
UHF Synthesized Transmitter

WRT-8B

Operating Instructions

Owner's Record

The model and serial numbers are located at the rear 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-8B

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 license.

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

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate this device.

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 license 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 license is issued on no-interference, no-protection basis with respect to broadcast signals.

Operation of this device is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Overview

The WRT-8B is a transmitter for a UHF synthesized wireless microphone system to be used for broadcast or movie production purpose. This transmitter is suitable for Electronic News gathering (ENG) and Electronic Field Production (EFP).

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

A 24-MHz frequency band 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 wireless channel (frequency).

Features

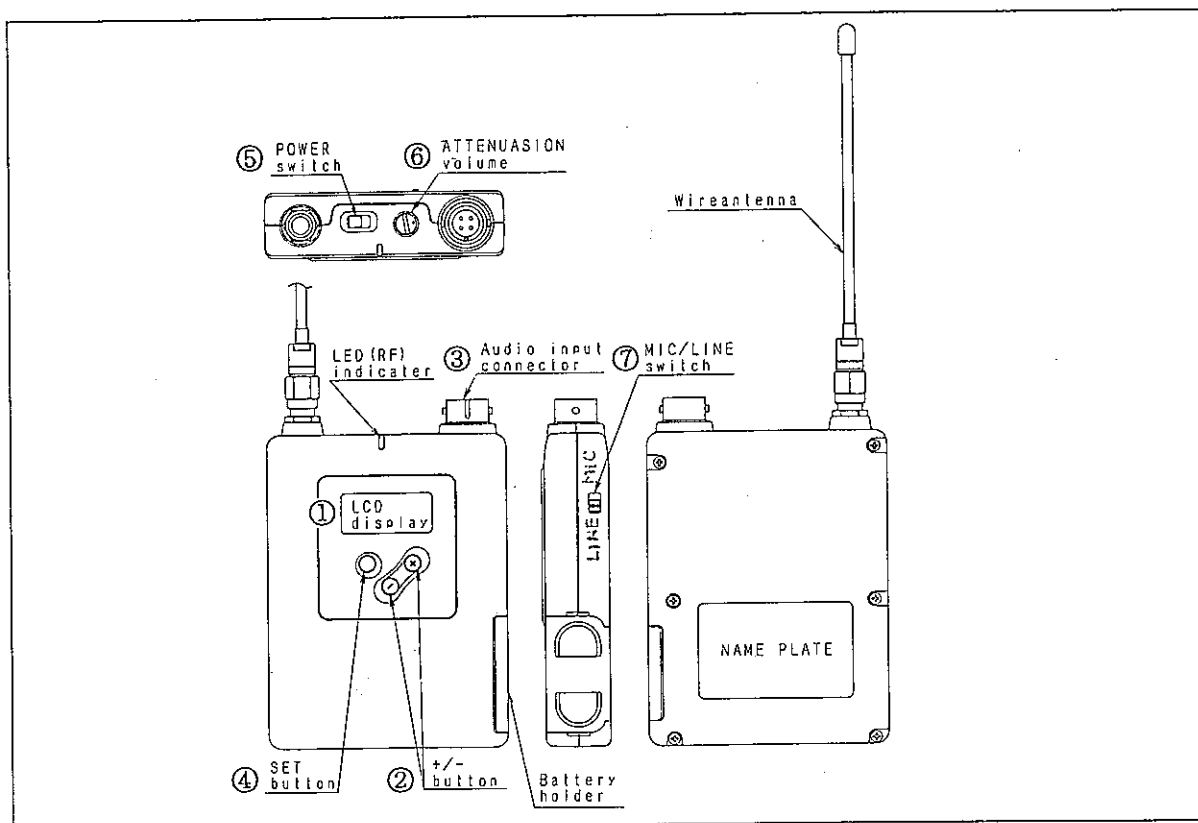
The features of the WRT-8B are:

