First Edition, February 2020

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QUICK START

Show/Hide & Adjust Onscreen Keyboard

Touch the KB button on the upper menu to show or hide the onscreen keyboard. Use the TALL button in the keyboard taskbar to change key height. To change keyboard position or size, touch the PADLOCK button to enter adjustment mode. Scroll the keyboard to change position. Pinch in or out to change key width. When finished, touch PADLOCK again to return back to performance mode.

Show/Hide XY-Pad

Use the XY button on the keyboard taskbar to show or hide the XY-Pad/Oscilloscope.

Browse and Load Presets

Touch the main display area in the upper menu to display the preset browser. Select a bank in the list on the left side of the browser. Load a preset by selecting it in the list found in the right side. When finished, touch anywhere on the upper menu to dismiss.

Navigating Synth Panels

You can navigate to a synthesizer subpanel by touching its title on the SYNTH submenu, dragging the red thumb also found in the submenu, or scrolling the synth view directly by touching a vacant area.

Portrait Mode (iPad Only)

Simply rotate your device (with orientation lock disabled) to portrait orientation to enter portrait display mode.

The Synthesizer

Basic

- Vol: Set the amplitude of the overall output.
- FX: Set the amount of FX signal sent into the built-in effects rack.

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Oscillators

- Wave Select Button: Touch down, drag and release to select the waveform for the oscillator.
- OCT: Specify oscillator octave.
- PW (Oscs 1 & 2): Vary the pulse width when the selected waveform is PULSE, or set blend amount when the selected waveform is SHARK.
- SEMI (Oscs 2 & 3): Fine-tune the oscillator frequency.
- Key Tracking (Osc 3): In KEY mode, oscillator 3 is synced to the keyboard (just like oscs 2 & 3). In LO and HI modes, it no longer tracks the key, and instead emits a fixed frequency as specified by its tuning.
- VOL: Specify the oscillator signal level.

Timbre

The TIMBRE module acts on oscillators 1 & 2 to modify their waveforms, and hence their tonality. When DEPTH is set to 0, the module is disconnected from its oscillator. Experiment with DEPTH and DRIFT knobs in tandem to obtain original sounds.

Osc Unison

The OSC UNISON module activates additional oscillators tethered to the principal three to provide "superwave" or natural chorus/flange effects. Use the ON/OFF button to enable the module. Use DETUNE and WIDTH to vary the pitch difference and drift among the oscillators.

Maximizer

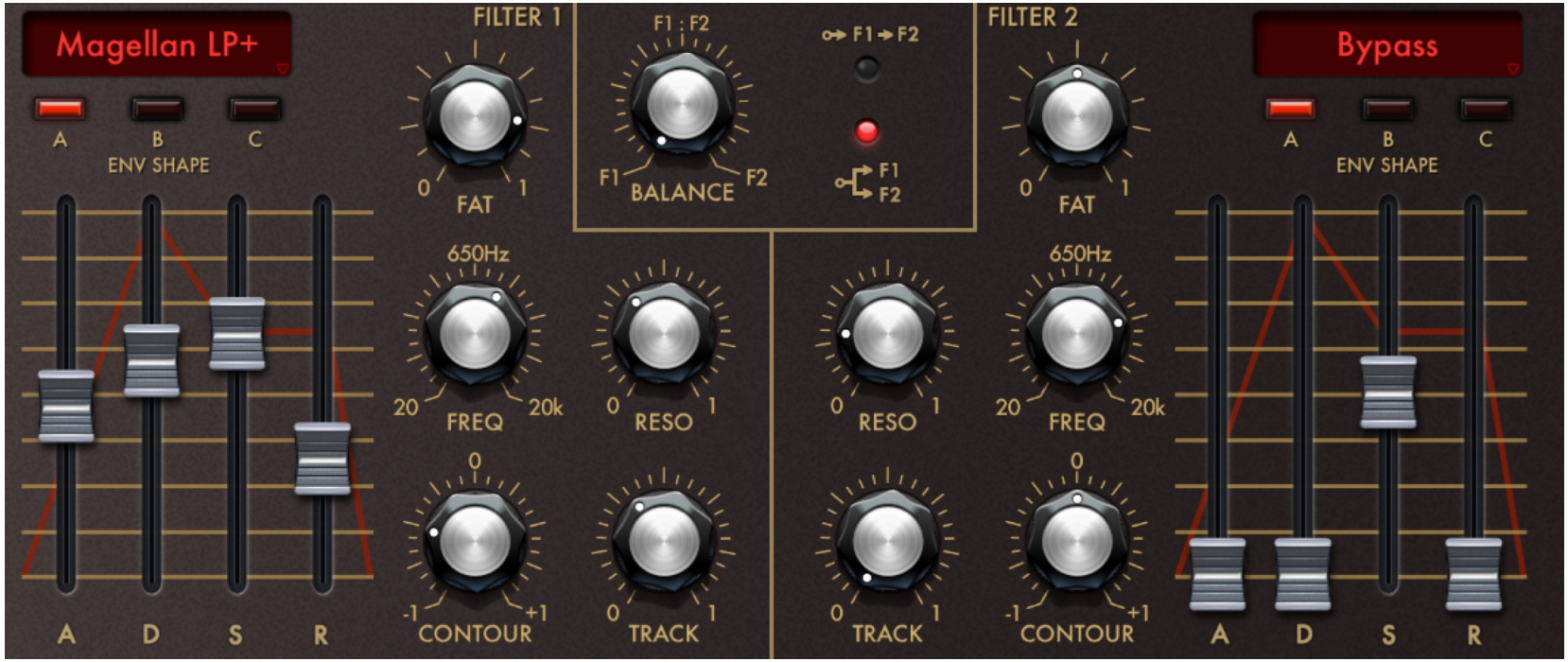
The Maximizer module helps instantly obtain big, punchy synth sounds. It can also be manipulated to

