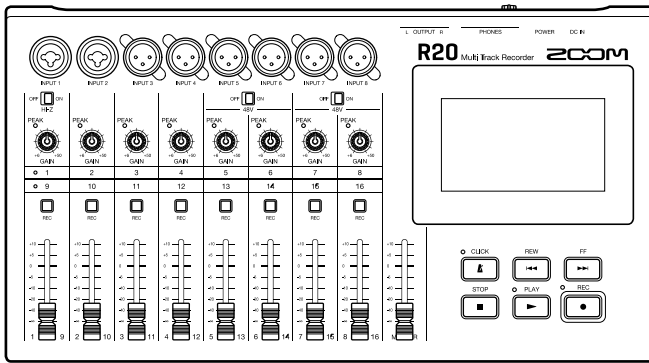


R20

Multi Track Recorder



Quick Tour

You must read the Usage and Safety Precautions before use.



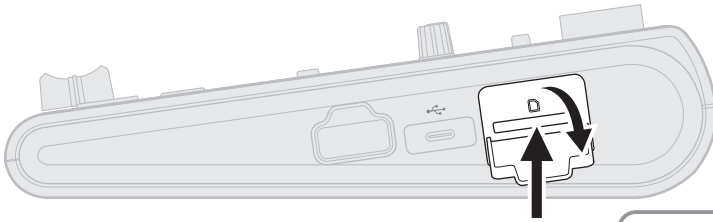
The Operation Manual can be downloaded from the ZOOM website (www.zoom.jp/docs/r20).

This page has files in PDF and HTML formats.

The PDF file format is suitable for printing on paper and reading on a computer.

The HTML format can be read with web browsers and is designed for reading on smartphones and tablets.

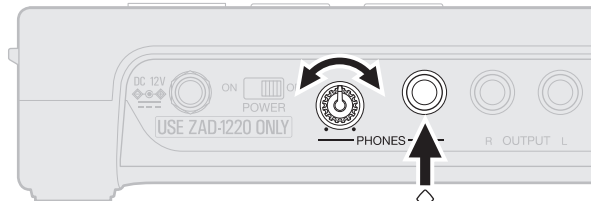
Inserting SD cards



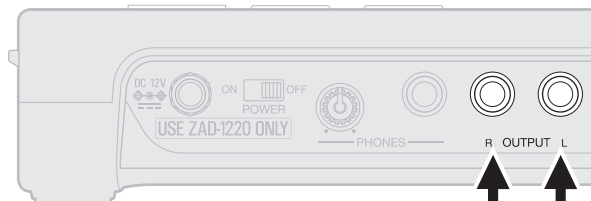
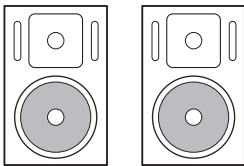
Supported recording media
SDHC: 4–32 GB
SDXC: 64–512 GB

Connecting output devices

Headphones

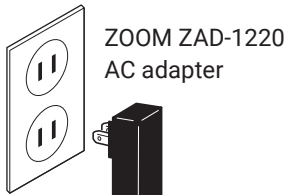


Powered monitors

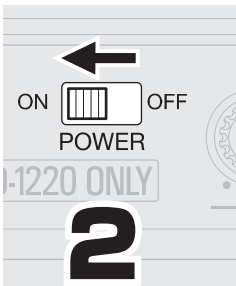
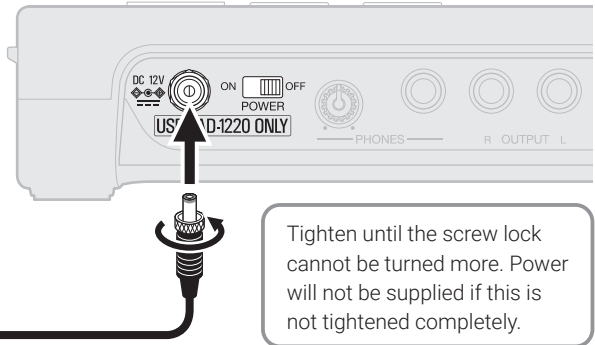


Turn powered monitors off before connecting them.

