

Owners Manual/Operating Instructions

Telex Model PST-170 Auditory Assistance Transmitter

Carefully inspect your Auditory Assistance Transmitter. If there is any damage or shortages, please refer to the “Warranty Information Section”.

Set-up Instructions:

Power: Power is provided by 2 “AA” size batteries. Alkaline batteries provide the best battery life. Nickel Cadmium or Nickel Metal Hydride rechargeable batteries can be used also but with shorter battery life. Install batteries as shown in the illustrations but do not apply power to the transmitter at this time.

CAUTION: Do not attempt to recharge Alkaline Batteries as this may result in personal injury. Charge Pins are provided on the bottom of the unit that fit TELEX drop in chargers.

Frequency/Channel Considerations: As with any radio device, interference can occur at any time. The frequencies offered are shared with other legitimate users. **Check the frequency/channel with the matching receiver to see if any interference is present.** If interference is present, choose a different channel. The severity of interference varies with location and distance to the interfering station. If the interference is weak on all channels, this is probably acceptable since your transmitter will cover the interference and is unlikely to interfere with other users. Multiple Channel Systems require other considerations but each channel should be checked as above.

Transmitter Location: Select a clear, unobstructed path between the transmitter and the receiver if possible, for best performance. The transmitter should not be used between objects such as metallic building structures and file cabinets as this can cause short distance performance and reflections that could cause fading of the signal. Place the transmitter on the users belt or pocket, preferably with the antenna facing the receiver. Do not coil the antenna and put it in a pocket. This will severely reduce the operating distance.

Transmitter Operation: Now that you have checked all of the channels you intend to use, apply power to the transmitter by moving the Toggle Switch on top of the transmitter towards the Function Display. The display will light up for approximately 8-10 seconds allowing better viewing in low light situations. Pressing either of the Function Buttons will also cause the screen to light up for 8-10 seconds. Use the function push buttons to select any of the items listed in the Function Instructions below.

Antenna: The transmitter uses a flexible wire “trailing” antenna that is permanently attached to comply with FCC Part 15 Rules. Do not cut or lengthen the antenna . This is a tuned antenna and modification will shorten the operating range.

Operating Instructions: Battery Power is applied to the transmitter with the toggle switch on the top of the transmitter. The display on the top of the transmitter will then show the Operating Channel, a small Lock icon (if Lock is ON) and E.D.R. The two pushbuttons above the display are used to “program” the remainder of the transmitter functions, as shown below. The “Set” button is on the left and the “up” button is on the right. Pressing the Set button one time will cause the item on the display to “blink” or “flash”. Pressing the Set button again will “Set” or store the item in memory. When the displayed item is flashing, pressing the Up button selects the next item. Once the desired item is selected, press Set again to store the item in memory. The Lock function must be disabled to make any changes.

<u>Operation</u>	<u>Function/Result</u>
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Press and hold the **Set** and **Up** buttons for 5-10 seconds until the Lock icon either comes on the display or goes off the display as desired. If you hold both buttons too long, the Lock will come back on or go off.

Press set	Channel (“blinks”) flashes.
Press up	Channel increments. Stop on desired channel. If the channel is missed, continue pressing the Up button until the desired channel appears again.
Press set	flash stops, Channel is set in memory.
Press set	Mic Gain setting flashes.
Press up	Audio Level increases at 6 dB per step. (see E.D.R. and AUX audio section) If the desired setting is missed, continue pressing up until desired level appears again.
Press set	flash stops, Level is set in memory. Terminates edit mode.

Special Function Programming:

E.D.R. : If E.D.R. does not already show on the display and Enhanced Audio Performance is desired, Switch the toggle switch off for a few seconds. Press and hold the Set button, switch the toggle switch back ON. The E.D.R. icon will be ON if E.D.R. is enabled. To disable E.D.R., Hold the Set button down when the power is applied.

