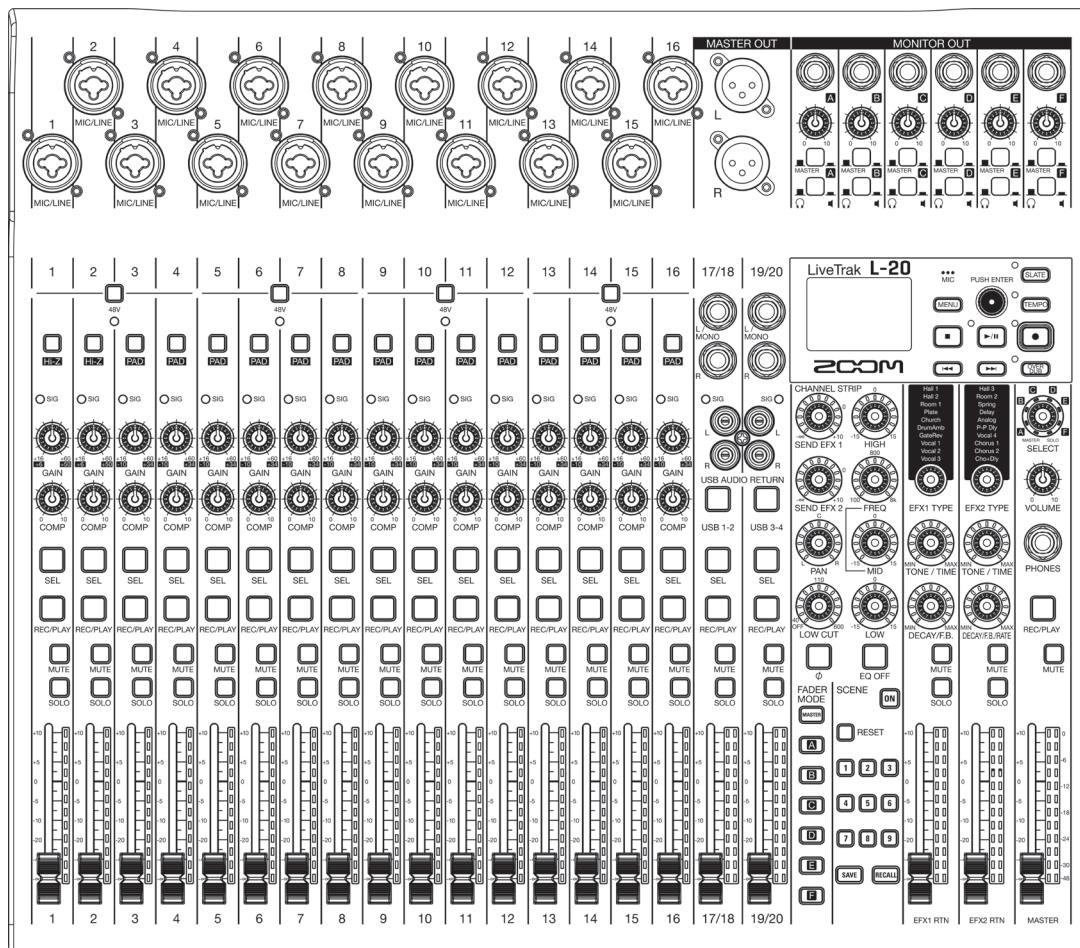


ZOOM®

L-20

LiveTrak



Operation Manual

You must read the Usage and Safety Precautions before use.

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■ Operation Manual overview

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Introduction

Thank you very much for purchasing a ZOOM **L-20** LiveTrak (hereafter, "**L-20**").The **L-20** has the following features.

20-channel digital mixer & multitrack recorder

The **L-20** combines a digital mixer with 20 total input channels (16 mono and 2 stereo), a multitrack recorder that can simultaneously record up to 22 tracks, and a 22-in/4-out USB audio interface. Compact and lightweight, this digital mixer is easy to transport and can even be used with PA systems for live performances in rehearsal studios, cafés and other small venues.

High-quality mic preamps

The **L-20** has high-quality mic preamps built-in for 16 channels. The high-quality analog inputs, which can provide +48V phantom power, have a -128dBu EIN rating and +60dB maximum input gain. In addition, channels 1 and 2 also support Hi-Z input, while channels 3 to 16 have PAD functions (26dB attenuation), enabling them to accept high levels of input.

6 MONITOR OUT channels

In addition to the MASTER OUT, the **L-20** also has 6 MONITOR OUT channels. The MONITOR OUT mixes can be set separately for each output, enabling different mixes to be sent to individual performers. Moreover, they support output to both headphones and monitor speakers.

Digital mixer that can be operated intuitively

Opening menus is not necessary with the **L-20**. Every mixer parameter can be controlled with knobs and keys just like an analog mixer. Each channel has a 3-band EQ, and the mono channels have compressor functions. The mixer also includes high-quality send effects. In addition, up to 9 mixer status scenes can be saved in the unit.

Recorder can simultaneously record 22 tracks and play 20 tracks

The **L-20** can simultaneously record every channel and the master fader stereo signal output for a total of 22 tracks. Since the recorded data is saved in 16/24-bit, 44.1/48/96kHz WAV format, the files can easily be copied to a computer and used in a DAW. In addition, overdubbing and punching in/out can be done as expected with a multitrack recorder.

22-in/4-out USB audio interface

The **L-20** can be used as a 22-in/4-out USB audio interface. The signals from each input and the master fader output can be recorded in a DAW. In addition, signals output from a computer can also be assigned to a stereo channel.

Class compliant mode, which enables connection with iOS devices, is also supported.

Operate the **L-20** from an iPad using a controller app

By connecting a BTA-1 or other ZOOM-specific wireless adapter (sold separately) and using the dedicated controller app, the **L-20** can be operated from an iPad. See the ZOOM website (www.zoom.co.jp) for the controller app.

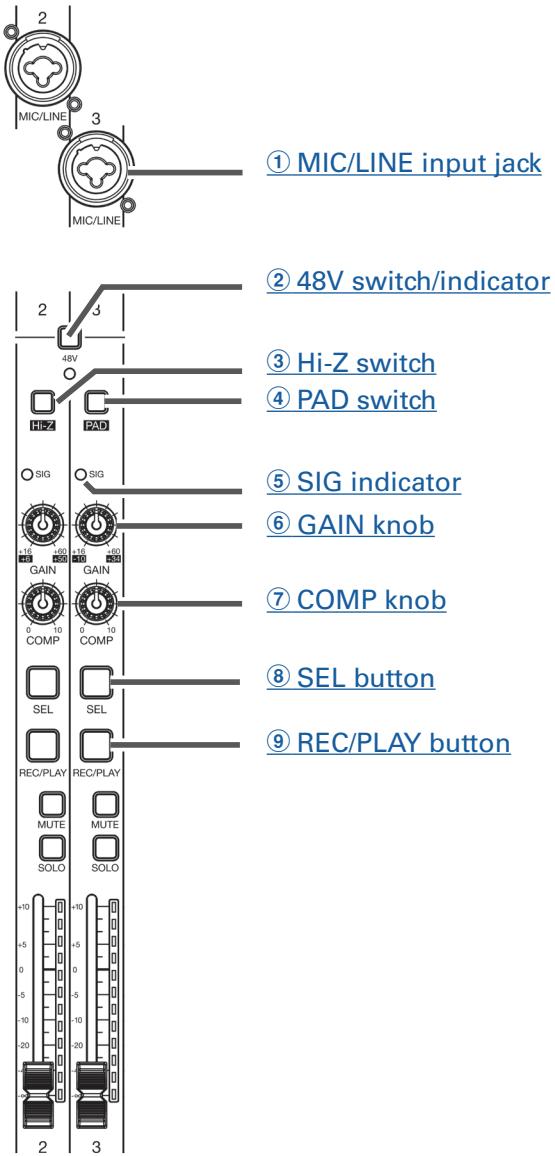
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Names and functions of parts

Top

Input channel section



① MIC/LINE input jack

These input jacks have built-in mic preamps. Connect mics, keyboards and guitars to them. These can be used with both XLR and 1/4-inch (balanced or unbalanced) phone plugs.

② 48V switch/indicator

This turns +48 V phantom power on or off. Turn this on () to supply phantom power to MIC/LINE input jacks 1–4, 5–8, 9–12 or 13–16.

The indicator lights when the switch is on.

③ Hi-Z switch

Use to switch the input impedance of MIC/LINE input jack 1 (or 2).

Turn it on (■) when connecting a guitar or bass guitar.

④ PAD switch

This attenuates (reduces) the input signal of the equipment connected to the MIC/LINE input jack by 26 dB.

Turn this on (■) when connecting line level equipment.

⑤ SIG indicator

This indicator shows the signal level after adjustment by the GAIN knob.

The indicator color changes according to the signal level. Adjust so that it does not light red.

Lit red: input signal level is close (-3 dBFS or higher) to the clipping level (0 dBFS)

Lit green: input signal level is between -48 dBFS and -3 dBFS compared to the clipping level (0 dBFS)

⑥ GAIN knob

Use to adjust the input gain of the mic preamp.

The range of adjustment depends on the on/off status of the MIC/LINE input jack switch (Hi-Z on channels 1–2 or PAD on channels 3–16).

Jack	Adjustment range	
MIC/LINE input jack 1–2 (XLR)	+16 – +60 dB	
MIC/LINE input jack 1–2 (TRS)	Hi-Z off	+16 – +60 dB
	Hi-Z on (TS)	+6 – +50 dB
MIC/LINE input jack 3–16	PAD off	+16 – +60 dB
	PAD on	-10 – +34 dB

⑦ COMP knob

Use to adjust the amount of compression.

⑧ SEL button

Use to select a channel for parameter adjustment in the channel strip section.

Channels with lit SEL buttons are affected by channel strip section adjustments.

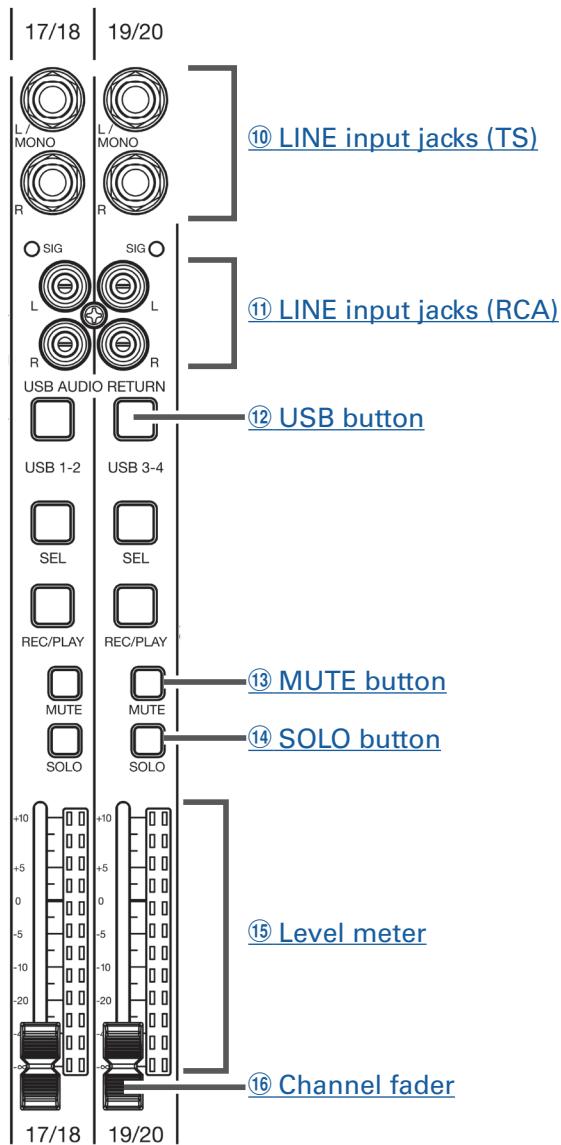
⑨ REC/PLAY button

Use this button to switch between recording input signals to the SD card and playing back an already recorded file from the SD card.

Status	Explanation
Lit red	Input signals will be recorded to the SD card.
Lit green	An already recorded file will be played back. Playback signals are input before the equalizer. In this state, only files are played back. Signals from input jacks are disabled.
Unlit	Files will neither be recorded nor played back.

NOTE

Recorded signals can be set to either before or after the compressor. (→ "Changing the input signal recording source")



(10) LINE input jacks (TS)

Use these input jacks to connect line level equipment. For example, connect keyboards or audio devices.

These can be used with 1/4-inch (unbalanced) phone plugs.

NOTE

If only the left LINE input jack (TS) channel is connected, it will be handled as a mono channel.

(11) LINE input jacks (RCA)

Use these input jacks to connect line level equipment. For example, connect audio devices.

These can be used with RCA pin connectors.

NOTE

If both the RCA and TS LINE input jacks are connected, the TS input jacks will be used.

⑫ USB button

This switches the signals input to channels 17/18 (or 19/20).

Lit: audio return signal output from the computer

Unlit: LINE input jacks

NOTE

Connect the **L-20** to a computer as an audio interface. (→ "Connecting to a computer")

⑬ MUTE button

This mutes or unmutes signals.

To mute the channel, press this button to light it.

HINT

This has no effect on recording to the SD card.

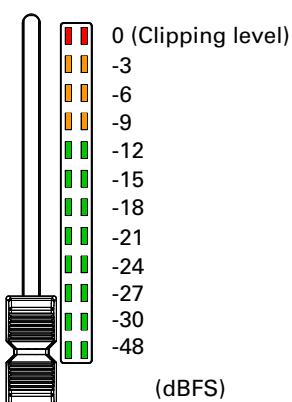
⑭ SOLO button

When a SOLO button is ON, the pre-fader signal can be heard from the PHONES jack. At such times, the SELECT knob will automatically select SOLO.

⑮ Level meter

This shows the signal level after adjustment by the channel fader.

Range shown: -48 dB – 0 dB



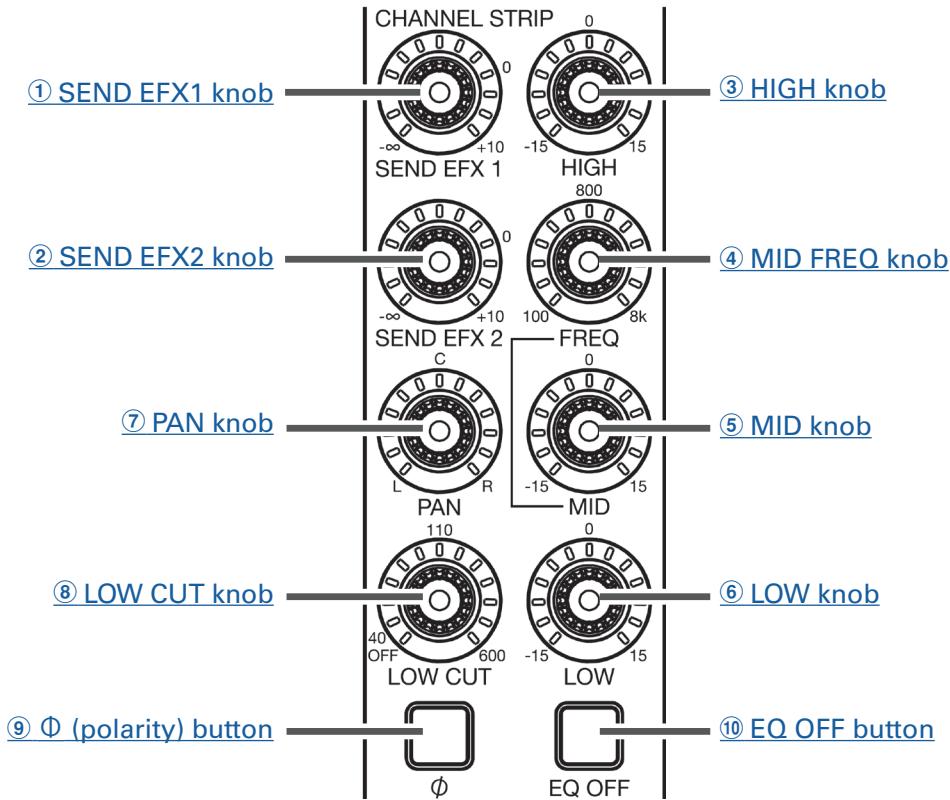
NOTE

If the actual channel fader position differs from the channel fader position recalled using the scene function, for example, the level meter will show the recalled fader position.

⑯ Channel fader

This adjusts the channel signal level in a range from $-\infty$ to +10 dB.

CHANNEL STRIP section



① SEND EFX1 knob

The amount that can be sent to the SEND EFX 1 bus can be set from $-\infty$ to +10 dB.

② SEND EFX2 knob

The amount that can be sent to the SEND EFX 2 bus can be set from $-\infty$ to +10 dB.

③ HIGH knob

This adjusts the boost/cut of high-frequency equalization.

Type: shelving

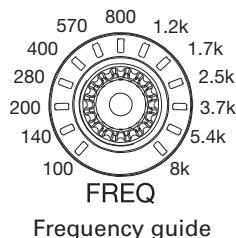
Gain range: -15 db – +15 dB

Frequency: 10 kHz

④ MID FREQ knob

This adjusts the central frequency of the mid frequency equalization.

Frequency: 100 Hz–8 kHz



⑤ MID knob

This adjusts the boost/cut of mid-frequency equalization.

Type: peaking

Gain range: -15 db – +15 dB

Frequency: set by MID FREQ knob

⑥ LOW knob

This adjusts the boost/cut of low-frequency equalization.

Type: shelving

Gain range: -15 db – +15 dB

Frequency: 100 Hz

⑦ PAN knob

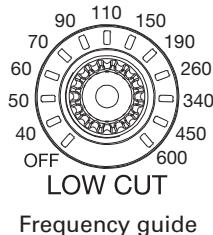
This adjusts the position in the stereo output bus.

On a stereo input channel, this adjusts the volume balance between the left and right channels.

⑧ LOW CUT knob

This adjusts the high-pass filter, which cuts low frequencies. Signals below the set frequency are attenuated 12 dB/octave. Turning the LOW CUT knob left so that all the LEDs around it become unlit turns off the LOW CUT.

Frequency: OFF, 40–600 Hz



Frequency guide

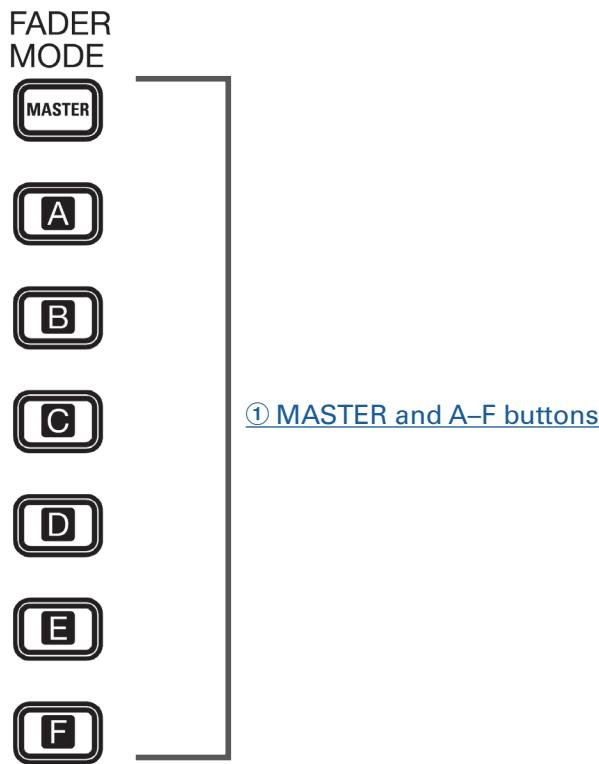
⑨ Φ (polarity) button

This reverses the polarity of the selected channel.

⑩ EQ OFF button

When this button is lit, HIGH, MID, LOW and LOW CUT are bypassed.

FADER MODE section



① MASTER and A–F buttons

These switch between the mixes output from the MASTER OUT and MONITOR OUT A–F jacks.

MASTER button: Use to show and adjust the mix output from the MASTER OUT jacks.

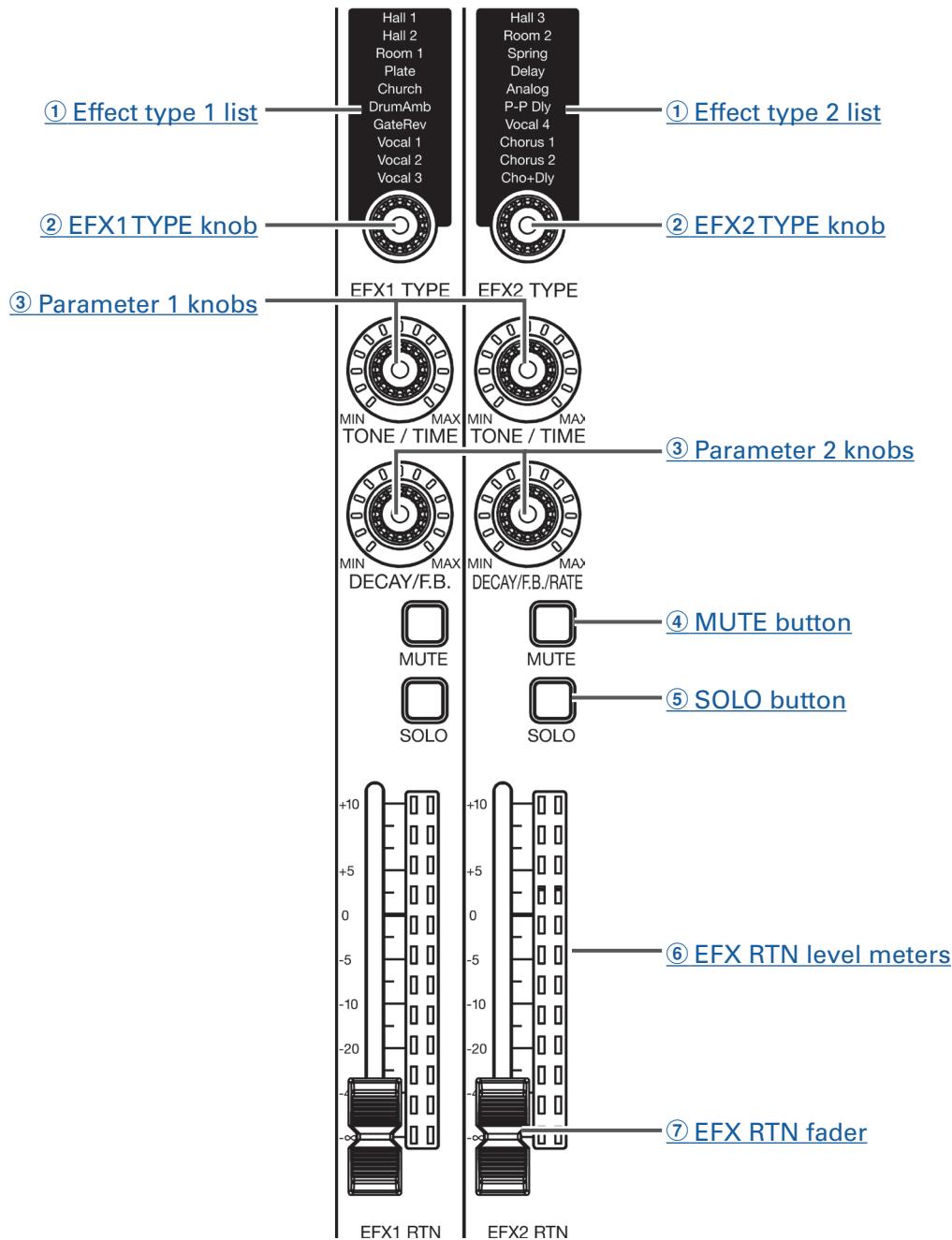
A–F buttons: Use to show and adjust the mixes output from the MONITOR OUT A–F jacks.