create true chorus or flange effects that do not suffer from 'thinness' usually associated with FX processors. By using the DRIFT control, effects such as octaved accompaniment or complex frequency interactions could be obtained. The SPREAD control can help obtain massive, true stereophonic synth sounds.

- VOICES: Specify the number of 'unison' voices generated for each note.
- DRIFT: Specify the frequency difference among the unison voices.
- SPREAD: Set the stereo spread of the unison voices.

Other Controls

- GLIDE: Enable and set the duration of the glissando between two notes.
- GLIDE MODE: Select the algorithm used to generate the glide effect.
- RING O2 > O1: Enable and set the amount of ring modulation from oscillator 2 to 1.
- TUNE: Set the master tuning for the synthesizer.
- POLY: Switch between polyphonic / monophonic operation modes.
- LEG(ATO): Enable legato operation.



Filters

There are two independent filter banks with their own envelopes. The banks can be run in series or parallel, and the balance between the banks can be varied.

Globals:

- SERIES/PARALLEL SELECT: Specify whether the banks operate in series or parallel.
- BALANCE: In either mode, set the relative mix between bank 1 & 2 outputs.

Filter Banks:

- FILTER SELECT: Select the filter type, or select BYPASS to disable the bank.
- FAT: Set the drive, presence and harmonic content of the analog-modeling filter module. Increasing FAT will give punchier, "heavier" tones.

• FREQ: Set filter corner frequency
• RESO: Set filter emphasis. Certain filter types will self-oscillate at high resonance settings.
• ENV SHAPE: Select the contour type for the filter envelope. Each type is a different attack, decay and release curve combination specially tuned to complement one another. Default is A.
• A: Set filter attack duration.
• D: Set filter decay duration.
• S: Set filter sustain level frequency, reached at the end of the decay stage. Sustain frequency range depends on FREQ and CONTOUR settings.
• R: Set filter release duration. Release is activated when a key is let go.
• CONTOUR: Set the peak frequency of the filter (reached at the end of the attack stage) relative to FREQ parameter. Positive values represent peak corner frequency greater than FREQ, whereas negative values imply a lower peak.
• TRACK: Specify the amount of key tracking applied to the filter frequency. Increasing tracking will brighten higher notes.

Frequency Modulation

The Magellan FM module is designed as an additional signal generator over the three main oscillators and the oscillator unison module. It allows you to obtain unique tones through a technique called "Frequency Modulation Synthesis". The FM module user interface is configured to behave like a filter bank to help user intuition, and includes its own envelope with contour generator.

- AMOUNT: Specify the amount of modulation imposed by the modulator (Osc 2) on the carrier (Osc 1) signal.
- MIX: Set the level of FM output.
- CLASSIC MODE: When enabled, the FM module switches to a special mode of operation that replicates the FM design in the original Magellan.
- A: Envelope attack duration.

- D: Envelope decay duration.
- S: FM amount (in tandem with CONTOUR and AMOUNT settings) at the end of decay.
- R: Envelope release duration.
- CONTOUR: Peak FM amount at the end of attack relative to AMOUNT parameter.
- ENV SHAPE: Select among three different envelope A/D/R profiles.

VCA / Output

VCA Envelope: The amplitude of the synth signal can be modified via the VCA envelope, whether to mimic transients in other instruments, or to create original effects.

- A: Envelope attack duration. Increasing attack time will result in a note "fading in" more gradually.
- D: Envelope decay duration.
- S: Envelope sustain level, attained at the end of decay.
- R: Envelope release duration. Release is activated when a key is let go.
- ENV SHAPE: Select among three different envelope profiles. Each profile has its own "feel" and response. Default is profile A.

Output Parameters:

- VOL: Set the overall output level. This is identical to the VOL knob on the Magellan left-hand panel.
- PAN: Set the stereo balance for the pre-FX synth signal.
- FX: Set the amount of signal sent into the FX rack. This is identical to the FX knob on the Magellan left-hand panel.

Modulation

Magellan 2 features a powerful and versatile modulation system to deliver interesting synthesis textures and sounds. Two LFOs, a modulation envelope, as well as a series of other sources (including MIDI) could be combined to control synth parameters in real time.