Turning the power on

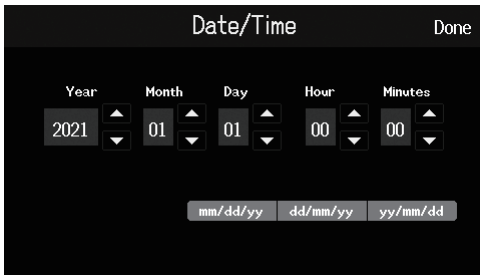


1

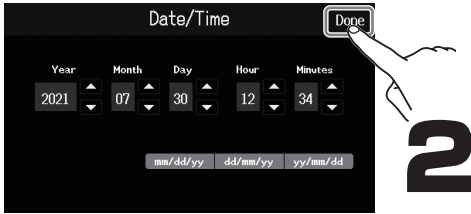
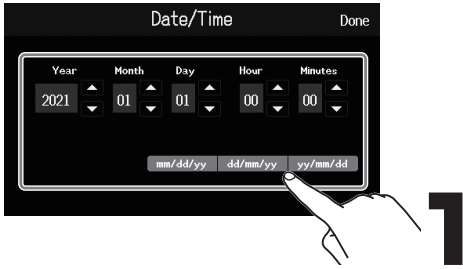


Turn on the power monitors after starting up the R20.

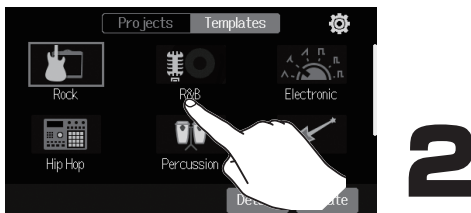
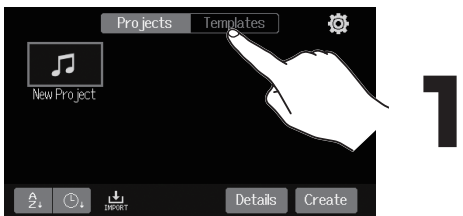
The power will automatically turn off if the R20 is unused for 10 hours. If you want to keep the power on always, turn off the automatic power saving (Auto Power Off) function.



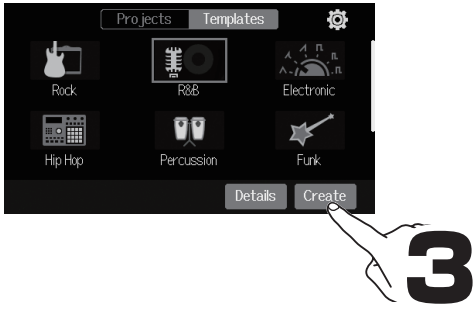
Setting the date and time



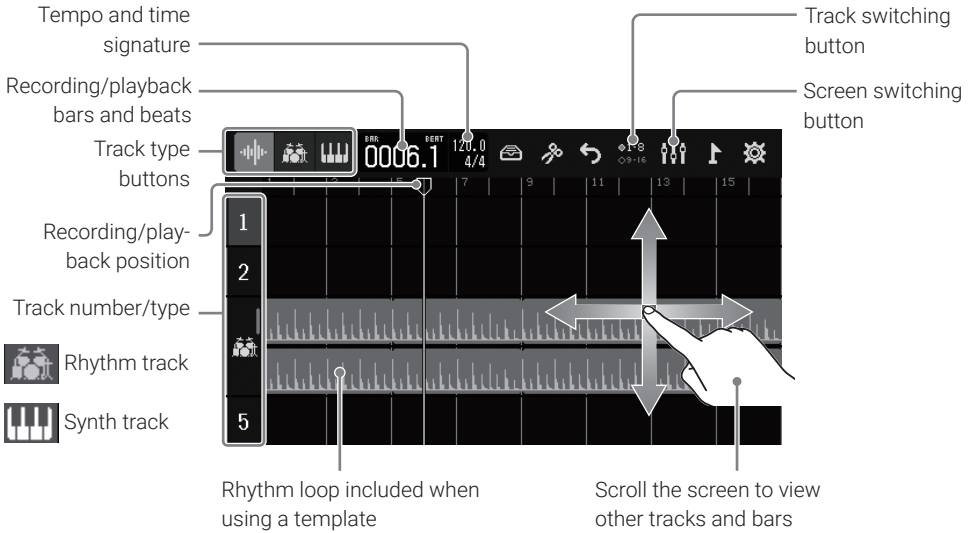
Creating projects



Templates include preset rhythm loops. Select the desired template.