NOTE

The following parameters can have separate settings for the MASTER and A–F mixes.

- Fader positions (each channel)
- EFX1/2 RTN positions

Send effect (SEND EFX) section



① Effect 1/2 type lists

These are lists of the built-in effects. The effects are separated into two sets, and one effect from each set can be used.

The names of the currently selected effects light. An effect name blinks when being selected.

If some time passes without a different effect being selected, the previously selected effect will remain selected.

② EFX1/EFX2 TYPE knobs

Use to select the built-in effects.

Turn these knobs to select effect types, and press them to confirm.

③ Parameter 1 and 2 knobs

Use these to adjust the parameters for the selected effects.

See "Send effect specifications" for the parameters of each effect.

④ MUTE button

This mutes or unmutes the signal sent from the built-in effect.

To mute the channel, press this button to light it.

⑤ SOLO button

When a SOLO button is ON, the signal before the EFX 1/2 RTN fader can be heard from the PHONES jack. At such times, the SELECT knob will automatically select SOLO.

⑥ EFX RTN level meters

These show the levels of the signals sent from the built-in effect to the master bus after adjustment by the EFX RTN fader. Their range is from -48 dB to 0 dB.

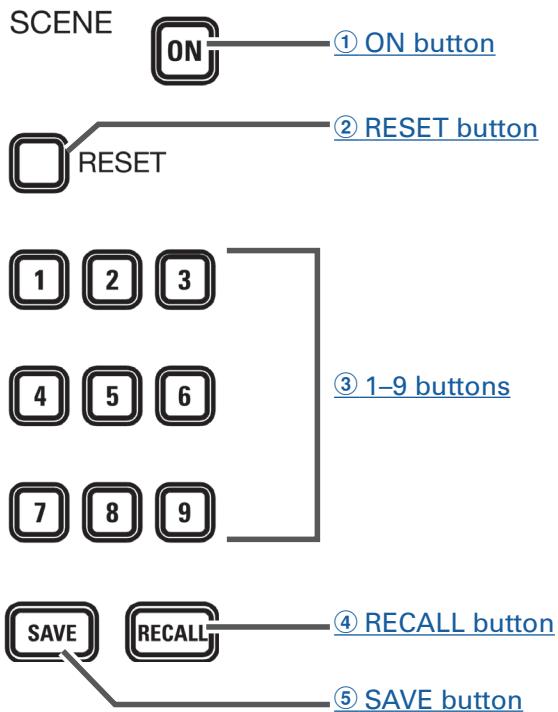
⑦ EFX RTN fader

This adjusts the levels of the signals sent from the built-in effect to the master bus in a range from $-\infty$ dB to +10 dB.

NOTE

If the actual channel fader position differs from the channel fader position recalled using the scene function, for example, the level meter will show the recalled fader position.

SCENE section



(1) ON button

Press this button, lighting it, to use the scene function

(2) RESET button

Press this button to reset the current mixer settings to the factory defaults.

(3) 1–9 buttons

Use these buttons to select the scene to use to save the current mixer settings and to load saved scenes.

If the current mixer settings match the settings of a scene, the corresponding number button will light. This unit can save up to 9 scenes.

(4) RECALL button

Use this button when loading scenes saved to buttons 1–9.

When this button is pressed, buttons 1–9 will blink if they have saved scenes and be unlit if they do not.

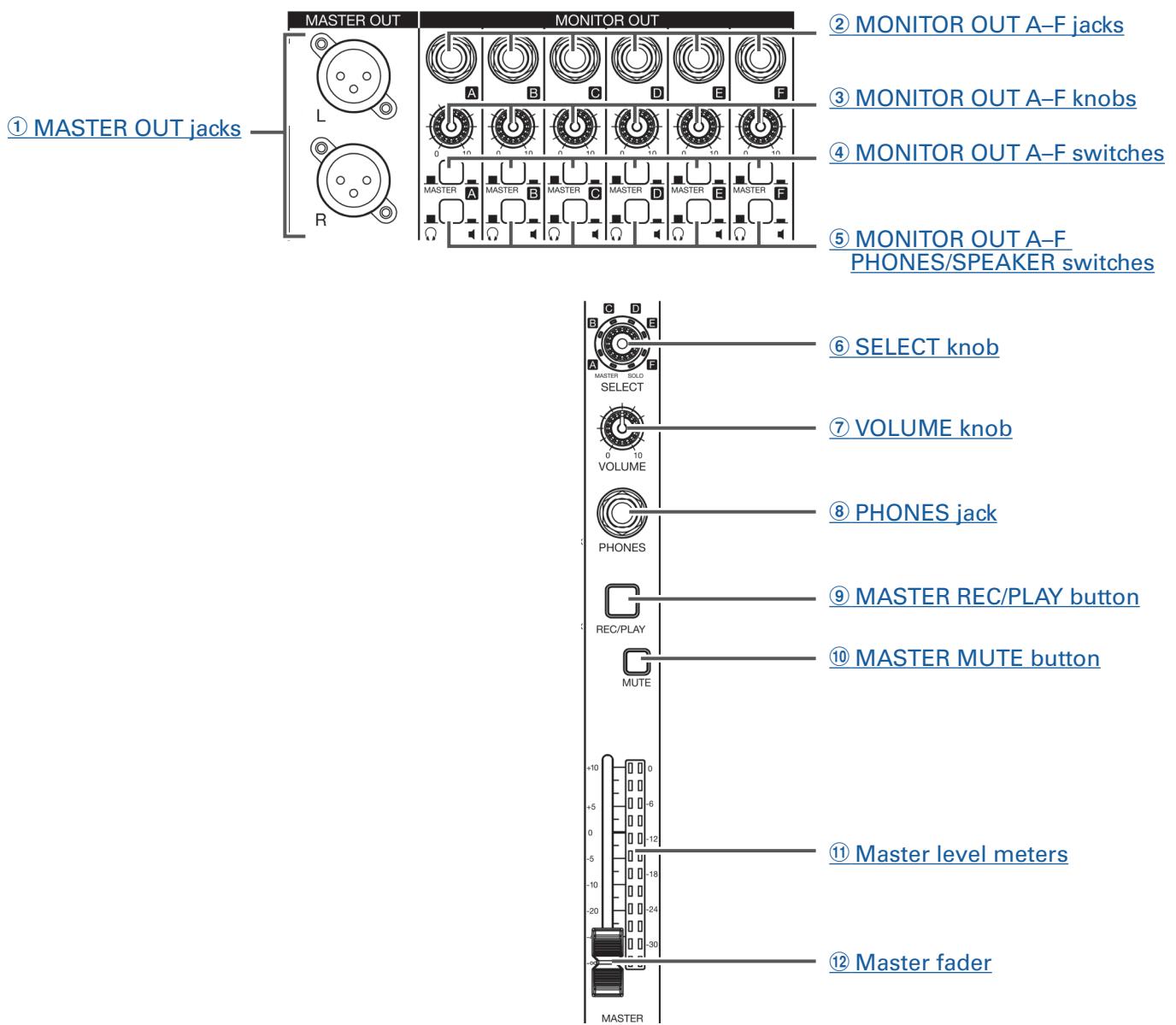
To recall a saved scene, press a blinking button between 1 and 9. To cancel recalling a scene, press the RECALL button again.

(5) SAVE button

Use this button when saving the current mixer settings to a scene.

When this button is pressed, buttons 1–9 will light if they have saved scenes and blink if they do not. To save a scene, press a button between 1 and 9 to save it to that number. To cancel saving a scene, press the SAVE button again.

Output section



① MASTER OUT jacks

These jacks output signals after volume adjustment by the master fader.

Connect them to a power amplifier, a PA system or speakers with built-in amplifiers, for example.

These support balanced output with XLR connectors (2 HOT).

② MONITOR OUT A-F jacks

These jacks output signals after volume adjustment by the MONITOR OUT A-F knobs.

Connect monitor speakers or headphones for performers here.

These support balanced 1/4-inch phone jack output.

NOTE

- The MONITOR OUT A-F jacks can be set to output the same signals as the MASTER OUT jacks or the signals set separately in the fader mode section. (→ "Setting signals output from MONITOR OUT A-F")
- Set the MONITOR OUT A-F PHONES/SPEAKER switch according to the type of connected equipment.

③ MONITOR OUT A–F knobs

Use to adjust the volumes of the signals output from the MONITOR OUT A–F jacks.

④ MONITOR OUT A–F switches

These switch the signals output from the MONITOR OUT A–F jacks.

Status	Explanation
MASTER (■)	The signal after adjustment by the master fader will be output.
A–F (■)	The signals set in the FADER MODE section are output.

⑤ MONITOR OUT A–F PHONES/SPEAKER switches

Use these to select the type of equipment connected to the MONITOR OUT A–F jacks.

Status	Explanation
Headphones (■)	Select this when headphones are connected. A stereo signal is output from the MONITOR OUT A–F jack.
Speaker (■)	Select this when speakers are connected. A mono balanced signal is output from the MONITOR OUT A–F jack.

⑥ SELECT knob

Use this to select the signal output from the PHONES jack.

The options are MASTER, SOLO and MONITOR OUT A–F.

Status	Explanation
MASTER	The same signals as the MASTER OUT are output.
A–F	The signals set in the FADER MODE section are output.
SOLO	The signals of SOLO enabled channels are output.

NOTE

When a SOLO button is activated, this knob will also automatically select SOLO. At such times, changing the output with the SELECT knob will cancel soloing.

⑦ VOLUME knob

Use this to adjust the volume of the PHONES jack.

⑧ PHONES jack

Connect headphones here.

⑨ MASTER REC/PLAY button

Use this button to switch between recording the signal input on the master bus to the SD card and playing back an already recorded file from the SD card.

Status	Explanation
Lit red	The signal will be recorded to the SD card after adjustment by the master fader.
Lit green	The playback signal of a file is inserted on the master bus. The REC/PLAY buttons of other channels will be unlit at this time.
Unlit	Files will neither be recorded nor played back.

⑩ MASTER MUTE button

This mutes or unmutes the MASTER OUT jacks. To mute the channel, press this button to light it.

⑪ Master level meters

These show the signal levels output from the MASTER OUT jacks in a range from –48 dB to 0 dB.

⑫ Master fader

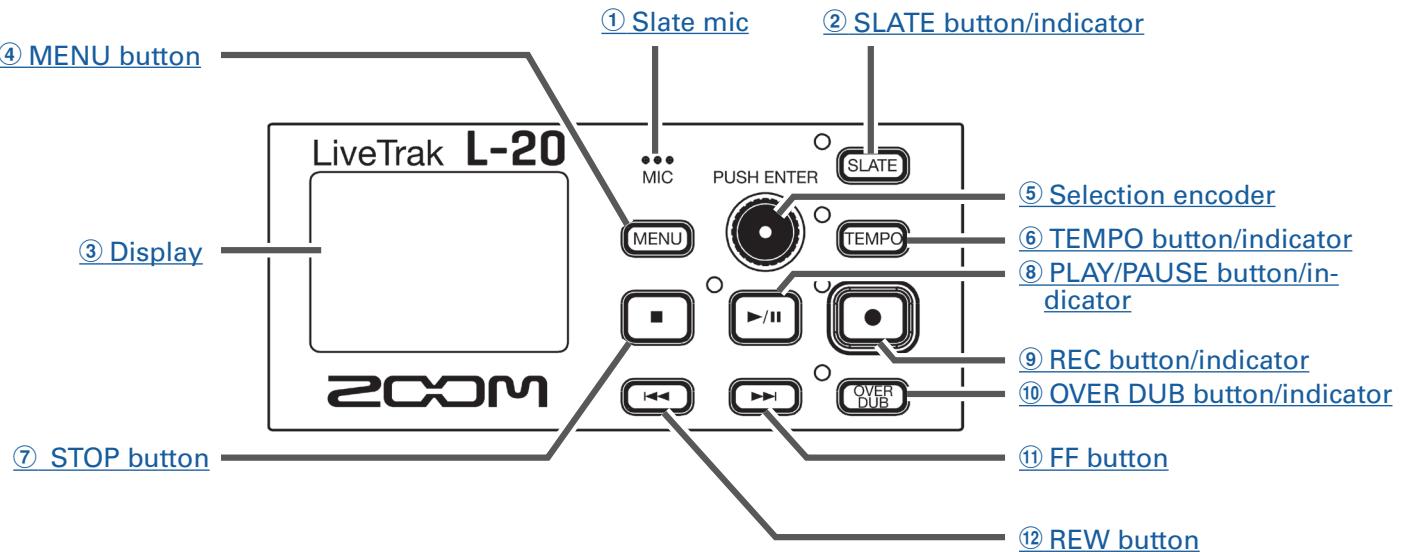
This adjusts the signal levels output from the MASTER OUT jacks in a range from $-\infty$ to +10 dB.

NOTE

If the actual channel fader position differs from the channel fader position recalled using the scene function, for example, the level meter will show the recalled fader position.

When AUTO REC is activated, however, the master fader position will not be shown.

RECORDER section



① Slate mic

This is a built-in mic for recording comments.

This mic input is active while the SLATE button is being pressed.

It can be set to record on channels 1–20, the MASTER channel or all channels. (→ "Changing the slate mic routing")

② SLATE button/indicator

This activates the slate mic.

The slate mic is activated while this button is being pressed and its indicator is lit.

③ Display

This shows the recorder status and MENU screen.

④ MENU button

This opens the menu.

⑤ Selection encoder

Use this to change menus and values and to move between items.

Operation	Result
Turn when Home Screen open	Search forward or backward in one-second increments.
Press when Home Screen open	Set a mark.
Turn when menu open	Move between parameters and change values.
Press when menu open	Confirm parameter value.

⑥ TEMPO button/indicator

This sets the tempo of the metronome built into the recorder.

Press this button to make the recorder detect the tempo from the average value.

The indicator blinks at a tempo of 40.0–250.0 bpm during recording, playback and when one of the following effects that synchronize with tempo is selected.

Effects that synchronize with the tempo: Delay, Analog, P-P Dly

Metronome settings (→ "Changing metronome settings")

⑦ STOP button

This stops the recorder.

⑧ PLAY/PAUSE button/indicator

This starts and pauses recorder playback. The indicator shows the playback status as follows.

Status	Explanation
Lit green	The recorder is playing back.
Blinking green	Playback is paused.

⑨ REC button/indicator

This puts the recorder in recording standby. The indicator shows the recording status as follows.

Status	Explanation
Lit red	The recorder is recording or in recording standby.
Blinking red	Recording is paused.

⑩ REW button

Press to move to the previous mark.

If no mark is set, this moves to the beginning. Press this button when at the beginning to move to the previous project.

Press and hold to search backward. (The longer you press, the faster the speed becomes.)

⑪ FF button

Press to move to the next mark.

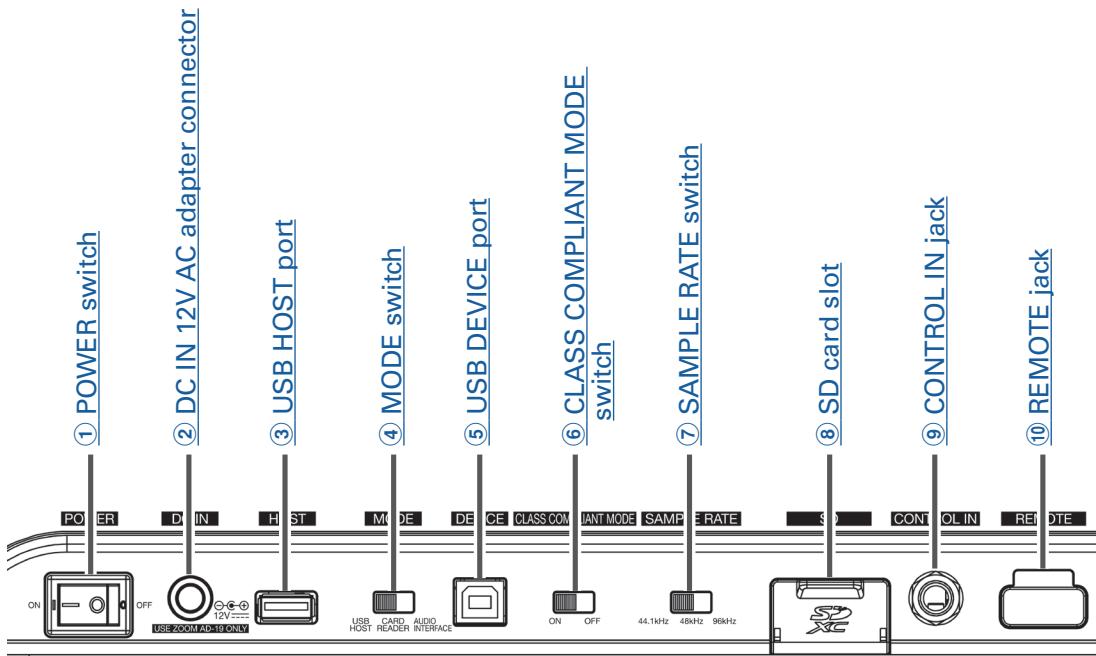
If it is the last mark, this moves to the end of the file. Press this button again to move to the next project.

Press and hold to search forward. (The longer you press, the faster the speed becomes.)

⑫ OVER DUB button/indicator

Status	Explanation
Lit (ON)	Record by overwriting into the current project folder.
Unlit (OFF)	Create a new project folder and make a new recording.

Rear panel



① POWER switch

This turns the unit on and off.

Switch to — to turn the power on. Switch to ○ to turn the power off.

When the POWER switch setting is changed to OFF, the current mixer settings are automatically saved in the unit and in the settings file in the project folder on the SD card.

② DC IN 12V AC adapter connector

Connect the included AC adapter here.

③ USB HOST port

This USB 2.0 HOST port is for connecting USB flash drives.

Projects and audio files can be saved on and loaded from connected USB flash drives.

④ MODE switch

Set whether to use as a USB HOST, card reader or audio interface.

This cannot be changed after starting up.

⑤ USB DEVICE port

This USB 2.0 port is for connecting with a computer.

It will start up as a card reader or audio interface, depending on the MODE switch selection.

Card reader mode

Operating as an SD card reader, data can be exchanged with a computer.

Audio interface mode

Operating as an audio interface, audio data can be exchanged with a computer.

Inputs: The signals from channels 1–20 after they pass through their compressors and the master fader output signals are input to the computer.

Outputs: Outputs from the computer can be assigned to channels 17/18 and 19/20.

Use when connected to an iOS device is possible if the CLASS COMPLIANT MODE switch is set to ON.

⑥ CLASS COMPLIANT MODE switch

Use this to turn Class Compliant Mode ON/OFF.

Set it to ON when connected to an iOS device.

⑦ SAMPLE RATE switch

Set the sampling rate used by the unit.

This cannot be changed after starting up.

⑧ SD card slot

This slot is for SD cards.

The **L-20** supports SDHC and SDXC card specifications.

HINT

You can test whether an SD card can be used with the **L-20**. (→ "Testing SD card performance")

⑨ CONTROL IN jack

A footswitch (ZOOM FS01) can be connected here.

