

aFrame

electrorganic percussion

Functional change and additon

List

The following functions have been changed and added in version1.20.

- **System edit menu changing and additions.**

Changed/Additions	Menu	Description
Changed	SYS:Save Project	<p>We have changed the user interface for saving project file(.prj). The save procedure is as follows: (1) When you turn the encoder and select a save-destination on the SD card, project files are displayed in alphabetical order. If there is no project file saved on the SD card, the default file name is "aFramePD001.prj".</p> <p>(2) When you press the encoder to select file, the display will change, and you will be able to edit the name. Press the ◀ / ▶ buttons next to the display to select the character to edit, turn encoder to change the character, press the 3 BEND button to "insert", and the 4 VOLUME button to "delete". [Note] Only [_,0-9,a-z,A-Z] characters are available. If another character is used, it will be replaced with '_'. (3) After changing the file name, pressing the encoder will save the data to the SD card and exit to play mode. If you don't rename and press encoder, keeping original name, the overwrite-confirmation display will appear. Pressing the ▶ button selects overwrite and exit. Pressing the ◀ button returns to the previous display.</p>
Addition	SYS:Del Project	We added the ability to delete a project file(.prj) on the SD card.
Changed	SYS:Export TONE	<p>The file name currently selected INST NAME is displayed. Press the encoder, the display will change and you will be able to edit the name. Rename with the same procedure as the SYS:Save Project. Pressing encoder will save the tone file(.prm) to the SD card and exit to play mode. If no name is entered (0 character length), the name will be changed to "_.prm".</p>
Addition	SYS>Delete TONE	We added user interface to delete the tone file(.prm) on the SD card.
Changed	SYS:Audio Output	<p>In play mode, the symbol on either side of the instrument name shows the current Stereo/Mono status of the Audio Output.</p> <p>[Stereo]</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;"> <p>◆ Harmo Drum ◆ ◀ GRP A-01/10 ▶</p> </div> <p>[Mono]</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;"> <p>◇ Harmo Drum ◇ ◀ GRP A-01/10 ▶</p> </div>

[Note] It is possible to include uppercase and lowercase in file names, but they are recognized as the same character. For example, renaming aFrame to AFrame will be treated as the same name file and aFrame will be overwritten.



- **GroupKeyLock function was added.**

In the PLAY MODE, if you hold down any individual A, B, C, D button for 2 seconds, the button will light red and the Group Select function is locked.

Holding down the same button for 2 seconds will unlock the Group Select function. The button color will return to the original Group color. In Group Lock, the FNC button color does not change, it indicates the current BANK selection.
- **[INST] Extention of XtraType**

Click3, Click4 and JingleX (9types) were added to XtraType's algorithm.
- **[INST] Tune parameter changing**

For Main/Sub/Xtra tune parameter, the lowest frequency 20Hz was changed to 16Hz (C0), and the maximum frequency 10000Hz was changed to 12544Hz (G9). Additionally, you may now switch between frequency-display mode or cent-display mode.
- **[INST] Addition: Negative Value Adjustment.**

Complicated envelope can be created by extending the setting range of Man/Sub/Xtra DFM, PFM, PSC, Mute and XtraD.Tap to negative values.
- **[Effect] algorithm Multi-Tap Delay was added.**

For parameter details, please refer to [Effect Edit Parameters](#).
- **[EFFECT] Supports BPM display of DLY and Multi-Tap DLY DelayTime.**

In the DelayTime editing, switch between [ms] and [BPM] with ◀ and ▶ button next to LCD.

In the case of [BPM] display, when turning the encoder, TEMPO is changed. When turning the encoder while pressing it, [NOTE] is changed.

For detail, refer to [Supports BPM display of DLY and Multi-Tap DLY DelayTime](#).
- **Factory preset A' - D' (40 tones) were updated with new Groups.**

After updating, execution of SYS: Init Project (System Edit) is necessary for reflection.

For details of tones, please refer to [Parameters List](#).

[INST] Extention of XtraType

When editing the parameters, it becomes possible to skip invalid parameters depending on XtraType value.

