Preliminary Operating Instructions
Telex Model TT-16 Transmitter

Carefully unpack your IFB 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 antenna supplied should be the only antenna used with the TT-16. 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 only audio sources 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 or unbalance devices should be plugged into the "XLR" jack
located on the rear panel. Pin 1 is Common (or ground), Pin 2 and Pin 3 are audio inputs that
depend on the type of intercom selected (RTS 1, RTS 2 or Telex).

E.D.R. audio: The Telex TT-16 Transmitter is equipped with E.D.R., Enhanced
Dynamic Range (companded) audio. This mode greatly improves the Audio Signal
to Noise Ratio when the TT-16 is used with the Telex Model TR-16 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 TT-16 is used with older equipment such as the TR-
34 receiver.

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 (balance and/or unbalance audio input). Adjust the appropriate Audio Input Level
control until loud program material causes the audio level meter to hit 0 dB. This allows sufficient
"headroom" to prevent peak distortion on loud inputs. Set the High/Low power button to High
position initially.

 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, TX power level, existing audio level settings and intercom type are displayed. After this point, switch functions as follows:

Operation	**Function/Result**
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	RF Power High flashes
Press up	High power
Press down	Low power
Press set	Flash stops, Level is set in memory. High = displayed, Low = Not displayed
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	Input audio type, RTS 1, RTS 2 or Telx 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	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	Input audio type, RTS 1, RTS 2 or Telx 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.

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 flashs 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.

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, Unbalanced RTS 1 or RTS 2 selected……. 0.5 to 2 VRMS
Impedance, Microphone selected……………….. > 10,000 Ohms

Level, Balanced Telex selected…………………. 0.5 to 2 VRMS
Impedance, Telex selected………………………... > 10,000 Ohms

Audio Input……………………………………..Female ¼ inch
Level………………………………….………..10 mV to 1.0 VRMS Unbalanced
Impedance…………………………….………... > 10,000 Ohms

Signal To Noise Ratio…………….………….....56 dB Un-companded, 77dB companded
Pre-emphasis……………………………….…115 uSeconds

Maximum Deviation…………………………..25 KHz
Number of Channels…………………………..16, user selectable
Frequency Range………………………………64.5-67.5 MHz (in selected steps/channels) See Channel/Frequency Chart.
RF Power Output……………………………. 50mW (High Power), 5mW (Low Power)

Channel/Frequency assignment:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	64.5	A	66.1
2	64.7	B	66.3
3	64.9	C	66.5
4	65.1	D	66.7
5	65.3	E	66.9
6	65.5	F	67.1
7	65.7	G	67.3
8	65.9	H	67.5

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 TT-16 is authorized under Federal Communications Commission and Industry Canada Rules . Licensing of the transmitter, if required, is the users responsibility and depends upon the users classification.

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.