Low Battery: The Treble Clef icon flashes when the battery voltage goes below 2.0 Volts.

Audio Input: There are 2 audio input jacks on the transmitter. One is the normally used microphone input. This input is located on the transmitter top panel “step”. A microphone is supplied with the transmitter but other types can be used as well. Place the microphone element about 8 to 10 inches below the mouth of the user. Adjust the gain mentioned above to adjust the transmitted volume. Excessive input levels may sound unnatural and the Treble Clef symbol will come on, indicating “overload”. Adjust the microphone volume before using the Aux input.

The second audio input, the Auxilliary input jack is located on the side of the transmitter case. The input jack is a 1/8 inch stereo/mono jack designed to allow audio devices such as teachers aids or tape recorders to be used. Typical input level is 100 mV RMS maximum for normal modulation. Input exceeding this level will cause the audio to “limit” which may also sound unnatural. Input “overload” will be indicated by the Treble Clef Symbol coming on (flashing). Reduce the input level in if this should happen, with the input device’s control . Turn the program material on (tape recorder, PA, etc. or use the microphone) Adjust the appropriate tape output etc. level control until loud program material passages sound natural in the receiver. This allows sufficient “headroom” to prevent peak distortion on loud inputs.

System Walk Through: Now that the transmitter is set up, you should be able to hear the program material on the appropriate receiver. Walk the receiver through the area that it is intended to be used in. Check for any noise or interference that would cause undesired operation. Some of the causes of poor performance are listed below.

- Poor transmitter location.
- Poor receiver location.
- Interference.
- Local AC Line noise.
- RF “Trouble Spots”
- Operating distance beyond system capability

Additional Information:

Transmitter/Receiver Channel Selection:

As mentioned in the Set-Up instructions, be sure to check the receiver channels first to insure that no interference is present. If more than one system is to be used at the same location, check the channels as each transmitter is added to insure that interference between units is not being generated. Two transmitters can sometimes be operated on the same channel if they are widely separated (over 300 feet apart). For best multiple system performance (all units in the same area) do not assign adjacent channels to each unit. Up to four systems can be used in the same area without co-system interference. Some experiments with channel selection may be necessary to suit local conditions. All frequencies used by the PST-170 transmitter may be shared by other legitimate users.

Specifications:

Audio Input:

- Level, Microphone..... 7.75 mV RMS (gain max) for rated deviation.
- Impedance, Microphone,10 K Ohm nominal.
- Level, AUX input,100 mV RMS for rated deviation, 25 KHz maximum.
- Impedance, AUX input..... 100 K nominal.
- Audio Level.....0 to 42 dB Attenuation in 6 dB Steps.
- Signal To Noise Ratio.....56 dB, uncompanded, 77 dB companded.
- Pre-emphasis.....115 uSeconds
- Maximum Deviation.....25 KHz
- Number of Channels.....17, user selectable
- Frequency Range.....72.1-75.9 MHz (in selected steps /channels.

See Channel Assignment List for further information.

Note: All frequencies within the above range are factory selected on legal frequencies and Additional transmitter frequencies are not field programmable.

RF Power Output.....80,000 uV/M @ 3 M., Maximum.

Channel/Frequency assignment:

<u>Channel</u>	<u>Frequency (MHz)</u>	<u>Channel</u>	<u>Frequency (MHz)</u>
A	72.1	O	74.7
B	72.2	P	75.3
C	72.3	Q	75.4
D	72.4	J	75.5
E	72.5	K	75.6
F	72.6	L	75.7
G	72.7	M	75.8
H	72.8	N	75.9
I	72.9		

Warranty Service Information:

Please see the separate Warranty Card supplied with this product.

APPROVAL INFORMATION:

The Telex Model PST-170 is authorized under Federal Communications Commission and Industry Canada Rules . Licensing of the Transmitter, if required, is the user's responsibility and licensability depends upon the users classification, and frequency selected.

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

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.