FLAMMA

FS21

**Drum machine &
Looper pedal
Owner's Manual**

Content

Precautions

Please read carefully before proceeding

Power Supply

Please use power supply with 9V and at least 300mA current value for the unit. Incorrect power suuply may cause short-circuit and damage.
Please turn off the power supply if the device is not used for long period.

Important Safety Instructions

1. Read these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. Do not use this apparatus near water
6. Clean only with a dry cloth
7. Do not install near any ventilation openings. Install in accordance with the manufacturer's instructions
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparati (including amplifiers)that produce heat
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade of the third prong are provided for your safety. If the provided plug does not fit into your outlet consult an electrician for replacement of the obsolete outlet
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point

FCC certification

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
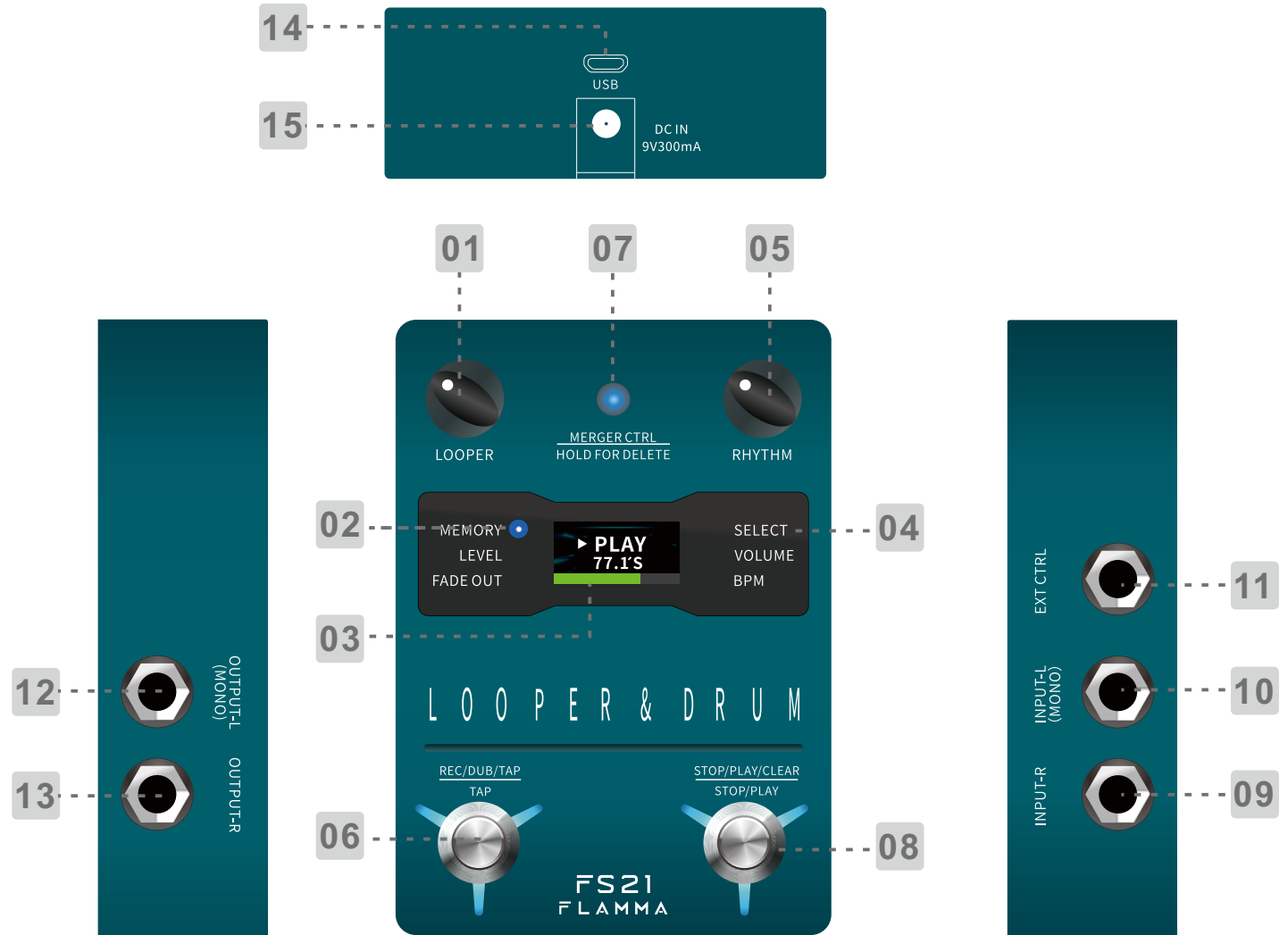
- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation

Features

1. 44.1kHz 24bit high-quality looper and drum machine

2. Up to 4 minutes of recording time per each track, 40 preset slots, and 160 minutes total recording capacity.

3. 100 different drum grooves from 10 unique music styles. 10 types of metronome settings to choose from.

