

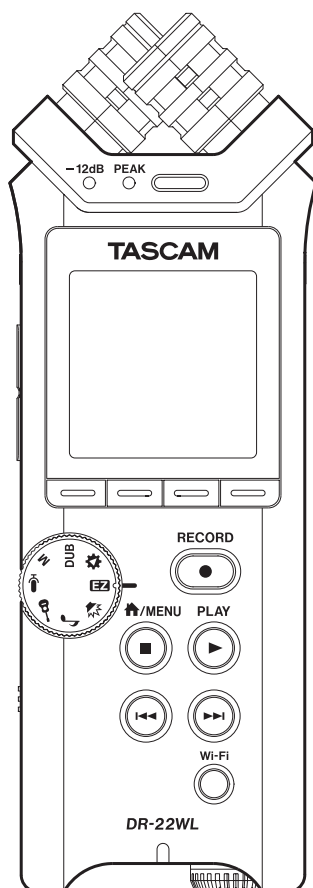
TASCAM

D01244520C

DR-22WL

Linear PCM Recorder

REFERENCE MANUAL



Contents

1 – Introduction	4
Features	4
Conventions used in this manual	4
About microSD cards	4
Precautions	4
2 – Names and functions of parts	5
Top panel	5
Front panel	5
Left side panel	6
Right side panel	6
Bottom panel	6
Home Screen	7
Recording Screen	7
Menu item list	9
Using menus	9
Basic operations	9
3 – Preparation	10
Powering the unit	10
Power sources	10
Using AA size batteries	10
Using an AC adapter (sold separately)	10
Using USB bus power	10
Turning the power on and off (standby mode)	11
Starting up the unit	11
Shutting down (standby mode)	11
Resume function	11
Setting the date/time	11
Inserting and removing microSD cards	12
Inserting the SD card	12
Removing the card	12
Setup the microSD card for use	12
Turning the built-in speaker on/off	12
Connecting a monitor device	13
Adjusting the playback volume	13
Input settings	14
Recording with the built-in microphone	14
Recording with an external microphone (MIC IN)	14
Recording from an external device (LINE IN)	14
4 – Recording	15
Selecting the recording mode	15
Recording	15
Scene recording mode	15
Selecting a folder to store files	16
Recording format settings (FORMAT/SAMPLE/TYPE)	16
Adjusting the input level	17
Setting the peak hold function	17
Setting the Low Cut Filter	18
Using the level control function	18

Switching files during recording (track increment)	19
Manual track increment during recording	19
Automatic track increment at specified time	19
Automatic recording (AUTO REC)	19
Start recording from slightly before pressing RECORD (PRE REC)	20
Using the SELF TIMER for recording	20
Recording in two formats (DUAL FORMAT REC)	21
Mixing the input sound to the playback for recording (overdubbing)	21
Select files for overdubbing with an input sound	21
Start overdubbing	21
Create cue marks during recording	22
Manual cue marking during recording	22
Add cue marks automatically to recording	22
Moving to the cue mark position	23
Recording duration	24

5 – Using files and folders (browse screen).25

Navigating in the browse screen	25
Icon display on the browse screen	25
File operations	25
Folder operations	26
Moving up a folder level	26
Creating a new folder	26

6 – Playback.....27

Playback	27
Pausing/stopping playback	27
Rewinding and fast-forwarding (search)	27
Selecting a playback file (skip)	27
Special playback (practice mode)	27
Loop playback	27
Changing the playback speed (VSA)	28
Changing keys	28

7– Useful functions29

Dividing a file	29
Dividing the selected file (DIVIDE)	29
Dividing the selected file automatically (AUTO DIVIDE)	29
Reverb function	30
Setting the reverb function	30
Reverb pre-set list	30
Metronome function (compatible with V1.10)	30

8 – Connecting with a computer.....32

Transferring files to a computer	32
Transferring files from a computer	32
Disconnecting from a computer	32

9 – Using Wi-Fi.....	33
Connect the DR-22WL and smart phone via Wi-Fi	33
How to download and install the exclusive application (TASCAM DR CONTROL).....	33
Connecting the DR-22WL to a smart phone via Wi-Fi for the first time.....	33
Connecting the DR-22WL to a smart phone via Wi-Fi (from second time onward).....	34
Using a smart phone to remote control the DR-22WL	35
File transfer from the DR-22WL to a smart phone	35
Connecting this unit to a computer by Wi-Fi.....	35
Downloading and installing the TASCAM DR FILE TRANSFER software.....	35
Connecting this unit to a computer by Wi-Fi for the first time	35
Connecting this unit to a computer by Wi-Fi after the first time	36
Transferring files from the unit to a computer	36
Changing password	37
10 – Settings and Information	38
View information (INFORMATION).....	38
File information screen (FILE INFO).....	38
Card information screen (CARD INFO).....	38
System information screen (VERSION)	38
System Settings (SETUP).....	39
Auto power save function setting	39
Backlight setting.....	39
Adjusting the display contrast.....	39
Battery type settings	39
Restoring the DR-22WL to factory settings	39
Formatting the microSD card	39
Setting the file name type	40
11 – Messages.....	41
12 – Troubleshooting.....	42
13 – Specifications	43
Rating	43
Input/output ratings.....	43
Analog audio input and output ratings.....	43
Control input/output ratings	43
Audio performance.....	43
Requirements for connected computers.....	43
Wi-Fi	43
General	44
Dimensional drawings	44

1 – Introduction

Features

- Compact audio recorder that uses microSD/microSDHC/microSDXC cards as recording media
- Built-in with high performance directional stereo microphones in XY positions
- Built-in Wi-Fi feature to use smartphone as remote control, transfer files from the PCM recorder, and playback audio
- Scene dial allows for easy recording
- Two overdubbing modes for sound dubbing
- Practice mode with features useful for instrument practice, such as I/O loop for repeated playback, VSA to adjust playback speed without changing the pitch, key-change and fine-tune to adjust the pitch
- 44.1/48/96 kHz, 16/24-bit, linear PCM (WAV/BWF format) recording possible
- 32–320 kbps MP3 format recording possible (compatible with ID3 tag v2.4)
- Overdubbing allows playback and input signals to be mixed and recorded together as a new file
- Built-in 0.3 W monaural output speaker
- Built-in reverb function can be used during recording and playback
- Automatic recording function starts recording automatically when a set sound input level is detected
- Track incrementing function allows a recording to be split by creating a new file when desired
- Pre-recording function allows the unit to record the 2 seconds of sound before recording is activated
- Peak reduction function is available to reduce the level automatically in case of excessively large input
- Limiter function is available to reduce the level automatically in case of excessively large input
- Low cut filter reduces low-frequency noise
- Self-timer function to start recording after a set period of time
- DIVIDE function allows files to be split where desired (only for WAV files)
- MARK function convenient for moving to specific locations
- File name format can be set to use a user-defined word or the date
- Resume function memorizes the playback position before the unit is turned off
- 3.5mm (1/8") jack for external stereo microphone input (provides plug-in power) or external stereo line input
- 3.5mm (1/8") line/headphones output jack
- 128 x 128 pixel LCD with backlight
- Micro-B type USB 2.0 port
- Operates on 2 AA batteries, AC adapter (sold separately: TASCAM PS-P515U), or USB bus power
- Tripod attachment screw-hole built into unit
- USB cable included

This product has a Blackfin® 16/32-bit embedded processor made by Analog Devices, Inc. This processor controls digital signal processing. Inclusion of this Blackfin® processor in the product increases its performance and reduces its power consumption.

Conventions used in this manual

The following conventions are used in this manual:

- Buttons, connectors and other physical parts of this unit are written using a bold font like this: **MENU** button.
- When we show messages, for example, that appears on the unit's display, the typeface looks like this: INPUT.
- microSD, microSDHC and microSDXC memory cards are called "microSD cards".
- Information shown on the computer display is written like this "OK".
- The selected folder is indicated as the "current folder".
- Computer or portable audio devices that are connected via Wi-Fi with the DR-22WL are indicated as the "Wi-Fi device".
- Additional information is provided as necessary in tips, notes and cautions

TIP

These are tips about how to use the unit.

NOTE

These include additional explanations and special cases.

CAUTION

Failure to follow these instructions could result in injury, equipment damage or lost data, for example.

About microSD cards

The DR-22WL uses microSD cards for recording and playback. Memory cards that you can use with the DR-22WL are microSD cards of 64 MB to 2 GB, microSDHC cards of 4GB to 32GB, and microSDXC cards of 48GB to 128GB.

Please refer to the TEAC Global Site (<http://teac-global.com>) to learn more on the list of compatible SD cards, or contact the TASCAM customer support service.

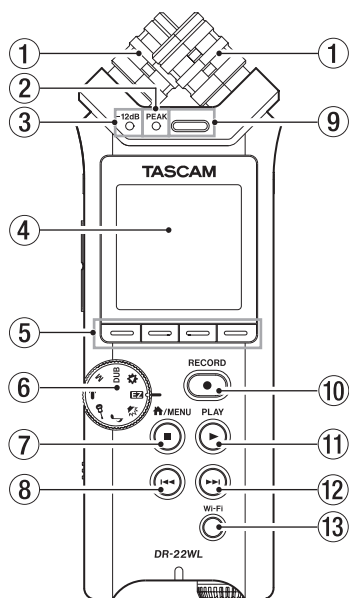
Precautions

microSD cards are precision devices. Please refer to the below when using memory cards to prevent memory and/or card damage:

- Do not leave a memory card in extremely hot or cold places
- Do not leave a memory card in extremely humid places
- Do not spill any liquids on the memory card
- Do not bend the card or subject it to any excessive force
- Do not subject the card to any physical shock
- Do not remove the card while the unit is accessing data, or recording, playing, or making data transfer
- Always store the memory card in a case

2 – Names and functions of parts

Top panel



- ① **Built-in stereo microphone**
This is an XY directional stereo electret condenser microphone.
The built-in microphone becomes inactive when an external microphone or external input is connected to the **MIC/EXT IN** jack on the right-side panel.
- ② **PEAK indicator**
This will light in red immediately before the input noise increases to a distortion level (-2dB).
- ③ **-12dB indicator**
This will light in green when the input noise exceeds the -12dB level.
- ④ **Display**
Displays a variety of information.
- ⑤ **Function buttons**
Function of individual buttons changes according to what is shown on display.
The displayed icon at the bottom of the screen indicates the current function.

NOTE

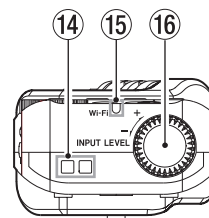
For your convenience, this manual indicates the four function buttons as **F1**, **F2**, **F3**, and **F4** starting from the left.

- ⑥ **Scene dial**
Use this dial to change the unit setting according to the scene. (See "Scene recording mode" on page 15.)
- ⑦ **⏮/MENU/⏭ button**
To display the MENU screen, press this button in home screen.
To return to the home screen, press this button in any screen display.
Press this button during recording to stop recording. Press this button during playback or recording standby to pause or stop (depending on the position in the file).
- ⑧ **⏮ Fast rewind button**
Press this button while in play or stop mode to return to the beginning of a track.
Press and hold this button to search backwards.

When the **MARK SKIP MODE** is set to **ON** on the **TOOL** menu page, press this button while pressing and holding the **F2** button to move to the previous mark. (See "Moving to the cue mark position" on page 23.)

- ⑨ **Built-in mono speaker**
Use this built-in speaker to listen to recordings.
No sound will play when:
 - In recording standby
 - Headphone is connected
 - In recording mode
 - Speaker output setting is turned off
- ⑩ **RECORD button/RECORD indicator**
When you press this button during stop mode, the **RECORD** indicator (around **RECORD** button) flashes and the DR-22WL will go into recording standby mode.
When you press this button during the recording standby mode, the **RECORD** indicator lights and the DR-22WL starts recording.
When you press this button during recording, the **RECORD** indicator flashes.
When the scene dial is set to **E2**, press when stopped to start recording.
- ⑪ **PLAY button**
When the home screen is open and playback is stopped, press this button to start playback.
When you select a file or folder in **BROWSE** screen and press the **PLAY** button, the unit will return to the home screen and start playing the selected file or folder from the beginning.
- ⑫ **▶▶ Fast forward button**
Press this button in playback or stop mode to skip to the next track.
Press and hold this button for fast forward search.
When the **MARK SKIP MODE** is set to **ON** on the **TOOL** menu page, press this button while pressing and holding the **F2** button to move to the next mark. (See "Moving to the cue mark position" on page 23.)
- ⑬ **Wi-Fi button**
Use this button to turn on/off the Wi-Fi function.

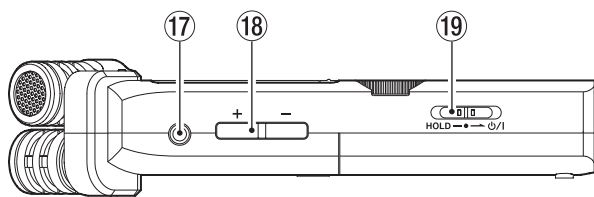
Front panel



- ⑭ **Strap holder**
A strap can be attached to this holder.
- ⑮ **Wi-Fi indicator**
This indicator lights while the Wi-Fi module is in access.
- ⑯ **INPUT LEVEL volume**
Turn this dial to adjust the input level.
The input level setting will pop-up on display when making an adjustment.

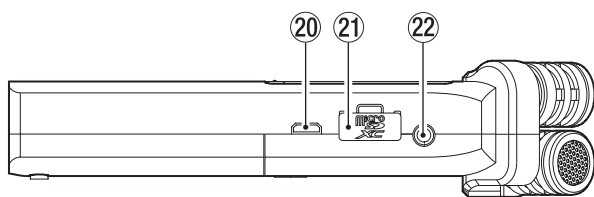
2 – Names and functions of parts

Left side panel



- 17 Ω /LINE OUT jack**
A headphone or a line input jack of an external device (via stereo mini-jack cable) can be connected to this jack.
- 18 OUTPUT LEVEL (+/-) buttons**
These buttons adjust the output sound level of the built-in speaker or the Ω /LINE OUT jack. Volume level will pop-up on the bottom of the display while making adjustment.
- 19 HOLD/ ϕ / I switch**
To turn the power on/off, slide and hold the switch towards the ϕ / I icon. When you slide the switch towards the **HOLD** side, all the functions of the buttons are locked.

Right side panel



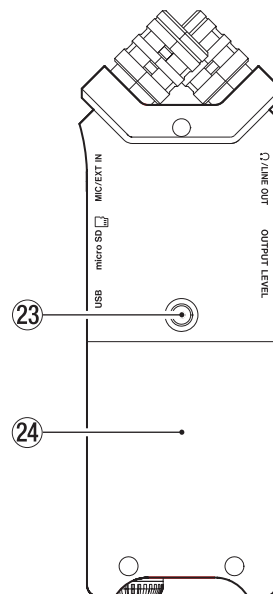
- 20 USB port**
Use the supplied USB cable to connect the DR-22WL with a computer. (See "8 – Connecting with a computer" on page 32.) Power can be supplied by using this USB cable or from an AC adapter (sold separately: PS-P515U).

CAUTION

Connect the DR-22WL directly be connected directly with the computer, not through a USB hub.

