

Albuquerque Ukekopelli Festival

Electronics for Uke

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For most of us, the ukulele is the perfect instrument. Small, portable, and with a unique and lovely sound that is suited to most of our musical endeavors. Still, it has the drawback of a soft voice that really doesn't carry well or cut through other instruments in an ensemble situation. For instances like these we must really rely on electronics, especially amplification, to make the sound louder and carry to an audience. In this workshop we will examine the ins and outs of using electronics to augment and enhance our ukulele's voice.

Pickups

- **Microphone**
Great sound but not really useful for driving effects. Even instrument installed units will be far too prone to feedback.
- **Piezo**
The most common. Sadly, ill-suited to driving electronic FX. Will require a preamp of some type to generate a quality signal strong enough to drive most FX units but it can be done. (No preamp may be required if you are running an amp intended for acoustic instruments.)
- **Magnetic**
Rare. Only works with steel strings. Great for FX.

Amplifiers

Should be an amp designed to produce an uncolored, clean sound, such as a dedicated ukulele or acoustic guitar amp or PA. Electric guitar amps are less useful as they are designed to color the source instrument in specific ways.

Most modern "acoustic" amplifiers have built in effects. Most are very good and, in all honesty, should be enough for most people in most situations. They have the "built in" advantage of no cables, connections, or extra gear.

Cables

Don't buy the cheapest or the most expensive. There's a lot of "cable voodoo" out there.

FX

Electronic effects (or FX) are devices that are intended to alter the basic sound of your ukulele. They can be purchased and utilized individually or in combination. Some players use a chain of individual devices and some use sophisticated multi-effects units that can alter the sound in many ways.

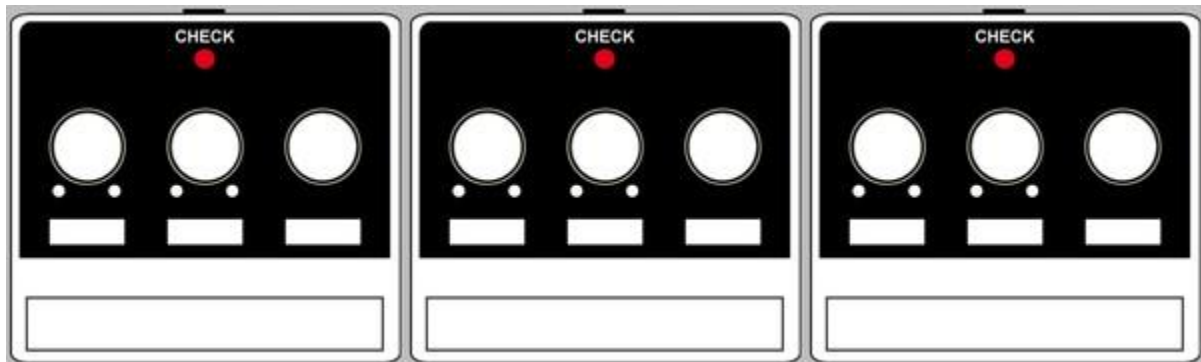
- **Pre-amps and compressors**
 - **Preamp**

Useful. Most instruments will benefit from the use of a preamp, even those with onboard pres. Useful for tonal shaping. May have muting and FX loop options as well.

