

# Drum Circles

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Drum Circles will make it easy for drummers to construct and improvise electronic beats on the iPad. The screen will have 2 circles (each will play one drum sound). Like in other drum apps, a sound plays when the user presses the circle. However, unlike other drum apps, the user doesn't have to continually tap a circle to play the same drum multiple times. Instead, a sound continues playing as long as the user's finger is pressed within the circle. Each circle is divided into 4 quadrants (subdivisions). The quadrants are assigned beat subdivisions of either quarter, eighth, sixteenth, or thirty-second notes. This way, the user can control which notes they want to play. If the user's finger is on the quarter note subdivision, the iPad will play quarter notes until the user's finger moves out of that subdivision. The user can slide between subdivisions to create perfectly accurate patterns. Drum Circles eliminates the human error involved with playing drums on a touch screen. It is impossible to play a note off-tempo, because the iPad syncs the subdivisions to the internal metronome.

Drum Circles allows the user to record beats and continue playing on top of them. If a beat is playing, the user can improvise on top of it by pressing one of the circles. They can save their updates and store the beats they create. Ultimately, they will be able to export the beats as midi.

## Instructions

To play a subdivision of a drum, press within the appropriate quadrant (quarter, eighth, sixteenth, or thirty-second). Swipe between quadrants to play different note subdivisions. Slide your finger into the middle circle to mute the drum. Lift your finger to resume playing the pre-recorded sound for that specific drum.

Swipe one of the circles on the bottom towards either the middle left or middle right of the screen to replace an existing drum circle.

Tap the record button to begin recording, then press it again to stop recording. This beat can be saved and stored as one of the numbered presets.

Tap the metronome on the top right to change the beats per minute.

## Controls

White mute buttons - hold these to mute the corresponding instrument/beat

Drum subdivisions - press these to play the corresponding drum

Record button - press this to start/stop recording

Metronome - tap to edit beats per minute

Presets - tap to change current beat being played

Bottom circles - Swipe an inactive circle towards one of the active circles to replace that circle

### **Tests**

1. Drum subdivisions play the correct drum at the correct intervals. The intervals must be synced to the metronome. When a subdivision is pressed, it should mute that drum in the pre-recorded playback.

2. Inactive circles capable of swiping into the active position at the center of the screen, replacing the drum that was just there. After this happens, the new drum should play its correct sound.

3. Record button capable of recording a beat. After the user stops recording, a prompt should appear to save the beat .

4. When the user clicks a preset, that beat should replace the current beat if the preset was

set. The metronome should continue at its previous bpm.

5. All 3 mute buttons work. Each active subdivision has a mute button. This should mute the playback of that drum. Each inactive subdivision has a mute button, which, when tapped, should mute the corresponding drum in the playback until the mute button is pressed again. The master mute button at the top of the screen should mute the entire playback when tapped and resume playback when tapped again.

### **Additional Comments and Suggestions**