



# SMART GUITAR TECHNOLOGY

**D**o you have a music lab in your school? The kind with MIDI keyboards, computers, Chromebooks or tablets, like iPads? If so, you probably use Digital Audio Workstation software (DAWs), such as GarageBand, Logic, ProTools, Mixcraft, Soundation and Soundtrap. Keyboard players have a huge advantage in this typical lab – they can record music as MIDI. Since so many of your students already play some guitar, you probably have a way to record guitars into the software, even if it's not MIDI data. But MIDI inside a DAW is infinitely editable, in ways that audio from a guitar is not.

MIDI guitars have been available for some time, but until now, their expense has been beyond the reach of most school budgets.

In a typical music lab, guitars are recorded as digital audio. To use a standard electric or acoustic guitar with a pickup, an intermediary device called a Digital Interface (DI) is needed. The user plugs the audio output of the guitar (via a patch cable or captured by microphone) into the DI, then connects the DI to the computer via USB. The DI converts the analog audio signal from the guitar (or

New products such as the MIDI-capable, DAW-friendly Jamstik can enable teachers to better incorporate guitars into their tech-based music labs.

**By Marjorie LoPresti**

microphone) into a digital audio format that can be interpreted, stored and edited in a DAW or other audio software. Popular and reliable DI devices include the Focusrite Scarlett 2i4 USB Audio Interface (about \$179) and IK Multimedia's iRig series (\$40-\$200-plus).

In recent years, guitar (and ukulele) instruction has gained some momentum in upper elementary-school and middle-school general music programs, but it hasn't yet reached every school music program. Some obstacles include not only tight budgets but also storage issues, instrument maintenance, tuning and a lack of scalable curricula that provide adequate differentiation for the varied needs of individual learners. With the push toward technology across the curriculum, these acoustic instruments often don't currently fit into many schools' technology plans for music instruction. But there are solutions.

## JAMSTIK SMART GUITARS

One possible way to provide meaningful guitar instruction for learners of all ages in a tech-based environment is the Jamstik

Smart Guitar by Zivix. Jamstiks are plug-and-play, MIDI-compliant guitar interfaces that do not require tuning. They are small and lightweight, and easily stored in a classroom; at about \$200 per device, they are also within reach of many school budgets. The Jamstik 7's fretboard has seven frets and an onboard "capo" function. The Jamstik+ has five frets and a slightly narrower neck, with more of an electric-guitar feel. Both devices connect directly to a computer or Chromebook via an included USB cable, or to any compatible device such as a smart phone and tablet via Bluetooth. When playing the Jamstik, the touch-sensitive fingerboard registers pitch by finger position on the string and note activation by vibration of the string. Tuning of the strings is irrelevant – the sound is produced via MIDI by the connected device. In a lab setting, each student uses headphones for a personalized experience.

On any connected device, users can log into the Jamstik Play Portal ([play.jamstik.com](http://play.jamstik.com)) on the Chrome browser to use the web-based tutorials to learn and practice guitar. The web app also includes a link to Spotify for learning and practicing along with favorite songs. Two available iOS apps mirror the Play Portal. The Jamstik iOS app is for general play, adjusting Jamstik settings, trying new instruments or using chord/scale overlays in open play. The JamTutor iOS app is built for learning with more of a "hands-on" approach, with video tutorials and on-screen cues, and it offers a game-like arcade mode for practicing.

### LEARNING GUITAR WITH JAMSTIK

The Jamstik Play Portal is built on a brand-new framework with a unified login system, progress-tracking and the ability for developers to add experiences and customization quickly. Some of the new experiences in the works are a rhythm trainer, a scrolling tab and notation player, and more control for teachers when it comes to building exercises and managing content.

The Jamstik Education team is working on an exciting new curriculum that will be launching at pilot schools around the world next fall; it's designed to fulfill an entire semester-long course using the Jamstik Smart Guitar. The course will be hosted in a learning management system that enables educators to assign lessons, track progress and easily grade their students using the contained Jamstik Curriculum.

This hybrid course will teach guitar fundamentals, including chords, scales, rhythm training and how to read tablature – all using the Jamstik-compatible software. The course will also introduce the basics of songwriting and music production with downloadable project templates pre-built for both Soundtrap and GarageBand (depending on which music production software your school uses).

In addition to these core experiences, educators will have the option to supplement the lesson plans with additional music-related subjects, such as music theory, music composition and advanced music production. Since the Jamstik is a class-compliant MIDI controller, it will work with any third-party compatible software that supports MIDI input, such as NoteFlight, flat.io, Guitar Pro,

Corridor Music, Logic Pro X, Ableton and hundreds more. The Jamstik team will be releasing additional information in the coming months, but those interested in participating in some of the first pilot programs next fall can find more information and get in touch with the team via [jamstik.com/edu](http://jamstik.com/edu).

### CLASS MANAGEMENT TIPS FOR JAMSTIKS

In an early pilot of the coming Jamstik curriculum, Shawna Longo of Hopatcong Middle School in New Jersey developed some best practices:

- Provide instruction as you would with acoustic guitars. In-person modeling and reinforcement is as important as technology-mediated instruction and practice.
- Provide an opportunity to play acoustic guitars if you have them, in addition to Jamstik Smart Guitars. Providing experience playing on a "real" instrument supplements student work, such as the way a teacher would balance playing an acoustic piano with using a MIDI keyboard along with a DAW. This strategy is essential if you do not have one Jamstik per student. A rotation model allows all students the chance to learn and explore with multiple music hardware interfaces.
- Use the apps and Play Portal to provide focused attention for students who need additional support to master skills or to challenge those who are ready to move ahead.
- Encourage student creativity by using the Jamstik within a DAW such as GarageBand and Soundtrap or a notation program like Noteflight. Soundtrap offers a wide range of free lesson plans to support student creativity. For MusicFirst users, many of these Soundtrap lesson plans will be available in the MusicFirst Library by the end of summer.
- Manage differentiated instruction with a learning management system, such as MusicFirst, or with online tools like Google Classroom.
- Check out the Soundtrap EDU Blog post "Create Music Online with Soundtrap for Google Chrome Using Jamstik" (May 2, 2018). This will help you get started using Jamstiks within Soundtrap. Many of the tips in this post apply to other DAWs as well.
- Whenever possible, use the USB connection to limit Jamstik latency and avoid Bluetooth connection confusion when students are in close quarters.

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