Additionally, Click3, Click4 and JingleX (9 types, hereinafter "Jx ***) were added to XtraType's algorithm. [Extra Timbre OSC Algorithm Chart](#) shows which parameters are valid for each algorithm and how they change sound. (x) in the figure means an invalid parameter.

JingleX is like a X-FM/RingModulation 2DCO synthesizer.
 C-OSC:Carrier-OSC, M-OSC:Modulator-OSC

When Jx *** is selected in the XtraType, below parameters are enabled.
 Please refer to [Extra Parameter](#).

It is valid when XtraType is	Parameters
Jx ***.	XtraJxFR, XtraJxMR, XtraJxXMod, XtraJxCarLev, XtraJxModLev, XtraJxRingLv

Swith [Freq] and [Ratio] with the ◀ and ▶ button next to LCD in the XtraJxFR.
 When [Freq] is selected, Modulator OSC moves independently from Carrier-OSC Tuning.
 When [Ratio] is selected, Modulator OSC moves synchronously with Carrier-OSC Tuning.
 In case of XtraJxXMod is set to negative, the target of XFM is the signal before envelope, XFM is constant.
 In case of XtraJxXMod is set to positive, the target of XFM is the signal after envelope, the modulation changes with the strength of the strike.

Variation of Envelope Generator is increased.
 The algorithm is shown [EXTRA Timbre Envelope Gerenator](#).

