# FLOXACHINES User manual

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# **About Flow Machines**

Flow Machines is a research, development, and a social implementation project that aims to expand the creativity of creators in music.

Music has been expanding together with new technology and creators who have applied them to music creation. Flow Machines is working with creators to generate new music using cutting-edge machine learning technology.

Flow Machines is an AI-assisted music production tool. It delivers an integration of human creativity and AI-based music, where creators select distinctive melodies proposed by AI according to their own aesthetic sense as they produce music.

## Installation

Download Flow Machines by selecting "Mac App" in the App Store.



## Login

Agree to the End User License Agreement and Privacy Policy, and sign in with your Google/Twitter/Facebook/Apple account.



#### Limitations

\* If you use Chrome browser on Big Sur, you may not be able to sign in with an SNS account. In that case, please change the default browser to Safari.



When you successfully log in, you can change the profile picture and name. If you have used the Flow Machines app on your iPad, your history will be synchronized with the cloud when you login with the same account.

#### **Supported OS**

✓ Mac OS

Windows is not supported.

macOS Big Sur 11.0 or later

# **About Style Palette**

Style Palette creates AI powered melodies that match an 8-bar chord progression. Flow Machines offers more than 100 presets that capture the characteristics of different melodies in different music genres such as Pop, Jazz etc. Infinite combinations of melodies can be proposed from a single style palette.



#### **Style Palette Selection Screen**

#### List of Genre in Style Palette

·A.I. Vocal	·Bright pop
·Spring	·Slow pop
·EDM/Dance	·J-POP
·Happy Holidays	•Anime
·Electronica	•no genre
·Jazz/Fusion	•scaleetc

New genres will be marked with "New", and will be added as needed.

## **Style Palette View Settings**

You can select how to display the palette from "View" in the upper left corner.



Sort of NAME Vie	w List V + N	lew Palette		
W EDM/Dance				
			GbM7,[Ab,]Bbm7,[Db(9),]GbM7,]Ab	
			GM7(9),,Asus4,(Bm7,,D(9),(GM7(9),,Asu	
		Cancel		

#### Find Style Palette from Card View (shown left)

The "Card" view is the default. You can view style palettes in a card-like format.

#### Find Style Palette from List View (shown right)

When "List" is selected, the palette name, BPM, chord progression, date and time the palette was added, and the number of favorites are displayed in a row.

#### Find Style Palette from Map View (shown below)

Select "Map" to find a style palette of your choice in a diagram, which maps the characteristics of style palettes in 3D space. You can use the mouse to rotate the entire 3D space and view it 360° in all directions. You can also zoom in/out of the map with a trackpad.

StylePalette ; EDM/Dance D-008	✓ Compose	< 120 > ( <u>1-4</u> 5-8	C min 🗸	ver 1.0.9	LOXACHINES
Sort of NAME View Map V + New Pa	lette				
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					ubr × 0
					ılır × 0
					ube × 0
					ulle × 0
					ulir × 0
•					ulle × 0
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•					
Canc	el				
Harmony 1.0 Select Draw					Save
Duration 0.5 Fm Gm7					цĊ
provide a second					
song 11					
song 12					



## **Style Palette Main UI Overview**



① **Compose Button**...Press this button to generate a new melody.

② **Tempo and Key Settings**...When you select a Style Palette, the tempo (BPM) and key (key/scale) is displayed. The tempo and key can be changed to your preference.

③ **Displayed Bar Settings**...Select the range of bars you wish to display in the piano roll. For example, select "1-4" to display bar 1 to bar 4, or "5-8" to display bar 5 to 8. During playback, the bars that are being played are automatically selected.

④ Piano roll ... Displays the melody that has been composed.

#### **5** Parameters that determine melody characteristics

**Harmony** ...A parameter that adjusts the degree of harmony between the chord and melody (0.0 - 1.0).

The higher the value is, the more harmonious the melody sounds.

**Duration** ... A parameter that adjusts the note value (0.0 - 1.0).

The higher the value is, the longer the tones get in the melody.

**Complexity**...A parameter that adjusts the complexity of the melody (0.0 - 1.0). The higher the value is, the more complex and further away from the original style palette the melody is.