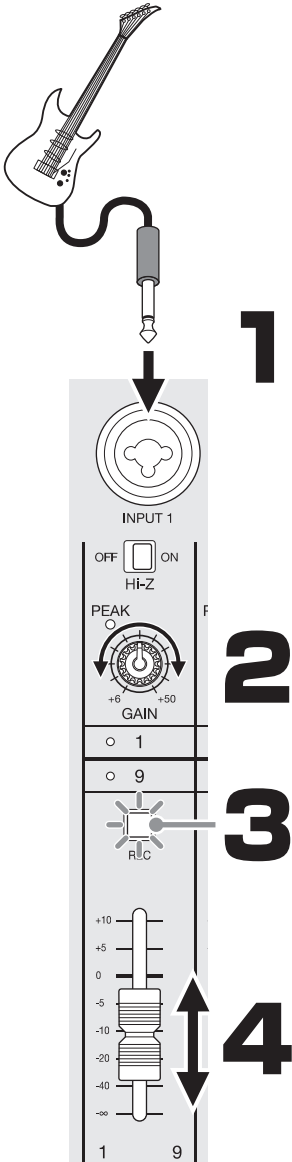


Home Screen



Recording

Connections and preparation

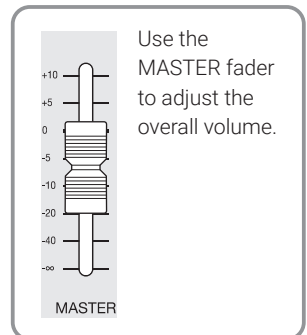


Connected equipment	Connector and setting
Guitar/bass with passive pickups (direct connection)	INPUT 1 (OFF <input type="checkbox"/> ON) HI-Z
Guitar/bass with active pickups, synth or other electronic instrument	INPUT 1 (OFF <input type="checkbox"/> ON) INPUT 2 HI-Z
Dynamic mic	INPUT 1-4 INPUT 5-8 (OFF <input type="checkbox"/> ON) 48V
Condenser mic	INPUT 5-8 (OFF <input type="checkbox"/> ON) 48V

Make sound and adjust so ^{PEAK} does not quite light at maximum volume.

Press so that it lights.

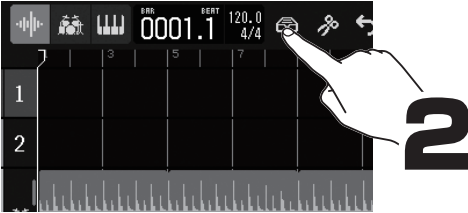
Make sound and adjust the fader.



Using effects




Select a track to use an effect on.



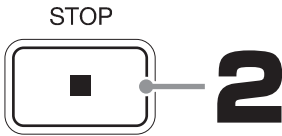
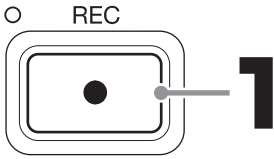
Add a to select a patch memory.



Specific effect settings can be changed.


- Tap  to return to the previous screen.
- Patch memories store the effects used, their order, on/off states and parameter settings.

Recording

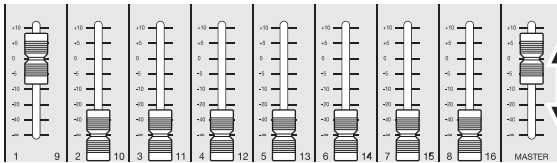
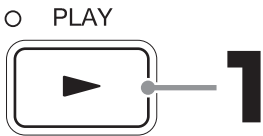


Tracks with  lit will be recorded.



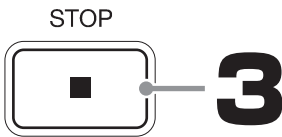
Press  when stopped to set the recording/playback position to the beginning.

