

**FM SPECIFICATION DATA**

Group Tours • Destination Marketing Organizations • Cruise Ships • Tourism Offices  
• University Tours • Large-Scale Guided Attractions • Museum & Presentation  
Centers • Chambers of Commerce • Factory/Plant Tours

# TGS PRO MULTI

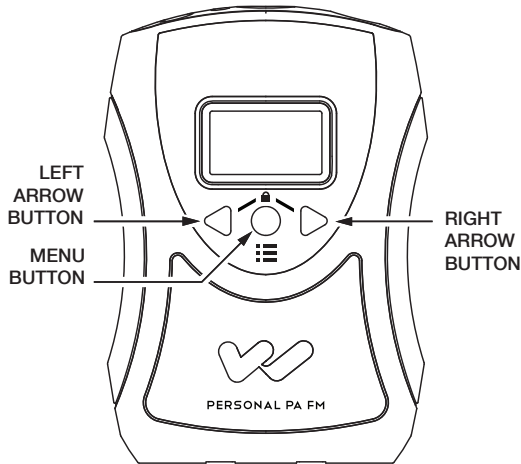
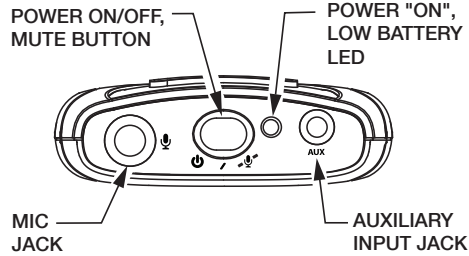
Hearing Helper FM Tour Guide System

The Hearing Helper® FM Tour Guide System, model TGS PRO MULTI, helps tour group members with hearing difficulties overcome background noise and distance from the guide. Use it in factories, museums, power plants—anywhere hearing assistance is needed. The Hearing Helper Tour Guide System features eight selectable operating frequencies on 72-76 MHz. As a result, multiple tour guide systems can operate within the same location, simultaneously, with no crosstalk or interference. System includes one (1) T46 transmitter with MIC 100 microphone, ten (10) R35-8 receivers, batteries and a system carry case.



# Hearing Helper FM Tour Guide System

## PPA T46 FM Transmitter



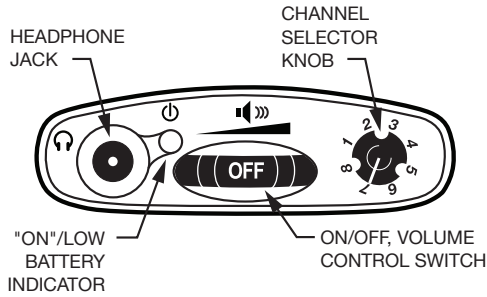
<b>Dimensions:</b>	4.1" L x 2.8" W x 1.1" D (104 mm x 71 mm x 28 mm)
<b>Weight:</b>	2.6 oz (74 g), no batteries
<b>Color:</b>	Black/Silver
<b>Enclosure Material:</b>	Shatter-resistant PC/ABS plastic with textured scratch-resistant aluminum faceplate
<b>Battery Type options:</b>	Two (2) AA 1.5 V non-rechargeable Alkaline batteries (BAT 001-2), 75 mA nominal current drain, up to 30 hours battery life Two (2) AA 1.5 V NiMH rechargeable batteries (BAT 026-2), 75 mA nominal current drain, up to 20 hours battery life per charge, recharges in 14–16 hours, uses CHG 3502 or CHG 3512 Charger
<b>Operating Frequencies:</b>	Selectable, 17 channels, 72.1 – 75.9 MHz*. Switchable 8 or 17 Channel Mode. (8-channel mode setting corresponds with PPA R35-8 receiver channels)
<b>Stability:</b>	± .005%, frequency synthesized, crystal reference, PLL
<b>Modulation:</b>	Wide-band FM, 75 kHz peak, 75 μS pre-emphasis
<b>RF Output:</b>	80 mV/m at 3 m (max. allowed by FCC rules)
<b>Frequency Response:</b>	180 Hz to 13 kHz, ± 3 dB at 1% max. THD
<b>Signal-to-Noise Ratio:</b>	65 dB (typical) transmitted
<b>Transmit Antenna:</b>	Integral with microphone cord
<b>Microphone:</b>	Electret type, 3.5 mm mono plug
<b>External Display:</b>	OLED for status and menu information. Status: Ch/Freq, Mic Audio Level, Auxiliary Input Audio Level, Battery Status, Mic Mute, Channel Lock, Dual-Preset mode. Menu: Ch/Freq display mode select, Volume, Aux Input, Compression, 17 or 8-channel mode, screen time out, screen brightness, restore default settings
<b>External Controls:</b>	Momentary push button: push and hold 3 seconds for power On/Off, push and release for microphone mute On/Off. "Up", "Down" and "Menu" buttons for accessing and changing transmitter settings. Battery type switch (Alkaline or NiMH) located behind the battery compartment door
<b>External Indicators:</b>	Power LED - Green, flashes when battery is low
<b>Mic Input:</b>	3.5 mm mono jack with electret mic bias, adjustable gain with 25 dB range
<b>Aux Input:</b>	2.5 mm stereo jack, adjustable gain with 60 dB range
<b>Audio Compression:</b>	1:1 (off) or 2:1 (on) selectable in menu
<b>Compatible Receivers:</b>	PFM R33, PFM R36, PPA R35, PPA R37, PPA R35-8, PPA R1600,
<b>Approvals/Directives:</b>	FCC, Industry Canada, RoHS, WEEE
<b>Warranty:</b>	Lifetime PLUS Limited Warranty, 90 Days on most accessories.

