



# Getting Started with Osmo Coding Jam

Updated 6.1.17

1.0.0

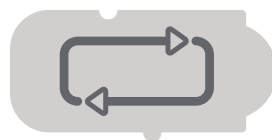


# What's Included

Each Osmo Coding Jam set contains 23 magnetic coding blocks. Snap them together in coding sequences to create an endless variety of musical compositions!



**Walk**  
Quantity: 3



**Repeat**  
Quantity: 2



**Jump**  
Quantity: 3



**Rest**  
Quantity: 2



**Hand**  
Quantity: 3



**2x Quantifier**  
Quantity: 2



**Circle Subroutine**  
Quantity: 2



**3x Quantifier**  
Quantity: 2



**Square Subroutine**  
Quantity: 1



**4x Quantifier**  
Quantity: 1



**Star Subroutine**  
Quantity: 1



**5x Quantifier**  
Quantity: 1

# Main Menu Navigation


## Practice Mode

Practice Mode contains a set of skill-building exercises that helps you learn the basic usage of each coding block and how to make jams. You can earn hearts by completing practice levels. If you need more hearts for the next practice level, you can go to Studio Mode to earn more hearts.


## Studio Mode

Studio Mode opens after you earn 100 hearts. Here, you can earn more hearts by creating jams in the open-ended studio. Each jam you create in Studio Mode is automatically submitted for a chance to be featured on JamTV. In Studio Mode, you can also tap on JamTV to view other players' jams, and the record player to listen to and edit your own music.

## Accessing your myOsmo Account


1. Tap  in the upper right corner to view the **myOsmo** account screen.
2. From this screen, you can Add an Account, Switch Accounts or Switch Profile.

## Resetting Progress

1. Tap  in the upper left corner and tap **Reset Progress**.

★ Be careful! All progress and jams will be lost and reset.

## Returning to the Main Menu

Use  in the upper left corner until you reach the Main Menu.

# Verb Command Blocks

## Key Concept 1

The Osmo coding language has three different verb commands, which are used to tell the characters which musical objects to play. These verb commands (Walk, Hand, and Jump) have arrows that can be turned to specify the direction. Combining verb commands together will result in longer musical compositions and more complex jams!



### Hand

The orange Hand block tells a character to use their hands and play a musical object located in the **inside** ring. Turn the arrow to select the specific object.



### Walk

The blue Walk block tells a character to step and play a musical object located in the **middle** ring. Turn the arrow to select the specific object.



### Jump

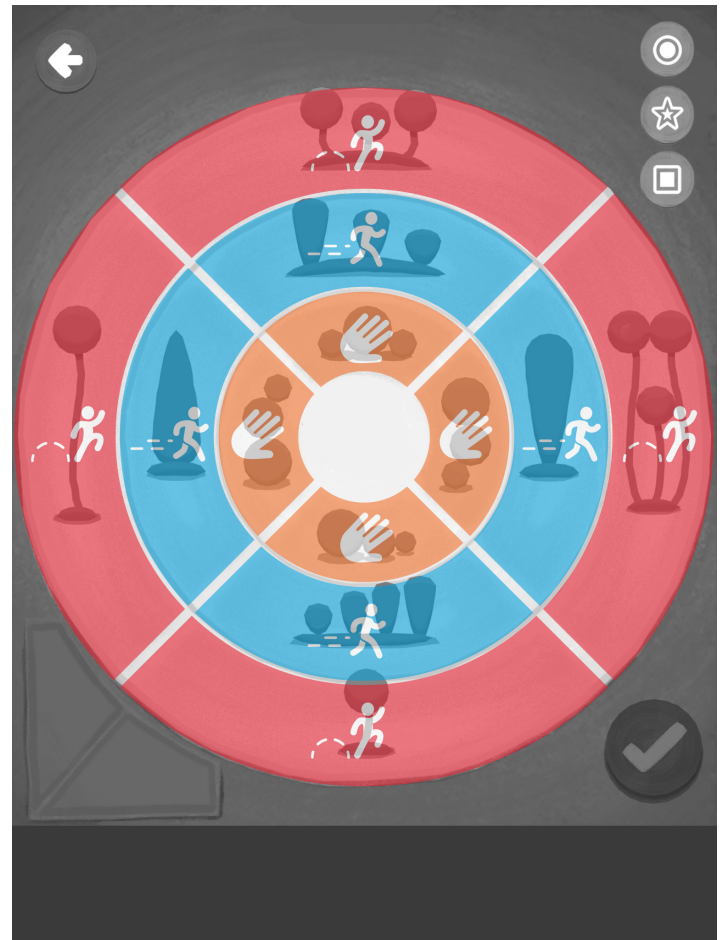
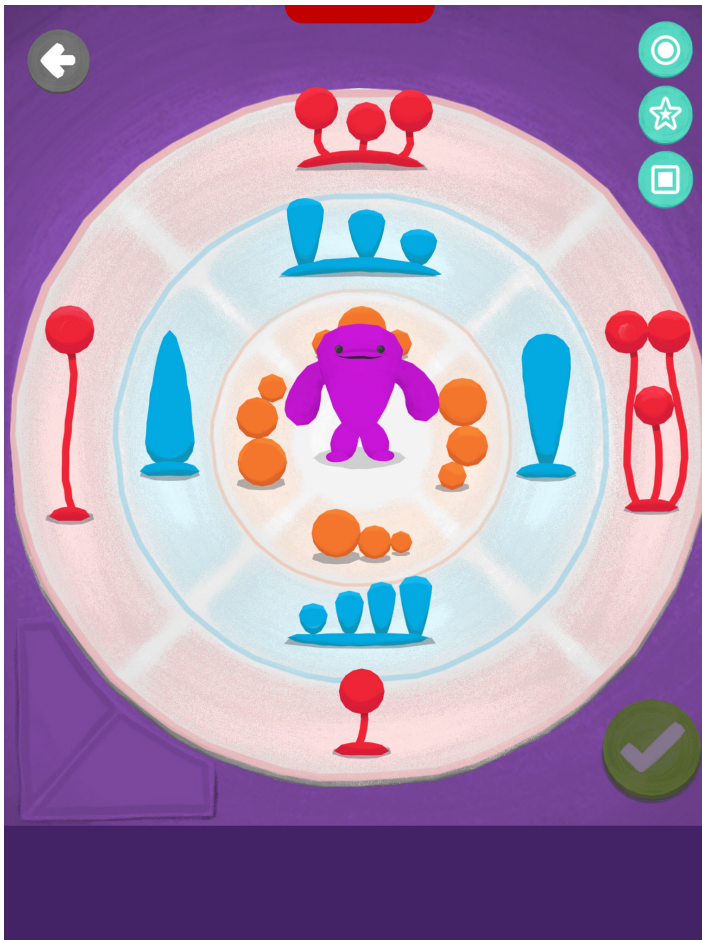
The red Jump block tells a character to jump and play a musical object located in the **outer** ring. Turn the arrow to select the specific object.