- Phase Locked Loop (PLL) synthesized system
- Compact and lightweight
- Remote battery alarm on tuner
- Operation powered by easily available batteries
- LCD for coordinated operation control
- Saved channel and input attenuation settings
- Highly reliable electronic attenuator
- Compatibility with Sony lavalier microphone
- RF carrier with tone signal
- Wide dynamic range and low noise

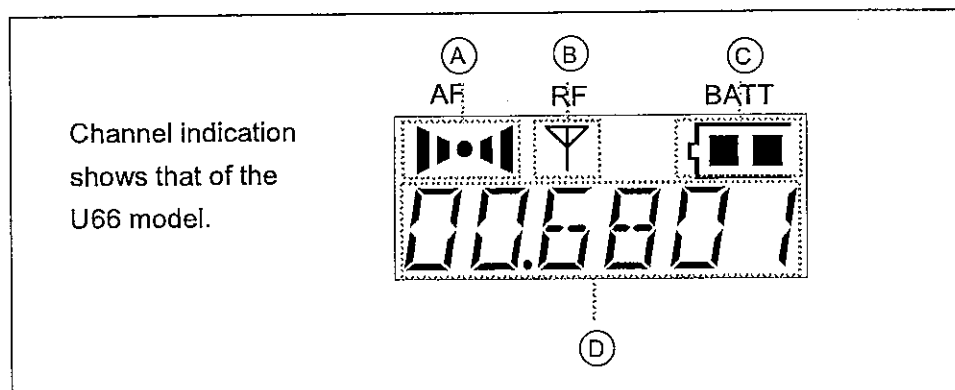
Precautions

- 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 expose to an active or corrosive 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 thinners 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.

Parts Identification



① LCD (liquid-crystal display) display



A. AF (audio input) indication

Lights whenever an audio signal stronger than the reference level is received.

B. RF (antenna output) indication

Lights during signal transmission from the antenna.

C. BATT (battery) indication

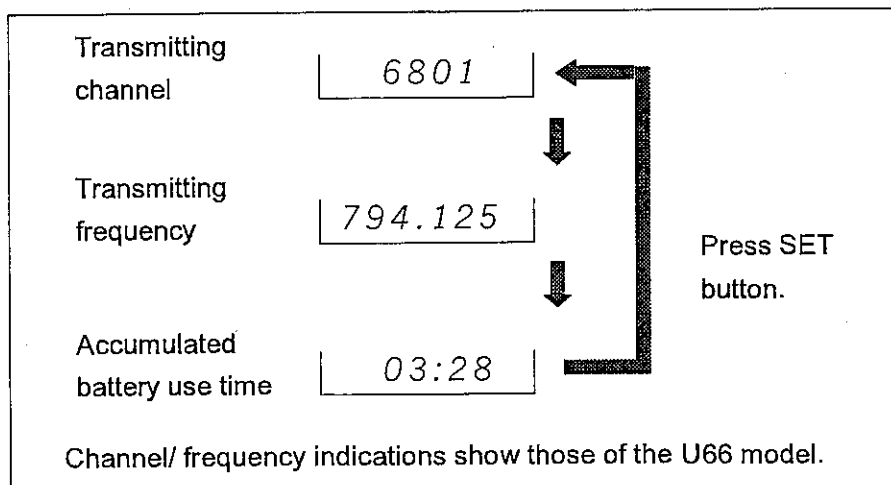
Shows the batteries condition.

See "Battery indication " in "Power Supply" section.

D. CH (channel) indication

Shows transmitting channel.

Each time you press the SET button in Transmitting mode, the channel indication changes as follows.



Transmitting channel: The current transmitting channel setting.

Transmitting frequency: The current transmitting frequency setting.

Accumulated battery use time: The accumulated time of battery use (in one-minute increments).