Playing recordings

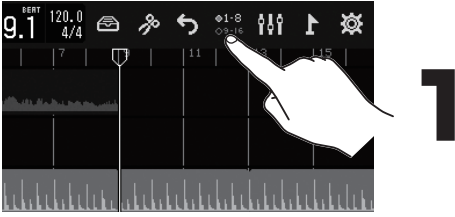


2

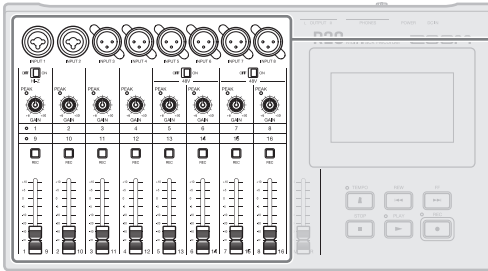
Adjust levels with the MASTER fader and faders for tracks to be played.



Using tracks 9–16 (switching tracks)



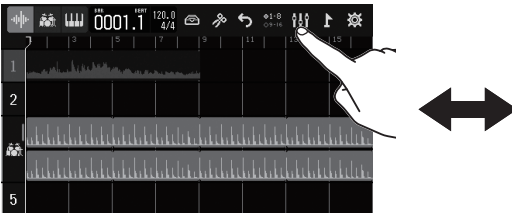
Select which tracks receive audio from INPUTS 1–8 and can be operated with the physical controls.



◆ 1-8 Tracks 1–8 can be operated.

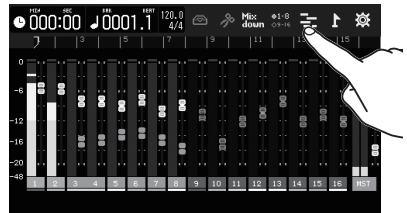
◊ 9-16 Tracks 9–16 can be operated.

Switching screens




Track view

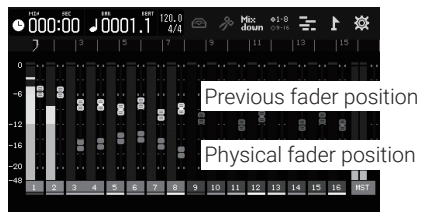
This is the normal recording/editing screen. Since recorded waveforms and their positions can be examined easily, this is useful for thinking about song structure and editing.



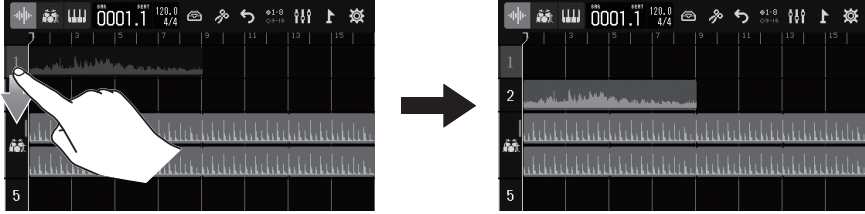
Level meter view

This screen shows the level meters and faders for all tracks. This is useful for recording multiple channels simultaneously and adjusting the mix.

After switching track groups, for example, the positions of physical faders will be applied again after they have been aligned once with the bright  positions.

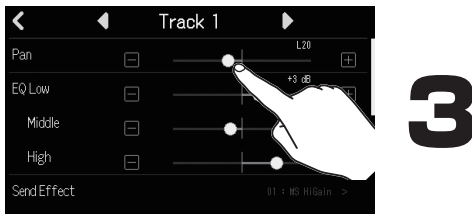
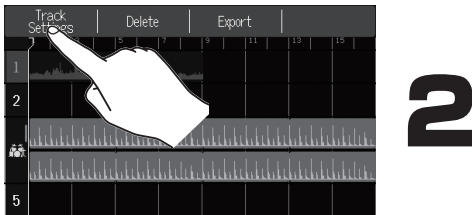
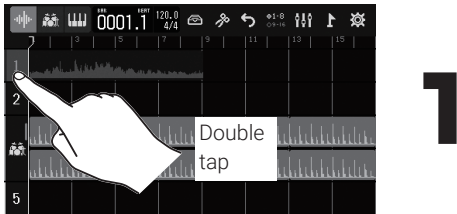


■ Changing track contents



Recorded data can be moved between tracks. For example, before recording a guitar or bass directly with INPUT 1 (using Hi-Z), clear track 1 by moving previously recorded data from it to a different track.

