

RE3-RX RE3 Diversity Receiver



- Diversity reception minimizes dropouts
- Up to 36 MHz tuning bandwidth (band specific) for trouble-free operation
- Easy-to-read LCD display
- Frequency scanning for selecting open frequencies
- Sync function links transmitter to receiver for easy setup



The RE3-RX is a professional rack-mountable, ½ space diversity receiver. Designed to function as the control center for an RE3 wireless set, it features frequency scanning and synchronizing, as well as full transmitter control settings which synchronize to a mated transmitter.

The diversity reception technology minimizes the chances of signal dropouts by providing two separate antenna locations which are electronically chosen moment-by-moment based on signal strength and stability. The wide tuning bandwidth provides access to a wide range of frequencies, selectable in 25kHz steps for trouble-free operation of single and multi-channel systems. The easy-to-read LCD display provides vivid viewing of all menus and operating parameters. The easy-to-use frequency scanning function simplifies locating and tuning to a clear operating frequency. The sync function wirelessly synchronizes all operating parameters to the mated transmitter.

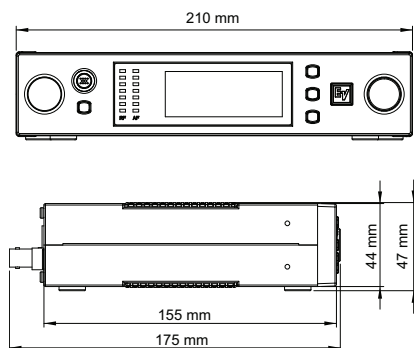
Technical specifications

Frequency oscillation mode:	Phase-locked loop (PLL)
Carrier frequency range:	470 - 865 MHz (tuning bandwidth is band dependent)
Band names, tuning bandwidths, and carrier frequency ranges:	5L: 36 MHz (488-524 MHz) 5H: 36 MHz (560-596 MHz) 6M: 10 MHz (653-663 MHz) 8M: (823-865 MHz)*

T: 3 MHz (803-806 MHz)
*8M is split into two segments:
823-832MHz: 9MHz
863-865MHz: 2MHz

Sync frequency:	Ultrasonic 40 kHz
Diversity:	Antenna diversity
Bandwidth:	36MHz
Signal/Noise ratio:	>100dB(A)
Total harmonic distortion (Thd):	<0.6%@1kHz
Receiving sensitivity:	-81dBm for -12dB SINAD
Frequency response:	63Hz~16kHz±2dB (BPT) 51Hz~16kHz±2dB (HHT)
Antenna type:	Detachable ½ wave with BNC connector
Antenna booster power:	DC12 - 15V/100mA
Function display by:	LCD
Contents of display:	Group, channel, frequency, antenna A/B, transmitter battery level, transmitter status (mute, live, or no sync), output level attenuation, AF indication, RF indication, key lock indicator.

Control functions:	Power, scan, frequency, group, channel, squelch, TX sensitivity, TX attenuation, TX RF power, TX auto off, TX key lock, TX display info, TX sync configuration, RX output volume, RX output level, RX antenna booster power, RX key lock, RX display contrast, RX display brightness, RX system reset.
Sync data options:	Frequency, group, channel, sensitivity level, attenuation status, RF power, auto off status, key lock status, transmitter display (freq or Gp/Ch)
Audio frequency output level:	Ref : $\pm 22.5\text{kHz}$ Dev@1kHz Tone $\frac{1}{4}$ " (6.3mm) Phone Jack : -10dBV XLR Jack : -4dBV(Line)、-24dBV(MIC)
Audio frequency output impedance:	240 Ω (unbalanced) 1400 Ω (balanced)
Squelch and noise muting:	Noise muting and tone code locking
Output ports:	1 x balanced XLRM jack 1 x unbalanced $\frac{1}{4}$ " TS (6.3mm) jack
Power supply:	DC12~15V/500mA
Finish:	Black polyurethane paint
Dimensions:	Width: 8.27 in. (210mm) Height: (with feet attached) 1.85 in. (47mm) Height: (without feet attached) 1.73 in. (44mm) Depth: (including antenna jack) 6.89 in. (175mm) Depth: (not including antenna jack) 6.1 in. (155mm)
Net weight:	2.71 lb (1.23 kg)
Gross weight:	3.28 lb (1.49 kg)

Dimensions:

For full operational information, download the RE3 installation manual at www.electrovoice.com.

