WELCOME TO PAINT COMPOSER!

The short version: The interface is simple enough for players of all ages. Choose from 20+ instruments to create rhythms and melodies. Each instrument is represented by an intriguing character that does a little dance when it plays its sound. Adjust the tempo anywhere from a solemn 40 BPM to a happy hardcore-esque 190BPM or beyond. Players can publish and share their creations instantly with clickable URLs. The songs can be exported in both .wav and .mp3 formats.

Now, go make beautiful music!

KEYBOARD SHORTCUTS

ACTION	KEY
Place note	Click
Erase note	Right click
Sharp (♯)	Shift-click
Flat (♭)	Ctrl-click
Select Instrument	0-9
Select Instrument	<backtick> 1-7
Select Pattern	Shift+0-9
Eraser Tool	e
Selection Tool	s
Undo	Ctrl+z, ⌘+z
Redo	Ctrl+y, ⌘+y
Play/Pause	Space
Play from Beginning	Enter
Move playhead to next measure	Right arrow
Move playhead to previous measure	Left arrow

ACTION	KEY
Selection	
Copy	c
Cut	x
Delete	Delete
Reset	Esc
Move	Arrow keys
Data	
Save	Ctrl+s, ⌘+s
Open	Ctrl+o, ⌘+o
Export	Ctrl+r, ⌘+r
Meta	
About	F1
Toggle Full Screen	F11
Help	?

Some web browser extensions may interfere with the use of keyboard shortcuts. If this is the case, you may need to disable that browser extension when you use Paint Composer, or modify that extension's shortcuts if possible.

TABLE OF CONTENTS

A TRIP AROUND PAINT COMPOSER

INSTRUMENT AND PATTERN PALETTES

Choose from one of 21 instruments available in the Instrument Palette, each represented by a different character. Use keyboard shortcuts as shown to easily select between the instruments. The active instrument will be highlighted.

Instrument Selection Shortcuts

1	2	3	4	5	6	7	8	9	0	`0	`1	`2	`3	`4	`5	`6	`7	`8	`9	
synth	piano	guitar	bass	horn	orch hit	chime	organ	drum	snare	wood block	clap	hat	baby	yoshi	pig	cat	dog	french	nylon	snare 2

Characters are placed on the staff to represent notes.

There is also an **eraser** tool and a **selection** tool. The selection tool lets you select, copy, and move sections of your song, and save them to the Pattern Palette for later use.

STAFF
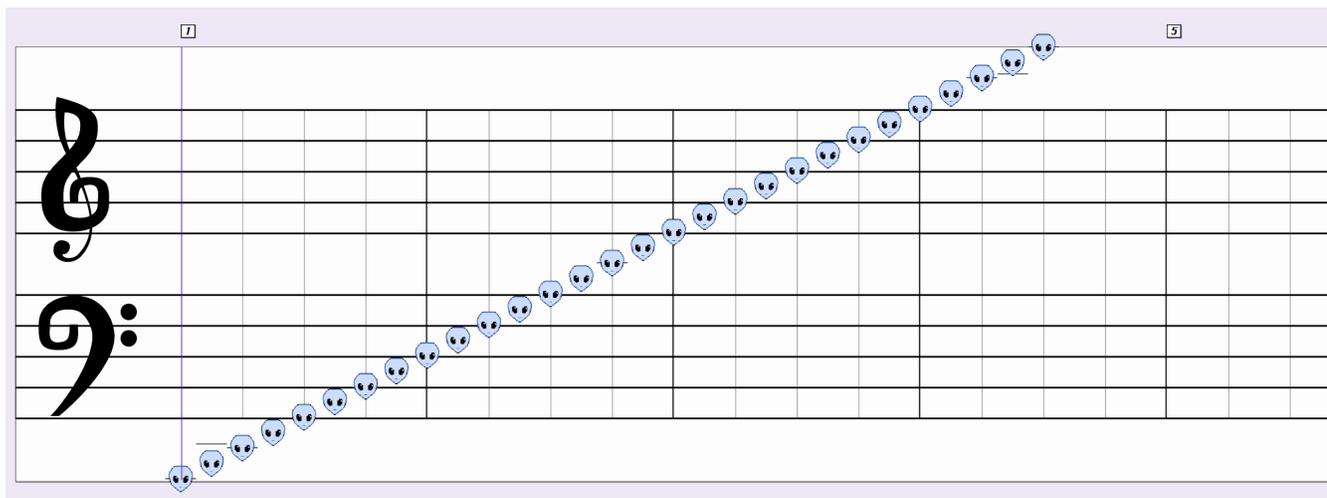
The **staff** in Paint Composer is very similar to sheet music you might see online or in a music book.