- **Compressor**

Settings

- Compression/Ratio
- Threshold
- Gain



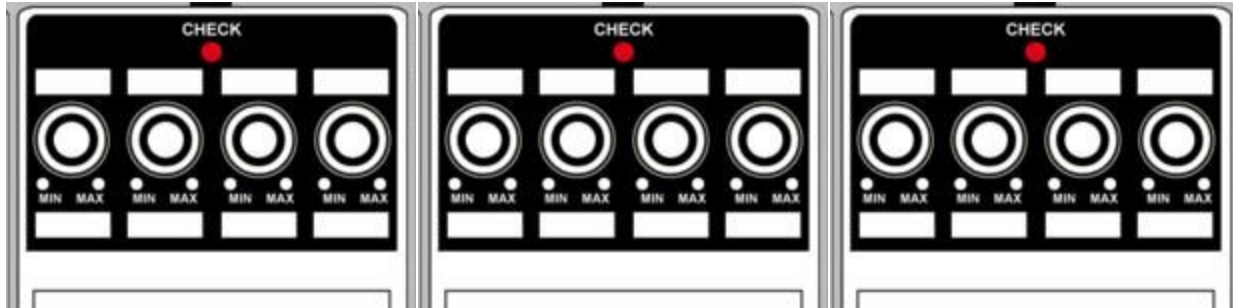
- **Echo/Delay Reverb**

Reverb

The most commonly used effect. Creates a sense of “spaciousness” around the sound. Basically an emulation of sound bouncing back off of multiple surfaces. Think of the sound of a basketball being dribbled in an empty gymnasium.

Settings

- Level
- Tone
- Time
- Mode
 - Room
 - Hall
 - Arena
 - Plate
 - Spring



Echo/Delay

An emulation of a sound reflected back from a single surface – an echo

- Analog

Like an actual “echo”. The repeats become fainter and less “high fidelity”.

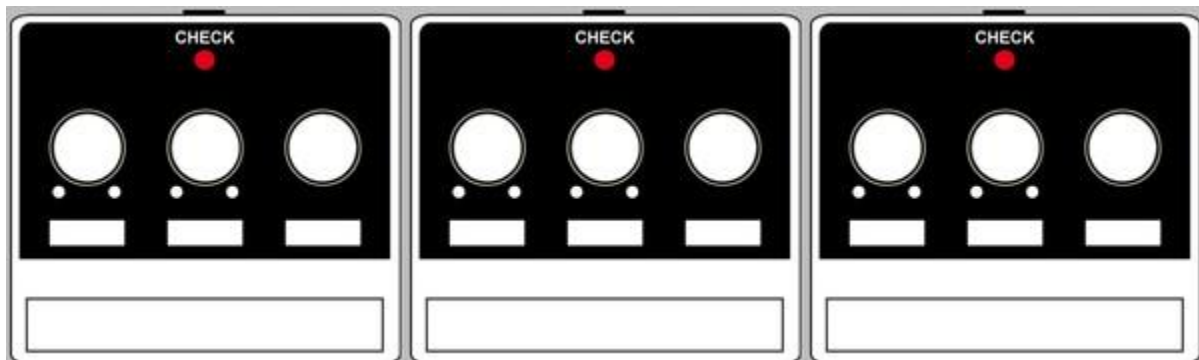
- Digital

Pristine clear quality. Can repeat infinitely and maintain signal quality indefinitely

Settings

- Level
- Feedback
- Time

Tempo sync



- **Modulation**

- **Flanging/Phase Shifting**

Flanging creates a swirling, jet-engine sound.

Phasing creates a rotary-speaker type effect with a full tone.

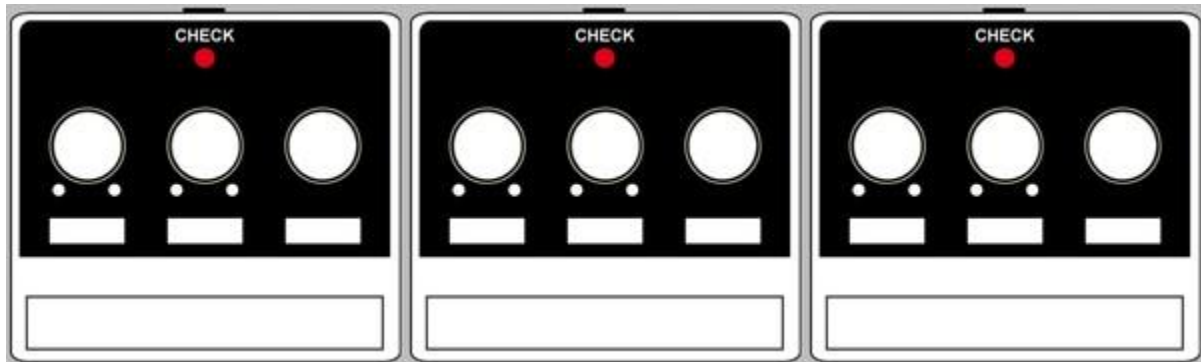
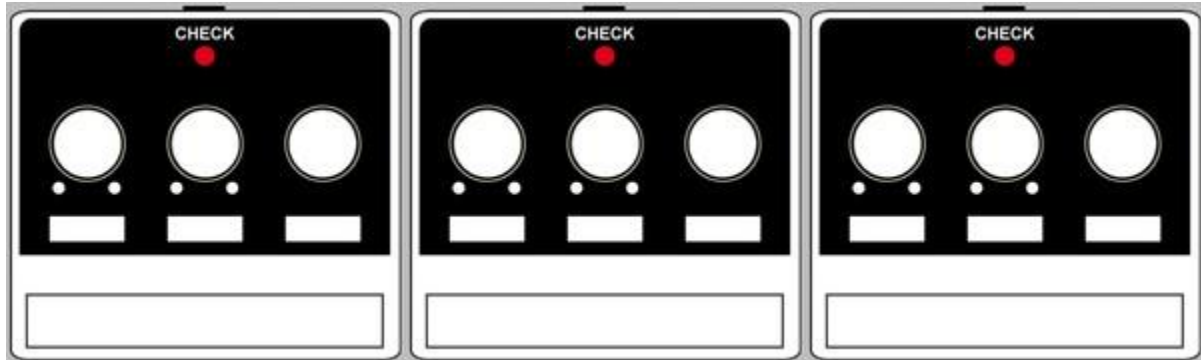
- **Chorus**