- 21 microSD card slot**
Insert or remove a microSD card.
- 22 MIC/EXT IN jack**
Connect an external stereo microphone or external input to this jack. It is compatible with plug-in power. The built-in microphone is disable when an external microphone is connected to the **MIC/EXT IN** jack.

Bottom panel

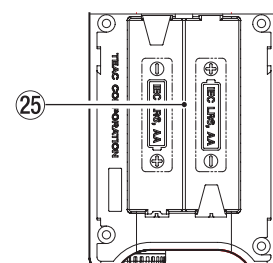


- 23 Tripod attachment screw-hole (1/4 inch)**
A tripod can be attached to the DR-22WL.

CAUTION

- Ensure the tripod or microphone stand screws are securely fastened to prevent the unit from falling off.
- When attaching this unit to a tripod or microphone stand, ensure to place it on a level surface.

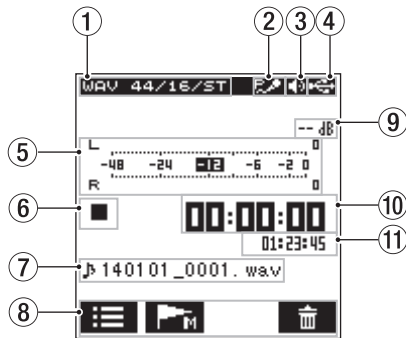
- 24 Battery compartment cover**



- 25 Battery case**
Insert batteries (two AA size) in this compartment to power the unit. (See "Using AA size batteries" on page 10.)

2 – Names and functions of parts

Home Screen



① Playback file type message

Format type, sampling rate, bit rate, stereo/mono setting of the playback file are shown.

② Plug-in power on/off message

The plug-in power status (on/off) is displayed in icon view. (See "Recording with an external microphone (MIC IN)" on page 14.)

Icon	On/off status
	Plug-in power function off
	Plug-in power function on

③ Monitor output message

: output from built-in speaker

: output from headphone

④ Power supply status message

When power is supplied from the batteries, the current battery level is displayed in bars (, ,).

When the battery level is low, the will flash and the power will be switched off (standby mode).

The will be displayed when using either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power.

NOTE

When attempting recording or other operations that consume large amount of power, a warning message of Battery Low may pop-up.

⑤ Level meter

Displays the level of the playback sound.

⑥ Recorder status message

The recording status is indicated in the following icons:

Indicator	Meaning
	Stop
	Pause
	Playback
	Fast forward
	Rewind
	Skip forward to the beginning of the next file
	Skip backward to the beginning of either the current or preceding file

⑦ File name

The name or tag information of the file currently in play is displayed.

The ID3 tag information is displayed instead when included in the MP3 file.

NOTE

ID3 tag information contains titles and artist names, which can be stored in MP3 files.

⑧ Function buttons status message

Below icons are displayed while in stop or playback mode.

Icon	Function
	Display browse screen
	Mark function (set/clear)
	Delete file

⑨ Peak decibel (dB) message

Displays the maximum playback level in decibel reading per set amount of time.

⑩ Elapsed time message

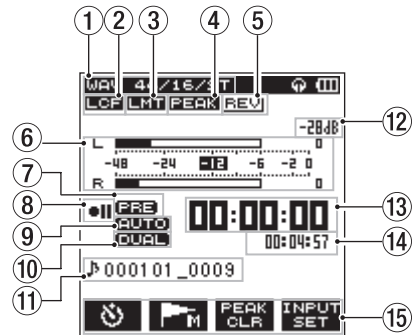
Displays the elapsed time (hours: minutes: seconds) of the current file.

⑪ Remaining time message

Displays the remaining time (hours: minutes: seconds) of the current file.

Recording Screen

The below recording screen is displayed in recording or recording standby mode.



① Recording mode message

Displays the format, sampling rate, and stereo/mono of the recording file. (See "Recording format settings (FORMAT/SAMPLE/TYPE)" on page 16.)

② Low-cut filter on/off status message

Displays the low-cut filter on/off status.

The message is highlighted when the low-cut filter is set at 40Hz / 80Hz / 120Hz / 220Hz.

Blank: low-cut filter is off

: low-cut filter is on

③ Limiter function on/off status message

Displays the limiter function on/off status. (See "Setting the Low Cut Filter" on page 18.)

Blank: limiter function is off

: limiter function is on

④ Peak reduction function on/off status message

Displays the peak reduction on/off status. (See "Using the level control function" on page 18.)



Blank: peak reduction function is off

: peak reduction function is on

2 – Names and functions of parts

⑤ Reverb on/off status message

Displays the reverb on/off status.

Icon	On/off status
Blank	Reverb is off
	Reverb is on (Reverb sound added to input sound)
	Reverb is on (Reverb sound added to output sound)

⑥ Level meter

Displays the input sound level.

When the AUTO REC function is turned on, the level meter will display sounds within the level that activates the AUTO REC function.

⑦ Prerecording function on/off status





Displays the Prerecording function on/off status. (See “Start recording from slightly before pressing RECORD (PRE REC)” on page 20.)

Blank: Prerecording is off

: Prerecording function is on

⑧ Recording status message

The recording status is indicated in the following icons:

Indicator	Meaning
	Recording standby or recording pause mode
	In recording mode
	Begins recording in five seconds
	Begins recording in ten seconds

⑨ Automatic recording function on/off status

Displays the Automatic recording function on/off status. (See “Automatic recording (AUTO REC)” on page 19.)

Blank: Automatic recording off

: Automatic recording function on

NOTE


 is displayed when the scene mode is  or .

In this case, level control is automatic.

⑩ Dual format recording function on/off status

This shows whether dual format recording is on or off.

Blank: dual format recording function off


: dual format recording function on

⑪ File name message

Displays the file name automatically assigned to the recording file.

⑫ Peak decibel (dB) message

Displays the peak input level in decibel reading.

 will be displayed when recording is above the peak level (–2dB or more).

⑬ Elapsed recording time






Displays the elapsed recording time of a recorded file (hours: minutes: seconds).

⑭ Remaining recording time

Displays the remaining recording time for the microSD card (hours: minutes: seconds).

⑮ Function buttons message

The following icons will be displayed while in recording standby, recording, or recording pause mode:

Icon	Function
	Self-timer function
	Mark function (set mark)
	Display input setting screen
	Activate the track increment
	Clear peak hold

2 – Names and functions of parts

Menu item list

Press the **HOME/MENU/STOP** button to display the menu screen.



The menu screen consists of four pages each separated by types of menu items.

REC: make basic recording settings

TOOL: make function settings useful for playback files

SETUP: make configuration settings for the DR-22WL

INFO: displays file and media information

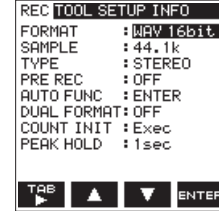
Menu items are as follows:

Menu item	Function	Ref. page
REC	Make recording settings	
	FORMAT	page 16
	SAMPLE	
	TYPE	
	PRE REC	page 20
	AUTO FUNC	page 19
	DUAL FORMAT	page 21
TOOL	COUNT INIT	page 40
	PEAK HOLD	page 17
	Make settings for various functions.	
	MARK SKIP MODE	page 23
	DIVIDE	page 29
	AUTO DIVIDE	page 29
	REVERB	page 30
SETUP	SPEAKER	page 12
	METRONOME	page 30
	Make various settings.	
	MEDIA FORMAT	page 39
	BACKLIGHT	page 39
	CONTRAST	page 39
	Wi-Fi	page 37
	AUTO PWR SAVE	page 39
	BATTERY TYPE	page 39
	DATE/TIME	page 11
INFO	FILE NAME	page 40
	INITIALIZE	page 39
	View various types of information.	
	FILE INFO	page 38
	CARD INFO	
	VERSION	

Using menus

The following explains the menus, using the display contrast setting as an example.

1. Press the **HOME/MENU/STOP** button to display the menu screen.



2. Press the **F1** **TAB** button to display various menu pages.



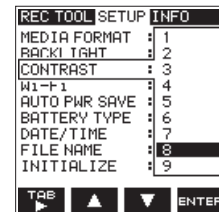
SETUP page is selected

3. Use the **F2** **▲** and **F3** **▼** buttons to select (highlight) the item you want to set.



CONTRAST item is selected

4. Press the **F4** **ENTER** button to open the parameter display.



5. Use the **F2** **▲** and **F3** **▼** buttons to change settings, and press the **F4** **ENTER** button to finalize the setting.
6. Repeat the 2. to 5. steps to set each items.
7. Press the **HOME/MENU/STOP** button to return to the home screen.

Basic operations

Use the following buttons to operate the various screens.

HOME/MENU/STOP button

The menu screen will pop up when you press this button in stop or pause mode.

To return to the home screen, press this button in any screen display.

3 – Preparation

Powering the unit

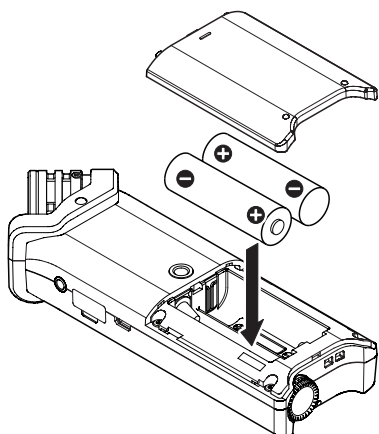
Power sources

The DR-22WL operates on two AA batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately), or the supplied USB cable (USB bus power).

Use either alkaline batteries or Ni-MH batteries.

Using AA size batteries

Remove the battery compartment cover on the back of the unit, insert two AA batteries with the ⊕ and ⊖ ends in the right position, and close the cover.



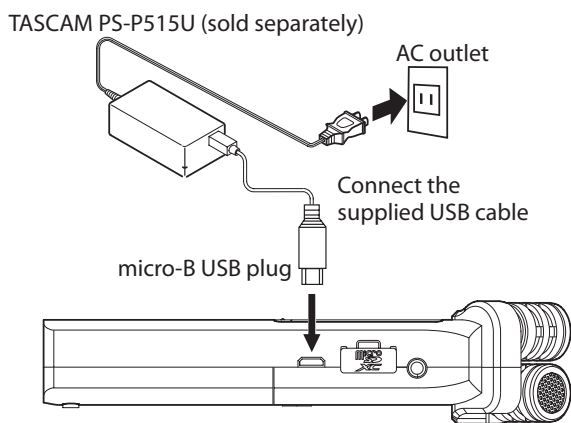
Select the same type of batteries to get an accurate reading of the remaining battery power and required minimum power for operation. (See “Battery type settings” on page 39.)

CAUTION

- Do not use Manganese dry cell batteries.
- Ni-MH batteries will not be recharged with this unit; use a separate battery recharger instead.
- The supplied alkaline batteries are for testing and may not last long.

Using an AC adapter (sold separately)

Use the supplied USB cable to connect the USB port of the unit and the dedicated AC adapter (TASCAM PS-P515U; sold separately) as illustrated below.



NOTE

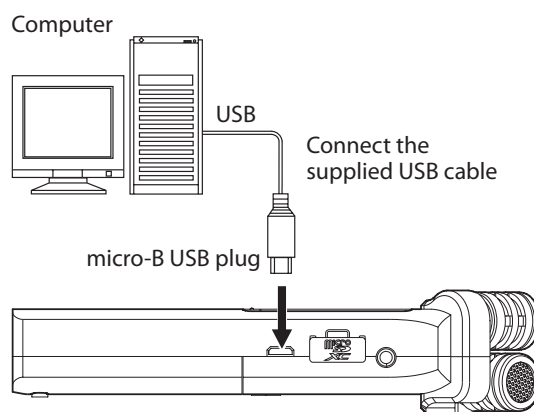
When both batteries and the AC adapter are attached to the unit, power will be supplied from the AC adapter.

CAUTION

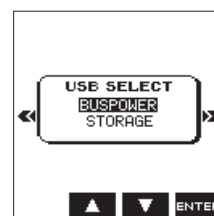
- Use only the dedicated AC adapter (TASCAM PS-P515U; sold separately). The use of another adapter may cause malfunction, fire or electric shock.
- Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.

Using USB bus power

Use the supplied USB cable to connect the unit and the computer as illustrated below.



When you connect a USB cable while the unit power is on, or turn on the power after making a connection, the USB SELECT screen will pop up, prompting the user to select either to operate the unit with USB bus power or make a USB connection with the computer.



Use the **F2** ▲ button and the **F3** ▼ button to select (highlight) the **BUS POWER**, then press **F4** ENTER button to supply power from the USB port and display the home screen.

NOTE

Power is supplied from the USB port when USB cable is connected to the unit inserted with batteries (USB bus power prioritized).

CAUTION

- Depending on the USB bus power specifications of the computer, the DR-22WL may not operate with a USB connection. If this occurs, please use the dedicated AC adapter (TASCAM PS-P515U; sold separately) instead.
- This unit is not compatible with the computer's power-save mode or sleep-mode. Please turn off these modes when operating the unit from the computer's USB bus power.

Turning the power on and off (standby mode)

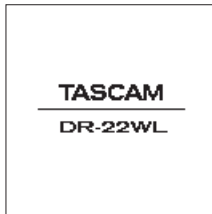
CAUTION

- When you turn the power switch off while supplying power from the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power connected to a computer, the unit will go to a standby mode.
- Before turning the power switch on and off, turn the volume down for the sound system connected to the unit.
- Do not wear headphones when turning the power switch on and off (standby mode); the noise may cause damage to your ears and/or headphones.

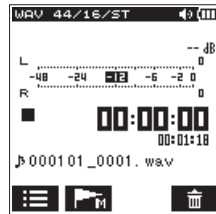
Starting up the unit

In power off mode, slide and hold the **HOLD/⏻/I** switch (located at left-side of the panel) toward the **⏻/I** direction, and release the switch when the TASCAM DR-22WL (start-up screen) appears.

The DR-22WL starts up and the home screen is displayed.



Start-up screen



Home screen

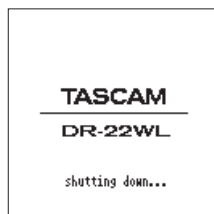
CAUTION

When turn the power on for the first time (or when the built-in clock is reset due to no battery power), the **DATE/TIME** screen will appear before the home screen to set date/time. (See "Setting the date/time" on page 11.)

Shutting down (standby mode)

In power on mode, slide and hold the **HOLD/⏻/I** switch (located at left-side of the panel) toward the **⏻/I** direction, and release the switch when the TASCAM DR-22WL shutting down appears.

The power turns off when the shut-down process is completed.



CAUTION

Always use the **HOLD/⏻/I** switch to turn the power off. In power on mode, all recorded data and settings will be lost if you remove the batteries, disconnect the power cable of the dedicated AC adapter (TASCAM PS-P515U; sold separately), or plug-off the USB cable for USB bus power. Any lost data and/or settings cannot be restored.

Resume function

The DR-22WL is equipped with a resume function to locate the previous position (or time) when the power was turned off. Turn the power on and press the **PLAY** button to playback from the previous file position (time) when the power was turned off.

NOTE

The position is recorded in the microSD card. The resume function does not work if the microSD card is replaced or formatted.

