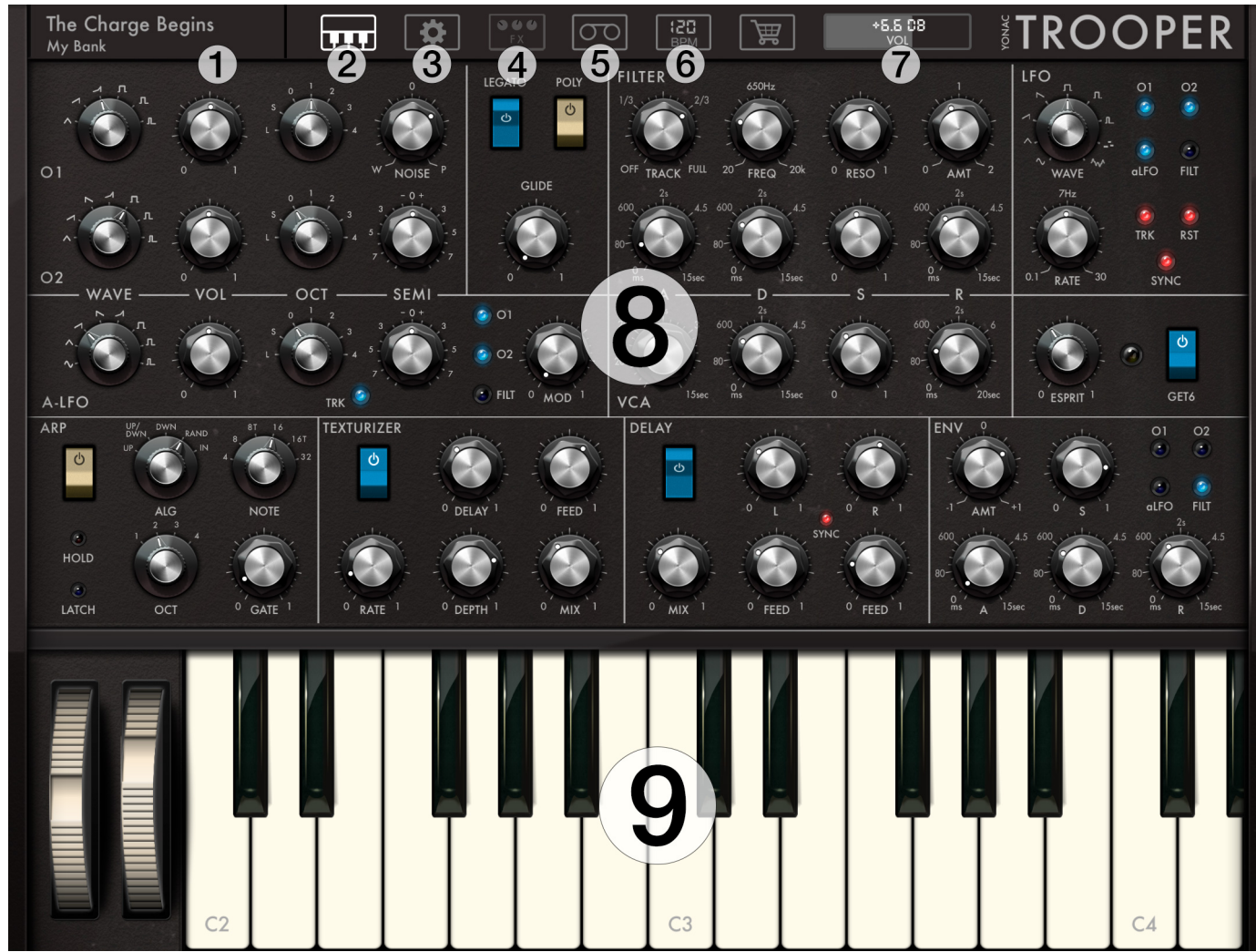




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BASICS



1) Preset Access

Touch to reveal the preset browser

2) Virtual Keyboard Options

Touch to reveal control strip. Use buttons in the strip to hide or show the virtual keyboard; change its height, or toggle scrolling/resizing to change the size and location of the keys.

3) Preferences

Touch to reveal synth & app preferences panel

4) FX (automatically appears according to window size)

If the device or AUv3 screen is too small to display all the synth controls at once, this button will automatically appear. Touch it to display the FX panel, which also contains the Arp and the Modulation Envelope.

