

Preliminary Operating Instructions

Telex Model ST-300 Auditory Assistance Transmitter

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

Set-up Instructions:

Power: Power will be received from the supplied “wall cube”. Before applying power, it is suggested that all input cords be plugged in and the antenna be screwed onto the transmitter. Insert the cord plug into the transmitter before plugging in the wall cube. The wall cube normally supplied is for 120 V AC, 60 Hz use only.

Transmitter Location: Select a suitable location for the transmitter. Try to keep a clear, unobstructed path between the transmitter and the receiver. The transmitter should not be located near metallic objects such as building structures and file cabinets. Locating the transmitter on top of a file cabinet is OK. Avoid high heat sources such as radiators .

Antenna: The transmitter uses a special “reverse” RF connector on the model ST-300. This is intentional and is designed to comply with FCC Part 15 Rules. The antenna supplied should be the only antenna used with the ST-300. The antenna is designed to operate in the vertical position.

Audio Input: One or both of the audio input connections can be used at the same time. A single modulation limiter serves both inputs. If either input is not used, that input should be “turned off”. Unbalanced devices should be plugged into the ¼ in. (quarter inch) Unbalanced Audio input jack located on the rear panel. Tip is “hot” and the barrel is ground. Balanced devices should be plugged into the Balanced Audio “XLR” jack located on the rear panel. Pin 1 is Common (or ground), Pin 2 is audio input, Pin 3 is audio input. See operating instructions for additional information.

E.D.R. audio: The Telex ST-300 Transmitter is equipped with E.D.R., Enhanced Dynamic Range (companded) audio. This mode greatly improves the Audio Signal to Noise Ratio when the ST-400 is used with the Telex Model SR-400 receiver. The E.D.R. mode must be selected on the transmitter and receiver to be effective. Also, The E.D.R. Mode must be de-selected if the ST-300 is used with more economical receivers such as the Telex SR-50 receiver. See Operating Instructions for further information.

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. For best results, locate each transmitter in the area it is to service, and as far apart as possible.

Transmitter Operation: Turn the Monitor control down (counter-clockwise). Now that you have checked all of the channels you intend to use, apply power to the transmitter by pressing the Power Button located on the front panel. The Display Screen should now be on. Select the RF Channel on the transmitter to match the receiver channel. Turn the program material on (tape recorder, PA, microphone etc.) Adjust the appropriate Audio Input Level control until loud program material passages cause the Treble Clef Icon to just come on with loud input or set the step to the next dB level down. This allows sufficient “headroom” to prevent peak distortion on loud inputs. Set the High/Low power button to High position initially. See operating Instructions for additional information.

Audio Monitor: After the audio input levels have been adjusted in the above procedure, stereo headphones with a ¼ in. plug can be plugged into the Monitor jack. If you wish to monitor the audio program material, turn up the monitor (volume) control to the desired level. The monitor control does not affect the transmitted audio level.

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.

Operating Instructions: When the Power button is pressed, the Channel, Frequency and existing audio settings are displayed. After 10 seconds (unless another button is pressed) the audio settings are blanked out. After this point, switch functions as follows:

<u>Operation</u>	<u>Function/Result</u>
Press set	Audio Settings are displayed.
Press set	Channel (“blinks”) flashes.
Press up (arrow)	Channel increments.
Press down (arrow)	Channel decrements.
Press set	flash stops, Channel is set in memory.
Press set	Unbalanced Audio Level flashes.
Press up	Audio Level increases at 6 dB per step.
Press down	Audio Level decreases at 6 dB per step.
Press set	flash stops, Level is set in memory.
Press set	Balanced Audio Level flashes.
Press up	Audio Level increases at 6 dB per step.
Press down	Audio Level decreases at 6 dB per step.
Press set	flash stops, Level is set in memory.
Press set	Mic (microphone input), 600 (600 Ohm Line) or 70V (70 V Line input) will flash, depending on which source was last selected. Press set again if the flashing source item is the desired item or Press up/down button to select new source. Press set last to save flashing item.
Press set	All items stop flashing. Ends “normal use” programming.

Special Function Programming:

E.D.R. : If E.D.R. does not already show on the display and Enhanced Audio Performance is desired, program as follows:

Press the power switch for 2-3 seconds to remove power, if not already off.

Press and **Hold** the set button and then **Press** the power button . E.D.R. should then be displayed near the MHz Icon. To de-select E.D.R., remove power and re-apply power while holding the set button in.

Power Lock: To lock the power button ON, Press the set and the up and the down buttons at the same time until a small “lock” icon near the channel icon flashes two times. The lock icon will then disappear. Pressing the power button while in lock mode will cause the lock icon to flash. To de-select the lock function, Press the set and up and down buttons again until the icon flashes one time. The power button will then be unlocked.

RF Power: RF Power is normally set to “High”. The display will show RF Power: High. For multiple frequency installations and re-use of frequencies, Low power output may be desired. In no case is the power raised beyond approved levels. To select Low power, Press set and down buttons at the same time. To select High power, press the set and up buttons at the same time.

SW Revision: Press and hold the down button. The Revision Number will be Displayed in the Balanced and Unbalanced gain digits.

Specifications:

Audio Input.....	Female XLR
Level, MICrophone selected.....	0.5 to 70mV
Impedance, Microphone selected.....	2 K Ohm
Level, 600 Ohm selected.....	70 mV to 7.0 V
Impedance, 600 Ohm selected.....	300 K Ohm
Level, 70 V selected.....	7.0 to 70 V
Impedance, 70 V selected.....	150 K Ohm
Audio Input.....	Female ¼ inch
Level.....	10 mV to 1.0 VRMS Un-balanced
Impedance.....	10 K Ohm
Signal To Noise Ratio.....	56 dB Un-companded, 77dB 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/Frequency Chart.	
RF Power Output.....	80,000 uV/M @ 3 M.

Note: All frequencies are factory selected on legal frequencies and additional or different transmitter frequencies are not field programmable.
See Channel/Frequency Chart for clarification.

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		

Power input requirement: 12-15V AC/DC at 700mA.

Warranty Service Information:

Please see the separate Warranty Card supplied with this product.

APPROVAL INFORMATION:

The Telex Model ST-300 is authorized under Federal Communications Commission and Industry Canada Rules . Licensing of the Transmitter, if required, is the users 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.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.