

**Mandala™**

**Instruction Manual**

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# INTRODUCTION

**Thank you for purchasing the Mandala™ Drum and Brain v1.0. I hope you enjoy exploring sonic terrains previously uncharted by performance-based electronic instruments. With unprecedented speed and sensitivity, the Drum translates your rhythmic nuances and tonal preferences into signals that generate sounds and transmit MIDI info, taking full advantage of the position and velocity of your strikes for new levels of electronic musical expression. Whether using the Brain's internal sound generator or controlling your external gear via MIDI, the user-friendly Mandala helps you find wormholes to creative dimensions that will hurl your mind into the unknown!**

**At Synesthesia Corporation, we are musicians who expect first-rate quality in the gear we use, and we strive to deliver that quality in our own products. Each Mandala Drum and Brain is hand-assembled and thoroughly tested before it is shipped, and we continually review the Mandala's capabilities in order to keep it updated with any possible improvements. We also provide complimentary tech support to our fellow explorers, and welcome your feedback and suggestions.**

**Thanks again for your support. I am confident you'll find the Mandala Drum an exciting vehicle with which to tap into your undiscovered sonic potentials.**

**Sincerely,**

**Vince De Franco**

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# **PT. I - FEATURES**

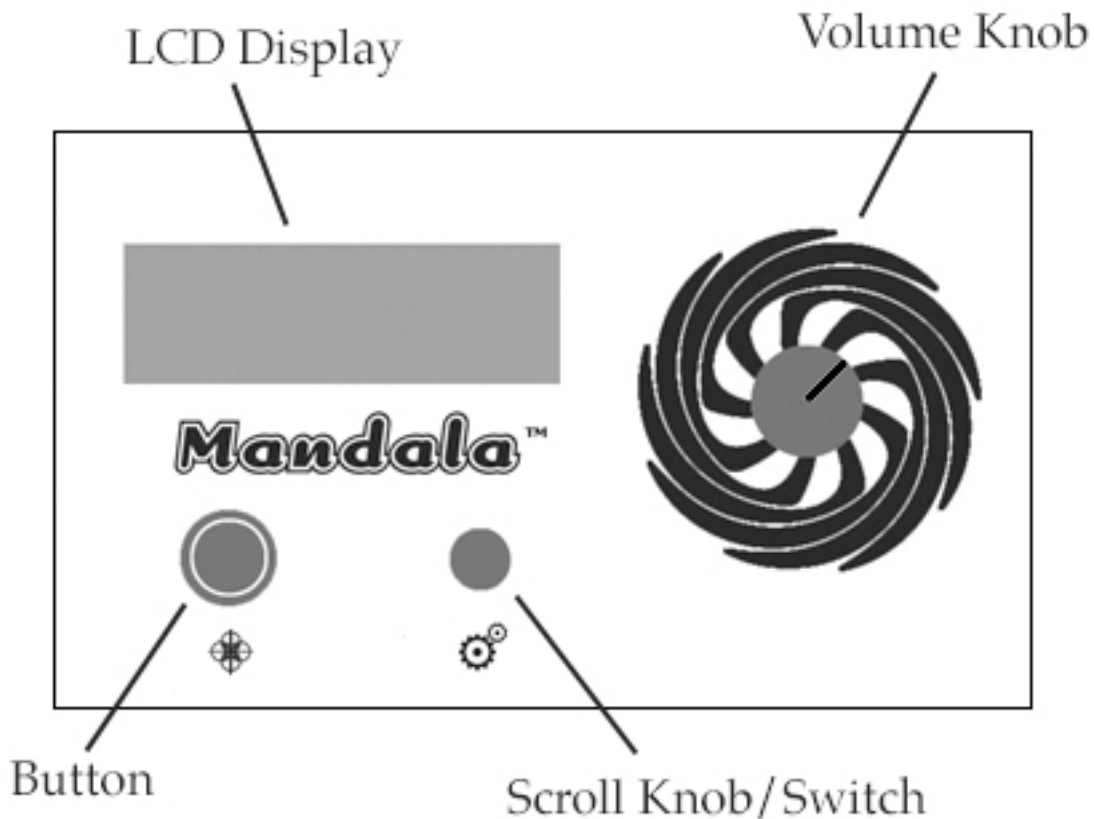
**The Mandala Drum and Brain was conceived from a need for an electronic MIDI trigger with unprecedented sensitivity to human motor precision and individual performance styles.**

**The Mandala Package features:**

- **The Drum Pad, which is a dynamic multiple control zone electronic surface that uses patented sensor technology to detect where and how hard a surface strike occurs**
- **The Brain, driven by a dual-microprocessor powered circuit with an onboard sound synthesizer chip containing a library of sounds that are assignable to respond according to the Drum's ultra-fast triggering and controller info**
- **Full functionality as a programmable real-time MIDI controller; specifically intended to manipulate external MIDI-compatible gear (synths, computers, samplers, tone modules, etc.)**
- **Onboard Reverb, Delay, Chorus and Flange effects, as well as 4-band EQ, pitch-bend, modulation, volume and panning parameters**
- **An array of per-zone tonal options, including scales and modalities, root note intonation, intervallic sequences, and programmable range definitions**
- **A provided dual footswitch for hands-free preset scrolling, as well as an input for a continuous controller expression pedal such as the recommended Roland FV-50 (not included)**