# Verb Command Blocks

## Key Concept 1 - Continued

Musical objects are set up into three rings that surround your character. The diagram below shows how the coding blocks relate to the different sections of the rings. Choose the different Verb Command blocks and rotate the arrows to pick what object you want to play.

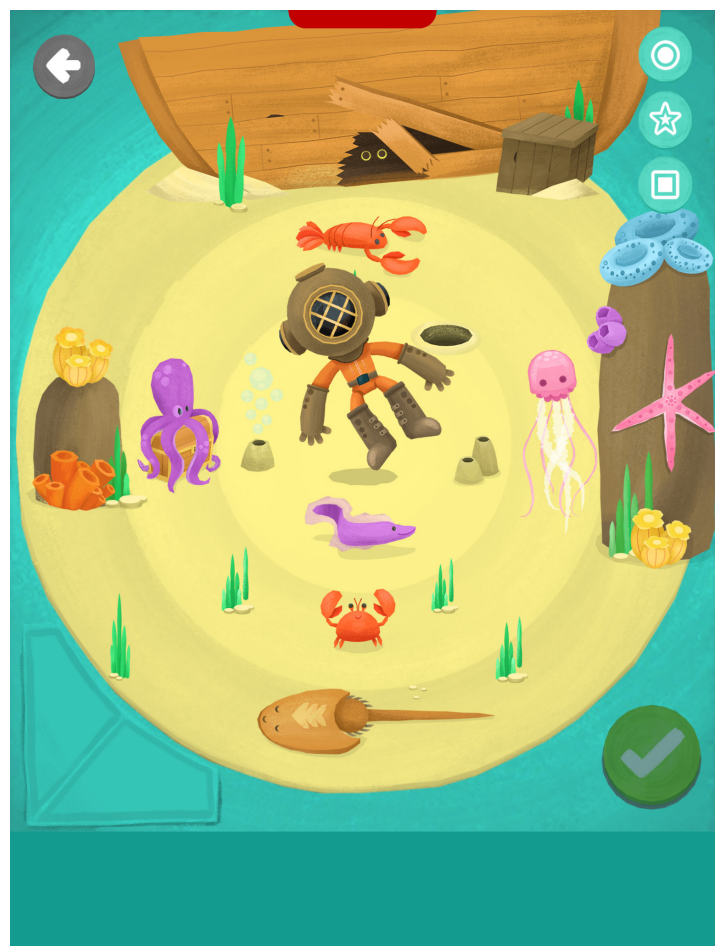
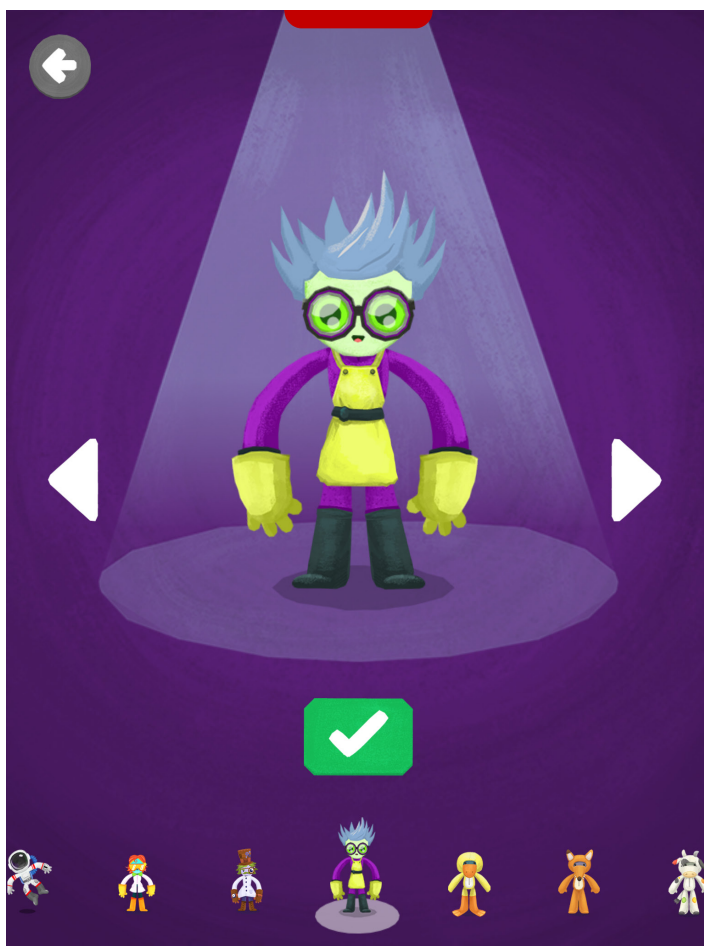