Every song (or **section** of a song) is divided into smaller sections called **measures**. A black **bar line** separates each measure and represents the first beat of that measure. A gray **beat line** shows the location of all the following beats in that measure. In the image above, there are four beats per measure.

Measure numbers appear at the beginning of every fourth measure, as shown above. For example, in the image above, you can see measures 1 and 5 indicated by the numbered boxes above the staff.

A purple **playhead** appears as a vertical bar spanning the height of the staff. This indicates where playback will begin. It is shown above at beat 1. Click above or below the white staff area in the **effects background** to move the playhead to that location.

For those who can read or have studied music, there are a few key differences between the Paint Composer staff and a traditional music staff:
- The inclusion of beat lines, to help you align your notes correctly.
- Beat 1 of each measure is on the bar line.
- Spacing between the treble clef and bass clef is smaller, as shown above, eliminating the need for ledger lines other than for middle C (C4).

The staff spans four octaves. The lowest note you can place directly is C2, and the highest is C6, as shown in the image above. (Notes can sneak higher or lower with a few tricks, however!)
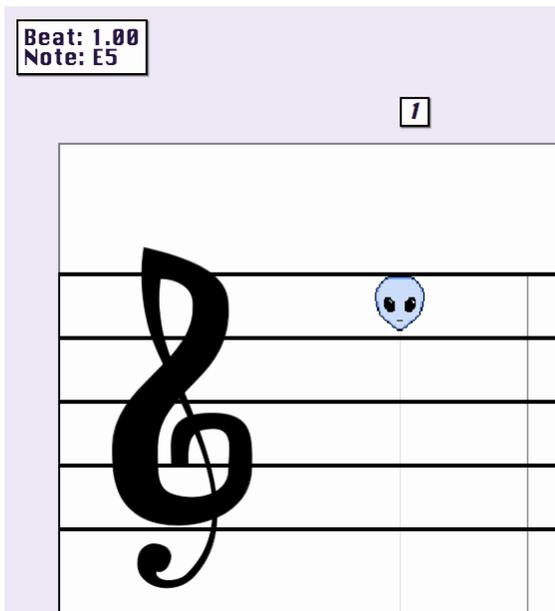
When you hover over any note position on the staff, a small **Note Info** dialog box appears to the upper left of the staff. This dialog tells you the nearest beat or subdivision and the note value, as shown at left. (See **Snap** for more details about subdivisions.)

This dialog updates as you hover over different positions, and disappears when the cursor leaves the white staff area.

SONG OPTIONS

Repeat

When this option is active, the song will play again immediately after it ends.

Time Signature

Choose from four different **time signatures**. The first number shown represents the number of beats in the measure. For instance, in 4/4 time, there are four beats per measure. The second number in each time signature is 4, indicating all beats are a quarter note in duration. Beats can be further subdivided as shown in the **Snap** section.

Sharp/Flat Selectors
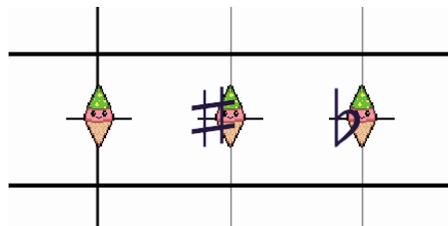
These selectors place accidental signs (sharps and flats) onto notes to change their pitch.