LFO 1
SHAPE
7Hz
0.2
RATE
30
0
-1
PHASE
+1
0
DELAY
1
CONT
TRIG
TRIG1
SHOT
BPM Sync
KEY TRK
TARGET
CONTROL
1
Pitch +12
Mod Env
6
84
3
Osc1 PW
Aftertouch
-4
53
2
Osc3 Pitch
Aftertouch
4
Osc2 PW
LFO 2
-14
21
23
-67
LFO 2
SHAPE
7Hz
0.2
RATE
30
0
-1
PHASE
+1
0
DELAY
1
CONT
TRIG
TRIG1
SHOT
BPM Sync
KEY TRK
TARGET
CONTROL
1
None
None
0
0
3
None
None
0
0
2
None
None
4
None
None
0
0
0
0

LFOs 1 & 2

Each LFO can simultaneously modulate four targets. Modulation routing is managed through the "matrix" found in an LFO's module. The matrix consists of TARGET / CONTROL pairs numbered 1 through 4. Each target has its own AMOUNT parameter, located below its selector. The associated CONTROL assignment can be used to vary the LFO's effect on the target parameter (for example, using a modulation wheel to increase the modulation amount), or can be used to introduce an additional signal to combine with the LFO (for example, MIDI input routed through one of MIDI Ctrls 1-4).

LFO Settings:

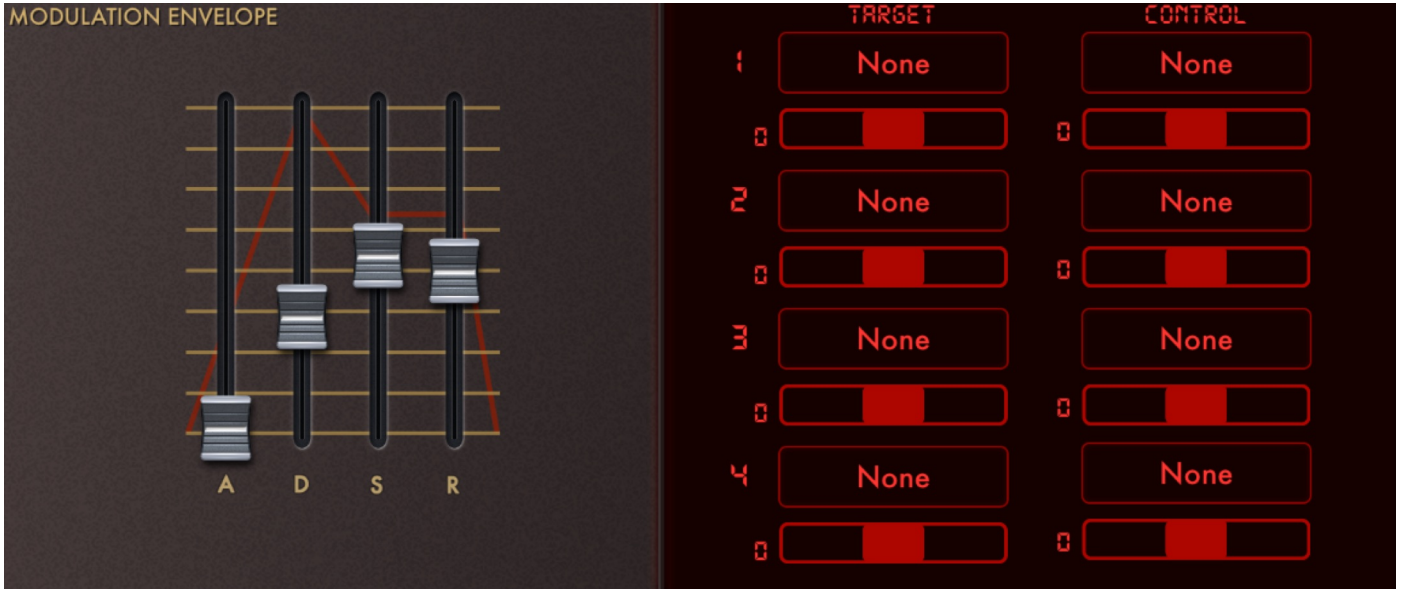
- SHAPE: Select the LFO waveform. The last two waveshapes generate random stepped and random smooth waveforms, respectively.
- RATE: Specify the frequency of the LFO signal.
- PHASE: Specify the phase shift of the LFO signal relative to default.
- DELAY (Non-Continuous Trigger Modes): Specify the duration after a trigger event that the LFO reaches peak amplitude.
- TRIGGER MODE SELECT: Set the LFO trigger mode:
    - CONT: LFO runs continuously (DELAY is disabled in this mode).
    - TRIG: LFO phase is reset at every new key-on event.
    - TRIG1: LFO phase is reset at the first key-on event. It will then run continuously until all the keys are let go.
    - SHOT: LFO is triggered for one period only at every key-on event.

- BPM SYNC: Activate tempo syncing for the LFO frequency. When enabled, use RATE parameter to select a note duration for the LFO period.
- KEY TRK: Enable key-tracking for the LFO rate.

