

# UM110

## UHF Belt-pack Transmitter

### TECHNICAL DATA



#### Feature Highlights

- 256 synthesized UHF frequencies
- Wide range input limiting
- Dual LEDs for accurate gain adjustment
- Dual-band compandor for low noise and distortion
- Variable low frequency roll-off adjustment
- Rugged, tempered alloy antenna
- Slim, spring-wire contoured belt clip
- Rugged machined aluminum construction

The UM110 belt-pack transmitter is a high performance synthesized UHF design that offers the frequency agility needed to alleviate interference and frequency coordination problems in travelling applications. Interference caused by television broadcasts and other radio equipment can easily be avoided with 256 available frequencies selected in 100 kHz steps with two rotary switches on the side panel.

The input section provides a correct tap for virtually any microphone or line level audio source. The level and limiting LEDs are provided on the control panel to make level settings quick and accurate, without having to view the receiver. The audio input section includes a low distortion, wide range limiter to prevent overload and optimize the signal to noise ratio.

The audio processing circuitry provides an extremely wide, flat frequency response that preserves the tonal qualities of whatever microphone is used. The wide deviation (+/-75 kHz) of the system provides a wide dynamic range and outstanding signal to noise ratio. The dual-band compandor lowers noise and distortion to exceptionally low levels for the most critical applications in studio and stage.

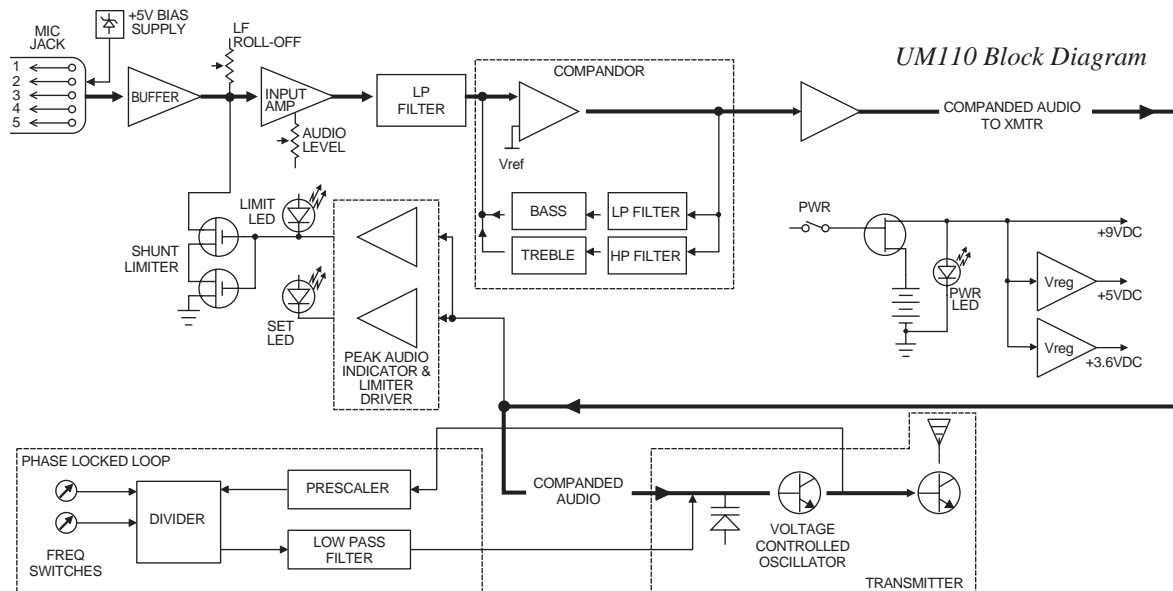
A user adjustable low frequency roll-off control can be adjusted to eliminate the effects of subsonic noise or to extend the low frequency response in controlled applications with high quality microphones.