The footswitch can be assigned to one function: starting/stopping recorder playback, manually punching in/out or muting/unmuting the built-in effect. (→ "Setting the footswitch")

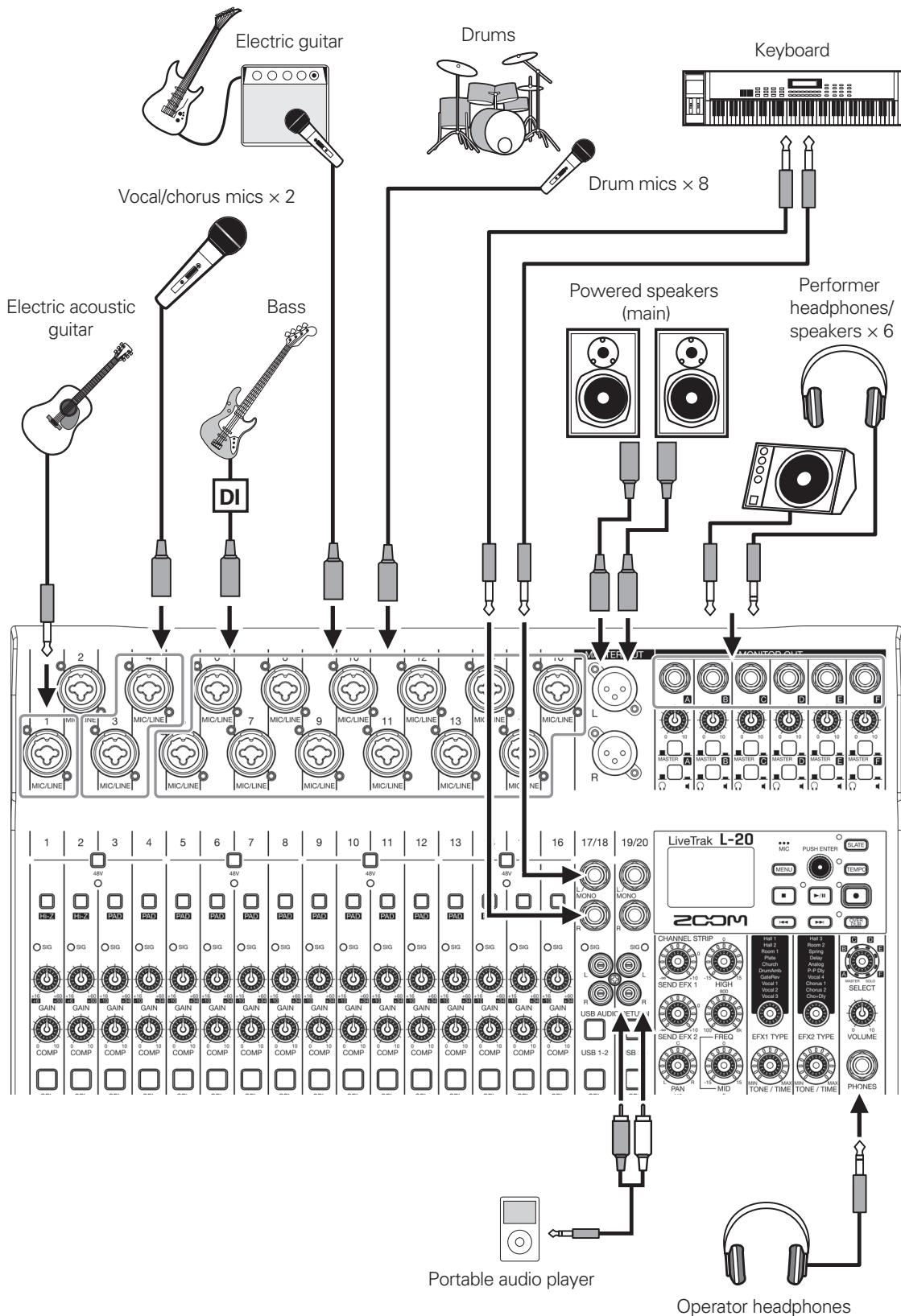
⑩ REMOTE jack

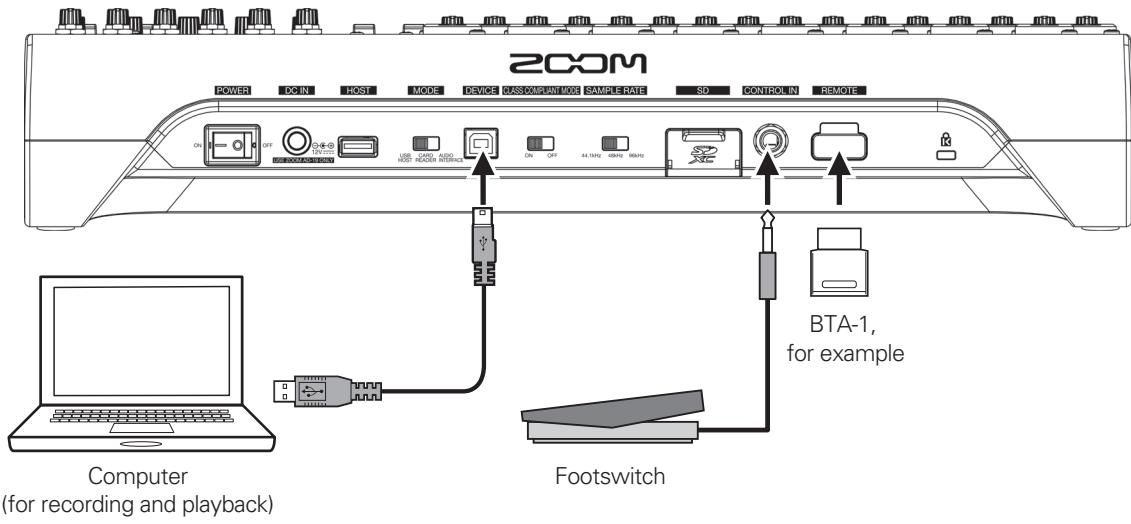
A BTA-1 or other ZOOM-specific wireless adapter (sold separately) can be connected here.

This enables operation of the **L-20** from an iPad using a controller app

Equipment connection examples

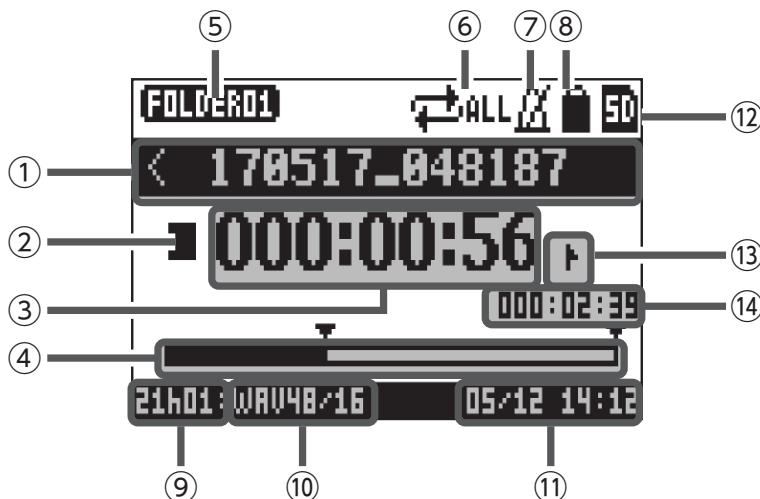
Live PA system





Display overview

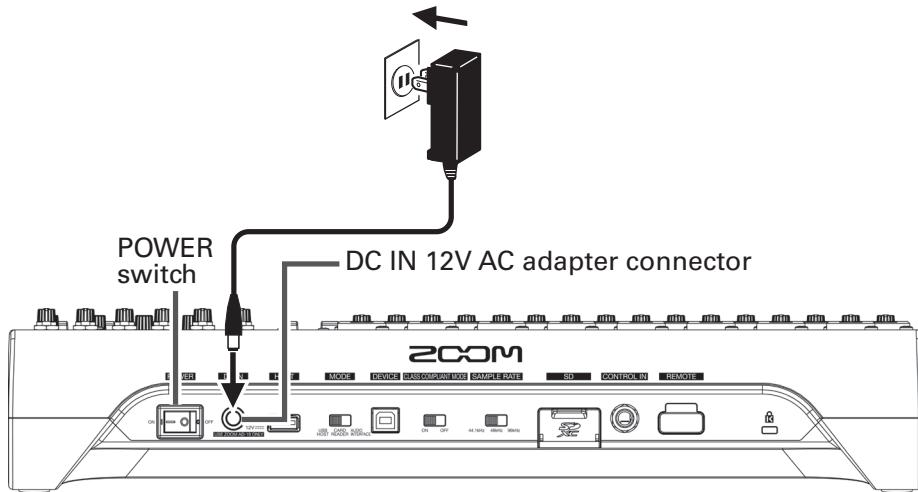
Home Screen



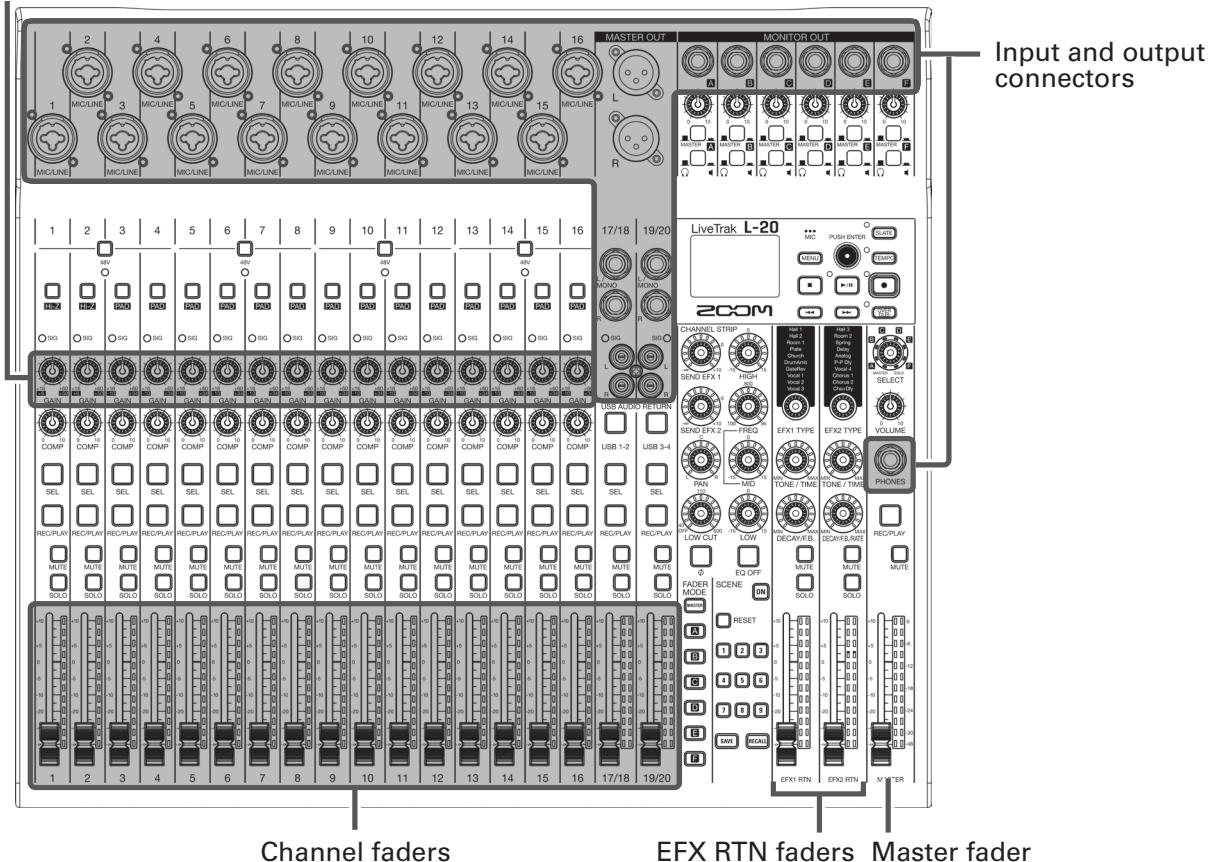
No.	Item	Explanation
①	Project name	This shows the project name. "<" appears if there is another project before this one in the folder. ">" appears if there is another project after this one in the folder.
②	Status icon	This shows the status as follows. ■: Stopped ■: Paused ●: Recording ▶: Playing back
③	Counter	This shows the hour: minute: second.
④	Progress bar	The progress bar shows the amount of time from the beginning to the end of the project.
⑤	Folder name	The folder where the project is saved will be shown as FOLDER01 – FOLDER10.
⑥	PLAY MODE icon	This shows the PLAY MODE setting. (→ "Changing the playback mode")
⑦	Metronome icon	This is shown when the metronome is enabled. (→ "Enabling the metronome")
⑧	Project protection icon	This is shown when project protection is enabled. (→ "Protecting projects")
⑨	Remaining recordable time	This shows the remaining recordable time. This will change automatically according to the number of channels that have recording enabled with REC/PLAY.
⑩	Recording file format	This shows the recording file format used by the recorder.
⑪	Current date and time	This shows the current date and time.
⑫	SD card icon	This is shown when an SD card is detected.
⑬	Mark	This shows the mark number and the status as follows. ●: at mark (mark added at counter location) ▶: not at mark (mark not added at counter location)
⑭	Longest file time in project	This shows the length of the longest file in the project.

Turning the power on and off

Turning the power on

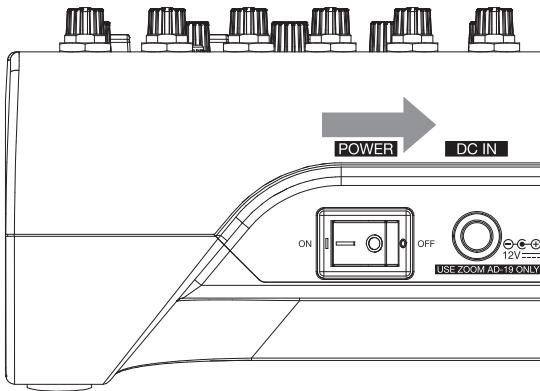


GAIN knobs



1. Confirm that the output devices connected to the **L-20** are turned off.

2. Confirm that  is set to OFF.



3. Plug the specified adapter (AD-19) into an outlet.

4. Set all  knobs and faders to their minimum values.

5. Connect instruments, mics, speakers and other equipment.

HINT

Equipment connection example (\rightarrow "Equipment connection examples")

6. Set  to ON.

7. Turn on the output devices connected to the **L-20**.

NOTE

- When using a passive guitar or bass guitar, connect it to channel 1 or 2, and turn  on. (\rightarrow "Top")
- When using a condenser mic, turn  on. (\rightarrow "Top")
- The power will automatically turn off if the **L-20** is unused for 10 hours. If you want the power to stay on always, disable the automatic power saving function (\rightarrow "Disabling the automatic power saving function")

Turning the power off

1. Minimize the volume of output devices connected to the L-20.

2. Turn off the power of output devices connected to the L-20.

3. Set  to OFF.

The following screens appear and the power turns off.



NOTE

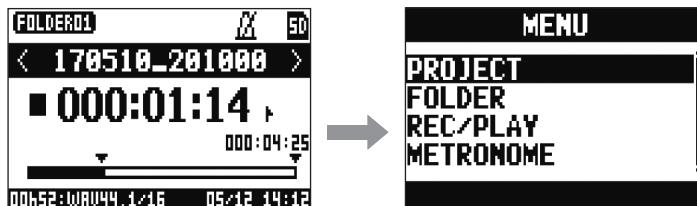
When the power is turned off, the current mixer settings are saved in the project on the SD card. If they cannot be saved to the SD card, they will be saved in the unit.

Using the MENU screen

Recorder function settings, for example are made for the L-20 using the MENU screen. This is an explanation of the basic menu operations.

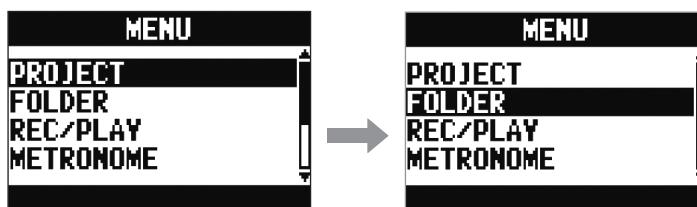
Open the menu: Press 

This opens the MENU screen.



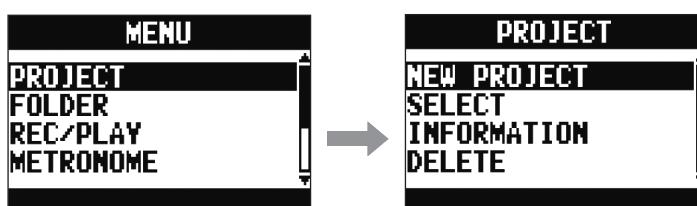
Select menu items and parameters: Turn 

This moves the cursor.



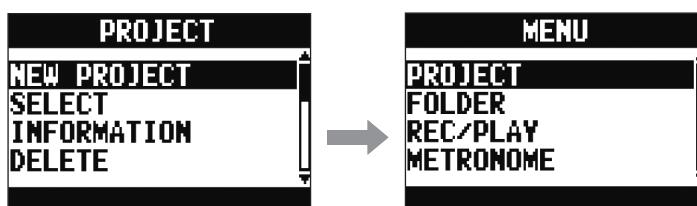
Confirm menu items and parameters: Press 

This opens the selected MENU screen or parameter setting screen.



Return to previous screen: Press 

This opens the selected MENU screen or parameter setting screen.



On the following pages, menu screen operations are shown in the following way.

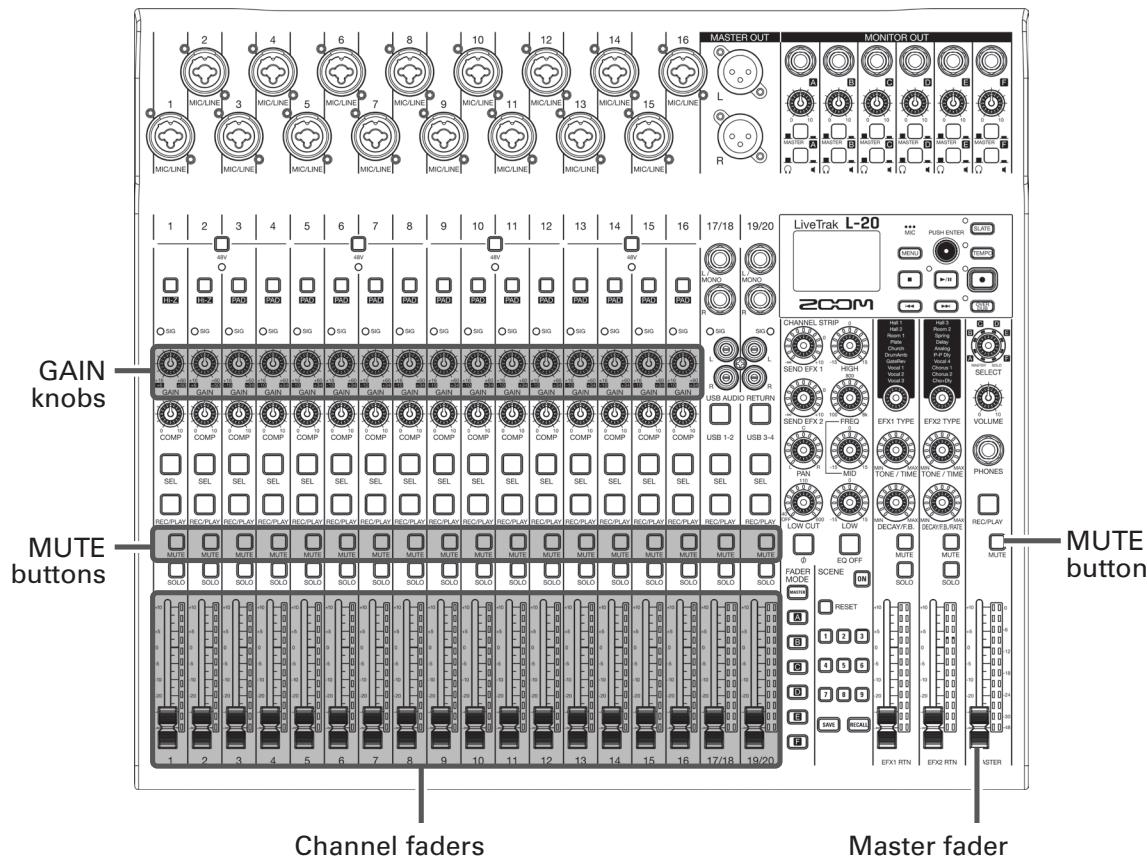
For example, "After selecting 'METRONOME' on the MENU screen, select 'CLICK'" becomes:

Select **MENU > METRONOME > CLICK**.

Mixer

Outputting input sounds from output devices

Outputting sound from speakers



1. Use to adjust the input signals while inputting sound from instruments and mics.

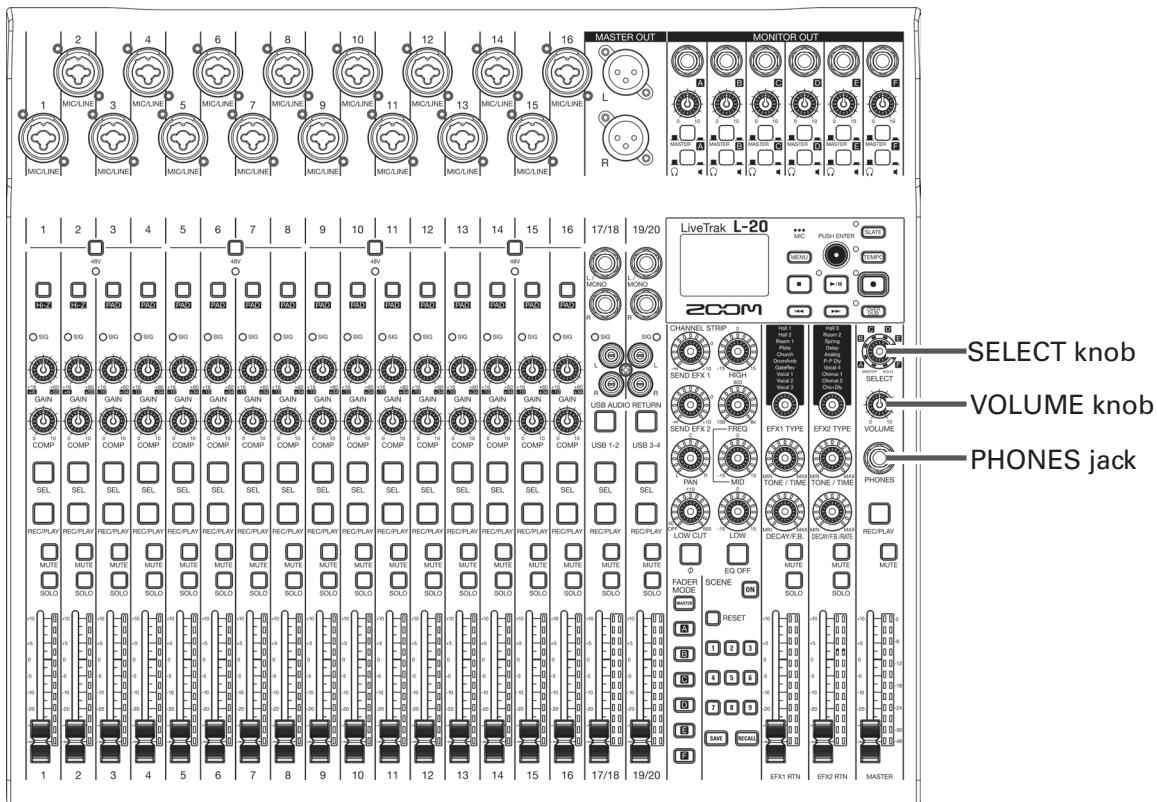
NOTE

Set them so that SIG indicators do not light red.



2. Turn off (unlit) for the MASTER and the channels with sound you want to output.
3. Set the MASTER fader to 0.
4. Use the channel faders to adjust the volumes.
5. Use the MASTER fader to adjust the overall volume.