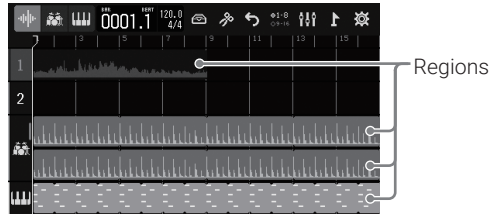
■ Making individual track settings



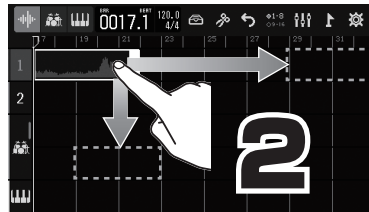
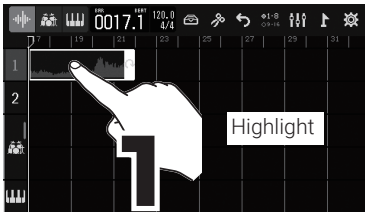
Make settings for each track.

Editing projects

Waveforms and MIDI notes added to recorded tracks are called "regions". The R20 has audio, rhythm and synth regions that can be edited to create projects.



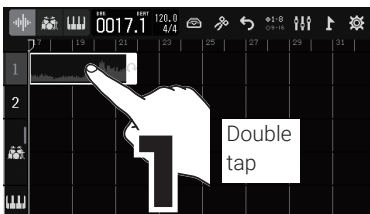
Moving regions



Extending regions (looping)

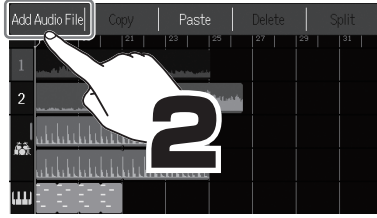
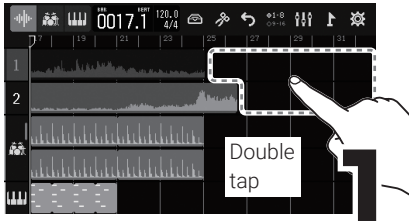


Editing regions

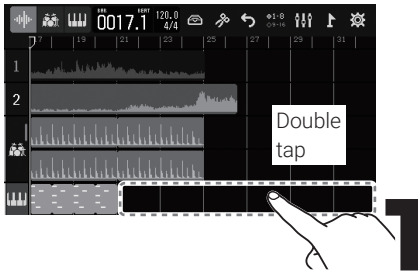


■ Adding regions

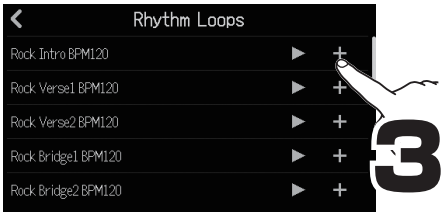
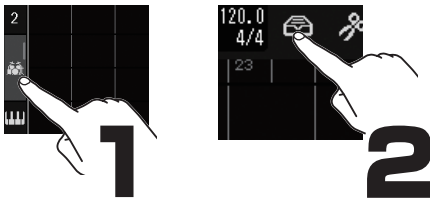
Audio



Synth



Rhythm

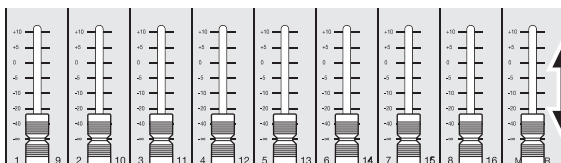


Mixing down

Projects can be mixed down to stereo WAV files.

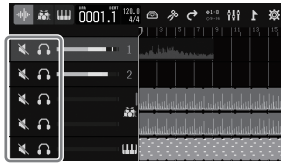
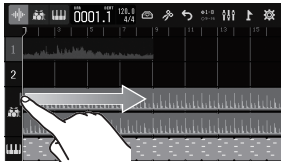
Since the project plays back while recording the mixdown, adjusting the faders during playback will affect the levels.