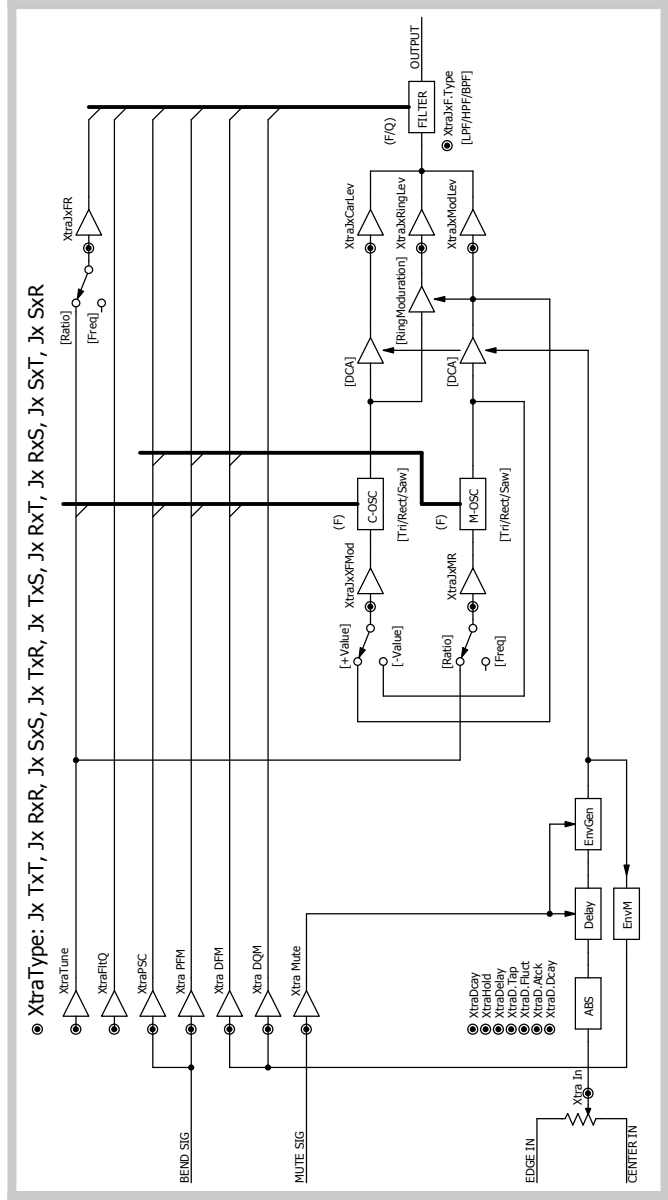
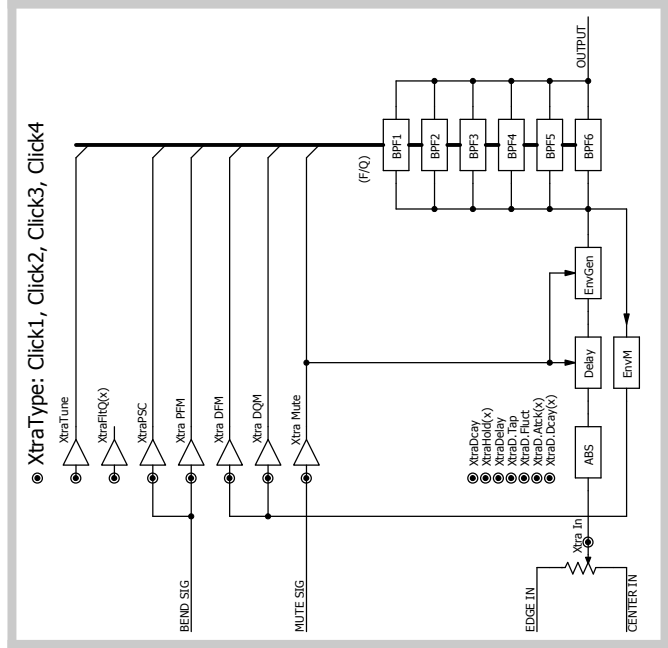
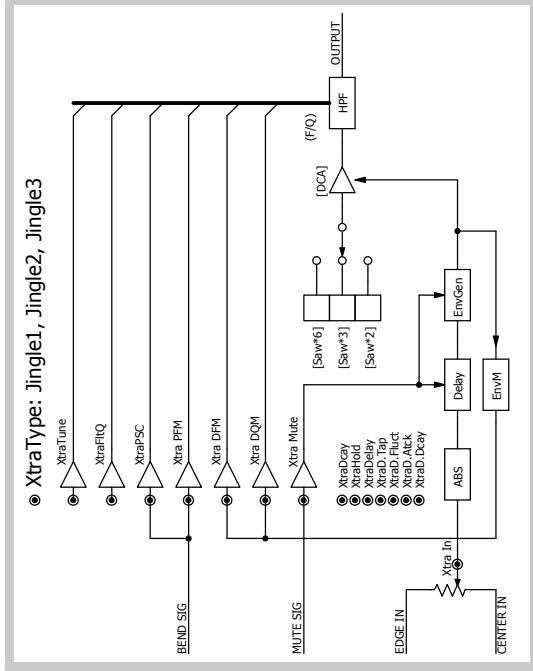
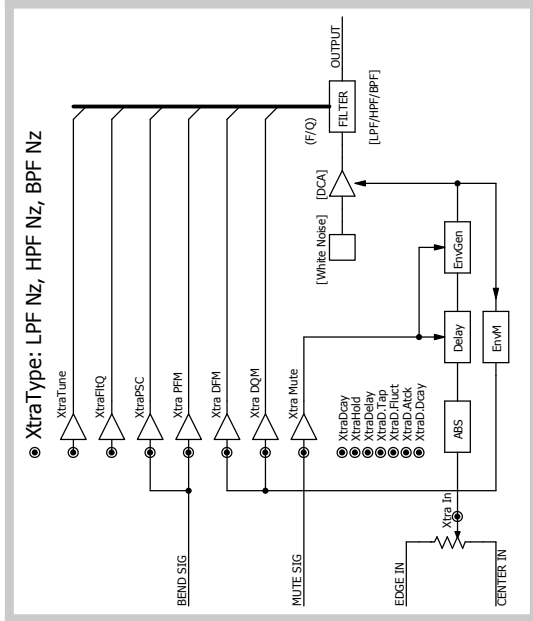
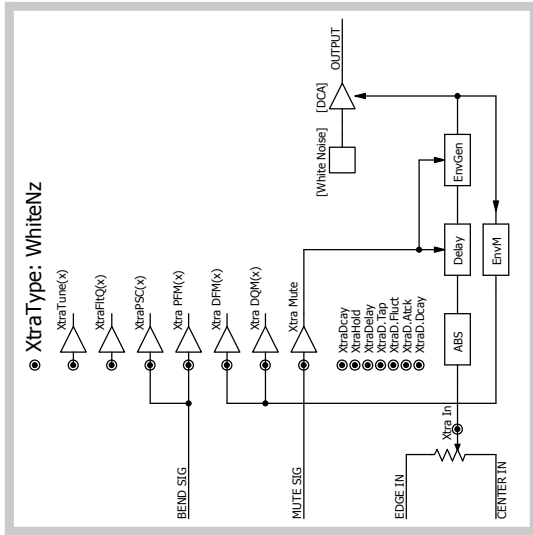
In case of XtraD.Tap is set to negative (-1 to -3000), the parameters below are enabled.

