SONY

5-067-298-**11** (1)

Digital Wireless Microphone

Operating Instructions

DWM-30

DWX DIGITAL WIRELESS

WiDIF-HP Cross Remote

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Features

The DWM-30 is a digital wireless microphone for a UHF synthesized wireless microphone system to be used for broadcast or movie production purposes. This transmitter is suitable for Electronic News Gathering (ENG) and Electronic Field Production (EFP). It is designed for use with a Sony digital wireless receiver.

What is DWX?

DWX refers to Sony's new digital wireless microphone system. The DWX series reflects Sony's extensive expertise in professional microphones and sound design. It represents a successful blend of Sony know-how, wireless technology renowned for stability, and cutting-edge digital audio technology.
In addition to realizing the high sound quality possible with a digital system, the DWX series supports multi-channel simultaneous operation, encrypted transmission, and metadata transmission for monitoring the status of multiple transmitters. Using a main link and a separate additional link, remote control of transmitters from the receiver is also possible. With its many advanced features, the system has the potential to revolutionize the workflow of professional applications.

What is WiDIF-HP?

WiDIF-HP (WiDIF: Wireless Digital Interface Format, HP: High Profile) is a wireless digital audio interface format developed by Sony.
It enables highly secure transmission with high sound quality and low system latency, and supports simultaneous multi-channel operation.

What is Cross Remote?

Cross Remote is a system that allows transmitters to be monitored and controlled from a receiver and the Wireless Studio control software installed on a computer connected to the receiver.
For example, the settings of a transmitter worn under clothing can be easily changed over the wireless link.

Interchangeable microphone capsule

Coupled with a Sony microphone capsule unit (not supplied), the DWM-30 can be used for vocal performances, interviews, speeches, and a variety of other applications. You can attach a microphone capsule unit by simply screwing it onto the capsule mounting area at the top of the DWM-30. The microphone capsule unit has standard dimensions with a diameter of 31.3 mm and a pitch of 1.0 mm (1.25"/28 thread pitch).

Simultaneous multi-channel operation

Simultaneous multi-channel operation is made possible with the 375-kHz interval channel plan.

High sound quality and low latency

Low system latency of 1.2 ms (minimum) is achieved when using CODEC MODE2.
Switch between five audio codec modes based on your operational needs.

For details, see "Audio codec mode setting (CODEC MODE)" (page 14).

Encrypted transmissions

AES 256-bit encryption allows for highly secure wireless transmissions.

Gain/attenuator settings for flexible audio level

HIGH GAIN settings allow you to increase the gain in three stages (6/12/18 dB) in situations where the normal setting may not be sufficiently sensitive. The attenuator can be adjusted using 15 levels in the range 0 dB to 42 dB.

RF transmission output switching available

RF transmission output can be set to 2, 10, or 25 mW according to multi channel operation or long-distance transmission priority.

For details, see "Setting the RF output power (RF POWER)" (page 14).

User-set memory function

Various settings can be saved and activated on the transmitter.

For further details, see "Settings storage function (USER MEMORY)" (page 15).

Easy-to-grip design and light weight

An optimized mechanical structure achieves a grip design that is easy to hold and is approximately 10% lighter than previous models.

Supports operation for long periods of time and various battery types

The DWM-30 supports various battery types, such as AA alkaline batteries, lithium batteries, and NiMH batteries. It can be operated for

approximately 6 hours when powered by alkaline batteries.

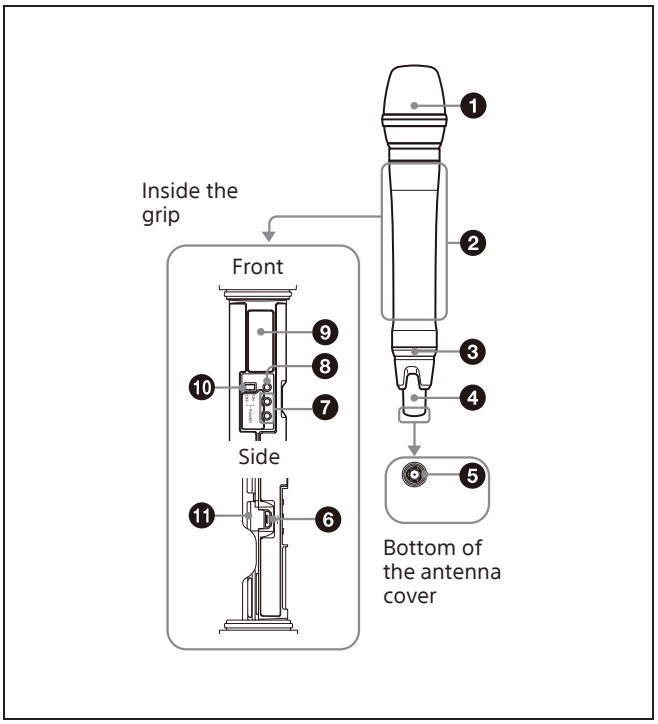
Note

Rechargeable AA lithium-ion batteries cannot be used.

Organic EL (electroluminescent) display

The quick response of the OLED (organic light-emitting diode) display enables real-time operating conditions to be displayed clearly and accurately.

Parts Identification



❶ Microphone capsule unit (not supplied)

Mount the microphone capsule unit securely.

Notes

- Make sure that the wireless microphone is turned off before mounting or removing the microphone capsule unit.
  Mounting or removing the unit while the wireless microphone is turned on may result in malfunctions.
- Do not touch the electrodes on the microphone capsule unit attachment point.

For details on mounting, refer to the operating instructions supplied with your microphone capsule unit.

❷ Grip

Contains operation buttons, display section, and the battery holder.
Open the grip to make settings or install the batteries.

For details on how to open the grip, see "Installing the Batteries" (page 6).

Note

When the grip is open, the metal part of the grip obstructs the antenna for RF transmission and wireless remote control system. To transmit the signal or to use the wireless remote control function with this microphone, be sure to close the grip.

❸ Identification ring
The ring can be replaced with the ones supplied. This is useful when multiple microphones are used in the system.

For details on how to replace the identification ring, see "Replacing the Identification Ring" (page 7).

❹ Antenna cover
Holds the antenna for RF transmission and wireless remote control function.

Notes

Covering the antenna cover with your hand while using the unit will shield the RF transmission and the wireless remote antenna. Do not grasp the antenna cover with your hands during radio transmission or when using wireless remote.

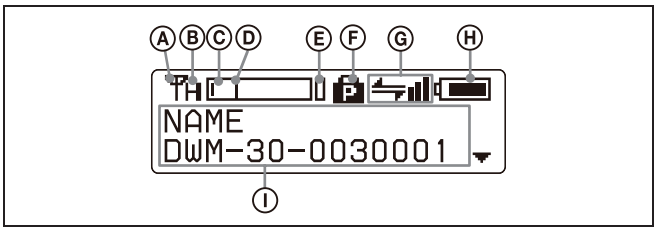
❺ POWER indicator
Lights up green when the microphone is turned on. When the battery is exhausted, the indicator starts flashing.

❻ USB connector (Micro USB)
Use only when updating the firmware.

❼ + or – button
Selects functions or values shown on the display. Holding down the – button while switching on the microphone activates the pairing operation for the wireless remote control function.

❽ SET button
Adjusts displayed function settings and enters the value.
Holding down the SET button while switching on the power turns the microphone on without sending a signal.

❾ Display section



Ⓐ RF transmission indication
Indicates the current transmission status.
: Currently transmitting
—: Transmission stopped

Ⓑ RF (radio frequency) transmission power indication
Indicates the current transmission power setting. You can change the setting with the RF transmission power setting function.
H: transmitting at 25 mW
M: transmitting at 10 mW
L: transmitting at 2 mW

Ⓒ Audio input level meter
Indicates the signal input level.

Ⓓ Reference level gauge
Indicates the reference input level. When the attenuation is 0 dB, –52 dBu is indicated.

Ⓔ Peak indicator
Warns of excessive input by lighting up when the signal is 3 dB below the level at which distortion begins.