By default, the **Natural** (♮) selector is active. When a note is placed on the staff it will be natural - neither sharp nor flat - and will appear on the staff with the character representing the currently selected instrument, as shown above at left.

Clicking on the **Sharp** (♯) selector will make every note placed be sharp (one half-step higher) and bear the ♯ symbol on the staff, as shown in the center above. Similarly, while the **Flat** (♭) selector is active, every note placed will be flat (one half-step lower) and have the ♭ symbol on the staff, as shown above at right.

Accidental signs apply only to the note they are placed on. Any following notes placed in that staff position within that measure will revert to the default value for that key signature.

Sharp/Flat Shortcuts
- Holding the Shift key while clicking will make that note sharp.
- Holding the Control key will make that note flat.

> ### *Greasefire's ProTip™* *Accidentally Awesome*
>
> If you are using the free version of Paint Composer, keeping the Natural selector active while using the keyboard shortcuts above makes it easier to work in keys other than C Major/A Minor. (If you have purchased the full version, key signatures make composing in other keys even simpler!)

Note that if the Sharp selector is active, holding the Shift key will not raise the note an additional half step, but holding the Control key *will* lower the note by a half step, resulting in a natural note.

Similarly, if the Flat selector is active, holding the Control key will not lower the note an additional half step, but holding the Shift key *will* raise the note by a half step, resulting in a natural note.

Snap

When notes are placed, they will **snap** to the nearest beat line or subdivision. The options are to snap to:
- ♩ - Quarter notes - snap to beat lines
- ♪ - Eighth notes - snap to beat lines and the halfway points between the beat lines
- ♬ - Sixteenth notes - all the eighth note snap positions, plus the points halfway in between those.
- 3 - Triplets - when this selector is on, it snaps notes so that three notes of the selected duration fit in the space where two would ordinarily go.
  - This selector can be paired with the quarter note, eighth note, or sixteenth note snap.

When the snap selector is changed, the number field will update with a decimal representation of the portion of the beat you have chosen to snap to, as follows:
- Quarter notes display a 1 in the number field, showing that you are snapping to one whole beat.
- Eighth notes display 0.5 in the number field, showing that you are snapping in increments of half a beat.
- Sixteenth notes display 0.25 in the number field, showing that you are snapping in increments of a quarter of a beat.
- When the triplet selector is on, the number field will show a value that is two-thirds of the decimal representation for the snap value you have chosen.

You can also enter a custom snap value in the number field. For instance, to snap to thirty-second notes, enter 0.125. To snap to half notes (every two beats), enter 2.