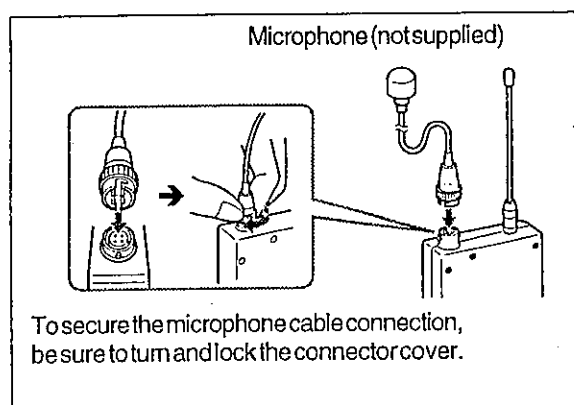
② **+ (+ selection) / - (- selection/reset) buttons**

In setting mode, select the transmission channel, frequency and attenuator level using either of these buttons, or reset the time-of-use indication to "00:00" with the - button.

③ **Audio input connector**

Connect the output connector of the following Sony lavalier microphones: ECM-44BC, ECM-55BC, ECM-66BC, ECM-77BC, ECM-166BC, ECM-310BC, ECM-350BC.

You can also use your wired microphone by connecting it to this connector with an optional EC-1.5CF microphone cable.



Caution

When connecting a microphone to the unit, be sure to turn the unit off.

④ SET button

In Transmitting mode, press this button to change the indicated items in the lower half of the LCD display.

To change the setting on each item, set the transmitter in Setting mode as follows; turn the POWER switch to ON while holding the SET button down. Then press the SET button to select the items to be changed, and press the +/- buttons to change the settings.

⑤ POWER switch

Turns the transmitter ON or OFF.

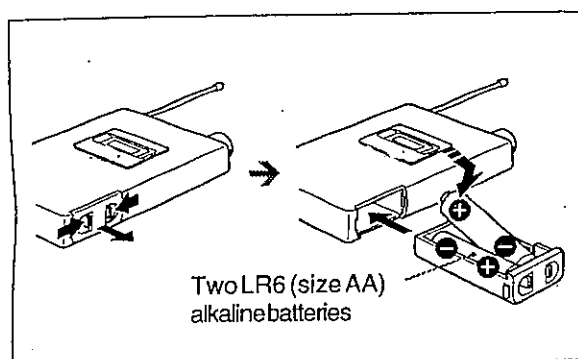
When you set this switch to ON without holding down any other button, the transmitter enters Transmitting mode, and transmits the signal of the selected channel.

⑥ ATTENUATION volume**⑦ MIC/LINE switch****Note**

Be sure to connect a microphone before turning the power ON.

Power Supply

The transmitter can operate on two LR6 (size AA) alkaline batteries continuously for about 6 hours at 25°C (77°F).



Installing the batteries

- 1 Slide the battery-holder catches inward (in the direction of the arrows → ←) to take out the battery holder
- 2 Match the polarities and insert the batteries.
- 3 Set the battery holder in the original position.

Battery Indication

When you turn the power on, the battery status appears in the BATT indication on the display section as show on the right column.

	1	2	3	4
BATT indication	Lights 	Lights 	Flashes 	Goes off
Battery condition	Good	Less than half-charge	Almost exhausted	Completely exhausted

When the batteries reach stage 3 shown in the table, the BATT indication on the WRR-802/805/862 and WRU-806 also starts flashing.

Note

The indication may be incorrect if the batteries are not new when installed. If you plan to use the transmitter for a long period, it is best to replace the batteries with new ones.

Notes on batteries

- Use new alkaline batteries.
- Do not pair different types of battery.
- Always replace the two batteries together.
- The batteries are not rechargeable.
- Be careful to install the batteries with the correct polarity.
- When not using the transmitter for a long period, remove the batteries to avoid leakage. If the batteries do leak, clean all leakage from the battery holder case and the unit. Leakage left in the holder case and the unit may cause poor battery contact. If there seems to be poor battery contact, consult your Sony dealer.

Settings

For the transmitting channels and frequencies selectable on your transmitter, see the "Sony Wireless Microphone System Frequency List" supplied with this manual.