# Verb Commands + Music Worlds

## Key Concept 1 - Continued

Coding Jam is filled with music worlds to unlock and explore. Each music world in Coding Jam has unique characters and musical objects that you can control with your coding blocks. The first few music worlds are color coded to match the Verb Command blocks.

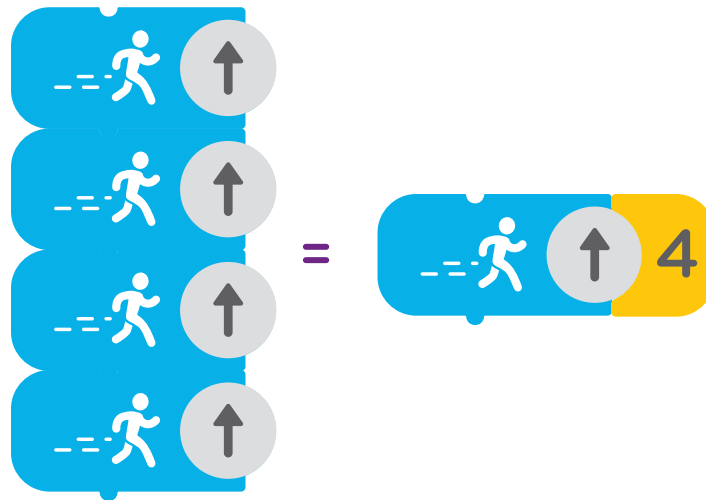
Unlock music worlds by creating jams in Studio Mode and completing levels in Practice Mode. Players from around the world can also award you with hearts when they like your jams on JamTV.



# Quantifiers

## Key Concept 2

The quantifiers are the yellow number blocks. If you attach a quantifier to a Verb Command block (Walk, Jump, or Hand), the character will play that musical object **X** times. Quantifiers range from 2 to 5. **Think of quantifiers as parameters to a function.**



# Sequencing

## Key Concept 3

Sequencing is when you connect two or more blocks together. When you start using multiple blocks in succession, you're taking an important step towards a key computational concept, sequencing.