5) Tapdeck (Standalone)

Displays the built-in recorder/playback/looper

6) Tap Tempo (Standalone)

Displays the tap tempo and scroll wheel interface for setting the app tempo

7) Master volume

Sets the output volume of the synth

8) Synth Controls

9) Virtual keyboard

Virtual Keyboard Management

Touch the KEYBOARD button on the taskbar to display keyboard options strip. From left to right, these buttons,

- Select the short height (“compact”) keyboard
- Select the full height (“performance”) keyboard
- Hide the keyboard altogether to make more of the synth controls visible, depending on the available screen real estate.
- Toggle keyboard scrolling/resizing mode on and off. When turned on, scroll to change the keyboard offset; pinch to change the key width to fit the desired number of keys on the screen.

THE SYNTHESIZER

Oscillators & Audible LFO

Oscillators 1 and 2 are the principal signal generators, whereas the Audible LFO can simultaneously or separately generate an audible signal or provide wide frequency modulation.

The waveform for an oscillator is selected using the WAVE knob. The base octave of the signal is set through the OCT knob. Each oscillator and the aLFO provide six octaves in the audible range, including sub (S) and octaves through 0 and 4. The additional low position (L) provides output below the audible range and can be used for imparting interesting characteristics to the overall signal.

The VOL knobs specify the volume for each oscillator and react with other elements in the synth's design. Up until the mid position, the oscillator output will be relatively "pure," which may be useful for cleaner synth sounds. Above the mid point, the tonality of the signal will begin to change, resulting in a "rounder" sound. When oscillators are combined, the volume controls can be used as an additional way obtain interesting new overtones not usually available in the "clean" combination of signals.

The SEMI knobs in oscillator 2 and aLFO are used to vary the tuning of each relative to that of oscillator 1. In small variations from the center, interesting "drifty" tones can be obtained.

The aLFO can be uncoupled from the keyboard by turning off the TRK button. In this case, it will emit a fixed frequency that does not change no matter which key is held down. Modulation can be obtained by selecting a target (O1, O2, or FILT) and then setting the desired amount of modulation via the MOD knob. Additional modulation amount control can be obtained via the mod wheel, velocity, aftertouch, etc. These settings are found in the PREFS -> MODULATION panel.

Filter

TRACK: amount of keyboard filter tracking.

FREQ: The corner frequency of the filter, as well as the initial value when the filter envelope is triggered

RESO: The amount of filter resonance. In higher settings, the filter will start to self-oscillate, which can be used as a unique sound on its own and controlled via the keyboard by setting TRACK to desired amount.

AMT: The peak value of the filter envelope. Filter envelope will have a more traditional contour up to the middle setting. Above the middle setting, the AMT knob will start to change the envelope contour

A: Filter envelope attack time

D: Filter envelope decay time

S: Filter envelope sustain level: will represent a value between FREQ and AMT

R: Filter envelope release time. When set to 0, the last envelope value is held

VCA

A: VCA envelope attack time: i.e., from silence to peak amplitude

D: VCA envelope decay time: i.e., from peak to amplitude specified by SUSTAIN (S)

S: VCA envelope sustain level

R: VCA envelope release time: i.e., from sustain level to silence

Legato, Poly, and Glide

LEGATO: Toggle legato mode.

POLY: Switch between monophonic and polyphonic synth operation

GLIDE: Specify the portamento time between two notes

LFO

The LFO applies a modulating signal to the selected targets. The amount of the signal is traditionally controlled using the modulation wheel on the built in virtual keyboard or an external MIDI keyboard. Further control options are provided in the Prefs -> MODULATION panel.

WAVE: Specify the waveform of the modulating signal

RATE: Specify the speed of the modulating signal

TARGET SELECTORS: Select which synth parameters to modulate

TRK: Turn on key tracking. The signal will speed up the higher one plays on the keyboard.

RST: Turn on first-key-in phase reset for the signal

SYNC: Enable BPM syncing. When BPM syncing is turned on, the RATE knob can be used to specify the note value at which the LFO will operate

MOD WHEEL: Specify the amount of modulation supplied to the selected target(s). Further settings for the Mod Wheel and other modulation related controls can be found in PREFS -> MODULATION

Modulation Envelope

Use the ENV as an additional modulation source to obtain interesting sounds. The ENV amount can optionally also be controlled via MIDI velocity and Mod Wheel. Options are located in PREFS -> MODULATION.

