

Hearing Helper® Personal FM Systems

FM Listening Systems, Models PFM 300 / PFM 350



NEW!

PFM 350 Shown

HELPING
PEOPLE
LISTEN
AND
LEARN!



Applications

- Classroom Listening
- TV Listening
- Meetings & Conferences
- Worker Training & Coaching
- And More!

Components

- FM Body Pack Transmitter (PFM T30)
- Mini Lapel Clip Mic (MIC 081)
- Mini Earphone (EAR 013)
- Soft Nylon System Carry Case (CCS 020)
- Belt clip cases (2) (CCS 021)
- Instruction Manual
- PFM 300 Only**
- FM Personal Receiver (PFM R32)
- PFM 350 Only**
- FM Personal Receiver (PFM R31)
- Environmental Mic (MIC 014)

HOW WELL A PERSON hears can substantially affect their ability to learn. Too often, people with hearing difficulties have that challenge compounded by background noise.

To help, Williams Sound has developed the Hearing Helper® Personal FM System.

The Hearing Helper® System helps listeners overcome background noise, reverberation, and distance from the speaker in classrooms and small groups, thus maximizing their ability to hear and understand.

▶ How It Works

The Hearing Helper® PFM System broadcasts the speaker's voice directly to the ears of individual listeners.

While the speaker wears a compact transmitter and microphone, listeners use portable receivers and earphones to hear the presentation clearly and easily, even from the back of the room.

▶ Easy To Setup & Use

Both PFM 300 and PFM 350 models operate on 2 AA batteries and include the PFM T30 Transmitter and portable receiver. The PFM 350's portable receiver includes an environmental microphone.

Both systems operate over a range of 150 feet (45 m) and accommodate any number of listeners with additional receivers.

The T30 Transmitter and R31 and R32 receivers are field-tuneable over 10 wideband channels.

▶ Model Differences

The PFM 300 and PFM 350 systems differ only in the receivers they include. The PFM 300 includes the PFM R32 Receiver, an FM-only receiver designed for maximum isolation of the speaker's voice.

The PFM 350's R31 portable receiver includes an environmental microphone which helps users listen to themselves or those near them.

▶ Earphone Choices

Both receivers can be used with single or dual earphones, headphones, or custom earmold drivers to suit a wide range of hearing losses.

▶ Fitting Range

The Hearing Helper® System is designed for a wide fitting range: minimum amplification, mild to moderate hearing loss, or moderate to severe hearing loss when used with a hearing aid. It is not recommended for use as a primary hearing aid.

▶ Hearing Aid Use

An optional neckloop telecoil coupler is available for use with telecoil-equipped hearing aids. For cochlear processor users, a Direct Audio Input cord is available.

Stay Up & Running With The Optional Drop-In Charger!

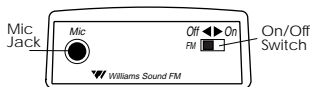


You know how vital the Hearing Helper PFM System is to its users. By dropping your receivers and transmitter into the optional charger each night, you won't ever be left without power.

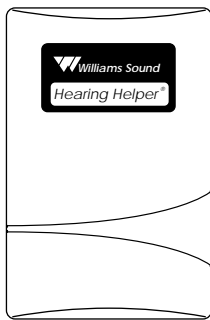
The CHG 200 is a 3 V multi-charger, designed to store and charge one or two Receiver or Transmitter units simultaneously overnight. 110 VAC.

TECHNICAL SPECIFICATIONS: HEARING HELPER® PERSONAL FM

FM Transmitter, Model PFM T30



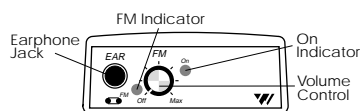
T30 Top



T30 Front

Dimensions:	3-5/8" L x 2-3/8" W x 7/8" H (92.1 mm x 60.3 mm x 22.2 mm)
Weight:	4.4 oz (125 g) with battery
Color:	Royal blue, shatter-resistant polypropylene
Battery Type:	Two (2) AA 1.5 V Non-rechargeable Alkaline batteries (BAT 001), 70 mA nominal current drain, 12 hours approx. life (OR) Two (2) AA 1.5 V Ni-Cad Rechargeable batteries (BAT 026), 70 mA nominal current drain, 10 hours per charge approx., recharges in 14-16 hours, uses CHG 200 Charger
Operating Freq's:	Selectable, 10 channels, 72.1 - 75.9 MHz, internal DIP switch
Stability:	+ .005%, frequency synthesized, crystal reference, PLL
Modulation:	Wide-band FM, 75 kHz, 75 µs pre-emphasis
RF Output:	8000 µV/m at 30 m, max., 40 mW typical
FCC ID:	CNM T30
Freq Response:	100 to 10 kHz, + 3 dB at 1% max. THD
Signal-Noise Ratio:	55 - 60 dB, with R31 or R32 Receiver
Auto Gain Control:	40 dB range, 30 mV threshold
Transmit Antenna:	Integral with 39" microphone cord
Microphone:	Omnidirectional condenser, Lavalier-type, 39" cord, 3.5 mm mono phone plug (MIC 081)
Controls:	On/Off switch, slide-type
Mic Connector:	3.5 mm mono phone jack