> ### *Greasefire's ProTip™*   *Oh, Snap!*
>
> The smaller the snap value, the more crowded each measure can become if there are a lot of notes spaced closely together. Use the Note Info dialog to help you place your notes accurately. You could also spread out your song so that every other beat line represents a quarter note, and double the tempo accordingly.
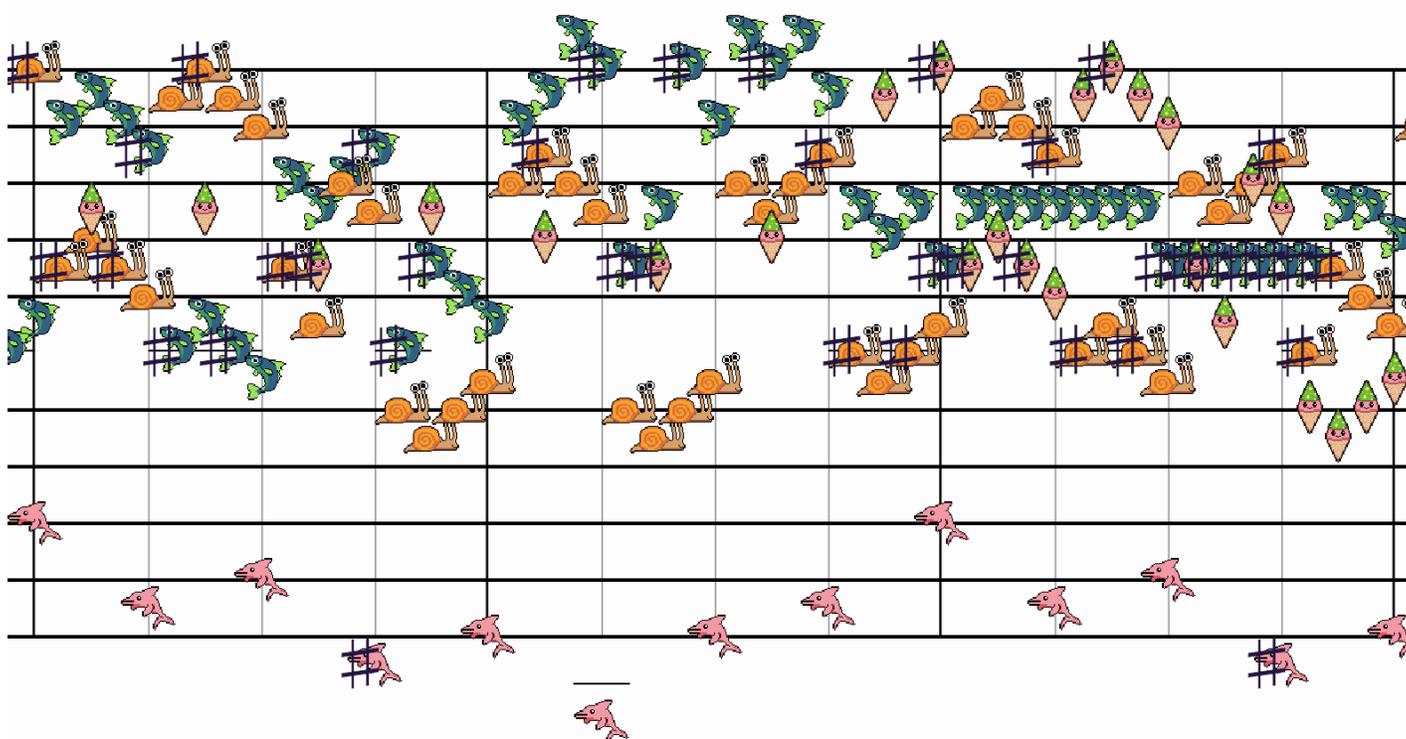
An example of a very crowded song.

Effects (FX)

Select from four options to apply a filter effect to your song. From left to right as shown above, they are:
- Purple - 30ms slapback delay (default)
- Cygnus
- Psy
- Water

Selecting an effect changes the background of your song so it is easy to see what filter has been applied. This background appears above and below the white staff area. The default is light purple.

If you are working with the full version of Paint Composer, you can apply different effects on different sections of your song.

Playback Controls

Clicking the **Play** button will play the song from the current playhead position. This button will be active as long as the song is playing. Click again to stop playback.

Clicking the **Go to Start** button will return the playhead to the start of the song at beat 1.

Playback Shortcuts
- Press the Space bar to play the song from the current playhead position. The button will be activated. Press Space again to stop.
- Press the Enter key to play the song from the start. Press Enter or Space to stop.

Moving the playhead

To move the playhead, click anywhere in the effects background area above or below the staff, and the playhead will jump to the beat line closest to where you clicked.

Playhead Shortcuts
- The Left and Right Arrow keys will move the playhead to the previous or next measure, respectively.
- The Home and End keys will move the playhead to the beginning or the end of the song, respectively.

Tempo

Enter a number representing the beats per minute, or use the up and down arrows to adjust. Default is 120 BPM.

Length

Enter a number representing the number of beats in the song. When hovering over the field, use the up and down arrows to adjust in increments of 4.

Sections and Key Signatures (Full Version)

Sections

| Name	Time Signature	Key Signature	Length	Tempo	FX				Action			
Intro	4/4	D / b	16	90					↑	↓	+	X
Verse 1	4/4	G / e	48	120					↑	↓	+	X
Chorus	4/4	C / a	48	120					↑	↓	+	X

+ New Section

The Sections feature, which includes key signatures, is only available if you have purchased the full version of Paint Composer.