Initiating Setting Mode

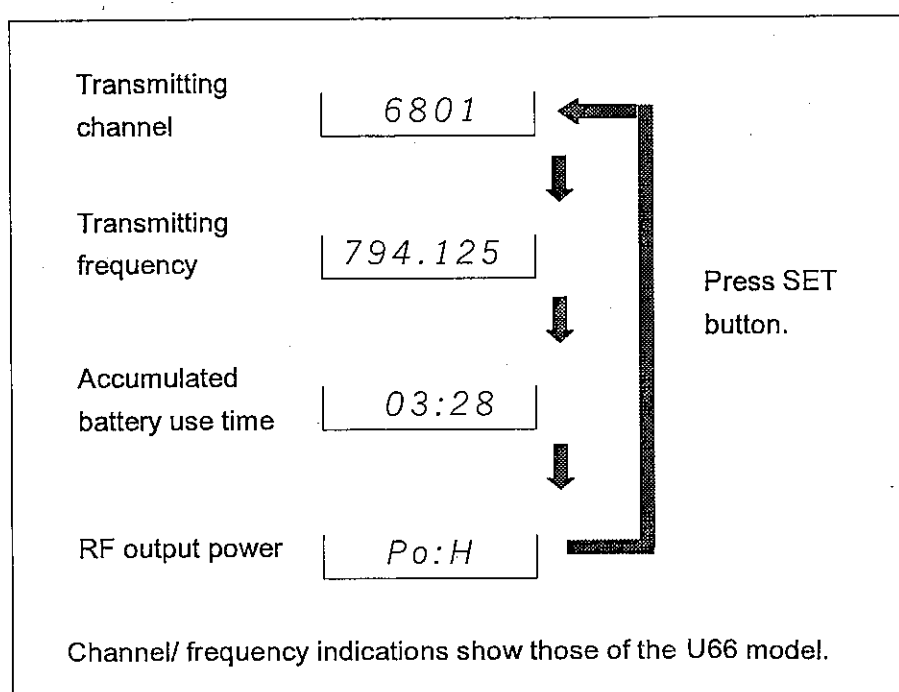
In Setting mode, you can change the transmission channel/ frequency and the attenuation level, or reset the accumulated time indication.

To enter Setting mode

While holding down the SET button, set the POWER switch to ON.

The transmitter enters Setting mode and the indication before the transmitter was previously turned OFF flashes on the display section.

Each time you press the SET button, the setting items are cyclically switched as shown on the "D CH (channel) indication" of the "Parts Identification" (see below).



Changing the Transmitting Channel

The transmitting channel can be selected through either the channel number or the frequency.

1 Set the transmitter to Setting mode.

If the channel number (or frequency) indication does not appear, press the SET button until the channel number (or frequency) indication appears.

2 Press the + or – button to select the channel number (or frequency).

Pressing the + button cycles the indication in the order shown in the tables in the "Sony Wireless Microphone System Frequency List" supplied with the manual. Pressing the – button cycles the indications in the opposite direction.

Hold down the button to change the channel number (or frequency) quickly.

3 When the desired channel number (or frequency) appears, set the POWER switch to off position to release Setting mode, or press the SET button to continue operations in Setting mode.

The next time you turn on the transmitter (by setting the POWER switch to ON), the transmitter will enter Transmitting mode with the selected channel number (or frequency).

Notes

- The transmitter cannot transmit in Setting mode.
- Make sure that the channel selected on the transmitter is the same as that selected on the tuner being used in the same system.
- Depending on the noise or interference conditions, all selectable channels may not be usable. If necessary, you can determine which channels are usable by cycling the channel selection through a number of channels on the tuner with the unit set to OFF. Those channels for which the RF indicator on the tuner does not light are usable.
- If there is a TV broadcasting station near by, do not use the station's channel.
- The transmitter may not operate correctly if it is tuned on immediately after being turned off in Setting mode. Wait for a few seconds before turning the power on again.
- The channel numbers and frequencies of your transmitter are shown on the "Sony Wireless Microphone System Frequency List" supplied with the manual.