**The Complete Mandala Package includes the Drum Pad, Drum Brain, a dual-button footswitch, AC power supply, a TRS cord that connects the Drum to the Brain and a 9.5mm L-Rod for mounting the Drum on standard drum kit hardware. Snare stands provide the steadiest support, and are recommended.**

## PT. II - BRAIN PANELS



### TOP PANEL

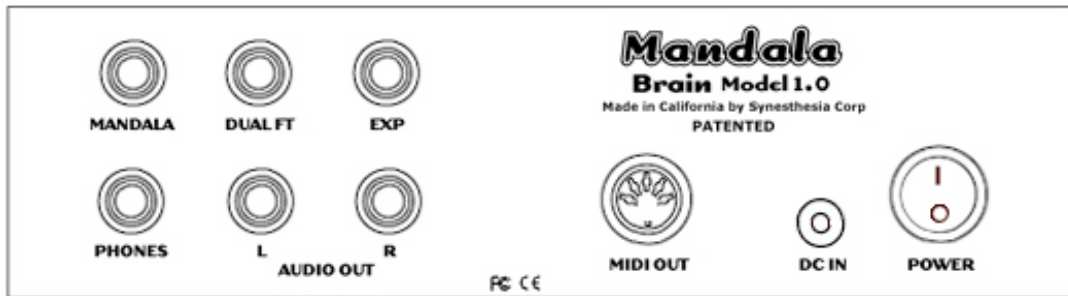
**LCD Display** – This is the window through which you communicate with the Mandala. It's main functions are to display realtime data as you play and to show you **Edit Pages** full of **Zone Parameters** which you can adjust to customize Preset Programs and sculpt new User Programs.

**Scroll Knob/Switch** – Use this to move from one **Edit Page** to another and to shuffle through lists of **Zone Parameters** and adjust parameter values (PUSH AND TURN to adjust parameter values faster). From most pages, pushing the Scroll Knob once will take you back to **Navigation Mode** (the cursor mentioned below must be solid,

not blinking). A second push will ferry you back to the **MANDALA REALTIME page**.

**Button** – Pressing the Button creates a cursor that serves two main functions: a solid/underline cursor allows the Scroll Knob to advance through Zone Parameter Options, and a blinking cursor enables the Scroll Knob to adjust parameter values within each option. From the **MANDALA REALTIME page**, a sustained push of the Button enables any changes to be saved.

**Volume Knob** - Controls the volume of all triggered sounds and [momentarily] cuts any assigned effects' tails when the knob is adjusted.



## REAR PANEL

**Mandala Input** – Receives control signals from the Drum Pad through a provided TRS cord.

**Dual FT** - Lets you use the provided Dual Footswitch to load Presets one-at-a-time in either direction.

**Exp** - A TS input that receives continuous controller signals from an expression pedal (we recommend a Roland FV-50 or Ernie Ball Volume Pedal, neither of which are included).

**Phones** - Short for Headphones, and this stereo output jack will help reduce the chances of any cops showing up at your door.

**Audio Out L-R** - Send a stereo signal into any external audio gear you can get your hands on, like recording devices, effects processors, and amplified speakers. Be ready to quell complaints from uptight neighbors.

**MIDI Out** – This jack enables the Mandala to carry out its most exciting feature: controlling external synths, samplers, computers etc., which is an original inspiration for this technology’s genesis.

**DC In** – Power in from the provided AC power supply.

**Power Switch** – You’ll need this switch to turn the unit on, and then to eventually turn it off.

## PT. III - QUICK START

The easiest way to get going with your Mandala is to:

1. Connect the Drum Pad to the Mandala Input of the Brain using the included TRS cable.
2. Connect the Audio Outs (L and R) from the Brain to a mixer or stereo amplifier using 2 instrument cables (or connect your headphones to the Phones jack on the Brain).

***Note: Always turn the master volume of your amplifier or mixer to its lowest setting before connecting and powering up equipment such as the Mandala Brain. Also, keep your headphones off of your head when connecting them to the Mandala Brain and powering up the Mandala Brain.***

3. Connect the included Dual Footswitch to the Dual FT jack on the Brain.
4. Power up the Brain.
5. Make sure the volume knob is up on both the Mandala Brain and your mixer/amplifier.
6. You should see preset *000 Shobbz Wuz Hear* on the LCD Display. Start playing!
7. When you want to hear something different just press the right button on the Dual Footswitch to advance to Preset *001 Diego* and play away! There are 82 presets in all. They are locked into memory so don't worry about experimenting and altering their parameters. If you fiddle with their settings and you like your creation just save your new program to a memory location from 83-139.



## PT. IV – MODES and FUNCTION PAGES

The Mandala Brain operates in 3 separate Modes. These Modes utilize 14 **Function Pages**.