It is valid when XtraD.	Parameters
Tap is set to negative.	XtraD.Fluct, XtraD.Atck, XtraD.Dcay

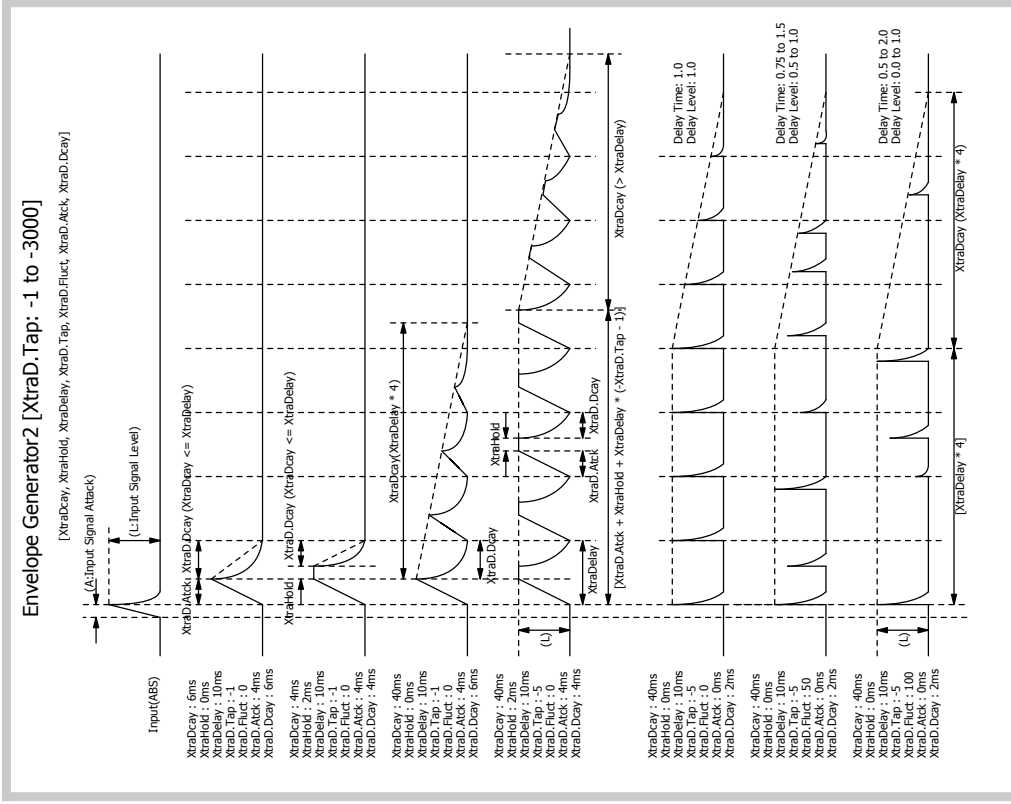
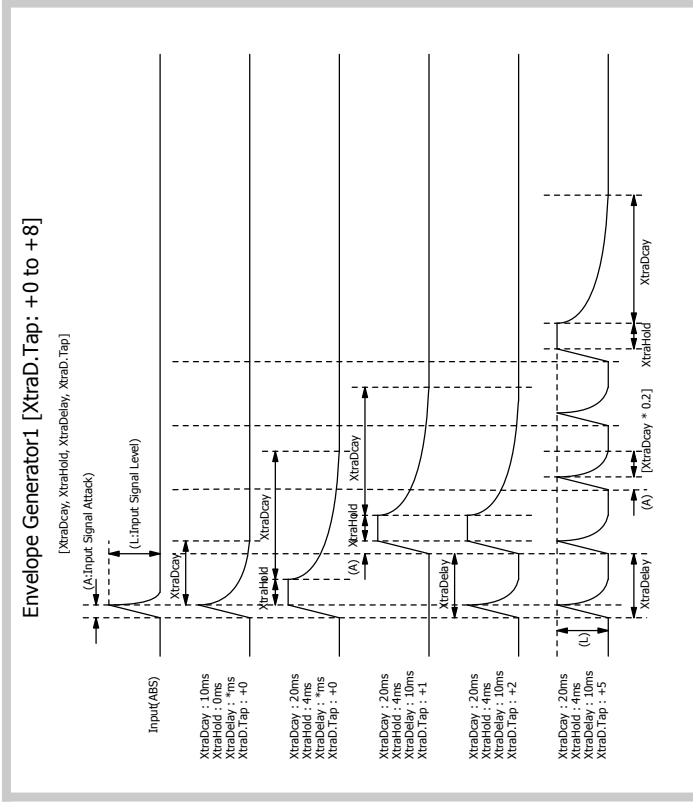
The delay's Attack/Dcay can be controlled, Fluct gives variation to delay's level and time.
 Maximum is 100, The "shake/rumble" value can be set between 0% and 100%. Time can be set between 50% and 200%.
 When the XtraD.Tap is set to positive (+0 ... +8), Attack transient is sent to the band-pass filter, similar to Main/Sub timbres.
 Expression will increase even though delay's Attack/Dcay is constant (same as previous version).
 As shown in the algorithm chart, OSC is controlled by [DCA] (except Click*); there is no tone change, only level change.
 In order to increase tone variation, adjust the XtraFltQ value (except Click*).