Licensing and certification declarations:

FCC Supplier's Declaration of Conformity 47 CFR, Section 2.1077 Compliance Information Product Identifier: Electro-Voice: RE3 Wireless Receiver, AASP Active Antenna Splitter, ALPA Active Log Periodic Antenna, RFAMP Antenna Booster, BC2 Battery Charger Responsible Party – U.S. Contact Information Bosch Security Systems, Inc. 130 Perinton Parkway Fairport, NY 14450 USA Tel: +1 (585) 223-4060 FCC Compliance Statement This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not be cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IC: This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada. This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CE and EU: The CE Declaration of Conformity can be obtained and downloaded from:
www.electrovoice.com

This Equipment is in compliance with CE requirements and the following directives:

- 2011/65/EU RoHS Directive
- 2012/19/EU WEEE Directive
- 2014/53/EU RED Directive

AU and NZ: This device is in compliance with Cisp32.

Replacement parts

Order number	Description
ESP-EF01U362330	RE3 rubber feet, skid pads and screws
ESP-EF01U362333	RE3 antenna, 5L band, 480-524MHz
ESP-EF01U362334	RE3 antenna, 5H band, 560-596MHz
ESP-EF01U362335	RE3 antenna, 6M band, 653-663MHz
ESP-EF01U362336	RE3 antenna, 8M band, 823-865MHz
ESP-EF01U362337	RE3 antenna, T band, 803-806MHz
ESP-EF01U362338	RE3 receiver power supply with AC clips

Compatible products

Order number	Description
RE3-HHT76-5L	Handheld transmitter with ND76 head, 488-524MHz
RE3-HHT86-5L	Handheld transmitter with ND86 head, 488-524MHz
RE3-HHT96-5L	Handheld transmitter with ND96 head, 488-524MHz
RE3-HHT420-5L	Handheld transmitter with RE420 head, 488-524MHz
RE3-HHT520-5L	Handheld transmitter with RE520 head, 488-524MHz
RE3-BPT-5L	Bodypack transmitter 488-524MHz
RE3-BPT-5H	Bodypack transmitter 560-596MHz
RE3-BPT-6M	Bodypack transmitter 653-663MHz
RE3-BPT-8M	Bodypack transmitter 823-865MHz
RE3-BPT-T	Bodypack transmitter 803-806MHz
RE3-ACC-RMK1	Rack mount kit for single RE3 receiver
RE3-ACC-RMK2	Rack mount kit for two RE3 receivers

Ordering information**RE3-RX-5L RE3 half rack space receiver 488-524MHz**

RE3 wireless diversity receiver, 5L band, 488-524MHz, black

Order number **RE3-RX-5L**

RE3-RX-5H RE3 half rack space receiver 560-596MHz

RE3 wireless diversity receiver, 5H band, 560-596MHz, black

Order number **RE3-RX-5H**

RE3-RX-6M RE3 half rack space receiver 653-663MHz

RE3 wireless diversity receiver, 6M band, 653-663MHz, black

Order number **RE3-RX-6M**

RE3-RX-8M RE3 half rack space receiver 823-865MHz

RE3 wireless diversity receiver, 8M band, 823-865MHz, black

Order number **RE3-RX-8M**

RE3-RX-T RE3 half rack space receiver 803-806MHz

RE3 wireless diversity receiver, T band, 803-806MHz, black

Order number **RE3-RX-T**

Accessories**RE3-ACC-BC2 Two slot battery charger**

Two slot battery charger for RE3-BPT and RE3-HHT transmitters, black

Order number **RE3-ACC-BC2**

Represented by:

Germany:
Bosch Sicherheitssysteme GmbH
Robert-Bosch-Ring 5
85630 Grasbrunn
Germany