Ⓕ Lock indicator
Indicates whether the accidental operation locks are enabled. Nothing is displayed when the lock function is disabled.
: Operation of the POWER button is locked.
: Changes to the settings are locked.
: Operation of the POWER button and changes to the settings are locked.

For details, see "Lock function (LOCK)" (page 13).

Ⓖ Cross Remote condition indication
Indicates the signal transmission condition of the wireless remote control function (4 levels).
: Good transmission
: Somewhat good transmission
: Somewhat poor transmission
: Poor transmission
: Unable to communicate with paired receiver

When the wireless remote control function is off, this indication does not appear.

Ⓗ Battery indication
Shows the battery condition.

For details, see "Battery indication" (page 6).

Ⓘ Menu display section
The status of 17 different functions are displayed here. To select the function, press the + or – button repeatedly.

For details, see "Setting Menus" (page 12).

❿ POWER switch
Turns the microphone ON or OFF.

⓫ Battery compartment
Accommodates two LR6 (size AA) batteries.

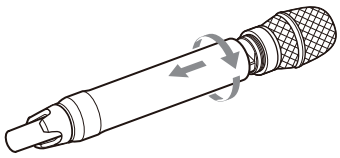
For details on how to insert the batteries, see "Power Supply" (page 6).

Power Supply

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

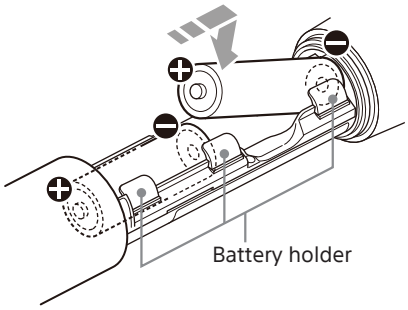
Installing the Batteries

1 Turn the grip in the direction of the arrow, and pull down the grip until the battery compartment is shown.



2 Insert two new LR6 (size AA) alkaline batteries, making sure the polarities are correct.

When inserting the first battery, slightly open the center snap-in battery holder. When inserting the second battery, slightly open the snap-in battery holder on the microphone capsule unit side.



Note

To prevent the batteries from touching each other, push in the second battery against the spring tension.
Squeezing the batteries into the compartment while two batteries are touching may damage the battery packages.

3 Close the grip and turn it in the reverse direction in the step **1** above.

Battery indication

The display of the remaining battery level varies depending on the selected value for BATTERY TYPE. The following table shows the battery level display for each BATTERY TYPE setting.

BATTERY TYPE	Battery level display
TYPE1	8 steps
TYPE2	5 steps
TYPE3	5 steps
TYPE4	7 steps

Replace both batteries when the battery indication starts to flash.
Be sure to check the expiration date printed on the new batteries before using them.

Notes

- When BATTERY TYPE is set to TYPE1, the battery level status is indicated based on new LR6 (size AA) alkaline batteries from a specific manufacturer. An incorrect indication may result when a different kind of batteries, a different brand of batteries or old batteries are used. If you plan to use other kind of batteries than alkaline, set the BATTERY TYPE function according to the type of batteries to be used.
- If a rechargeable nickel-metal hydride battery is charged and discharged repeatedly, the performance of the battery may deteriorate, and the battery level display may not accurately reflect the remaining charge. Follow the usage guideline recommended by the rechargeable battery manufacturer.
- If you plan to use the microphone for a long period of time, it is recommended that you replace the batteries with brand new ones.

For details on BATTERY TYPE setting, see "Setting the battery type (BATTERY TYPE)" (page 13).

Attaching the Supplied Accessories

Replacing the Identification Ring

A black ring is attached at the factory.
When multiple microphones are used in the system, identification rings with different colors are useful to distinguish a microphone from another.
Move the ring holder as follows to remove it.

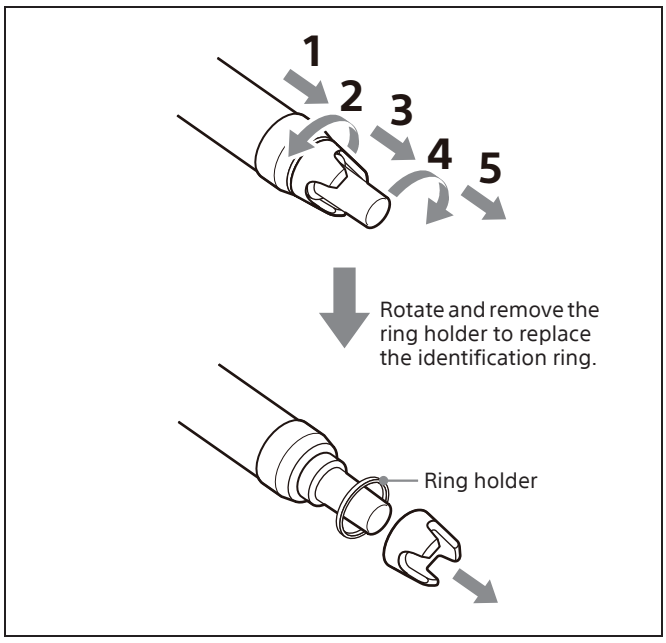
1 Pull it down.

2 Turn it left.

3 Pull it down.

4 Turn it right.

5 Pull it down.



Setting the Transmission Channel

The transmitter provides groups of interference-free channels. When using multiple microphones and transmitters at the same time (simultaneous multi-channel operations) within the same area, selecting the same group and using a channel within that group can prevent signal interference. To set the transmission channel on the transmitter, first you select the group and channel using the RF indicator and scanning functions on the receiver. Next you set the group and channel parameters to match the setting on the receiver.

Notes

- Certain transmission channels cannot be used with the wireless remote control function. *For details on transmission channels that do not support the wireless remote control function, refer to the frequency lists.*
- When selecting the channel, "(INCOMPATIBLE WITH RF REMOTE)" will slide across the display for transmission channels that cannot be used with the wireless remote control function.
- When a transmission channel that cannot be used with the wireless remote control function is selected, "RESTRICTED BY GP/CH SETTING" appears on the RF REMOTE screen and the wireless remote control function cannot be used. To enable use of the wireless remote control function, select transmission channels for which "(INCOMPATIBLE WITH RF REMOTE)" does not appear during channel selection.

Selecting the group/channel

Notes

- Before doing this procedure, use the BAND function *(see page 12)* to set the transmitter to the bandwidth of the receiver you are using.
- The setting for this function cannot be changed during actual signal transmission.

Set the transmitter group (GP) and channel (CH) as follows:

For details on groups and channels included in each frequency band, refer to the frequency lists.

For details on menu operation, see "Basic Menu Operations" (page 11).

1 Turn off the power, and then while holding down the SET button, turn the power on.

The signal transmission stops.

2 Press the + or – button repeatedly until the GP/CH indication is displayed.

3 Hold down the SET button until the item to be set flashes.

4 Press the + or – button repeatedly to select a group.

5 Press the SET button to enter the group.

The channel indication starts flashing.

6 Press the + or – button repeatedly to select a channel.

7 Press the SET button to enter the channel.

Note

To start signal transmission with the selected channel, turn off the power and then turn it on again.

To set the group/channel using the pairing mode of the Cross Remote

When the transmitter is paired with the receiver, the transmission channel of the transmitter is set to the receiving channel on the receiver automatically.

For details, see "Pairing with a receiver" (page 8).

Using Cross Remote

This transmitter is equipped with a wireless remote control function that can be used to set the parameters (low-cut filter, attenuation operation, power save mode, etc.) of the transmitter through the receiver or other devices. This function makes it easier to operate and manage the microphone system while in the field.
This wireless control is 2.4 GHz IEEE802.15.4 compliant and has no effect on the RF band of digital wireless audio.
This function is activated when pairing is established between the transmitter and the receiver using the RF REMOTE function.
Pairing must be done first before the wireless remote control function can be used.

Note

If "RESTRICTED BY GP/CH SETTING" appears on the RF REMOTE screen, the wireless remote control function cannot be used. To use the wireless remote control function, select a different transmission channel.

For details on how to change the transmission channel, see "Setting the Transmission Channel" (page 7).