Receiver, Models PFM R31 & PFM R32



R32 Top

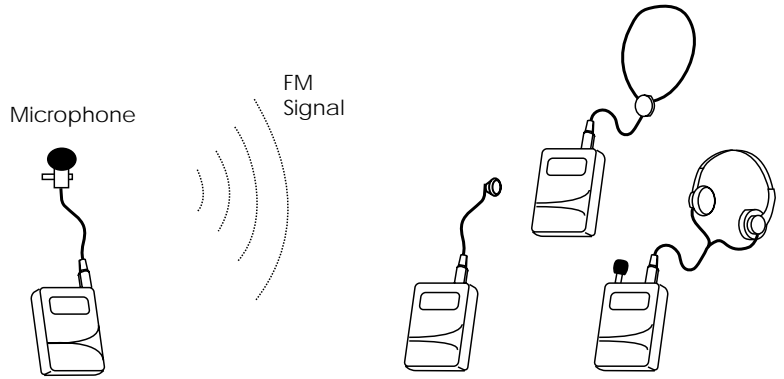
Dimensions and Weight:	3-5/8" L x 2-3/8" W x 7/8" H (92.1 mm x 60.3 mm x 22.2 mm) 4.6 oz (130 g) with batteries
Color:	Royal blue, shatter-resistant polypropylene

► The Williams Sound Warranty: Your Assurance Of Quality

At Williams Sound, we're certain of our quality. That's why we back the Hearing Helper® Personal FM Systems with a 5-year warranty*, your assurance of both quality and satisfaction.

* 90 days on headphones, microphones, and accessories

HOW THE PFM SYSTEM WORKS

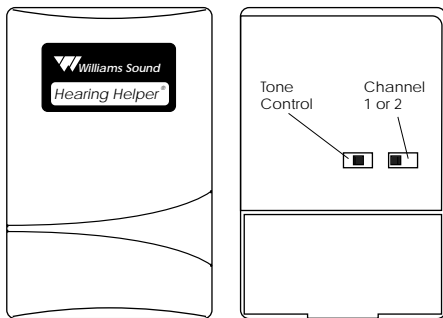


T30 Transmitter

R31 & R32 Receivers

The speaker wears the body-pack transmitter and a clip-on microphone. The speaker's voice is broadcast as an FM radio signal over a distance of 100-150' (30-45 m). Listeners use the pocket receiver and earphone or headphone to hear the speaker's voice directly. By placing the microphone close to the sound source, desired sounds become louder in relation to background noises. A neckloop telecoil coupler allows the system to be used with telecoil (T-switch) equipped hearing aids. For cochlear processor users, a Direct Audio Input cord is available.

SYSTEMS, MODELS PFM 300 AND PFM 350



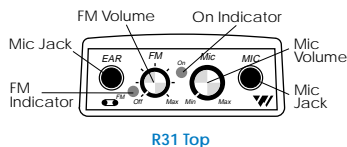
R32/R31 Front

R32/R31 Rear

- Battery Type: Two (2) AA 1.5 V non-rechargeable Alkaline batteries (BAT 001), 14 mA nom. current drain, 80 hours approx. life (OR) Two (2) AA 1.5 V Ni-Cad rechargeable batteries (BAT 026), 14 mA nominal current drain, 50 hours per charge approx., recharges in 14-16 hours, uses CHG 200 Charger CNM R31
- FCC ID: Pre-Tuned, Field-tuneable, 72 MHz - 76 MHz.
- Operating Freq's: Pre-set channels are E (72.9 MHz) and G (75.7 MHz)
- FM Deviation: Wide-band, 75 kHz, 75 µS de-emphasis
- AFC Range: ± 120 kHz
- Sensitivity: 4 µV at 12 dB Sinad with squelch defeated, squelches at 10 µV for min. 50 dB S/N ratio
- Freq Response: 100 to 10 kHz, + 3 dB
- Signal-Noise Ratio: 50 dB at 10 uV
- Receive Antenna: Integral with earphone cord
- Audio Output: 35 mW, max. at 16 Ω
- Output Connector: 3.5 mm mono phone jack
- Squelch: Set to turn off audio under weak or no signal condition
- Carrier Detect Ind: Red LED, turns on in the presence of a carrier
- Controls: Volume: rotary/on/off/volume
Tone: 3-way slide switch: Lo = flat response (20 Hz), Mid = -3 dB at 235 Hz, Hi = -3 dB at 730 Hz
Channel: 2-way slide switch: Ch 1 = 72.9 MHz, Ch 2 = 75.7 MHz
Indicators: On/off and FM
- Note: Specifications are electrical performance