Clicking the **Sections** button opens a dialog that allows you to structure and modify your song.

By default, each song begins with one section. Click New Section to create additional sections. When you create a section in your song, the measure number starts over at 1 for each section, and is displayed at the top of the staff.

- **Name**: Edit this field to give each section a custom name.
- **Time Signature:** Choose from all available time signatures.
- **Key Signature:** Change the key signature of a section. The corresponding sharps or flats that indicate that key will appear on the staff just before measure 1 of that section.
- **Length, Tempo,** and **FX:** These reflect the options chosen for each section. During editing or playback, when the playhead enters a new section, the values for these options auto-update in the Song Options bar.
- **Action**: Use the up and down arrows to rearrange the order of the sections. The + button duplicates a section. The x button deletes a section, which cannot be undone.
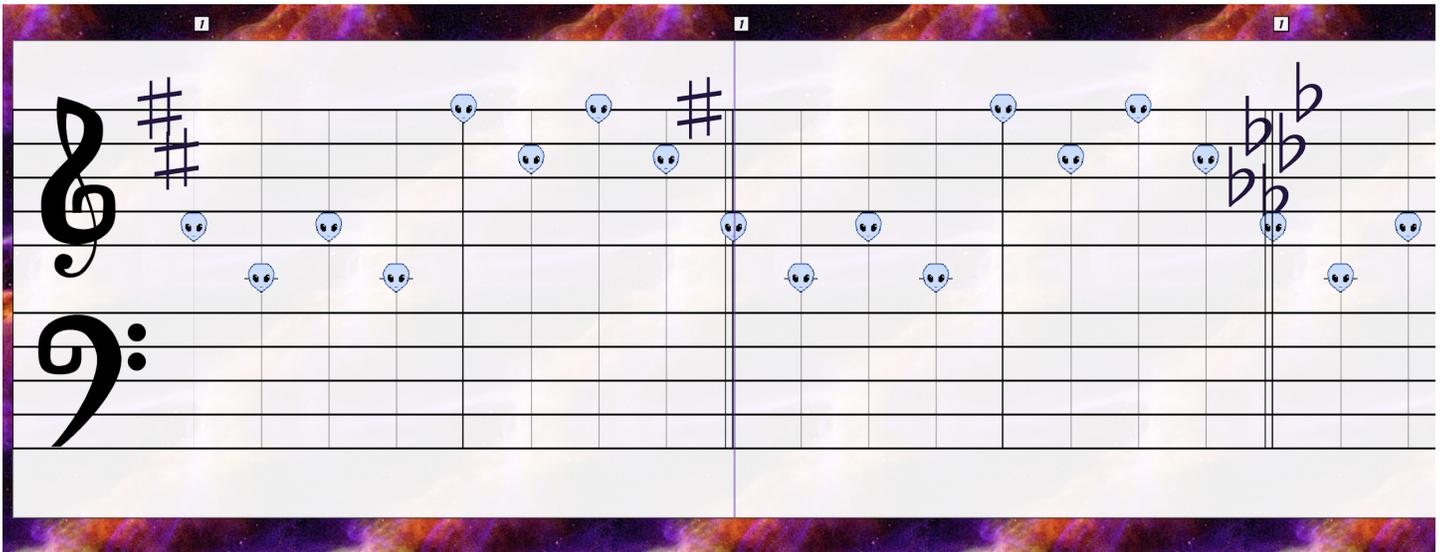
The image above shows the appearance of three very short sections with three different key signatures. The key signature, together with the measure number 1 and the double bar on the staff, show where the new section begins.
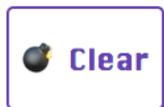
Undo/Redo