Click3: Wooden, Click4: Metals are added.
 When using a Click XtraType, XtraFltQ is set automatically by DecayTime, like with Main/Sub.
 Direct control is not possible.

aFrame EXTRA Timbre OSC Algorithm Chart



aFrame EXTRA Timbre Envelope Generator



[INST] Tune Parameter changing

For Main/Sub/Xtra tune parameter, the lowest frequency 20Hz was changed to 16Hz (C0), and the maximum frequency, 10000Hz, was changed to 12544Hz (G9). Additionally, you may now switch between frequency-display mode or cent-display mode.

When editing MainTune:/Sub Tune:/XtraTune, switch between [Hz] and [NotePitch/cent] with ◀ and ▶ button next to LCD.

◀ Button	LCD display	▶ Button
No change	[Hz]display Main Tune: 440Hz	Change [Hz] to [NotePitch/cent] display.
Change [NotePitch/cent] to [Hz] display.	[NotePitch/cent]display Main Tune: A4 /+00	No change

In the case of [Hz] display, when turning the encoder, frequency is changed in semitones, shown in Hz. When turning the encoder while pressing it, frequency is changed in 1Hz increments.

This is the same as the previous version 1.10 firmware. With the version 1.20 firmware, the following specification has been changed: When the value reaches the minimum value of 16Hz or the maximum value of 12544Hz, the frequency steps through octaves based on the pitch A (..220Hz, 440Hz, 880Hz..). In previous version, the frequency was changed to 453Hz, moving in 1Hz units each time.

In the case of [NotePitch./cent] display, when turning the encoder, NotePitch is changed in semitone units. When turning the encoder while pressing it, /+00 is changed in 1cent units.

The range is from -50 to +49, the example of A4 is shown below.

