

# Digital Wireless Transmitter

The supplied CD-ROM includes the Operating Instructions for the DWT-B01 digital wireless transmitter (English, French, German, Italian, and Spanish versions). For more details, see "Using the CD-ROM manual" on page 11.

## Operating Instructions

### DWT-B01

## **WARNING**

Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

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

### **For the customers in the U.S.A.**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **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.

**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.

This device complies with FCC radiation exposure limits set forth for uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. This device has

very low levels of RF energy that it is deemed to comply without testing of specific absorption radio (SAR).

### **For the customers in Canada**

Operation 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.

The term "IC" before the radio certification number only signifies that Industry Canada technical specifications were met.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

This device has been designed to operate with an antenna having a maximum gain of 0 dB.

Antenna having a higher gain is strictly prohibited per regulations of Industry Canada.

The required antenna impedance is 50 ohms.

### **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.

### **AVERTISSEMENT**

N'exposez pas les batteries à une chaleur excessive, au soleil ou près d'un feu par exemple.

## Pour les utilisateurs au Canada

L'utilisation doit répondre aux deux conditions suivantes : (1) ce matériel ne doit pas provoquer de brouillage et (2) il doit accepter tout brouillage, même celui qui est susceptible d'affecter son fonctionnement.

La mention « IC: » devant le numéro de certification/ homologation signifie uniquement que les spécifications techniques d'Industrie Canada sont remplies.

R-13\_FRXXX To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.XXX

R-14\_FRXXX This device has been designed to operate with an antenna having a maximum gain of 0 dB.

Antenna having a higher gain is strictly prohibited per regulations of Industry Canada.

The required antenna impedance is 50 ohms.XXX

## Remarque à l'intention des utilisateurs au Canada:

L'usage des appareils sans fil Sony est réglementé par l'Industrie Canada comme décrit dans leur Cahier des Normes Radioélectriques CNR-123.

Une licence est normalement requise.

Le bureau de l'Industrie Canada doit être contacté. Lorsque le fonctionnement de l'appareil respecte les limites de la bande de radiodiffusion, la licence est accordée sur la base d'une non-interférence, non-protection pour les signaux de radiodiffusion.

## WARNUNG

Akkus dürfen keinesfalls übermäßiger Wärmeeinwirkung ausgesetzt werden, wie z.B. Sonneneinstrahlung, Feuer o. ä.

## AVVERTENZA

Le batterie non devono essere esposte a fonti di calore eccessivo come luce solare diretta, fuoco, ecc.

## ADVERTENCIA

No se deben exponer las baterías a una fuente de calor excesivo como la luz del sol, el fuego o similar.



U.K.	470 - 862 MHz
Germany	470 - 606 MHz, 614 - 862 MHz
Norway	800 - 820 MHz
Luxembourg	470 - 862 MHz
Belgium	470 - 862 MHz
Denmark	800.100 - 819.900 MHz
France	470 - 830 MHz
Italy	470 - 854 MHz
Sweden	470 - 862 MHz
Switzerland	790 - 862 MHz
Finland	790.100 - 821.900 MHz, 854 - 862 MHz
Iceland	470 - 862 MHz
Turkey	470 - 862 MHz

## For the customers in Europe

Hereby, Sony Corporation, declares that this DWT-B01 is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC.

For details, please access the following URL: <http://www.compliance.sony.de/>

This product is intended to be used in the following countries : United Kingdom, Germany, Norway, Luxembourg, Belgium, Denmark, France, Italy, Sweden, Switzerland, Finland, Iceland, and Turkey.

## Note for the users in Spain

Carrier frequencies only allowed 2421, 2449, 2477MHz in Spain.

## Pour les clients en Europe

Par la présente Sony Corporation déclare que l'appareil DWT-B01 est conforme aux

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# Using the CD-ROM manual

The supplied CD-ROM includes Operating Instructions for the DWT-B01 (English, French, German, Italian, and Spanish versions) and the frequency lists (English and Japanese versions).

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## Preparations

The following program must be installed on your computer in order to read the Operating Instructions contained on the CD-ROM.

- Adobe Reader Version 6.0 or higher

If Adobe Reader is not installed, you can download it from the following URL:  
<http://www.adobe.com/>

Adobe and Adobe Reader are trademarks of Adobe Systems Incorporated in the United States and/or other countries.

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## Reading the CD-ROM manual

To read the operation manuals contained on the CD-ROM, do the following.

- 1** Insert the CD-ROM in your CD-ROM drive.

A cover page appears automatically in your browser.

If it does not appear automatically in the browser, double-click on the index.htm file on the CD-ROM.

- 2** Select and click on the Operating Instructions that you want to read.

This opens the PDF file of the operation manuals.

The files may not be displayed properly, depending on the version of Acrobat Reader. In such a case, install the latest version you can download from the URL mentioned in “Preparations” above.

### Note

If you have lost or damaged the CD-ROM, you can purchase a new one to replace it. Contact your Sony service representative.