Undo Shortcuts
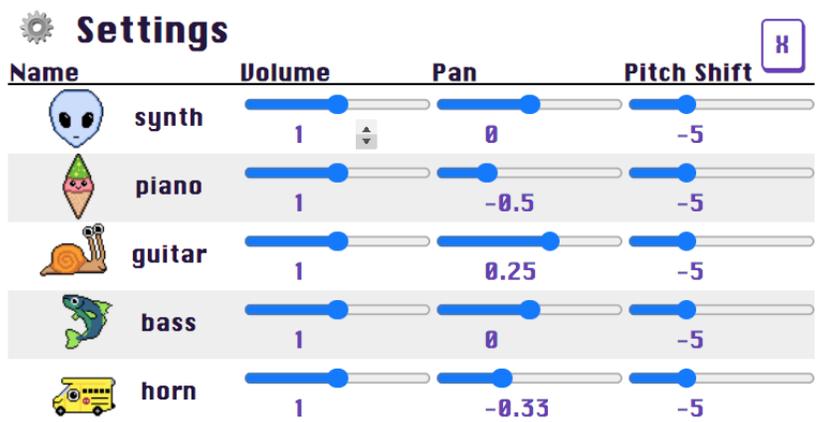- Undo: Ctrl+z, ⌘+z
- Redo: Ctrl+y, ⌘+y

Clear

Clears the entire song, so you can start again. Any settings in the Song Options are saved. This action can be undone.

If you are using the full version and your song has multiple sections, only the first section's settings in the Song Options are saved. This cannot be undone.

Settings

Clicking **Settings** opens a dialog that allows you to individually configure each instrument, as follows:
- **Volume** is a decimal value ranging between 0 and 2. The default value of 1 is equivalent to 100% of the sound's volume.
- **Pan** is a decimal value ranging between -1 and 1. The default value varies for each instrument. A value of -1 plays the note only in the left speaker; a value of 1 plays the note only in the right speaker.
- **Pitch Shift** is a whole number value between -12 and 12. The default value varies for each instrument. Reducing the value by 1 lowers the tone of that instrument by a half step, and raising the value by 1 raises the tone of that instrument by a half step.
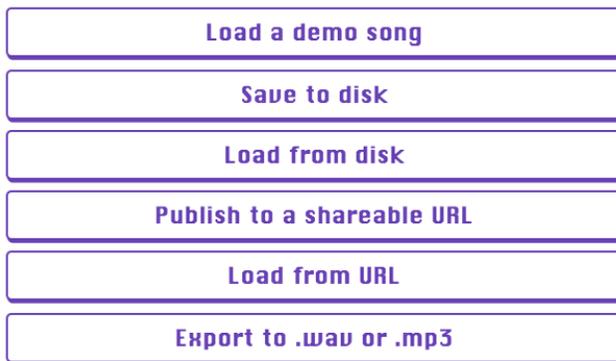
Use the sliders to adjust the values, or hover to the right of each number to reveal arrows for more precise changes, as shown next to the volume for the Synth (Alien) instrument above.

These settings apply to every note placed with that instrument. If you have already placed notes, they will be updated to match what is in the settings for that instrument.

> ### Greasefire's ProTip™   *Shiftin' that Pitch*
>
> The instrument settings are useful for adjusting the balance of your instruments so your melody can shine, or to adjust the pitch of a percussion instrument to avoid crowding in the staff area. This also lets you quickly shift your entire song to a different key by simply pitch-shifting all of your chosen instruments up or down the appropriate number of half-steps, especially if you are using the free version of Paint Composer.

Save

Load a demo song
Save to disk
Load from disk
Publish to a shareable URL
Load from URL
Export to .wav or .mp3

*The **Save** options consist of several dialogs, as described in the following sections.*

Load a demo song

♫ **Demo Songs** ♫   [X]

Title	Author
Dubsgrace	diamondblaze413
Orinoco Flow	Enya
MeGaLoVania	Toby Fox (arranged by Jackattack413)
Mushroom Forest	Junko Tamiya (Little Nemo: The Dream Master NES) (arranged by Daniel X Moore)
Wind Forest	Joe Hisaishi (arranged by A. E. Moore)
600 AD	(arranged by LachrymatoryAgent)

Choose from a selection of sample songs, both original compositions and arrangements of users' favorite songs, to gain inspiration. You can also remix them!