Changing the Input Attenuation Setting

You can change the input attenuation setting in a range of -60dBV to -20dBV at "MIC" position, -20dBu to +20dBV at "LINE" position.

1 Set the MIC/LINE switch depending on a device connected to the AF input connector. When you use a microphone, set the switch to "MIC". When you use a mixer etc, set the switch to "LINE".

2 When you connect the microphone, adjust the attenuation level turning the volume, referring to the mic level indication of volume.

3 When you connect the mixer etc, adjust the attenuation level turning the volume, referring to the line level indication of volume.

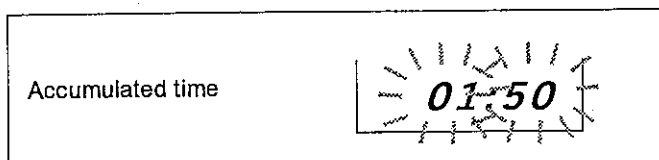
Resetting the Accumulated Time Indication

The time indication accumulates time in hours and minutes when the WRT-8B is on.

Reset the indication to "00:00" whenever you replace the batteries so that it can display the running time of the batteries.

1 Set the unit in Setting mode.

2 Press the SET button until the accumulated time indication appears on the display.



3 Press the – button.

The time indication resets to "00:00".

While you see "00:00" indication, you can go back to previous value by pressing the + button.

4 Set the POWER switch to OFF to release Setting mode.

Or, press the SET button to continue operations in Setting mode.

Error Messages

When a problem occurs, one of the following error messages may appear on the display.

Messages	Contents	Measures
ERROR 11	An error occurred in backup memory data.	Contact your Sony dealer.
ERROR 21	The PLL synthesized circuit is in trouble.	
ERROR 31	The battery voltage exceeds the allowable value.	Use the specified batteries.

Notes on Microphone System Operation

- To operate with two or more channels, maintain a distance of at least 30 cm (one ft.) between each pair of transmitters.

For details of operation with two or more channels, refer to the Operating Instructions for the WRR-802/805/855/862, etc.

- Ensure that the tuners set to channels not being used are either turned off or set the minimum output level.

- When powering the transmitter 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 transmitter on without checking the channel selection first may interfere with the operation of other microphone/transmitters, if the current setting is already being used.

- To prevent noise generation, keep the microphones and transmitters at least 3m (10 feet) away from the antennas when the system is operated using a group which allows selection of up to 11 channels, and at least 6m (20 ft) away when using a group which allows selection of 12 channels.

- When there is a strong interference signal around the microphone system, such as an interference caused by an active handyphone, noise may occur on the microphone system.

Specifications

Transmitter and modular section

Oscillator	Crystal controlled PLL synthesizer
Type of emission	F3E
Carrier frequencies	758 to 806 MHz
Operating frequency band	24 MHz
	<i>Refer to the "Sony Wireless Microphone System Frequency List" supplied with this manual.</i>
RF power output	50mW / 10mW
Frequency stability	Within ± 15 kHz
Total signal	32.768 kHz
Battery condition signal	32.782 kHz
Type of antenna	1/4 -wavelength wire
Pre-emphasis	50 μ s
Deviation	± 5 kHz (-60 dBV, 1kHz input, MIC) ± 5 kHz (-20 dBV, 1kHz input, LINE)
Maximum Deviation	± 40 kHz
Frequency response	40 Hz to 20,000 Hz
Signal-to-noise ratio	60 dB or more (A-weighted, modulation frequency 1 kHz, with ± 5 kHz deviation at tuner)

Power section

Power requirements	3.0V DC, (two LR6/ size AA alkaline batteries)
Battery life	Approx. 6 hours at 25 °C (77°F) with Sony LR6 alkaline batteries (50mW) Approx. 13 hours at 25 °C (77°F) with Sony LR6 alkaline batteries (10mW)

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 83 x 17 mm (w/h/d) (2 1/2 x 3 3/8 x 11/16 inches)
Mass	Approx. 140g (4.9 oz) including batteries

Supplied accessories

Operating instructions
 Sony wireless Microphone System Frequency List (1)
 Soft case (1)
 Battery case (1)
 Microphone cable (1)

Optional accessories

Lavalier microphones: ECM-44BC, ECM-77BC, ECM-166BC,
 ECM-310BC, ECM-350BC

Design and specifications are subject to change without notice.

