

Equipment Descriptions

The WRT-822B is a transmitter for a UHF synthesized wireless microphone system to be used for general purpose.

The other system components include the WRT-807A UHF Synthesized Wireless Microphone, the WRT-805A/822B UHF Synthesized Transmitter, the AN-820A UHF Antenna, the WD-820A UHF Antenna Divider, the WRR-805A UHF Synthesized Tuner, the WRR-802A/855A UHF Synthesized Diversity Tuner.

Transmitting Channel Band

The microphone/transmitter and tuners of the wireless microphone system are classified by frequency band.

An 12 MHz frequency band (TV channel 30 to 69 use) is assigned to each microphone/transmitter and tuner model.

In building a UHF wireless microphone system, be sure to combine a microphone/transmitter and a tuner having the same TV channel number.

Features

Phase Locked Loop (PLL) synthesized system

The WRT-822B has a refined phase locked loop (PLL) synthesizer circuit.

Compact and lightweight

Innovative high-density mounting technology and magnesium case have enabled the creation of this compact and lightweight transmitter, which lets you move anywhere for Electronic News Gathering (ENG) and Electronic Field Production (EFP).

Remote battery alarm on tuner

This transmitter has capability of transmitting "Battery status information" to the WRR-802A/805A to give advance warning of battery depletion.

The information is sent to the WRR-802A/805A in approx. one hour advance to battery exhaust so that they can safely replace batteries of the transmitter.

When the WRR-802A/805A receives the information, the LED and the LCD on the panel start flashing.

Operation powered by easily available batteries

The built-in high efficiency DC-DC converter allows stable operation, for about 8 hours continuously, with two LR6 (size AA) alkaline batteries.

LCD for coordinated operation control

The built-in CPU controls operation of the unit, including the PLL circuit function. The LCD shows the current channel number/frequency, the residual battery power, input attenuation setting, AF input level and RF output. An accumulated operation time indication is also provided for simple control of the time of battery use (in one-minute increments).

Saved channel and input attenuation settings

The unit stores the channel and the input attenuation setting when it is turned off. The saved settings are retained even if the batteries are removed. Therefore, when using the unit next time, you need not make the same settings again.

Highly reliable electronic attenuator

The built-in input level attenuator is adjustable in a range of 0 to 21 dB in 3-dB steps. It reduces signal distortion when an excessively strong audio signal is inputted.

Compatibility with Sony lavalier microphone

The transmitter is compatible with Sony lavalier microphones, including the ECM-77BC.

RF carrier with tone signal

The unit transmits the RF carrier accompanied by a tone signal, enabling the tuner with a tone squelch circuit to take out only the target audio signal received.

Wide dynamic range and low noise

The compander (compressor/expander) system enables transmission over a wide dynamic range with minimum noise.

Specifications

Transmitter and modulator section

| | |
|-----------------------|---|
| Oscillator | Crystal controlled PLL synthesizer |
| Type of emission | F3E |
| Carrier frequencies | (Refer to the frequency list) |
| U30 model : | 566.125 - 577.875 |
| U50 model : | 686.125 - 697.875 |
| U68 model : | 794.125 - 805.875 |
| RF power output | 20 mW |
| Frequency stability | Within ± 15 kHz |
| Tone signal | 32.768 kHz |
| Type of antenna | $1/4$ -wavelength wire |
| Pre-emphasis | 50 μ sec |
| Deviation | ± 5 kHz (-60 dBV ¹⁾ , 1 kHz input) |
| Frequency response | 70 to 13,000 Hz |
| Signal-to-noise ratio | 60 dB or more (A-weighted, with reference deviation at WRR-800A/801A/805A/810A/820A/840A/850A/855A/860A) |
| Audio attenuator | 0 to 21 dB, variable in 3-dB steps |
| Input level | -60 dBV at audio attenuator 0 dB |

Power section

| | |
|--------------------|--|
| Power requirements | 3.0 V DC (two LR6/size AA alkaline batteries) |
| Battery life | Approx. 8 hours at 25°C (77°F) with Sony LR6 alkaline batteries |

General

| | |
|-----------------------|--|
| Operating temperature | 0°C to +50°C (32°F to 122°F) |
| Storage temperature | -30°C to +60°C (-22°F to +140°F) |
| Dimensions | 63 x 103 x 17 mm (w/h/d) (2 $1/2$ x 4 $1/8$ x $11/16$ inches) |
| Mass | Approx. 145 g (5.1 oz) including batteries |

Supplied accessories

Operating Instructions (1)
Soft case (1)

Optional accessories

Lavalier microphones
ECM-44BC, ECM-55BC, ECM-66BC, ECM-77BC/FC,
ECM-166BC, ECM-310BC, ECM-350BC
Microphone cable
EC-1.5CF

Design and specifications are subject to change without notice.

1) 0 dBV = 1 V_{rms}

System Configuration

The WRT-822B can be used with the tuners listed below.

Configuration example

| WRT-822B | Frequency band | | Model name | |
|----------|----------------|-------------------|----------------------------------|---|
| | TV channel | Frequency (MHz) | Transmitter or microphone | Tuner |
| U30 | 30 | 566.125 - 571.875 | WRT-805A WRT-807A WRT-822B | WRR-802A WRR-805A WRR-855A MB-806A |
| | 31 | 572.125 - 577.875 | | |
| | 32 | 578.125 - 583.875 | | |
| | 33 | 584.125 - 589.875 | | |
| U50 | 50 | 686.125 - 691.875 | | |
| | 51 | 692.125 - 697.875 | | |
| | 52 | 698.125 - 703.875 | | |
| | 53 | 704.125 - 709.875 | | |
| U66 | 66 | 782.125 - 787.875 | | |
| | 67 | 788.125 - 793.875 | | |
| | 68 | 794.125 - 799.875 | | |
| | 69 | 800.125 - 805.875 | | |