### Modes

- 1. Realtime Mode:** Displays all strike information as you play and is your doorway into all other Modes.
- 2. Navigation Mode:** Arrows are displayed on both sides of the screen meaning you are ready to scroll through **Function Pages**.
- 3. Edit Mode:** Allows you to alter parameters within **Function Pages**.

### Function Pages

1. MANDALA REALTIME
2. SAVE
3. ZONE SETUP
4. ZONE INSTRUMENT
5.       b. ZONE MOD
6.       c. ZONE SCALE
7. REVERB/DELAY
8. CHORUS/FLANGE
9. 4-BAND EQ
10. PARAMETERS
11. POSITION CONTROLLER
12. VELOCITY CONTROLLER
13. PEDAL CONTROLLER
14. OPTIONS

The following screen diagrams will acquaint you with the Mandala's functions and walk you through the process of playing factory Presets, customizing them, and saving any changes as your own Presets. Of course, you can also build your own Presets from scratch, but for now...

## MODE 1: Realtime Mode

This Mode consists of the **MANDALA REALTIME page** (which is the Mandala's default Startup page) and the **SAVE page**.

### MANDALA REALTIME Page

```
017 Tutorial_1
zone:          sur:n ped
nt:           ctPOS:
vel:          ctVEL:
```

When you power on the Brain, this default startup page tells you the name of the currently loaded Preset and the number of its location. This page also displays the realtime info each of your strikes generates:

which **Zone** was last struck

which **Note** played in that zone

and with what **Velocity**...

also, as a result of your strike you have generated

strike **Position Controller** data (**POS**), and

strike **Velocity Controller** data (**VEL**)

You will also see how the pad's surface is configured to react in the current preset by way of:

You'll see **Surface Settings(sur): Normal(n)/Choke(c)/Dynamic(d)**.

Additionally, the Realtime Page reminds you of any **Pedal** assignments in the Preset by displaying '**ped**' next to the Surface Setting. (All these functions will be elaborated upon through this manual, rest assured.)

## **Changing Presets:**

- Press the button once. A blinking cursor will appear over the location number.

-Use the Scroll Knob to scroll through the list of Presets. For now, choose **#17\_Tutorial\_1**.

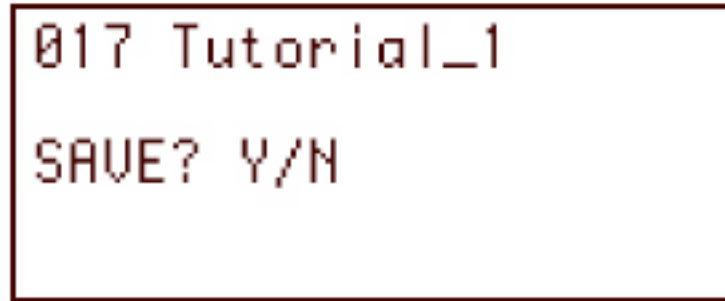
***-Press the button again, and the Preset will load.*** Grab your sticks and play away on the surface for a minute to hear the settings.

*(Instead of using the Button and the Scroll knob you can always just step on the right switch of the included Dual Footswitch to automatically load the next preset in the Mandala Brain's memory... or press the left switch to load the previous preset.)*

When you are ready to start warping the Preset's impressionable young mind press the Button twice. This will take you to the ZONE SETUP page, which is fully detailed in the MODE 3: Edit Mode section of this manual.

***Note: After that second Button push, navigation arrows will appear on each side of the screen, which means you are in Navigation Mode.***

## SAVE Page



### Saving Presets:

From the **MANDALA REALTIME Page**, hold the Button down until the 'SAVE? Y/N' option appears. Use the Scroll Knob to select 'Yes,' and then scroll through the presets until you find your desired location. Push the Button once. The cursor will move from the chosen location number to the character spaces. To start spelling the name of your new preset, push the Button again, and when the cursor blinks the Scroll Knob will take you through all available characters. After entering a character, push the Button to advance to the next space. To skip around, push the Scroll Knob down to solidify the cursor and move it forward or backward (a Button push will make that cursor blink so you can enter in or change a character). When you're ready, press and hold the Button until 'SAVING' appears on the screen. Give it a second, and the new Preset's **MANDALA REALTIME page** will appear. At most times during the SAVE process you can push the Scroll Knob to move back one step if you change your mind and want to exit.

