

700 Series Quick Start Guide

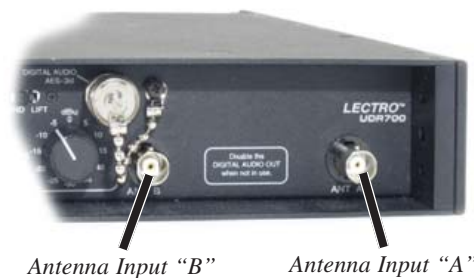
1) **Locate Receiver.** Place the receiver where it will not be subjected to extreme temperature variations, bumped or dropped. Try to route all power, antenna and audio cables so they do not cross walkways or aisles.

2) **Connect Power.** For AC operation, connect the female end of the power cord to the AC input jack on the rear panel and plug the other end into a suitable electrical outlet (90-240 VAC, 50-60 Hz).

If external DC power is used, connect a power cord from the DC power source to the External Power Connector. (This cable will have to be fabricated. See 700 Series Operations Manual for specifications on this cable.)



3) **Connect Antennas.** You can use either two remote antennas or two whip antennas with 90-degree connectors to operate the UDR700; however, the operating range may be less with the whip antennas than with the remote antennas. When using remote antennas, for best performance place them at least three feet from each other and as high as possible with a direct line of sight path to the transmitter.

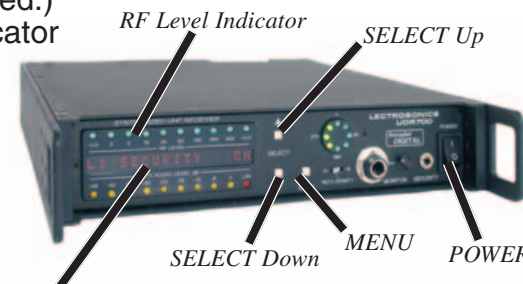


4) **Preset Receiver and Connect to Sound System.** Preset the UDR700 controls as follows and connect the Audio Output XLR jack to your audio equipment input:

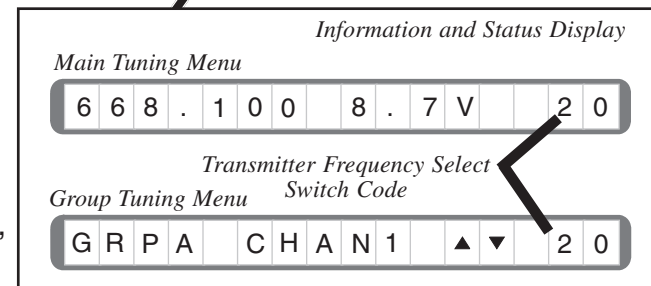
Audio Monitor Level Control (front panel) to min. (CCW)
PHASE Switch (rear panel) to "0"
Analog Audio Output Control (rear panel) to -40 (full CCW)



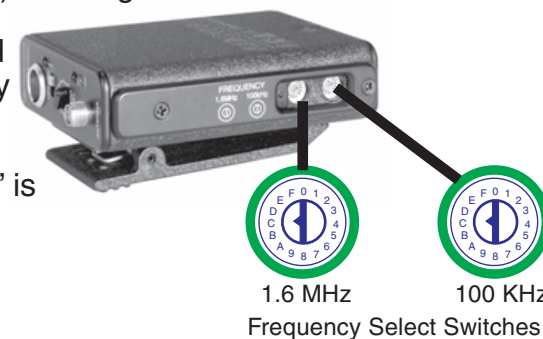
5) **Turn On Receiver and Find Clear Frequency** - When the Main Tuning Menu appears, observe the RF Level Indicator LEDs. (If the Main Tuning Menu is not displayed, press and release the MENU button to step through the menu selections until it is displayed.) If any of the RF Level Indicator LEDs glow or blink, use the SELECT Up or Down button to locate a clear channel (no RF activity) from one of the current factory preset frequency group.



If a clear channel is not available using one of the factory preset frequencies, press and hold the MENU button, then press the SELECT Up or Down button to tune across the entire 25.5 MHz frequency block (in 100 kHz steps) to locate one.