Bosch Security Systems, Inc.
12000 Portland Avenue South
Burnsville MN 55337
USA

www.electrovoice.com

RE3-HHT RE3 Handheld Transmitter



- Robust metal body
- Up to 36 MHz tuning bandwidth (band specific)
- Selectable low and high output power (band specific)
- Common threaded coupling allows microphone head interchangeable
- Sync function for easy frequency setup



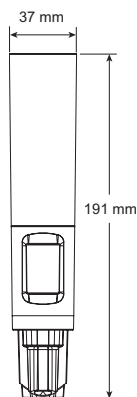
The RE3-HHT is a lightweight, yet robust UHF handheld transmitter body. It is ideally-suited for professional performance and presentation applications. Due to its commonly-used 1.25” diameter, 28 UN-2A thread pitch microphone head coupling, it accepts mic heads using this common coupling convention. Although primarily intended to accept the ND and RE Series heads developed for RE3 listed in the compatible products section of this data sheet, the RE3-HHT will adapt other microphone heads using the 1.25” diameter, 28 UN-2A thread pitch coupling scheme. The all-metal body is robust and durable, and operates on 2 AA alkaline or rechargeable NiMH cells. The tuning bandwidth affords generous frequency tuning options helping to avoid various sources of possible interference. The selectable output power (band specific) assists in overcoming the challenges of both long, or short, transmission ranges. The threaded coupling makes attaching and interchanging a variety of heads simple and convenient. The ultrasonic sync function makes for a simple system setup by syncing the transmitter to the receiver frequency tuning and other functional data. Recharging contacts provide for functional use with the optional BC2 charging station allowing the NiMH rechargeable cells within two bodypack transmitters to be charged without removal.

Technical specifications

Frequency oscillation mode:	Phase-locked loop (PLL)
Available band names, tuning bandwidths, and carrier frequency ranges:	5L: 36 MHz (488-524 MHz) 5H: 36 MHz (560-596 MHz) 6M: 10 MHz (653-663 MHz) 8M: (823-865 MHz)* T: 3 MHz (803-806 MHz) * 8M is split into two segments: 823-832MHz: 9MHz 863-865MHz: 2MHz
Sync frequency:	Ultrasonic
RF power output:	Frequency bands 5L (488-524MHz): Low 10mW / High 50mW 5H (560-596MHz): Low 10mW / High 50mW 6M (653-663MHz): Low 10mW / High 20mW 8M (823-865MHz) 10mW T (803-806MHz): Low 10mW / High 50mW
Display by:	LCD + LED
Function controls:	Power, mute, group, channel, frequency, sensitivity adjustment, RF power, auto off, key lock.

RF stability:	<±10kHz@Fc
Modulation frequency shift:	Wideband FM ±48kHz deviation
Harmonic radiation:	<-50dBc
Battery:	2 x AA alkaline battery or NiMH rechargeable battery
Charging contacts:	Yes
Microphone coupling:	1.25" diameter, 28 UN-2A thread pitch
Microphone electrical contact:	3-ring/3-pin
Finish:	Black polyurethane paint
Dimensions (without head):	Height: 7.52 in. (191mm) Width at threaded end: 1.46 in. (37mm) Width at control cover: 0.856 in. (22mm)
Net weight (without head):	12.2 oz. (346 g)
Gross weight (without head):	16.9 oz. (480 g)

Dimensions:



For full operational information, download the RE3 installation manual at www.electrovoice.com.

Licensing and certification declarations:

FCC information:

Certified under FCC Part 74.

FCC IDs: B5DH2285L, and B5DH2285H

Certified under FCC Part 15 and FCC Part 74.

FCC IDs: B5DH2286M

not require an additional user license. For more information, see <https://www.fcc.gov/consumers/guides/operation-wireless-microphones>.

Responsible Party - U.S. Contact Information

Bosch Security Systems, Inc.

130 Perinton Parkway

Fairport, NY 14450

USA

Tel: +1 (585) 223-4060

Notice!

Use of frequencies beginning at 653.000 MHz up to 657.000 MHz is covered under FCC Part 74 ID number B5DH2286M and requires an LPAS user license, however use of frequencies between 657.025 up to 663.000 MHz is covered under FCC Part 15, and do



Notice!