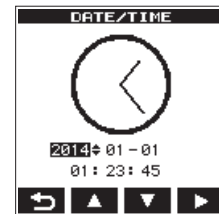
Setting the date/time

The DR-22WL uses its internal clock to record the date and time to the recorded files.

1. Press the **⏠/MENU/⏏** button to display the menu screen.
2. Press the **F1** **⏏** button to display the **SETUP** page.
3. Use both the **F2** **⏶** and **F3** **⏷** buttons to select (highlight) the **DATE/TIME** item parameters.



4. Press the **F4** **ENTER** button to display the **DATE/TIME** screen.



5. Press the **F4** **ENTER** button to move the cursor (highlighted area), and use the **F2** **⏶** and **F3** **⏷** buttons to change settings.
6. Press the **F1** **⏏** button to finalize the settings. The screen will return to the **SETUP** page.

NOTE

The file name will include the set date/time. (See "Setting the file name type" on page 40.)

CAUTION

Without the use of the batteries, the dedicated AC adapter (TASCAM PS-P515U; sold separately) or USB bus power, the date and time setting can be made only for a few minutes. When using batteries, we recommend to replace them before they are completely drained.

3 – Preparation

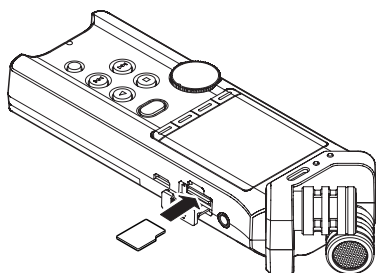
Inserting and removing microSD cards

Inserting the SD card

NOTE

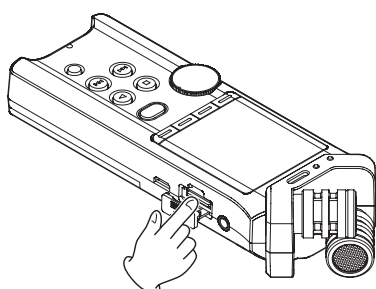
A microSD card is already installed at the time of purchase. You can immediately start recording and playing tracks without the need to remove and insert the microSD card.

1. Open the microSD card slot cover on the right side panel.
2. Insert the microSD Card into the slot (as illustrated below) until it clicks into place.



Removing the card

1. Open the microSD card slot cover.
2. Gently press and release the microSD card; the card should pop out.



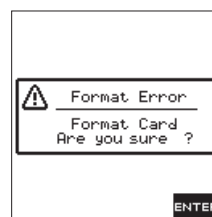
CAUTION

- Do not remove the microSD card while the unit is accessing data for recording, playback, etc.
- Do not remove the microSD card from the unit when connected via USB cable to a computer.
- The DR-22WL is compatible with microSD/microSDHC/microSDXC standards.
- Please refer to the TEAC Global Site (<http://teac-global.com>) to learn more on the list of compatible SD cards.

Setup the microSD card for use

To use a microSD card, it must be formatted first by the DR-22WL.

1. Confirm that a microSD card is inserted and turn the power on.
2. The following message appears when a new card or a card formatted by another device is inserted into the unit.



micro SD/SDHC card



micro SDXC card

3. Press the **F4** button to start formatting.

CAUTION

Formatting will delete all data from the card.

4. When formatting is complete, it will return to the home screen. You may format the card whenever required.

CAUTION

Before formatting, make sure the unit is connected to either a dedicated AC adapter (TASCAM PS-P515U; sold separately), a computer via USB bus power, or fully-charged batteries.

Turning the built-in speaker on/off

The factory setting for the built-in speaker output is selected as ON. To turn the built-in speaker output off, set the **SPEAKER** item to **OFF** on the **TOOL** menu page.

1. Press the **HOME/MENU** button to display the menu screen.
2. Use the **F1** button to display the **TOOL** page.
3. Use the **F2** and **F3** buttons to select (highlight) the **SPEAKER** item and press the **F4** button.
This shows the **SPEAKER** item parameters.



4. Use the **F2** and **F3** buttons to change settings, and press the **F4** button to finalize the setting.

Options: **OFF**, **ON** (default setting)

- When setting is completed, press the **HOME/MENU/** button to return to the home screen.

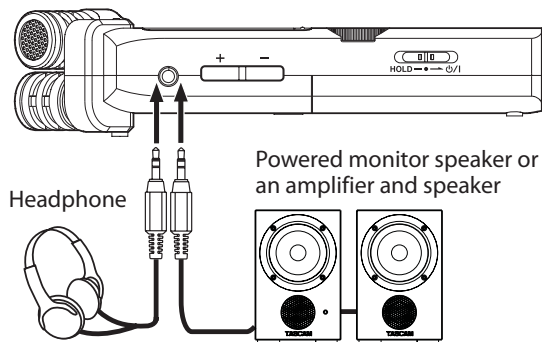
NOTE

*In a recording standby or recording mode, or when a headphone or a speaker system is connected to the DR-22WL, the built-in speaker will not emit sound even when the **SPEAKER** setting is ON.*

Connecting a monitor device

To listen with headphones, connect them to the **Ω/LINE OUT** jack on the left side of the unit.

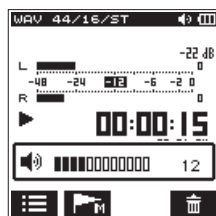
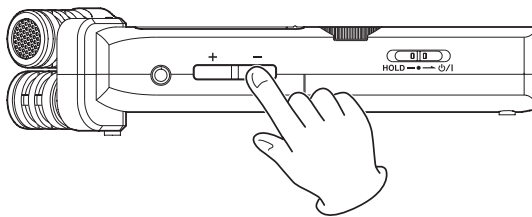
To listen with an external monitoring system (powered monitor speakers or an amplifier and speakers), connect it to the **Ω/LINE OUT** jack.



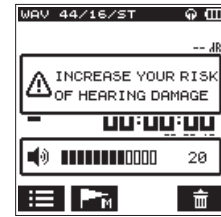
Adjusting the playback volume

Use the **OUTPUT LEVEL (+/-)** buttons on the left side of the unit to adjust the volume of output through the built-in speaker and **Ω/LINE OUT** connector.

When doing this, a volume position pop-up appears at the bottom of the display.



When increasing the volume, this pop-up message might appear: **INCREASE YOUR RISK OF HEARING DAMAGE.**



This warning appears when the volume is set above a level recommended by the European Union (EU) to avoid hearing damage (EU volume limit regulation).

Reconnecting headphones will reset the volume to its default value.

NOTE

You can continue to adjust the volume even after the pop-up message appears.

When you raise or lower the volume again, the pop-up message will disappear.

CAUTION

Listening at high volumes could cause hearing damage. If the surroundings are noisy, the sound of playback might seem quieter than it actually is.

Start playback of the audio and check the volume before putting on headphones, for example.

3 – Preparation

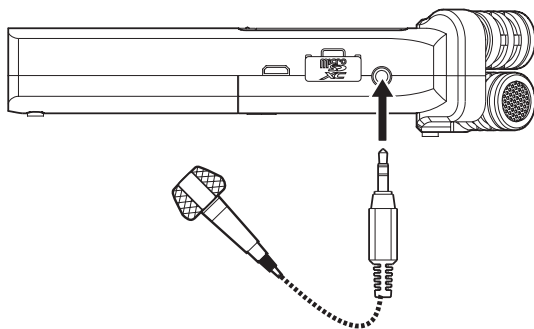
Input settings

Recording with the built-in microphone

Point the built-in microphone toward the sound source and place the unit on a stable surface with minimum vibration.

Recording with an external microphone (MIC IN)

Connect the external microphone to the **MIC/EXT IN** jack at right side panel.



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.



Select the **F3** **YES** button for plug-in-power microphones, or **F2** **NO** button for other microphone types.

* Plug-in-power means that a power is delivered from the recorder to the microphone

NOTE

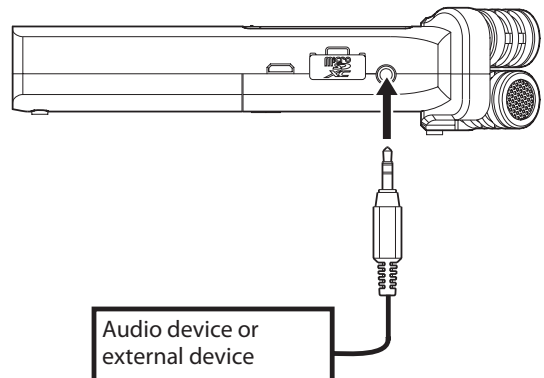
Point the external microphone toward the sound source and place the unit on a stable surface with minimum vibration.

CAUTION

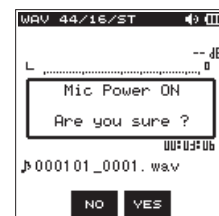
- When not using a mic that requires plug-in power, do not enable it by selecting the **F3** **YES** button. Doing so could damage connected equipment. See the mic operation manual for details.
- When connecting a dynamic mic or external mic that has its own battery, do not enable plug-in power by selecting the **F3** **YES** button. If plug-in power is turned ON, it could damage such microphones.

Recording from an external device (LINE IN)

Connect a stereo mini-plug cable to the output of an external audio device (i.e. headphone jack of a portable CD player).



The following pop-up message will appear when connected to the **MIC/EXT IN** jack.



When an external device is connected, select **F2** **NO** button (disable plug-in power).

CAUTION

If the input sound is still distorted after adjusting the input level of the unit, reduce the playback sound of the external device.

4 – Recording

In addition to the built-in microphone, an external microphone or external audio devices (i.e. CD player) can also be used for recordings.

Recordings can be made in MP3 (32k-320kbps, 44.1k/48kHz) and WAV/BWF (44.1k/48k/96kHz, 16/24-bit) audio formats.

Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible softwares.

In addition, the DR-22WL can mix input signals while playing an audio file and record a new file (overdubbing function).

Selecting the recording mode

■ **EZ** (EASY recording mode)

Select the **scene dial** to **EZ**.

The simple recording mode allows users to quickly start recording by pressing the **RECORD** button just once; it automatically adjusts the recording level. This feature is useful for beginners and others wanting to make a quick-recording.

■ **M** (MANUAL recording mode)

Select the **scene dial** to **M**.

The manual mode allows to adjust the recording level manually, suited for a higher-quality recording. This feature is especially useful for those who wants to make fine-tuned recording.

Recording

1. Press the **RECORD** button to set the recording standby mode.
The indicator around the **RECORD** button flashes and the recording screen opens.

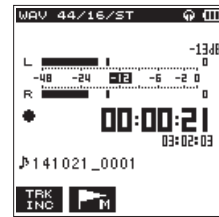


The bottom of the recording screen displays the recording file name, the recording audio file type, and the sampling rate. Users can confirm these information before starting recording.

NOTE

*When the scene dial is set at "EZ", recording begins when you press the **RECORD** button once.*

2. Press the **RECORD** button again to start recording.



When recording starts, the **RECORD** indicator lights, and displays the elapsed recording time and the remaining recording time.

To pause, press the **RECORD** button while recording.

Press the **RECORD** button again to resume recording.

If you press the **HOME/MENU** button while in pause mode, the recorded audio file up to the pause point will be created.

3. Press the **HOME/MENU** button to stop recording.
The recording stops and returns to the beginning of the file.

NOTE

- In recording standby mode, the speaker will not emit sound. Use a headphone to listen to the input sound and make level adjustments. In recording mode, operating the **OUTPUT LEVEL (+/-)** button to adjust sound will not affect the recording level.
- To avoid recording the **RECORD** button operation sound, the DR-22WL begins recording about 0.3 seconds (fixed time) after pressing the **RECORD** button. (REC DELAY)

CAUTION

Noise may occur during microphone recording when the unit and AC adapter are in close proximity. If noise occurs, move the AC adapter away from the unit.

Scene recording mode

The DR-22WL offers pre-set scenes that adjusts recording to the most-suited level. Turn the **scene dial** and to set the following scene:

■ **L** (LOUD)

Suited for recording band performance and other scenes with large sound volume.

■ **M** (MUSIC)

Suited for recording voices, such as concert or group singing.

■ **I** (INSTRUMENT)

Suited for recording near musical instruments, such as an acoustic guitar and wind instruments.

■ **V** (INTERVIEW)

Suited for recording an interview or take voice memos during meetings.

NOTE

Recording level, low-cut filter, or level control are still adjustable in scene recording mode.

*However, level control cannot be adjusted in **V** scene mode. Settings are not stored and will be removed when scene mode is changed.*

4 – Recording

Selecting a folder to store files

Recorded files will be saved in the current folder. If no setting is made, they will be saved in the MUSIC folder. To change to the folder that you want, follow the instructions in “5 – Using files and folders (browse screen)” on page 25 to designate it. When an SD card is initialized, the MUSIC folder will be set as the current folder.

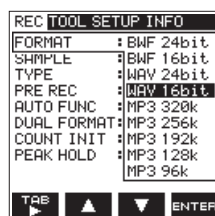
Recording format settings (FORMAT/SAMPLE/TYPE)

Select the desired audio file type before you start recording.

1. Press the **HOME/MENU/** button to display the menu screen.
2. Press the **F1** button to open the REC menu page.

FORMAT setting

3. Use the **F2** and **F3** buttons to select (highlight) the **FORMAT** item and press the **F4** button.
Open the parameter list for the **FORMAT** item.



4. Use the **F2** and **F3** buttons to select (highlight) the file type.

Options: BWF 16bit, BWF 24bit, WAV 16bit (default value), WAV 24bit, MP3 32k, MP3 64k, MP3 96k, MP3 128k, MP3 192k, MP3 256k, MP3 320k

NOTE

- BWF is a format for broadcasting that has the same sound quality as the standard WAV format. It also uses the same “.wav” file extension as WAV files. In this manual, we distinguish these file types by using the terms BWF and WAV.
 - The WAV format offers higher quality recording than MP3 files;
 - On the other hand, the MP3 format can record for longer hours.
 - With MP3 format, recording with higher values offers better quality.
 - Cue marks in WAV file that supports BWF (Broadcast Wave Format) can be used in BWF compatible devices and computer softwares.
5. Press the **F4** button to finalize the setting and return to the item selection mode.

SAMPLE setting

6. Use the **F2** and **F3** buttons to select (highlight) the **SAMPLE** item and press the **F4** button.
Open the parameter list for the **SAMPLE** item.



7. Use the **F2** and **F3** buttons to select (highlight) the sampling rate.

Options: 44.1k (default value), 48k, 96k

NOTE

96k cannot be selected for a MP3 format file.

TIPS

Selecting the WAV 16bit and 44.1kHz will allow you to record in CD-quality.

8. Press the **F4** button to finalize the setting and return to the item selection mode.

TYPE setting

9. Use the **F2** and **F3** buttons to select (highlight) the **TYPE** item and press the **F4** button.

Open the parameter list for the **TYPE** item.



10. Use the **F2** and **F3** buttons to select (highlight) either the stereo file or mono file.

Options: STEREO (default value), MONO

NOTE

- When MONO is selected, left and right channel signals will be recorded separately.
 - Selecting the WAV format MONO will extend the recording hours by two times than the STEREO type, allowing for longer recording hours.
11. Press the **F4** button to finalize the setting and return to the item selection mode.
 12. Press the **HOME/MENU/** button to return to the home screen.