The song will be loaded in place of any song you currently have open. You will be prompted to save if there are any unsaved changes.

Save to disk

Save Song
Name

[untitled]

[OK] [Cancel]

Save your song to a file on your device. The file will appear wherever your browser downloads appear by default, usually a Downloads folder.

Paint Composer uses the .dxc file extension.

Save Shortcut: Ctrl+s, ⌘+s

Load from disk

Choose a saved .dxc file from your device and load it. If you have purchased the full version, you may also import MIDI files. MIDI instruments are mapped to the closest Paint Composer instrument.

Load Shortcut: Ctrl+o, ⌘+o

Publish to a shareable URL

Published!

https://danielx.net/composer/#api-vOQNyWpgIRSsgNWtDgqpZzmA7EdmDEKvm6luHocEBNU

Copy Link   **Done**

This will save your work to a URL that you can share with friends, family, and followers.

The URL is a unique identifier for your song as it exists at the time of publishing, so if you or anyone else remixes your song and saves it, those changes will be published to a new URL.

Load from URL

Load from URL

Paste shareable URL here:

https://danielx.net/com

OK   **Cancel**

Loads the song from a Paint Composer shareable URL.

You will be prompted to confirm loading the new song, since it will overwrite what is currently on the staff.

While you can load a URL directly in the browser, this is useful if you have patterns saved in the Pattern Palette, as these are not overwritten.

Greasefire's ProTip™ *Mix and Mash Like a Boss*

Loading a song from the URL dialog lets you select and copy patterns from one or more songs to the Pattern Palette, and then use these to make remixes or mashups!

Export to .wav or .mp3

Export your rad track

File Name

song

Format mp3 ⌄

Cancel   **Export!**

Exports the song as a .wav or .mp3 file.

The file will appear wherever your browser downloads appear by default, usually a Downloads folder.

Export Shortcut: Ctrl+r, ⌘+r

COMPOSING A SONG

PLACING, ERASING, AND MOVING NOTES

Place **notes** on the staff by clicking. The cursor shows the active instrument. The active instrument is also highlighted in the Instrument Palette. Change instruments by clicking on them, or using the instrument shortcuts.

Right-click on a note to remove it, or use the ⬭ **Eraser Tool**.

Selection Tool and the Pattern Palette
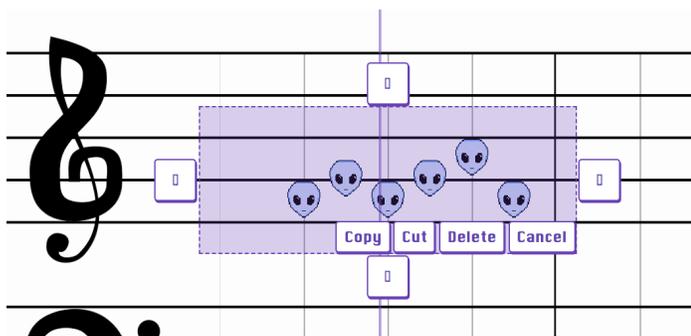
Use the ⬚ **Selection Tool** to select a group of notes. Options to **copy**, **cut**, **delete**, **cancel** (deselect), and **move** appear over the selection, as shown in the image at left.