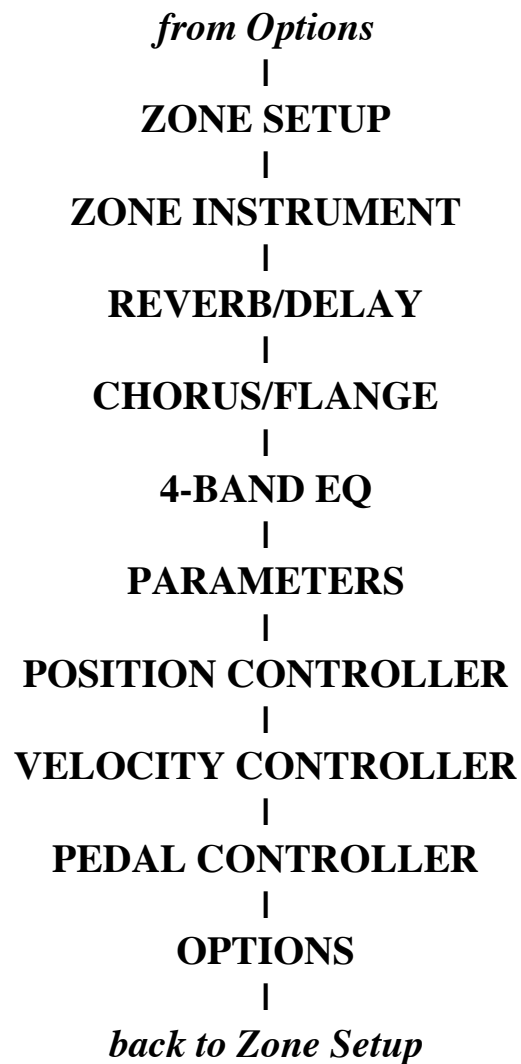
## MODE 2: Navigation Mode

Whenever you see the **navigation arrows** on each side of the screen, you are in **Navigation Mode**, which is basically a scroll directory

consisting of the 12 editable non-realtime function pages. When the navigation arrows are present your options are to:

- Turn the scroll knob and shuttle from page to page until you reach your desired page.
- Press the button at your desired page and thereby enter into **EDIT MODE**.
- Press the scroll knob once in order to return to the **MANDALA REALTIME** page.

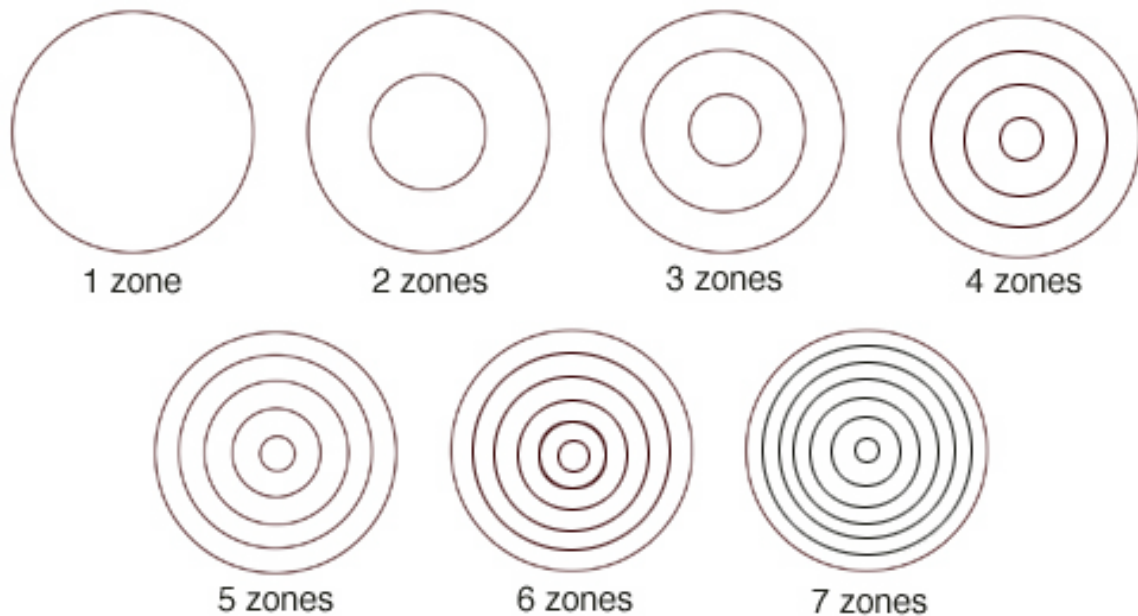
As you turn the scroll knob in **Navigation Mode** you will move circularly through the **Function Pages** in the following order:



OK, wait a minute. Before we go any further, let's make sure nobody is scratching their heads wondering:

### *So what's the deal with these ZONES?*

A **Zone** is a concentric division of the Drum Surface that can be assigned its own Instrument, Parameter Settings, and MIDI channel, if desired. The whole Pad can be one zone, or divided into up to seven zones. If you program multiple zones, Zone 1 will always be in the center, and each added zone will evenly divide the pad concentrically out to the edge. See the diagram below.