LFO Modulation Matrix:

- TARGET: Select a parameter for the LFO to modulate.

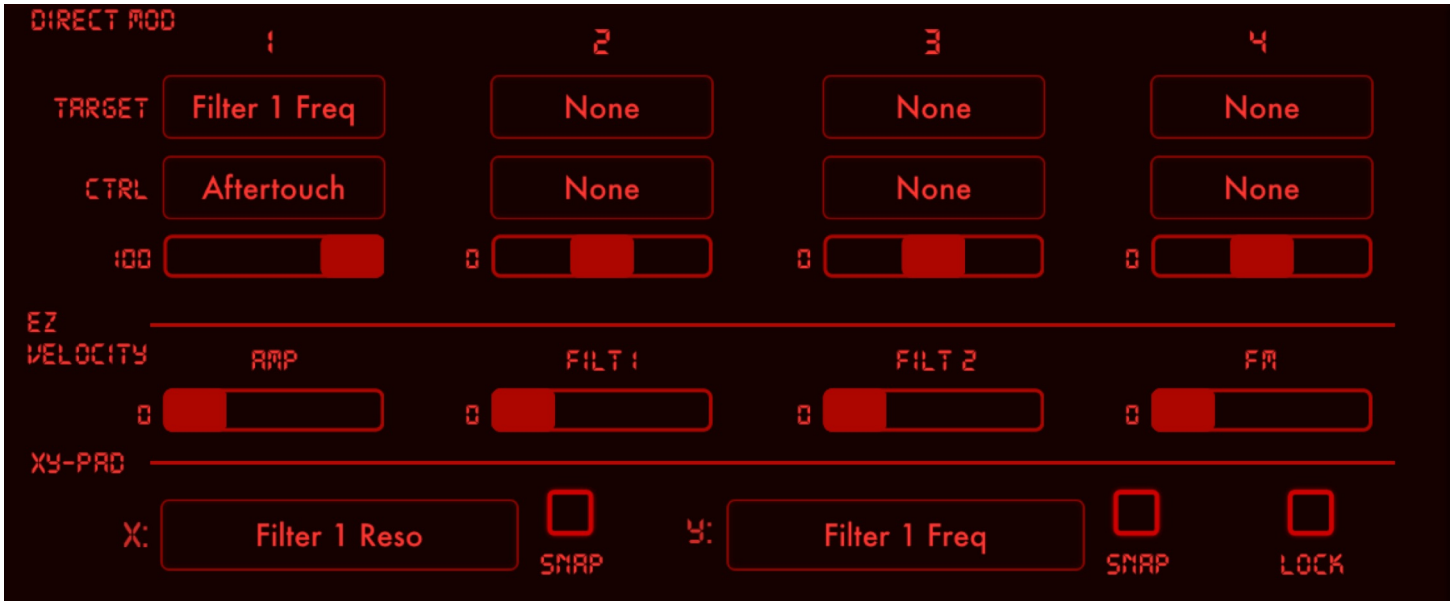
• TARGET AMOUNT FADER: Specify the -/+ amount of modulation for the target. At 0, there's no modulation.
• CONTROL: Select an optional control input for the associated target. The control input works in series with the LFO signal to modulate the target parameter. The additional control can also be an LFO/Mod Envelope, or a MIDI parameter like Modulation Wheel, Velocity, Aftertouch, CC74, or even an external MIDI LFO (mappable through Midi Controls 1-4. Refer to section on MIDI Learn for more information on MIDI control mappings).
• CONTROL AMOUNT FADER: Set how much influence the control signal has on the overall target modulation.



MODULATION ENVELOPE

The Modulation Envelope offers additional sound-sculpting option to those obtainable via LFOs alone.
In Magellan 2, it also has its own 4-target/control routing matrix. For more information on how routing matrices

work, please refer to the section about LFOs. The envelope controls are: A (attack duration), D (decay duration), S (sustain level), and R (release duration).



DIRECT MODULATION

A tertiary routing matrix allows for an additional four different control sources to be paired with parameters. These control sources can be Magellan LFO (thus extending their own matrices), or MIDI based controllers/signals. After selecting the target parameter and the controller, you can specify the modulation amount for each matrix entry individually. This is usually the place where assignments between controls like MIDI Aftertouch and synth parameters are made.

EZ VELOCITY

The EZ-Velocity module allows for conveniently and quickly adding MIDI Note Velocity control of important synth

parameters. In addition, the parameter responses are carefully designed to provide a natural feel and optimal response to changes in velocity. To add increasing velocity control to a designated parameter, simply turn up the fader. To disable velocity control for that target, set the fader to 0.

XY-PAD ASSIGNMENTS

You can use the XY-Pad (located in the hideable left-hand sidepanel) to control any given pair out of over 140 synth and effects parameters. These assignments are saved to, and can optionally be loaded from, presets.

To assign a synth parameter to a pad axis, simply select it from the associated dropdown. If the SNAP for that axis is enabled, the parameter will automatically "spring back" to its preset value when you lift your finger off the XY-Pad (much like a MIDI Pitch Wheel). At any case, you can reset the parameters for both axes by triple tapping the XY-Pad.