Adjusting the input level

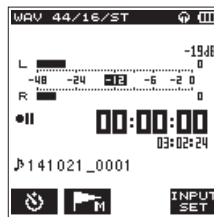
Before you start recording, ensure to adjust the input level to prevent the recorded file from distortion or canceled by noise, which can occur from excessively large or quiet input volume. Use the limiter/peak reduction functions as necessary, in addition to making manual adjustments.

TIPS

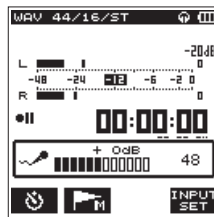
In addition to adjusting the INPUT level, try changing the distance and angle between the microphone and the sound source. The angle and distance of the microphone can also change the sound quality.

1. Press the **RECORD** button to set the recording standby mode.

The **RECORD** indicator (around **RECORD** button) will flash and displays the recording screen.



2. Use the **INPUT LEVEL** volume to adjust the input level. The input level setting meter will pop-up at the bottom of the display.



To obtain higher quality, it is recommended to set at the maximum recording level. As a guideline, adjust the input level until the **-12dB** indicator lights in green to obtain the optimum level. To prevent possible distortion from excessively large input volume, reduce the input level when the **PEAK** indicator lights in red.

NOTE

- Press the **HOME/MENU** button to cancel the recording standby mode.
 - In a recording standby or recording mode, the speaker will not emit sound even when the **SPEAKER** setting is ON.
- If you need to monitor sound to adjust the input level and make recordings, connect the headphone to the **LINE OUT** jack.

To adjust monitor sound, go to home screen and use the **OUTPUT LEVEL (+/-)** button. Adjusting the monitor sound will not affect the recording quality.

Setting the peak hold function

Using the peak hold function makes monitoring the levels easier.

1. Press the **HOME/MENU** button to display the menu screen.
2. Press the **F1** button to open the **REC** menu page.
3. Use the **F2** and **F3** buttons to select (highlight) the parameter of the **PEAK HOLD** item and press the **F4** button.

Open the parameter list for the **PEAK HOLD** item.








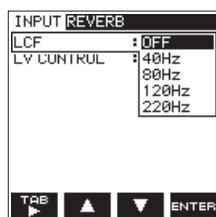
4. Use the **F2** and **F3** buttons to select (highlight) the peak hold mode.
Options:
 - OFF**: Peak levels are not held.
 - 1 sec** (default): Peak levels are held for one second.
 - HOLD**: Peak levels are held until the peak clear (**PEAK CLR**) button is pressed.
5. Press the **F4** button to finalize the setting and return to the item selection mode.
6. Press the **HOME/MENU** button to return to the home screen.





4 – Recording

Setting the Low Cut Filter

The Low Cut Filter function can reduce noise from air-conditioners, projector fans and unwanted wind noise.

1. Press the **RECORD** button to set the recording standby mode.
The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4**  button to display the input setting screen.
3. Press the **F1**  button to display the **INPUT** page of the input setting screen.
4. Use the **F2**  and **F3**  buttons to select (highlight) the parameter of the **LCF** item and press the **F4**  button.
Open the parameter list for the **LCF** item.



5. Use the **F2**  and **F3**  buttons to select (highlight) the cut-off frequency.
Options: **OFF** (default value), **40Hz**, **80Hz**, **120Hz**, **220Hz**
6. Press the **F4**  button to finalize the selected cut-off frequency for the Low Cut Filter.
7. Press the **HOME/MENU**  button to return to the recording screen.

NOTE






- When the low-cut filter is on, the **LCF** icon appears on the recording screen.
- The low-cut filter can be set and changed when in recording standby.

TIPS

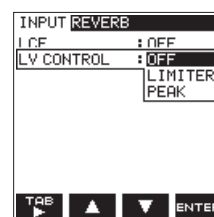
- Setting it to larger value can reduce more noise in the low-frequency range, but this is not recommended when recording music.
- The DR-22WL has a built-in reverb, which can be added to the input source as desired. (See "Reverb function" on page 30.)





Using the level control function

You can set the recording level for microphone input.

1. Press the **RECORD** button to set the recording standby mode.
The **RECORD** indicator will flash and displays the recording screen.
2. Press the **F4**  button to display the input setting screen.
3. Press the **F1**  button to display the **INPUT** page of the input setting screen.
4. Use the **F2**  and **F3**  buttons to select (highlight) the parameter of the **LV CONTROL** item and press the **F4**  button.

Open the parameter list for the **LV CONTROL** item.



5. Use the **F2**  and **F3**  buttons to select (highlight) the function.
Options: **OFF** (default value), **LIMITER**, **PEAK**
6. Press the **F4**  button to finalize the selected function.
7. Press the **HOME/MENU**  button to return to the recording screen.
The selected function is shown with an icon in the recording screen.

NOTE

The selected mode is shown with an icon in the recording screen.

- When the limiter function is ON, the **LMT** icon will appear on the recording screen.
- When the peak reduction function is ON, the **PEAK** icon will appear on the recording screen.

LIMITER

The limiter functions only at excessive input level. This function is useful for musical instrument performance and musical recordings.

PEAK (PEAK REDUCTION)

This function automatically reduce the recording level to an appropriate value when input signal is too high. It is useful when you cannot preset the recording level or unable to make adjustments during recordings.

CAUTION

Distortion might occur if the input sound is too loud even when the limiter is on. In such a case, lower the input level or increase the distance between the mic and the sound source.

NOTE


When level control function is ON, you can still adjust the recording level by using the **INPUT LEVEL** volume. This function cannot be used, however, when the scene dial is set to **EZ** or **!**.

Switching files during recording (track increment)

During recording, you can switch to a new recording file either manually or at a set time, and continue to make recording in the new file. (Track increment function)

Manual track increment during recording

During recording, you can easily update a file manually and continue to make recording.

1. During recording, press the **F1**  button.

NOTE

Numbers at the end of file name will increment each time when a new file is created.









CAUTION

- The maximum total number of folders and files you can create is 5,000.
- Files with a recording time of less than two seconds cannot be created.
- The number of the new file will increment if its name is the same as the existing file.
- Track increment function is not available during overdubbing.

Automatic track increment at specified time




Without pausing recording, a new file can be created automatically during recording when the time set using the **TRACK INC** item on the **AUTO FUNCTION** screen is reached (track increment function).

Follow the below steps to set the maximum time for automatic increment:

1. Press the **HOME/MENU**  button to display the menu screen.
2. Press the **F1**  button to open the **REC** menu page.
3. Use the **F2**  and the **F3**  buttons to select (highlight) the parameter of the **AUTO FUNC** item and press the **F4**  button.
AUTO FUNCTION screen is displayed.
4. Use the **F2**  and the **F3**  buttons to select (highlight) the parameter of the **TRACK INC** item and press the **F4**  button.

This shows the **TRACK INC** item parameters.








5. Use the **F2**  and the **F3**  buttons to select the automatic track increment time.
Options: OFF (default value), 5min, 10min, 15min, 30min, 60min
6. Press the **F4**  button to finalize the selected time.

CAUTION

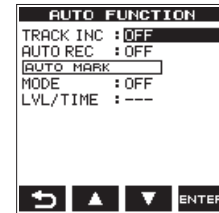
The maximum total number of folders and files you can create is 5,000.

Automatic recording (AUTO REC)

When the auto record function is on, the unit can respond to input sound levels and start and pause recording and create new files automatically.

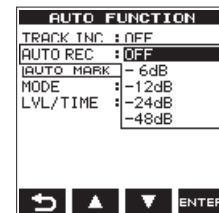
1. Press the **HOME/MENU**  button to display the menu screen.
2. Press the **F1**  button to open the **REC** menu page.
3. Use the **F2**  and the **F3**  buttons to select (highlight) the parameter of the **AUTO FUNC** item and press the **F4**  button.





AUTO FUNCTION screen is displayed.



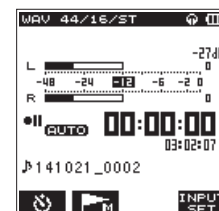
4. Use the **F2**  and the **F3**  buttons to select (highlight) the parameter of the **AUTO REC** item and press the **F4**  button.

This shows the **AUTO REC** item parameters.



5. Use the **F2**  and **F3**  buttons to select a level that activates the **AUTO REC** function (a level that recognize incoming signal).
Options: OFF (default value), -6dB, -12dB, -24dB, -48dB
6. Press the **F4**  button to finalize the selected level that activates the **AUTO REC** function.
7. Press the **HOME/MENU**  button to return to the home screen.
8. Press the **RECORD** button to set the recording standby mode.

The level meter will display sounds within the level that activates the **AUTO REC** function and the **AUTO** icon will appear on the right side of the recorder status display.



Recording starts automatically when the input signal exceeds the threshold set in the **LEVEL** item.

NOTE

- When in recording standby, the **RECORD** indicator flashes faster than when recording.
- When recording, if the input signal level falls below the level set with the **LEVEL** item for more than 5 seconds, the unit pauses recording and creates a new file. When the input

4 – Recording

signal level becomes higher than the set level again, it starts recording to a new file.

- When new files are created, incremental numbers are added to the end of each file name.
9. When you need to stop recording, press the **HOME/MENU/** button.

CAUTION

- A new file cannot be created if the total number of folders and files would exceed 5000.
- Files shorter than 2 seconds cannot be created. If the sampling frequency is 96 kHz, files shorter than 4 seconds cannot be created.
- If the name of a newly created file would be the same as that of an existing file, the number will be incremented until the new file has a unique name.

TIP

By using this in combination with the **PRE REC** function, you can record events without losing the beginnings of sounds.

Start recording from slightly before pressing **RECORD** (**PRE REC**)

PRE REC function will allow you to start recording up to two seconds before the desired timing, by recording an input signal (up to two seconds) during the recording standby mode.

1. Press the **HOME/MENU/** button to display the menu screen.
2. Press the **F1** button to open the **REC** menu page.
3. Use the **F2** and the **F3** buttons to select (highlight) the parameter of the **PRE REC** item and press the **F4** button.

Open the parameter list for the **PRE REC** item.



4. Use the **F2** and **F3** buttons to turn on the **PRE REC** function.
Options: OFF (default value), ON
5. Press the **F4** button to finalize the setting and return to the item selection mode.
6. Press the **HOME/MENU/** button to return to the home screen.

TIPS

By combining **PRE REC** with the **AUTO REC** function, you will not miss an opportunity to start recording.

NOTE

- When the pre-recording function is on, the **PRE** icon appears on the right of the recorder operation status area on the recording screen.
- If you start recording within two seconds from when the record standby mode is turned ON, recording will begin from the record standby mode.
- **PRE REC** function will not work during overdubbing.

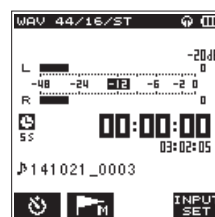
Using the **SELF TIMER** for recording

Similar to a camera, the DR-22WL has a **SELF TIMER** function to begin recording after a set period of time.

1. Press the **RECORD** button to enter recording standby.
The indicator around the **RECORD** button flashes and the recording screen opens.
2. Press the **F1** button to turn the self-timer on, making its icon appear in the recorder operation status area.
The time is shown below the self-timer icon. Each time you press the **F1** button, the setting changes as follows.

Time display below the icon

No display (OFF) → 5S (5 sec.) → 10S (10 sec.) → no display (OFF)



3. After setting the time, press the **RECORD** button. The **RECORD** indicator will flash more quickly until recording starts after the set amount of time passes.

NOTE

- **SELF-TIMER** function will not work when recording is on pause.
- **SELF-TIMER** function can be used in the Automatic recording function. When recording begins, the Automatic recording function is prioritized.

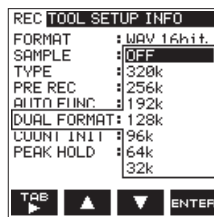
Recording in two formats (DUAL FORMAT REC)

The DR-22WL can transfer files to a smart phone via Wi-Fi. (See “Connect the DR-22WL and smart phone via Wi-Fi” on page 33.)

WAV/BWF delivers a high-quality sound but unfit to transfer via Wi-Fi due to its large file size. The DR-22WL can make simultaneous recordings in WAV/BWF format and MP3 format (smaller file size) for Wi-Fi transfer.

1. Press the **HOME/MENU** button to display the menu screen.
2. Press the **F1** button to open the **REC** menu page.
3. Use the **F2** and **F3** buttons to select (highlight) the parameter in **DUAL FORMAT** item and press the **F4** button.

Open the parameter list for the **DUAL FORMAT** item.



4. Use the **F2** and **F3** buttons to select (highlight) the file type.
Options: OFF (default value), 32k, 64k, 96k, 128k, 192k, 256k, 320k
5. Press the **F4** button to finalize the setting and return to the item selection mode.

NOTE

- When dual format recording is on, the **DUAL** icon appears to the right of the recorder operation status indicator on the Recording Screen.
- **DUAL FORMAT** recording is available only in WAV 16bit/BWF 16bit with sampling rate of 44.1k/48kHz formats.

Mixing the input sound to the playback for recording (overdubbing)

The DR-22WL can mix the input sound while playing the recorded track to create a new file.

The unit offers two overdubbing modes.

OVERDUB

This mode mixes the input sound to the playback file.

Users can monitor with a headphone and overdub the sounds.

AIRDUB

This mode records group singing or musical performance with the accompaniment music playback (similar to karaoke).

Since only the playback sound is output from the output jacks in this mode, you can use it to play along with an already recorded performance output from a connected external monitoring system, for example, and record this new performance together with the sound playing back.

NOTE

- The recording format of the playback file is used when in an overdubbing mode (FORMAT, SAMPLE, TYPE). When the playback file format is mono, the inputs will also be treated as mono (left and right). When the playback file format is stereo, the inputs will also be treated as stereo. Open the **FILE INFO** screen if you want to check the playback file format. (See “File information screen (FILE INFO)” on page 38.)
- Speaker will not emit sound in overdubbing mode.
- Pause will not work in overdubbing mode (RECORD button is disabled).
- The overdubbed file is created in playback format regardless of the recording format setting.
- When in an overdubbing mode, the self-timer, pre-recording, automatic recording and dual format recording functions cannot be used.

Select files for overdubbing with an input sound

Select the file for overdubbing with either the **LEFT/RIGHT** button or in browse screen.

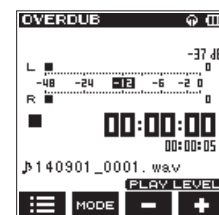
NOTE

Please refer to the page 25 for selecting files in browse screen.

Start overdubbing

1. In home screen, set the **scene dial** to **DUB**.

The **OVERDUB** screen is displayed and the input sound is recorded.



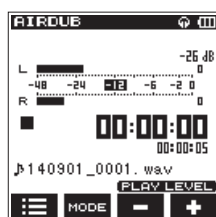
NOTE

In pause or playback mode, when you set the **scene dial** to **DUB**, the DR-22WL will make a force stop and display the **OVERDUB** screen.

4 – Recording

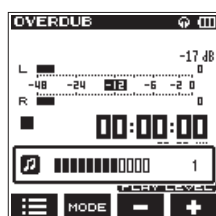
- To switch to the overdubbing mode, press the **F2** **MODE** button. The overdubbing and airdubbing modes will appear in turn on the screen.