Changes or modifications made by the user could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

IC (Industry Canada)

Certified in Canada by IC under RSS-102, RSS-210, and RSS-Gen

IC: 1321A-RE3HHT488, 1321A-RE3HHT560, and 1321A-RE3HHT653

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference, and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Notice!

Regarding RE3-HHT-6M (653-663 MHz); the use of frequencies between 653.025 up to 663.000 MHz, please check Canada's ISSED (Innovation, Science and Economic Development) website for the current information of the license status of this band.

EU (European Union)

The CE Declaration of Conformity can be obtained and downloaded from: www.electrovoice.com

This Equipment is in compliance with CE requirements and the following directives:

- 2011/65/EU RoHS Directive
- 2012/19/EU WEEE Directive
- 2014/53/EU RED Directive

Regarding (applies to) handheld transmitter RE3-HHT-5L (480-524 MHz), RE3-HHT-5H (560-596 MHz), RE3-HHT-6M (653-663 MHz), RE3-HHT-8M (823-865 MHz), and bodypack transmitter RE3-BPT-5L (480-524 MHz), RE3-BPT-5H (560-596 MHz), RE3-BPT-6M (653-663 MHz), and RE3-BPT-8M (823-865 MHz):

This equipment is intended for use in wireless microphone applications.

Some countries in the EEA (European Economic Area) have restrictions placed on this equipment. If an EEA country is not listed it did not have any restrictions of the product at the time this document was published. The country codes used in regard to these restrictions are the following:

Austria (AT), Belgium (BE), Cyprus (CY), Denmark (DK), Germany (DE), Greece (EL), Spain (ES), Ireland (IE), Iceland (IS), Latvia (LV), Lithuania (LT), Malta (MT), Norway (NO), Slovakia (SK), Sweden (SE) and United Kingdom (UK).

Listed below are these restrictions:

- Transmitters in the ranges, 488 - 524 MHz, 560 - 596 MHz, and 653 - 663 MHz require a license in the following countries: AT, BE, CY, DE, IE, LV, LT, SK, SE, UK.

- Transmitters in the ranges, 488 - 524 MHz, 560 - 596 MHz, and 653 - 663 MHz require the transmitter be used in TV white spaces in the following countries: AT, DK, IS, MT, NO, ES.
- Transmitters in the ranges, 488 - 524 MHz, 560 - 596 MHz, and 653 - 663 MHz if used outdoor will have geographical restrictions of operation in the United Kingdom (UK).
- Transmitters in the range, 823 - 865, require a license for use in the 823 - 832 MHz range in the following countries: AT, BE, CY, EL, IE, LV, LT, UK.
- Transmitters in the range, 488 - 524 MHz may only use the range 510 - 524 MHz in Norway (NO).

Notice!



TV white spaces are gaps between operating TV broadcast stations where there are no active TV broadcasts.

Always consult your national authority before placing equipment into operation as requirements and spectrum usage can change.

AU and NZ

This device operates under an ACMA class license and must comply with all the terms of that license including operating frequencies.

Licensing information

Licensing: A ministerial license to operate this equipment may be required in certain areas. Consult your national authority for possible requirements. Changes or modifications not expressly approved by Electro-Voice could void your authority to operate the equipment. Licensing of Electro-Voice wireless microphone equipment is the user's responsibility, and licensability depends on the user's classification and application, and upon the selected frequencies on which it will operate. Electro-Voice advises the user to contact the appropriate telecommunications authority concerning proper licensing, and before selecting and ordering frequency bands.

Notices

Battery precautions

- Keep batteries out of the reach of children.
- Observe and install batteries according to the correct polarity as marked on the battery and the transmitter battery compartment.
- Do not expose the battery to excessive heat such as sunshine, fire, or other sources of high heat.
- Always consider the environment issues and follow local regulations when disposing of batteries.
- Remove depleted battery immediately.
- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- Use only disposable LR6 (AA) alkaline or NiMH batteries.
- Do not mix new batteries with old ones in the transmitter at the same time.

- Do not use different battery types or models.
- Do not use a leaking battery. If battery leakage occurs, avoid contact with skin. If contact occurs, immediately wash thoroughly with soap and water.
- If battery leakage comes into contact with your eyes, immediately flush with water and seek medical attention.
- Remove and safely store batteries away from the transmitter when the transmitter will not be used for 60 or more days.