Outputting sound from headphones



1. Connect headphones to the PHONES jack.

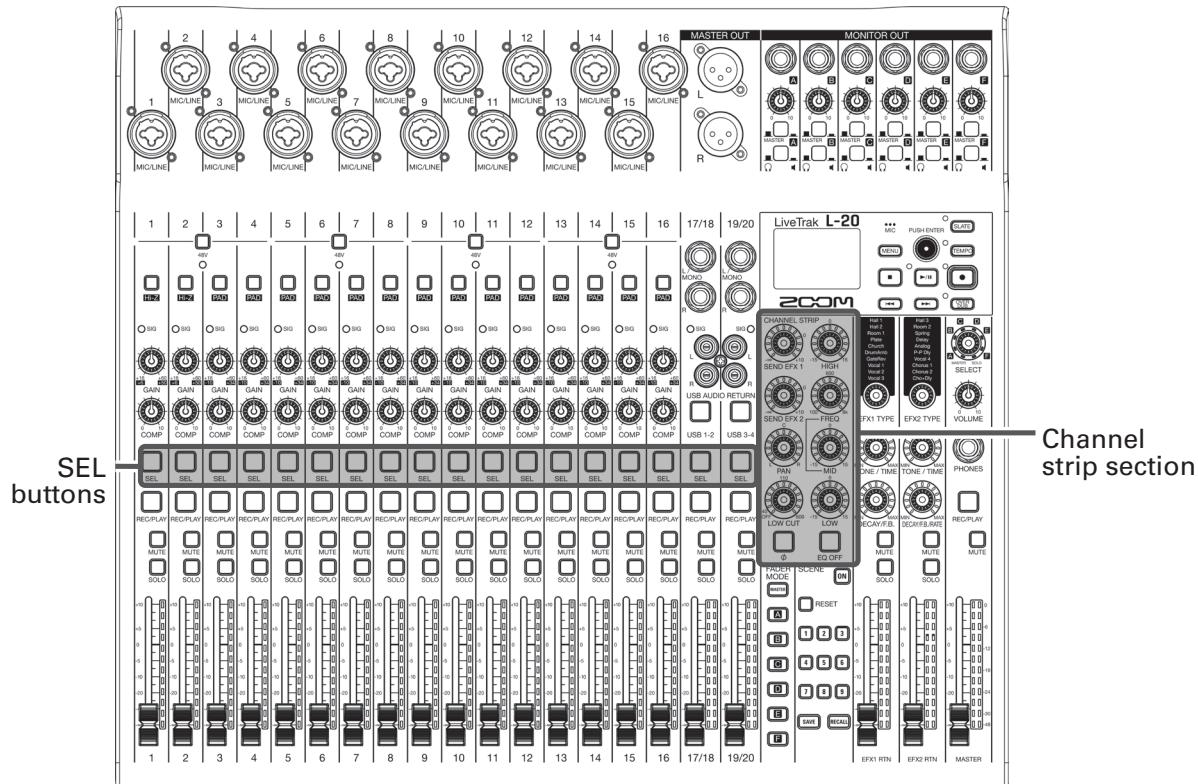
2. Turn  to select the bus you want to output from the PHONES jack, and press .

The options are MASTER, SOLO and MONITOR OUT A-F.

Status	Explanation
MASTER	The same signals as the MASTER OUT are output.
A-F	The signals set in the FADER MODE section are output.
SOLO	The signals of SOLO enabled channels are output.

3. Use  to adjust the volume.

Adjusting the tone and panning



1. Press to light it for the channel for which you want to adjust tone and panning.

2. Use the knobs and buttons in the channel strip section to adjust the tone and panning.

Adjusting the tone: HIGH, MID, FREQ, LOW, LOW CUT

Adjusting the panning:

Reversing the polarity:

NOTE

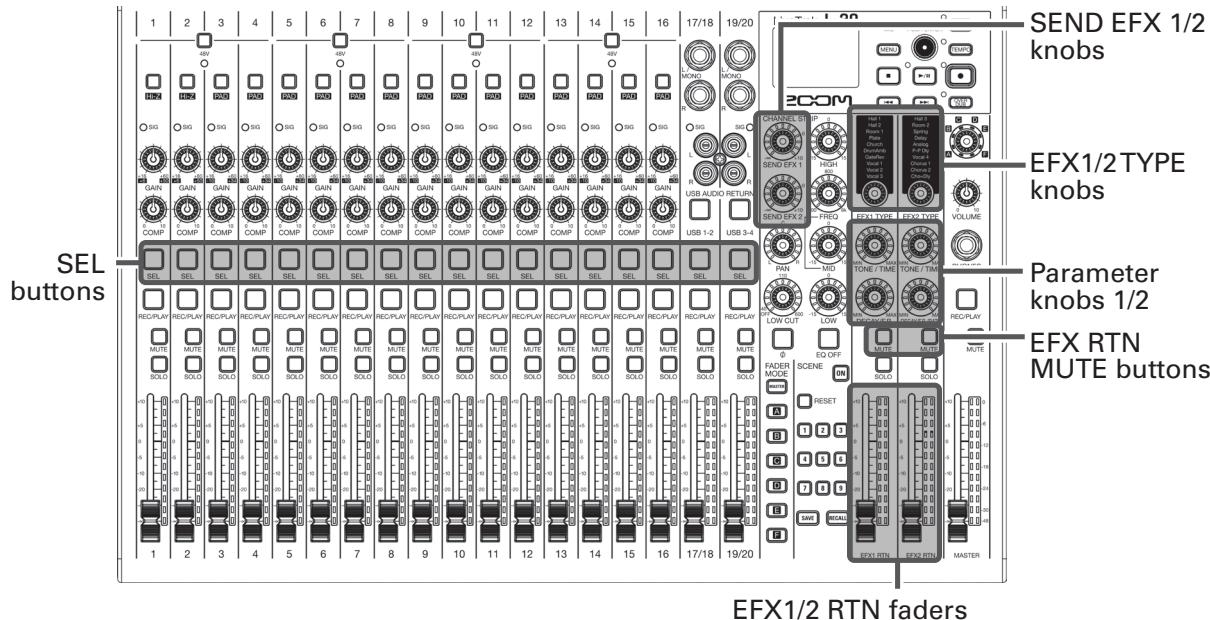
- Press to light it, turning off all equalization at once. This will bypass HIGH, MID, LOW and LOW CUT settings.
- Using the compressor (→ "Input channel section")

HINT

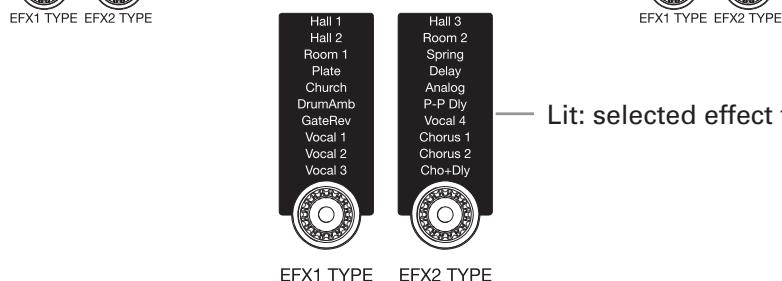
Details about each knob and button (→ "CHANNEL STRIP section")

Using the built-in effects

The L-20 has 20 types of send effects in 2 banks.



1. Turn / to select the effect type, and press / to confirm.



2. Press to turn it off, unmuting EFX1/EFX2 RTN.

3. Set the EFX1/EFX2 RTN fader to 0.

4. Press for a channel that you want to use the effect on to light it.

5. Use / to adjust the amount for each channel.

6. Use the EFX1/EFX2 RTN fader to adjust the overall effect amount.

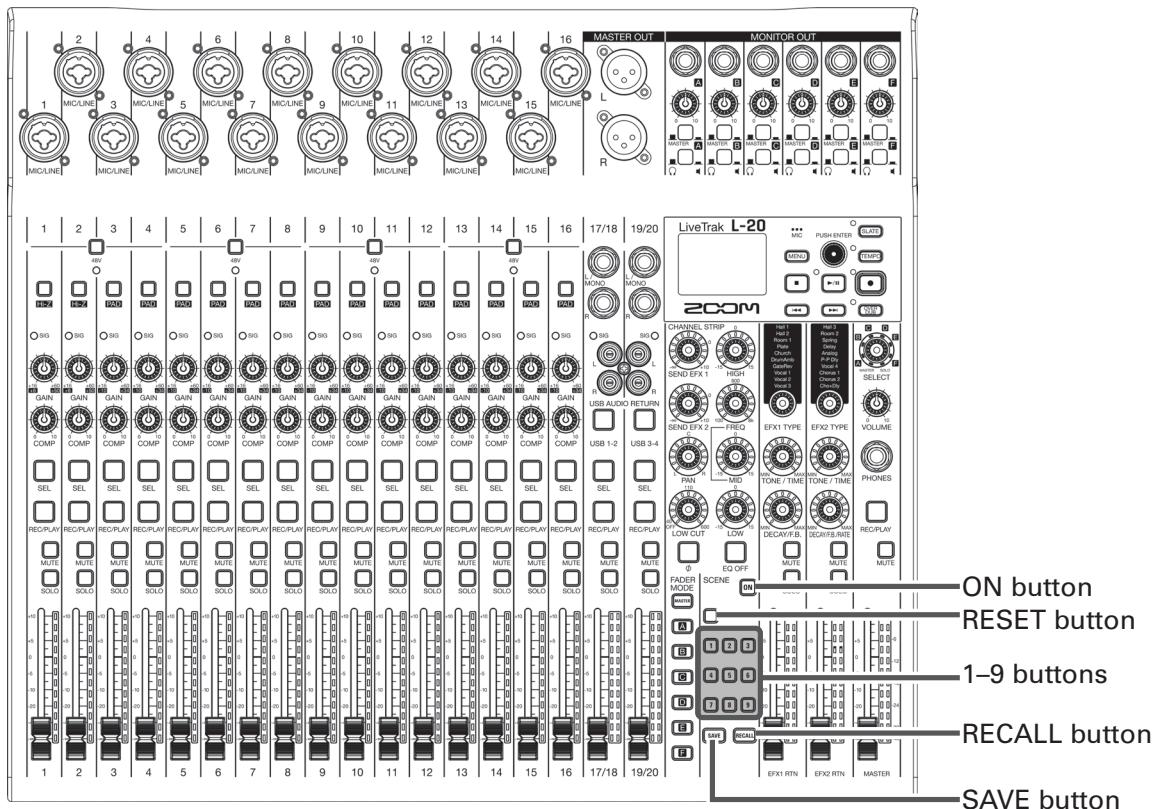
7. Use and to adjust the send effect parameters for EFX1/EFX2 RTN.

NOTE

Parameters of each effect that can be adjusted by and ([→ "Send effect specifications"](#)).

Using scene functions

The scene function can be used to save up to nine sets of current mixer settings as scenes and to recall these saved settings at any time.



Saving scenes

1. Click **ON** so that it lights.

This enables the scene function.

2. Press **SAVE**.

Buttons **1** – **9** will light if they have saved scenes and blink if they do not.

Press **SAVE** again if you do not want to save a scene.

3. Press the button where you want to save the scene.

NOTE

- Nine scenes are saved in the unit. (→ "SCENE section")
- If a button that already has a scene saved is selected, that scene will be overwritten.
- The following items are saved with scenes.
 - Fader positions (each channel, EFX 1/2 RTN and MASTER)
 - MUTE ON/OFF (each channel, EFX 1/2 RTN and MASTER)
 - EQ OFF
 - LOW CUT
 - EQ HIGH
 - EQ MID
 - EQ MID FREQ
 - EQ LOW
 - SEND EFX 1/2
 - PAN
 - Ø
 - EFX 1/2 TYPE
 - EFX 1/2 parameters
 - USB button setting

Recalling scenes

1. Click so that it lights.

This enables the scene function.

2. Press .

Buttons  –  will blink if they have saved scenes and be unlit if they do not.

Press  again if you do not want to recall a scene.

3. Press the button for the scene you want to recall.

The scene for the selected number is recalled.

NOTE

If the actual channel fader position differs from the channel fader position shown, the volume will not change until the fader is moved to the same position. (→ "Input channel section")

Resetting mixer settings

1. Click **ON** so that it lights.

This enables the scene function.

2. Press **RECALL**.

Buttons **1** – **9** will blink if they have saved scenes and be unlit if they do not.

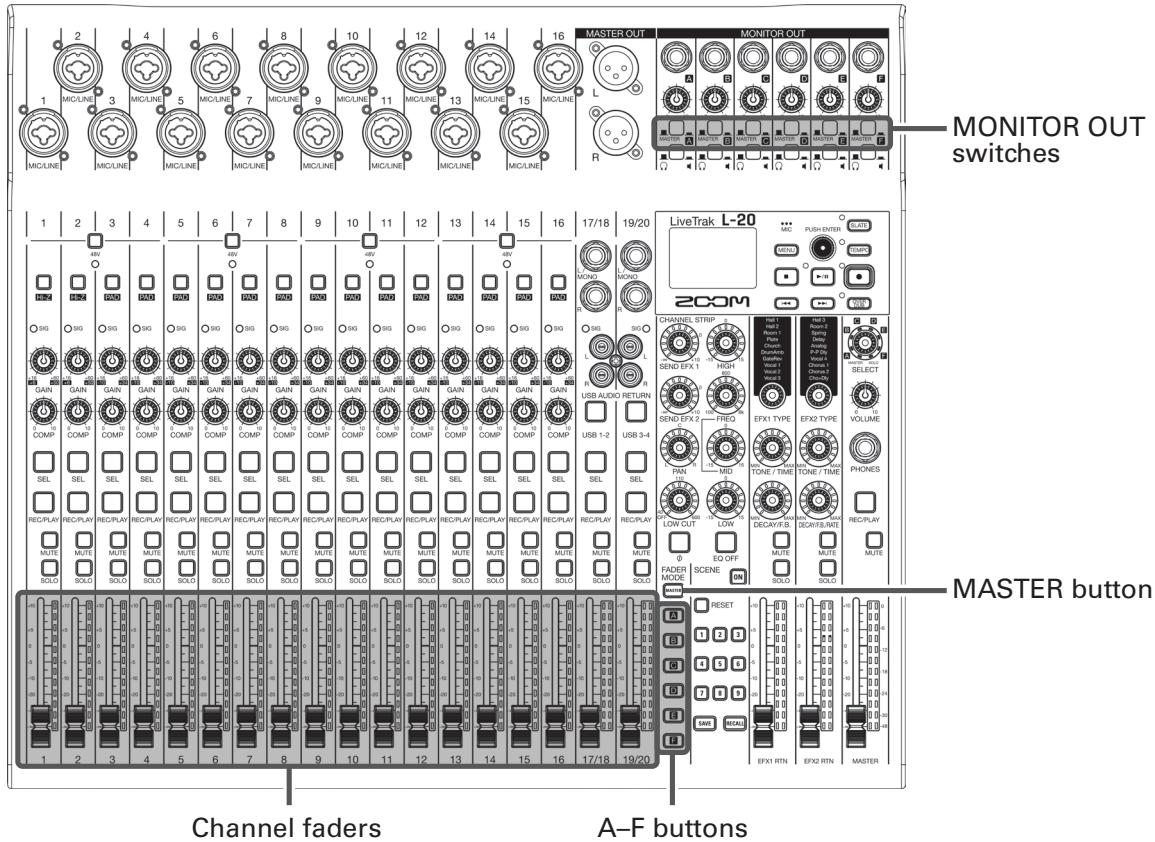
Press **RECALL** again if you do not want to reset the settings.

3. Press **RESET**.

The current mixer settings are reset to their factory defaults.

Setting signals output from MONITOR OUT A–F

The MONITOR OUT A–F jacks can be set to output the same mix as the MASTER OUT or different mixes.



Adjusting the MONITOR OUT A–F mixes

1. Press an **A** – **F** button to select the output to mix.

The selected output button lights and operation of all the channel faders is enabled.

NOTE

The level meters show the fader positions. If the actual channel fader position differs from the channel fader position shown, the volume will not change until the fader is moved to the same position.

2. Use the channel faders to adjust the volumes.

Selecting MONITOR OUT A–F output signals

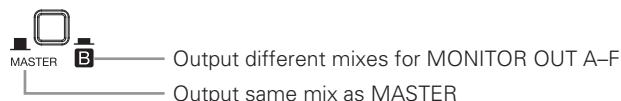
1. Use the MONITOR OUT switch for an output to select its output signal.

To output a mix set using MONITOR OUT A–F:

Set the MONITOR OUT switch to A–F (■)

To output the same mix as the MASTER:

Set the MONITOR OUT switch to MASTER (■)



NOTE

- Each output mix is saved with the scene and project.
- The parameters that can have separate settings for the MASTER and MONITOR OUT A–F are as follows.
 - Fader positions (each channel)
 - EFX1/2 RTN positions

Select the type of equipment connected to MONITOR OUT A–F

1. Set the MONITOR OUT PHONES/SPEAKER switch for the output according to the type of equipment connected.

To connect headphones to MONITOR OUT A–F:

Set the MONITOR OUT PHONES/SPEAKER switch to (■).

A stereo signal will be output from the jack.

To connect speakers to MONITOR OUT A–F:

Set the MONITOR OUT PHONES/SPEAKER switch to (■).

A mono balanced signal will be output from the jack.

Copying a mix

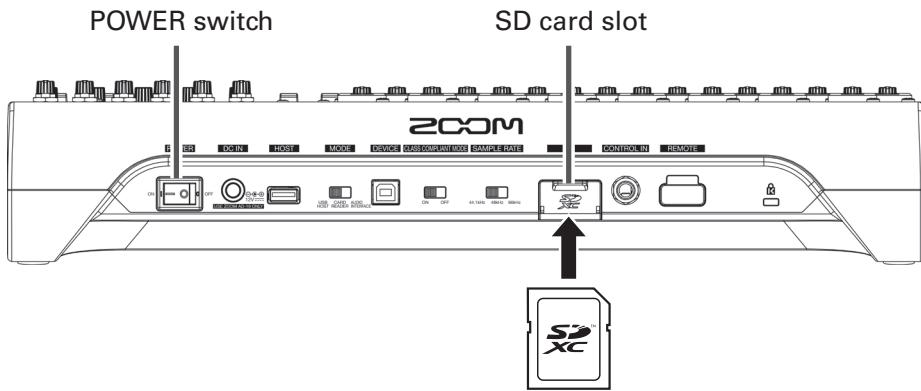
1. While pressing , – for the output you want to copy, press a blinking copy destination (, –).

This copies the mix from the source to the destination.

Recording and playback

Preparing to record

Inserting SD cards



1. Set to OFF.
2. Open the SD card slot cover, and insert an SD card all the way into the slot.
To remove an SD card, push it further into the slot and then pull it out.

NOTE

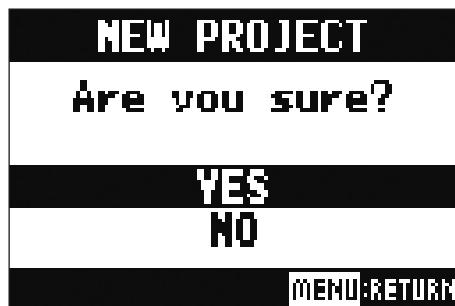
- Disable write-protection on the SD card before inserting it.
- Always set to OFF before inserting or removing an SD card.
Inserting or removing a card while the power is on could result in data loss.
- When inserting an SD card, be sure to insert the correct end with the top side up as shown.
- If an SD card is not loaded, recording and playback are not possible.
- To format an SD card, see "[Formatting SD cards](#)".
- Use an SD card that is Class 10 or higher.
- Format an SD card before recording to it at 96 kHz. If you record without formatting first, skipping could occur.

Creating new projects

The **L-20** manages recording and playback data in units called projects.

1. Select MENU > PROJECT > NEW PROJECT.

2. Use  to select YES, and press .



NOTE

- See "Projects" for information about projects.
- When a new project is created, it will start with the current mixer settings.

HINT

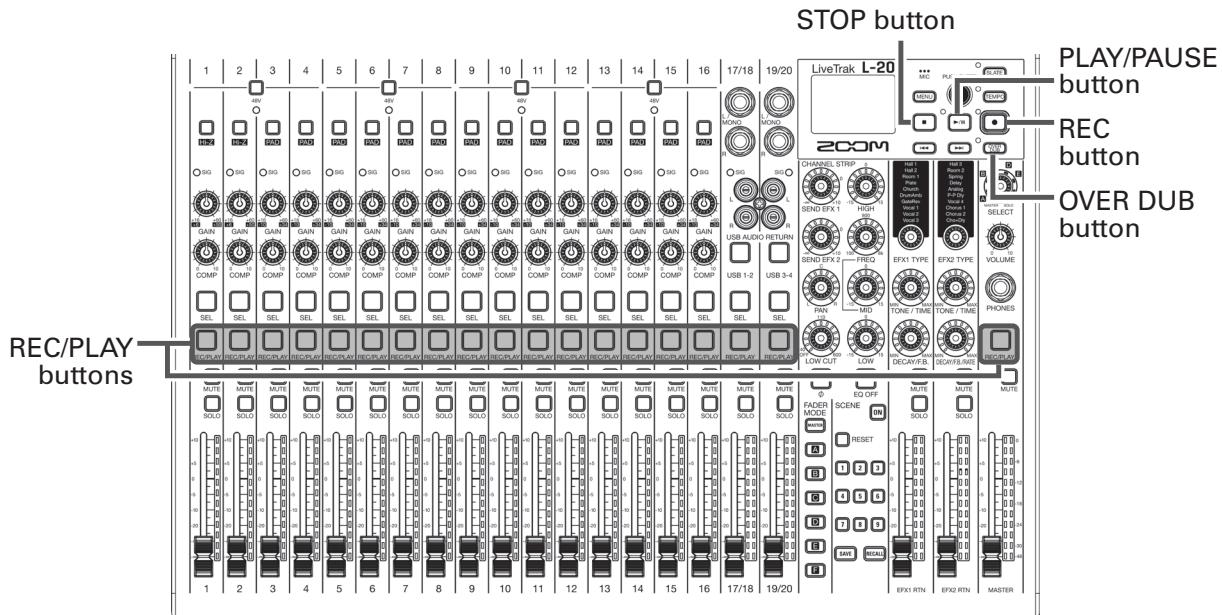
When the **L-20** power is turned on, it will automatically load the last used project.

Recording/overdubbing and playing tracks

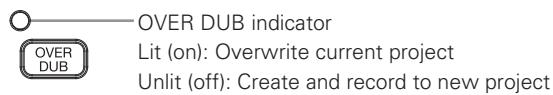
The **L-20** has recorder functions that enable simultaneous recording of up to 22 tracks and simultaneous playback of up to 20 tracks.