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## Reading the Sony Digital Wireless Microphone System Frequency Lists

The frequency lists for US and European models are contained on the CD-ROM. To read the frequency lists, do the following:

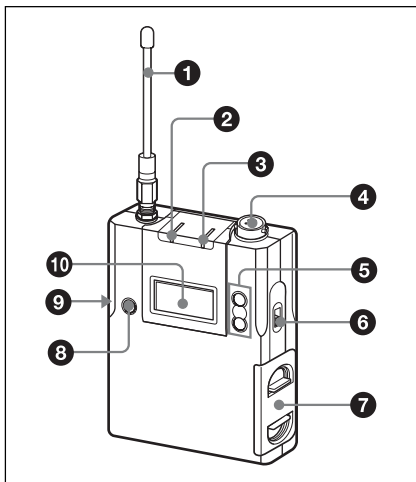
- 1** Insert the CD-ROM in your CD-ROM drive.

A cover page appears automatically in your browser.

- 2** Select and click on the frequency list that you want to read.

This opens the PDF file of the frequency list.

# Parts identification



**1 Antenna**

**2 AF (audio input level) /PEAK indicator**

Lights up green when the signal input is stronger than the reference level.  
Lights up red when the signal input is 3 dB below the level at which distortion begins.

**3 POWER indicator**

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

**4 Audio input connector (SMC9-4S)**

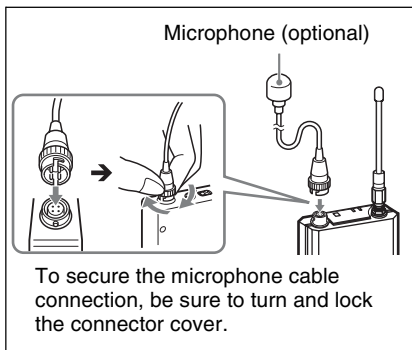
Connects the output plug from the optional lavalier microphone.

This connector also accepts the input from another wired microphone connected through the supplied microphone cable, or the audio output from a mixer, etc.



1:+5V (OUTPUT)  
2:Hot  
3:Cold  
4:GND

## To connect a microphone



**5 + or - button**

Selects functions or values shown on the display.  
Holding down the - button while switching on the transmitter activates the pairing operation for the wireless remote control function.

**6 POWER switch**

Turns the transmitter ON or OFF.

**7 Battery compartment**

Accommodates two LR6 (size AA) alkaline batteries.

*For details on how to insert the batteries, see "Power supply" on page 14.*

**8 SET button**

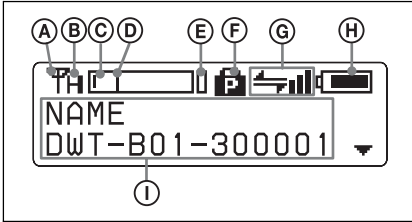
Adjusts displayed function settings and enters the value.  
Holding down the SET button while switching on the power turns the transmitter on without sending a signal.

**9 USB connector (Micro USB)**

Use this connector to connect an optional USB keyboard to carry out menu functions

using key operations. By connecting the digital wireless receiver to this connector with the supplied USB cable, you can exchange the encryption key for encrypted transmission function.

## 10 Display section



### A RF transmission indication

Indicates the current transmission status.  
 ▮: Currently transmitting  
 —: Transmission stopped

### B 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 50 mW

**M:** transmitting at 10 mW

**L:** transmitting at 1 mW

### C Audio input level meter

Indicates the input signal level of the audio input connector

### D Reference level gage

Indicates the reference input level. When the attenuation is 0 dB with the input level set to “mic”, -58 dBu (-60 dBV) is indicated. When the line level is set, +4 dBu is indicated.

### E Peak indicator

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

### F Power switch lock indicator

Indicates that the power switch is locked, preventing the transmitter from being accidentally turned off or on.

*For details, see “Locking the power switch (POWER SW LOCK)” on page 24.*

### G Wireless remote control 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.

### H Battery indication

Shows the battery condition.

*For details, see “Battery indication” on page 14.*

### I Menu display section

The status of 15 different functions are displayed here. To select the function, press the + or – button repeatedly.

*For details, See “Setting menus” on page 21.*

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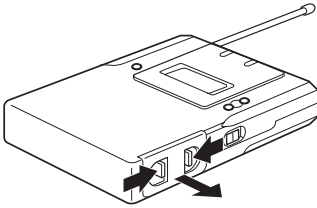
# Power supply

The transmitter can operate on two LR6 (size AA) alkaline batteries continuously for about 3.5 hours at 25°C (77°F).

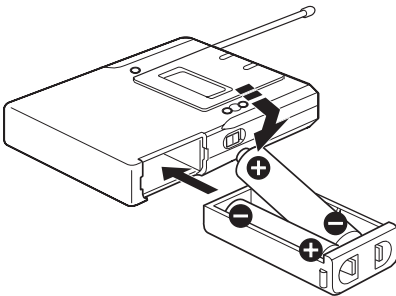
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## Installing the batteries

- 1 Squeeze the battery-holder tabs inward (in the direction of the arrows) and slide out the battery holder.