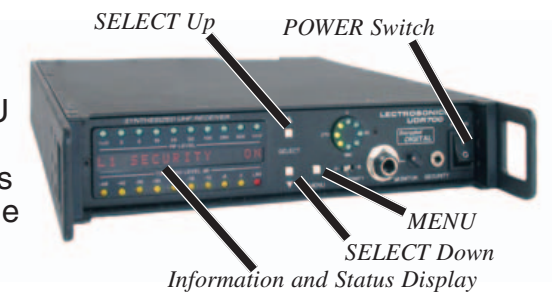


6) **Set Transmitter Frequency Switches** - If necessary, install a fresh battery, then set the Frequency Select Switches on the associated transmitter(s) to the two-digit code displayed on the right side of the Information and Status Display. (See illustration in Step 5.) The digits represent the positions of the Coarse (1.6 MHz) and Fine (100 KHz) Frequency Select Switches. (In the example, "2" represents the Coarse setting and "0" is the Fine setting.)



7) **Set Security Level** - Set the UDR700 Power switch to OFF, then press and hold the SELECT Down button while setting the Power switch to On.

Press SELECT Up and Down to choose a new security level (default is Level 1), then press MENU to finalize the selection. The Information and Status Display displays a message indicating the selected Security Level (1, 2 or 3).



8) **Generate Encryption Key** - Press MENU to enter the Key Generation Menu. "MAKE NEW KEY? ^" will be displayed in the Information and Status Display.



Press the SELECT Up button to begin the process, or press MENU to cancel creating a new key and return to the MAIN TUNING MENU display.

Follow the Information and Status Display instructions until "NEW KEY TO TX ^" appears.



9) **Connect Key Cable.** Remove the Battery Compartment Cover (UT700 only), then connect the Key Cable between the transmitter and the UDR700.

Caution
The UM700 and UT700 Key Cables are different.



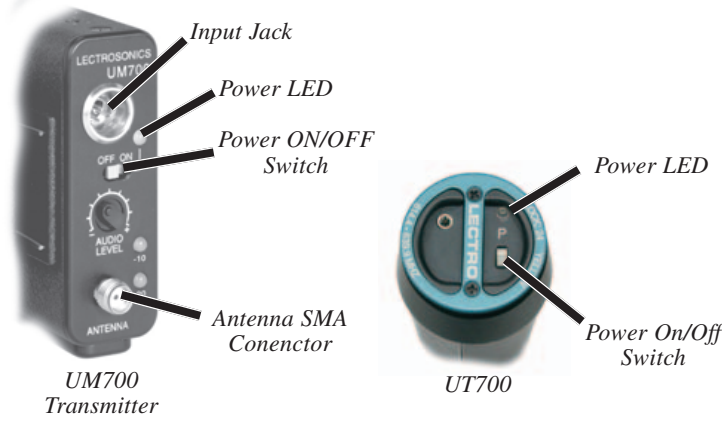
10) **Transfer Encryption Key** - Turn on the transmitter, verify battery condition, and then press the SELECT Up on the UDR700 to transfer the encryption key to the transmitter. The Power LED on the UT700 and the two Modulation LEDs on the UM700 blink to confirm receipt of the new key.