By default, XY-Pad assignments are loaded from patch. To lock the assignments so that they remain the same during patch changes, simply enable the LOCK toggle.

ARPEGGIATOR

- ARP ON/OFF: Enables the arpeggiator.
- MODE: Select among LIVE, TRIG or TRIG FIX operation modes:
    - LIVE: Arp steps through the notes currently engaged on the keyboard.
    - PROG: Arp plays a pre-programmed pattern when a key is pressed down. The pattern will be transposed, so that its lowest note corresponds to that of the pressed key.
    - PROG FIX: Works similarly to the PROG mode, except the pattern is not transposed.
- ALGORITHM: Select the arp stepping algorithm.
- GATE: Specify the length of each step relative to the arp note value.

- SWING: Set the amount of rhythmic swing.
- NOTE: Set the note duration per arp step.
- NOTE RPT: Specify the number of times a step is repeated before moving on to the next one.
- OCT: Specify the number of octaves for a pattern to step.
- OCT RPT: Indicate the number of times a pattern is repeated in each of the octaves set by the OCT knob.
- TRIG MODES BUFFER: Enabled for TRIG and TRIG FIX modes only. Specify the arpeggiator notes by selecting them, then trigger the arp by pressing a key.

CHORDMAKER

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The ChordMaker module maps the keyboard into chord shapes, so that you can play chords containing up to four voices by pressing a single key – a convenient feature when designing pads, for example. The mapping is configured via the chord matrix, and features mutable scale key. There is a collection of factory mappings available via the PRESETS dropdown. In addition, each matrix row features a cycler that cycles through common (and some not so common) chords for the given tonic.

Enable ChordMaker with the CHORDMAKER toggle. Select a factory progression by using the PRESETS dropdown. Change musical key by selecting it on the KEY column of the chord matrix. Add or remove components for a given tonic by touching the cells along its row. Load a preset chord for any row by cycling the CHORD button, found at the very last cell of that row.

Enabling LOCK results in the current note map to be retained across preset changes. Otherwise, the chord progression is loaded from patch on each preset change.

SEQUENCER

Magellan features a 32 step, 4 track, 16 pattern polyphonic step / pattern sequencer. The sequencer state can be saved to file and shared.

Writing a New Sequence

Touch the filename area located on top of the Pattern Bank Number Pad to reveal the file operations screen / dropdown. Press INIT on the lower task bar to load a blank sequencer state.

Sequencing Notes in a Pattern

Touch the number of the pattern you wish to program on the Pattern Bank Number Pad. On the step sequencer area on the right, touch the LED for Track 1, if not already selected. Touch and drag on the NOTE button/window on the steps you wish to program to load a note into that step. Alternatively, you can use KEY ENTRY to enter notes from the onscreen keyboard / MagTOUCH or an external MIDI controller.

Specify the number of steps for the pattern by touching the END button on the final step. For example, if you want your pattern to have 8 steps, you would press the END button on the 8th step.

If you wish to program a polyphonic pattern, simply continue by selecting Track 2 by touching its LED, and repeat the above with new notes. You can program up to 4 tracks per pattern in this way.

Additional step parameters include,

GATE: Specifies the duration of the step, relative to current note value
VELOCITY: Specifies the MIDI velocity of the step
SKIP: When activated, sequencer will be tacit during the step when in playback

Additional per-pattern parameters include,

NOTE VALUE: Select the note value for the pattern steps from the dropdown (e.g., 8th note, 16th note, etc)
STEPPING ALGORITHM: Select the order in which the pattern steps are played

These additional pattern operations are carried out using the buttons under the Pattern Bank Number Pad,

COPY: Copies the selected pattern
PASTE: Pastes the previously copied pattern into the currently selected pattern
CLEAR: Clears all the steps and tracks in the selected pattern

Using Key Entry

You can also program steps using a MIDI controller, or the onscreen Magellan keyboards. To perform key entry, go to the pattern you wish to program, and enable KEY ENTRY mode by touching its LED in the pattern steps panel on the right. Select the first step you wish to program by touching its NOTE button/dragger. Press a key on the keyboard to load the corresponding note to the step. The KEY ENTRY cursor will automatically advance to the neighboring step. When finished, do not forget to turn off KEY ENTRY mode by touching its LED again.

Saving Sequencer State

Open the FILE MANAGER dropdown/screen by touching the filename area above the Pattern Bank Number Pad. Press (Pencil+) icon to save the sequence as a new file. To save changes to an existing file, press the (Pencil Arrow) icon instead.

Loading Sequencer Files

Open the FILE MANAGER dropdown/screen. Choose the sequencer file you wish to load and press LOAD or LOAD LINKED. Note: Pressing LOAD LINKED will also load the Magellan 2 synth preset that was active the last time the sequencer file was saved. Contrariwise, pressing LOAD will make no changes to the currently active preset.