Replacement parts

Order number	Description
ESP-EF01U362339	RE3-HHT bottom section with slide door
ESP-EF01U362340	RE3-HHT display window
RE3-ACC-HHTSA1	Stand adapter for RE3-HHT transmitter

Compatible products

Order number	Description
ND76-RC3	Wireless head with ND76 capsule
ND86-RC3	Wireless head with ND86 capsule
ND96-RC3	Wireless head with ND96 capsule
RE420-RC3	Wireless head with RE420 capsule
RE520-RC3	Wireless head with RE520 capsule

Ordering information

RE3-HHTNID-5L Handheld TX with no head, 488-524MHz

Not available for sale individually.

Order number **RE3-HHTNID-5L**

RE3-HHTNID-5H Handheld TX with no head, 560-596MHz

Not available for sale individually.

Order number **RE3-HHTNID-5H**

RE3-HHTNID-6M Handheld TX with no head, 653-663MHz

Not available for sale individually.

Order number **RE3-HHTNID-6M**

RE3-HHTNID-8M Handheld TX with no head, 823-865MHz

Not available for sale individually.

Order number **RE3-HHTNID-8M**

RE3-HHTNID-T Handheld TX with no head, 803-806MHz

Not available for sale individually.

Order number **RE3-HHTNID-T**

Accessories

RE3-ACC-BC2 Two slot battery charger

Two slot battery charger for RE3-BPT and RE3-HHT transmitters, black

Order number **RE3-ACC-BC2**

Represented by:

Germany:

Bosch Sicherheitssysteme GmbH
Robert-Bosch-Ring 5
85630 Grasbrunn
Germany

Bosch Security Systems, Inc.
12000 Portland Avenue South
Burnsville MN 55337
USA

www.electrovoice.com



RE420-RC3 Wireless head with RE420 capsule

- Thread-on microphone head for Electro-Voice and other brand's wireless handheld transmitters
- 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



The RE420-RC3 is a premium-grade, high-performance, condenser cardioid thread-on vocal microphone head for wireless handheld transmitters. Designed to reveal the exceptional detail and vivid clarity synonymous with condenser elements, it skillfully delivers the lyrical finesse required for expressive vocal performances.

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. The floating captured ID collar will spin freely until screwing the head on tightly. It will remain locked in place when fully tightened. This allows the desired orientation of the branding to the transmitter.

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. The cardioid pattern provides excellent acoustic isolation. Maximum feedback rejection occurs when a stage monitor is positioned 180° off-axis to the element. This pattern also allows for a comfortable working range around the microphone making expressive microphone techniques easy.

The multi-stage pop filter consists of two layers of dense foam separated by air, which attenuates wind velocity caused by breath and windblasts. The high-pass filter has two positions (see drawing). The flat position delivers the full frequency band pass of the capsule. The high-pass position attenuates frequencies below 150 Hz. The internal shock mount isolates the microphone element from vibration and guards against handling noise.

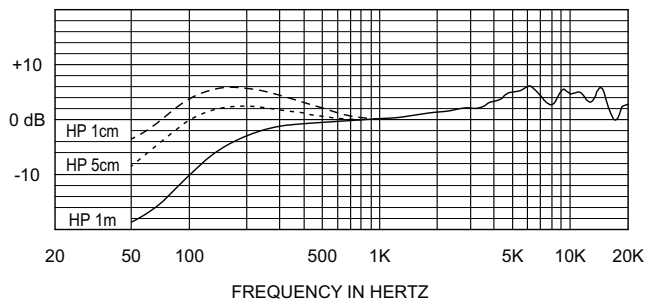
Technical specifications

Element type:	Self-biased condenser
Frequency response:	50 Hz-20 kHz (see chart)
Polar pattern:	Cardioid
Sensitivity, open circuit voltage @ 1 kHz:	5.6 mV/Pascal (-45 dBV/Pa)
Clipping (max SPL):	137 dB SPL (1% THD)
Self noise:	22 dB SPL "A" weighed (0 dB=20 µPa)
Dynamic range:	115 dB
Signal-to-Noise ratio:	72 dB