- **Copy**: Copies the current selection into a pattern, which then appears in the Pattern Palette just below the Instrument Palette. The current pattern selection is highlighted, as shown below, and the cursor is replaced with the pattern. The selected notes remain on the staff.
- **Cut**: Converts the current selection into a pattern, which then appears in the Pattern Palette, and then removes the selection from the staff. To paste, choose the pattern from the palette and place wherever you wish.
- **Delete**: Removes the selection from the staff. This action can be undone.
- **Cancel**: De-selects the area.
- **Move**: Click on the boxes above and below the selection to shift all notes up or down one line or space. Click on the left and right boxes to move the selection left or right one portion of a beat equivalent to the current snap value. Arrow keys also work to move the selection.
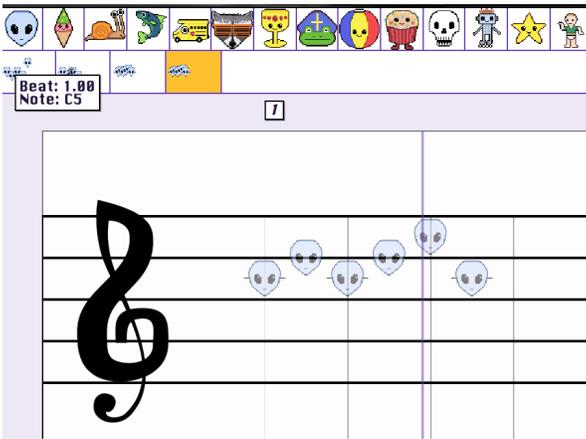
Whether it was cut or copied, with a pattern selected in the Pattern Palette, you can place that pattern anywhere on the staff, not just the lines and/or spaces where it originally appeared. This is useful for elements you want to repeat, such as percussion or a portion of a melody.

Selection Shortcuts
- Eraser tool: e
- Selection Tool: s
- Move selection: up, down, left, right arrow keys.

Greasefire's ProTip™ The Highest Heights, the Lowest Lows…

Want to reach notes higher than C6 or lower than C2? Patterns keep their same shape no matter where they are placed, so use this to your advantage. In the example below, the three notes on the left (C4, E4, and G4) were copied to the Pattern Palette, and then placed on the right with the lowest note on C6, so that the three new notes are C6, E6, and G6! Sneaky! Just be careful - once placed, you may not be able to delete or move a note if it lies partially outside the effects background area, as G6 does in this example. Undo is your friend!

If you are using the full version, MIDI imports may also include notes outside the clickable range.
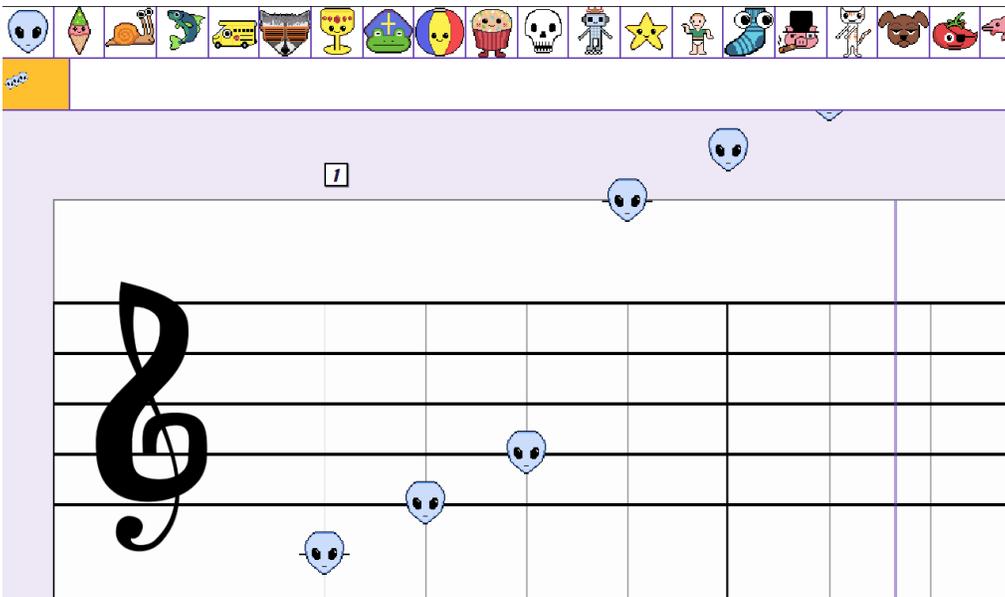
An example of notes placed outside the white staff area.

The first note of the pattern must be placed in the white staff area, however, since the area beyond is not clickable.