Sharing Sequencer Files

Press the (SHARE) icon in the FILE MANAGER taskbar to reveal sharing options. You can share sequencer files via email, or to the Magellan 2 root directory in the iOS Files app. In the latter case, you can also retrieve your sequencers via iTunes Filesharing on your desktop computer.

Sequencing Patterns

You can sequence patterns to play after each other in two ways: live, by pressing the number of a pattern while the sequencer is turned on, or automatically via adding patterns to the timeline.

For live pattern sequencing, simply select the first pattern you wish to play and turn on the sequencer. Whenever you wish to change to another pattern, press its number on the Pattern Bank Number Pad. You can also activate the TIME LOCK feature to ensure the new pattern doesn't play until the current pattern is finished, thereby maintaining the beat sync.

For automatic pattern sequencing, pull up the TIMELINE program area by touch TIMELINE EDIT. Add a pattern by pressing the + button on the upper left, and choosing it in the number pad overlay that appears. When done adding patterns, touch outside of the number pad overlay to dismiss it. To reorder patterns, simply drag and drop the timeline cells. To remove a pattern from the timeline, select it and press the '-' button.

Turn on timeline LOOP (located in the upper right of the timeline programming area) to have the timeline loop after reaching the end.

Magellan 2 features a built-in FX rack containing 10 stereo effects and configurable signal flow. The effects include,

1) VC-93 Mk. III Compressor
2) HexEQ 2 Six-Channel Parametric Equalizer/Filter
3) PURPLEBoost Distortion/Overdrive
4) Bit Mistress Bitcrusher
5) Phased 'N Confuzed Multi-Parameter Phaser
6) Flanger Danger
7) ChorusStar
8) XPander Sonic Enhancer
9) Echoplasm DLX Dual-Channel Delay w/ Tempo Sync
10) Big Be-Verb Parametric Reverb

To change the order of the signal flow, simply drag and drop the cell representing an effect in the Signal Flow Controller. To quickly focus on an effect's controls, touch its cell in the Signal Flow Controller. You can also navigate to the effect by scrolling the FX rack itself.

SPAWN²

Magellan 2 features the next generation of our Artificial Intelligence preset creation system, SPAWN². This special system uses a combination of machine language and predictive algorithms to generate new presets at the touch of a button. Giving you unprecedented control on machine autonomy and variation, SPAWN² helps you create anything from subtle variation on a patch to completely new sounds. Unlike completely random systems found in a few other synths, SPAWN² is able to generate an exceptionally high yield of usable presets per sequence of click.

Feel free to experiment with different combinations of algorithms and settings to find the results that best suit your tastes!

BASIC SPAWN²

In this mode, the choices involved in writing a new preset are left completely up to SPAWN².

- Select the 'BASIC' state via the MODE button, if not already selected.
- Touch the SPAWN² button to generate a new preset.
- If you like the new preset, don't forget to touch the SAVE button and follow the steps to save the preset into the file system.

EXPERT SPAWN²

In this mode, you can select the foundation algorithm as well as specify the variation and autonomy parameters for each major synth module.

- Switch to the XPERT state via the MODE button, if needed.
- Specify the foundation algorithm via the ALGORITHM menu:
    - Cumulative: SPAWN² will create recursive variations on a starting preset after each time the SPAWN² button is pressed.
    - Persistent: SPAWN² will create a different variation on the same preset after each time the SPAWN² button is pressed.
    - Random: SPAWN² will itself decide the basic preset-writing approach.
- If desired, specify the variation and autonomy amounts for the synth modules.
    - If either VARIATION or AUTONOMY is set to 0 for a module, no changes will be made to those modules.
    - Feel free to experiment with different combination of settings to find what you like the best.
- If using the Cumulative or Persistent algorithms, select the starting preset by going to the preset browser.
- Touch the SPAWN² button to generate a new preset
- If you like the result, don't forget to touch the SAVE button and follow the steps to save the preset into the file system.

ARP SPAWN²

SPAWN² can also generate new arp programs in any listed scale or randomly.

- To generate a new preset with an included arp program, follow the above steps and make sure the ARP button is turned on. Select a musical scale from the adjoining menu if desired.
- Touch the SPAWN² button to generate a new preset
- If you like the result, don't forget to touch the SAVE button and follow the steps to save the preset into the file system.

TIP: If you just wanna generate new arp patterns without causing any changes to the other elements of a preset, simply choose the PERSISTENT SPAWN² algorithm, set all module variations to 0, and select the preset you'd like to use with arp patterns. Again, don't forget to save anything you happened to like and wish to use in the future.

MIDI

MIDI KEYBOARDS

Use Apple's Camera Connection Kit to connect a CoreMIDI compatible USB MIDI controller to your device's charging port.

You can also use an iOS compatible MIDI interface connected to a MIDI controller via a standard MIDI cable.

NOTE: USB MIDI controller may require a power adaptor to work with your device.

BASIC SETTINGS

Access essential MIDI settings in the PREFS menu. NOTE: Some settings like MIDI channeling are excluded in the AUv3 version, as by convention the DAW/Host application is expected to handle routing, MIDI output, etc.