(6) **History & Like function**...When you press the "Compose" button, the generated melodies are stored as history in the box on the left side. The history can be deleted by clicking the "Edit" button below. If you find a melody you like, you can mark it by pressing the "Like" button in the upper right corner of the Piano roll.

#### ⑦ Re-edit generated MIDI notes

Select ... You can move, expend, and reduce a MIDI note. The same operation as Select can be performed while the "control" key is held down as a shortcut.

**Draw** ...You can write a new MIDI note. You can also delete a MIDI note by clicking on it.

Erase...You can delete generated MIDI.

**Undo** ... You can go back to the previous operation.

Save ... You can save the re-edited MIDI note to history.

#### 8 Export

**WAV**...When you click the "WAV" button, Export wav file dialog appears. Choose from three types of export files: "Melody," "Melody + Backtrack," or "Backtrack". You can preview the file to be exported by clicking the play button on the right. When you click the "Export" button, a progress bar appears and the file begins to render. When rendering is finished, the "Drag&Drop" and "Share" buttons appear.

MIDI...You can drag and drop "MELODY/CHORD/BASS" MIDI data into a Digital Audio Station (DAW) or desktop.

#### \*Tested DAW

- •Cubase Pro 11/12 •Studio One 5
- Ableton Live 11
  Digital Performer
- Logic Pro
  GrageBand
- Pro Tools
  Soundmain Studio

Instruments...You can change the tone of "CHORD/MELODY/BASS". %For details, please refer to p.10.

(1) Octave Button...You can change the octave of the generated melody.

① **Chord Panel**...To change the chord progression, select chords from the panel at the bottom of the screen.

① Chord · Bass · Rhythm Settings...Chord and Bass can be used to specify chords. Bass chords can be changed to fraction chords. Rhythm can be used to specify beats such as Hi Hat, Snare Drum, and Bass Drum.

(3) **Sample track and Volume Control**...When Sample track is On (switch to the right to turn it on), you can listen to the track that matches the palette as a sample; when it is Off, MELODY/CHORD/BASS will play in the default tone, or your own Instrument tone. Below the switch is the volume control knob for the Sample track.

#### **Change tone from Instruments**

① Open the Style palette and click "Instruments" in the upper right corner.

② Click "Melody," "Chord," or "Bass" to select the tone you wish to change.

③ Select Sound Fonts from "Sound Font Name", and instrument or tone from "Tone Name" for each of the three.

④ Adjust "Volume" to balance each instrument.



#### **Sound Font**

	Sound Font Name	Tone Name		default ×
	GM	6: Dirty Sub		
Melody	EDM synth	7: FM Modulator	Volume: 127	
	House Organ	8: Happy Mellow		
Chord	GM	5: Electric Piano	Volume: 100	
Bass	GM	39: Synth Bass 1	Volume: 100	

GM(General MIDI)...Tones such as acoustic instruments

EDM synth...Tones used in electronic music

House Organ...Tones often used in bass of house music etc

## **Creating tone with GANStrument**



GANStrument is an instrument that can create new sounds from two different tones. It allows you to blend the instrument sounds of Input A and B and adjust the blend ratio using the Mix Balance parameter. ① Open the Style Palette and click the "GANStrument" button at the top right.

② Click "Melody," "Chord," or "Bass" to select the tone you wish to change.

③ Turn the dial on Input A to select your preferred tone. (You can check the tone from the keyboard keys.)

④ Select the tone you want to blend with Input A from Input B.

(5) Mix Balance controls the ratio of Input A and B by manipulating the 9 levels of parameters. Turning it to the far left increases the amount of Input A's sound components, while turning it to the far right increases the amount of Input B's sound components.

6 Once you have created a tone you like, press the "Store" button in the "Stock" corner.

⑦ Select one from "A, B, C, D" in the "Bank" section, and click the place you want to save from the eight pads next to it.

(8) When saving is complete, a waveform icon will appear. The color of the waveform icon indicates which part of the Mix Balance parameter you selected.

## How to recompose specific bars

You can make small adjustments; for example, recompose two bars out of eight bars while maintaining the other.

If you want to change only a certain bar, click on the bar you want to change and press the "Compose" button. To change multiple bars, hold down the Shift key to select multiple bars and press the "Compose" button.