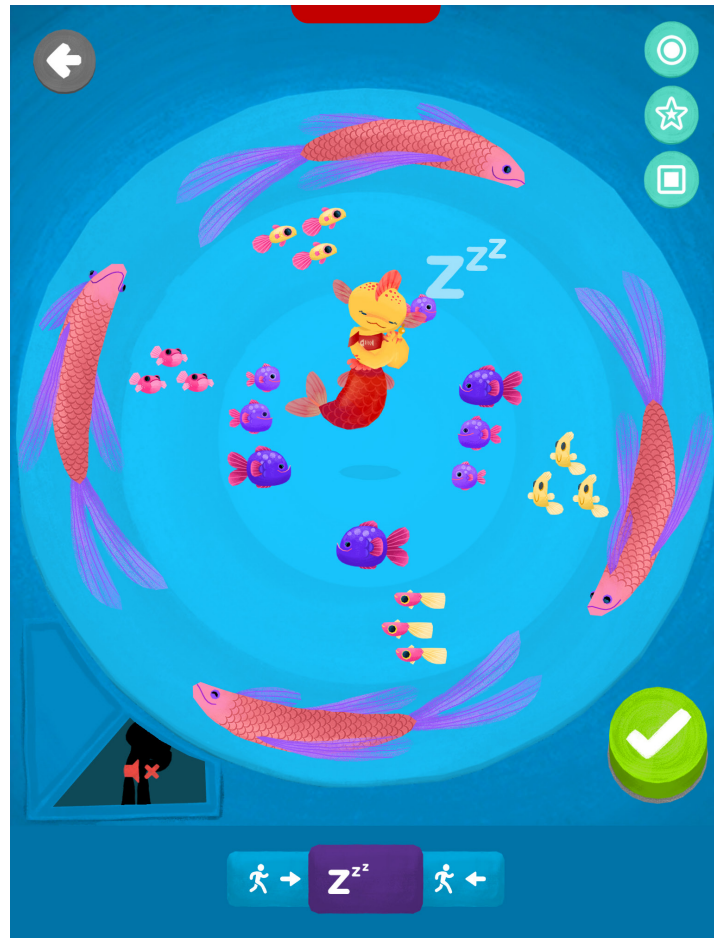
★ Note: **The order of verb commands is read from the top down.** In the below sequence, the character will play the musical object located at Walk Right 2 times, then play the object at Walk Up 4 times, then play the Jump Right object 1 time.



# Using Rest

## Key Concept 4

Use the Rest block whenever you'd like to add a pause to your jam. The Rest block tells the character to pause the sequence for a single beat. Add quantifiers to the Rest block if you would like to have a longer section of silence. **Use the Rest block at the start of a track to control when the music begins in your jam.**

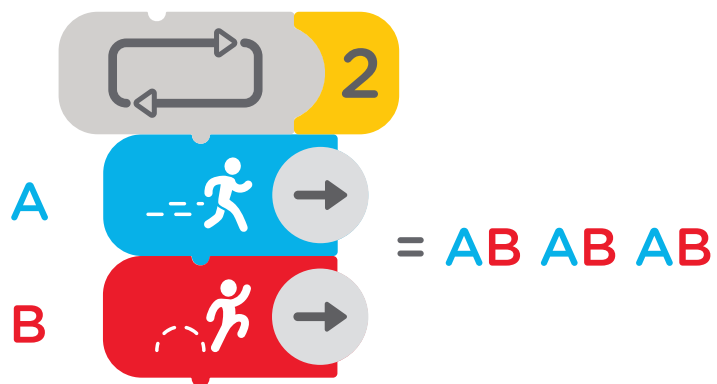
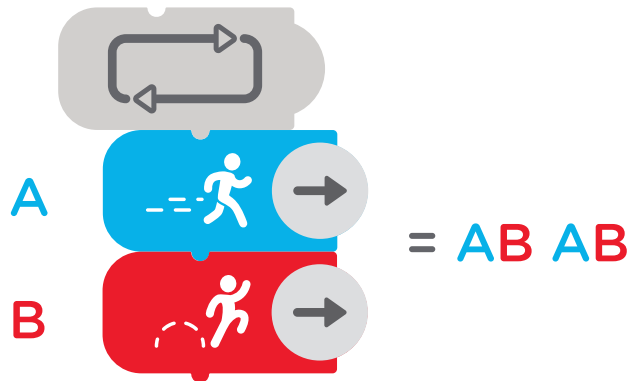
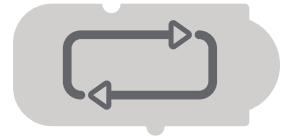


# Using Repeat

## Key Concept 5

Use the Repeat Block to create a loop. When code inside a loop reaches the end, the loop will bounce back to the Repeat block, and repeat the code. Loops are another key concept in computational thinking.