Wireless Microphone System Frequency List

U62

English

The following tables show the channels and frequencies selectable on your wireless microphone, transmitter and tuner.

The group 00 permits the unit to operate on any of 47 carrier frequencies in 125 kHz steps of TV channels 62 to 65.

For the setting procedures of the transmitting channels/frequencies on your unit, refer to the Instruction Manual of your unit. Be sure to save this list together with the Instruction Manual of your unit.

Français

Les tableaux suivants illustrent les canaux et les fréquences pouvant être sélectionnés sur votre microphone sans fil, émetteur et sintoniseur.

Le groupe 00 permet à l'appareil de fonctionner sur n'importe laquelle des 47 fréquences porteuses dans les étapes 125 kHz des canaux télévisés de 62 à 65.

Pour savoir comment configurer les fréquences/canaux de transmission sur votre appareil, reportez-vous au mode d'emploi de votre appareil. Veuillez à bien conserver cette liste avec le mode d'emploi de votre appareil.

Español

En las siguientes tablas se muestran los canales y frecuencias que pueden seleccionarse en el micrófono inalámbrico, transmisor y sintonizador.

El grupo 00 permite que la unidad funcione en cualquiera de las 47 frecuencias portadoras en intervalos de 125 kHz de los canales de TV 62 a 65.

Con respecto a los procedimientos de ajuste de los canales y frecuencias de transmisión de la unidad, consulte el manual de instrucciones de la misma. Asegúrese de guardar esta lista junto con el manual de instrucciones de la unidad.

Group for transmitter and tuner / Groupe pour l'émetteur et le sintoniseur / Grupo para el transmisor y sintonizador

Group / Groupe / Grupo 00

TV-62

CH	MHz	CH	MHz
62-01	758.125	62-26	761.250
62-02	758.250	62-27	761.375
62-03	758.375	62-28	761.500
62-04	758.500	62-29	761.625
62-05	758.625	62-30	761.750
62-06	758.750	62-31	761.875
62-07	758.875	62-32	762.000
62-08	759.000	62-33	762.125
62-09	759.125	62-34	762.250
62-10	759.250	62-35	762.375
62-11	759.375	62-36	762.500
62-12	759.500	62-37	762.625
62-13	759.625	62-38	762.750
62-14	759.750	62-39	762.875
62-15	759.875	62-40	763.000
62-16	760.000	62-41	763.125
62-17	760.125	62-42	763.250
62-18	760.250	62-43	763.375
62-19	760.375	62-44	763.500
62-20	760.500	62-45	763.625
62-21	760.625	62-46	763.750
62-22	760.750	62-47	763.875
62-23	760.875		
62-24	761.000		
62-25	761.125		

TV-63

CH	MHz	CH	MHz
63-01	764.125	63-26	767.250
63-02	764.250	63-27	767.375
63-03	764.375	63-28	767.500
63-04	764.500	63-29	767.625
63-05	764.625	63-30	767.750
63-06	764.750	63-31	767.875
63-07	764.875	63-32	768.000
63-08	765.000	63-33	768.125
63-09	765.125	63-34	768.250
63-10	765.250	63-35	768.375
63-11	765.375	63-36	768.500
63-12	765.500	63-37	768.625
63-13	765.625	63-38	768.750
63-14	765.750	63-39	768.875
63-15	765.875	63-40	769.000
63-16	766.000	63-41	769.125
63-17	766.125	63-42	769.250
63-18	766.250	63-43	769.375
63-19	766.375	63-44	769.500
63-20	766.500	63-45	769.625
63-21	766.625	63-46	769.750
63-22	766.750	63-47	769.875
63-23	766.875		
63-24	767.000		
63-25	767.125		