**Note: FCC regulations, section 15.21, requires the user to comply with the rules of transmitter operation. Any changes or modifications made by the user not expressly approved for compliance may result in the loss of all privileges and authority to operate the equipment**

**\*DISCLAIMER: FCC RULES LIMIT USE OF THIS EQUIPMENT TO AUDITORY ASSISTANCE**

# Hearing Helper FM Tour Guide System

## PPA R35-8 Receiver



<b>Dimensions:</b>	4.5" H x 2.85" W x 1.2" D (115 mm x 72 mm x 30 mm)
<b>Weight:</b>	4.6 oz (130 g)
<b>Color:</b>	Black
<b>Battery Type options:</b>	Two (2) AA 1.5 V non-rechargeable Alkaline batteries (BAT 001-2), 75 mA nominal current drain, up to 50 hours battery life Two (2) AA 1.5 V NiMH rechargeable batteries (BAT 026-2), 1500 mAh, up to 32 hours battery life per charge, recharges in 14–16 hours, uses CHG 3502 or CHG 3512 Charger
<b>Operating Freq:</b>	8 channels: 72.1, 72.3, 72.6, 72.8, 74.7, 75.4, 75.7, or 75.9 MHz*.
<b>Intermediate Freq:</b>	10.7 MHz
<b>FM Deviation:</b>	+/- 75 kHz
<b>De-emphasis:</b>	75 uS
<b>LED Indicator:</b>	Power: Red. Low Battery: Flashes
<b>Sensitivity:</b>	2 uV at 12 dB SINAD with squelch defeated
<b>Input Overload:</b>	20 mV
<b>Frequency Response:</b>	40 Hz to 15 kHz +/- 3 dB
<b>Signal to Noise ratio:</b>	60 dB at 100 uV
<b>Receive Antenna:</b>	Integral with earphone/headphone cord
<b>Audio Output:</b>	35 mW, max 16 ohm load
<b>Output Connector:</b>	3.5 mm mono phone jack
<b>Squelch:</b>	Located inside battery door. Factory set for 25 dB S/N. Squelch may be set with JFD-7104-5 from Sprague Goodman or any flat tipped tuning tool with tip size .095 X .016
<b>Notes:</b>	The R35-8 is NOT field tunable. The eight channels have been carefully selected to inhibit inter-modulation interference. Channel frequencies are 72.1, 72.3, 72.6, 72.8, 74.7, 75.4, 75.7, and 75.9 MHz.
<b>Approvals:</b>	FCC, Industry Canada, RoHS, WEEE
<b>Warranty:</b>	Lifetime PLUS Limited Warranty, 90 Days on most accessories.

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# Hearing Helper FM Tour Guide System

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## Architectural/Engineering Specifications

### PPA T46

The PPA T46 is a wide-band body-pack transmitter and shall operate on 17 selectable frequencies between 72MHz and 76MHz. It shall operate for up to 30 hrs with two AA Alkaline batteries and be housed in a black plastic enclosure. It shall have battery recharge ability utilizing Williams Sound drop-in chargers.

The T46 shall have a 3.5 mm microphone jack and a 2.5 mm auxiliary audio input jack. The microphone cord will serve as the transmitting antenna. It shall have three buttons on the front to access channel select, master and aux gain, compression on/off, channel lock and screen adjustments. There shall be an OLED screen on the front of the T46 displaying current operating status and menu information.

The T46 shall have the ability to operate in dual channel mode whereby the user can switch between two different transmitting channels, each with its own set-up parameters.

There shall be a power switch which also serves as a microphone mute control on the top bezel of the transmitter.

The T46 shall have wide band modulation at 75 KHz peak with a frequency response of 200 Hz to 16 KHz.

The PPA T46 shall be covered under a limited lifetime parts and labor warranty.

This transmitter shall be the Williams Sound model PPA T46.

### PPA R35-8

The PPA R35-8 shall be a digitally synthesized eight channel receiver. The receiver shall be encased in a black PC/ABS plastic with a hinged door on the back for battery installation.

The receiver shall be a body-pack type and include a detachable belt-clip for hands-free operation. The receiver shall have a 3.5 mm mono phone jack and accommodate low-impedance mono earphones, headphones and telecoil couplers. The receiver shall have a combination volume control and power on/off rotator dial, an eight position channel select knob and a red power LED on the top bezel. The power LED will flash to indicate low battery. There shall be a slide switch located inside the battery compartment to select between Alkaline or NiMH rechargeable battery operation. There shall be a squelch control located inside the battery door. There shall be drop-in charging contacts on the bottom of the receiver.

The receiver shall be pre-programmed to eight channels between 72 and 76 MHz. The receiver shall operate for up to 50 hours on two 1.5 volt AA Alkaline batteries (BAT 001-2) and up to 32 hours with two 1.5 volt AA NiMH rechargeable batteries (BAT 026-2).

The R35-8 shall receive FM signals in the 72-76 MHz audio assistance band with 75  $\mu$ S de-emphasis. The receiver shall provide a maximum output of 35 mW at 16 Ohms with an earbud type earphone. The receiver shall accept a maximum wideband deviation of  $\pm 75$  kHz. The system's electrical frequency response shall be 40 Hz to 15 KHz  $\pm 3$ dB and the signal to noise ratio shall be 60 dB at 100  $\mu$ V. The receiver shall have a sensitivity of 2  $\mu$ V at 12 dB Sinad.

The receiver shall be covered by a Lifetime PLUS Limited Warranty, 90 Days on most accessories.

The receiver shall be the Williams Sound model PPA R35-8.

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**NOTE: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE!**

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Web: [www.williamssound.com](http://www.williamssound.com)

### International Sales

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