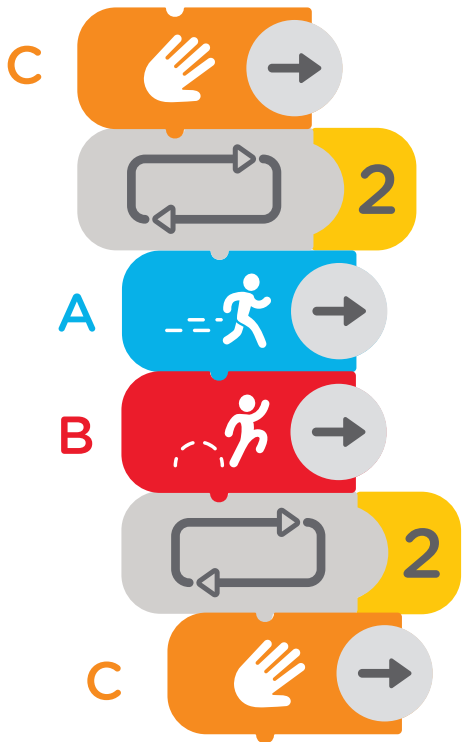
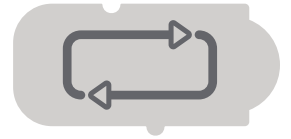
By default, the Repeat block loops the connected sequence twice. Each added quantifier will add 1 to the number of loops, up to a total of 6 times.



# Using (Nested) Repeat

## Key Concept 5 - Continued

You can add multiple Repeat blocks to create a nested loop. Each Repeat block adds one indentation. When code reaches the end of a nested loop, it will bounce back up to each Repeat block, going to the one with the deepest indentation first.

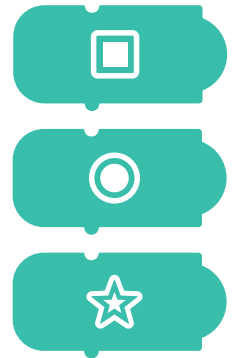


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# Subroutines

## Key Concept 6 (Advanced)

Subroutines are a way to store a sequence of code into one block. If you like how a specific sequence in a track sounds, you can store it on one of the subroutine blocks.

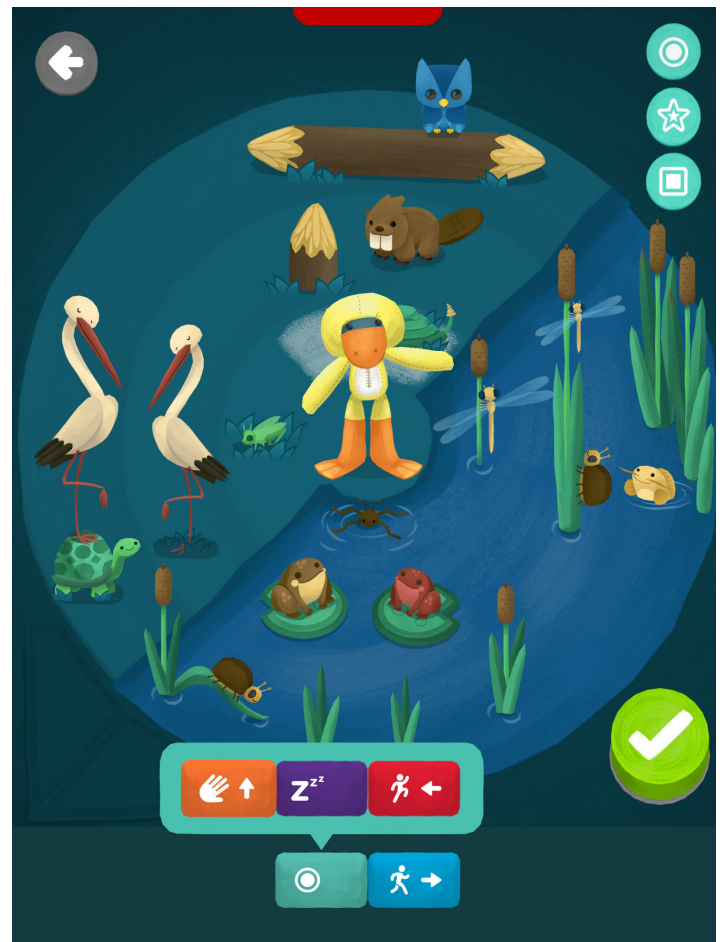
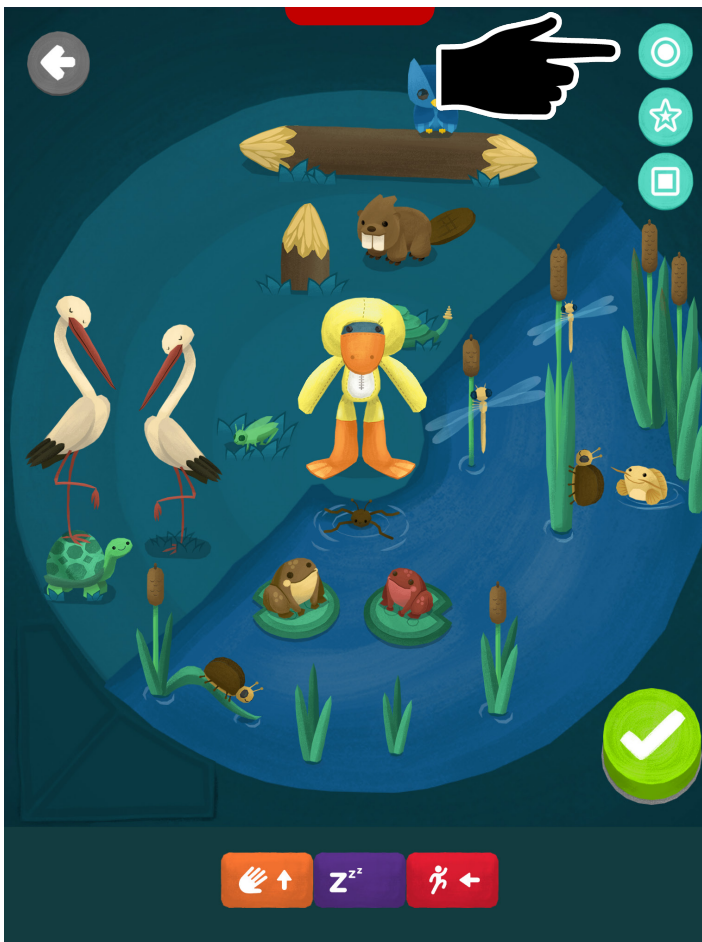
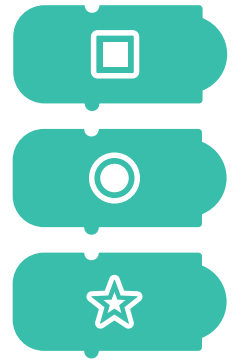