The input signals of every channel and from the master fader output can be recorded. These recordings can also be played back.

Recording



1. Use **OVER DUB** to turn overdubbing on or off.



2. Press **REC/PLAY** for the channels you want to record, lighting these buttons red.

3. Press **●** to start recording standby.

HINT

If a recorded file already exists, and **OVER DUB** is off, pressing **●** will create a new project and then start recording standby.

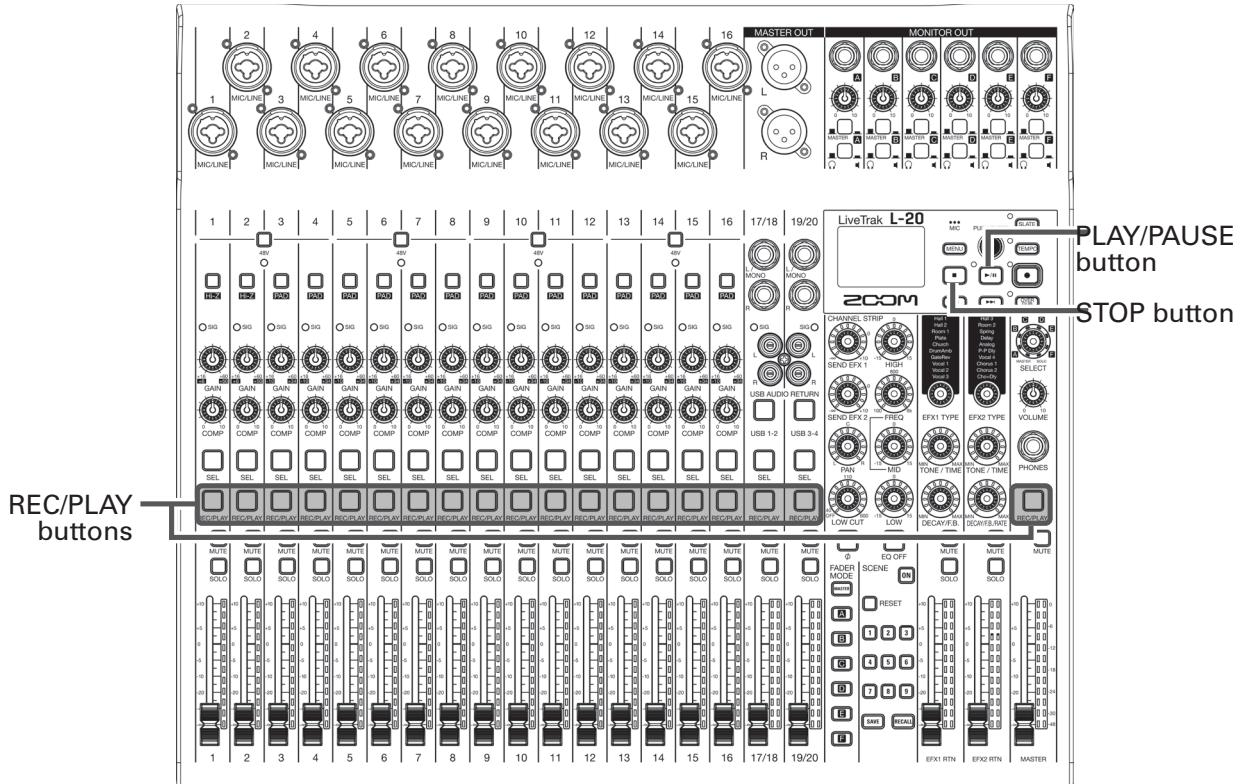
4. Press **▶/II** to start recording.

5. Press to stop recording.

NOTE

- The signals recorded on each channel can be set to either before or after the compressor. (→ "Changing the input signal recording source")
- Punching in/out (→ "Redoing parts of recordings (punching in/out)")
- Starting recording automatically (→ "Recording automatically")
- Capturing audio before recording starts (→ "Capturing audio before recording starts")
- When recording stops, "Please Wait" appears on the display. Do not turn the power off or remove the SD card while this message appears. Doing so could cause data loss or malfunction.

Playing recordings



1. Press  for the channels you want to play, lighting these buttons green.

2. Press  to start playback.



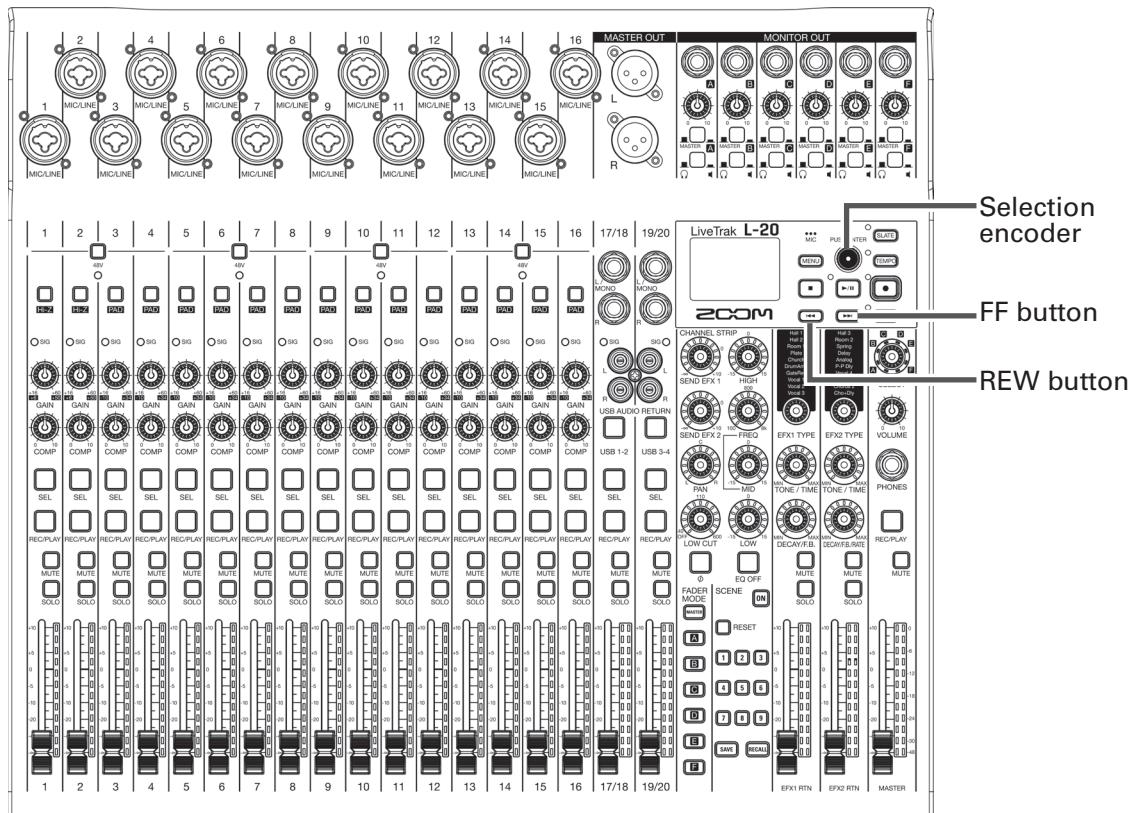
3. Press  to stop playback.

NOTE

- Playback signals are added before the equalizer section, so their EQ and panning settings can be adjusted during playback. (→ "Mixer block diagram")
- If recorded signals are pre-compressor, playback signals will be inserted before the compressor. (→ "Changing the input signal recording source")
- Changing the playback mode (→ "Changing the playback mode")
- Other channels cannot be played back when the MASTER channel is playing back.

Adding marks

Adding marks at desired positions with the recorder makes moving to those positions easy.



Adding marks during recording and playback

1. Press during recording/playback.

Moving in mark order

1. Use these buttons to move in mark order.

Move to next mark: Press

Move to previous mark: Press

NOTE

Checking and deleting marks in projects (→ "Managing marks")

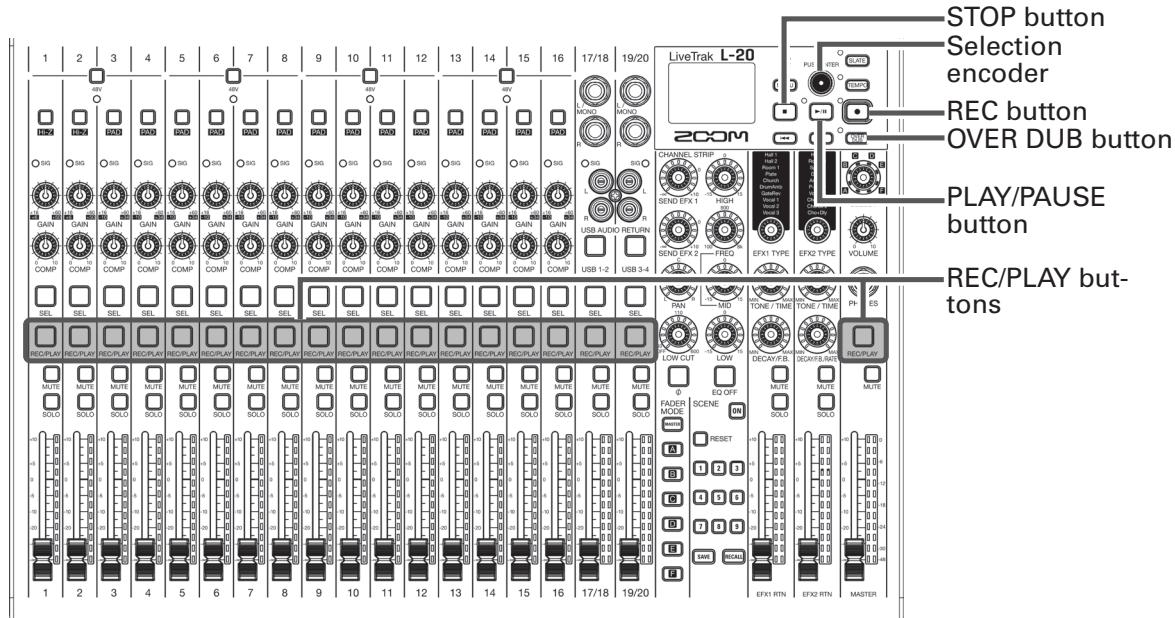
HINT

- A maximum of 99 marks can be added to one project.
- You can also delete a mark by pressing when at the mark position.

Redoing parts of recordings (punching in/out)

Punching in/out is a function that can be used to rerecord parts of already recorded tracks. "Punching in" is switching track status from playback to recording. "Punching out" is switching track status from recording to playback.

With the **L-20**, punching in/out can be conducted using buttons on its top or a footswitch (ZOOM FS01).



1. Press **[OVER DUB]** to turn it on (lighting its indicator).

2. Press **[REC/PLAY]** repeatedly for the tracks to rerecord until they light red.



3. Press **[◀]** or turn **(encoder)** left to move to before the part to be rerecorded.

4. Press **[▶/II]** to start playback.

5. Press **[●]** at the position where you want to start rerecording (punch in).

6. Press **[■]** to end rerecording (punch out).

NOTE

- Punching in/out using a footswitch (ZOOM FS01) (→ "Setting the footswitch")
- Punching in/out overwrites recordings.
- Punching in/out can be done up to 99 times each time playback is started.

7. Press **[■]** to stop playback.

Mixing down tracks

A final stereo mix can be recorded to the master track.

Signals are sent to the master track after passing through the master fader.

Mixing down to the master track

1. Click  so that it lights.

NOTE

- Adjust the volume and panning of each recorded track before starting.
- When mixing down, set the sampling rate to 44.1kHz or 48kHz.
If the sampling rate is 96kHz, the OVER DUB button cannot be set to ON.

2. Press MASTER  repeatedly until it lights red.



3. Press  to return to the recording beginning.

4. Press  to start recording standby.

5. Press  to start recording.

6. Press  to end mixing down.

Playing the master track

1. Press MASTER  RECP/PLAY repeatedly until it lights green.



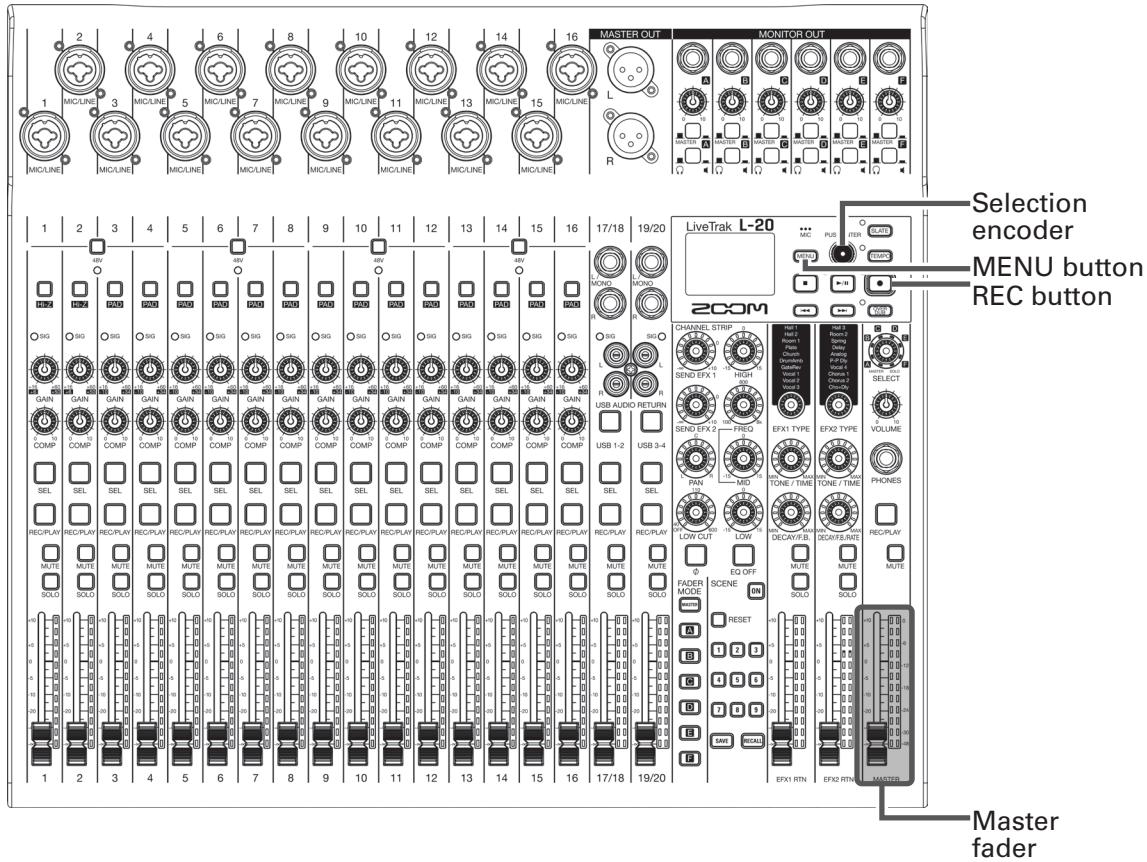
2. Press .

NOTE

- To stop master track playback, press MASTER  RECP/PLAY repeatedly until it becomes unlit.
- When the master track is playing, other tracks will not be played back.
- To listen to master track playback from a MONITOR OUT, set the MONITOR OUT A–F switch to MASTER ().
- To listen to master track playback from the main headphone jack for the mixer operator, set the SELECT knob to MASTER.

Starting recording automatically

Recording can be started and stopped automatically in response to the level after passing through the master fader.



1. Select MENU > REC/PLAY > AUTO REC > ON/OFF.

2. Use to select ON, and press .



NOTE

Making additional settings for automatic recording (→ "Changing automatic recording settings")

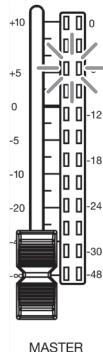
3. Press repeatedly to return to the Home Screen.

4. Press .

The indicator will light and recording standby will start.



The MASTER level meters will blink at the level that will cause automatic recording to start.



HINT

Recording starts automatically when the input exceeds the set level (shown by the MASTER level meters).

You can also set recording to stop automatically when the input goes below a set level. ([→ "Setting automatic stopping"](#))

5. Press to end recording standby or stop recording.

NOTE

- This function cannot be used with the PRE REC, METRONOME or PRE COUNT functions. When you turn AUTO REC on, these other functions will be disabled.
- When the OVER DUB function is enabled, the AUTO REC function will be disabled.

Pre-recording before recording starts

The input signal can be captured for up to 2 seconds before recording is started (pre-recording). Setting this in advance can be useful when a performance starts suddenly, for example.

1. Select MENU > REC/PLAY > PRE REC.

2. Use  to select ON, and press .



NOTE

- This function cannot be used with the AUTO REC, METRONOME, PRE COUNT or OVER DUB functions.
- When you turn AUTO REC or PRE COUNT on, PRE REC will be disabled.
- The PRE REC function continues to be enabled even when recording is paused.

Selecting the folder where projects are saved

Choose one of ten folders as the folder where recorded projects will be saved.

1. Select MENU > FOLDER.

2. Use  to select the folder where you want to save, and press .



NOTE

- Up to 1000 projects can be saved in a single folder.
- If a folder that does not have a project is selected, a new project will be created automatically.

Selecting projects for playback

Projects saved on SD cards can be loaded.

1. Select MENU > PROJECT > SELECT.

2. Use  to select the project you want to load, and press .



NOTE

- Projects in different folders cannot be selected. To select a project that is saved in a different folder, select that folder first. (→ "Selecting the folder where projects are saved")
- When a project is loaded, the mixer settings saved in that project are also loaded.
- If actual channel fader positions differ from the channel fader positions of the loaded project, the level meters will show the recalled fader positions. The volume will not be changed until the actual fader position becomes the same as the recalled position.
- When switching to a different project, the project mixer settings of the current project are saved to the settings file in the project folder.

Using the metronome

The **L-20** metronome has adjustable volume, a selectable sound, and a precount function. The volume can also be adjusted separately for each output. Metronome settings are saved separately with each project.

Enabling the metronome

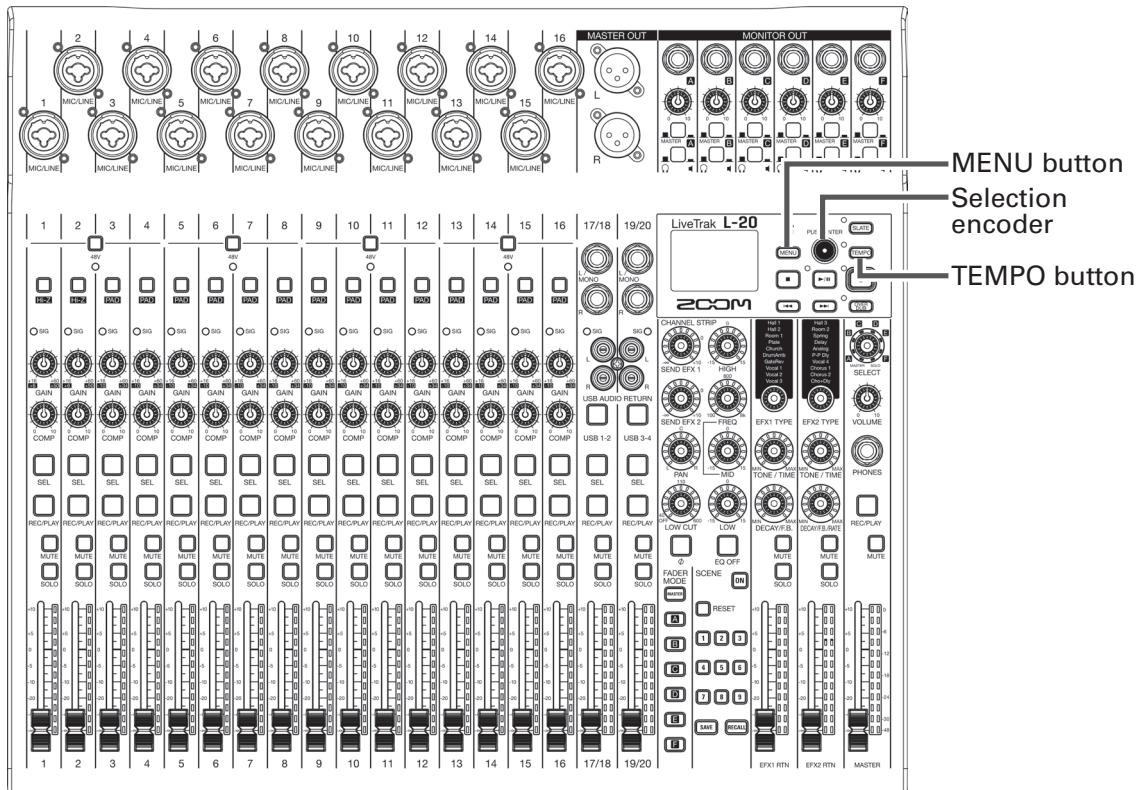
1. Select MENU > METRONOME > CLICK.

2. Use  to select when the metronome makes sound, and press .



Setting values	Explanation
OFF	The metronome does not make sound.
REC AND PLAY	The metronome sounds during recording and playback.
REC ONLY	The metronome sounds only during recording.
PLAY ONLY	The metronome sounds only during playback.

Changing metronome settings



Changing the metronome tempo

1. Press **TEMPO**.

The current tempo is shown on the display.

2. Do one of the following to change the tempo.

- Turn
- Press **TEMPO** repeatedly at the tempo you want to set



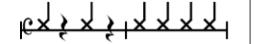
Setting the precount

A metronome count can be sounded before starting recording/playback.

1. Select MENU > METRONOME > PRE COUNT.

2. Use  to select the precount behavior, and press .



Setting values	Explanation
OFF	No precount will sound.
1–8	Before recording/playback, the precount will sound for the set number of times (1–8).
SPECIAL	Before recording/playback, the precount will sound as shown below. 

NOTE

- The precount is enabled even during playback.
- This function cannot be used with the AUTO REC function. When you turn AUTO REC on, PRE COUNT will be disabled.
- This function cannot be used with the PRE REC function. When you turn PRE COUNT on, PRE REC will be disabled.

Changing the metronome sound

1. Select MENU > METRONOME > SOUND.

2. Use  to select the sound, and press .



HINT

The options are BELL, CLICK, STICK, COWBELL and HI-Q.

NOTE

Press  to play the metronome and check the sound.