Everything related to setting up and editing these zones will be discussed in the following section, amply titled:

## **MODE 3: Edit Mode**

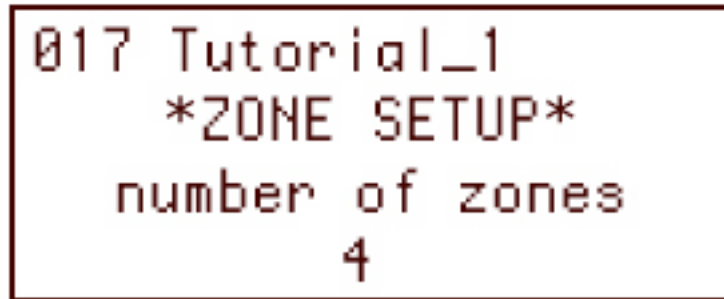
**Edit Mode** is reached by pressing the Button once while in **Navigation Mode**. A solid underline cursor will appear under the first parameter value in the current page. Spinning the knob will move the cursor from parameter to parameter. When you reach the parameter you would like to alter just press the button and the cursor will begin to blink. Now you can spin the knob and change the parameter value. Changes occur as you make them so hit the surface if you'd like to hear what you're doing. Also, pressing the scroll knob while you are turning it to alter a parameter will increase the rate of your change in order to speed things up a bit.

**Edit Mode** is entered into by pressing the button at any of the following pages while in **Navigation Mode**:

- ZONE SETUP PAGE
- ZONE INSTRUMENT PAGE
- REVERB/DELAY
- CHORUS/FLANGE
- 4-BAND EQ
- PARAMETERS
- POSITION CONTROLLER
- VELOCITY CONTROLLER
- PEDAL CONTROLLER
- OPTIONS

The following serves as a description of each of these pages as well as a tutorial on programming the Mandala:

## ZONE SETUP Page



```
017 Tutorial_1
*ZONE SETUP*
number of zones
4
```

This page displays the **number of zones** used in the chosen Preset.

### Changing the number of Zones:

-Make sure you've pressed the button to get from **Navigation Mode** to **Edit Mode** in order to begin changing the number of zones.

-Use the Scroll Knob to set the desired amount of zones (up to seven).

-Push the button to confirm your choice. (The cursor will vanish, and those pesky **navigation arrows** will reappear on each side of the screen. You're back in **Navigation Mode**.)

-The Scroll Knob will move you through the **Zone INSTRUMENT pages**, each of which serves as a different zone's 'Edit Page 1.' (From these you can access each zone's two additional **Edit Mode Pages**.)

Scrolling past the **Zone INSTRUMENT pages** will bring you to the Preset's **Global Effects pages** (REVERB, CHORUS, and EQ), a MIDI PARAMETERS page, and several CONTROLLER OPTIONS settings pages. First we'll learn how to set up individual zones, then we'll put global effects and controllers on the lot of them.



### **To edit a particular zone's settings:**

- Use the Scroll Knob to select the **Zone's INSTRUMENT page**.
- Press the button once. The navigation arrows will vanish and a cursor line will appear under the Instrument's location number.
- Use the Scroll Knob to move the cursor line to any of the other parameter options. Scroll your way through all three Edit pages.
- Press the Button once at any parameter option you want to edit. The cursor will start blinking, which means you're good to go.
- Use the Scroll Knob to change the value of your chosen parameter.
- Remember to press the Button again after you've adjusted each parameter's value to your liking. The cursor line must be solid before you can scroll to the next parameter option.

## **PT. V - ZONE EDIT PAGES**

Each Zone has 3 pages of editable Parameter Options:

### **ZONE EDIT Page 1 – INSTRUMENT**

```
017 Tutorial_1
      *ZONE 4*
◀18)el.jazz guitar
note: C2 midi ch: 16
```

This is essentially each zone's Main page, and is found in the **Navigation Mode** menu. Choose this page to access each zone's additional **EDIT Pages**.

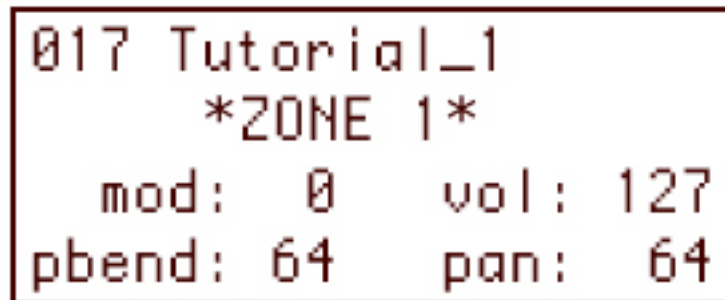
Instrument/Location #: Scroll through all instruments stored in the Brain\*

Note: if you opt to employ any of the scales on the **MOD Edit Page**, this parameter allows you to choose the scale's root note

MIDI Channel: all Zones are assignable to any MIDI channel from 1-16 (MIDI channels default to matching Zone numbers)

*\*A large selection of drum sounds can be found on MIDI Channel 10; to use them, set a zone's MIDI channel to 10 and set the Root Note Parameter value anywhere from B0 to A4 (see Drum Set Table below).*

### ZONE EDIT Page 2 – MOD



```
017 Tutorial_1
    *ZONE 1*
    mod:  0    vol: 127
    pbend: 64  pan:  64
```

On this page, all Parameter Option values range from 0-127. Parameters can also be controlled by footpedal (ped), strike velocity (vel), and strike position on the drum surface (pos). (See the manual's **GLOBAL SETTINGS** section for descriptions of each controller's **SETUP** page.)

