Coupling with the CU-F780, CU-G780, CU-E700, CU-E672 or CU-F117 Sony Microphone Capsule Unit, the WRT-847 β UHF-synthesized transmitter unit makes up a UHF-synthesized wireless microphone to be used in a UHF-synthesized wireless microphone system.

For vocal concentration, operate the WRT-847 β in conjunction with the WRR-802A, MB-806A UHF Synthesized Tuner. For vocal and interview use, operate the WRT-847 β in conjunction with the WRR-805A/855A UHF Synthesized Tuner.

The microphone/transmitter and tuners of the wireless microphone system are classified by frequency band.
A 24 MHz frequency band (or two consecutive-numbered TV channels) is assigned to each microphone/transmitter and tuner model.
In building up a UHF wireless microphone system, be sure to combine a microphone/transmitter and a tuner having the same TV channel number.

Features

Selectable microphone capsules

To make up suitable wireless microphones for your use, five microphone capsule units are available as optional accessories. The capsule units for the WRT-847 β are;

- CU-F780 Dynamic Microphone Unit
- CU-G780 High Sound Quality Dynamic Microphone Unit
- CU-E700 Electret Condenser Microphone Unit
- CU-E672 Unidirectional Electret Condenser Microphone Unit
- CU-F117 Omnidirectional Dynamic Microphone Unit

The capsule unit can be mounted simply by screwing it into the transmitter.

Phase Locked Loop (PLL) synthesized system

The WRT-847 β features a refined phase locked loop (PLL) synthesizer circuit.

POWER switch with holding function

The POWER switch can be locked in the ON position to protect against accidental power cutoffs.

Low-battery notification on the unit and the tuner

When the transmitter batteries are low, the transmitter sends a warning to the WRR-802A/805A/850A, MB-806A in the form of "Battery status information."
This information is set to the WRR-802A/805A/850A, MB-806A about one hour before the batteries go dead to allow the batteries to be safely replaced.
When the WRR-802A/805A/850A, MB-806A receive this information, the LED and the LCD on tuner panel start to flash.

Powered by readily available battery type

The built-in, high-efficiency DC-DC converter provides about eight hours of continuous and stable operation (at 10 mW output) with two LR6 (size-AA) alkaline batteries.

LCD read-out of various information

The transmitter's LCD shows the current channel number, frequency, audio gain level setting, RF output setting, compressor mode, audio equalizer setting and residual battery power.
The accumulated battery use time is also indicated (in one-minute increments) to allow precise monitoring of battery use.

Automatic saving of channel, audio gain and RF output settings

All channel, audio gain, compressor mode, audio equalizer and RF output settings are automatically saved when the transmitter is turned off (and are maintained even when the batteries are removed), thus eliminating the need to make the same settings again the next time you use the transmitter.

Highly reliable audio gain level adjustment

With an adjustable range of –12 dB to +9 dB in 3 dB steps, the built-in input level volume reduces signal distortion during the input of excessively strong audio signals. It can raise the input gain during too low audio input.

Tone signal-incorporated RF carrier signal

The transmitter sends an RF carrier signal that incorporates a tone signal to enable any tuner with a tone squelch circuit to pick out only the target audio signal.

Wide dynamic range and low noise

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

Selectable RF output

The RF output power can be adjusted to high (50 mW) or low (10 mW) to match the environment where it will be used.

Notes on microphone system operation

- When operating two or more transmitters, keep the transmitters separated from each other by a distance of at least 30 cm (1 foot).
- Keep transmitters at least 3 meters (10 feet) away from the receiving antenna.

Specifications

Transmitter and modulator section

Oscillator	Crystal controlled PLL synthesizer
Type of emission	F3E
Carrier frequencies	470 to 806 MHz
Operating frequency band	24 MHz *Refer to the "Wireless Microphone System Frequency List" supplied with the manual.*
RF power output	10 mW/50 mW selectable (50-ohm load)
Tone signal	32.768 kHz
Battery condition signal	32.782 kHz
Type of antenna	1/4 -wavelength wire

Audio section

Acceptable microphone capsule	Sony microphone capsules listed on next page
Pre-emphasis	50 µs
Deviation	±5 kHz (94 dB_{SPL}[1]), 1 kHz input)
Frequency response	70 to 15,000 Hz
Signal-to-noise ratio	60 dB or more (A-weighted, modulation frequency 1 kHz, with ±5 kHz deviation at WRR-802A)
Audio gain control	–12 to +9 dB, variable in 3-dB steps
Maximum input level	142 dB_{SPL} (at audio gain –12 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, at 10 mW RF output

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	37 × 150 mm (diameter/length) (1 1/2 ×6 inches) not including antenna
Mass	Approx. 150 g (0.3 oz) not including batteries

Supplied accessory

Operating Instructions (1)
Wireless Microphone System Frequency List (1)
Microphone holder (1)
Stand adaptor (1)
(PF 1/2 to W 3/8 type for the customer in Europe and Australia)
(PF 1/2 to W 5/8 type for the customer in USA)
Channel color seal (1)
Soft case (1)

1) 0 dB_{SPL} = 2 × 10^{-5} Pa