After selecting, either the **OVERDUB** or the **AIRDUB** screen will be displayed.



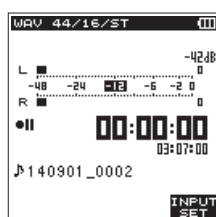
AIRDUB mode

- Press the **PLAY** button to play the file for overdubbing, and use the **F3** **-** and **F4** **+** buttons to adjust the playback volume.

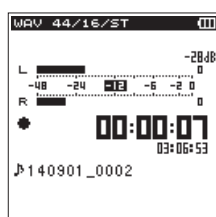


- Press the **RECORD** button to set the recording standby mode.

The indicator around the **RECORD** button flashes.



- Press again the **RECORD** button. Overdubbing will start.



When recording starts, the **RECORD** indicator lights, and the recording screen displays the elapsed recording time and the remaining recording time.

When a file that can be playback is not selected, a pop-up message of **No PB File** will appear.

- To finish recording, press the **HOME/MENU** button.

Create cue marks during recording

In recording or recording standby mode, the DR-22WL can create cue marks to a file to quickly locate the marked position and start playback. (See “Moving to the cue mark position” on page 23.)

You can either manually set the cue mark, or automatically set the cue mark level or time to minimize the operation noise.

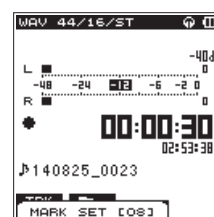
NOTE

The unit will not move to the cue mark position in recording or recording standby mode.

Manual cue marking during recording

In recording or recording standby mode, press the **F2** **MARK** button to create a cue mark.

A pull-up cue mark no. message will appear above the icon.



NOTE

- Up to 99 cue marks can be created and stored in each file.
- Cue marks that are created during the recording of WAV file in BWF format by this unit are stored in the file. You can use the cue marks in softwares compatible with BWF format.

Add cue marks automatically to recording

If you turn the **AUTO MARK** function ON, cue marks will be added automatically.

■ Add cue marks automatically according to set levels

- Press the **HOME/MENU** button to display the menu screen.
- Press the **F1** **TAB** button to open the **REC** menu page.
- Use the **F2** **▲** and the **F3** **▼** buttons to select (highlight) the parameter of the **AUTO FUNC** item and press the **F4** **ENTER** button.
AUTO FUNCTION screen is displayed.
- Use the **F2** **▲** and **F3** **▼** buttons to select (highlight) the **MODE** in the **AUTO MARK** item, and press the **F4** **ENTER** button.
- Use the **F2** **▲** and **F3** **▼** buttons to set the automatic cue mark mode to **LEVEL**.







Options: OFF (default value), LEVEL, TIME

- Press the **F4** **ENTER** button to finalize the set mode.











- Use the **F2**  and **F3**  buttons to select (highlight) the **LVL/TIME** of the **AUTO MARK** item and press the **F4**  button.

This shows the **LVL/TIME** item parameters.







- Use the **F2**  and **F3**  buttons to set a level to automatically add cue marks.
Options: -6dB, -12dB (default value), -24dB, -48dB
- Press the **F4**  button to finalize the set mode.
- Press the **HOME/MENU**  button to return to the home screen.

■ Add cue marks automatically according to set time

- Press the **HOME/MENU**  button to display the menu screen.
- Press the **F1**  button to open the **REC** menu page.
- Use the **F2**  and the **F3**  buttons to select (highlight) the parameter of the **AUTO FUNC** item and press the **F4**  button.
AUTO FUNCTION screen is displayed.
- Use the **F2**  and **F3**  buttons to select (highlight) the **MODE** in the **AUTO MARK** item, and press the **F4**  button.
- Use the **F2**  and **F3**  buttons to set the automatic cue mark mode to **TIME**.







Options: OFF (default value), LEVEL, TIME

- Press the **F4**  button to finalize the set mode.
- Use the **F2**  and **F3**  buttons to select (highlight) the **LVL/TIME** in the **AUTO MARK** item, and press the **F4**  button.

This shows the **LVL/TIME** item parameters.








- Use the **F2**  and **F3**  buttons to set a time to automatically add cue marks.
Options: 5min, 10min, 15min, 30min, 60min (default value)
- Press the **F4**  button to finalize the set time.
- Press the **HOME/MENU**  button to return to the home screen.

Moving to the cue mark position








In stop or playback mode, you can move to cue marks created in the selected file.

You can use this function to go to the beginning of a song, similar to an index.

- Press the **HOME/MENU**  button to display the menu screen.
- Use the **F1**  button to display the **TOOL** page.
- Use the **F2**  and **F3**  buttons to select (highlight) the parameter in **MARK SKIP MODE** item and press the **F4**  button.

This shows the **MARK SKIP MODE** item parameters.



- Use the **F2**  and **F3**  buttons to set the mode to **ON**, and press the **F4**  button.
Options: OFF (default value), ON
- When setting is completed, press the **HOME/MENU**  button to return to the home screen.
- In stop or playback mode, press together the **F2**  button and either the **LEFT**  button or the **RIGHT**  button.

NOTE

You cannot move to a cue mark of a different file.

4 – Recording

Recording duration

The table below shows the maximum recording time per file format for microSD/microSDHC/microSDXC cards:

File format (recording setting)			microSD/microSDHC/microSDXC cards capacity			
			1GB	4GB	8GB	32GB
WAV/BWF 16 bit (STEREO)	44.1kHz		1 hour 34 minutes	6 hour 17 minutes	12 hour 35 minutes	50 hour 23 minutes
	48kHz		1 hour 26 minutes	5 hour 47 minutes	11 hour 34 minutes	46 hour 17 minutes
	96kHz		43 minutes	2 hour 53 minutes	5 hour 47 minutes	23 hour 08 minutes
WAV/BWF 24 bit (STEREO)	44.1kHz		1 hour 02 minutes	4 hour 11 minutes	8 hour 23 minutes	33 hour 35 minutes
	48kHz		57 minutes	3 hour 51 minutes	7 hour 42 minutes	30 hour 51 minutes
	96kHz		28 minutes	1 hour 55 minutes	3 hour 51 minutes	15 hour 25 minutes
MP3 (STEREO/MONO)	32 kbps	44.1kHz/48kHz	69 hour 26 minutes	277 hour	555 hour	2222 hour
	64 kbps	44.1kHz/48kHz	34 hour 43 minutes	138 hour	277 hour	1111 hour
	96 kbps	44.1kHz/48kHz	23 hour 08 minutes	92 hour 35 minutes	185 hour	740 hour
	128 kbps	44.1kHz/48kHz	17 hour 21 minutes	69 hour 26 minutes	138 hour	555 hour
	192 kbps	44.1kHz/48kHz	11 hour 34 minutes	46 hour 17 minutes	92 hour 35 minutes	370 hour
	256 kbps	44.1kHz/48kHz	8 hour 40 minutes	34 hour 43 minutes	69 hour 26 minutes	277 hour
	320 kbps	44.1kHz/48kHz	6 hour 56 minutes	27 hour 46 minutes	55 hour 33 minutes	222 hour


- The recording times shown above are theoretical values. Times may differ depending on the microSD/microSDHC/microSDXC card in use.
- The recording times shown above are the total possible recording times for the microSD/microSDHC/microSDXC cards, and not the continuous recording times.
- Recording automatically stops if recording time exceeds 24 hours.
- Mono recording in WAV format will double the maximum recording times specified above.

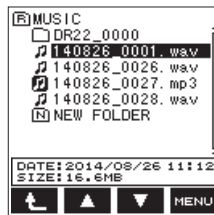
5 – Using files and folders (browse screen)

In browse screen, you can browse the MUSIC folder (stores audio files), delete files and folders, or create a new folder in the microSD card.

TIPS

You can also connect the DR-22WL with a computer via USB, or directly insert the microSD card to the computer to change configuration of folders or delete files in the MUSIC folder. In addition, you can change file names from the computer.

To display the browse screen, press the **F1**  button in stop/pause mode.







Prior to displaying the browse screen, the unit will display the files and folders selected in home screen.

Navigating in the browse screen

Folders and music files are displayed in a layered-tree type in the browse screen.

The DR-22WL can create up to two layers in each folder.

- Use the **F2**  and **F3**  buttons to select (highlight) the file and/or folder.
- While selecting the file and/or folder, press the **F1**  button to move up to the next layer.
- While selecting the file and/or folder, press the **F4**  button to display the pop-up menu.
- While selecting a file, press the **PLAY** button to return to the home screen and playback the selected file.

The folder that contains the above file becomes the current folder (currently selected folder), and the recorded files will be saved in this folder.

Icon display on the browse screen

Below are descriptions for each of the icons displayed in the browse screen.

■ MUSIC folder ()

When the browse screen displays the ROOT layer, the MUSIC folder will appear at the most top.

■ Audio file ()

This is an audio file.

■ Currently selected audio file ()

This is the currently selected audio file.

■ Folder ()

This folder contains a sub-folder.

■ Folder ()

This folder contains no sub-folder.


■ Folder in display ()

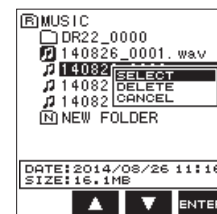
Contents of this folder is currently in display.




■ New folder ()

A new folder will be created.

File operations

Select (highlight) the desired audio file in the browse screen, and press the **F4**  button. The below pop-up menu will appear.



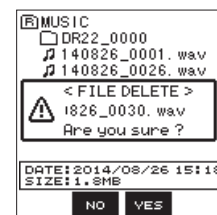
Use the **F2**  and **F3**  buttons to select (highlight) an item, and press the **F4**  button. The following action will start according to the selected item.

■ SELECT

Returns to the home screen and playback the selected file.

■ DELETE


A pop-up message appears to confirm that the deletion of the selected file.





To delete the file, press the **F3**  button. To cancel delete, press the **F2**  button.

5 – Using files and folders (browse screen)

NOTE

When the home screen is open, press the **F4**  button to open a pop-up message confirming deletion of the selected file.




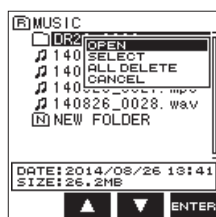
Press the **F3**  button to delete the file, or press the **F2**  button to cancel the deletion.




■ CANCEL

Action for the selected (highlighted) file is canceled, and the pop-up menu is closed.

Folder operations

Select (highlight) the desired file in the browse screen, and press the **F4**  button. The following pop-up message menu will appear.



Use the **F2**  and **F3**  buttons to select (highlight) an item, and press the **F4**  button. The following action will start according to the selected item.

■ OPEN

This will open the selected folder.

■ SELECT

Returns to the Home Screen and selects the first file in the folder. In addition, the recorded files are saved in the selected folder.

■ ALL DELETE

A pop-up message appears to confirm deletion of all files in the selected folder.



To delete the file, press the **F3**  button. To cancel delete, press the **F2**  button.

NOTE

Read-only files and unrecognized files by the DR-22WL will not be deleted.

■ CANCEL

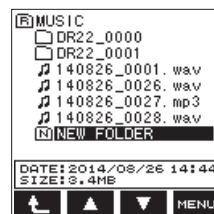
The operation for the selected (highlighted) file is canceled, and the pop-up menu is closed.




Moving up a folder level

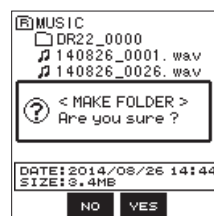
Press the **F1**  button to move up a folder level.



Creating a new folder

NEW FOLDER is available at the bottom of each folder.



1. Use the **F2**  and **F3**  buttons to select (highlight) the NEW FOLDER and press the **F4**  button. A quick menu will pop-up on screen. It shows a message to confirm creation of a new folder.



2. To create a new folder, press the **F3**  button. To cancel creation of a new folder, press the **F2**  button.

NOTE

The DR-22WL is not designed to handle folders with three or more layers, and therefore the NEW FOLDER does not exist in a folder with two layers.

A newly created folder becomes the current folder (currently selected folder), and recorded files are saved in this folder.

Playback

To start playback in home screen mode, press the **PLAY** button in stop mode.

NOTE

You can also select and playback a file in the browse screen.

Pausing/stopping playback

To stop playback, press the **⏮/MENU/⏭** button. (PAUSE)
When playback was stopped in the middle of a file, the status icon **⏸** will appear on screen.

If you press the **⏮** or **⏭** button to move to the beginning of a file and stop playback, **■** is shown.

To resume playback from the stop position, press the **PLAY** button.

Rewinding and fast-forwarding (search)

During playback when the home screen is open, press and hold the **⏮/⏭** button to search backward/forward.

NOTE

*Search speed will increase if you keep holding the **⏮/⏭** button.*

Selecting a playback file (skip)

In home screen, press either the **⏮** button or the **⏭** button to select the file you want to play.

When you are in the middle of a file and want to return to the beginning, press the **⏮** button. To skip to the previous file, press the **⏮** button.

To skip to the next file, press the **⏭** button at the beginning of in the middle of a file.

Special playback (practice mode)

Practice mode is useful for practicing musical instruments. To use the practice mode while in stop/pause/playback mode, set the **scene dial** to “**🔧**” in home screen. The **PRACTICE** screen will appear with a practice mode.



Loop playback, playback speed change, and key change can be made in this mode.

Press the **F1** **≡** button to select the file from the browse screen you want to playback.

To exit practice mode, change the **scene dial** to a different setting.

NOTE

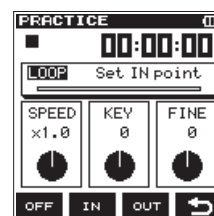
- *In practice mode, you can monitor and adjust the input sound. (See “Adjusting the input level” on page 17.)*
- *File skip will not work in practice mode.*

Loop playback

Loop playback allows you to repeat playback of the entire or part of a file.

■ Set the IN and OUT points

1. In **PRACTICE** screen, press the **F3** **SEL** button to select (highlight) the **LOOP** item, and press the **F4** **ENTER** button to set loop playback.



2. Move to the loop playback IN point, and press the **F2** **IN** button.
This position is set as IN (start) point.
The **■** icon will light at the top of the playback position display bar.
3. Press the **F3** **OUT** button at the loop playback OUT point.
This position is set as OUT (end) point, and the unit will playback the section between the loop playback IN and OUT points.
The **■** icon will light at the top of the playback position display bar.

NOTE

- *The **I/O Too Short** pop-up message will appear when the IN-OUT points are too close. Please reset by spacing at least one second in between.*
- *MP3 files with VBR format may affect the accuracy of the IN and OUT points settings.*

6 – Playback

■ Delete the IN and OUT points

In stop mode, press the **I◀** button or the **▶I** button to skip to the IN (start) and OUT (end) points.

When stopped, skip to an IN (start) point and press the **F2** **IN** button to clear that point.

When stopped, skip to an OUT (end) point and press the **F3** **OUT** button to clear that point.

■ Loop playback

Press the **F1** **ON** button to enable the loop playback function. You can disable the playback function by pressing the **F1** **OFF** button, but the setting will be saved.