Changing the metronome pattern

1. Select MENU > METRONOME > PATTERN.

2. Use  to select the pattern, and press .



HINT

The options are 1/4–8/4 and 6/8.

NOTE

Press  to play the metronome and check the pattern.

Changing the metronome volume

The metronome volume can be adjusted separately for the MASTER OUT and the MONITOR OUT A-F outputs.

1. Select MENU > METRONOME > LEVEL > MASTER or A-F.

2. Turn  to adjust the volume, and press .



HINT

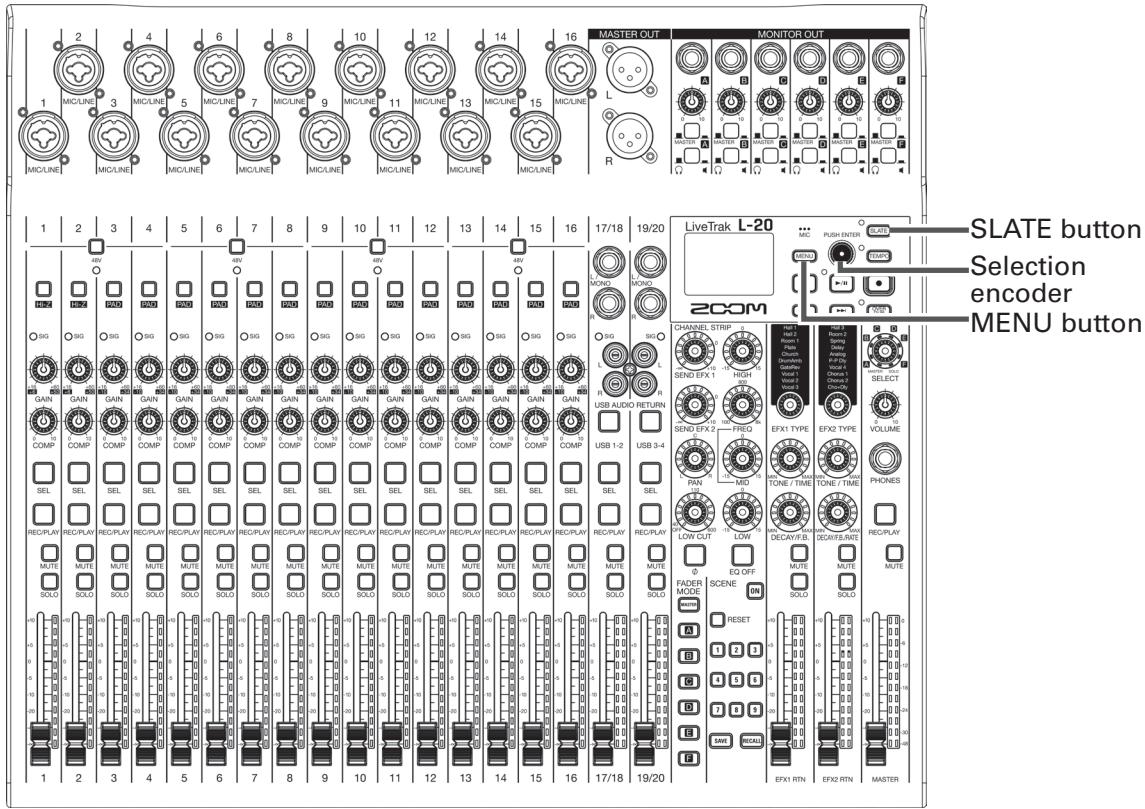
Set from 0 to 100.

NOTE

Press  to play the metronome and check the sound.

Using the slate mic

The **L-20** has a built-in slate mic that is useful for adding comments and talk-back during recording.



Recording with the slate mic

1. Start recording. (→ "Recording")

2. Press **SLATE** to enable the slate mic.

While **SLATE** is being pressed, the indicator lights and the slate mic is enabled.



NOTE

- When the slate mic is in use, signals from input jacks are muted to the channels to which the slate mic is routed.
- None of the channel faders affect the level of the slate mic.

Changing slate mic settings

Changing the slate mic volume

1. Select MENU > SLATE > LEVEL.

2. Turn  to adjust the volume, and press .

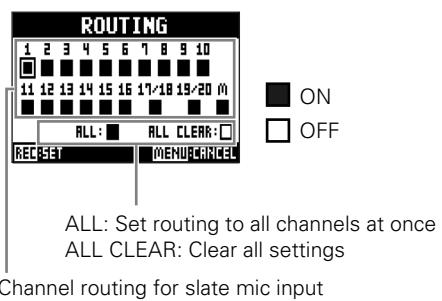


Changing the slate mic routing

1. Select MENU > SLATE > ROUTING.

2. Turn  to select a channel for routing.

3. Press  to confirm.



Channel routing for slate mic input

4. Press .

HINT

Pressing  toggles it ON/OFF.

Projects

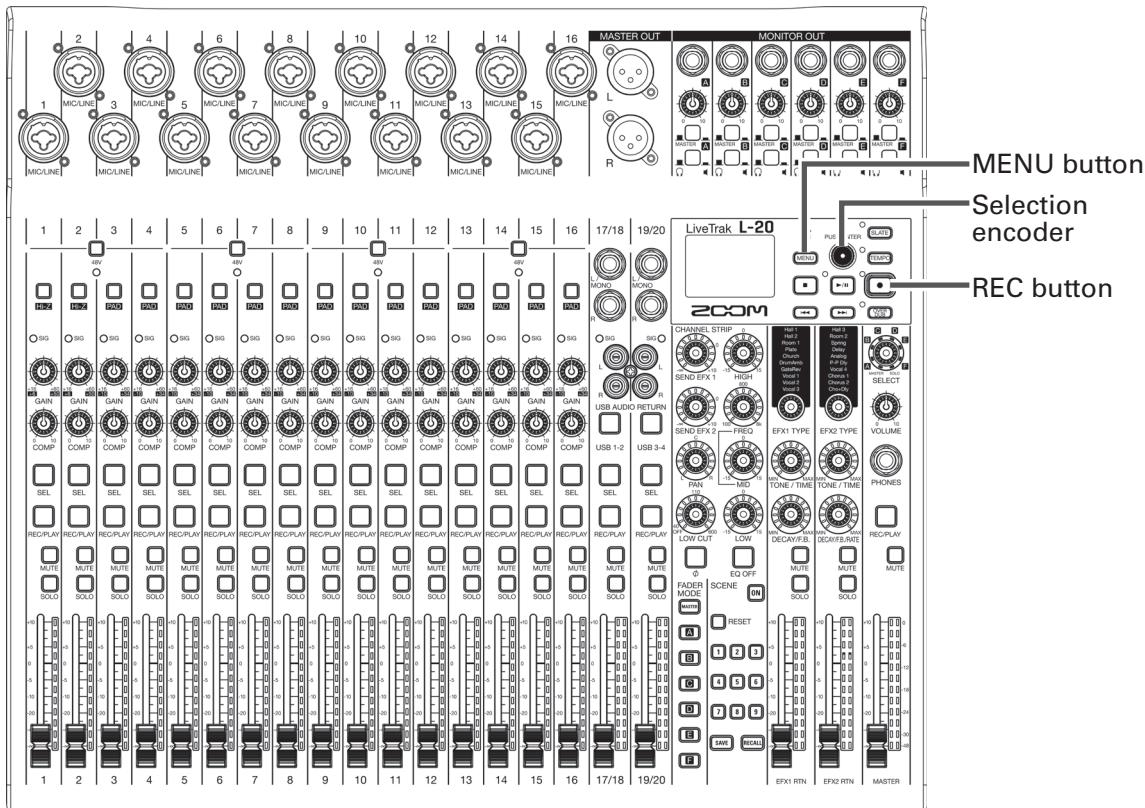
The **L-20** manages recording and playback data in units called projects.

The following data is saved in projects.

- Audio data
- Mixer settings
- Send return effect settings
- Mark information
- Metronome settings

Changing project names

The name of the currently loaded project can be changed.



1. Select MENU > PROJECT > RENAME.

2. Edit the name.

Move cursor or change character: Turn

Select character to change/confirm change: Press



NOTE

- The default project name is the date and time of creation.
For example, if a project was created at 6:48:20 p.m. on Wednesday, March 14, 2018, the project name would be "180314_184820" (YYMMDD_HHMMSS).
- Project names have 13 characters.
- The following characters can be used in project and file names.
(space) ! # \$ % & ' () + , - 0 1 2 3 4 5 6 7 8 9 ; = @
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [] ^ _ `
a b c d e f g h i j k l m n o p q r s t u v w x y z { ~ }
- Projects can be ordered numerically or alphabetically.
- Project/file names cannot be only spaces.
- The project name is the same as the project folder name on the SD card.

3. Press

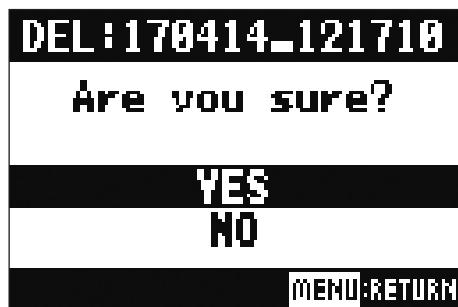
Deleting projects

Projects inside the selected folder can be deleted.

1. Select MENU > PROJECT > DELETE.

2. Use to select the project you want to delete, and press .

3. Use to select YES, and press .



NOTE

Projects cannot be deleted if protection is ON.

Protecting projects

The currently loaded project can be write-protected, preventing the project from being saved, deleted or having its content changed.

1. Select MENU > PROJECT > PROJECT PROTECT.

2. Use to select ON, and press .



NOTE

- Projects cannot be used for recording if protection is ON. Turn protection OFF to record.
- When protection is OFF for a project, it will always be saved to the SD card when the power is turned off or another project is loaded. We recommend turning protection ON to prevent accidentally saving changes to a musical project after it has been completed.

Checking project information

Various information about the currently loaded project can be viewed.

1. Select MENU > PROJECT.

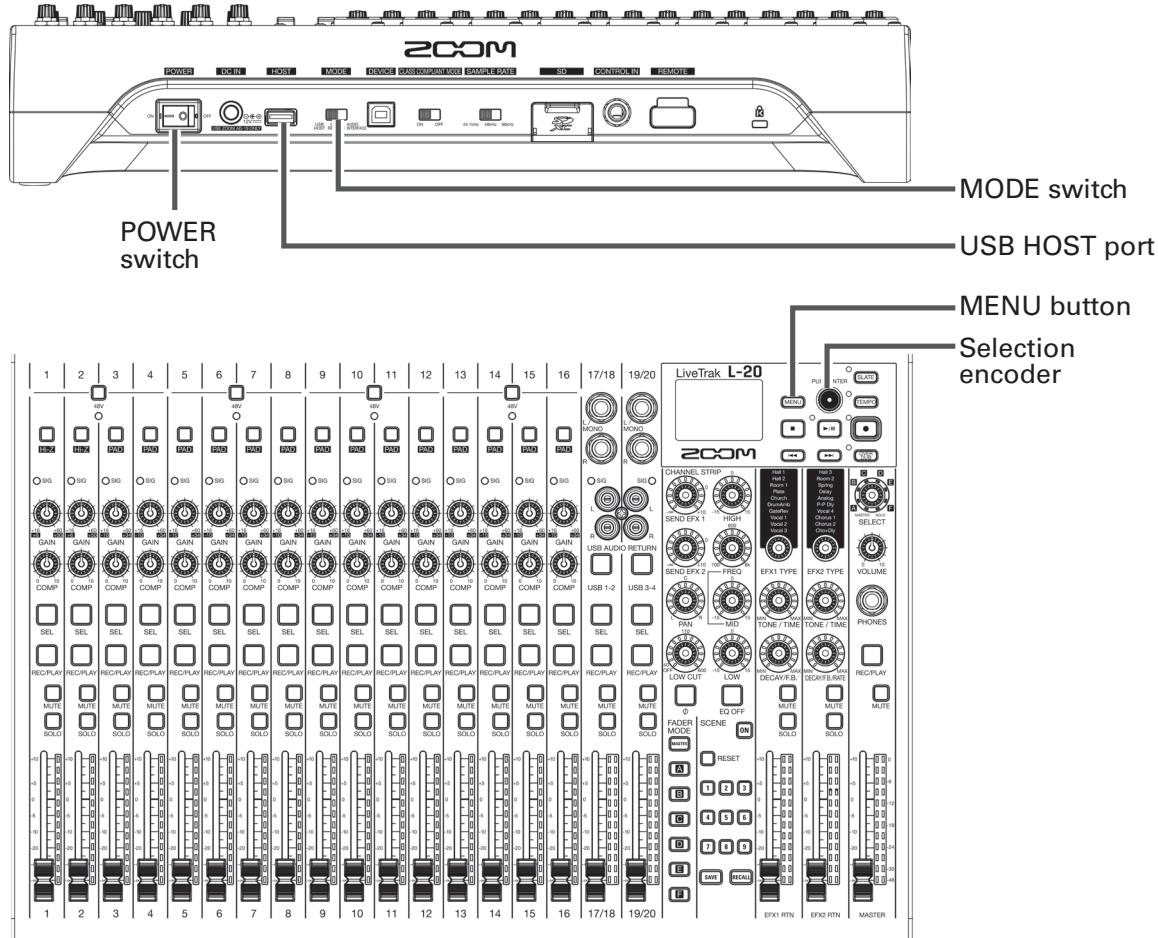
2. Use to select INFORMATION, and press .



Item shown	Explanation
NAME	Project name
PATH	Location where project saved
DATE	Project creation date (YYYY/MM/DD HH:MM:SS)
FORMAT	Recording format
SIZE	Project size
TIME	Project length (HHH: MM: SS)
FILES	Information about tracks and files

Saving projects to USB flash drives

A USB flash drive can be connected directly to the **L-20**, and the currently loaded project can be saved to it.



1. Set ON OFF to OFF.

2. Connect the USB flash drive to the USB HOST port.



3. Set to USB HOST.

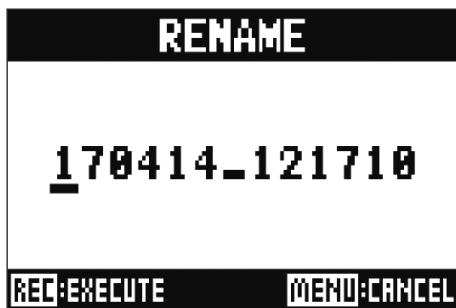
4. Set ON OFF to ON.

5. Select MENU > PROJECT > PROJECT EXPORT.

6. Edit the name.

Move cursor or change character: Turn 

Select character to change/confirm change: Press 



NOTE

- The default project name is the date and time of creation.
For example, if a project was created at 6:48:20 p.m. on Wednesday, March 14, 2018, the project name would be "180314_184820" (YYMMDD_HHMMSS).
- Project names have 13 characters.
- The following characters can be used in project and file names.
(space) ! # \$ % & ' () + , - 0 1 2 3 4 5 6 7 8 9 ; = @
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [] ^ _
a b c d e f g h i j k l m n o p q r s t u v w x y z { ~ }
- Projects can be ordered numerically or alphabetically.
- Project/file names cannot be only spaces.
- The project name is the same as the project folder name on the SD card.

7. Press .

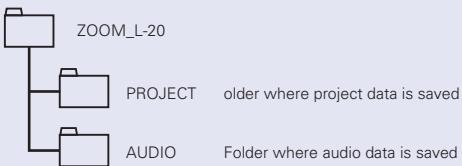
8. Use to select YES, and press .



NOTE

- The folder structure on USB flash drives is as follows.

Never change this folder structure.



- Projects will be saved on the USB flash drive in the "PROJECT" subfolder of the "ZOOM_L-20" folder.
- Never disconnect a USB flash drive when "Please Wait ..." appears on the display.

Importing projects from USB flash drives

Projects saved on USB flash drives can be copied to SD cards.

NOTE

Use a computer to create "ZOOM_L-20" and "PROJECT" folders on the USB flash drive in advance (→ "Saving projects to USB flash drives"). Only projects inside the "PROJECT" folder can be imported.

1. Set  ON  OFF to OFF.

2. Connect the USB flash drive to the USB HOST port.



3. Set  to USB HOST.

4. Set  ON  OFF to ON.

5. Select MENU > PROJECT > PROJECT IMPORT.

6. Use  to select the project you want to load from the USB flash drive, and press .



7. Edit the name.

Move cursor or change character: Turn 

Select character to change/confirm change: Press 



NOTE

- The default project name is the date and time of creation.
For example, if a project was created at 6:48:20 p.m. on Wednesday, March 14, 2018, the project name would be "180314_184820" (YYMMDD_HHMMSS).
- Project names have 13 characters.
- The following characters can be used in project and file names.
(space) ! # \$ % & ' () + , - 0 1 2 3 4 5 6 7 8 9 ; = @
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [] ^ _`
a b c d e f g h i j k l m n o p q r s t u v w x y z { ~ }
- Projects can be ordered numerically or alphabetically.
- Project/file names cannot be only spaces.
- The project name is the same as the project folder name on the SD card.

8. Press .

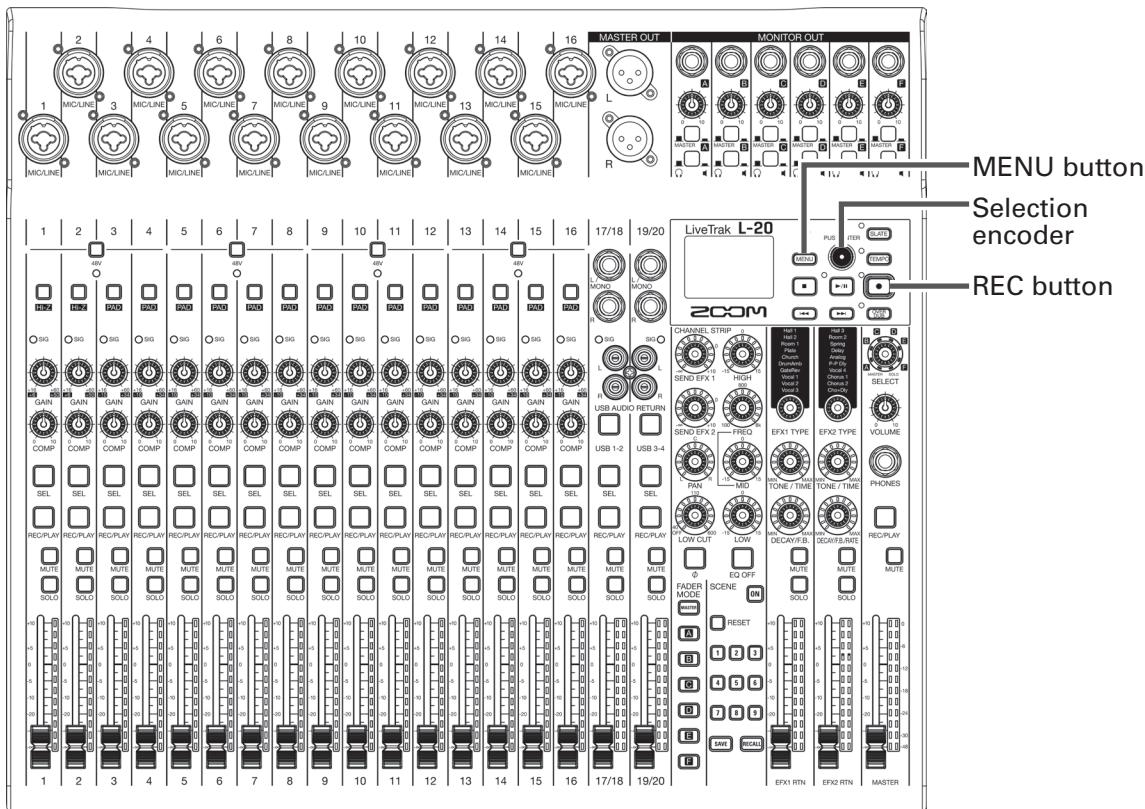
9. Use  to select YES, and press .

**NOTE**

- Imported projects are saved in the currently selected folder.
- Never disconnect a USB flash drive when "Please Wait ..." appears on the display.

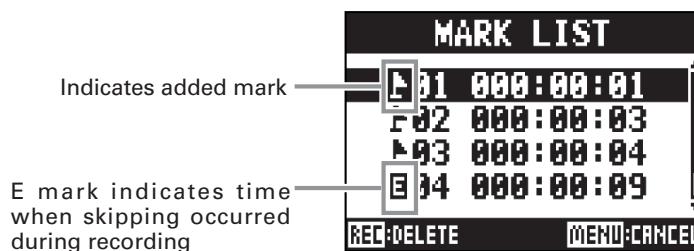
Checking, deleting and moving to marks

A list of marks in the currently loaded project can be opened, allowing them to be checked, moved to and deleted.



1. Select MENU > PROJECT > MARK LIST.

A list of marks appears.



2. Turn to select a mark, and move to or delete it.

Press to move to the mark position.

Press to delete the mark.

Audio files

The **L-20** creates the following types of audio files according to the recording channel.

- Channels 1–16: mono WAV files
- Channels 17/18, 19/20 and MASTER: stereo WAV files

The file format depends on the sampling rate (→ "Changing the sampling rate") and quantization bit depth (→ "Changing the recording format") used by the unit.

The **L-20** can also play back audio files created using DAW software (→ "Importing audio files from USB flash drives").

NOTE

- The names given to audio files depend on their channels.