TV-64

CH	MHz	CH	MHz
64-01	770.125	64-26	773.250
64-02	770.250	64-27	773.375
64-03	770.375	64-28	773.500
64-04	770.500	64-29	773.625
64-05	770.625	64-30	773.750
64-06	770.750	64-31	773.875
64-07	770.875	64-32	774.000
64-08	771.000	64-33	774.125
64-09	771.125	64-34	774.250
64-10	771.250	64-35	774.375
64-11	771.375	64-36	774.500
64-12	771.500	64-37	774.625
64-13	771.625	64-38	774.750
64-14	771.750	64-39	774.875
64-15	771.875	64-40	775.000
64-16	772.000	64-41	775.125
64-17	772.125	64-42	775.250
64-18	772.250	64-43	775.375
64-19	772.375	64-44	775.500
64-20	772.500	64-45	775.625
64-21	772.625	64-46	775.750
64-22	772.750	64-47	775.875
64-23	772.875		
64-24	773.000		
64-25	773.125		

TV-65

CH	MHz	CH	MHz
65-01	776.125	65-26	779.250
65-02	776.250	65-27	779.375
65-03	776.375	65-28	779.500
65-04	776.500	65-29	779.625
65-05	776.625	65-30	779.750
65-06	776.750	65-31	779.875
65-07	776.875	65-32	780.000
65-08	777.000	65-33	780.125
65-09	777.125	65-34	780.250
65-10	777.250	65-35	780.375
65-11	777.375	65-36	780.500
65-12	777.500	65-37	780.625
65-13	777.625	65-38	780.750
65-14	777.750	65-39	780.875
65-15	777.875	65-40	781.000
65-16	778.000	65-41	781.125
65-17	778.125	65-42	781.250
65-18	778.250	65-43	781.375
65-19	778.375	65-44	781.500
65-20	778.500	65-45	781.625
65-21	778.625	65-46	781.750
65-22	778.750	65-47	781.875
65-23	778.875		
65-24	779.000		
65-25	779.125		

Wireless Microphone System Frequency List

U66

English

The following tables show the channels and frequencies selectable on your wireless microphone, transmitter and tuner.

The group 00 permits the unit to operate on any of 47 carrier frequencies in 125 kHz steps of TV channels 66 to 69.

For the setting procedures of the transmitting channels/frequencies on your unit, refer to the Instruction Manual of your unit. Be sure to save this list together with the Instruction Manual of your unit.

Français

Les tableaux suivants illustrent les canaux et les fréquences pouvant être sélectionnés sur votre microphone sans fil, émetteur et sintoniseur.

Le groupe 00 permet à l'appareil de fonctionner sur n'importe laquelle des 47 fréquences porteuses dans les étapes 125 kHz des canaux télévisés de 66 à 69.

Pour savoir comment configurer les fréquences/canaux de transmission sur votre appareil, reportez-vous au mode d'emploi de votre appareil. Veuillez à bien conserver cette liste avec le mode d'emploi de votre appareil.

Español

En las siguientes tablas se muestran los canales y frecuencias que pueden seleccionarse en el micrófono inalámbrico, transmisor y sintonizador.

El grupo 00 permite que la unidad funcione en cualquiera de las 47 frecuencias portadoras en intervalos de 125 kHz de los canales de TV 66 a 69.

Con respecto a los procedimientos de ajuste de los canales y frecuencias de transmisión de la unidad, consulte el manual de instrucciones de la misma. Asegúrese de guardar esta lista junto con el manual de instrucciones de la unidad.