Mod: Values set **modulation** amount: 0 = none; 127 = full

Note: *The following Zone parameter settings are relative to the **GLOBAL PARAMETER Page's** settings.*

Pbnd: **Pitchbend** values can change a note's intonation by up to 2 octaves

Vol: 128 Values can set a strike's maximum **volume**

Pan: Values can set a zone's sound to **pan** as much as:  
0 = full Left; 64 = Center; 127 = Full Right

### **ZONE EDIT Page 3 – SCALES**

```
017 Tutorial_1
    *ZONE 1*
scale:ionian  rg: 8
patrn:  2    step: 1
```

This page shapes the Mandala's tonal dimensions. You can set which scale or mode each zone will orient to [see the list below], and for the tonally (and atonally) inclined, you can use multiple zones to literally create new scales and modes.

***It will behoove you have Preset #17\_Tutorial\_1's Zone 1 SCALES Edit Page displayed while referencing this section***

Scale: scroll through the list and choose a **scale** or **mode** to manipulate (see below for list)

Step: set up **which notes** to use within the chosen scale: 1 = every note, 2 = every other note (third intervals for you music school kids), 3 = every 3<sup>rd</sup> note (fourth intervals), 4 = every 4<sup>th</sup> note (fifth intervals), and so on...

Patrn: assign a **contour pattern** (literally, a *linear shape*) to your chosen scale's sequence of notes. (See list)

Rg: program the scale's **tonal range** by deciding how many notes you want to fit into the contour

Here's an example of a zone's **SCALE Edit Page** setting:

Scale: Major (let's use the key of C for this example)\*

Steps: 1 – all of the chosen scale's notes are sequential (meaning there are no skipped notes)

Pattern: 2 – scale up (bottom to top, bottom to top, etc.)

Range: 7 – seven notes total before starting again at the bottom

Result: Your usable notes will draw from a C Major scale (set the key – or root note – of the scale using the Note Parameter Option found on the Zone's INSTRUMENT Edit Page). Each note will be one step up from the last, and all seven notes in the scale will be available. C, D, E, F, G, A, B

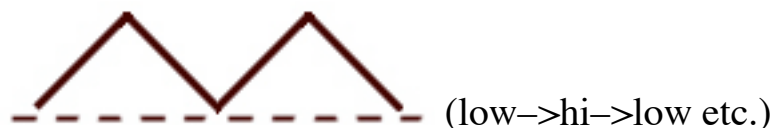
*\*On the INSTRUMENT page, set the Note Parameter Value to C3*

## SCALES

Major, Natural Minor, Melodic Minor, Diminished, Whole Tone, Pentatonic Major, Pentatonic Minor, Blues Major, Blues Minor, Ryuku, Gamelan, Indian, Combined Diminished, Chromatic, Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, Locrian, scale off

### SCALE PLAY PATTERNS

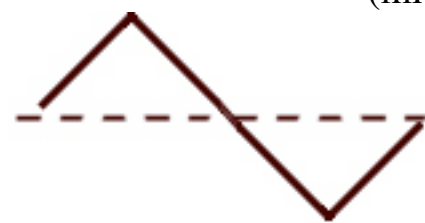
1. Upwave:




2. Up Rep:  (low->hi, low->hi, etc.)

3. Downwave :  (hi->low->hi, etc.)

4. Down Rep :  (hi->low, hi->low, etc.)

5. Fullwave Up :  (mid->hi->mid->lo->mid, etc.)

6. Fullwave Down:  (mid->lo->mid->hi->mid, etc.)

7. Velocity Up: the harder you hit, the *higher* the scale note you trigger

8. Velocity Down: the harder you hit, the *lower* the scale note you trigger

9. Random: any strike triggers a random note in the scale; strike velocity makes no difference

## PT. VI – EDITING GLOBAL SETTINGS

All Global Settings affect all Zones in a Preset.

***Reminder:*** You'll need to be in **Navigation Mode** to scroll through each of these pages. (If you don't see those **navigation arrows** on each side of the screen, make sure the cursor is solid, push the Scroll Knob down once, and the magic arrows will appear.)

### REVERB/DELAY Page



```
017 REVERB send: 95
type:room1
time: 127
fdbk: 0 vol: 72
```

***Each Reverb Type has its own preset value settings. If you've been fiddling with the values and you change the Reverb or Chorus Type, your value settings will be lost, so remember to save what you like before trying other Types.***

Type: Room1, Room2, Room3, Hall1, Hall2, Plate, Delay,  
Pan Delay

Time: 0->127, pedal

Feedback amount: 0->127, pedal

Send Volume: 0->127, velocity, position, pedal

Effect Volume: 0->127, pedal

## CHORUS/FLANGE page

```
017 CHORUS send: 87
type:fln rte: 9
time: 86 dpt: 4
fdbk: 57 vol: 72
```

*Each Chorus Type has its own preset value settings, so again, keep this in mind when you fiddle about...*

Type: Chorus1, Chorus2, Chorus3, Chorus4, Feedback, Flange, Delay, Feedback

Delay Time: 0→127, pedal

Feedback: 0→127, pedal

Rate: 0→127, pedal

Depth: 0→127, pedal

Send Volume: 0→127, velocity, position, pedal

Effect Volume: 0→127, pedal

## 4-BAND EQ page

```
017 lo mlo mhi hi
fq:ped 89 377 942
vL:-64 0 0 +32
vR:-64 0 0 +32
```

All values of the following parameters can be set by the Scroll Knob or controlled by footpedal (ped), strike velocity (vel), and strike position on the drum surface (pos).

