cascaded to run antennas for up to 20 systems from two antennas (using five RE3-ACC-AASP units). Each RE3-ACC-AASP has a cascade out per antenna input, allowing daisy-chaining of splitters without sacrificing usable outputs.



WIRED MICROPHONE APPLICATION CHART

PERFORMANCE MICS

	PL35	PL37	PL24S	PL44	PL80a	ND44	ND46	ND66	ND68	ND76	ND76S	ND86	ND96	RE320	RE420	RE520	RE920TX
Dynamic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condenser	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cardioid	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Supercardioid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hypercardioid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Figure 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Omni	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Variable-d	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On / off switch	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STAGE																	
Lead vocal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Backing vocal	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Speech	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Kick drum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toms	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hi-hat / overhead	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Percussion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Guitar amp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bass amp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acoustic guitar	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Upright bass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Piano	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accordion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Woodwinds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Brass	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
STUDIO																	
Vocals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Kick drum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snare	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toms	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hi-hat / overhead	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Percussion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Guitar amp	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bass amp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acoustic guitar	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Upright bass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Piano	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Accordion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Woodwinds	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Brass	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BROADCAST																	
Studio and podcast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interview / eng	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lavalier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headworn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INSTALL / CONTROLLING																	
Boardrooms / podiums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boundary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hanging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lavalier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headworn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BROADCAST MICS

INSTALLATION MICS

	RE20 RE20-BLACK	RE27N/D	RE320	RE50B	RE50L	RE92L	PC Boundary	PC Desktop	PC Plus	PC-12/MLR PC-18/MLR	RE90B	RE90H	RE90P	RE92H	RE92Tx
Dynamic	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condenser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cardioid	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Supercardioid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hypercardioid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Figure 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Omni	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Variable-d	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On / off switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
STAGE															
Lead vocal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backing vocal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speech	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kick drum	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hi-hat / overhead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Percussion	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guitar amp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bass amp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acoustic guitar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>													

WIRELESS MICROPHONE APPLICATION CHART

	R300 SETS			RE3 SETS									
	R300-HD	R300-L	R300-E	RE3-ND76	RE3-ND86	RE3-ND96	RE3-RE420	RE3-ND520	RE3-RPOL	RE3-RPCL	RE3-RPHW	RE3-RPGC	RE3-RPNID
Handheld set	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bodypack set	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
UHF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Frequency scanning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Transmitter sync	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Diversity receiver	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dynamic element	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condenser element	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lavalier microphone	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headworn microphone	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cardiod pattern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supercardioid pattern	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Instrument cable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MUSIC PERFORMANCE													
Lead vocal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backing vocal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electric guitar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bass guitar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HOUSE OF WORSHIP													
Pastor / priest handheld	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pastor / priest handsfree	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Praise leader handheld	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Praise leader handsfree	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Praise band vocal	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soloist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pass around mic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INSTITUTIONAL													
Classroom instructor / leader	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auditorium handheld	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auditorium handsfree	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SPORTING / FITNESS													
Aerobics instructor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Program leader	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Featured field performer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Announcer / MC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Referee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
RENTAL													
Primary vocal performer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Secondary vocal performer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presenter handheld	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presenter handsfree	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backline performer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backline instrumental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Backline performer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Backline instrumental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* When used with RSB-2 switch
 ** When used with RSB-2 switch and optional microphone of choice





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