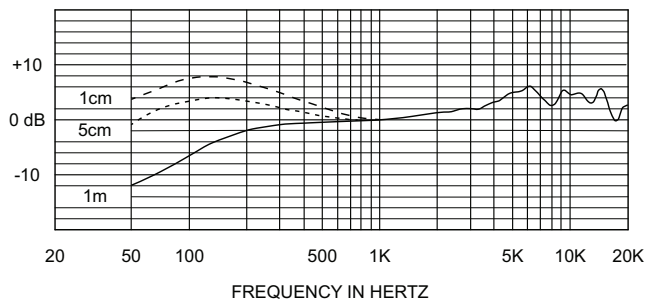
2 | RE420-RC3 Wireless head with RE420 capsule

Output impedance:	1000 ohms
Power requirements:	4-8 VDC phantom power
Polarity:	Positive pressure on diaphragm produces positive voltage at center contact relative to ground contact.
Electrical contact:	3-Ring/3-Pin
Threaded coupling:	1.25" diameter 28 UN-2A thread pitch
Finish:	Black polyurethane paint
Materials:	Aluminum, steel, steel wire grille screen
Dimensions, length: diameter:	3.36 in. (85.3 mm) 1.95 in. (49.6 mm)
Net weight:	4.6 oz (130 g)
Shipping weight:	6.5 oz (184 g)

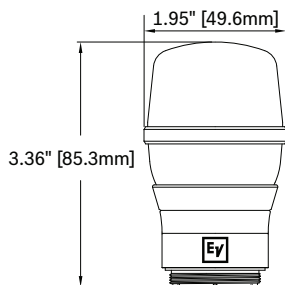
Frequency response: High-Pass



Flat



Dimensions:



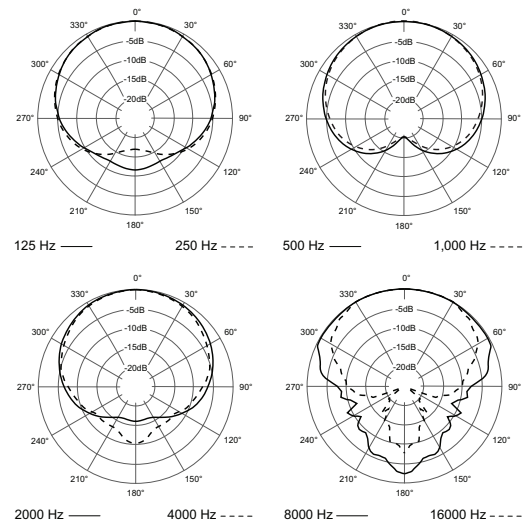
Notice!

It is important to prevent under-driving or over-driving the handheld transmitter input stage. Pay special attention when matching the transmitter input sensitivity to this microphone head.

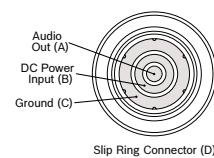


Adjust the transmitter sensitivity to a level where the audio path meter on its companion receiver shows 75%-95% full on high-emphasis vocal peaks for optimal signal strength and quality.

Polar response:



Bottom view:



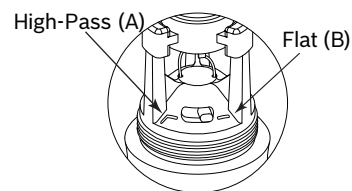
A Audio out

B DC power input

C Ground

D Slip ring connector

High-Pass filter:



A High-Pass

B Flat

Replacement parts	Description
RE420GRILLE	Replacement grille, black

Parts included

Quantity	Component
1	Thread-on microphone head
1	Engineering datasheet
1	Warranty and product documentation information card

Ordering information

RE420-RC3 Wireless head with RE420 capsule

Condenser cardioid screw-on vocal microphone head, black

Order number **RE420-RC3**

Accessories

379-1 379-1 WINDSCREEN, BLACK, PACKAGED

Foam windscreen/pop filter, black

Order number **379-1**

Represented by:

Germany:

Bosch Sicherheitssysteme GmbH
Robert-Bosch-Ring 5
85630 Grasbrunn
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