PFM R31 Receiver Only

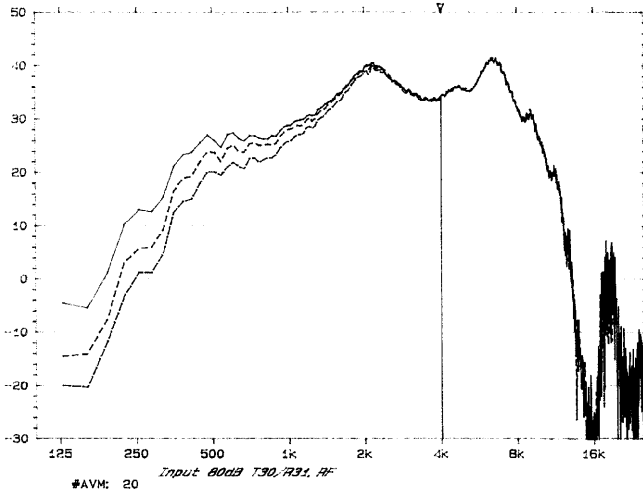
- Mic Connector: 3.5 mm mono phone jack, supplies positive DC for Williams Sound electret mics
- Microphone: Plug mount electret, omnidirectional, with windscreen, 3.5mm mono phone plug (MIC 014)
- Mic Volume: Rotary control



R31 Top

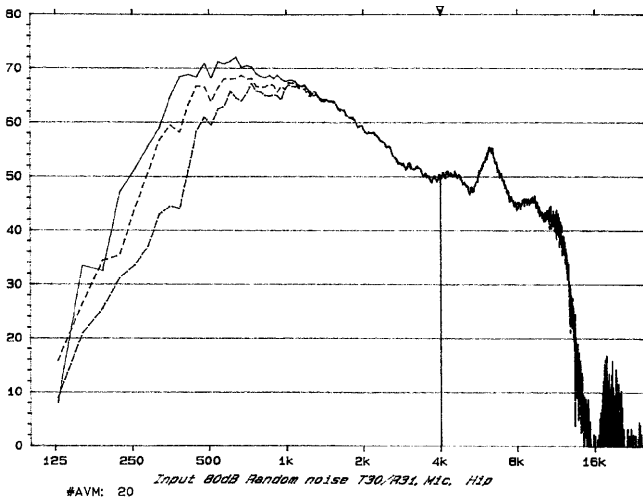
ACOUSTIC SPECIFICATIONS

ANSI 2.44 Test



FM Response (PFM R31, R32)

Input: 80 dB random noise
 Device: KEMAR mannequin with BTK 3550 Tester
 Y: 80.0 dB 80 db Main Y: 34.1 dB
 X: 100 Hz + 8 OCT LOG Main X: 4 kHz



Environmental Mic Response (PFM R31 Only)

Input: 80 dB random noise
 Device: KEMAR mannequin with BTK 3550 Tester
 Y: 80.0 dB 80 db Main Y: 50.2 dB
 X: 100 Hz + 8 OCT LOG Main X: 4 kHz

ANSI S3.22-1987 Test

FM Response (PFM R31, R32)

Minimum Low Cut (Tone Set To Low)

Max. SSPL90: 135.8 dB at 500 Hz
 HF Avg SSPL90: 127.1 dB
 HF Avg Full On Gain: 37.7 dB at 60 dB in
 Reference Test Gain: 38.1 dB
 Response Limit: 80.1 dB
 F1=200 Hz, F2=8 kHz
 Total Harmonic Dist: 3.6 % at 500 Hz
 3.9 % at 800 Hz
 2.2 % at 1600 Hz

Medium Low Cut (Tone Set To Mid)

Max. SSPL90: 135.5 dB at 600 Hz
 HF Avg SSPL90: 127.1 dB
 HF Avg Full On Gain: 36.8 dB at 60 dB in
 Reference Test Gain: 37.3 dB
 Response Limit: 79.4 dB
 F1=200 Hz, F2=8 kHz
 Total Harmonic Dist: 3.4 % at 500 Hz
 3.4 % at 800 Hz
 2.2 % at 1600 Hz

Maximum Low Cut (Tone Set To HI)

Max. SSPL90: 133.5 dB at 1000 Hz
 HF Avg SSPL90: 127.0 dB
 HF Avg Full On Gain: 35.4 dB at 60 dB in
 Reference Test Gain: 35.8 dB
 Response Limit: 78.01 dB
 F1=200 Hz, F2=8 kHz
 Total Harmonic Dist: 1.1 % at 500 Hz
 2.7 % at 800 Hz
 2.1 % at 1600 Hz

Environmental Mic Response (PFM R31 Only)

No Tone Modification

Max. SSPL90: 134.8 dB at 500 Hz
 HF Avg SSPL90: 126.4 dB
 HF Avg Full On Gain: 40.9 dB at 60 dB in
 Reference Test Gain: 40.8 dB
 Response Limit: 81.1 dB
 F1=200 Hz, F2=8 kHz
 Total Harmonic Dist: 1.1 % at 500 Hz
 1.1 % at 800 Hz
 0.3 % at 1600 Hz

Your Authorized Williams Sound Dealer Is: