Assistive Listening Systems

PTX Transmitter

User's Guide

Gentner

Copyright Information

PTX User's Guide, April 1997 (Rev. 1.10)

Contents

Introduction

The PTX portable transmitter results from years of surveying audiologists, sound contractors, consultants and end users. It is designed to provide every feature and function with the highest possible audio/RF performance and reliable operation while remaining affordable and easy to use.

The PTX has audio inputs for both microphone and line (i.e. tape or CD player). The two sources can also be mixed. An audio processor shapes the input audio dynamics and frequency response to produce a signal with maximum intelligibility and minimal operator adjustment.

The RF section is crystal-controlled for stability. Its digital frequency-synthesizer circuitry sets the transmitter to 37 of the FCC-approved Assistive Listening Band's channels. Six memory channels can recall frequent-use channels.

Features and Controls

Audio Processing

To make transmitted sound intelligible to the hearing impaired, making it louder is not enough. The needs of the hearing impaired differ greatly from those with normal hearing. The most common impairments are reduced sensitivity and dynamic

range, and loss of high frequencies.

The PTX uses a system of program-dependent AGC with a proprietary frequency-shaping system to control dynamics and maximize voice intelligibility. This results in a clear, loud sound, and eliminates the need to constantly raise and lower receiver volume.

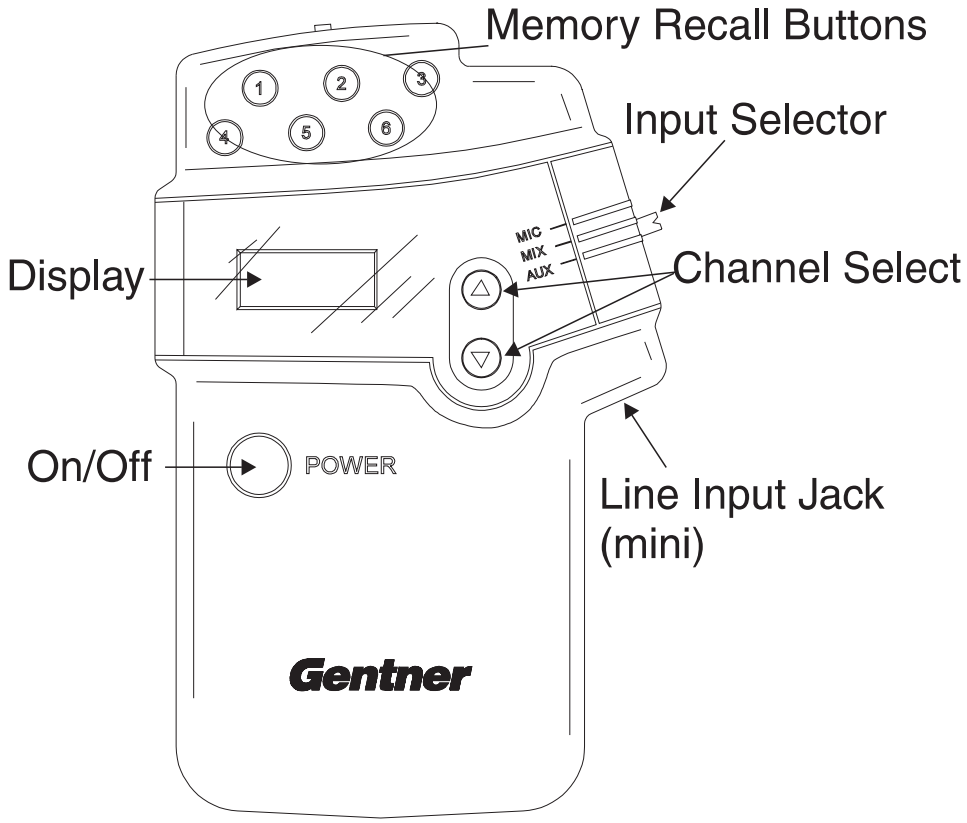

Figure 1. PTX front panel

Controls

Power: Turns on the power to the PTX transmitter
Channel Select: Allow the user to scroll up or down through the 37 preprogrammed channels
Memory Recall Buttons: May be programmed to any of the 37 channels for instant recall
Display: LCD display shows the channel the PTX is currently using. If tuned manually, the channel will be prefixed by a C (example: C-20). If tuned using a memorized channel, the channel will be prefixed by the memory-button number (example: 4-20).
Input Selector: Allows the user to broadcast the audio input from a microphone, a line source or a mix of both
Line Input Jack: A standard 1/8-inch/3.5mm jack for an outside audio source (i.e. tape or CD player)
Mic Mute Switch: Allows the user to mute the mic audio input, *not* the auxiliary audio input
Mic Input Jack: A mini XLR-type professional connector with a locking action to prevent the mic plug from being accidentally pulled out