■ Adjusting the mix



While listening to playback, adjust the faders to balance the levels as desired.

Mute/solo functions

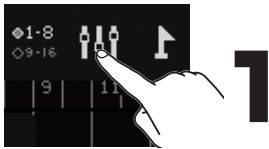


Mute tracks.



Output sound only from selected tracks.

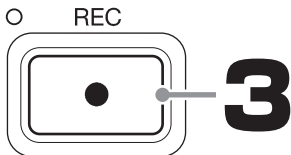
Mixing down



Switch to level meter view.

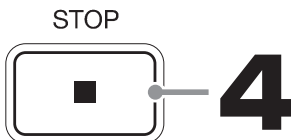


Tap **Mix down** so that it becomes red.



Start playback to begin creating the mixdown file.

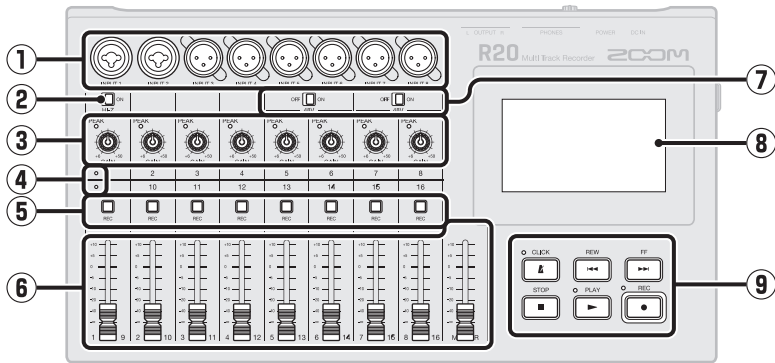
All fader movements during playback will affect the mixdown file.



End mixing down.

The mixdown file will be saved in the "AUDIO" folder on the SD card.

Functions of parts



① Input jacks

Use INPUTS 1 and 2 to connect mics, keyboards and guitars. These support XLR and 1/4-inch phone (unbalanced) plugs. Use INPUTS 3–8 to connect mics and keyboards. These support XLR plugs.

② Hi-Z switch

Turn Hi-Z on/off for INPUT 1. Turn it on as necessary for the connected guitar or bass.

③ Input PEAK indicators/GAIN knobs

Use these input gain knobs to adjust input signals. Adjust them so that the PEAK indicators do not light.

④ Track indicators

These show whether the channel inputs and the faders are connected to tracks 1–8 or 9–16.

⑤ Track REC buttons

Press these buttons to enable recording on tracks. Buttons light red when recording is enabled.

⑥ Channel/MASTER faders

Channel faders: These adjust individual track signal levels in a range from $-\infty$ to +10 dB.

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

⑦ PHANTOM switches

These turn +48V phantom power on/off. Turn these on when, for example, connecting condenser mics that support phantom power to INPUTS 5–8.

⑧ Touchscreen

This shows various types of information and allows operation by touch.

⑨ Other buttons

CLICK: This turns the metronome on/off. The indicator lights when it is on.

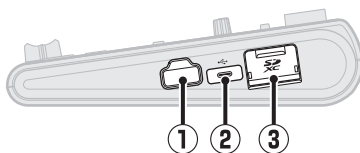
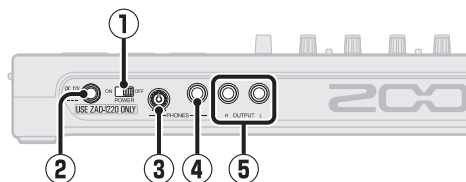
REW: This moves the playback position one bar back. Press and hold to search backward.

FF: This moves the playback position one bar forward. Press and hold to search forward.

STOP: This stops recording/playback. Press when stopped to move the recording/playback position to the project beginning.

PLAY: This starts/pauses playback of recorded files. The indicator lights during playback and recording.

REC: This starts recording. The indicator lights during recording.