4. EXT CTRL function supports external footswitch control (purchased separately).

5. Supports import/export recording via USB

6. The detail of recording is displayed by the progress bar on the screen

7. Separate footswitch for controlling looper and drum machine

8. Recording saved automatically, even after FS21 is powered off

Lay out

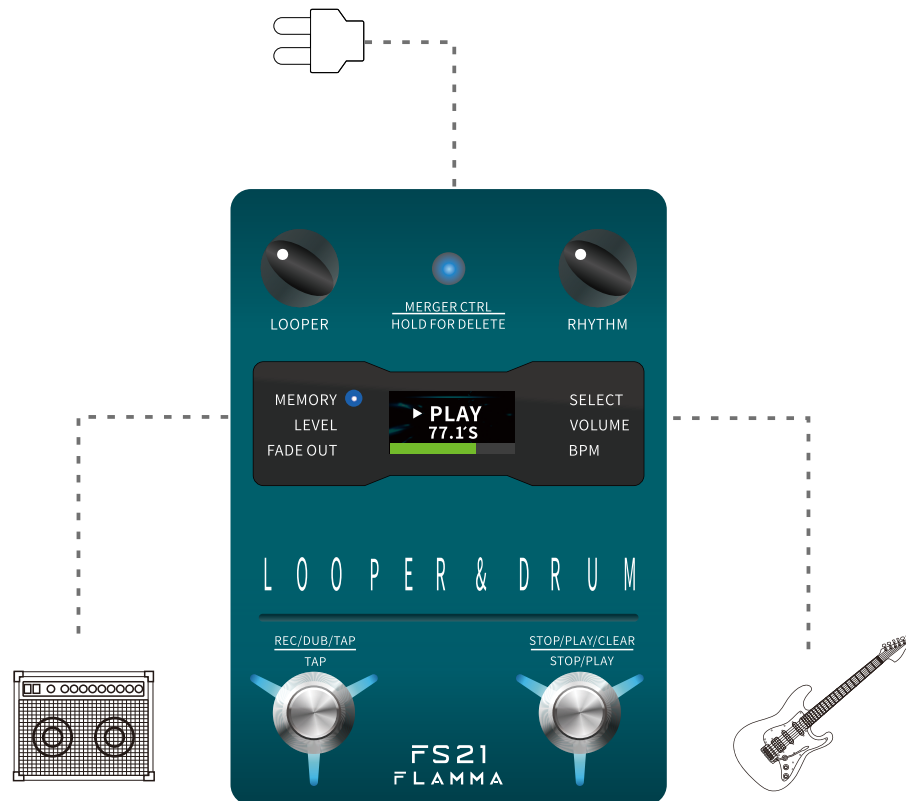|	
14	USB
15	DC IN 9V300mA
01	LOOPER
07	MERGER CTRL / HOLD FOR DELETE
05	RHYTHM
02	MEMORY / LEVEL / FADE OUT
04	SELECT / VOLUME / BPM
03	► PLAY 77.1'S
12	OUTPUT-L (MONO)
13	OUTPUT-R
11	EXT CTRL
10	INPUT-L (MONO)
09	INPUT-R
06	REC/DUB/TAP / TAP
08	STOP/PLAY/CLEAR / STOP/PLAY

LOOPER & DRUM

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Lay out

01 LOOPER： LOOPER control. Select the position, volume level, and fade out time of the LOOPER

02 LOOPER LED： Indicates current LOOPER parameters

03 Display Screen

04 RHYTHM LED： Indicates current RHYTHM parameters

05 RHYTHM： RHYTHM control. Select the rhythm type, speed, and volume level of the RHYTHM setting.

06 Left Footswitch： Control the Record, Dub and Playback in LOOPER mode; Tap tempo for RHYTHM

07 MERGER CTRL： Toggle LOOPER and drum machine to work independently or simultaneuosly. Hold to delete recorded tracks

08 Right Footswitch: Control the Playback, Stop and Delete in LOOPER mode; Play/Stop for RHYTHM

09 INPUT RIGHT: MONO audio input jack

10 INPUT LEFT: MONO audio input jack. (Connect both LEFT and RIGHT input to set up stereo input)

11 EXT CTRL: External stereo footswitch jack

12 OUTPUT LETF: Mono output jack

13 OUTPUT RIGHT: Mono output jack (Connect both output jacks to set up stereo output)

14 USB： Micro type-B USB. Connect to computer for editor software,import/export recorded files, perform factory reset

15 DC IN： Power supply, 9V 300mA negative inside.

Start

Plug in 9V 300mA power supply to DC IN jack.

Connect guitar to the LEFT INPUT via instrument cable.

Connect the output of the FS21 to an amplifier or stompbox.