Loop playback will start as follows, depending on the IN (start) and OUT (end) points:

Set only the IN (start) point	Loop playback from IN point → end of the file
Set only the OUT (end) point	Loop playback from the beginning of the file → OUT point
Set both IN/OUT points	Loop playback between IN - OUT points
No settings of IN/OUT points	Loop playback from the beginning until the end of the file

NOTE

Press the **F1** **OFF** button to turn on/off the loop playback.

Changing the playback speed (VSA)

The DR-22WL has a built-in VSA (Variable Speed Audition) function to change the playback speed without changing its pitch.

CAUTION

The VSA function will not work when you select a file recorded with a sampling rate of 96kHz.

- In **PRACTICE** screen, press the **F3** **SEL** button to select (highlight) the **SPEED** item, and press the **F4** **ENTER** button to enable the playback speed change option.



- Use the **F2** **▲** and the **F3** **▼** buttons to change the playback speed value.
Options: $\times 0.5$ - $\times 2.0$ (per $\times 0.1$) (default: $\times 1.0$)
- Press the **F4** **↵** button to finalize the setting and return to the item selection mode.
- Press the **PLAY** button for playback.

NOTE

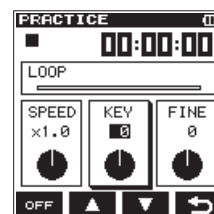
Press the **F1** **OFF** button (or the **F1** **ON** button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings. Settings will be stored.

Changing keys

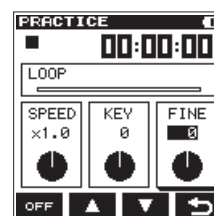
The DR-22WL can change the playback key (pitch) with its key control function.

The key control function offers KEY and FINE TUNE modes. The KEY mode can adjust in ± 6 half-tone, and the FINE TUNE mode can adjust in ± 50 cents.

- In the **PRACTICE** screen, press the **F3** **SEL** button to select (highlight) either the **KEY** or **FINE** items, then press the **F4** **ENTER** button to enable the key change setting.



Pop-up display of the **KEY** item



Pop-up display of the **FINE** item

- Use the **F2** **▲** and the **F3** **▼** buttons to change the key value.
Options:
When KEY is selected : $\flat 6$ - $\sharp 6$ (per half-tone) (default: 0)
When FINE is selected : -50 - $+50$ (per cent) (default: 0)
- Press the **F4** **↵** button to finalize the setting and return to the item selection mode.
- Press the **PLAY** button for playback.

NOTE

Press the **F1** **OFF** button (or the **F1** **ON** button) to simultaneously turn on/off the speed change and key change (KEY, FINE) settings. Settings will be stored.

7– Useful functions

Dividing a file

A recorded file can be divided into two manually or at a mark position.

CAUTION

- MP3 files cannot be divided.
- If the microSD card has insufficient open space, division might not be possible.
- Division is not possible if the file name would become more than 200 characters long.
- Division is not possible if a file that already exists has the same name as the name that would be given to a new file created by division.

Dividing the selected file (DIVIDE)

A recorded file can be divided into two at a desired position.

1. Use the **◀◀** button, the **▶▶** button, or the browse screen to select the file you want to divide.
2. Press the **⬆/MENU/⬇** button to display the menu screen.
3. Use the **F1** **⏮** button to display the **TOOL** page.
4. Use the **F2** **⬆** and **F3** **⬇** buttons to select (highlight) the parameter in **DIVIDE** item and press the **F4** **ENTER** button. The **DIVIDE** screen is displayed.



5. Use the **F2** **⬆** and **F3** **⬇** buttons to finalize the dividing section, and press the **F4** **ENTER** button to finalize the setting. The following pop-up window appears.



6. Press the **F3** **YES** button to divide the file and return to the home screen.

If you press the **F2** **NO** button, the file will not divide and return to the **DIVIDE** screen.

7. When finished, press the **⬆/MENU/⬇** button.

NOTE

- When the **DIVIDE** screen is open, you can press the **PLAY** button and set the divide position while playing the track.
- When the **DIVIDE** screen is open, press the **PLAY** button to start/pause playback and press the **◀◀/▶▶** button to move to the beginning/end of the track. Use the **F2** **⬆** and **F3** **⬇** buttons to adjust the division point in fine increments. Press and hold these buttons to change the position continuously.
- When a file is divided, names will be created ending with either **a** or **b**.
(Example)

File name before division

140826_0001.wav

File name after division

140826_0001a.wav (before the dividing point)

140826_0001b.wav (after the dividing point)

CAUTION

- MP3 files cannot be divided.
- Division may not be available when microSD card does not have sufficient capacity.
- File name with more than two hundred characters cannot be divided.
- File cannot be divided when there is a file name identical to that of the post-divided file.

TIPS

You can add cue marks during recording at the position you want to divide. (See “Create cue marks during recording” on page 22.)

Dividing the selected file automatically (AUTO DIVIDE)

Use the **AUTO DIVIDE** function to automatically divide an already recorded file at positions where marks have been added.

NOTE

See “Create cue marks during recording” on page 22 for details about how to add marks.

1. Select a file to be divided using the **◀◀** and **▶▶** buttons or the **BROWSE** screen.
2. Press the **⬆/MENU/⬇** button to open the menu screen.
3. Press the **F1** **⏮** button to open the **TOOL** menu page.
4. Use the **F2** **⬆** or **F3** **⬇** button to select the **AUTO DIVIDE** item parameter and press the **F4** **ENTER** button. The following pop-up message will appear.



5. Press the **F3** **YES** button to divide the file.

To return to the **TOOL** page without dividing the file, press the **F2** **NO** button.

6. When finished, press the **⬆/MENU/⬇** button.

CAUTION

If the length of time between any two marks is less than two seconds, automatic division is not possible.

NOTE

- After dividing a file, new files with “_1”, “_2” and “_3” added to the end of the original file name are created in order.
Example: 2 marks
File name before division
140826_0001.wav
File name after division
140826_0001_1.wav
140826_0001_2.wav
140826_0001_3.wav
- When used together with the automatic marking function, long recordings can automatically be divided into files with

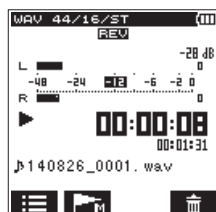
7– Useful functions

individual songs. (See “Add cue marks automatically to recording” on page 22.)

Reverb function

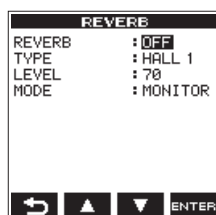
This unit has a built-in reverb that can be applied to the input sound or the output sound.

When reverb function is ON, the **REV** icon will appear at the top of the home screen.



Setting the reverb function

1. Press the **HOME/MENU/** button to display the menu screen.
2. Use the **F1** button to display the **TOOL** page.
3. Use the **F2** and **F3** buttons to select (highlight) the parameter in **REVERB** item and press the **F4** button. The **REVERB** screen is displayed.



NOTE

You can set and adjust reverb in record standby mode as well, from the **REVERB** page of the input setting screen.

4. The following settings are made in the **REVERB** screen.

REVERB:

Set the reverb on/off status (default value: OFF).

TYPE:

See the reverb type from the pre-set items. See 30 Reverb pre-set list for more details on reverb pre-set items.

LEVEL:

Adjust the reverb output level. Settings can be selected from 0 - 100. (default value: 70)

MODE:

Set the reverb mode.

MODE (options)	Icon	Detail
MONITOR (default value)	REV	You can add reverb to the output sound. This does not affect the sound recorded.
REC	REV	You can add reverb to the input sound. You can record sound with reverb added.

5. Use the **F2** and **F3** buttons to select (highlight) the setting parameter and press the **F4** button.

6. Use the **F2** and **F3** buttons to set the desired option/value.
7. Press the **F4** button to finalize the setting and return to the item setting item status.
8. Repeat the 4.-7. steps as necessary.
9. When setting is completed, press the **HOME/MENU/** button.

CAUTION

Reverb function will not work (but able to make settings) when the setting or the selected playback file's sampling rate is 96kHz.

NOTE

The reverb function on/off setting is available also in recording standby mode; press **F4** button and make setting in the **REVERB** page of the input setting screen.

Reverb pre-set list

Pre-set name	Effect
HALL 1 (default value)	A bright effect, like a spacious hall
HALL 2	A warm effect, like a spacious hall
ROOM	Small room effect
STUDIO	Studio effect
PLATE 1	Bright plate reverb
PLATE 2	Warm plate reverb

Metronome function (compatible with V1.10)

The DR-22WL has a built-in metronome, useful for practicing musical instruments.

1. Press the **HOME/MENU/** button to display the menu screen.
2. Use the **F1** button to display the **TOOL** page.
3. Use the **F2** and **F3** buttons to select (highlight) the **METRONOME** item and press the **F4** button. The **METRONOME** screen is displayed.



4. The following settings are available in the **METRONOME** screen:

TEMPO

Set speed between 20 - 250 (BPM).
(default value: 120)

BEAT








Set beat between 0 - 9. (default value: 4)
This will accent the first beat.

SOUND

You can set the metronome sound to **CLICK**, **STICK** or **BELL**. (Default: **CLICK**)

LEVEL:

Set the metronome volume 0 - 100.
(default value: 50)

5. Use the **F2**  and the **F3**  buttons to select (highlight) the setting parameter and press the **F4**  button.
6. Use the **F2**  and **F3**  buttons to set the desired option/value.
7. Press the **F4**  button to finalize the setting and return to the item setting item status.
8. Repeat the 5.-7. steps as necessary.
9. Press the **PLAY** button to start the metronome. When the metronome is operating, press the **PLAY** button to stop it.
10. Press the **F1**  button to return to the **TOOL** page.

8 – Connecting with a computer

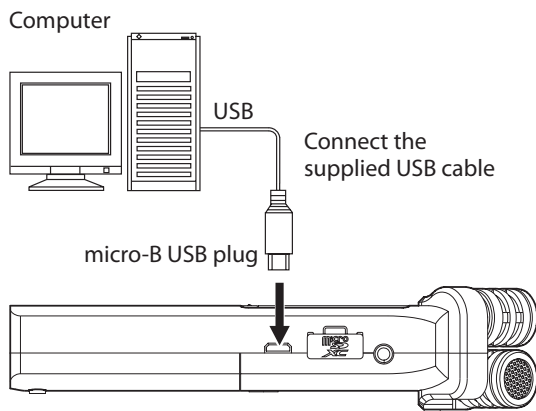
By connecting this unit with a computer using the USB cable, you can transfer audio files on the microSD card in the unit to a computer, as well as transfer audio files on the computer to the microSD card in the unit.

This unit can handle audio files of the following formats.

WAV : 44.1k/48k/96kHz, 16/24 bit

BWF : 44.1k/48k/96kHz, 16/24 bit

MP3 : 44.1k/48kHz, 32k/64k/96k/128k/192k/256k/320kbps



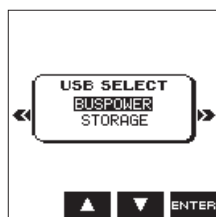
NOTE

- Instead of connecting the DR-22WL a computer via USB, you can remove the microSD card from the unit and insert directly (or with a card adapter) to the computer and make the same operation.
- Both WAV and BWF files will have the ".wav" extension.

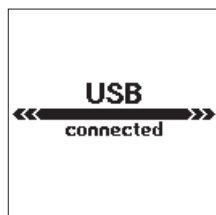
CAUTION

- The DR-22WL will not operate when STORAGE is selected (highlighted) under USB connection.
- Please make a direct connection with the computer without using a hub.

When you make a USB connection before or after turning ON the unit's main power, the USB SELECT screen will appear and prompt you to select the USB bus power or make a USB connection with the computer.



Use the **F2** (up arrow) and **F3** (down arrow) buttons to select (highlight) the **STORAGE**; if you press the **F4** (ENTER) button, the unit will connect with the computer and displays the **USB connected** message.



Make sure that the microSD card is inserted properly to the DR-22WL.

NOTE

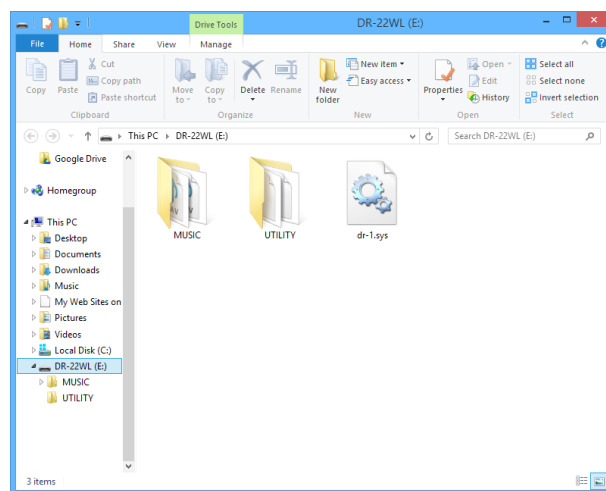
When you make a USB connection while the batteries are inserted to the unit, the USB port will supply power (USB bus power prioritized).

If USB connection is made when the microSD card is not inserted correctly, a pop-up message of Can't Save Data will appear.

When you turn on the "computer", the screen will display the DR-22WL as an external drive with a volume label of "DR-22WL".

Transferring files to a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Open the "MUSIC" folder and drag & drop the file you want to transfer to the desired location.



Transferring files from a computer

1. Click the "DR-22WL" drive on computer screen to display the "MUSIC" and the "UTILITY" folders.
2. Drag & drop the audio file from the computer to the "MUSIC" folder.

TIPS

- You can manage the "MUSIC" folder on computer screen.
- You can create a sub-folder in the "MUSIC" folder. The DR-22WL can create up to two layers. The DR-22WL cannot recognize sub-folders and files located at the third layer level or below.
- If you name the sub-folders and music tracks, these names will appear on the home screen or browse screen of this unit.

Disconnecting from a computer

When disconnecting the DR-22WL from the computer, make sure to follow the correct steps and remove the USB cable. The power turns off when the shut-down process is completed. Refer to the computer's operation manual for instructions on unmounting from the computer.

Connect the DR-22WL and smart phone via Wi-Fi

CAUTION

The DR-22WL designs are in conformance with the laws and regulations of the countries and regions in which this unit is sold, and labeled as required.

The DR-22WL is approved in the following countries and regions:

United States, Canada, Europe (EU member states), Australia, New Zealand, Japan

The use of wireless functions in a country other than those listed above could result in a violation of that country's wireless transmission laws.

Our company will bear no responsibility for use in countries other than those listed above.

TIPS

The battery will drain faster during Wi-Fi use.

Running out of batteries during data transfer will terminate the process and may result in transfer failure.

We recommend to use either the AC adapter or USB bus power during Wi-Fi use.

The DR-22WL is designed for remote control with the use of an exclusive application (TASCAM DR CONTROL), free of charge. Transport control such as playback and stop, as well as input level adjustment and file transfer can be made via Wi-Fi.

How to download and install the exclusive application (TASCAM DR CONTROL)

1. Connect your smart phone to the Internet.
2. Search the exclusive application (TASCAM DR CONTROL) and download from either Google Play (Android smart phone) or App Store (iOS device) for installation.