- ① **Power switch**
This turns the power on/off.
 - ② **DC12V AC adapter connector**
Connect the dedicated AC adapter (ZOOM ZAD-1220) here.
 - ③ **PHONES output volume knob**
This adjusts the headphone output volume.
 - ④ **PHONES output jack**
Connect headphones here.
 - ⑤ **OUTPUT jacks**
Connect these to a power amplifier, a PA system or powered monitor speakers, for example.
- ① **REMOTE connector**
Connect a ZOOM BTA-1 or other dedicated wireless adapter here. This enables wireless operation of the R20 from an iOS/iPadOS device using a dedicated app.
 - ② **USB (Type-C) port**
Using this, projects can be copied to and imported from USB flash drives, and USB MIDI keyboards can be connected and used to play synth sounds. Connecting a computer also makes the following possible.
 - Using the R20 as an audio interface
 - Using Guitar Lab to replace R20 effects
 - Using the R20 as a card reader
 - Using the R20 as a DAW controller
 - ③ **SD card slot**
This supports cards that meet SDHC/SDXC specifications.

Other functions

Project options	Projects can be renamed, duplicated, deleted, rendered, and exported to USB storage.
Wave Editor	Waveform editing functions can be used in audio and rhythm regions. The Time Stretch function allows the lengths of regions to be changed without changing the pitch.
Snap	The positions of regions and notes (synth sounds) can be snapped to the ruler shown.
Stereo Link	Adjacent even and odd-numbered tracks can be handled as stereo tracks.
Convert to Audio	All regions on a track can be converted to a single audio file. This can be used to avoid limits on the number of regions and the use of effects and synths.
Add WAV and SMF files from the SD card or USB storage	WAV and SMF (Standard MIDI File) files on the SD card or USB storage can be added as new regions.
Marks	Memos can be added at the beginnings of bars. The overall structure of a song can be managed easily by adding memos to each part.
Metronome	The metronome functions include pre-count, sound selection and separate volume adjustment for PHONES and OUTPUT jacks.

Synth	The R20 has an internal synthesizer. Notes can be input by connecting a USB MIDI keyboard and performing them in real-time or by using the piano roll on the touchscreen. In addition, SMF (Standard MIDI File) files can be imported as regions.
Physical controller	When connected by USB to a computer or similar device, the R20 buttons and faders can be used to control DAW transport and mixing operations.
USB audio interface	When connected by USB to a computer or similar device, the R20 can be used as an audio interface with up to 8 inputs and 4 outputs.
Guitar Lab connection	A computer can be used to add effects that are distributed online as well as to edit and back up patch memories, for example.
SD card reader	When the R20 is connected to a computer, data on the SD card can be checked and copied.
Operation from iOS/iPadOS devices	By connecting a BTA-1 or other dedicated wireless adapter to the R20, an iOS/iPadOS device with a dedicated controller app can be used to operate the R20 wirelessly.

Troubleshooting

Sound is not output or the volume is very low

- Check the connections to the monitoring system and its volume settings.
- Confirm that the volume setting of the R20 is not too low.

Cannot hear sound from a mic or other connected equipment or the volume is very low

- Check the orientation of the mic or the volume settings of the connected device.
- Check the R20 gain settings.
- Check the R20 fader settings.
- Check the R20 output level settings.
- Check the R20 phantom power settings.

Cannot record

- Confirm that track REC buttons are lit red.
- Confirm that the SD card has open space.
- Confirm that an SD card is loaded properly in the card slot.

- If "SD card protected!" appears on the display, the SD card write-protection is enabled. Slide the lock switch on the SD card to disable write-protection.

Sound input through INPUT 1 is very noisy

- Check the Hi-Z switch setting.

Cannot hear recorded sound or the volume is very low

- Confirm that the track faders are not too low.
- Confirm that the tracks are not muted and that other tracks are not soloed.

Not recognized by computer when connected

- Confirm that the USB cable being used is not designed only to provide power.
- The operation mode must be set on the R20 to allow the computer to recognize it.

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ZOOM CORPORATION

4-4-3 Kanda-surugadai, Chiyoda-ku, Tokyo 101-0062 Japan

zoomcorp.com