LOOPER

MERGER CTRL
HOLD FOR DELETE

RHYTHM

MEMORY
LEVEL
FADE OUT

▶ PLAY
77.1′S

SELECT
VOLUME
BPM

L O O P E R & D R U M

REC/DUB/TAP
TAP

STOP/PLAY/CLEAR
STOP/PLAY

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Instructions

FS21 has both LOOPER and RHYTHM modules. Users can switch between LOOPER and RHYTHM by pressing both footswitches simultaneously. The LED of LOOPER (blue)and RHYTHM (red) will indicate current module.

LOOPER

Press LOOPER knob to select a function below:

MEMORY ●
LEVEL
FADE OUT
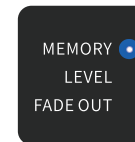
MEMORY:LOOPER saving mode. In this mode, rotate LOOPER knob to select a slot to save looper file.

Current saving number ------ **MEM.1** / **Empty** ---- EMPTY indicates empty slot

LEVEL: Playback volume level of the tracks. Ranges from -∞ to +6dB. If OUTPUT CLIPPING is displayed on the screen, please turn down the volume level of playback.

VOL
0.0dB

OUTPUT
CLIPPING

When the input signal level is detected to be clipping, "INPUT CLIPPING" will be displayed on the screen. Please turn down the input level or the output level of your instrument.

INPUT
CLIPPING

Instructions

FADE OUT: Setting the time of fade out when the playback stops. Range from 1 to 5 seconds. FADE OUT function is set to off as default.

```
FADE
0S
```

REC: Press LOOPER knob to select MEMORY. Rotate to an empty slot. Press left footswitch to start recording. The screen will display "REC" and timer will begin counting.

```
• REC
5.2'S
```

Playback: After current track recording is finished, press right footswitch to stop recording and begin playback. Progress bar will display play time.

Dub: After current track recording is finished, press left footswitch to enter Dub mode. it will start recording while playing back previously recorded tracks. Press left footswitch again to finish recording and begin playback of all recorded tracks.

```
• DUB
0.0'S
```

UNDO: If two or more tracks have been recorded, press and hold right footswitch for 2 seconds during playback to delete the last track. "UNDO" will be displayed on the screen.

```
UNDO
```

Instructions

REDO: You can utilize REDO to recall the last track you deleted. After UNDO, press and hold right footswitch for 2 seconds to recall the deleted track. "REDO" will be displayed on the screen.

REDO

STOP: In playback mode, press right footswitch to stop playback. "STOP" will be displayed on the screen. You can press the right footswitch again to continue playing. You can also press left footswitch while in STOP mode to continue playing and DUB a new track.

CLEAR: In STOP mode, press and hold right footswitch for 2 seconds to clear all the tracks in the current slot. "EMPTY" will be displayed to indicate current slot is empty.

Notice:
1. If only one track is recorded, you can press and hold right footswitch for 2 seconds during recording to delete the track; if there are two or more tracks recorded, press and hold right footswitch for 2 seconds during recording to UNDO/REDO. If you would like to delete all tracks, you need switch to "STOP" mode then press and hold right footswitch to CLEAR.
2. In playback mode, you can press LOOPER knob to select MEMORY and navigate to desired tracks in slot.

Instructions

RHYTHM

Press RHYTHM knob to select a function below:
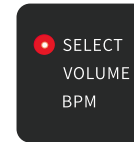
In the RHYTHM mode, the left footswitch will blink in RED and BLUE.

SELECT: Rotate the RHYTHM to select from 100 different drum grooves from 10 styles of music as well as 10 styles of metronome.

VOLUME: Adjust the play volume level of RHYTHM. Default value is 5, which corresponds to no attenuation or increase to original signal.

BPM: Show BPM (Beat per minute) of RHYTHM. The LED light above the left footswitch will blink to indicate current BPM of RHYTHM. Please refer to the TAP TEMPO section for BPM setting procedure.

On/Off: In RHYTHM mode, press right footswitch once to turn on/off RHYTHM. The LED above right footswitch will indicate the on/off of RHYTHM.

TAP TEMPO: In RHYTHM mode, press left footswitch two or more times at the desired tempo to set the BPM of the current RHYTHM. The LED above the left footswitch will indicate current BPM (beats per minute).

Tips: While RHYTHM mode is on, you can switch to SELECT mode to select between different grooves. However, unlike the LOOPER, the RHYTHM setting will not switch until current bar has finished.

Instructions

LOOPER+RHYTHM

When RHYTHM is off, while using the LOOPER to record, RHYTHM will start automatically in playback/DUB modes after the first track has recorded.
You can turn on RHYTHM before recording, then switch to LOOPER to start recording.
RHYTHM will run simultaneously with LOOPER.
LOOPER and RHYTHM are two individual modules. The on/off of one will not affect the other.