Pairing with a receiver

Pairing links the transmitter with the receiver which the wireless remote control function is to be used.
When the transmitter has been paired with a receiver through the receiver operation, turning on the transmitter while holding down the – button establishes the pairing immediately.

To carry out pairing through menu operations on the transmitter, do the following.

1 Set the receiver to be used for controlling the transmitter to pairing mode.

For details, refer to the operating instructions supplied with the receiver.

2 Press the + or – button repeatedly until the RF REMOTE indication is displayed.

3 Hold down the SET button until the item to be set flashes.

4 Press the + or – button repeatedly to select PAIRING.

5 Press the SET button to enter.

The transmitter sends a pairing request to the receiver which is on pairing mode.
Before established pairing, if you press any operation key on the transmitter, pairing mode will be cancelled.
When pairing has been established, the wireless remote control condition level (indicated by) goes up, RF REMOTE turns on, and the remote control function becomes operative.

To use the Cross Remote with a previous pairing

In the RF REMOTE indication, select ON.

Notes

- When you set RF REMOTE to ON, the transmitter will communicate with the receiver to which it was previously paired. To use the wireless remote control function with another receiver, you must perform the pairing procedure for that receiver.
- Multiple transmitters cannot be paired with the same receiver.
- If you reset all parameters by using the FACTORY PRESET function *(see page 16)*, the pairing setting of the transmitter is also cleared.

The following transmitter settings can be done from the remote control:

- Transmitter name setting
- Frequency band/group/channel selection
- RF transmission power setting
- Attenuator setting
- Low-cut filter setting
- Power save setting
- Resetting accumulated use time
- Audio codec mode setting
- Internal signal setting
- LOCK function

For details on menu operation, see "Setting Menus" (page 12).

To perform remote control, the receiver must be equipped with a control function for the setting you want to control. For details, refer to the operating instructions supplied with the receiver.

To cancel the Cross Remote

In the RF REMOTE indication, select OFF.

Notes on the Cross Remote

The wireless remote control function on the transmitter uses the 2.4-GHz band and may thus be subject to interference from other devices.

- When pairing fails ("Pairing fail" is displayed), successful communication between the transmitter and the receiver has not occurred within a given amount of time. Pairing may be harder to do when another receiver is engaged in pairing nearby.
- When it becomes hard to use the remote control, the remote control may be improved by switching the wireless remote control function off, then on again in the RF REMOTE display, then re-pairing with the transmitter (change to a channel with less interference).

Using the Encrypted Transmission Function

The unit is capable of transmitting encrypted signals to prevent unwanted surveillance.
To use the function, select one of the following encryption modes.
Encryption key modes (SECURE KEY / AES256): An encryption key is automatically generated by the transmitter and used by both the transmitter and receiver in these one-to-one encrypted transmission modes.
The SECURE KEY mode is compatible with first and second generation DWX-series devices.

For details on the model generations, see "Model names for each generation" (page 10).

The AES256 mode uses AES 256-bit encryption for a higher level of security in transmissions.
Password mode (PASSWORD): A user-created password of up to 8 characters can be set for multiple transmitters (this unit) and receivers in this mode. This allows encrypted transmission within a group.

Note

Make sure that encryption mode settings are identical on both the transmitter (this unit) and the receiver.

Model names for each generation

The following shows the model names for each generation.

Generation	Transmitter	Receiver	Other
1st generation	DWT-B01 DWM-01 DWM-02 DWT-P01	DWR-S01D DWR-R01D DWR-S02D DWR-R02D	RMU-01
2nd generation	DWT-B01N DWM-02N DWT-P01N	DWR-R02DN DWR-S02DN	–
3rd generation	DWM-30 DWT-B03R DWT-B30 DWT-P30	DWR-R03D DWR-S03D	–

Using the encryption key modes (SECURE KEY / AES256)

Use these modes for one-to-one encrypted transmission between one transmitter (this unit) and one receiver.
To enable encrypted transmission in these modes, an encryption key that cannot be read from the outside is automatically generated by the unit, and the key is transmitted to the receiver via the wireless remote control function.
A new encryption key for the transmitter (this unit) and receiver is automatically generated for each key transmission, resulting in highly secure communication.
The encryption key for the transmitter (this unit) and receiver is retained when the unit is turned off, allowing you to resume the same encrypted transmission the next time you turn the unit on.

1 Prepare the transmitter (this unit).

① Hold down the SET button in the unit's ENCRYPTION screen until the setting value blinks.
② Use the + and – buttons to select SECURE KEY or AES256, and press the SET button.

2 Prepare the receiver.

Set the receiver that will receive the encryption key to SECURE KEY or AES256.

For details on receiver operations, refer to the receiver's operating instructions.

3 Exchange the encryption key.

On the receiver side, select REMOTE (wireless remote) as the encryption key exchange method, and perform encryption key exchange.
REMOTE cannot be selected when the wireless remote control function is disabled.

Note

If the receiver does not support AES256 mode, select SECURE KEY.

For details, refer to the receiver's operating instructions.

The unit searches for the receiver with which it is paired.
When the receiver is found, the encryption key is exchanged, and encrypted transmission begins.

Using the password mode (PASSWORD)

Use this mode for encrypted transmissions between multiple paired transmitters (this unit) and receivers.
When the same user-created password is set on both the transmitters (this unit) and the receivers, the audio signal can be decoded. This mode is useful when you want to operate multiple transmitters (this unit) and receivers as a group, or receive transmissions from a single transmitter (this unit) on multiple receivers at the same time.

1 Hold down the SET button in the unit's ENCRYPTION screen until the setting value blinks.

2 Use the + and – buttons to select PASSWORD, and press the SET button.

3 Enter a password of up to 8 characters on the unit.

For details on how to enter the password, see the procedure described in "Unit name setting (NAME)" (page 12).

4 Set the encrypted transmission setting on the receiver to PASSWORD.

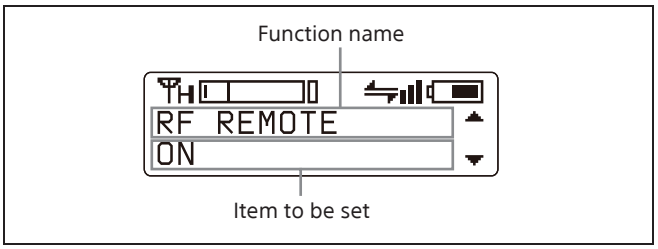
5 Set the same password that you set for the unit on the receiver.

For details on receiver operations, refer to the receiver's operating instructions.

Note

We recommend changing the password periodically.

Basic Menu Operations



1 Press the + or – button repeatedly until the function to be set appears.

Holding down the + and – buttons allows you to cycle through screens quickly.
In addition, holding down the + button while the first setting item of the menu is displayed allows you to jump to the last setting item, while holding down the – button while the last setting item of the menu is displayed allows you to jump to the first setting item.

2 Hold down the SET button until the item to be set flashes.

3 Press the + or – button to change the setting.

4 Press the SET button to enter the setting.

Setting items in the menu

- NAME (transmitter name) setting
- BAND (frequency band) selection
- GP/CH (group/channel) selection
- AF ATT (audio attenuator level) setting
- LCF (low-cut filter) setting
- LOCK function
- POWER SAVE setting
- BATTERY TYPE (battery type) setting
- RF REMOTE (wireless remote control) function
- SEARCH RX (receiver search) function
- CODEC MODE (audio codec mode) setting
- ENCRYPTION (encrypted transmission function) setting
- HIGH GAIN (high gain) setting
- INTERNAL SG (internal signal generator) function
- RF POWER (RF transmission power) setting
- MAX RF POWER (maximum RF transmission power) setting
- TIME (accumulated use time) indication
- BRIGHTNESS (display brightness) setting
- DIMMER MODE (automatic display dimmer) setting
- USER MEMORY (settings storage) function
- FACTORY PRESET (factory settings) function
- VERSION (software version) display

Setting Menus

The functions and parameters of the settings menu are explained here. Underlined items are the factory setting.

Unit name setting (NAME)

You can specify a transmitter name of up to 16 characters. The factory setting for the transmitter name is the model name and serial number. The transmitter name is sent to the receiver as metadata and is used by the receiver to distinguish between different transmitters.