The UM110 transmitter design is a rugged machined aluminum package for lasting performance in abusive environments. The housing is constructed of an aluminum extrusion with an electrostatic powder coated finish. The panels, side bezel and battery door are machined aluminum with an anodized finish. The nomenclature is laser etched into the finishes for legibility and permanence.

The antenna is a 1/4 wavelength design constructed of a special tempered alloy that will withstand extreme bending and flexing without damage. The spring-wire belt clip is removable for costuming and special applications.

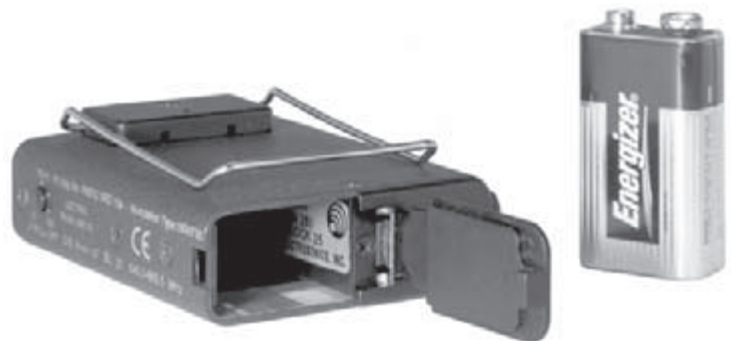


*A sliding cover on the side panel opens for access to the frequency selection switches. 256 frequencies are selected with two rotary switches. The aluminum cover protects the switches during operation.*



The UM110 is powered by an alkaline or lithium 9 Volt battery. Floating battery contacts automatically adjust to fit any of the wide variety of batteries available. A machined aluminum battery door remains attached to the housing to avoid being lost.

A low frequency audio roll-off adjustment is provided on the side panel. Set to the highest frequency, undesirable subsonic noise such as that generated by a moving vehicle or air conditioning noise is minimized. When set at the lowest setting, low frequency audio is allowed to pass, which is normally used in an indoor, controlled environment.



## SPECIFICATIONS AND FEATURES

<b>Operating frequencies:</b>	537.600 to 862.000 MHz
<b>Frequency selection:</b>	256 frequencies in 100kHz steps per 26MHz wide block
<b>Channel spacing:</b>	100kHz (25kHz programmable)
<b>RF Power output:</b>	50 mW (nominal)
<b>Frequency stability:</b>	+/- 0.001%
<b>Deviation:</b>	+/- 20 kHz (max)
<b>Spurious radiation:</b>	90 dB below carrier
<b>Equivalent input noise:</b>	-126 dBV
<b>Input level:</b>	Nominal 2 mV to 300 mV, before limiting. Greater than 3V maximum, with limiting.
<b>Input impedance:</b>	Taps for 200, 1k, 10k Ohm
<b>Input compressor:</b>	Soft compressor, >30 dB range
<b>Gain control range:</b>	43 dB; semi-log rotary control
<b>Modulation indicators:</b>	Dual LEDs indicate modulation level 20dB below limiting and at the onset of limiting.

<b>Low frequency roll-off adjustment:</b>	-18 dB/octave; adjustable 35Hz to 150Hz
<b>Controls:</b>	<ul style="list-style-type: none"> <li>• 2 position "OFF-ON" slide switch for noiseless on/off</li> <li>• Front panel knob audio gain.</li> <li>• Recessed control on side panel adjusts low frequency roll-off.</li> <li>• Rotary switches on side panel adjust transmitter frequency.</li> </ul>
<b>Audio Input Jack:</b>	Switchcraft 5 pin locking (TA5F)
<b>Antenna:</b>	Fixed, flexible cable.
<b>Battery:</b>	Precision compartment auto adjusts to accept any known 9 Volt battery.
<b>Battery Life:</b>	4.5 hours (alkaline); 14 hours (lithium)
<b>Weight:</b>	6.3 ozs. including battery
<b>Dimensions:</b>	3.1 x 2.4 x .75 inches
<b>Emission Designator:</b>	180KF3E