AMT: Peak value of the envelope at the end of the attack stage

S: Sustain value of the envelope at the sustain stage

A: Attack time

D: Decay time

R: Release time

TARGET SELECTORS: Select the synth parameters to modulate

Esprit & Getó

Esprit is a special parameter designed to interact with other synth settings. Depending on the underlying patch, it can be used to give tighter, deeper bass sounds; change the tonality of the signal; or make the overall sound more full and aggressive.

Getó turns on big, stereophonic synth sounds, supplying an extra tool with which to obtain ballsier tones.

Arpeggiator

POWER: Turn the arp on or off

ALG: Select the note order for the pattern

NOTE: Select the note value for each step

OCT: Select the octave range for the pattern

GATE: Specify the gate amount for each step. When legato is activated, the maximum gate amount will result arpeggiation in legato.

Texturizer

Texturizer is a multi-use effect. By experimenting with its parameters, one can obtain various flavors of chorus, flange, stereo expansion, short-time resonant delay, sweeping comb filter effects, and more.

DELAY: The initial delay for the wet signal

FEED: The feedback for the wet signal

RATE: Speed of modulation

DEPTH: Amount of modulation

MIX: Amount of wet signal applied to output.

Delay

Two-tap stereo delay.

L/R: Delay time for the left and right channels

FEED (L/R): Feedback amount for the left and right channels

MIX: Delayed signal mix

SYNC: Enable BPM syncing. Note values can be set via the L/R (delay time) knobs.

PREFERENCES

Control Surfaces

Here you can set general and MIDI elements relevant to performance components. All the preferences found (except ROTARY KNOBS) on this panel are patch-bound. However, you can preserve the existing settings across patch changes by activating the LOCK button on the lower right.

MPE: Enable synth to work with the MPE protocol. This will also automatically display TROOPER's built in MPE controller.

PITCH CTRL (MPE): Specifies the amount of note snapping when using TROOPER's built in MPE controller. At 0, the controller plays discrete notes; at 100, controller will be in full portamento.

MPE PITCH RADIUS: The range, in semitones, that the MPE voice-wise pitch shift messages map to. Default is 48.

PITCHWHEEL: The amount of pitch shift in semitones in either direction of the pitch wheel movement.

COARSE TUNE: Alter the master synth tuning in semitones

FINE TUNE: Alter the master synth tuning in cents

440: Specify the A4 reference pitch for the synth

MIDI NOTE MIN: The minimum MIDI note recognized by the synth. Default is 0

MIDI NOTE MAX: The maximum MIDI note recognized by the synth. Default is 127

MIDI NOTE SHIFT: The number of notes incoming MIDI data is shifted. Default is 0, i.e., no shift.

SCALE (MPE): Select one of the preset musical scales for the built-in MPE controller

EDIT SCALE: Edit the notes in the selected scale. You can add or drop notes by touching one of the buttons in the array. To change the musical key, press and hold the button for the desired note.

ROTARY KNOBS: Specifies if the knobs found on the synth UI up/down fader like gestures, (default) or respond to rotary touch gestures.

PANIC: Send global MIDI Panic.

Modulation Settings

You can access an array of modulation settings on the Prefs -> Modulation panel. Here you can specify the amount of control certain MIDI elements have on synth parameters. For example, you can use MIDI velocity or aftertouch to control voice amplitude or filter cutoff.

The amount of control that modulation wheel has on the LFO can also be set here. In addition, you can configure the mod wheel to control the aLFO as well as the dedicated Modulation Envelope.

At 0%, the MIDI source has no effect on a given synth parameter.

MIDI Learn

MIDI CCs can be mapped onto the knobs and switches found on the synth and FX panels. The mapping can be saved to file and recalled for later use. The files can be shared. In addition, the loaded map is linked to the preset when the latter is saved, so that the map it contains it is automatically loaded when the preset itself is loaded. Like some of the other settings panels, this one also contains a "lock." If enabled, this preserves the already loaded CC map across preset changes.

To enter MIDI Learn mode, press the LEARN button. Touch the overlay on the desired knob or switch on the synth or FX panel so that it is highlighted. Manipulate the control on your MIDI device until the CC/Channel pair is indicated on the overlay. Repeat with any number of synth elements. When finished, go back to Prefs -> MIDI Learn and unselect the LEARN button. Save the changes to file using the SAVE or SAVE AS buttons.