+: The first press on the + button displays the character set. You can then use the + and – buttons to select the desired character. And then, pressing the SET button adds the selected character to the end of the current name.
–: Deletes the last character in the current name.
SET: Enters the character or edited name.

Note

You cannot insert or delete a character in the middle of the name.

Using wireless remote control, this function can be controlled from the receiver and other devices.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

Selecting the frequency band (BAND)

Match the frequency range on this transmitter to that of the Sony digital wireless receiver.
See "Carrier Frequencies and Channel Steps" (page 23) for differences in frequency ranges that can be set for optional receivers combined with this transmitter.

For details on groups and channels included in each frequency band, refer to the frequency lists.

Using wireless remote control, this function can be controlled from the receiver and other devices.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

Notes

- The setting for this function cannot be changed during actual signal transmission. To change the setting, turn off the transmitter first. Then, while holding down the SET button, turn the power on. Then change the setting after the signal transmission has stopped.
- Be sure to select the group/channel right after selecting the frequency band. To start signal transmission with the selected frequency band/group/channel, turn off the power and then turn it on again.

Selecting the group/channel (GP/CH)

See "Carrier Frequencies and Channel Steps" (page 23) for factory settings.

For details, see "Selecting the group/channel" (page 7).

Using wireless remote control, this function can be controlled from the receiver and other devices.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

Audio attenuator setting (AF ATT)

Note

To set HIGH GAIN to 6/12/18 dB, first set the attenuator to 0 dB.

Input audio from the connected microphone, and use the + and – buttons to select the attenuator level while viewing the input level meter.
The reference levels for the various settings are as follows.

Input	Attenuation (dB)	Reference input level (dBu)	Maximum input level (dBu)	Headroom (dB)
MIC	0	–52	–16	36
	3	–49	–13	
	6	–46	–10	
	9	–43	–7	
	3 dB steps	3 dB steps	3 dB steps	
	39	–13	+23	
	42	–10	+24	34
LINE	–	+4	+24	20

The audio attenuator setting can be changed from the receiver and other devices via the wireless remote control function.

For details, see "Using Cross Remote" (page 8).

Low-cut filter setting (LCF)

The frequency of the low-cut filter can be set.

OFF: Turns off the low-cut filter.

20 30 40 50 60 70 80 90 100 120 140 160 180 200 220 (Hz): Low-cut filter is set according to the selected frequency.

Using wireless remote control, this function can be controlled from the receiver and other devices.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

Lock function (LOCK)

Lock and prevent operations such as those for the POWER button and for settings changes. This prevents you from accidentally turning the unit off, for example.

UNLOCK: Disables operation locks for the POWER button and settings changes.
POWER: Locks POWER button operations only.
SETTING: Locks setting change operations only.
POWER+SETTING: Locks both POWER button and settings change operations.

Disabling the lock function

Set LOCK to UNLOCK.
Changes to the LOCK function are enabled, even when settings change operations are locked.

Lock function shortcuts

You can use to the unit's buttons to enable or disable the POWER+SETTING setting and all lock functions without displaying the settings menu.
To enable the POWER+SETTING setting, hold down the SET and + buttons at the same time until the POWER+SETTING icon appears.
To disable the lock, hold down the SET and – buttons at the same time until the lock indicator disappears.

The lock setting can be changed from the receiver and other devices via the wireless remote control function.

For details, see "Using Cross Remote" (page 8).

Note

Changes to settings via the wireless remote control function are enabled, even when settings change operations are locked. However, changes to settings will not be possible via the wireless remote control function on receivers that do not support the settings change lock function.

For details, refer to the receiver's operating instructions.

Power save setting (POWER SAVE)

To conserve power, this setting allows you to put all transmitter functions to sleep.

ACTIVE: The transmitter operates normally.
SLEEP: The sleep function is on. During sleep, the POWER indicator flashes at 2-second intervals.

To change back to normal operation

During sleep, press the SET, +, or – button.

You can also use the wireless remote control to change the receiver back to normal operation.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

Setting the battery type (BATTERY TYPE)

Set this item according to the type of batteries you use to obtain accurate battery power status indication.
TYPE1: Select this when using AA alkaline batteries. The battery level status is indicated based on the characteristics of new LR6 (size AA) alkaline batteries from a specific manufacturer.
TYPE2: Select this when using rechargeable nickel-metal hydride batteries with capacities of about 2000 mAh.
TYPE3: Select this when using lithium batteries.
TYPE4: Select this when using rechargeable nickel-metal hydride batteries with capacities of about 2500 mAh.

Notes

- The characteristics of batteries change according to battery type and environmental conditions. It is recommended that you learn the characteristics of batteries you use before using them.
- Rechargeable AA lithium-ion batteries cannot be used.

Cross Remote (RF REMOTE)

Enable use of the wireless remote control function between the unit and the receiver that will be used with the unit.

OFF: Disables the wireless remote control function.
ON: Enables use of the wireless remote control function with the paired device.
PAIRING: Executes a new pairing.

For details, see "Pairing with a receiver" (page 8).

Receiver search function (SEARCH RX)

Use this function to quickly locate a receiver communicating on the same frequency as the unit. When the receiver is found, the receiver will react (e.g., the receiver's display will blink).

Note

If a receiver does not support the receiver search function, it will not react.

For details on receiver actions, refer to the receiver's operating instructions.

Searching for receivers

Hold down the SET button in the SEARCH RX screen, and press the SET button again while the "SEARCH? YES" display is blinking.
You can hold down both the + button and – button for 1 second or more at the same time to start the receiver search function.

Audio codec mode setting (CODEC MODE)

MODE1: Audio codec mode that is compatible with first generation DWX-series devices.
MODE2: Audio codec mode that prioritizes short delay times while maintaining transmission stability and high audio quality.
MODE3: Audio codec mode that uses additional signal processing to suppress noise caused by unexpected pulse interference.
MODE4: Audio codec mode that prioritizes audio quality for faithful reproduction while maintaining transmission stability and low delay time.

Under normal circumstances, we recommend using MODE2 (prioritizing delay times) or MODE4 (prioritizing audio quality).
However, use MODE1 when when using the unit in conjunction with first generation DWX-series devices, and use MODE3 in environments where unexpected pulse interference may occur.

The audio delay durations that occur when transmitting and receiving with each mode will vary depending on the receiver's operating environment. For details, refer to the receiver's operating instructions.

The audio codec mode setting can be changed from the receiver and other devices via the wireless remote control function.

For details, see "Using Cross Remote" (page 8).

Encrypted transmission function Setting (ENCRYPTION)

Enable the encrypted transmission function.

SECURE KEY: Enables the encryption key mode that is compatible with first and second generation DWX-series devices.
AES256: Enables the AES256 encryption key mode.
PASSWORD: Enables the password mode.
OFF: Disables the encrypted transmission function.

For details, see "Using the Encrypted Transmission Function" (page 10).

High gain setting (HIGH GAIN)

Sets high gain.

OFF: Do not use high gain.
6 12 18dB: Sets the selected high gain.

Note

6/12/18 dB are available only when the attenuator is 0 dB.

Generating an internal signal (INTERNAL SG)

This transmitter generates a 1-kHz reference level sine wave that can be used to adjust or check the audio level of the receiver or the system that you are using. This internal signal is outside the control of the attenuator.
1 kHz: A 1-kHz internal signal is generated.
OFF: An internal signal is not generated.

Note

If the transmitter is turned off while the reference signal function is on, the function will turn off automatically.

Using wireless remote control, this function can be controlled from the receiver and other devices.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

Setting the RF output power (RF POWER)

You can set the RF output power.

2 mW (LOW): transmitted by 2 mW
10 mW (MID): transmitted by 10 mW
25 mW (HIGH): transmitted by 25 mW

Notes

- The setting for this function cannot be changed during actual signal transmission. To change the setting, turn off the transmitter first. Then, while holding down the SET button, turn the power on. And then, change the setting after the signal transmission has stopped.
- To start signal transmission with the selected RF output power setting, turn off the power and then turn it on again.