MIDI Note In Channel: Select the MIDI channel on which Magellan receives MIDI note messages. In addition to Channels 1-16, there is an "omni" (OM) mode to receive notes from any channel.

MPE: Enables MPE mode, for use with Midi Polyphonic Expression controllers, including Magellan's onscreen MagTOUCH controller. This setting overrides the MIDI Note In Channel selection. For more information, please refer to the section regarding MPE.

MPE Pitch Shift Radius: Set the per-voice pitch shift amount when in MPE mode. Default is 48.

Midi Out Channel (standalone version): Select the channel on which Magellan will output MIDI note and

modulation/pitch wheel messages. Default setting is OFF. For more information about managing MIDI I/O connections, please refer to the Advanced MIDI section.

MIDI Prog Change Channel: Select the channel on which Magellan receives MIDI Program / Bank Change messages. Default is OMNI.

KEYBOARD MAPPING

You can "map" an external or virtual MIDI to Magellan as follows,

1) Set MIDI Note In Min. Magellan will ignore all MIDI Notes less than the specified. (Default: 0)
2) Set MIDI Note In Max. Magellan will ignore all MIDI Notes greater than the specified. (Default: 127)
3) Set MIDI Note In Shift: The shift quantity will be added to the incoming notes to map them to a different region on the Magellan keyboard. (Default: 0)

Example: To use MIDI notes 36-48 (C1 to C2) on your MIDI keyboard to control notes 60-72 (C3-C4) in Magellan, set MIDI Note In Min to 36, Note In Max to 48, and set Note In Shift to +24 (so that pressing the key for MIDI Note 36 results in playing the note 36+24 = 60).

MIDI Learn

Magellan has powerful and easy to use MIDI Learn features, including save/recall, parameter-wise MIDI preferences, and more.

To activate visual MIDI Learn mode, touch the Midi Learn switch in the PREFS menu. Select the rectangular overlay on the parameter you wish to assign a CC (selection is confirmed when the overlay turns red), and manipulate the knob, button or control on your connected MIDI device to pair it with the Magellan parameter.

You can also manual enter a CC or Channel by double tapping the overlay. This will launch a panel with facilities for manual data entry as well as further MIDI options. Select the field you wish to modify and use the keypad to enter a MIDI value. When finished, press SET on the keypad.

When finished, exit MIDI Learn mode by turning off the MIDI Learn switch in the PREFS menu.

Parameter-wise MIDI Mapping Options

You can also map continuous control values to a specified range. With MIDI LEARN active, double tap a parameter to display advanced options. For continuous parameters, use the MIN and MAX fields to specify the range into which the CC value will map. For example, when MIN = 32 and MAX = 93, the value of 0 sent by the external controller will be mapped to 32, and 127 will be mapped to 93. Values between 0 and 127 will be mapped linearly to the interval (32, 93).

MIDI MAPS MANAGER

This provides features for saving, loading, and sharing MIDI CC Maps, as well as options for clearing all MIDI CC assignments at parameter and unit levels. MIDI Maps Manager also displays all learnable in list format for convenience.

You can 'learn' a given parameter by turning on the LEARN button, selecting the desired parameter and manipulating the component on your connected MIDI device to create the assignment. In addition, you can manually enter CC, Channel, and MIDI Value Range data for the selected parameter.

Advanced MIDI Settings

MIDI In Master On/Off: Use the switches provided in the MIDI In section to enable/disable MIDI In from hardware/network devices, or virtual MIDI sources.

Bluetooth MIDI: Launch the dialog to pair with Bluetooth LE MIDI devices.

MIDI INPUTS

See a list of physical (e.g., MIDI keyboards) or networked MIDI control devices currently available. Use the MIDI and CLOCK switches for a device to specify whether MIDI or MIDI clock messages from that device are to be ignored.

MIDI OUTPUTS

See a list of MIDI destinations currently available. These are entities to which Magellan 2 should be able to output MIDI note messages. Use the MIDI switch for a device to specify whether MIDI note messages should be sent to it. (Caution: ensure you avoid a "feedback cycle" in MIDI connections. For example, if you are using Magellan to control another MIDI app, ensure that either that app's MIDI Out feature is off, or that Magellan is configured to ignore MIDI messages from other apps. This way, you avoid having the same message sent by Magellan "echo back" to it and cause unusual phenomena).

MPE & MagTOUCH

Magellan 2 is able to receive and output MIDI messages according to MPE protocol. MPE compatibility makes Magellan more expressive than ever before, as you can now use external MPE controllers for polyphonic pitch control, as well as three dimensional voice expression. In addition, the new MagTOUCH works as a touchscreen MPE controller not only within Magellan, but also for controlling other MPE apps.

When MPE is active, MagTOUCH features polyphonic pitch control (with settable sensitivity) along the X-axis, and optionally outputs aftertouch along the Y-axis. When MPE is off, MagTOUCH behaves as a regular controller. In addition, MagTOUCH offers the ability to assign and edit a musical scale to its performance surface.