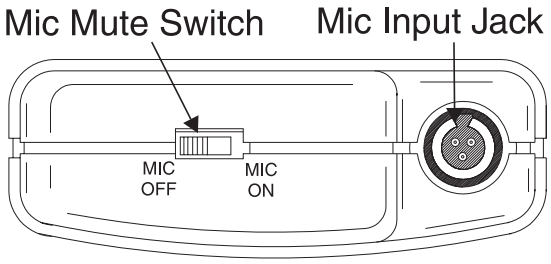

Figure 2. PTX top view

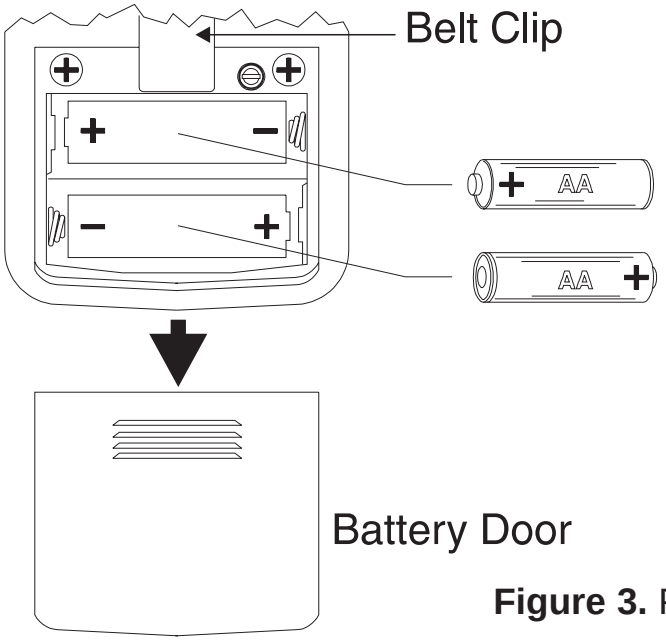

Figure 3. PTX back view

Belt Clip: Securely attaches the PTX to the user's belt for portable operation
Battery Door: PTX uses two AA batteries (alkaline or rechargeable Ni-Cad)

Setup

Antenna/Microphone

The PTX antenna is 2/3 internal to the PTX unit, 1/3 in the microphone cord. With this in mind, it is recommended, although not required, that the microphone be attached before use and that the cord is as fully extended as possible during use.

Also, ensure that you maintain line-of-sight contact with the receivers, so walls with large amounts of wiring, metal studs or concrete do not block or reduce the signal.

Please Note: *Any RF system is susceptible to "dropouts," where reduced RF energy caused by reflections and cancellations results in a noisy signal. If this happens, try moving the transmitter or receiver around until the signal clears. Sometimes, even a few inches can cause a dramatic difference in performance.*

Install Batteries

The PTX uses two AA batteries. For best results, we recommend alkaline types with a minimum of 600 mAHrs each of power. To install the batteries, slide the battery door down and place the two batteries as indicated in the battery compartment.

The PTX can also use the Gentner BC10A recharging system and Ni-Cad rechargeable batteries.

Caution: *Never use standard batteries in a recharger. The batteries can explode or leak, severely damaging the transmitter and charger.*

Select Audio Input

If a microphone will be used (normal operation), select the MIC position on the input selector. To feed audio from an outside source, select the LINE position and insert the audio cable from the external source into the line jack.

For proper microphone operation, ensure the MUTE switch is positioned closest to the mic jack. This turns the mic on.

Operation

Powering the PTX

Press the POWER button. The LCD display will come on, indicating which of the 37 channels is tuned in.

Selecting a Channel

The transmission channel is selected in two ways: 1) directly using the up and down-arrow push-buttons on the front panel; 2) using one of the six memory buttons.

Setting Memory Channels

To set a memory channel, first use the up/down-arrow tuning buttons to select the desired channel. Next, push and hold the desired memory button until the display blinks (three seconds). Let off the button and the channel is set.

Check the System

Walk around with the receiver while an audio source is playing and check reception in all parts of the seating area. If there are more than a few dropouts, change broadcast frequency and try again.

Using the Mix Function

To use the mic and line inputs together, set the input selector in the MIX position. The relative levels can be controlled by varying the level into the line input (i.e. adjusting the tape-recorder volume) until the mix of mic and line is satisfactory.