Using wireless remote control, this function can be controlled from the receiver and other devices.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

The maximum RF output power can be configured on the unit.

For details, see "Setting the maximum RF output power (MAX RF POWER)" (page 15).

Setting the maximum RF output power (MAX RF POWER)

You can set the maximum RF output power of the unit.

2mW MAX: Sets the maximum to 2 mW.
10mW MAX: Sets the maximum to 10 mW.
25mW MAX: Sets the maximum to 25 mW.

Notes

- The setting for this function cannot be changed during actual signal transmission. To change the setting, turn off the transmitter first. Then, while holding down the SET button, turn the power on. And then, change the setting after the signal transmission has stopped.
- To start signal transmission with the selected RF output power setting, turn off the power and then turn it on again.
- Always perform pairing after changing the maximum RF output power setting for a transmitter. If you fail to do so, configuration of RF output power settings via the wireless remote control function may become impossible.

For details on pairing, see "Using Cross Remote" (page 8).

Displaying the accumulated use time (TIME)

You can display the accumulated battery use time as a rough estimate of total transmitter usage.
The factory setting is "00:00".

To reset the accumulated time indication

1. Hold down the SET button until the time indication flashes.
2. Press the – button so "00:00 RESET" appears, and then press the SET button.

Using wireless remote control, this function can be controlled from the receiver and other devices.

For details on wireless remote control function, see "Using Cross Remote" (page 8).

Setting the brightness of the display (BRIGHTNESS)

Ten levels of brightness can be selected for the organic light-emitting diode display.
The selectable settings are the following:
(Dark) **1 2 3 4 5 6 7 8 9 10** (Bright)

Automatic dimming of the display (DIMMER MODE)

The organic light-emitting diode display can be set to dim or turn off after a certain amount of time.

AUTO OFF: The display turns off after 30 seconds. The display goes on again when you press the SET, +, or – button.
AUTO DIMMER: The display dims after 30 seconds. The display becomes bright again when you press the SET, +, or – button.
ALWAYS ON: The display stays on at the brightness level set with the BRIGHTNESS function.

Settings storage function (USER MEMORY)

Store setting values on the unit, or load previously saved setting values.
When you execute SAVE, the values for the following settings will be saved.

- NAME (transmitter name) setting
- BAND (frequency band) selection
- GP/CH (group/channel) selection
- AF ATT (audio attenuator level) setting
- LCF (low-cut filter) setting
- LOCK function
- BATTERY TYPE
- RF REMOTE (wireless remote control) function
- CODEC MODE (audio codec mode) setting
- ENCRYPTION (encrypted transmission function) setting
- RF POWER (RF transmission power) setting
- MAX RF POWER (maximum RF transmission power) setting
- BRIGHTNESS (display brightness) setting

- DIMMER MODE (automatic display dimmer) setting

When you execute LOAD, the saved setting values will be loaded.

Notes

- This function cannot be executed during actual signal transmission. Turn the unit off, and then hold down the POWER button while pressing the SET button to turn the unit on in a state where signals are not transmitted before execution.
- To start signal transmission after using this function, turn off the unit and then turn it on again.
- You cannot execute LOAD if you have never executed SAVE.
- If you execute LOAD while performing the following operations after setting values were stored, proper communication with the receiver will not be possible. In such cases, perform pairing or encrypted transmission settings again.
  - Pairing the unit or establishing encrypted transmission with a different receiver.
  - Pairing the receiver that was paired with the unit with a different transmitter.
  - Establishing encrypted transmission between the receiver and a different transmitter.
  - When FACTORY PRESET is executed, settings configured using SAVE will be deleted.

Resetting parameters to their factory settings (FACTORY PRESET)

All parameter settings can be returned to their factory settings.
Holding down the SET button until a message appears asking for confirmation. Press the + or – button repeatedly to select YES, and then press the SET button to enter. The transmitter parameters are reset to their factory settings.

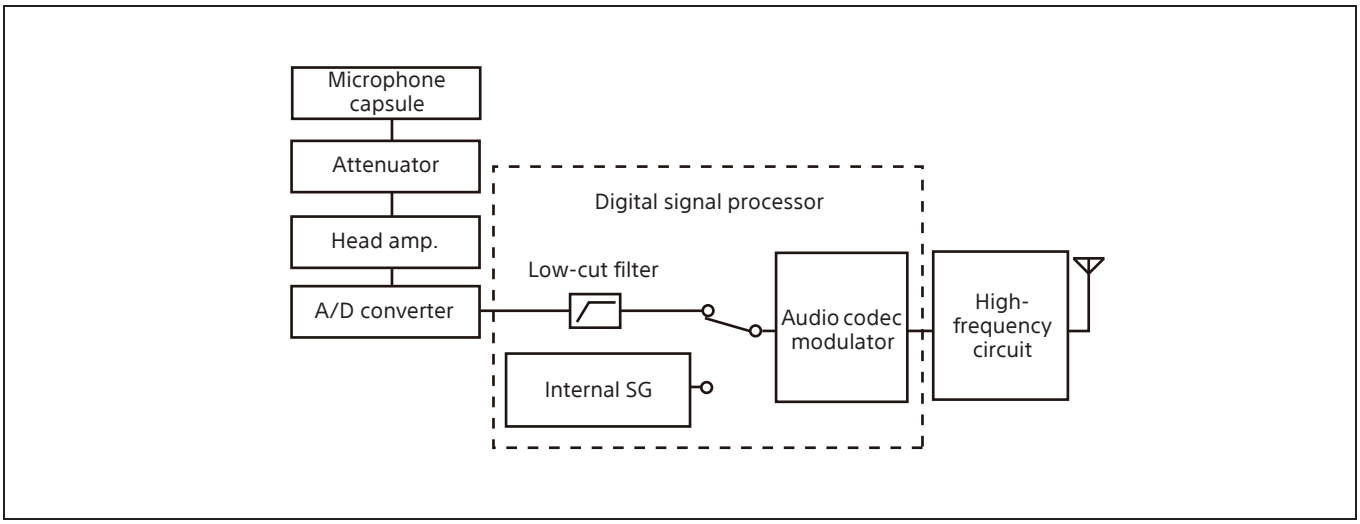
Notes

- The setting for this function cannot be changed during actual signal transmission. To change the setting, turn off the power first. Then while holding down the SET button, turn the power on. Then change the setting after the signal transmission has stopped.
- To start signal transmission with the factory parameter settings, turn off the power and then turn it on again.

Displaying the software version (VERSION)

The version of the transmitter software can be displayed.

Block Diagram



Troubleshooting

If you encounter a problem using this transmitter, use the following checklist to find a solution. For any problems with the receiver or adapter, refer to the operating instructions supplied with the respective device. If the problem persists, consult your Sony dealer.

Symptom	Meanings	Remedy
The transmitter does not turn on.	The batteries are inserted backwards in the battery compartment.	Reinsert the batteries with the correct orientation *(see page 6)*.
	The batteries are exhausted.	Replace the batteries with new ones.
The power is repeatedly turned ON/OFF (screen turns on/off) even when the POWER switch is ON.	The batteries are exhausted.	Replace the batteries with new ones.
The batteries drain quickly.	Manganese batteries are being used.	Use alkaline batteries.
	The unit is being used under cold conditions.	The batteries drain quickly under cold conditions.
	The rechargeable battery has deteriorated.	Replace with a new rechargeable battery.
Interruptions occur in the receiver audio.	The unit is too far from the receiver.	Reduce the distance from the receiver, and check the reception.
	The transmission power setting is set to “L.”	Increase the transmission power *(see page 14)*.
	The RF band is congested.	Use the scanning function of the receiver to find a channel without interference and change the channel.
	The unit is too close to the receiver.	Increase the distance from the receiver to about 1 m (3 feet).
	The reception level of the receiver is too low.	Adjust the RF attenuator or booster level of the receiver to increase the reception level.
	The reception level of the receiver is too high.	Adjust the RF attenuator or booster level of the receiver to decrease the reception level.
	The receiver is receiving using only one of the antennas (either A or B).	Set antenna A and antenna B of the receiver so that the reception levels are equal.
There is no sound.	The channel setting on the unit is different from that on the receiver.	Match the channel settings on the unit and receiver.
	The encrypted transmission function settings on the receiver and transmitter do not match.	Match the encryption transmission function settings on the transmitter and receiver *(see page 10)*.
	The audio codec mode settings on the receiver and transmitter do not match.	Match the audio codec mode settings on the receiver and transmitter *(see page 14)*.
	The microphone capsule unit is broken.	Replace the microphone capsule unit.
The sound is weak.	The attenuator setting is high.	Set the attenuator to an appropriate level while monitoring the audio input level meter of the unit *(see page 12)*.
	The microphone capsule unit is broken.	Replace the microphone capsule unit.
There is distortion in the sound.	The attenuator is set too low for the audio input level of the transmitter.	While monitoring the audio input level meter, set the attenuator to a level that does not produce distortion.
The bass is weak.	The frequency of the low-cut filter is set too high.	While monitoring the sound, decrease the low-cut filter frequency to a level that produces the proper sound quality *(see page 12)*.
There is too much bass.	The microphone connected to the transmitter produces excessive bass because the frequency response of the transmitter extends into the low 20-Hz range.	Use the low-cut filter to cut the bass *(see page 12)*.
The power does not turn off even though the POWER switch is turned to OFF.	The POWER switch is locked.	Turn off the LOCK function *(see page 13)*.