## How to create original Style Palette

You can create your own style palette with your own melodies.

① Click "+New Palette" and "Next" to continue.

			1-4 0-0	
Sort of NAME View	v Card 🗸 + New Palett	е		
Happy Holidays	BPM76	врм76 № х 0	BPM76 I∎ × 0	8PM76
	E-005 Dm9 Dm9 Gm9 Am9 Dm9 Dm	E-006 Dm7,Em7 Am7 Dm7,Em7 Am7	E-007 CM7[FM9[CM7]FM9[CM7]FM9]	E-008 Am7 Dm9,Bm7b5 Am7 Dm9,B
Bright pop	BPM76 ∎ × 0	BPM96 <b>№</b> × 0	BPM180 I × 0	BPM126
Slow pop		1430.08		
	E-009 Dm7,Gm9 Am11 Dm7,Gm9 Am1	E-010 Bm7 G,A Bm7 D,E Bm7 G,A Bm	E-011 Csus4 DbM7#11 Dm11 Eb69 C	E-012 Am9 F#m7b5 Bm7 E7 Am9 F4
Anime no genre	BPM120 Im x 0			
	E-013 Bbm7 Db Gb Ab Bbm7 Db Gb Ab			
	Cancel			
	🖍 Draw 🗎 Erase 🖄 Unio		Export MIDI Inst	
				I
song 17				

② Enter the following palette information, and click "Next" to proceed.

- Palette Name
- •BPM
- •The number of bars (choose either 4 or 8)
- •Key
- •Scale (choose Major or Minor)

Duration 0.5	1/3	Set para	meters						Next	Canc	el
	Name	song									
	ВРМ	120									
	Bars	<b>4</b> ~									
	Key	<b>C</b> ~									
Edit	Scale	Major V									
Octave											
				i i 8m C#m	b5 D	iv Em					

③ Enter a chord progression in the four panels in "Progression" section. Click on the panel where you want to enter a chord, and select a chord from the chord panel below. Once you have finished, click "Next".



(4) When you click the "Capture" button, the MIDI keyboard appears and 4 counts begin. Play the melody you want it to learn that harmonizes the chord. Repeat this process to input 5 patterns.





\* Bluetooth-enabled MIDI keyboard can be connected via the Bluetooth button in the upper left corner of the keyboard.

\* On Apple Silicon Mac, notes entered via the external MIDI keyboard may be captured with a delay when creating a new style palette.

⑤ Once Flow Machines has learned the melodies, click "Compose". Your original style palette is now complete.



6 You can open the style palette you created from "my\_ palettes".

	my_palettes	BPM76 00 + × 0	BPM105	BPM105 x 4	BPM105
			O of the		
	Happy Holidays	E-001_copy FM9 Am11 FM9 Am11 FM9 Am1	E-100/iLY-01_lucid dream AM7/F#m7/C#m/EM7/AM7/F#	E-101/iLY-02(variation)_copy AM7,AM7 F#m7,F#m7 C#m,C#	E-lucid dream FM7 Dm7 Am CM7 FM7 Dm7 A
	Electronica	BPM116	BPM105 I × 4	BPM120	BPM120 1 × 2
	Bright pop	J-lucid dream A#M7,A#M7 Gm7,Gm7 Dm,Dm	lucid dream CM7 Am7 Em GM7 CM7 Am7 E	song C Dm G Am	W palette Dbm,,, E,,, B,,, A,,,, AM7,,, Gbm.
		Cancel			
H	larmony 1.0				
					۵.

## **Registered Trademarks**

•FLOW MACHINES" and "Flow Machines" are trademarks of Sony Corporation.

•FLOW MACHINES" and "Flow Machines" are technologies developed by Sony Computer Science Laboratories.

•The rights to any music created using Flow Machines belong to the creator.

(The rights to the licensed software and music are described in Article 4 of the Software License Agreement.)

## License Agreement and Privacy Policy

Software License Agreement https://fmpro.flow-machines.com/public/eula

Flow Machines Mobile Privacy Policy https://fmpro.flow-machines.com/public/pp

## Website link

Flow Machines https://www.flow-machines.com/

Sony CSL https://www.sonycsl.co.jp/?lang=ja

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