

UHF Synthesized Wireless Microphone

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Manual de instrucciones (reverso)

Antes de utilizar la unidad, lea detenidamente este manual de instrucciones, y consérvelo para futuras referencias.

WRT-800A

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Owner's Record

The model and serial numbers are located on the body of the unit. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. WRT-800A Serial No. _____

Notice for customers in the U.S.A.

Use of Sony wireless devices is regulated by the Federal Communications Commission as described in Part 74 subpart H of the FCC regulations and users authorized thereby are required to obtain an appropriate licence.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Notice for customers in Canada:

Use of Sony wireless devices is regulated by the Industry Canada as described in their Radio Standard Specification RSS-123.

A licence is normally required. The local district office of Industry Canada should therefore be contacted. When the operation of the device is within the broadcast band, the licence is issued on no-interference, no-protection basis with respect to broadcast signals.

Avis pour les clients au Canada:

L'usage des appareils sans-fil Sony est réglé par l'Industrie Canada comme décrit dans leur Cahier des Normes Radio-électriques CNR-123. Une licence est normalement requise. Le bureau de l'Industrie Canada doit être contacté. Lorsque l'opération de l'appareil est dans les limites de la bande de radiodiffusion, la licence est émanée sur la base de non-interférence, non-protection avec les signaux de radiodiffusion.

- The unit is designed for use in ambient temperature range of 0°C to 50°C (32°F to 122°F).
- Do not place the unit on or near heat sources, such as lighting equipment, power amplifiers, or in a place subject to direct sunlight or excessive moisture. In such places, the external finish or internal parts of the unit may be damaged.
- If the unit is used in a very humid or dusty place or in a place subject to an active gas, clean its surface as well as the connectors with a dry, soft cloth soon after use. Lengthy use of the unit in such places or not cleaning it after its use in such places may shorten its life.
- When cleaning the unit, never use organic solvents such as thinner or benzene, which will damage the finish of the unit.
- The unit has been factory adjusted precisely. Do not tamper with its internal parts or attempt to repair it.

Introduction

The WRT-800A is a wireless microphone to be used in combination with the WRR-800A/801A UHF Synthesized Diversity Tuner for an 800 MHz band UHF synthesized wireless microphone system for broadcast or movie production purpose.

The WRT-800A can also be used in conventional Sony Wireless Microphone System composed of the WRT-810A/820A UHF Synthesized Transmitter, WRR-810A/820A/840A/850A UHF Synthesized Diversity Tuner, etc.

Features

Easy selection of 94 channels

The microphone can operate on any one of 94 carrier frequencies selected by a simple operation.

Operation powered by easily available battery

The built-in high-efficiency DC-DC converter allows stable operation, for about 12 hours continuously, with just a single LR6 (size AA) alkaline battery.

Battery status information

This microphone has capability of transmitting "Battery status information" to the WRR-800A/801A/850A. The information is sent to the WRR-800A/801A/850A in approx. 1 hour advance to battery exhaust so that they can safely replace battery of the microphone. When the WRR-800A/801A/850A receives the information, the LED and the LCD on the panel start flashes.

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.

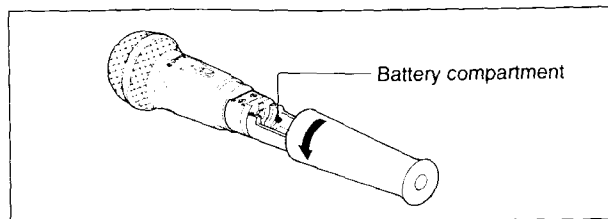
Compact helical antenna

Power Supply

The microphone can operate on one LR6 (size AA) alkaline battery continuously for about 12 hours at 25°C (77°F).

Inserting the batteries

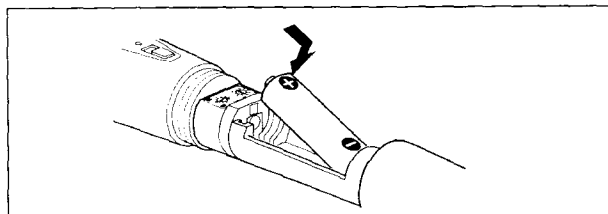
- 1 Rotate the grip counterclockwise and slide it down.