Symptom	Meanings	Remedy
Wireless remote control is not possible.	Pairing has not been established between the transmitter and receiver.	Carry out pairing *(see page 8)*.
	The receiver is too far from the transmitter for communication to occur.	Check the wireless remote control condition level. If it is low, decrease the distance between the transmitter and the receiver *(see page 5)*.
	The transmitter that was paired with the receiver has been paired with another receiver.	On the receiver, carry out pairing again with the transmitter that you want to control.
The display is too dark.	The display brightness is set to low.	Adjust the brightness of the display *(see page 15)*.
The RF output power cannot be configured.	The maximum RF output power function may be set to limit the RF output power.	Check and adjust the setting.
Display keeps showing an update message.	The system cannot start due to update failure or system failure.	Turn off and on again. If the message persists, try updating again.

Important Notes on Operation

Notes on using the transmitter

- The use of some frequency bands may be restricted by law, depending on the country or region. Check in advance before use.
- The digital wireless microphone system product must be used within a temperature range of 0 °C to 50 °C (32 °F to 122 °F).
- Operating the transmitter near electrical equipment (motors, transformers, or dimmers) may cause it to be affected by electromagnetic induction. Keep the transmitter as far from such equipment as possible.
- The presence of the lighting equipment may produce electrical interference over the entire frequency range. Position the transmitter so that interference is minimized.
- When using the unit in locations with excessive noise or vibration or is subject to physical shock, the vibration/shock may transfer directly to the unit, resulting in the generation of electrical noise (microphonics) and degradation of the signal-to-noise ratio. To prevent such occurrences, avoid using the unit in the following locations.
  – near electrical equipment, such as motors, transformers or dimmers
  – near air conditioning equipment or places subject to direct air flow from an air conditioner
  – near public address loudspeakers
  – where adjacent equipment might knock against the tuner

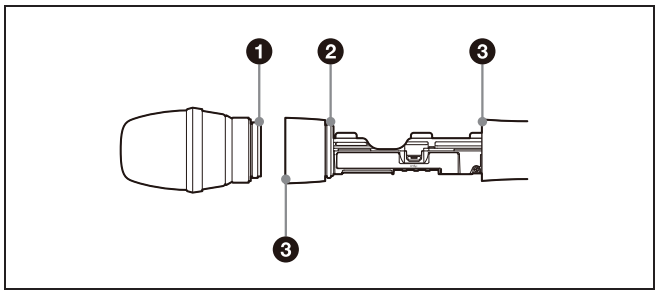
  Keep the transmitter as far from such equipment as possible or use buffering material.

On cleaning

- If the transmitter 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 transmitter in such places or not cleaning it after its use in such places may shorten its life.
- Clean the surface and the connectors of the transmitter with a dry, soft cloth. Never use thinner, benzene, alcohol or any other chemicals, since these may mar the finish.

Regular cleaning

Regular cleaning of each of the threaded parts shown below is recommended.



1 Microphone capsule unit (available separately) thread
Wipe with a dry, soft cloth.

2 Grip protruding thread
Wipe with a dry, soft cloth.

3 Grip recessed thread
Wipe with a cotton swab in the narrow space, being careful of electrical components such as terminals.

If disinfection is required, gently wipe with a soft cloth moistened with a small amount of rubbing alcohol.

Notes on simultaneous multi-channel operation

- Keep the microphone at least 30 cm (11 $^{7}/_{8}$ inches) away from another transmitter/microphone. When the distances between transmitters need to be closer than the distances above, use a grouping system for multi-channel systems that include both digital wireless and analog wireless devices.
  For details, refer to "Frequency Lists".
- When only digital wireless microphones are being used, keep the transmitter at least 4 meters (13 feet) away from the antenna of a receiver for up to 10 channels, and at least 6 meters (20 feet) away for 11 or more channels.
- When a mixture of digital and analog wireless microphones is being used, keep the transmitter at least 6 meters (20 feet) away from the antenna of a receiver.
- This system should be kept at least 100 meters (328 feet) away from any analog wireless systems using the same frequency when both are being used in a wide area with no walls or obstructions.
- If you experience noise, increase the distance between the transmitter and receiver or decrease the transmission power on the transmitter.

CROSS REMOTE Compatibility

As the unit supports a wider band than previous transmitters, establishing wireless remote

communication via CROSS REMOTE between the unit and DWX-series devices requires firmware update for the receiver and RMU-01 unit.

For details on updating the firmware on the DWX-series receiver or RMU-01 unit, contact your Sony representative.

For details on how to check the software version, refer to the device's operating instructions.

Applicable devices and versions

- DWR-R01D: Version 1.28 or earlier
- DWR-S01D: Version 1.16 or earlier
- DWR-R02D: Version 1.09 or earlier
- DWR-S02D: Version 1.07 or earlier
- DWR-R02DN: Version 1.18 or earlier
- DWR-S02DN: Version 1.18 or earlier
- RMU-01: Version 1.26 or earlier

About security

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- This unit is equipped with a maintenance function performed via a network. Maintenance may be performed with your consent.

Specifications

Transmitting section

Oscillator type
: Crystal-controlled PLL synthesizer

RF power output
: 2 mW/10 mW/25 mW (e.r.p) selectable

Occupied RF bandwidth
: 192 kHz or less

Audio delay
: MODE1: 0.8 ms
MODE2: 0.7 ms
MODE3: 1.8 ms
MODE4: 0.7 ms

Allowable frequency deviation
: ±6.5 ppm

Type of emission
: G1E or G1D

Modulation method
: π/4 Shift QPSK

Audio section

Maximum input level
: –16 dBu (with 0 dB attenuator)

Audio attenuator
: 0 dB to 42 dB (3 dB steps)

Input impedance
: 4.7 kohms or more

Frequency response
: 20 Hz to 22,000 Hz

T.H.D
: MODE1, MODE2, MODE4: 0.03% or less
MODE3: 0.3% or less

General

Operating voltage
: 3.0 V DC (two LR6 (size AA) alkaline batteries)

Current consumption
: Max. 410 mA DC (3 V DC, 50 mW antenna power)

Battery life
: Continuous operating time 6 hours (225 mA DC) (25 °C (77 °F), LR6 (AA) alkaline batteries, 10 mW output, CODEC MODE set to MODE1, wireless remote control function off, DIMMER MODE set to AUTO OFF, Sony CU-C31 capsule unit attached)

Operating temperature
: 0 °C to 50 °C (32 °F to 122 °F)

Note

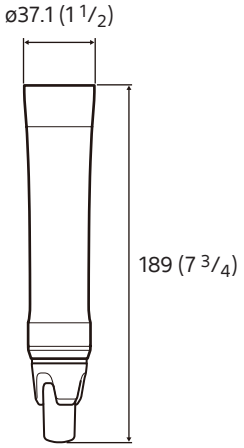
When used in locations with an ambient temperature of 45 °C (113 °F) or higher, make sure the unit does not come into direct contact

with your skin, as it may cause burns due to high temperature.