Channels 1–16: TRACK01–TRACK16

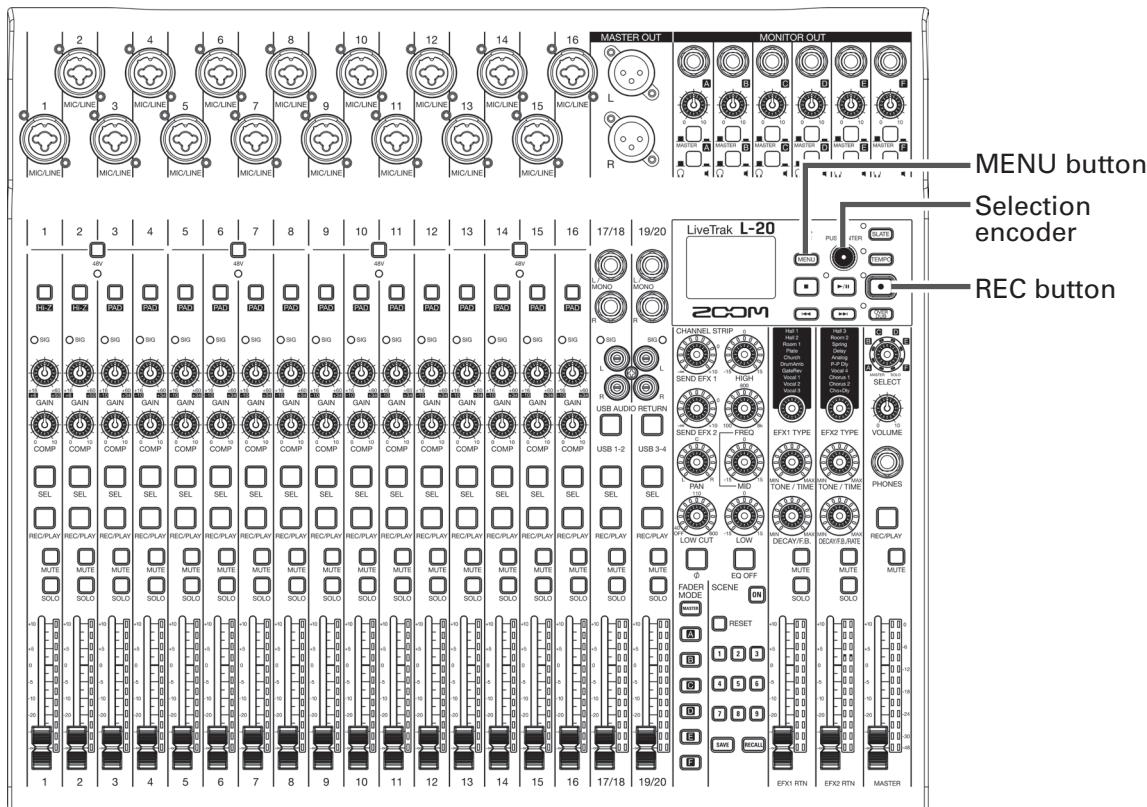
Channels 17/18, 19/20: TRACK17_18, TRACK19_20

MASTER: MASTER

- If the file size exceeds 2 GB during recording, a new file will be created automatically in the same project and recording will continue without pause. When this happens, numbers like "-01" and "-02" will be added to the ends of the file names.

Deleting audio files

Audio files that are not needed can be deleted.



1. Select MENU > PROJECT > FILE DELETE.

2. Use  to select the file you want to delete, and press .



NOTE

Press  to select/deselect all files.

3. Press .

4. Use  to select YES, and press .



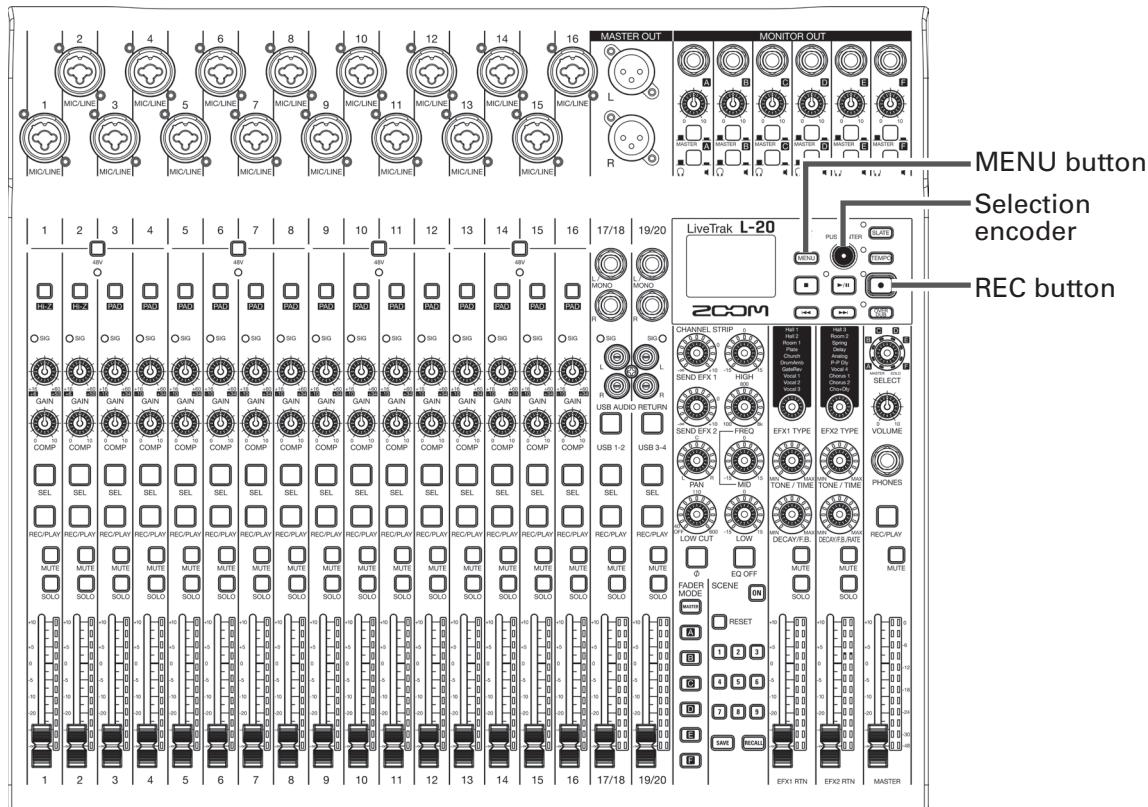
NOTE

Audio files cannot be deleted if protection is ON for their projects.

Exporting audio files to USB flash drives

The desired audio files can be exported from projects to USB flash drives.

Exported audio files will be saved on the USB flash drive in the "AUDIO" subfolder of the "ZOOM_L-20" folder.



1. Set to OFF.

2. Connect the USB flash drive to the USB HOST port.



3. Set to USB HOST.

4. Set to ON.

5. Select MENU > PROJECT > FILE EXPORT.

- 6.** Use  to select a file you want to export, and press .



- 7.** Edit the name.

Move cursor or change character: Turn 

Select character to change/confirm change: Press 



NOTE

- Audio file names have 24 characters.
- The following characters can be used in project and file names.
(space) ! # \$ % & ' () + , - 0 1 2 3 4 5 6 7 8 9 ; = @
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z [] ^ _`
a b c d e f g h i j k l m n o p q r s t u v w x y z { ~ }
- Project/file names cannot be only spaces.

- 8.** Press .

- 9.** Use  to select YES, and press .



NOTE

- Never disconnect a USB flash drive when "Please Wait ..." appears on the display.
- Audio files will be saved on the USB flash drive in the "AUDIO" subfolder of the "ZOOM_L-20" folder.

Importing audio files from USB flash drives

The desired audio files can be imported from USB flash drives to existing projects and assigned to channels.

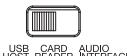
NOTE

Use a computer to create "ZOOM_L-20" and "AUDIO" folders on the USB flash drive in advance (→ "Saving projects to USB flash drives"). Only audio files inside the "AUDIO" folder can be imported.

1. Set  to OFF.

2. Connect the USB flash drive to the USB HOST port.

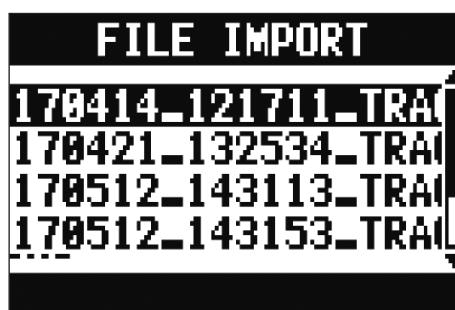


3. Set  to USB HOST.

4. Set  to ON.

5. Select MENU > PROJECT > FILE IMPORT.

6. Use  to select the file you want to import, and press .



NOTE

Audio files cannot be imported from USB flash drives into projects that have protection ON.

7. Use  to select the channel where you want to assign the file, and press .



NOTE

- Mono WAV files can be assigned to mono channels and stereo WAV files can be assigned to stereo channels.
- Files cannot be imported to channels that already have files assigned to them.
- When files are imported, their file names will automatically be changed according to their import channels.

8. Use  to select YES, and press .

**NOTE**

Never disconnect a USB flash drive when "Please Wait ..." appears on the display.

Using audio interface functions

The **L-20** can be used as a 22-in/4-out USB audio interface. After applying its compressor, each input channel always outputs its signal to the corresponding USB audio channel. Channels 1–20 and the stereo signal output from the master fader are sent to the computer (22 channels total).

Installing the driver

1. Download the "ZOOM L-20 Driver" from <http://www.zoom.co.jp> to the computer.

NOTE

- You can download the latest "ZOOM L-20 Driver" from the above website.
- Download the driver for the operating system that you are using.

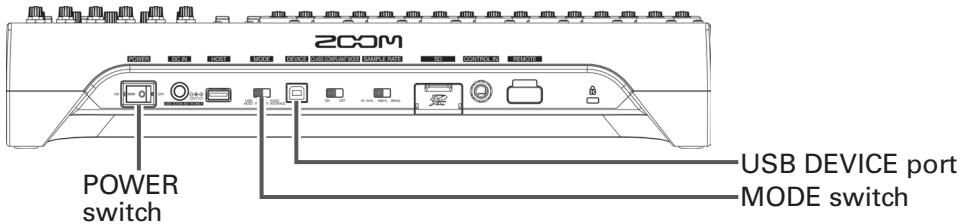
2. Launch the installer and install the driver.

Follow the instructions that appear on screen to install the ZOOM L-20 Driver.

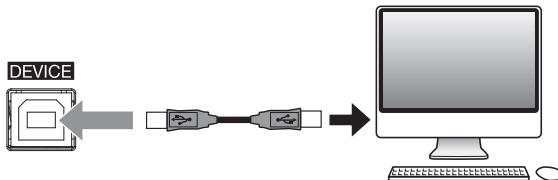
NOTE

See the Installation Guide included in the driver package for detailed installation procedures.

Connecting to a computer



1. Use a USB cable to connect the USB DEVICE port to the computer.



2. Set the switch to AUDIO INTERFACE.

3. Set to ON.

NOTE

CLASS COMPLIANT MODE

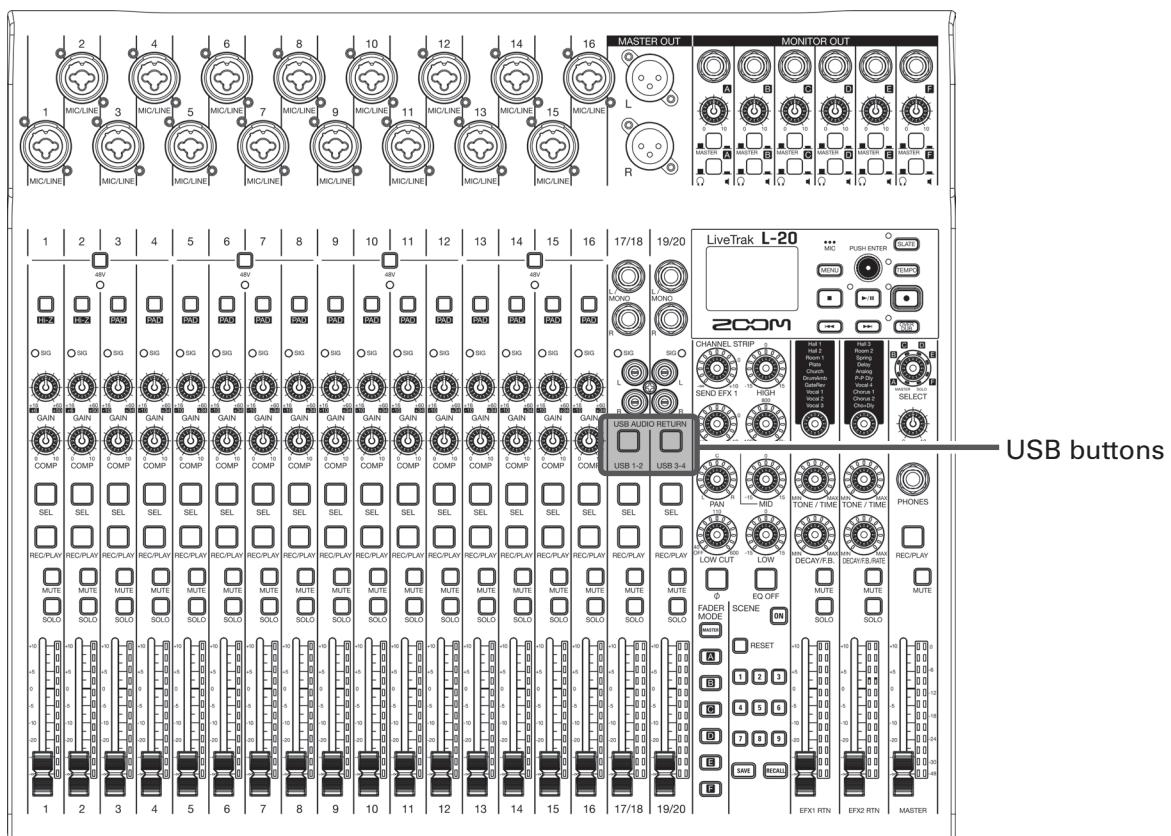
- Set to ON when connected to an iOS device.
- When connecting to an iOS device, use a Lightning to USB camera adapter (or Lightning to USB 3 camera adapter).

4. Set the **L-20** as the computer sound device.

NOTE

- Audio interface functions cannot be used when the sampling rate is set to 96 kHz.

Inputting return signals from the computer to a stereo channel

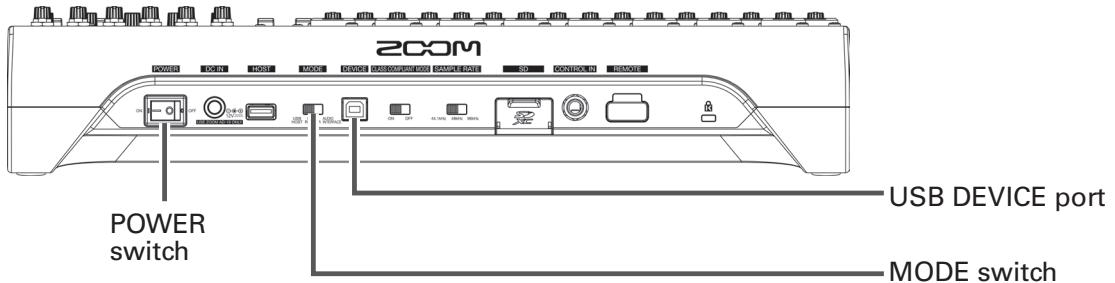


1. Turn / ON for the stereo channel to use for input.
USB 1-2 USB 3-4

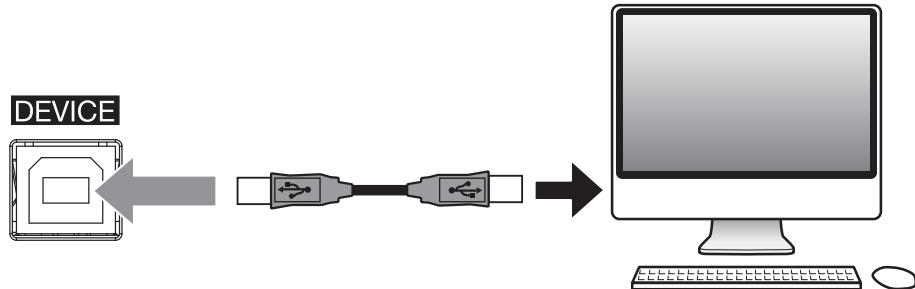
The signal controlled by the channel is switched to the USB audio channel signal (before EQ).

Using card reader functions

When connected to a computer, data on the SD card can be checked and copied.



1. Use a USB cable to connect the USB DEVICE port to the computer.



2. Set to CARD READER.

3. Set to ON.

NOTE

When operating as a CARD READER, other functions and buttons cannot be used.

Recording and playback settings

Changing the recording format

The recording format can be changed in consideration of audio quality and file size.

1. Open MENU > REC/PLAY > REC FORMAT.

2. Use to change the format, and press .



HINT

When overwriting a recording, recording will occur at the bit depth of the original file. For example, a file recorded at 16-bit cannot be overwritten with 24-bit recording.

Changing automatic recording settings

The conditions for automatically starting and stopping recording can be set.

Setting the automatic recording start level

1. Open MENU > REC/PLAY > AUTO REC > REC START LEVEL.

2. Use  to change the start level, and press .



Recording will start automatically when the level of the MASTER fader output signal exceeds the set level.

HINT

This can be set from –48 to 0 dB.

Setting automatic stopping

1. Open MENU > REC/PLAY > AUTO REC > AUTO STOP.

2. Use  to select the automatic stop time, and press .



HINT

This can be set to OFF or between 0 and 5 seconds.

3. Open MENU > REC/PLAY > AUTO REC > REC STOP LEVEL.

4. Use  to set the stop level, and press .



Recording will stop automatically when the level of the MASTER fader output stays below the set level for the amount of time set in step 2.

NOTE

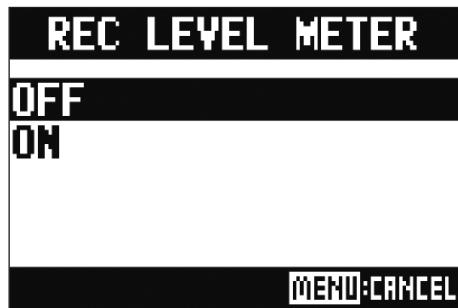
If you start recording after setting automatic recording starting and stopping, the level set in step 4 will be shown on the MASTER level meters.

Showing recording levels on level meters

The levels of signals recorded to the recorder can be shown on the level meters of each channel.

1. Open MENU > REC/PLAY > REC LEVEL METER.

2. Use  to select ON, and press .



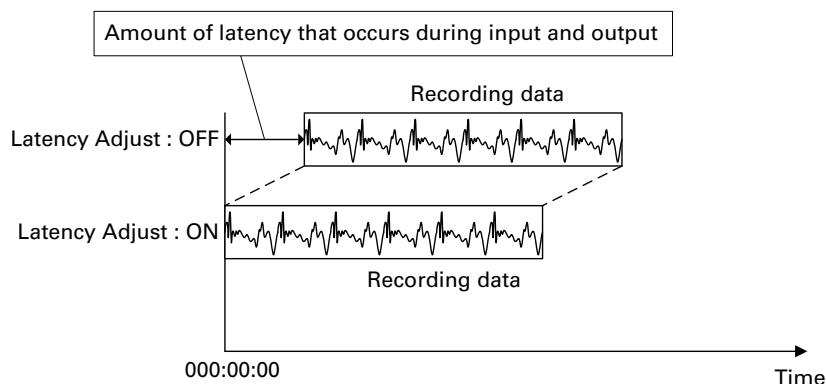
If recorded signal levels are higher than post fader levels, the recorded signal levels are shown lit dimly on the level meters.

Compensating for latency that occurs during input and output

The L-20 can compensate for latency that occurs during input and output if you want to listen to its output signal while overdubbing.

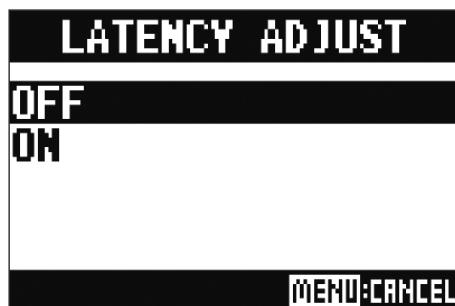
Use this menu item to set whether the latency that occurs during input and output is automatically compensated for or not when OVER DUB is ON.

When automatic compensation is enabled, the recording data is shifted by the amount of latency that occurs during input and output.



1. Open MENU > REC/PLAY > LATENCY ADJUST.

2. Use to select ON, and press .



Changing the playback mode

1. Open MENU > REC/PLAY > PLAY MODE.

2. Use  to select the play mode, and press .



Setting values	Explanation
OFF	Only the selected project plays back. Playback continues even when the end of a file is reached.
PLAY ONE → ¹ (single song playback)	Only the selected project plays back. Playback stops when the end of a file is reached.
PLAY ALL → ^{ALL} (all playback)	Every project from the selected one to the last one will be played back.
REPEAT ONE ↗ ¹ (single song repeat playback)	The selected project will be played repeatedly.
REPEAT ALL ↗ ^{ALL} (all song repeat playback)	All projects in the selected folder will be played repeatedly.

Changing the input signal recording source

1. Open MENU > REC/PLAY > REC SOURCE.

2. Use  to select the recording source, and press .



Setting values	Explanation
PRE COMP	Before compressor applied
POST COMP	After compressor applied

NOTE

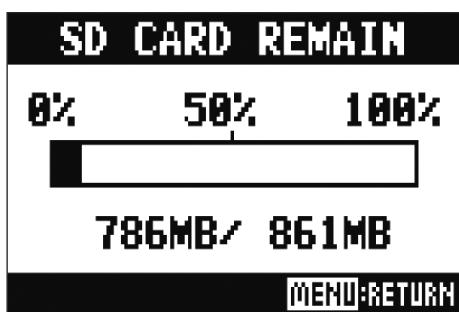
When PRE COMP is selected, the playback signal will be inserted before the compressor.
When POST COMP is selected, the playback signal will be inserted after the compressor.

SD card settings

Checking the open space on SD cards

1. Open MENU > SD CARD > REMAIN.

This shows the open space on the card.



NOTE

The **L-20** shows less than the actual open space in order to maintain space to prevent SD card writing performance from degrading.

Formatting SD cards

Format SD cards for use with the **L-20**.

1. Open MENU > SD CARD > FORMAT.

2. Use to select YES, and press .



NOTE

- Before using SD cards that have just been purchased or that have been formatted on a computer, they must be formatted by the **L-20**.
- Be aware that all data previously saved on the SD card will be deleted when it is formatted.
- Format an SD card before recording to it at 96 kHz.

Testing SD card performance

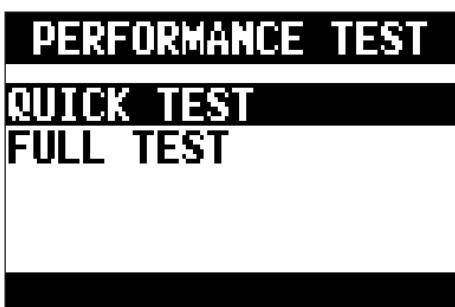
You can test whether SD cards can be used with the L-20.

A basic test can be done quickly, while a full test examines the entire SD card.