Enable MPE in the Keyboard Taskbar (or alternatively, in the PREFS menu). You can also display MagTOUCH prefs in the Keyboard Taskbar.

MagTOUCH Prefs

These settings apply to both MagTOUCH and the classic keyboard:

- Vertical Velocity: Enable virtual note velocity. Velocity is calculated from the initial vertical location of a touch.
- Vertical Aftertouch: Enable aftertouch along vertical axis. This feature can be used in both MPE and regular MIDI modes. In the regular MIDI mode, or when using the classic keyboard, it will transmit as polyphonic aftertouch.

These settings apply to MagTOUCH only:

- Poly Pitch Control: Set the "snap" amount for polyphonic pitch control (MPE mode only). At MIN, the

pitch fully snaps to note being played, without any “slide”. At MAX, the pitch is continuously variable without any snap.

- Preset Scale: Select a factory musical scale.
- Scale Key: Change the key for the current musical scale.
- Edit Scale Note: Add/remove notes from the scale.

MPE tips

- Currently, Magellan transmits and receives MPE messages on channels 2-16, with channel 1 reserved for “global” MPE messages like modulation/pitch wheels.
- Magellan’s MPE voice pitch bend amount (for use with external MPE controllers) is configurable in the PREFS menu. The default value is 48. However, you should set this to match your MPE controller’s configuration if you think it is something different.
- To successfully use MagTOUCH to control other MPE apps/devices, ensure their voice pitch bend amount is set to 48.
- You can also use MagTOUCH in the AUv3 version and record MPE. Note that there are a few DAWs that allow MPE to be recorded, although there probably are some that don’t. Refer to your DAW’s MIDI specifications. When it comes time for playback/mixing/freezing a track, etc, ensure that the Magellan instances on tracks originally recorded using MPE all have their MPE switches turned on, and that the poly pitch shift radius is set to the same value as used at the time of the recording.

AUv3

Magellan 2 comes packaged with its iOS Audio Units version 3 plugin binary. You can use multiple instances of Magellan 2 in any iOS DAW or mixer capable of hosting AUv3 plugins.

Both the MIDI and MPE functionalities of Magellan 2 onscreen controllers are available in AUv3 format, provided the hosting app is capable of receiving MIDI/MPE output from plugins. This way, you are able to use the added expressive capabilities of MagTOUCH and the classic Magellan 2 keyboard to record onto the "piano roll" in your DAW.

If using MagTOUCH in MPE mode, please ensure that MPE stays enabled during track playback, and that the MPE Pitch Shift Radius (located in the PREFS menu) is at the same setting as when the recording was made.

The Magellan 2 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.

PRESET MANAGER

The updated YPAT3 preset manager is a powerful system for organizing and sharing banks and presets. It now also integrates with the iOS Files app for even greater flexibility. Here is the function of the buttons found in the lower YPAT3 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 Magellan 2.

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 Magellan 2 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 Magellan 2 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 Magellan or Magellan 2 bank/preset file, which will automatically launch the app, and install that asset. Similarly, you can touch an email attachment to install an asset.

Magellan Classic to Magellan 2 Preset Translator

Magellan 2 comes with a highly accurate "Magellan-to-Magellan" bank/preset translator, so that you can still use your favorite patches made in the original Magellan. The translation and installation is done automatically: simply import a Magellan "yban" or "ypat" file the same way as you would import a Magellan 2 bank or preset.

OTHER SETTINGS (PREFS PANEL)

- Pitchbend Radius: Set the number of semitones that the pitch wheel will cause a note's frequency to shift when moved in either direction. Set to 0 to turn off pitch bending altogether.
- Buffer Size (Standalone App Only): Specify the buffer size for audio processing. Smaller values equate to reduced latency, but at the same time place more demand on the CPU. The default setting is 256.
    - NOTE: As the buffer size is a global property in iOS, the buffer size could be successfully set only if there is no other music or audio-related app currently open. All the music apps launched after the first one will typically inherit the first app's buffer size. Some apps may not be capable of running at certain buffer sizes. If you are having difficulties or encountering 'jittery' audio, first rule out that the cumulative demand on the CPU of all the open apps is not the culprit. Then, make sure that the current buffer size for iOS is compatible with all the open apps.
- Background Audio (Standalone App Only): Enable Magellan 2 to run even if it's not the current app in focus.
    - WARNING: It is easy to forget that an app with Background Audio enabled is actually still running, even if not in the focus. To prevent accidentally draining your battery, please make sure you either turn off audio backgrounding or quit the app completely after your finished with your session.
- Sample Rate (Standalone App Only): Select the operating sample rate. NOTE: Some sample rates may not be available on a given device or audio interface. Also NOTE that sample rate setting behaves like the Buffer Size setting – if another app is controlling the sample rate, it may not be possible to change it at that moment.
- ABLETON LINK (Standalone App Only): Magellan 2 integrates Ableton Link functionality for BPM syncing. By connecting to a Link session you can share tempo data among apps or devices, and set the session BPM from a single app. For more information, please refer to Ableton's documentation.