Storage temperature
–20 °C to +60 °C (–4 °F to +140 °F)

Wireless remote control
2.4 GHz IEEE802.15.4 compliant

Dimensions (Unit: mm (inches))



Mass Approx. 150 g (5.3 oz) excluding batteries

Supplied accessories
Identification ring (1)
Microphone holder (1)
Stand adaptor (1)
For the model available in the U.S.A.:
PF1/2 to W5/8 type
For the model available in Europe.:
PF1/2 to W3/8 type
Before Using This Unit (3)

Design and specifications are subject to change without notice.

Notes

- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
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Carrier Frequencies and Channel Steps

Underlined items are the factory setting.
Channel step: 25 kHz

US model

Channel step: 25 kHz

Model No.	Frequency band	Frequency	Group/channel (factory setting)
UC (TV14-TV36, TV38)	TV14-17	470.125 - 493.875 MHz	00 1801 494.125 MHz
	TV18-21	494.125 - 517.875 MHz	
	TV22-25	518.125 - 541.875 MHz	
	TV26-29	542.125 - 565.875 MHz	
	TV30-33	566.125 - 589.875 MHz	
	TV34-36	590.125 - 607.875 MHz	
	TV37	Not available	
	TV38	614.125 - 615.875 MHz	

The maximum transmission power (MAX RF POWER) for TV38 (614.125 - 615.875 MHz) is 10 mW.

European models

Channel step: 25 kHz

Model No.	Frequency band	Frequency	Group/channel (factory setting)
L (TV21-TV38)	TV21-23	470.025 - 494.000 MHz	00 2101 470.125 MHz
	TV24-26	494.025 - 518.000 MHz	
	TV27-29	518.025 - 542.000 MHz	
	TV30-32	542.025 - 566.000 MHz	
	TV33-35	566.025 - 590.000 MHz	
	TV36-37	590.025 - 606.000 MHz	
	TV38	606.025 - 614.000 MHz	
H (TV33-TV51)	TV33-35	566.025 - 590.000 MHz	00 3301 566.125 MHz
	TV36-37	590.025 - 606.000 MHz	
	TV38	606.025 - 614.000 MHz	
	TV38-40	606.025 - 630.000 MHz	
	TV41	630.025 - 638.000 MHz	
	TV42-44	638.025 - 662.000 MHz	
	TV45-47	662.025 - 686.000 MHz	
	TV48-50	686.025 - 710.000 MHz	
	TV51	710.025 - 714.000 MHz	

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Last Updated: 2025-04

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weapons systems, in which the failure of the SOFTWARE could lead to death, personal injury, or severe physical or environmental damage ("HIGH RISK ACTIVITIES"). To the extent permitted by applicable laws, SONY, each of the THIRD-PARTY SUPPLIERS, and each of their respective affiliates specifically disclaim any express or implied warranty, duty or condition of fitness for HIGH RISK ACTIVITIES.

EXCLUSION OF WARRANTY ON SOFTWARE

SOME JURISDICTIONS DO NOT ALLOW EXCLUSION OF WARRANTIES, SO THE EXCLUSIONS SET FORTH BELOW IN THIS SECTION MAY NOT APPLY TO YOU AND NOT EXCLUDE, RESTRICT OR MODIFY YOUR RIGHTS TO THE EXTENT THEY ARE CONTRARY TO APPLICABLE LAW IN YOUR JURISDICTION.

You acknowledge and agree that use of the SOFTWARE is at your sole risk and that you are responsible for use of the SOFTWARE. The SOFTWARE is provided "AS IS," without warranty, duty or condition of any kind. SONY AND EACH OF THE THIRD-PARTY SUPPLIERS (for purposes of this Section, SONY and each of the THIRD-PARTY SUPPLIERS shall be collectively referred to as "SONY") EXPRESSLY DISCLAIM ALL WARRANTIES, DUTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, TITLE AND NONINFRINGEMENT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, SONY DOES NOT WARRANT OR MAKE ANY CONDITIONS OR REPRESENTATIONS (A) THAT THE SOFTWARE WILL BE ERROR-FREE, UNINTERRUPTED OR UNMODIFIED, (B) THAT THE SOFTWARE WILL BE UPDATED OR CORRECTED, (C) THAT THE SOFTWARE AS USED BY ITSELF OR IN CONJUNCTION WITH OTHER DEVICES, SYSTEMS OR NETWORKS WILL BE COMPLETELY SECURE AGAINST CYBER THREATS, (D) THAT ANY SOFTWARE, CONTENTS, SERVICES OR PRODUCTS (OTHER THAN THE SOFTWARE) UPON WHICH THE SOFTWARE'S PERFORMANCE DEPENDS WILL CONTINUE TO BE AVAILABLE, UNINTERRUPTED OR UNMODIFIED. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY SONY OR AN AUTHORIZED REPRESENTATIVE OF SONY SHALL CREATE A WARRANTY, DUTY OR CONDITION.

LIMITATION OF LIABILITY

SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS OF LIABILITY, SO THE LIMITATIONS SET FORTH BELOW IN THIS SECTION MAY NOT APPLY TO YOU AND NOT EXCLUDE, RESTRICT OR MODIFY YOUR RIGHTS TO THE EXTENT THEY ARE CONTRARY TO APPLICABLE LAW IN YOUR JURISDICTION OR LIMITS LIABILITY TO THE EXTENT IT CANNOT BE EXCLUDED UNDER APPLICABLE LAW.

SONY AND EACH OF THE THIRD-PARTY SUPPLIERS (for purposes of this Section, SONY and each of the THIRD-PARTY SUPPLIERS shall be collectively referred to as "SONY") SHALL NOT BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL LOSS OR DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR UNDER ANY OTHER LEGAL THEORY RELATED TO THE SOFTWARE, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES ARISING OUT OF LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE SOFTWARE OR ANY ASSOCIATED HARDWARE, DOWN TIME AND USER'S TIME, EVEN IF ANY OF THEM HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES. IN ANY CASE, EACH AND ALL OF THEIR AGGREGATE LIABILITY UNDER ANY PROVISION OF THIS EULA SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID FOR THE SOFTWARE, SONY'S PRODUCT WHICH THE SOFTWARE IS EMBEDDED IN OR BUNDLED WITH AND/OR SONY'S SERVICE TO WHICH THE SOFTWARE IS DEDICATED.

AUTOMATIC UPDATE FEATURE

From time to time, SONY or the THIRD-PARTY SUPPLIERS may automatically update or otherwise modify the SOFTWARE for purposes of enhancement of security functions, error correction and improvement of functions, at such time as you interact with SONY's or third parties' servers, or otherwise. Such updates or modifications may delete or change the nature of features or other aspects of the SOFTWARE, including, but not limited to, functions you may rely upon. SONY may condition continued use of the SOFTWARE upon your complete installation or acceptance of such update or modifications. You are solely responsible for any consequences resulting from your failure to use the latest version of the SOFTWARE that SONY has made available to you. Any updates/modifications shall be deemed to be, and shall constitute part of, the SOFTWARE for purposes of this EULA.

ENTIRE AGREEMENT, WAIVER, SEVERABILITY

This EULA (and SONY's applicable privacy policy separately presented to you, if any), as amended and modified from time to time, constitute the entire agreement(s) between you and SONY with respect to the SOFTWARE. The failure of SONY to exercise or enforce any right or provision of this EULA shall not constitute a waiver of such right or provision. If any part of this EULA is held invalid, illegal, or unenforceable, that provision shall be enforced to the maximum extent permissible so as to maintain the intent of this EULA, and the other parts will remain in full force and effect.

GOVERNING LAW AND JURISDICTION

The United Nations Convention on Contracts for the International Sale of Goods shall not apply to the SOFTWARE or this EULA. This EULA will not be governed or interpreted in any way by referring to any law based on the Uniform Computer Information Transactions Act (UCITA) or any other act derived from or related to UCITA. This EULA shall be governed by the laws of the State of Delaware (USA), without regard to conflict of laws provisions.