Connecting the DR-22WL to a smart phone via Wi-Fi for the first time

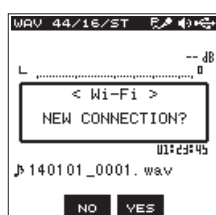
The DR-22WL can make a Wi-Fi/peer-to-peer connection with a smart phone via Wi-Fi, without the use of a router or other external devices. No Wi-Fi network environment is required. It can make direct connection with your smart phone.

NOTE

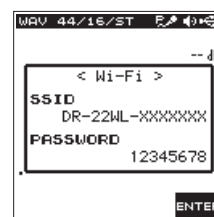
When this unit and a smartphone are connected by Wi-Fi, connection with other Wi-Fi networks will not be possible.

■ When using an iOS terminal

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.
A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a new smartphone, so press the **F3** **YES** button.



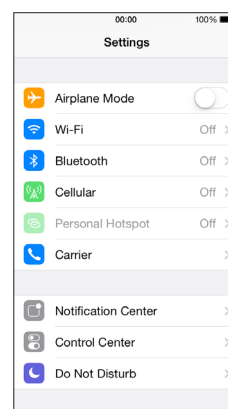
3. "SSID" and "PASSWORD" appear on the display.



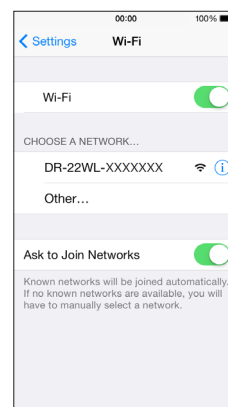
NOTE

The "SSID" is the name of the wireless LAN access point (wireless LAN device).

4. In your iOS device, select "setting" → "Wi-Fi".



5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.



6. A password input screen appears on the iOS device. Enter the password shown on the display of the unit.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

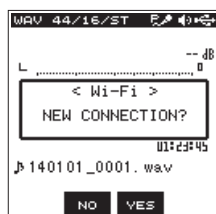
9 – Using Wi-Fi

■ When using an Android device

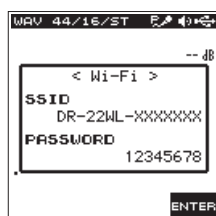
1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

A **NEW CONNECTION?** pop-up message appears on the display to determine whether or not the connection is new.

2. You will be making a connection to a new smartphone, so press the **F3** **YES** button.



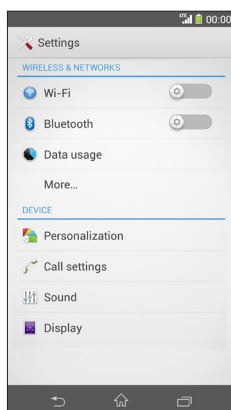
3. “SSID” and “PASSWORD” appear on the display.



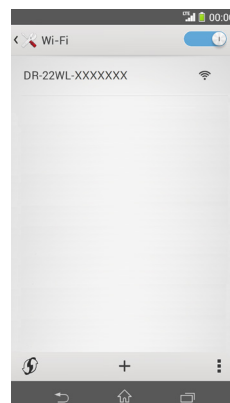
NOTE

The “SSID” is the name of the wireless LAN access point (wireless LAN device).

4. In your Android device, select the “setting” → “Wi-Fi”.



5. When you turn on Wi-Fi on an Android device, a Wi-Fi device SSID list and WPS mark will appear. Select the SSID shown on the display of the unit.



6. A password input screen appears on the Android device. Enter the password shown on the display of the unit.
7. Wi-Fi connection is established between the DR-22WL and your smart phone, and the **Wi-Fi** indicator of the unit will light.

NOTE

The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

Connecting the DR-22WL to a smart phone via Wi-Fi (from second time onward)

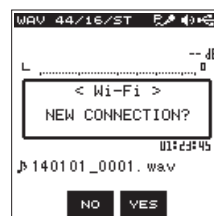
When you establish a connection between the DR-22WL and your smart phone for the first time and need to connect them again, you only need to select the SSID from the second time onward.

■ When using an iOS terminal

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

A **NEW CONNECTION?** pop-up message appears on the display to determine whether or not the connection is new.

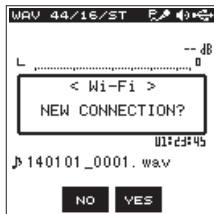
2. You will be making a connection to a previously connected smartphone, so press the **F2** **NO** button.



3. The pop-up message on the display disappears and the unit waits for a connection with a smartphone.
4. In your iOS device, select “settings” → “Wi-Fi”.
5. When Wi-Fi is enabled on for your iOS device, it will display the SSID list of Wi-Fi equipment. Select the SSID displayed on the DR-22WL.
6. A Wi-Fi connection between the unit and your smartphone is established and the **Wi-Fi** indicator is lit.

■ When using an Android device

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.
A **NEW CONNECTION?** pop-up message appears on the display to determine whether or not the connection is new.
2. You will be making a connection to a previously connected smartphone, so press the **F2 NO** button.



3. The pop-up message on the display disappears and the unit waits for a connection with a smartphone.
4. In your Android device, select the "settings" → "Wi-Fi".
5. When you turn on Wi-Fi on your Android device, a Wi-Fi device SSID list appears. Select the SSID shown on the display of the unit.
6. A Wi-Fi connection between the unit and your smartphone is established and the **Wi-Fi** indicator is lit.

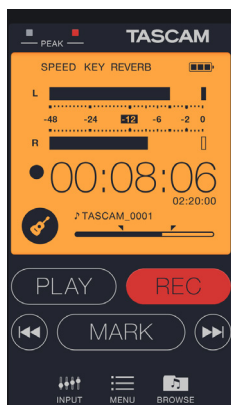
NOTE

The above description on operating the Android device are for reference only. Please refer to your smart phone's operation manual for more details.

Using a smart phone to remote control the DR-22WL

The exclusive application (TASCAM DR CONTROL) uses the same interface of the DR-22WL, so the remote control operation is basically the same as operating this unit. Familiarizing yourself with the DR-22W operation method will assist you in using the "TASCAM DR CONTROL" application.

1. When Wi-Fi connection is established between the DR-22WL and your smart phone, tap the installed "TASCAM DR CONTROL" application.
2. When the "TASCAM DR CONTROL" application is launched, the following screen will appear on your smart phone to remotely control the DR-22WL.



Detailed descriptions, on the "TASCAM DR CONTROL" application, including the "TASCAM DR CONTROL reference manual", can be downloaded from the TEAC Global Site (<http://teac-global.com>).

File transfer from the DR-22WL to a smart phone

1. Tap the "Browse" button on the "TASCAM DR CONTROL" screen.
2. The "Browse" screen displays a list of files from the DR-22WL; select the file you want to transfer.
3. Detail screen on the selected file will appear; tap the "Copy" button.
4. A confirmation screen for file copy will appear; press the "YES" button to start file transfer from the DR-22WL to your smart phone.

Connecting this unit to a computer by Wi-Fi

Transferring files from this unit to a computer is possible using the free TASCAM DR FILE TRANSFER software designed for this purpose. You can transfer recorded files by Wi-Fi.

Downloading and installing the TASCAM DR FILE TRANSFER software

1. Connect the computer to the Internet.
2. Download TASCAM DR FILE TRANSFER from the TEAC Global Site (<http://teac-global.com/>) and install it.

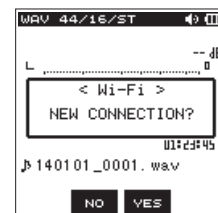
Connecting this unit to a computer by Wi-Fi for the first time

Since a direct Wi-Fi connection is used between the unit and the computer, no router or other external device is necessary. A Wi-Fi network is not necessary either. The connection can be made with just this unit and the computer.

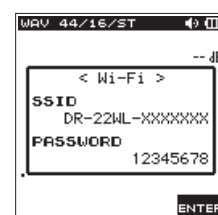
NOTE

When this unit and a computer are connected by Wi-Fi, the computer cannot be connected with other Wi-Fi networks.

1. Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.
A **NEW CONNECTION?** pop-up message appears on the display to determine whether or not the connection is new.
2. Since it is a new connection, press the **F3 YES** button.



3. "SSID" and "PASSWORD" appear on the display.

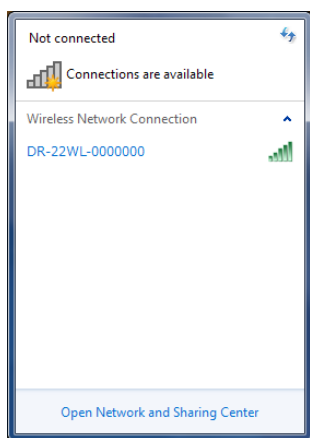


9 – Using Wi-Fi

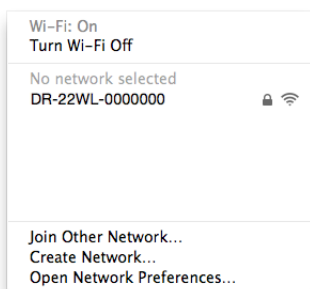
NOTE

The “SSID” is the name of the wireless LAN access point (wireless LAN device).

- Click the wireless connection icon in the computer taskbar/menu bar (Windows/Mac) to open a list of wireless networks.

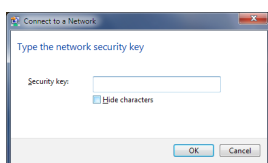


Windows



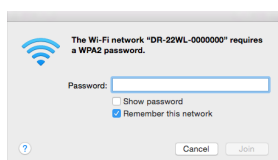
Mac

- Select the SSID shown on the unit's display.
- When the security key input screen appears on the computer, input the password shown on the display of the unit.



Windows

When the password input screen appears on the computer, input the password shown on the display of the unit.



Mac

- The **Wi-Fi** indicator on the unit lights when the Wi-Fi connection is established between the unit and the computer.

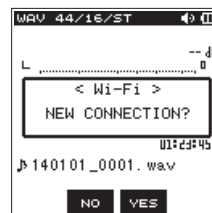
Connecting this unit to a computer by Wi-Fi after the first time

After the unit and the computer have been connected once, they can be connected again just by selecting the SS ID.

- Press the **Wi-Fi** button of the unit to make the **Wi-Fi** indicator blink.

A NEW CONNECTION? pop-up message appears on the display to determine whether or not the connection is new.

- Since the unit has been connected to the computer previously, press the **F2** **NO** button.






- When the pop-up message disappears from the display, the unit is waiting to connect to the computer.
- Click the wireless connection icon in the computer taskbar/menu bar (Windows/Mac) to open a list of wireless networks.
- Select the SSID shown on the unit's display.
- The Wi-Fi indicator on the unit lights when the Wi-Fi connection is established between the unit and a computer.

Transferring files from the unit to a computer


For details about the software download the TASCAM DR FILE TRANSFER Owner's Manual from the TEAC Global Site (<http://teac-global.com/>).

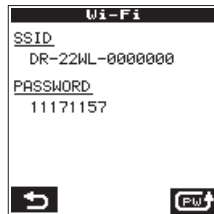
Changing password



The password for Wi-Fi connection can be changed for security purpose.

1. Press the **HOME/MENU/■** button to display the menu screen.
2. Press the **F1**  button to display the **SETUP** page.
3. Use the **F2**  and **F3**  buttons to select (highlight) the **Wi-Fi** item parameters.



4. Press the **F4**  button to display the **Wi-Fi** screen.




5. Each time when you press the **F4**  button, the password will change.
6. Press the **F1**  button to set the password. The screen will return to the **SETUP** page.

10 – Settings and Information




View information (INFORMATION)

The **INFO** page of the menu screen lists various information on the DR-22WL.

Follow the below steps to display the information:

1. Press the **↑/MENU/■** button to display the menu screen.
2. Use the **F1**  button to display the **INFO** page.



3. Use the **F2**  and **F3**  buttons to select (highlight) the item parameter of the information, and press the **F4**  button.

Below information will be displayed:

FILE INFO screen:

Displays information about the currently loaded audio file.

CARD INFO screen:

Displays information on the inserted microSD card.

VERSION screen:

Displays system settings and firmware version of the unit.

4. To return to the **INFO** page of the menu screen, press the **F4**  button.

File information screen (FILE INFO)

The **FILE INFO** screen displays the currently loaded audio file.



■ **FORMAT**

Displays the file type.

CBR/VBR will be displayed for MP3 files. (CBR: Constant Bit Rate, VBR: Variable Bit Rate)

■ **SAMPLE**

Displays the file's sampling rate.

■ **BIT WIDTH/BIT RATE**

Displays the file's bit width.

Bit rate (kbps) will be displayed for MP3 files.

■ **TYPE**

Displays the file type (stereo/mono).

■ **SIZE**

Displays the file size.

■ **DATE**

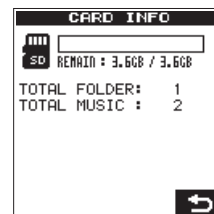
Displays the date of file creation .

■ **TIME**

Displays the recorded time.

Card information screen (CARD INFO)

The **CARD INFO** screen displays information on the inserted microSD card.



■ **REMAIN**

Displays available free space of the microSD card.

■ **TOTAL FOLDER**

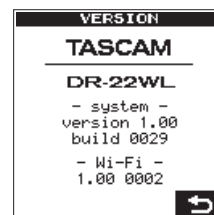
Displays the total number of folders in the music folder.

■ **TOTAL MUSIC**

Displays the number of playable files in the music folder.

System information screen (VERSION)

The **VERSION** screen displays system settings and firmware version of the DR-22WL.



■ **system**

Displays the system's firmware version.

■ **Wi-Fi**

Displays the Wi-Fi firmware version.

System Settings (SETUP)

The **SETUP** page allows you to make various settings for optimum use of the DR-22WL according to usage environment and conditions, as well as resetting the unit and formatting the microSD card.

Follow the below steps to display the **SETUP** page.

1. Press the **▲/MENU/■** button to display the menu screen.
2. Use the **F1** **TAB** button to display the **SETUP** page.



Use the **F2** **▲** button, the **F3** **▼** button, and the **F4** **ENTER** button to make settings for different items.

The following settings of different items can be made in the **SETUP** page.

Auto power save function setting

Use the **AUTO PWR SAVE** item to set the time for automatic turn-off, counting from the last operation.

Options: OFF (no automatic turn-off), 3min, 5min, 10min, 30min (default value)

Backlight setting

Use the **BACKLIGHT** item to set the time for automatic turn-off of back-light in battery operation, counting from the last operation.

Options: OFF (light-off), 5sec (default value), 10sec, 15sec, 30sec

Adjusting the display contrast

Use the **CONTRAST** item to adjust the display contrast.

Options: 1 - 20 (default value: 2)

Battery type settings

Use the **BATTERY TYPE** item to set the battery type. This setting is used to display the remaining battery power and to calculate the minimum capacity for normal operation.

Options: ALKAL (alkaline batteries, default value), Ni-MH (nickel-metal hydride batteries)

Restoring the DR-22WL to factory settings

Use the **INITIALIZE** item to execute initialization; this will restore the unit to factory settings.

1. Use the **F2** **▲** and **F3** **▼** buttons to select (highlight) the parameter of the **INITIALIZE** item and press the **F4** **ENTER** button.

The following confirmation message will pop-up:



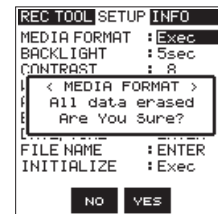
2. Press the **F3** **YES** button to execute initialization. Press the **F2** **NO** button to cancel the process.