Great for ukulele. Probably the second most useful effect for uke Adds dimension and depth for thick, rich sounds. Can add “motion” and “life” to the sound, anything from a slow, swirling effect to a lively “shimmer”. Use cautiously with other players.

Settings

- Speed
- Width
- Intensity

Mono chorus more dense. Stereo more spacious, with less detuning.



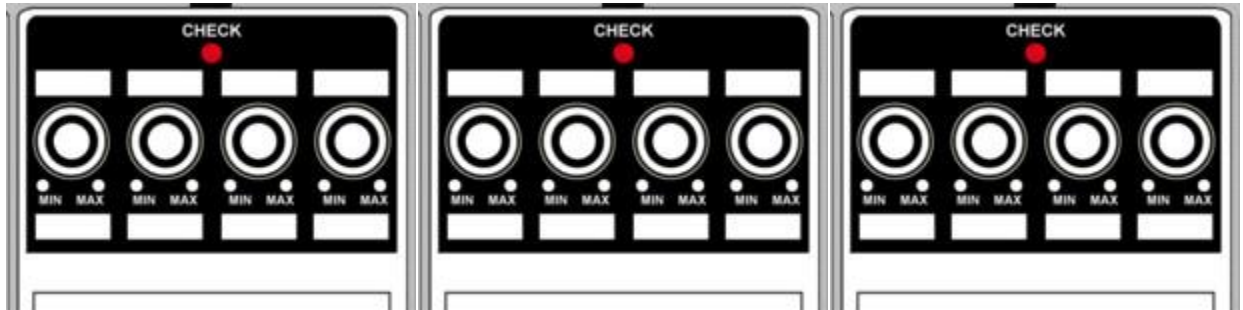
- **Overdrive and distortion**

Creates characteristic distorted “rock” sound. Uncommon for ukulele. Difficult to use with nylon string instruments but good results can be achieved with the right unit and a little experimentation. Find a unit that will blend clean signal with distortion.

Settings

- Level
Sets overall volume.
- Tone
- Blend
Combines original “clean” uke sound with distorted sound. A must have for ukulele. Keeps pitch and tone audible amid the fuzz.

- Gain
Set amount of distortion



- Volume
Not necessary but helpful to control volume or mute the signal. Can also generate nice “swells” into notes and chords. If used before a delay, can remove original signal leaving only the echoes – a neat trick.
- DI
Allows direct connection to mixing board/sound system. May be a dedicated unit or sometimes found on amp or multi-effects.

Signal Chain/FX Order/Gain Staging.

- Wah
- Pre-amps and compressors
- Overdrive and distortion

[FX Send if available/applicable]

- Modulation
- Volume
- Echo/Delay Reverb
Reverb
Echo/Delay
- DI

[FX Return if available/applicable]