Band Frequency Ranges:

Lo 0->4.69KHz, vel, pos, ped

Mid Lo 0->4.2Khz, vel, pos, ped

Mid Hi 0->4.2KHz, vel, pos, ped

Hi 0->18.75Khz, vel, pos, ped

Volume L: (each band has individual setting) -64->+63, vel, pos, pedal

Volume R: (each band has individual setting) -64->+63, vel, pos, pedal

**PARAMETERS page**

```
017  PARAMS  vol:127
      pan:ped  clip:  0
      pbra: 12  eqsd:  0
      ntoff: 21  eqfx:  0
```

Pan: 0 = Full Left; 64 = Center; 127 = Full Right, vel, pos, pedal

Pitchbend Range: spans 24 semitones (2 octaves)

Note Off: Set note length (set to 0 for NO NOTE OFF messages sent, resulting in lowest MIDI output latency and lowest onboard sound latency. ***FOR OPTIMUM USAGE OF THE MANDALA AS AN EXTERNAL GEAR TRIGGER: use only NOTE ON messages from your Mandala Brain (set ntoff = 0) and use your external gear's ADSR to set the length of your sound. Also, see MIDI PRIORITY setting below.***

Clip: 0=soft knee, 127=hard knee

EQ Send: EQ Settings applied to Zone Instruments, 0=off, 127=on

EQ FX: EQ Settings applied to Effects, 0=off, 127=on

Volume: Set Preset's overall volume, vel, pos, pedal



## POSITION CONTROLLER page

```
017 POSITION CNTLR
      center to edge
      range:( 0→127)
      ctrl#: 1 midi ch: 1
```

This refers to the location of a strike on the Drum Surface, which can be divided into 128 rings from center to edge.

Range: center = 0-127; edge = 0-127

Controller#: 0-127, pb, cp (channel pressure)

MIDI Channel#: 1-16

## VELOCITY CONTROLLER page

```
017 VELOCITY CNTLR
      soft to hard
      range:( 0→127)
      ctrl#: 2 midi ch: 1
```

The velocity of a strike can be used as a controller with 128 levels of intensity.

Range: soft = 0-127; hard = 0-127

Controller#: 0-127, pb, cp (channel pressure)

MIDI Channel#: 1-16

## FOOT PEDAL CONTROLLER page

```
017 FT PEDAL CNTLR
      heel to toe
      range:( 0→127)
      ctrl#: 4 midi ch: 1
```

Continuous controller footpedal (recommended are Roland FV-50 or Ernie Ball Volume Pedals) can change values as you play.

Range: heel = 0-127; toe = 0-127

Controller#: 0-127, pb, cp (channel pressure)

MIDI Channel#: 1-16

## OPTIONS page

```
017  OPTIONS
      vel boost: 0
      surface :norml
      midi priority:0
```

Velocity Boost: 0->127 – Helpful for playing with fingers.

Surface:    **Normal** – Zone layouts and strikes are, well... normal  
              **Choke** – Activate a thin layer at the outermost rim to choke the sound as you would on a drum cymbal  
              **Dynamic** – After a strike, hold your finger down and tap or slide around on surface for a position-based effect.

MIDI priority (On=1 Off=0): Sends MIDI internal data out the MIDI port prior to any internal sound generation thus lowering external gear triggering latency.