- 2 Insert new batteries, making sure the polarities are correct, and then return the battery holder to its original position.



## Battery indication

The power status is indicated by eight level indications.

Replace both batteries when the battery indication starts to flash.

Be sure to check the expiration date printed date on the new batteries before using them.

### Note

The indication is based on the use of new LR6 (size AA) Sony Alkaline batteries. 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 the transmitter for a long period of time, it is recommended that you replace the batteries with brand new ones.

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# Important notes on operation

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## Notes on using the transmitter

- 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.
- To avoid degradation of the signal-to-noise ratio, do not use the transmitter in noisy places or in locations subject to vibration, such as the following:
  - 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 tunerKeep the transmitter as far from such equipment as possible or use buffering material.

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## 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.

### **To prevent electromagnetic interference from portable communication devices**

The use of portable telephones and other communication devices near the DWT-B01 may result in malfunction and interference with audio signals. It is recommended that portable communication devices near the DWT-B01 be turned off.



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# Specifications

## Transmitting section

Oscillator type

Crystal-controlled PLL synthesizer

Carrier frequencies

US models:

U3040: 566 to 607 MHz (TV-30 to TV-36 channels);  
615 to 638 MHz (TV-38 to TV-41 channels)

U4250: 638 to 698 MHz (TV-42 to TV-51 channels)

European model:

CE6267: 798 to 822 MHz (TV-62 to TV-64 channels);  
838 to 862 MHz (TV-67 to TV-69 channels)

Channel step

US models:

U3040/U4250: 125 kHz

European model:

CE6267: 25 kHz

RF power output

1 mW/10 mW/50 mW (e.r.p)  
selectable

Antenna type

$\lambda/4$  flexible wire

Occupied RF bandwidth

192 kHz or less

Audio delay

1.5 ms

Transmission frequency stability level

$\pm 6.5$  ppm

Type of emission

G1E or G1D

Modulation method

$\pi/4$  Shift QPSK

MIC:  $-22$  dBu (with 0 dB attenuator)

LINE:  $+24$  dBu

Audio attenuator adjustment range (pad)

0 to 48 dB (3dB steps, MIC input mode only)

## Audio section

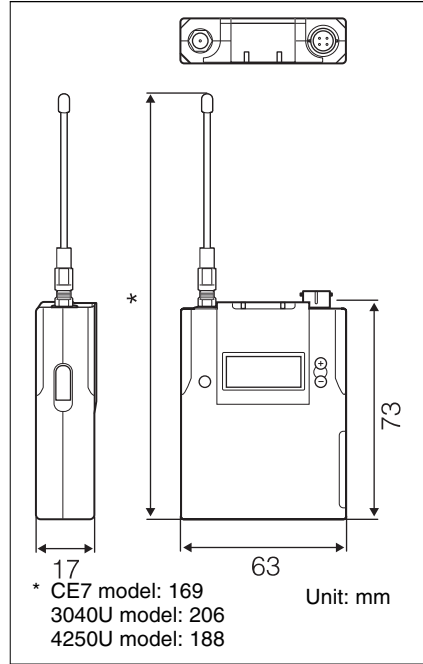
Maximum input level

Microphone input connector  
 Sony 4-pin (SMC9-4S) (female) (1)  
 Input impedance  
 4.7 kohms or more, 0 dBu = 0.775  
 V  
 Frequency response  
 20 Hz to 22 kHz  
 T.H.D 0.03% or less  
 Type of emission  
 G1E or G1D  
 Dynamic range  
 106 dB or more

## General

Operating voltage  
 3 V DC, with two LR6 (AA)  
 alkaline batteries  
 Battery life  
 Continuous operating time  
 3.5 hours (at 25 °C (77 °F), 10-mW  
 output using Sony LR6 (AA)-  
 size alkaline batteries with the  
 wireless remote control  
 function off and the display set  
 to AUTO OFF)  
 Operating temperature  
 0 to 50 °C (32 to 122 °F)  
 Storage temperature  
 -20 to +60 °C (-4 to +140 °F)  
 Wireless remote control  
 2.4-GHz IEEE802.15.4 compliant

## Dimensions



Approx. 63 x 73 x 17 mm  
 (2 1/2 x 2 7/8 x 11/16 inches) (W  
 x H x D) excluding projection

Mass Approx. 125 g (4 oz) including  
 batteries

## Supplied accessories

Spare battery case (1)  
 Soft case (1)  
 Microphone cable (4-pin to XLR-  
 type 3-pin) (1)  
 USB adapter cable (1)  
 USB cable (1)  
 Carrying case (1)  
 Operating Instructions (1)  
 CD-ROM (Operating Instructions  
 and Sony Digital Wireless  
 Microphone System Frequency  
 Lists included) (1)

Optional accessories

ECM-/77BC/9X lavalier  
microphones

Design and specifications are subject to  
change without notice.

**Note**

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.

**This model has an RF module of the FCC/IC approval built-in.**

**BUILT IN MODULE RM-215**

**FCC ID: AK8RM215**

**IC: 409B-RM215**