Note

The grip may separate from the body. Be careful not to drop it.

- 2 Match the polarity and insert the battery.



- 3 Return the grip to its original position and rotate it clockwise to secure.

Battery indication

When you turn the power on, the power indicator lights. When the battery level becomes low, the indicator goes off as a warning. Promptly replace the battery if the power indicator does not light when you turn the power on.

- The BATT indication on the WRR-800A/801A/850A starts flashing in synchronization when the power indicator of this wireless microphone goes off.

Specifications

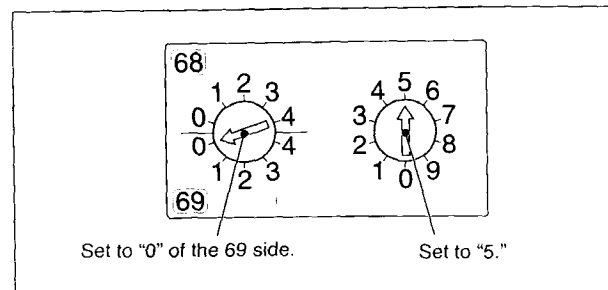
Transmitter and modulator section

Oscillator	Crystal controlled PLL synthesizer
Carrier frequencies	794.125 to 805.875 MHz (94 settings at 125 kHz intervals)
Tone signal	32.768 kHz
Type of emission	110KF3E
RF power output	5 mW
Frequency stability	Within $\pm 0.005\%$
Spurious radiation	20 nW or less
Type of antenna	$1/4$ -wavelength helical
Pre-emphasis	50 μ s
Reference deviation	± 5 kHz (94 dB SPL, 1 kHz)
Frequency response	100 to 15,000 Hz
Signal-to-noise ratio	57 dB or more (A-weighted, with reference deviation at WRR-800A/801A)
Maximum input	128 dB SPL (1 kHz)
Microphone unit	Electret condenser microphone

Channel Setting

Set the channel select switches for the desired channel using the supplied screwdriver. The left switch is for selecting the TV band and 10s digit of the transmitting channel, and the right switch is for selecting the 1s digit of the transmitting channel.

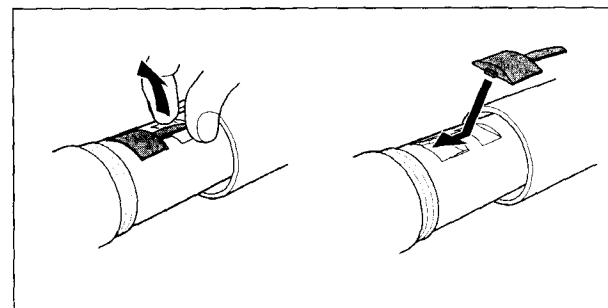
Example: To set to channel 69-05



Note

If you set to any channel other than those listed in the table on the page at left, the power indicator flashes as a warning.

Removing/storing the screwdriver



Power section

Power requirements	1.5 V DC (one LR6/size AA alkaline battery)
Battery life	Approx. 12 hours at 25°C (77°F) with Sony LR6 alkaline battery

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	$\phi 55 \times 216$ mm ($\phi 2\frac{1}{4} \times 8\frac{5}{8}$ inches)
Mass	Approx. 200 g (3.5 oz) including battery

Supplied accessories

Microphone holder (1), Stand adaptor PF1/2 to NS5/8 (1)
Screwdriver (1), Operating Instructions (1)

Design and specifications are subject to change without notice.

On channel selection

- The microphone/transmitter and tuners are classified by frequency band.
A 12 MHz frequency band (or two consecutive-numbered TV channels, such as 68 and 69 of the WRT-800A) 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.
- Make sure that the channel selected on the microphone is the same as that selected on the tuner used in the same system.
- Depending on the noise or interference conditions, the selectable channels may not necessarily all be usable. If necessary, you can determine the usable channels by stepping the channel selection through a number of channels on a tuner with the microphone set to OFF. Those channels on which the RF indicator of the tuner does not light are usable.
- If there is a TV broadcasting station near by, do not use the station's channel.