# Saving a Subroutine

## Key Concept 6 (Advanced) - Continued

To save a subroutine, first put down any desired sequence of code, let it load, then press one of the subroutine icons in the upper right corner. The code will be saved to that symbol. Now you can use the corresponding Subroutine block in any sequence.

★ Note: Subroutines are saved inside one track only. If you switch tracks or create a new jam, you will have to recreate and save the subroutine.

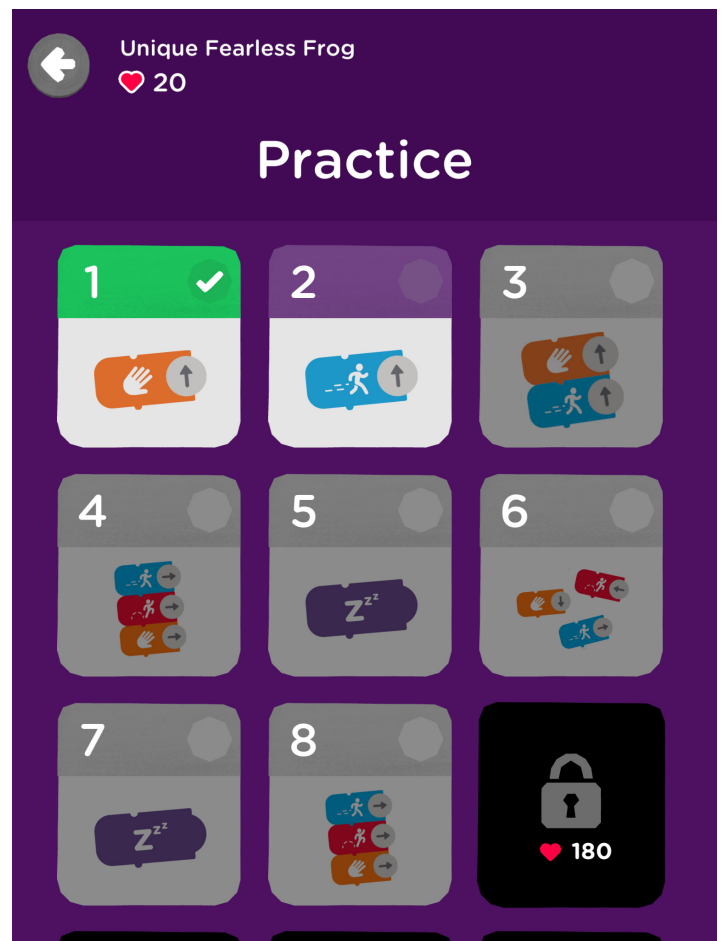


# Practice Mode

## Walk-through 1

Welcome to jam practice! Each level is a short exercise that teaches the basics of each Osmo coding block and how jams are made.