To load a MIDI CC Map, touch the MIDI MAP display area and choose a file from the browser. Options for sharing are also provided by touching the IMPORT or EXPORT buttons on the lower taskbar found on the file browser.

App Audio / MIDI

These preferences are only available for the standalone deployment of the app. Use the HW or VIRTUAL MIDI In buttons to toggle MIDI In from hardware or virtual sources altogether. Specify MIDI channel for notes received by deploying the NOTE IN CH menu.

If you wish to send MIDI performance data from the app, select the MIDI out channel from the NOTE Out Ch dropdown.

To specify the channel for MIDI program changes, use the PROG CH dropdown.

To access the dialog for connecting with Bluetooth MIDI inputs, touch the BTOOTH button.

You can manage connections to currently online MIDI I/O devices on the MIDI Inputs and MIDI Outputs lists. To receive MIDI or MIDI clock data from a given source, make sure the associated button next to its listing is highlighted in green. To disable receiving either data, touch the button to un-highlight it.

Similarly, the app will output MIDI performance data to all the recipients with the MIDI jack button highlighted in green. To disable MIDI output to these recipients, touch the button to un-highlight it.

Enable Audio Backgrounding by touching the BG AUDIO button. Set the buffer size using the BUFFER dropdown. Similarly, set the sampling rate using the SAMPLE RATE dropdown. Notice that access and ability to set buffer size and sample rate works in a first-in-last-out manner, so that if an app is already open and using the audio (including in the background), any app opened after it will not be able to change these settings to anything other than specified by the first app.

AUv3

TROOPER comes packaged with its iOS Audio Units version 3 plugin binary. You can use multiple instances of TROOPER in any iOS DAW or mixer capable of hosting AUv3 plugins.

Both the MIDI and MPE functionalities of TROOPER onscreen controllers are available in AUv3 format, provided the hosting app is capable of receiving MIDI/MPE output from plugins.

The TROOPER AUv3 will be located among the MIDI Instrument plugins of your DAW. For more information about how to use AUv3 MIDI instruments, please refer to your DAW's user manual.

PRESETS

What's saved in a preset?

All the parameters on synth and FX panels, except for keyboard latch and hold. In addition, settings in the Prefs -> Control Surfaces and Prefs -> Modulation panels, as well as the offset and key width for the virtual keyboard or MPE controller. Linkage to MIDI CC Map loaded at the time of the preset save. Note that there are locks provided for each of the three preference panels. When turned on, these locks will preserve the settings across preset changes.

Managing Presets

The app's built-in preset management system is a powerful way to organize, access, and share banks and presets. Here is the function of the buttons found in the preset manager's taskbar, left to right:

Bank Taskbar

- PLUS: Create an empty bank.
- RENAME: Rename the selected bank.
- EDIT: Enable to reorder or delete banks. When finished, touch again to exit editing mode.
- SHARE: Display bank export/import options. See below for more information.

Presets Taskbar

- SAVE: Save as a new preset.
- OVERWRITE: Overwrites the currently selected preset.

- [INIT]: Loads a basic “initial” preset, useful when writing a new patch from scratch.
- RENAME: Rename the selected preset.
- MOVE: Move selected preset to a different bank.
- EDIT: Enable to reorder or delete presets. When finished, touch again to exit editing mode.
- SHARE: Display preset export/import options. See below for more information.
- JOKER: Randomly load a preset from the file system.
- SEARCH: Search for a preset.
- RESTORE FACTORY: Reinstall factory presets that came packaged with TROOPER.

Favorites Bank

- You can “favorite” up to 256 presets by touching the STAR button located next to it. These presets are then displayed in the Favorites repository found at the very top of the banks list. To un-favorite a preset, simply touch the star button again.

Importing/Exporting Banks & Presets

You can export banks and presets to iOS Files or via email. Simply touch the bank or preset share task button and make a selection. The banks/presets exported to Files can be accessed through the iOS Files app (just navigate to the TROOPER root directory) and can also be accessed on your desktop computer via iTunes Filesharing.

You import banks and presets in many different ways: you can add them to the TROOPER root folder (either within your iPhone or iPad, or using iTunes Filesharing), and then install them using YPAT3 > Sharing > Import from Files. Or you can double tap any TROOPER bank/preset file, which will automatically launch the app, and install that asset. Similarly, you can touch an email attachment to install an asset.