Formatting the microSD card

Use the **MEDIA FORMAT** item to format the microSD card. Formatting will delete all music files in the microSD card, and the "MUSIC" folder, the "UTILITY" folder, and the "dr-1.sys" will be created automatically.

1. Use the **F2** **▲** and **F3** **▼** buttons to select (highlight) the parameter of the **MEDIA FORMAT** item, and press the **F4** **ENTER** button.

The following confirmation message will pop-up:



2. Press the **F3** **YES** button to format the microSD card. Press the **F2** **NO** button to cancel the process.



CAUTION

When formatting the microSD card, make sure that the DR-22WL is connected to either the dedicated AC adapter (TASCAM PS-P515U; sold separately) or the USB bus power from a computer, or operating on fully-charged batteries. Formatting may not complete successfully if the battery runs out.

10 – Settings and Information




Setting the file name type

The DR-22WL can set name types of the recording files.


1. Use the **F2**  and **F3**  buttons to select (highlight) the parameter of the **FILE NAME** item and press the **F4**  button.

The **FILE NAME** screen will be displayed.



2. Use the **◀◀** button and the **▶▶** button, the **F2**  button and the **F3**  button, and the **F4**  button to make settings for different items.

The following settings for each item can be made in this screen.

3. To return to the **SYSTEM** page of the menu screen, press the **F4**  button.

■ File name type

In the **TYPE** item, select either the **DATE** or **WORD** options.

Options:

DATE (default value): dates will be included in file name

Example: 140101_0000.wav



WORD : the six characters set in **WORD** will be included in file name

Example: TASCAM_0000.wav

NOTE


The internal clock of the unit is used to set dates. (See "Setting the date/time" on page 11.)

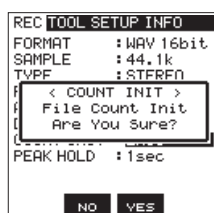
■ Setting characters (WORD)


In the **WORD** item, use either the **◀◀** button or the **▶▶** button to move the cursor, and use the **F2**  and the **F3**  buttons to set characters.

In addition to alphabets and numbers, the following characters can be used: ! # \$ % & ' () + , - . ; = @ ^ _ ' { } ~

■ Initializing the numbers (COUNT)

In **REC** page of the menu screen, select the parameter (highlight) the **COUNT INIT** item, and press the **F4**  button. The following confirmation message will appear:






Press the **F3**  button to reset the number that follows the characters to "0001".

11 – Messages

The following is a list of the pop-up messages.

The DR-22WL displays these pop-up messages according to the situation; refer to this list to learn more details and/or solutions.

Message	Details and solutions
Battery Empty	The batteries are empty. Replace the batteries.
Cannot overdub! See REC setting	Overdubbing in 96kHz WHV file with MP3 format is not possible. Select the WAV format for recording.
Can't Divide	The selected division point is not appropriate for DIVIDE action (the beginning and end of the track).
Card Error	The card cannot be recognized. Replace the card.
Card Full	The card has no empty space. Erase unnecessary files or transfer them to a computer.
Current File MP3	MP3 files cannot be divided.
Dup File Name	The name of the DIVIDE file to be created is identical to the name of the file that already exists in the same folder. The DIVIDE function adds "a" or "b" to the end of the file name. Before using the DIVIDE function, connect the DR-22WL to a computer and edit the file name.
File Full	The total number of folders and files exceeded the limit (5000). Delete unnecessary folders and files or move them to a computer.
File Name ERR	More than 200 characters has been added to the file name due to the DIVIDE function. The DIVIDE function adds "a" or "b" to the end of the file name. Before choosing the DIVIDE function, connect the unit to a computer and edit the file name to less than 198 characters.
File Not Found	The file cannot be found or damaged. Check the target file.
File Not Found Make Sys File	System files required to operate the DR-22WL is missing. To create system files, press the PLAY button while this message is displayed.
File Protected	The file is read-only and cannot be deleted.
Format Error Format CARD	The microSD card is not formatted properly or damaged. This message also appears when a computer under USB connection formatted the card, or when an unformatted card is inserted to the unit. Cards must be formatted with the DR-22WL. Insert a different card, or press the F4  button to start formatting. <u>Formatting will delete all data on the microSD card.</u>
Invalid Card Change Card	The card may not work properly. Replace the card.
Invalid SysFile Make Sys File	The system file required to operate this unit is invalid. To create new system files, press the F4  button while this message is displayed.

Message	Details and solutions
I/O Too Short	The IN (start) and OUT (end) points are too close. Re-set by spacing at least one second in between.
Layer too Deep	Folders can be created only up to two layers. You cannot create a new folder inside this folder.
Low battery, Wi-Fi OFF	The battery charge is low, so Wi-Fi cannot be used. Replace the batteries with new ones.
Max File Size	File size is larger than the designated size, or the recording time exceeded 24 hours.
MBR Error Init CARD	The card is not formatted properly or damaged. Insert a different card, or press the F4  button to start formatting. <u>Formatting will delete all data on the microSD card.</u>
No MUSIC File	There is no playback file.
No Card	A SD card is not set. Insert a recordable SD card.
No PB File	There are no files available for playback. The file may be damaged.
Non-Supported	The file type is not supported. Please refer to the 8 – Connecting with a computer 32 for compatible file types.
Write Timeout	Writing to the card timed out. Back up files to a computer and format the card.
Can't Save Data	Restart the unit when this error message appears. If the power cannot be turned off, remove the batteries, disconnect the AC adapter (TASCAM PS-P515U; sold separately), or disconnect the USB cable when in bus power supply. If these error messages appear frequently, please contact the TEAC Repair Center.
Device Error	
File Error	
Not Continued	
Player Error	
Writing Failed	
Sys Rom Err	
System Err 50	
System Error 1	
System Error 2	
System Error 3	
System Error 4	
System Error 5	
System Error 6	
System Error 7	
System Error 8	
System Error 9	

12 – Troubleshooting

When the DR-22WL does not operate properly, check the followings before make a repair request. If you still have a problem, contact either the store you purchased the DR-22WL or the TEAC repair center (see the back cover for contact details).

■ The power does not turn on

- Are batteries low?
- Are batteries inserted correctly with the ⊕, ⊖ terminals aligned correctly?
- Is the AC adapter (TASCAM PS-P515U; sold separately) securely connected to the outlet? Is the USB connector connected securely?
- Is the USB cable connecting the computer for USB bus power securely connected?
- Is the USB hub in use with computer connection for USB bus power?

■ The DR-22WL turn the power off automatically

- Is the automatic power saving function on? (See “Auto power save function setting” on page 39.)
- The DR-22WL is in compliance with the European Standby Power Regulations (ErP), and therefore, the automatic power saving function will work whether the unit is being powered by an AC adapter or batteries. Select “OFF” if you do not want to use the auto power saving function (the factory default setting is “30 min”).

■ The unit does not function.

- Is the **HOLD**/⏻/⏻ switch set at **HOLD**?
- Is the unit connected to a computer via USB cable (USB Connected)?

■ The microSD card is not recognized.

- Check that the microSD card is inserted correctly.

■ The DR-22WL don't play back

- If the file is WAV format, check whether its sampling rate is compatible with the unit.
- If the file is MP3 format, check whether the bit rate is compatible with the unit.

■ The built-in speaker does not emit sound

- Is a headphone connected to the unit?
- Is the **SPEAKER** item set as **OFF**?
- Is the unit in recording or recording standby mode?

■ The monitor system does not emit sound

- Is the monitoring system securely connected?
- Is the monitoring system volume at minimum level?
- Is the **OUTPUT LEVEL** setting of the unit at minimum level?

■ The DR-22WL is not recording

- Check the connection again.
- Check the input settings again.
- Is the recording level too low?
- Does the microSD card has free space?
- Check whether the number of files has reached the maximum level.

■ The input level is too low

- Is the input level setting too low?
- Is the output level of the connected device too low?

■ The sound I want to record is distorted

- Is the input level setting too high?
- Is reverb setting ON?

■ Playback sound is not natural

- Is the playback speed changed?
- Is the level control function ON?
- Is reverb setting ON?

■ The file cannot be deleted

- Is the file a copy of a read-only file set by a computer?

■ The computer does not display the unit's files

- Is the DR-22WL connect to a computer via USB port?
- Is USB hub in use?
- Is the unit in recording or recording standby mode?

■ The DR-22WL cannot make a Wi-Fi connection or communication is interrupted

- Check that the Wi-Fi device is turned ON and/or the Wi-Fi function is ON.
- Is the distance to the Wi-Fi device too far?
Is there any obstacles in between, for example a wall?
When a Wi-Fi device is located at the rear side of the DR-22WL, the unit itself maybe the cause of interruption.
Try changing the positions of the Wi-Fi device and the unit.
- Turn OFF and restart the DR-22WL.
- Delete the “DR-22WL” registered information in the Wi-Fi device, and follow the steps in “Connecting the unit to a Wi-Fi device.”

Rating

■ Recording media

microSD card (64 MB–2 GB)
microSDHC card (4 GB–32 GB)
microSDXC card (48 GB–128 GB)

■ Recording/playback formats

BWF: 44.1k/48k/96kHz, 16/24 bit
WAV: 44.1k/48k/96kHz, 16/24 bit
MP3: 44.1k/48 kHz, 32k/64k/96k/128k/192k/256k/320kbps

■ Number of channels

2 channels (stereo)

Input/output ratings

Analog audio input and output ratings

■ MIC/EXT IN jack (can provide plug-in power)

Connector: 1/8" (3.5 mm) stereo mini jack
Input impedance: 25 k Ω
Reference input level: –20dBV
Maximum input level: –4dBV

■ /LINE OUT jack

Connector: 1/8" (3.5 mm) stereo mini jack
Output impedance: 12 Ω
Reference output level: –14dBV (with 10k Ω load)
Maximum output level: +2dBV (with 10k Ω load)
Maximum output: 20mW+20mW (with 32 Ω load)

■ Built-in speaker

0.3W (mono)

Control input/output ratings

■ USB port

Connector: Micro-B type
Format: USB 2.0 HIGH SPEED mass storage class

Audio performance

■ Frequency response

20-20 kHz +1/-3 dB (EXT IN to LINE OUT, Fs44.1 kHz, JEITA)
20-22kHz +1/-3 dB (EXT IN to LINE OUT, Fs48kHz, JEITA)
20-40kHz +1/-3 dB (EXT IN to LINE OUT, Fs96kHz, JEITA)

■ Distortion

0.05% or less (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

■ S/N ratio

92dB or above (EXT IN to LINE OUT, Fs44.1k/48k/96kHz, JEITA)

Note) Based on JEITA: JEITA CP-2150

Requirements for connected computers

Please visit the TEAC Global Site (<http://teac-global.com>) to learn the latest compatible OS.

■ Windows

Pentium 300MHz or more
128MB or more memory
USB port (USB2.0 is recommended)

■ Mac

Power PC, iMac, G3, or G4 with 266MHz or above
64MB or more memory
USB port (USB2.0 is recommended)

■ Recommended USB host controller

Intel chip set

■ Supported operating systems

Windows: Windows XP, Windows Vista, Windows 7,
Windows 8 (including 8.1)
Macintosh: Mac OS X 10.2 or later

Wi-Fi

■ Wireless standard

Based on IEEE 802.11b/g/n (2.4GHz only)

■ Wireless communication mode

Simple access point (Limited AP)

■ Security

WPA2-PSK (WPS2.0 compatible)

13 – Specifications

General

■ Power supply

- 2 AA batteries (alkaline or NiMH)
- USB bus power from a computer
- Dedicated AC adapter (TASCAM PS-P515U; sold separately)

■ Current consumption

- 0.5 A (maximum)

■ Battery operation time (continuous operation)

- Alkaline batteries (EVOLTA)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 17.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 11 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 11 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 11 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

- Using NiMH batteries (eneloop)

Format	Operation time	Note
Recorded in WAV, 96kHz, 24bit	About 9 hours	Input from the built-in microphone
Recorded in WAV, 44.1kHz, 16bit	About 13.5 hours	Input from the built-in microphone
Recorded in MP3 format, 44.1kHz, 128kbps	About 12 hours	Input from the built-in microphone
Recorded in MP3 format, 48kHz, 320kbps	About 11 hours	Input from the built-in microphone
Playback in WAV, 96kHz, 24bit	About 12 hours	When using a headphone
Playback in WAV, 44.1kHz, 16bit	About 13.5 hours	When using a headphone
Playback in MP3 format, 44.1kHz, 128kbps	About 10 hours	When using a headphone
Playback in MP3 format, 48kHz, 320kbps	About 10 hours	When using a headphone

Recording: JEITA recording time Playback: JEITA music playback time

■ Dimensions

- 52.2 × 155 × 36.6mm (W x H x D)

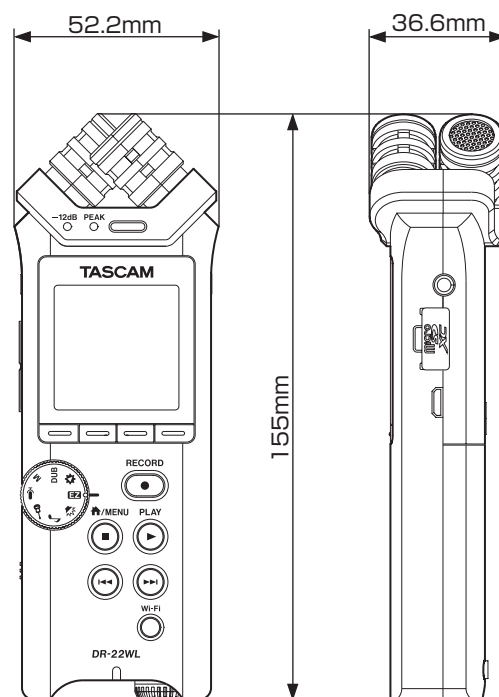
■ Weight

- 170 g/123 g (with batteries/without batteries)

■ Operating temperature

- 0°C–40°C

Dimensional drawings



- Illustrations in this manual may be different from the actual product.
- To improve the product, specifications and external appearance may change without prior notice.

TASCAM

TEAC CORPORATION

Phone: +81-42-356-9143
1-47 Ochiai, Tama-shi, Tokyo 206-8530 Japan

<http://tascam.jp/>

TEAC AMERICA, INC.

Phone: +1-323-726-0303
1834 Gage Road, Montebello, California 90640 USA

<http://tascam.com/>

TEAC MEXICO, S.A. de C.V.

Phone: +52-55-5010-6000
Río Churubusco 364, Colonia Del Carmen, Delegación Coyoacán, CP 04100, México DF, México

<http://teacmexico.net/>

TEAC UK Ltd.

Phone: +44-8451-302511
2 Huxley Road, Surrey Research Park, Guildford, GU2 7RE, United Kingdom

<http://tascam.eu/>

TEAC EUROPE GmbH

Phone: +49-611-71580
Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany

<http://tascam.eu/>

TEAC SALES & TRADING(SHENZHEN) CO., LTD

Phone: +86-755-88311561~2
Room 817, Block A, Hailun Complex, 6021 Shennan Blvd., Futian District, Shenzhen 518040, China

<http://tascam.cn/>