- Level 1: 1 blink
- Level 2: 2 blinks
- Level 3: 3 blinks

Note

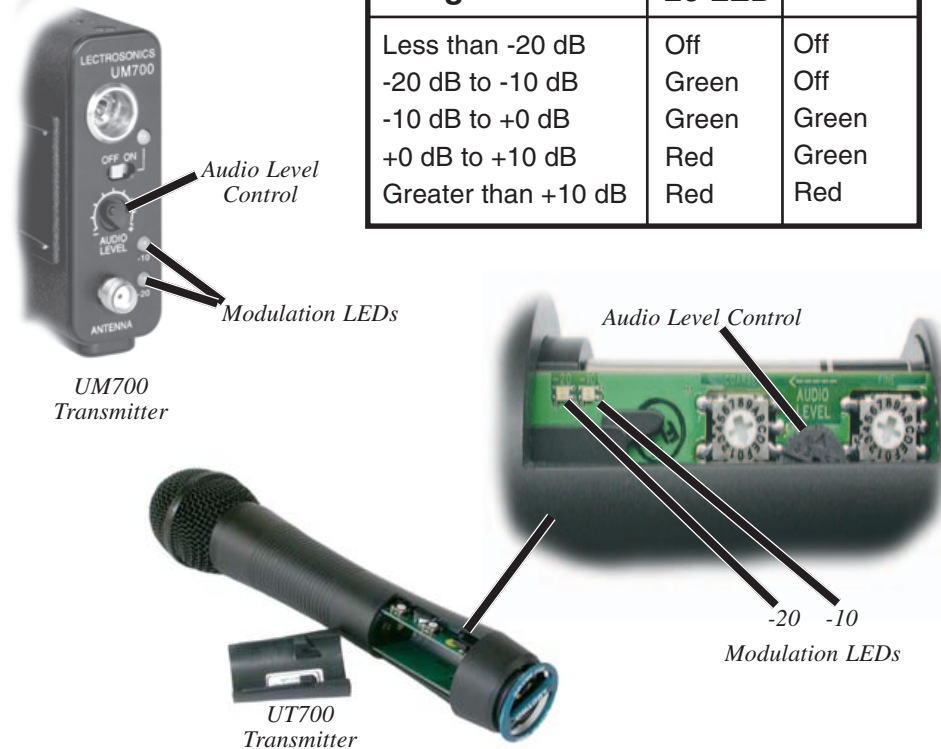
In Security Levels 1 and 2, you may program as many transmitters as you like to match the receiver. Repeat steps 9 and 10i for each transmitter. This will transmit the same encryption key to each transmitter; however, once you leave this prompt, this particular encryption key can never again be sent out of the Security jack to a transmitter. A new encryption key will have to be created. In Security Level 3, each encryption key may be sent to only one transmitter.



Remove the Key Cables. On the UM700, connect microphone to Input Jack and attach antenna to the SMA connector.

11) **Set Transmitter Gain** - Depending on the unit, position the microphone in the location where it will be used. While speaking or singing at the same voice level that will be used during the actual program, observe the Modulation LEDs on the UM700 and the UT700. Adjust the Audio Level Control until the -20 LED occasionally blinks red and the -10 LED glows green.

Signal Level	-20 LED	-10 LED
Less than -20 dB	Off	Off
-20 dB to -10 dB	Green	Off
-10 dB to +0 dB	Green	Green
+0 dB to +10 dB	Red	Green
Greater than +10 dB	Red	Red



Note
The transmitter Audio Level Control should not be used to control the volume of your sound system or recorder levels. This gain adjustment matches the transmitter gain with the user's voice level and microphone positioning. Different voices usually require different settings of the Audio Level Control. Check this adjustment as each new person uses the system, or adjust it for the loudest voice. Also, the UDR700 receiver needs at least 5 uV of RF signal to begin operating - this is the approximate squelch threshold. Between 5 uV and 10 uV, reception will be marginal and brief gaps in the audio may occur if the receiver squelches. Check to see that at least the lowest four RF LEVEL LEDs stay lit when the transmitter is turned on.

12) **Set System Audio Levels.** Set the UDR700 rear panel Analog Audio Output Control to midrange. Operate the wireless system and adjust the receiver analog audio output level as required for your equipment. Try different settings of the Analog Audio Output Control listen to the results. If the output of the receiver is too high, you may hear distortion or a loss of the natural dynamics of the audio signal. If the output is too low, you may hear steady noise (hiss) along with the audio. Use the Phase switch if necessary to ensure proper signal polarity at the Audio Output XLR Jack.



Note
If the security level is set to "1" or "2", the receiver must be powered on before the transmitter. If the security level is set to "3", communications do not begin until a fresh key is transferred.

13) **Perform and Walk Test.** Perform a walk test of the wireless microphone system prior to the actual event. Keep in mind that the security level has a direct impact on system operation. (See 700 Series Operations Manual, The 700 Series Encryption System) Mark, or otherwise note, the maximum range of the receiver in order to minimize performance problems.

PROTECT THE ENCRYPTION KEY

The encryption key is never displayed and once a key transfer session is complete, the existing key can never again be transferred out the receiver's security port. However, the key is stored inside the transmitter and the receiver, so you should treat the equipment as you would a key, storing it in a safe place for as long as the key is important.

For maximum security, it is recommended that you set a new key often, ideally before and after each use of the system, and that you always store the equipment in a physically secure location.

Note that in Security Level 3, the equipment itself enforces the most important part of this policy, namely that no key shall ever be used more than once.