Group for transmitter and tuner / Groupe pour l'émetteur et le sintoniseur / Grupo para el transmisor y sintonizador

Group / Groupe / Grupo 00

TV-66

CH	MHz	CH	MHz
66-01	782.125	66-26	785.250
66-02	782.250	66-27	785.375
66-03	782.375	66-28	785.500
66-04	782.500	66-29	785.625
66-05	782.625	66-30	785.750
66-06	782.750	66-31	785.875
66-07	782.875	66-32	786.000
66-08	783.000	66-33	786.125
66-09	783.125	66-34	786.250
66-10	783.250	66-35	786.375
66-11	783.375	66-36	786.500
66-12	783.500	66-37	786.625
66-13	783.625	66-38	786.750
66-14	783.750	66-39	786.875
66-15	783.875	66-40	787.000
66-16	784.000	66-41	787.125
66-17	784.125	66-42	787.250
66-18	784.250	66-43	787.375
66-19	784.375	66-44	787.500
66-20	784.500	66-45	787.625
66-21	784.625	66-46	787.750
66-22	784.750	66-47	787.875
66-23	784.875		
66-24	785.000		
66-25	785.125		

TV-67

CH	MHz	CH	MHz
67-01	788.125	67-26	791.250
67-02	788.250	67-27	791.375
67-03	788.375	67-28	791.500
67-04	788.500	67-29	791.625
67-05	788.625	67-30	791.750
67-06	788.750	67-31	791.875
67-07	788.875	67-32	792.000
67-08	789.000	67-33	792.125
67-09	789.125	67-34	792.250
67-10	789.250	67-35	792.375
67-11	789.375	67-36	792.500
67-12	789.500	67-37	792.625
67-13	789.625	67-38	792.750
67-14	789.750	67-39	792.875
67-15	789.875	67-40	793.000
67-16	790.000	67-41	793.125
67-17	790.125	67-42	793.250
67-18	790.250	67-43	793.375
67-19	790.375	67-44	793.500
67-20	790.500	67-45	793.625
67-21	790.625	67-46	793.750
67-22	790.750	67-47	793.875
67-23	790.875		
67-24	791.000		
67-25	791.125		

TV-68

CH	MHz	CH	MHz
68-01	794.125	68-26	797.250
68-02	794.250	68-27	797.375
68-03	794.375	68-28	797.500
68-04	794.500	68-29	797.625
68-05	794.625	68-30	797.750
68-06	794.750	68-31	797.875
68-07	794.875	68-32	798.000
68-08	795.000	68-33	798.125
68-09	795.125	68-34	798.250
68-10	795.250	68-35	798.375
68-11	795.375	68-36	798.500
68-12	795.500	68-37	798.625
68-13	795.625	68-38	798.750
68-14	795.750	68-39	798.875
68-15	795.875	68-40	799.000
68-16	796.000	68-41	799.125
68-17	796.125	68-42	799.250
68-18	796.250	68-43	799.375
68-19	796.375	68-44	799.500
68-20	796.500	68-45	799.625
68-21	796.625	68-46	799.750
68-22	796.750	68-47	799.875
68-23	796.875		
68-24	797.000		
68-25	797.125		

TV-69

CH	MHz	CH	MHz
69-01	800.125	69-26	803.250
69-02	800.250	69-27	803.375
69-03	800.375	69-28	803.500
69-04	800.500	69-29	803.625
69-05	800.625	69-30	803.750
69-06	800.750	69-31	803.875
69-07	800.875	69-32	804.000
69-08	801.000	69-33	804.125
69-09	801.125	69-34	804.250
69-10	801.250	69-35	804.375
69-11	801.375	69-36	804.500
69-12	801.500	69-37	804.625
69-13	801.625	69-38	804.750
69-14	801.750	69-39	804.875
69-15	801.875	69-40	805.000
69-16	802.000	69-41	805.125
69-17	802.125	69-42	805.250
69-18	802.250	69-43	805.375
69-19	802.375	69-44	805.500
69-20	802.500	69-45	805.625
69-21	802.625	69-46	805.750
69-22	802.750	69-47	805.875
69-23	802.875		
69-24	803.000		
69-25	803.125		