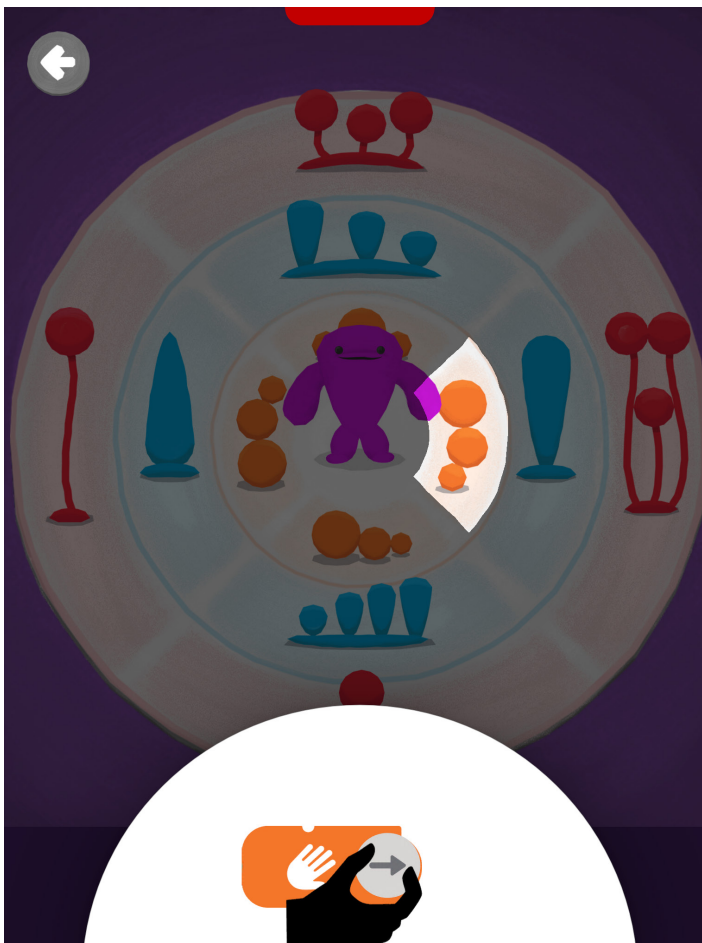
1. Tap **Practice** to see a list of all the practice levels. If this is your first time playing Coding Jam, you will need to complete a level before moving on to the next one.
2. When you get to a level that requires hearts to unlock, you will have to go to Studio Mode to earn more hearts.
3. Each practice level focuses on a key concept. Tap on a level to practice that concept.
4. There are two types of challenges in Practice Mode. In the first type, you play the highlighted object on screen. In the second, you play the sequence shown in the bottom bar.



# Practice Mode

## Walk-through 1 - Continued

1. Tap **Level 1** to begin your first practice jam. To complete this level, you'll play the objects that are highlighted.
2. Slide an orange Hand block in front of the screen. Rotate the arrow in the direction of the highlighted object. If you need help, follow the direction on the screen.
3. When you complete the level, a green check button will appear in the right. Tap it to unlock the next level.
4. You earn hearts by completing each level. Use hearts to unlock Studio Mode and new music worlds.



# Studio Mode

## Walk-through 2

After you earn 100 hearts in Practice Mode, Studio Mode will open! Here you can compose, listen, and edit your jams. You can also watch jam videos made by other players on JamTV!






1. To make a jam, tap **Studio**.
2. Tap **1** to create your jam's first track.
3. Tap a character to choose a music world. Experiment with coding sequences to create the sound for this track. Tap **✓** to save the track.
4. Repeat steps **2 & 3** for the rest of this jam's tracks. Tap **✓** to save your jam and publish it to JamTV.



# Studio Mode

## Walk-through 2 - Continued

In the studio, you can also edit any of your published jams.



1. Tap  and then tap  to view your published jams.
2. Scroll through your jams, choose the one you want to edit, and tap . You will then see all three tracks playing. Click on the character who's track you want to edit.
3. Tap  to unlock and edit the code sequence. Use the coding blocks to rearrange the code sequence until you are happy with your changes.
4. Tap  to save your changes and publish your revised jam.



# Advanced Editor & Chord Machine

## Walk-through 3

Once you earn 300 hearts, you will unlock the Advanced Editor and Chord Machine. Use it to add chord progressions and to access editing features like delete, rewind, and pause.


1. To add a chord progression, create a jam in **Studio**.
2. Tap on  and  to switch between different chord progressions.
3. Listen to how these different chords change the tune of your Jam. The keys are shown on the Chord Machine display.

★ Note: By default, all jams start in the key of C major.

