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WH20 DYNAMIC HEADSET MICROPHONE — Specification Sheet

GENERAL

The Shure Model WH20 is a rugged, light-weight, dynamic headset microphone that provides high-quality voice pick-up. It fits securely for active microphone users, such as aerobics instructors and musicians, with low visibility for stage appearances. The WH20 is suitable for any voice communications application where comfort and reliability are required.

The WH20 has a cardioid (unidirectional) pickup pattern. This provides greater gain-before-feedback and isolation from ambient noise and other unwanted sound sources, such as air-conditioning, musical instruments and loudspeakers. A carefully shaped frequency response includes a voice-frequency presence peak and a low-frequency rolloff to compensate for the proximity effect inherent in cardioid microphones during close-talk operation.

An integrated elastic CROAKIES® headband secures the headset comfortably. The headband, wireframe, and gooseneck are adjustable to accommodate any head size or shape. The WH20 is supplied with a foam windscreen and clothing clip.

FEATURES

- Lightweight wireframe and headband adjust for a secure, comfortable fit
- Extra-strong, small-diameter attached microphone cable resists breakage
- Collapsible microphone boom for easy storage and transportation
- Smooth, natural frequency response comparable to high-quality dynamic hand-held vocal microphones
- High input clipping level eliminates overload distortion
- Reliable at temperature and humidity extremes
- Supplied foam windscreen and clothing clip

MODEL VARIATIONS

- The *WH20QTR* has a right-angle $^1/_4$-inch phone plug for use with Shure Headset Wireless Microphone Systems, or any unbalanced microphone input.
- The *WH20TQG* has a miniature four-pin female Tini "QG"® connector for direct connection to Shure wireless body pack transmitters.*
- The *WH20XLR* has a three-pin male XLR connector with a convenient detachable belt clip.

*For use with Shure W10BT, LX1 or other transmitters, contact the Shure Wireless Customer Services Department.

MICROPHONE PARTS

The WH20 consists of the following parts (see Figure 1):



① *Microphone Cartridge*
② *Microphone Boom*
③ *Hinged Housing*
④ *Cable and Cable Retainer*
⑤ *Wireframe*
⑥ *Elastic Headband*

MICROPHONE PARTS
FIGURE 1

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SPECIFICATIONS

Type
Dynamic, Close-Talking

Frequency Response (at 8 mm [$^5/_{16}$ in.])
50 to 15,000 Hz (see Figure 2)

Polar Pattern
Cardioid (unidirectional) response—uniform with frequency, symmetrical about axis (see Figure 3)

Impedance
Microphone rating impedance is 150 ohms (200 ohms actual)

Output Level (close-talked* at 1,000 Hz)
Open Circuit Voltage . . . . . –67.0 db/Pa (0.45 mV)
(1 Pa = 94 dB SPL)
*At 12.5 mm ($^1/_2$ inch).

Hum Sensitivity
38.4 dB equivalent SPL in a 1 millioersted field

Polarity
WH20QTR as a wired microphone: Positive sound pressure on diaphragm produces positive voltage on tip with respect to sleeve (ground) of microphone output phone plug connector.
WH20QTR, WH20TQG used with Shure Wireless Systems:
$^1/_4$-inch Phone Jack Receiver Outputs: Positive sound pressure on diaphragm produces positive voltage on tip of receiver output connector.
3-pin XLR Receiver Outputs: Positive sound pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3 of low-impedance output connector, and on tip of Aux output connector.
WH20XLR as a wired microphone: Positive sound pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3 of microphone output XLR connector.

Environmental Conditions
Operating Temperatures: –18° to 60°C (0° to 140°F)
Storage Temperatures: –29° to 74°C (–20° to 165°F)
Humidity: 0 to 95%

Cable
Attached 1.22 m (4 ft), small-diameter, shielded, PVC-jacketed, two-conductor.

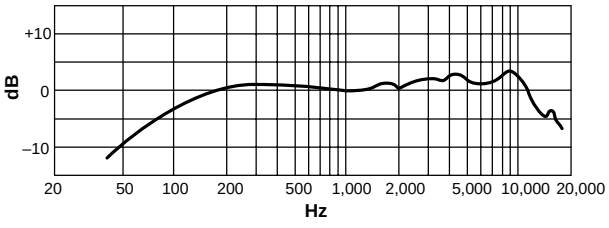
Cable Connector
WH20QTR: Right-angle $^1/_4$-inch phone plug
WH20TQG: Female Switchcraft Tini "QG" (TA4F)
WH20XLR: Three-pin female XLR with detachable belt clip

Construction
Black thermoplastic housing; stainless steel grille; black TEFLON®-coated stainless steel wireframe; flexible plastic-clad monel gooseneck; rubber/nylon elastic headband

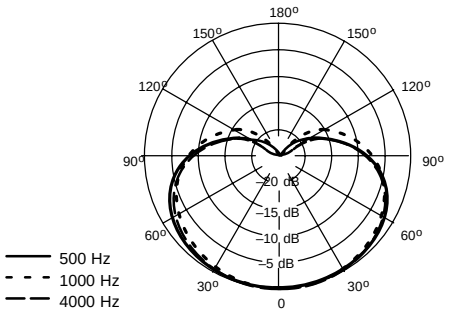
Net Weight (including connector)
WH20QTR: 67 g (2.4 oz)
WH20TQG: 64 g (2.2 oz)
WH20XLR: 100 g (3.5 oz)

CERTIFICATION

Conforms to European Union directives, eligible to bear CE marking; meets European Union EMC Immunity Requirements (EN 50 082-1, 1992).



TYPICAL FREQUENCY RESPONSE
FIGURE 2



TYPICAL POLAR PATTERNS
FIGURE 3

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