BINDING ARBITRATION

ANY "DISPUTE" THAT IS NOT RESOLVED THROUGH THE INFORMAL NEGOTIATION PROCESS DESCRIBED ABOVE SHALL BE RESOLVED EXCLUSIVELY THROUGH BINDING ARBITRATION. "DISPUTE" is defined as any disagreement, cause of action, claim, controversy, or proceeding between you and any Sony entity related to or arising out of the SOFTWARE or this EULA. DISPUTE is to be given the broadest possible meaning that will be enforced. If a DISPUTE arises, you agree to first give notice to SONY by contacting Sony Electronics Inc. at 16535 Via Esprillo, MZ 1105, San Diego, CA 92127, Attn: Legal Department, and engaging in good faith negotiations to attempt to resolve any DISPUTE for at least 14 days, except that you or Sony (or any of its affiliates) may skip this informal negotiation procedure for DISPUTE enforcing, protecting, or concerning the validity of intellectual property rights.

ARBITRATION INSTRUCTIONS

To begin arbitration, either you or SONY must make a written demand to the other for arbitration. The arbitration will take place before a single arbitrator. It will be administered in keeping with the Expedited Procedures of the Commercial Arbitration Rules, and the Supplementary Proceedings for Consumer-Related disputes when applicable ("Rules") of the American Arbitration Association ("AAA") in effect when the claim is filed. You may get a copy of AAA's Rules by contacting AAA at (800) 778-7879 or visiting www.adr.org. The filing fees to begin and carry out arbitration will be shared between you and SONY, but in no event shall your fees ever exceed the amount allowable by the special rules for Consumers Disputes provided for by AAA, at which point SONY will cover all additional administrative fees and expenses. This does not prohibit the arbitrator from giving the winning party their fees and expenses of the arbitration when appropriate pursuant to the Rules. Unless you and SONY agree differently, the arbitration will take place in the county and state where you live, and applicable federal or state law shall govern the substance of any DISPUTE. The Federal Arbitration Act, 9 U.S.C. § 1, et seq., will govern the arbitration itself and not any state law on arbitration. The arbitrator's decision will be binding and final, except for a limited right of appeal under the Federal Arbitration Act. The arbitrator may award declaratory or injunctive relief only in favor of the party seeking relief, and only to the extent necessary to provide relief warranted by that party's individual claim. Any court with jurisdiction over the parties may enforce the arbitrator's decision.

SMALL CLAIMS EXCEPTION

Despite the provisions set forth above, you have the right to litigate any DISPUTE in small claims court or other similar court of limited jurisdiction, to the extent the amount at issue does not exceed $15,000, and as long as such court has proper jurisdiction and all other requirements (including amount in controversy) are satisfied.

CLASS ACTION WAIVER

YOU UNDERSTAND AND ACKNOWLEDGE THAT BY AGREEING TO BINDING ARBITRATION, YOU ARE GIVING UP THE RIGHT TO LITIGATE (OR PARTICIPATE IN AS A PARTY OR CLASS MEMBER) ANY DISPUTES IN COURT BEFORE A JUDGE OR JURY. ANY DISPUTE RESOLUTION PROCEEDING WILL BE CONDUCTED ONLY ON AN INDIVIDUAL BASIS, AND BOTH PARTIES AGREE NOT TO HAVE ANY DISPUTE HEARD AS A CLASS ACTION, REPRESENTATIVE ACTION, CONSOLIDATED ACTION, OR PRIVATE ATTORNEY GENERAL ACTION, UNLESS ALL PARTIES INVOLVED IN THE DISPUTE SPECIFICALLY AGREE TO DO SO IN WRITING FOLLOWING INITIATION OF THE ARBITRATION.

OPT-OUT INSTRUCTIONS

IF YOU DO NOT WISH TO BE BOUND BY THE BINDING ARBITRATION PROVISION AND/OR THE CLASS ACTION WAIVER ABOVE, THEN: (1) YOU MUST NOTIFY SONY IN WRITING WITHIN 30 DAYS OF THE DATE THAT YOU FIRST USE THE SOFTWARE OR AGREE TO THIS EULA, WHICHEVER OCCURS FIRST; (2) YOUR WRITTEN NOTIFICATION MUST BE MAILED TO SONY ELECTRONICS INC., 16535 VIA ESPRILLO, MZ 1105, SAN DIEGO CA 92127, ATTN: LEGAL DEPARTMENT; AND (3) YOUR WRITTEN NOTIFICATION MUST INCLUDE: (A) YOUR NAME; (B) YOUR ADDRESS; (C) THE DATE YOU FIRST USED THE SOFTWARE OR AGREED TO THIS EULA; AND (D) A CLEAR STATEMENT THAT YOU DO NOT WISH TO RESOLVE DISPUTES WITH ANY SONY ENTITY THROUGH ARBITRATION AND/OR TO BE BOUND BY THE CLASS ACTION WAIVER.

REJECTING CHANGES MADE TO THE DISPUTE PROCEDURES

Despite anything to the contrary in this EULA, you may reject changes made to the binding arbitration provision and class action waiver if: (1) you've already begun authorized use of the SOFTWARE at the time the change was/is made; and (2) you mail written notice to the address in the immediately preceding paragraph within 30 days after the particular change was/is made. Should such a situation arise, you will still be bound by the DISPUTE procedures you previously agreed to and existing before the change you rejected was made.

MISCELLANEOUS

Any DISPUTE determined not subject to arbitration and not initiated in small claims court will be litigated by either party in a court of competent jurisdiction in either the superior court for the County of San Diego or in the United States District Court for the Southern District of California.

EQUITABLE REMEDIES

Notwithstanding anything contained in this EULA to the contrary, you acknowledge and agree that any violation of or non-compliance with this EULA by you will cause irreparable harm to SONY, for which monetary damages would be inadequate, and you consent to SONY obtaining any injunctive or equitable relief that SONY deems necessary or appropriate in such circumstances. SONY may also take any legal and technical remedies to prevent violation of and/or to enforce this EULA, including, but not limited to, immediate termination of your use of the SOFTWARE, if SONY believes in its sole discretion that you are violating or intend to violate this EULA. These remedies are in addition to any other remedies SONY may have at law, in equity or under contract.

TERMINATION

Without prejudice to any of its other rights, SONY may terminate this EULA if you fail to comply with any of its terms. In case of such termination, you must: (i) cease all use, and destroy any copies, of the SOFTWARE; (ii) comply with the requirements in the section below entitled "Your Account Responsibilities".

AMENDMENT

SONY RESERVES THE RIGHT TO AMEND ANY OF THE TERMS OF THIS EULA AT ITS SOLE DISCRETION BY POSTING NOTICE ON A SONY DESIGNATED WEB SITE, BY EMAIL NOTIFICATION TO AN EMAIL ADDRESS PROVIDED BY YOU, BY PROVIDING NOTICE AS PART OF THE PROCESS IN WHICH YOU OBTAIN UPGRADES/UPDATES OR BY ANY OTHER LEGALLY RECOGNIZABLE FORM OF NOTICE. If you do not agree to the amendment, you should promptly contact SONY for instructions. Your continued use of the SOFTWARE after the effective date of any such notice shall be deemed your agreement to be bound by such amendment.

THIRD-PARTY BENEFICIARIES

Each THIRD-PARTY SUPPLIER is an express intended third-party beneficiary of, and shall have the right to enforce, each provision of this EULA with respect to the software of such party.

YOUR ACCOUNT RESPONSIBILITIES

Should you return your DEVICE to its place of purchase, sell or otherwise transfer your DEVICE, or if this EULA is terminated, you are responsible for and must, if reasonably possible, uninstall the SOFTWARE from the DEVICE and delete any and all accounts you may have established on DEVICE or are accessible through the SOFTWARE. You are solely responsible for maintaining the confidentiality of any accounts you have with SONY or third parties and any usernames and passwords associated with your use of the DEVICE.

Should you have any questions concerning this EULA, you may contact SONY by writing to SONY at: Sony Electronics Inc., 16535 Via Esprillo, San Diego, CA 92127.