MERGER CTRL

MERGER CTRL button can be accessed to play/stop both LOOPER and RHYTHM simultaneously.

   *Press MERGER CTRL button to activate, LED button will turn green.
   *Enter RHYTHM module to set the rhythm type and BPM.
   *Switch to LOOPER module, press left footswitch to start recording. Beforestarting, a count-in bar will be played then the recording and drum machine will start simultaneously. "REC" will be displayed on the screen.

Tips:
1. The minimum recording capacity is one bar. Switching to Playback/Dub mode when the recording is less than one bar, the recording will not stop until current bar is finished.
2. When the recorded time is more than one bar and less than 1.5 bar, switching to Playback/Dub will only save the first full bar. RHYTHM and Playback/DUB will then return to the start of the bar.

Instructions

Notice:

1. When a LOOPER file is recorded, if you switch the rhythm type to a different time signature, such as 4/4 to 3/4, LOOPER and RHYTHM may not work normally as they cannot be justified with each other.

2. When MERGER CTRL is activated, press right footswitch to access Play/Stop of both LOOPER and RHYTHM. Pressing and holding right footswitch will clear all the tracks and RHYTHM will stop automatically.

External Footswitch

FS21 supports external footswitch control via EXT CTRL port. (External footswitch purchased separately)

External Footswitch
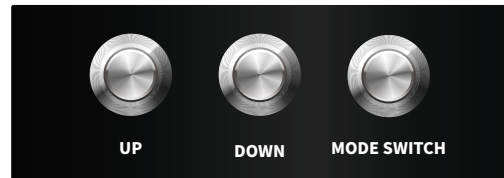
UP   DOWN   MODE SWITCH

MODE SWITCH: Press to switch between LOOPER and RHYTHM modules

UP/DOWN: Press to select rhythm type in RHYTHM. Press to select MEMORY slot in LOOPER.

Editor Software

FS21 supports import/export looper files and Factory Reset via editor software. Please enter relevant page of https://www.flammainnovation.com for download.

Download and install the editor software and audio drivers. Connect FS21 with computer via USB to access the editor software control.

When connecting with computer, "USB connect" will be displayed on the screen. The FS21 can be controlled by the software only. Buttons and footswitches will not respond in this mode.

Interface of editor software
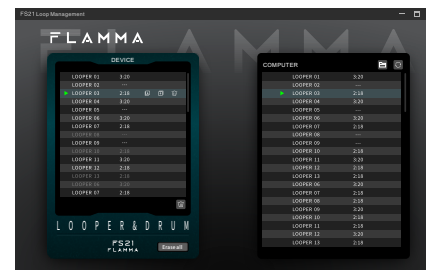
Name: List on the left-hand side shows 40 save slots in MEMORY. Slot name in dark indicates the looper file and its duration.Slot name in grey indicates empty slot.

Play: Click on ▶ to play the current looper file, click again to stop playing.

Editor Software

Import: Click on the ⬇ to import the audio file from computer to current slot. If loop file already exists in current slot, you can choose to replace the previous file.

Export: Click on the ⬆ to export loop file from current slot to computer. If current slot is empty, the icon will turn grey ⬆ and cannot be clicked.

Delete: Click on the 🗑 icon to delete looper file in current slot. If the slot is empty, the icon will turn grey 🗑 and cannot be clicked.

MERGE: Press SHIFT/CTRL and left click on the files to choose multiple files simultaneously. You can import/outport/delete selected files.

RESET: Clcik on Erase all to reset FS21 to factory settings.

Notice:
1. The exported audio file from the LOOPER recording, without the RHYTHM sound.
2. Deleting a looper file from a slot will set the volume, BPM, rhythm type or other parameters of back to default settings.

Specifications

Algorithm	Maximum recording time of each track	4 minutes
	Maximum number of recording tracks in each slot	No limitation
Input	Input		
	Type	Two 1/4'' unbalanced mono audio jacks
	Impedance	1Meg ohm
	Maximum Input Level	3 dBu
	A/D Conversion	
	Sampling Rate	44.1 kHz
	Sampling Accuracy	24 bit
	Dynamic	103 dB
	Frequency	20Hz~20KHz, +0 / -1 dB
Output	Output	
	Type	Two 1/4'' unbalanced mono audio jacks
	Impedance	470 ohm
	Maximum Input Level	3 dBu
	A/D Conversion	
	Dynamic	106 dB
	Frequency	20Hz~20KHz, +0 / -1 dB
	USB	
	Type	Type-B Micro USB

Specifications

Output	EXT CTRL	
	Type	1/4'' TRS jack x 1
	Power Supply	DC 9V, 300mA
	Dimension	85mmX120mmX33mm
	Weight	0.367kg
	Accessories	Safety Instruction & Warranty Card, Sticker, quick guide