# INSTRUMENTS

001.	el.piano 1	043.	charang lead	085.	crystal
002.	el.piano 2	044.	bass + lead	086.	tingly bell 2
003.	harpsichord 1	045.	fantasia pad	087.	ice rain
004.	clavi	046.	warm pad	088.	saw wave
005.	celesta	047.	polysynth pad	089.	square wave
006.	glockenspiel	048.	bowed pad	090.	pzzcto stngs 2
007.	music box	049.	metallic pad	091.	harp 1
008.	vibraphone	050.	sweep pad	092.	harp 2
009.	marimba	051.	rain	093.	ac.nylon gtr 2
010.	xylophone	052.	crystal	094.	sitar
011.	santur	053.	atmosphere	095.	acoust.bass 2
012.	drawbar organ	054.	goblins	096.	frtless bass 2
013.	percussive org	055.	echoes	097.	piccolo 2
014.	church organ 1	056.	shamisen	098.	piccolo 3
015.	reed organ	057.	koto	099.	clarinet 2
016.	harmonica	058.	kalimba	100.	clarinet 3
017.	ac.nylon guitr	059.	tingly bell	101.	oboe
018.	El.jazz guitar	060.	agogo	102.	english horn
019.	el.guitr muted	061.	steel drums	103.	vibraphone 2
020.	gtr harmonics	062.	woodblock	104.	vibraphone 3
021.	acoustic bass	063.	taiko drum	105.	kalimba 2
022.	fretless bass	064.	synth drum	106.	tingly bell 3
023.	synth bass 1	065.	breath noise	107.	glockenspiel
024.	pzzcato strngs	066.	detuned el.pno	108.	xylophone
025.	orchestral hrp	067.	el.piano 3	109.	marimba
026.	synth strngs 1	068.	organ	110.	koto 2
027.	synth strngs 2	069.	detuned organ	111.	taisho koto
028.	tuba	070.	church organ 2	112.	whistle 2
029.	french horn	071.	church organ 3	113.	whistle 3
030.	synth brass 1	072.	church organ 4	114.	synth drum 2
031.	synth brass 2	073.	harpsichord 2	115.	taiko 2
032.	soprano sax	074.	coupled hps. 1	116.	taiko 3
033.	alto sax	075.	coupled hps. 2	117.	bowed glass 2
034.	clarinet	076.	celesta 2	118.	ice rain
035.	piccolo	077.	celesta 3		
036.	flute	078.	synth brass 3		
037.	recorder	079.	synth brass 4		
038.	whistle	080.	synth bass 2		
039.	ocarina	081.	synth bass 3		
040.	square lead	082.	fantasia		
041.	sawtooth lead	083.	bowed glass		
042.	calliope lead	084.	atmosphere		

## DRUM SET TABLE (MIDI Channel 10)

Note	Sound	Note	Sound		
B0	35	kick drum 2	C3	59	ride cymbal 2
C1	36	kick drum 1	C#3	60	hi bongo
C#1	37	side stick	D3	61	low bongo
D1	38	snare drum 1	D#3	62	mute hi conga
D#1	39	hand clap	E3	63	open hi conga
E1	40	snare drum 2	F3	64	low conga
F1	41	low floor tom	F#3	65	high timbale
F#1	42	closed hi hat	G3	66	low timbale
G1	43	high floor tom	G#3	67	high agogo
G#1	44	pedal hi hat	A3	68	low agogo
A1	45	low tom	A#3	69	cabasa
A#1	46	open hi hat	B3	70	maracas
B1	47	lo-mid tom	C4	71	short whistle
C2	48	hi mid tom	C#4	72	long whistle
C#2	49	crash cymbal 1	D4	73	short guiro
D2	50	high tom	D#4	74	long guiro
D#2	51	ride cymbal 1	E4	75	claves
E2	52	chinese cymbal	F4	76	hi wood block
F2	53	ride bell	F#4	77	low wood block
F#2	54	tambourine	G4	78	mute cuica
G2	55	splash cymbal	G#4	79	open cuica
G#2	56	cowbell	A4	80	mute triangle
A2	57	crash cymbal 2	B4	81	open triangle
B2	58	vibraslap			

## USING THE MANDALA™ SAFELY

- Before using this unit, make sure to read the instructions below.
- .....

- Do not open (or modify in any way) the unit or its AC adaptor.
- .....

- Do not attempt to repair the unit, or replace parts within it. Refer all servicing to Synesthesia Corporation.
- .....

- Never use or store the unit in places that are:
    - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
    - Damp (e.g., baths, washrooms, on wet floors); or are
    - Humid; or are
    - Exposed to rain; or are
    - Dusty; or are
    - Subject to high levels of vibration.
- .....

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.
- .....

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!
- .....

- This unit, either alone or in combination with an

amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

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- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

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- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by Synesthesia Corporation when:

- The AC adaptor or the power-supply cord has been damaged; or
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.
- .....

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

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- Protect the unit from strong impact. Do not drop the unit.

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- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat

up and eventually melt through.

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- Before using the unit in a foreign country, consult with Synesthesia Corporation.

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- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.

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- Always grasp only the plug or the body of the AC adaptor when plugging into, or unplugging from, an outlet or this unit.

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- Whenever the unit is to remain unused for an extended period of time, disconnect the AC adaptor.

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- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

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- Never climb on top of, nor place heavy objects on the unit.

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- Never handle the AC adaptor body, or its plugs, with wet hands when plugging into, or unplugging from, an outlet or this unit.

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- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.

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- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet.

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- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.

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# **IMPORTANT NOTES**

## **Power Supply**

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

## **Placement**

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

## **Maintenance**

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.



## **Additional Precautions**

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit.
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit's once it has been lost. Synesthesia Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you.
- This instrument is designed to minimize the extraneous sounds produced when it's played. However, since sound vibrations can be transmitted through floors and walls to a greater degree than expected, take care not to allow these sounds to become a nuisance to neighbors, especially when performing at night and when using headphones.
- When you need to transport the unit, package it with an equivalent amount of packaging materials as was used to originally ship the product to you.
- Do not strike pads extremely strong. Be careful to prevent your fingers or hands from injury.



This product complies with the requirements of European Directive 89/336/EEC.

For EU Countries

## FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

For the USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.  
This equipment requires shielded interface cables in order to meet FCC class B Limit.