On microphone system operation

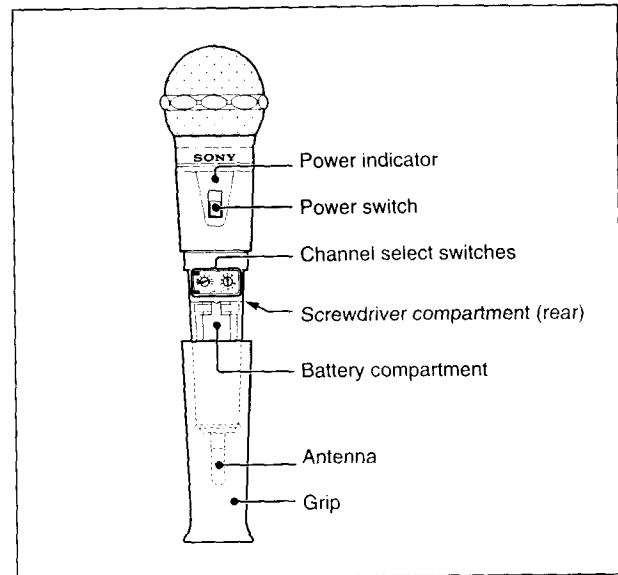
- To operate with 2 or more channels, maintain a distance of at least 30 cm (1 ft.) between each pair of microphones. *For details of operation with 2 or more channels, refer to the Operating Instructions for the WRR-800A/801A UHF Synthesized Diversity Tuners.*
- Ensure that the tuners set to channels not being used are either turned off or set to the minimum output level.
- When powering the microphone on or off, to keep the noise to a minimum, set the audio output level from the tuner or mixer to a minimum.
- Powering the microphone on without checking the channel selection first may interfere with the operation of other microphones/transmitters, if the current setting is already being used.
- To prevent noise generation, keep the microphones/transmitters at least 3 m (10 ft.) away from the tuner antennas when the system allows selection of up to 11 channels.

On battery

- Use a new alkaline battery, and check the recommended "useby" date on the bottom of the battery.
- Be careful to insert the battery with the correct polarity.
- When not using the wireless microphone for a long period, remove the battery to avoid leakage. If a battery does leak, clean all leakage from the unit and insert new battery. Leakage left in the unit may cause poor battery contact. If there seems to be poor battery contact, consult your Sony dealer.

On the antenna

Be sure not to block the antenna when holding the microphone.



Channels and Carrier Frequencies

The WRT-800A can transmit on any selected wireless channel among those listed below.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
68-01	794.125	69-01	800.125
68-02	794.250	69-02	800.250
68-03	794.375	69-03	800.375
68-04	794.500	69-04	800.500
68-05	794.625	69-05	800.625
68-06	794.750	69-06	800.750
68-07	794.875	69-07	800.875
68-08	795.000	69-08	801.000
68-09	795.125	69-09	801.125
68-10	795.250	69-10	801.250
68-11	795.375	69-11	801.375
68-12	795.500	69-12	801.500
68-13	795.625	69-13	801.625
68-14	795.750	69-14	801.750
68-15	795.875	69-15	801.875
68-16	796.000	69-16	802.000
68-17	796.125	69-17	802.125
68-18	796.250	69-18	802.250
68-19	796.375	69-19	802.375
68-20	796.500	69-20	802.500
68-21	796.625	69-21	802.625
68-22	796.750	69-22	802.750
68-23	796.875	69-23	802.875
68-24	797.000	69-24	803.000
68-25	797.125	69-25	803.125
68-26	797.250	69-26	803.250
68-27	797.375	69-27	803.375
68-28	797.500	69-28	803.500
68-29	797.625	69-29	803.625
68-30	797.750	69-30	803.750
68-31	797.875	69-31	803.875
68-32	798.000	69-32	804.000
68-33	798.125	69-33	804.125
68-34	798.250	69-34	804.250
68-35	798.375	69-35	804.375
68-36	798.500	69-36	804.500
68-37	798.625	69-37	804.625
68-38	798.750	69-38	804.750
68-39	798.875	69-39	804.875
68-40	799.000	69-40	805.000
68-41	799.125	69-41	805.125
68-42	799.250	69-42	805.250
68-43	799.375	69-43	805.375
68-44	799.500	69-44	805.500
68-45	799.625	69-45	805.625
68-46	799.750	69-46	805.750
68-47	799.875	69-47	805.875