Conducting a quick test

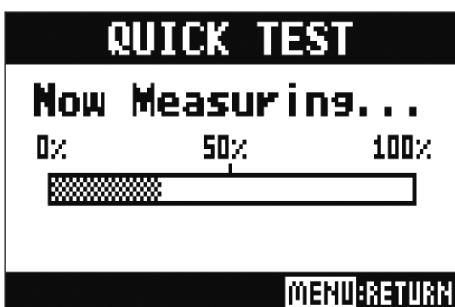
1. Open MENU > SD CARD > PERFORMANCE TEST.

2. Turn  to select QUICKTEST, and press .



3. Use  to select YES, and press .

The card performance test will start. The test should take about 30 seconds.



The result of the test will be shown when it completes.



- 4.** Press **[MENU]** to stop the test.

NOTE

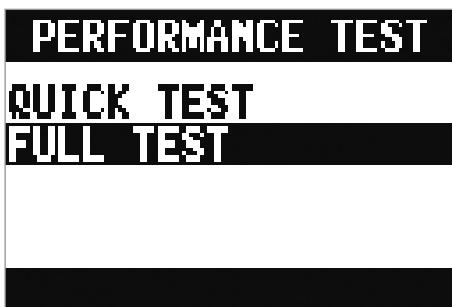
Even if a performance test result is "OK", there is no guarantee that writing errors will not occur. This information is just to provide guidance.

Conducting a full test

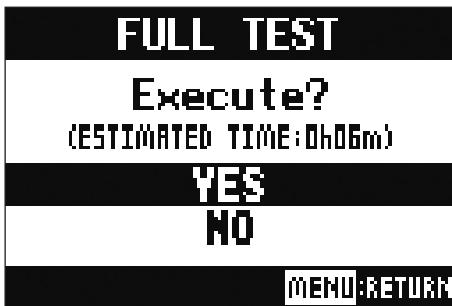
- 1.** Open **MENU > SD CARD > PERFORMANCE TEST**.

- 2.** Use **◀▶** to select **FULL TEST**, and press **○**.

The amount of time required will be shown.



- 3.** Use **◀▶** to select **YES**, and press **○**.



The result of the test will be shown when it completes.

If the access rate MAX reaches 100%, the card will fail (NG).



4. Press to stop the test.

HINT

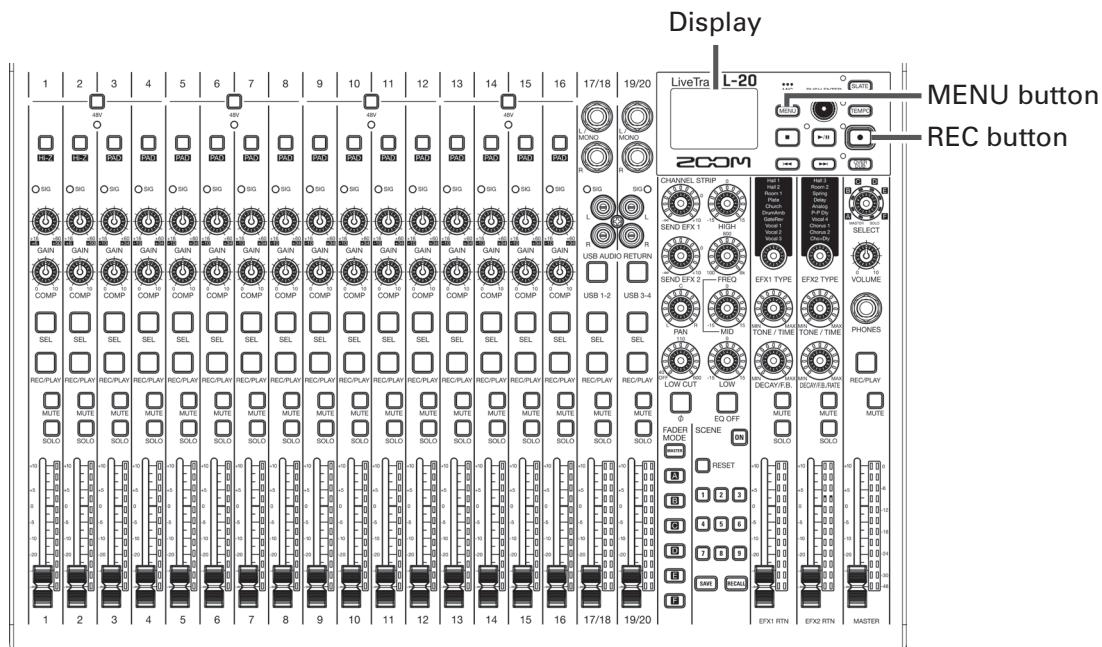
You can press  to pause and resume a test.

NOTE

Even if a performance test result is "OK", there is no guarantee that writing errors will not occur. This information is just to provide guidance.

Making various settings

Setting the date and time



1. Select MENU > SYSTEM > DATE/TIME.

2. Setting the date and time

Move cursor or change value: Turn

Select item/confirm change: Press



3. Press .

The first time you turn the power on after purchase, you must set the date/time.

Setting the footswitch

If a footswitch (ZOOM FS01) is connected to the CONTROL IN jack, you can start/stop recorder playback punch in/out or mute/unmute the send effect by foot.

1. Open MENU > SYSTEM > CONTROL IN.

2. Turn  to select the setting value, and press .



Setting values	Explanation
PLAY	Press the footswitch to start/stop playback. (Equivalent to  .)
PUNCH I/O	Use to control manual punching in/out. (Equivalent to  .)
EFX1 MUTE	Mute/unmute send effect 1.
EFX2 MUTE	Mute/unmute send effect 2.
EFX1&2 MUTE	Mute/unmute send effects 1 and 2.

Changing the sampling rate

The file format used when recording to the recorder depends on this setting.
Before changing the sampling rate, **L-20** must be set to OFF.

1. Confirm that  is set to OFF.

2. Change the  position.

HINT

This can be set to 44.1 kHz, 48 kHz or 96 kHz.

NOTE

- Format an SD card before recording to it at 96 kHz. If you record without formatting first, skipping could occur.
- When 96 kHz is selected, some unit operations are limited. The limited functions are as follows.
 - SEND EFX 1/2: disabled
 - EQ: disabled
 - OVER DUB: disabled
 - Audio interface: disabled
 - MONITOR OUT: output signal same as MASTER only

3. Set  to ON.

NOTE

- The sampling rate cannot be changed during operation.
- If a project is loaded that has a different sampling rate than the unit setting, recording and playback will not be possible.

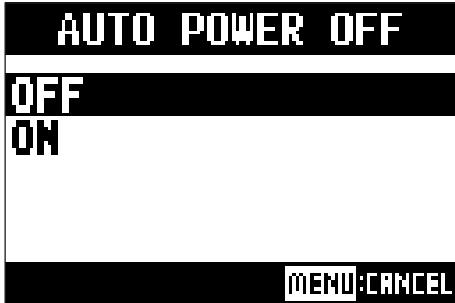
Disabling the automatic power saving function

The power will automatically turn off if the **L-20** is unused for 10 hours.

If you want the power to stay on always, disable the automatic power saving function.

1. While pressing and holding , set  to ON.

2. Use  to select OFF, and press .



NOTE

This setting is saved in the unit.

Adjusting the display contrast

1. Open MENU > SYSTEM > DISPLAY CONTRAST.

2. Turn  to select the setting value, and press .

HINT

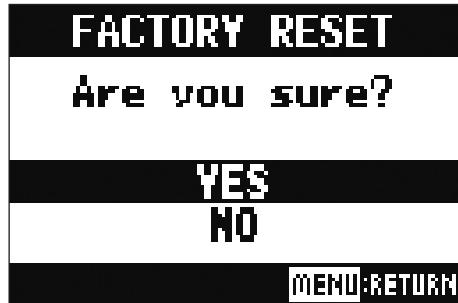
This can be set from 1 to 10.

Restoring settings to factory defaults

You can restore the factory default settings.

1. Open MENU > SYSTEM > FACTORY RESET.

2. Use  to select YES, and press .



NOTE

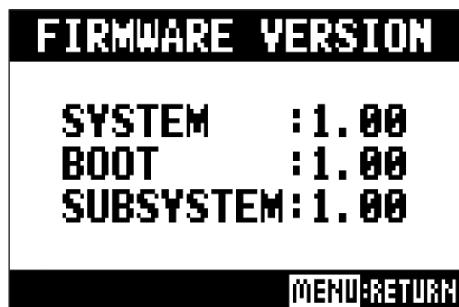
This does not reset mixer settings. (→ "Resetting mixer settings")

Checking the firmware versions.

The **L-20** firmware versions can be viewed.

1. Open MENU > SYSTEM > FIRMWARE VERSION.

This shows the firmware versions.



Updating the firmware

The **L-20** firmware can be updated to the latest versions.

1. Copy the firmware update file to the root directory on an SD card.

NOTE

Files for the latest firmware updates can be downloaded from the ZOOM website (www.zoom.co.jp).

2. Insert the SD card into the **L-20**.

3. While pressing , set  to ON.

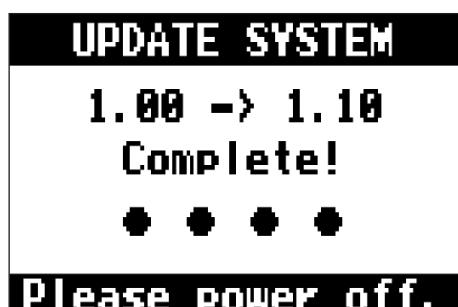
4. Press .



NOTE

During the firmware update, do not turn the power off or remove the SD card. Doing so could cause the **L-20** to become unstartable.

5. After the firmware update completes, turn the  off.



Control from an iPad

By connecting a BTA-1 or other ZOOM-specific wireless adapter (sold separately) and using the dedicated controller app, the **L-20** can be operated from an iPad.

NOTE

- Before turning the **L-20** on, connect the BTA-1 or other ZOOM-specific wireless adapter (sold separately).
- Download the dedicated app from the App Store.

Connecting with an iPad

Pairing beforehand is necessary to connect with an iPad.

1. While the **L-20** is off, connect the BTA-1 or other ZOOM-specific wireless adapter (sold separately).
2. Turn the **L-20** power on.
The **L-20** will start in recording standby.
3. Launch the dedicated app on the iPad.
4. On the app settings screen, conduct connection.

HINT

For app setting procedures, see the manual for the app.

Troubleshooting

General

There is no sound or output is very quiet

- Check the speaker connections and volume settings on the speakers.
- Check instrument and mic connections.
- When using a condenser mic, turn  on.
- Confirm that the SIG indicators are lit green.
- Confirm that  is unlit.
- Raise all the channel faders and the master fader, and confirm that the level meters are lit.
- Confirm that the MASTER  is unlit or lit red.

Recorded audio is too loud, too quiet or silent

- Adjust input gains and confirm that SIG indicators are lit green.
- When using a condenser mic, turn  on.
- When recording to an SD card, confirm that  is lit red.

Recording not possible

- When recording to an SD card, confirm that  is lit red.
- Confirm that the SD card has open space.
- When recording to an SD card, confirm that the project is not protected (to prevent overwriting).

"Write Error" appears and recording properly is not possible./ Stopping recording takes an excessive amount of time.

- SD cards can become worn out. Speed can decrease after repeated writing and erasing.
- Formatting the card with this unit might improve this. (→ "Formatting SD cards" on P84)
- If formatting an SD card does not improve this, we recommend replacing the card. Please check the list of cards that have been confirmed to work on the ZOOM website.

NOTE

This is not a guarantee of specific SD card recording performance for SDHC/SDXC cards that have been confirmed to work.

This list is provided as a guideline to help find suitable cards.

Playback sound cannot be heard or is quiet

- When playing data from an SD card, confirm that  is lit green.
- Raise the faders on the playback channels, and confirm that the level meters are lit.

The sounds of devices connected to input jacks are distorted

- Confirm that the SIG indicators are not lighting red. If they are lighting, lower their input gains. You can also turn  on.
- Confirm that level meters are not lighting to their highest levels. If a level meter is lighting to its highest level, lower its fader.

A send effect is not working

- Confirm that the EFX 1/2 RTN  is unlit.
- Raise the EFX 1/2 RTN fader, and confirm that the EFX 1/2 RTN level meters are lit.
- Confirm the send amounts of the channels on which you want to use the effect.

There is no sound or output is very quiet from MONITOR OUT A–F

- Confirm the mixes of each output.
- Confirm that the output volume of each output is raised (MONITOR OUT A–F knobs).
- Confirm the settings of the MONITOR OUT A–F switches.

Audio interface

Cannot select or use the L-20 device

- Confirm that the **L-20** is connected to the computer correctly.
- Confirm that  is set to OFF on the **L-20**.
- Quit all the software that is using the **L-20**, and turn the **L-20** off and on again.
- Reinstall the driver.
- Connect the **L-20** directly to a USB port on the computer. Do not connect it through a USB hub.

Sound skips during playback or recording

- If you can adjust the audio buffer size of the software that you are using, increase the buffer size.
- Connect the **L-20** directly to a USB port on the computer. Do not connect it through a USB hub.
- Turn the automatic sleep function and other computer power saving settings off.

Cannot play or record

- Confirm that the **L-20** is connected to the computer correctly.
- Confirm that the Sound setting of the computer you are using is set to "ZOOM L-20".
- Confirm that **L-20** is set for input and output in the software that you are using.
- Confirm that  for channels 17/18 and  for channels 19/20 are lit red, and that the level meters are lit.
- Quit all the software that is using the **L-20**, and disconnect and reconnect the USB cable connected to the **L-20**.

Specifications

Number of input and output chan- nels	Mono (MIC/LINE)	16
	Stereo (LINE)	2
	Outputs	MASTER OUT
		MONITOR OUT
		PHONES
Inputs	Mono (MIC/LINE)	Type XLR/TRS combo jacks (XLR: 2 HOT, TRS: TIP HOT) Input gain PAD OFF: +16 – +60 dB PAD ON: –10 – +34 dB Hi-Z ON: +6 – +50 dB Input impedance XLR: 3 kΩ TRS: 10 kΩ/1 MΩ (when Hi-Z ON) Maximum input level PAD OFF: 0 dBu (at 0 dBFS) PAD ON: +26 dBu (at 0 dBFS) Phantom power +48 V
	Stereo (LINE)	Type TS phone/RCA pin (unbalanced) jacks Maximum input level +14 dBu
Outputs	MASTER OUT	Type XLR jacks (balanced) Maximum output level +14.5 dBu Output impedance 100 Ω
	MONITOR OUT A-F (with balanced output) connected to monitor speakers	Type TRS phone jacks (balanced) Maximum output level +14.5 dBu Output impedance 100 Ω
	MONITOR OUT A-F (with unbalanced output) connected to head- phones	Type Standard stereo phone jacks Maximum output level 42 mW + 42 mW at 60 Ω Output impedance 100 Ω
	PHONES	Type Standard stereo phone jacks Maximum output level 42 mW + 42 mW at 60 Ω Output impedance 100 Ω
Buses	MASTER	1
	MONITOR	6
	SEND EFX	2
Channel strip	COMP	
	LOW CUT	40–600 Hz, 12dB/OCT
	EQ	HIGH: 10 kHz, ±15 dB, shelving MID: 100 Hz – 8 kHz, ±15 dB, peaking LOW: 100 Hz, ±15 dB, shelving
	PHASE	
Level meters		12 segments
Send effects		20 types
Recorder	Maximum simultaneous recording tracks	22 at 44.1/48/96 kHz
	Maximum simultaneous playback tracks	20
	Recording format	WAV 44.1/48/96 kHz, 16/24-bit, mono/stereo
	Recording media	16MB–2GB SD cards, 4GB–32GB SDHC cards, 64GB–512GB SDXC cards
Audio interface	44.1/48 kHz	Recording: 22 channels Playback: 4 channels
	Bit depth	24-bit
	Interface	USB 2.0
Card reader	Class	Mass storage USB 2.0 High Speed
USB HOST	Class	USB 2.0 High Speed
Sampling frequency		44.1/48/96 kHz
Frequency characteristics		44.1 kHz: –1.0 dB, 20 Hz – 20 kHz 96 kHz: –3.0 dB, 20 Hz – 40 kHz
Equivalent input noise		Actual measurements: –128dB EIN (IHF-A) at +60dB/150Ω input
Display		LCD with backlight (128×64 resolution)
Power		AD-19 AC adapter (DC12V 2A)
Power consumption		24 W maximum
External dimensions		445 mm (W) × 388.4 mm (D) × 82.6 mm (H)
Weight (main unit only)		3.71 kg

Send effect specifications

EFX 1

No.	Type	Explanation	Parameter knob 1	Parameter knob 2	Tempo synchronization
1	Hall 1	Hall reverb with a bright tone	TONE	DECAY	
2	Hall 2	Hall reverb with a long time for early reflections	TONE	DECAY	
3	Room 1	Dense room reverb	TONE	DECAY	
4	Plate	Plate reverb simulation	TONE	DECAY	
5	Church	Reverb that simulates the sound of a church	TONE	DECAY	
6	DrumAmb	Reverb that adds a natural ambience (air sound) to drums	TONE	DECAY	
7	GateRev	Special reverb suited to percussive performances	TONE	DECAY	
8	Vocal 1	Very useful effect that combines delay with hall reverb	TIME	DECAY	
9	Vocal 2	Effect that combines delay with mono output reverb	TIME	DECAY	
10	Vocal 3	Effect that combines delay suitable for ballads with plate reverb	TIME	DECAY	

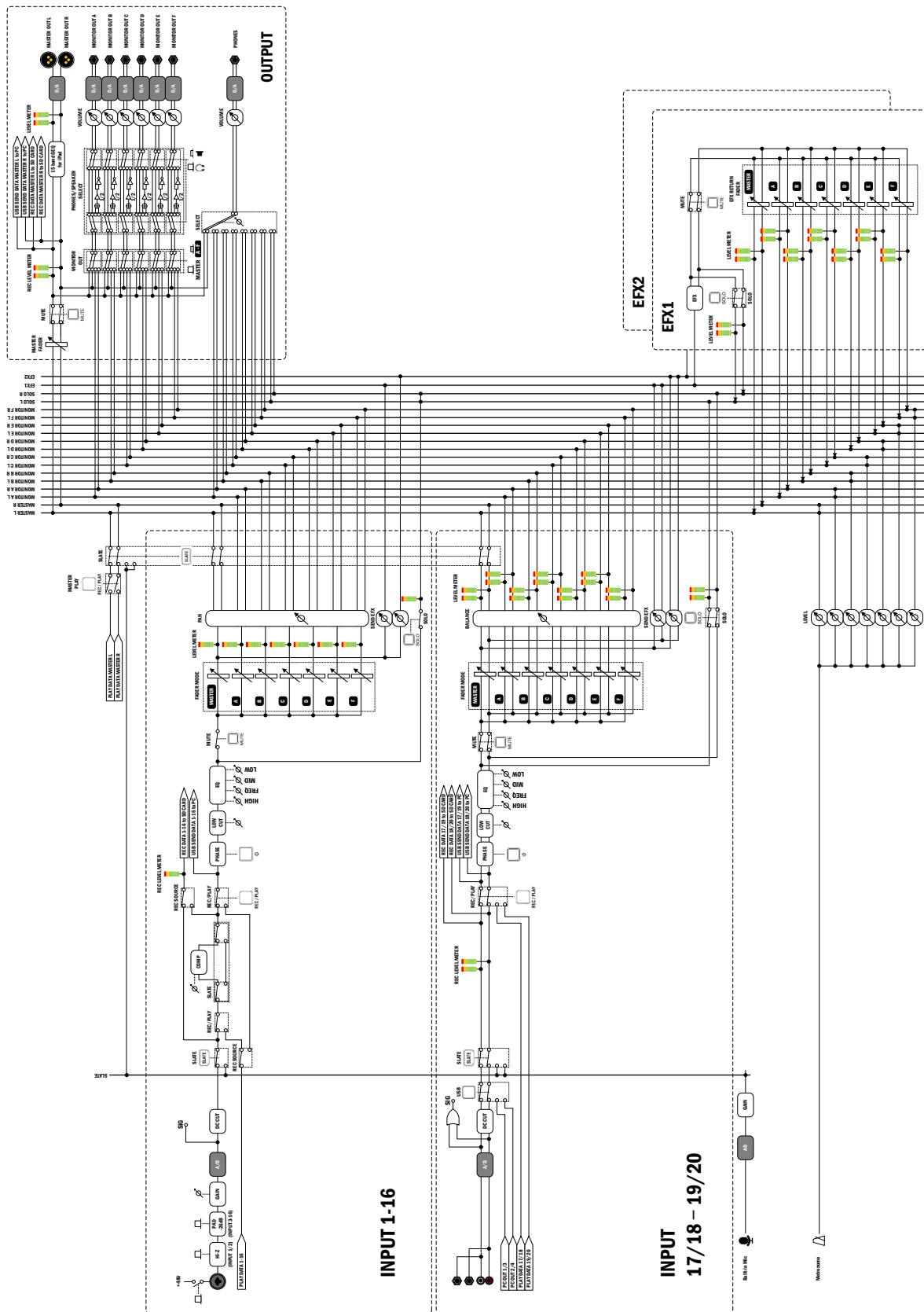
EFX 2

No.	Type	Explanation	Parameter knob 1	Parameter knob 2	Tempo synchronization
1	Hall 3	Hall reverb that simulates an arena-sized venue	TONE	DECAY	
2	Room 2	Room reverb with coarse reflections	TONE	DECAY	
3	Spring	Spring reverb simulation	TONE	DECAY	
4	Delay	Digital delay with a clear tone	TIME	FEEDBACK	●
5	Analog	Warm analog delay simulation	TIME	FEEDBACK	●
6	P-P Dly	Effect that outputs delay sound alternately left and right	TIME	FEEDBACK	●
7	Vocal 4	Effect that combines delay suitable for rock with room reverb	TIME	DECAY	
8	Chorus 1	Stereo chorus with a clear wide quality	TONE	RATE	
9	Chorus 2	Mono chorus with low variation useful for many applications	TONE	RATE	
10	Cho+Dly	Effect that combines chorus and delay	TIME	RATE	

Note: Delay effects that are tempo synchronized can be synchronized to the project tempo.

To synchronize them, press the TEMPO button and set the tempo. Quarter notes will be synchronized to the tempo.

Mixer block diagram



NOTE

The graphic equalizer inserted on the MASTER OUT can only be controlled with the dedicated iPad app.



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