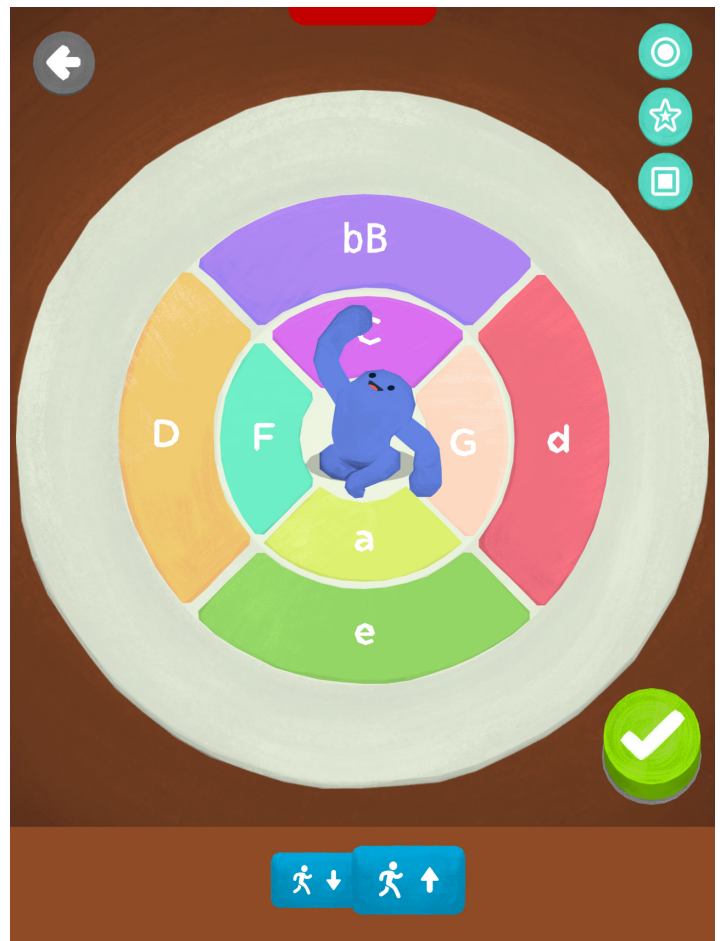
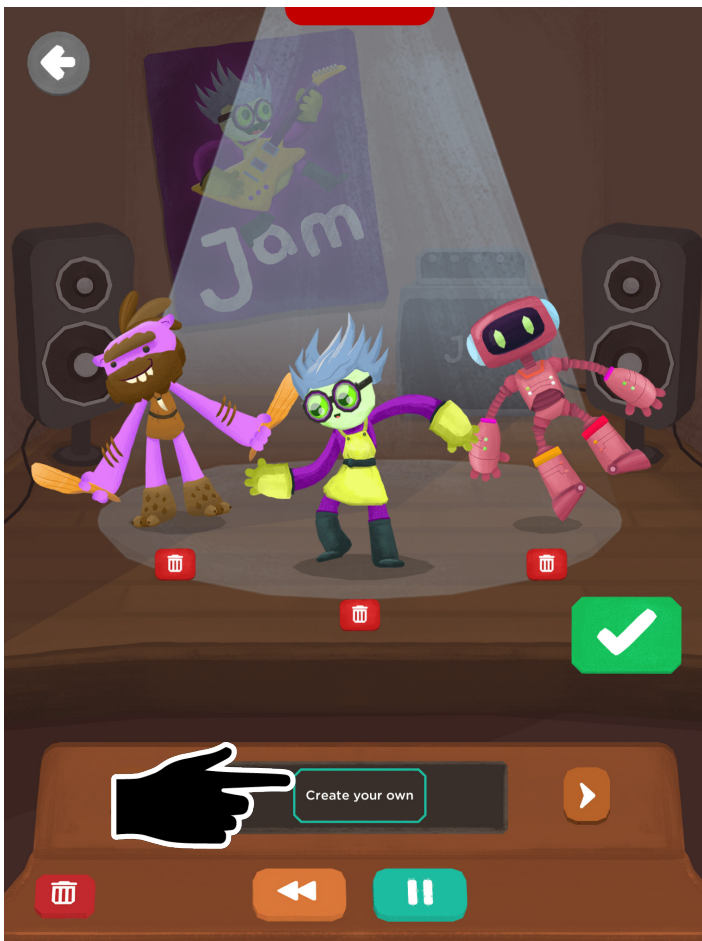


# Custom Chord Machine

## Walk-through 4

1. Create a jam in **Studio**. Then tap **Create your own** on the Chord Machine to open the chord music world.
2. Use only Walk and Hand coding blocks to program changes in chords. Tap  to return to the studio.







★ Note: In order to hear chord progressions, you will need to have tracks created.



# JamTV

## Walk-through 5

JamTV is an awesome place to listen to new jams created by other players from around the world! You can listen for fun, send hearts, and learn how to code new jams!

1. Tap  and then  to start watching your daily list of jams.
2. Tap  and  to go through the different music channels.
3. Tap  to award a heart to your favorite jams and notify the composer.
4. Tap  to visit that jam's studio and learn the code used to compose it.