Low-Battery Indication

The PTX operation period is based on the type of batteries used. Typical duration is 4–5 hours. When the batteries are close to depletion, the LCD display will flash "LO." When the display begins flashing, the PTX will continue to operate for about 15 minutes.

Interference Problems

With any type of RF device, other RF sources can interfere with reception. Even the Assistive Listening Band is occasionally subject to use by other types of devices.

Interference can take the form of intermittent rising-and-falling audio. To verify on-channel interference, take the receiver to a place where the signal should be stronger. Since the PTX is frequency-agile, you can set it to another channel and retune the receivers away from the interference.

For multiple PTXs operating in the same location, adjust the channel as far from the other unit(s) as possible. Transmitters should never be set to the same frequency in the same location.

Specifications

PTX

Dimensions:	4 5/8"H x 3"W x 1 1/8"D
Weight:	4 oz. (dry)
Audio Inputs:	>10kOhms (high impedance, varies with frequency), -55dB mic input level, mini XLR connector
Aux Inputs:	>3kOhms (high impedance), -10dB input level, mini jack connector
AGC Range:	40dB
Signal-to-Noise Ratio:	60dB

Transmission Type:	FM modulation
Max. FM Deviation:	50kHz total (+/- 25kHz)
Max. Radiated Power:	8000uV/m at 30 M
Frequency Control:	Digitally synthesized Crystal controlled
Frequency Stability:	.005%
Frequency Selection:	37 channels, 72–76MHz
Power Requirements:	2xAA batteries
Current Consumption:	Transmitting 300mA Standby 1mA

Notice

FCC Registration Number: FBI910402011

The PTX Assistive Listening Transmitter complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1) this device may not cause harmful interference;

2) this device must accept any interference received, including interference that may cause any undesired operation.

This device also complies with the requirements of the Department of Communications (DOC of Canada), as specified in document RSS-210. The device is permitted only on a no-interference basis, that is, it must cease operation if it is causing harmful interference of services authorized by DOC, as listed in the Canadian Table of Frequency Allocations. Also, the operator must accept any radio interference received, including that which causes undesired operation of the device.

Warranty

Gentner Communications Corporation (Manufacturer) warrants that this Assistive Listening System (ALS) product is free of defects in both materials and workmanship. Should any part of this equipment be defective, Manufacturer agrees, at its option, to:

A. Repair or replace any defective ALS product, free of charge (except transportation charges), for a period of one year from the date of the original purchase, provided the owner returns the equipment to the Manufacturer at the address set forth below. No charge will be made for parts or labor during this period;

B. Furnish replacement for any defective ALS product parts in

the equipment for a period of one year from the date of original purchase. Replacement parts shall be furnished without charge, except labor and transportation;

C. Repair or replace any defective ALS accessory, free of charge (except transportation charges), for a period of 60 days from the date of the original purchase, provided the owner returns the equipment to the Manufacturer at the address set forth below. No charge will be made for parts or labor during this period.

This Warranty excludes assembled products not manufactured by Manufacturer whether or not they are incorporated in a Manufacturer product or sold under a Manufacturer part or model number.

THIS WARRANTY IS VOID IF:

A. The equipment has been damaged by negligence, accident, act of God or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or,

B. The equipment has been altered or repaired by other than Manufacturer or an authorized service representative of Manufacturer; or,

C. Adaptations or accessories other than those manufactured or provided by Manufacturer have been made or attached to the equipment which, in the determination of Manufacturer, shall have affected the performance, safety or reliability of the equipment; or,

D. The equipment's original serial number has been modified

or removed.
NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE EQUIPMENT, nor is any person or company authorized to assume any warranty for Manufacturer or any other liability in connection with the sale of Manufacturer's products.
Manufacturer does not assume any responsibility for 1) consequential damages, 2) expenses or loss of revenue or property, 3) inconvenience or interruption in operation experienced by the customer due to a malfunction in the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period.
In case of unsatisfactory operation, the purchaser shall promptly notify Manufacturer at the address set forth below in writing, giving full particulars as to the defects or unsatisfactory operation. Upon receipt of such notice, Manufacturer will give instructions respecting the shipment of the equipment, or such other matters as it elects to honor this warranty as above provided. This warranty does not cover damage to the equipment during shipment and Manufacturer assumes no responsibility for such damage. All shipping costs shall be paid by customer.
This warranty extends only to the original purchaser and is not assignable or transferable.

Contact Numbers

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