[MainTune:A4 /+49] (+1cent) --> [MainTune:A#4/-50]

[MainTune:A4 /-50] (-1cent) --> [MainTune:G#4/+49]

G#4					A4					A#4				
-50	...	+00	...	+49	-50	...	+00	...	+49	-50	...	+00	...	+49

There is no error in the conversion from [Hz] to [NotePitch./cent], but there is an error in the conversion from [NotePitch./cent] to [Hz].

For example, [C4/+00] is exactly [261.625563Hz], but since the data is in 1Hz unit, it is rounded up to [262Hz], this is [C4/+02] with an error of +2cent.

In the case of simple edit version 1.10 or earlier, only the Main Timbre pitch will change.

In firmware version 1.20, each [NotePitch] set to [NotePitch/cent] in MainTune/SubTune/XtraTune is variable.

MainTune/SubTune/XtraTune can now be changed in semitone relative to one another.

Set timbre that you do not want to change to [Hz].

When MainTune/Sub Tune/XtraTune are all set to [Hz], the target of simple edit is only Main Tune for compatibility.

[NotePitch/cent]display setting.	Edit before	Edit after
None	Pitch(Freq): 440Hz	Pitch(Freq): 466Hz
Main	P.TN:A4 /--- /---	P.TN:A#4 /--- /---
Main + Sub	P.TN:A4 /C4/---	P.TN:A#4 /C#4 /---
Main + Sub + Xtra	P.TN:A4 /C4 / G4	P.TN:A#4 /C#4 /G#4

[INST] Addition: Negative Value Adjustment

Main/Sub/Xtra parameters now allow both positive and negative value adjustments, as shown in the table below.

Parameters	Range
Main[Sub, Xtra] DFM	-100 ... 0 ... +100
Main[Sub, Xtra] PFM	-100 ... 0 ... +100
Main[Sub, Xtra] PSC	OFF, MTriad ... Mixoly.
Main[Sub, Xtra] Mute	-100 ... -1, OFF, ON(nnn), +1 ... +100 nnn: Mute Sens value
XtraD.Tap	-3000 ... 0 ... 8

When Main[Sub,Xtra] Mute is "OFF", muting will be disabled.

When Main[Sub,Xtra] Mute is "ON(**)", ** value indicate Pressure Parameter: You may now adjust the Mute Sensitivity Value. Higher value will increase ease of Muting.

When Main[Sub,Xtra] Mute Value is positive (+1 ... +100), individual timbre Mute sensitivity may be adjusted. Pressure Parameter: Mute Sens, increasing the value, will increase ease of Muting. (Same as previous version.)

When Main[Sub,Xtra] Mute Value is positive, Pressure Parameter: Mute Dcay and Mute Mask affect the mute sensitivity. When Increasing Mute Dcay, Main[Sub,Xtra] Decay does not exhibit a large decrease, in fact, the mute will be less effective. Mute Mask adjusts the amount of time it takes for the mute start when pressing the playing surface.

When Main[Sub,Xtra] Mute is negative (-1 ... -100), the mute strength will be set to maximum. Once you touch the playing surface, the amount of pressure applied will effect the Mute amount. The smaller the value (The larger the absolute value), Main[Sub,Xtra] Dcay is longer and the mute release sensitivity is increased.

In the case of Main[Sub,Xtra] Mute is between -1 and -50, -50 will be the maximum mute value. By releasing pressure quickly, the sound is immediately muted.

In the case of Main[Sub,Xtra] Mute is between -51 and -100, when releaseing pressure quickly, the sound is not muted, the decay can be set by adjusting Main[Sub,Xtra] Dcay parameter.

When Main[Sub,Xtra] Mute is negative, Pressure Parameter: Mute Dcay and Mute Mask will not be affected.

Seting XtraD.Tap to negative, you can create complicated envelopes. For algorithm details, please refer to [EXTRA Timbre Envelope Generator](#).

[EFFECT] Supports BPM display of DLY and Multi-Tap DLY DelayTime

In the DelayTime editing, switch between [ms] and [BPM] with ◀ and ▶ button next to LCD.

In the case of [BPM] display, when turning the encoder, TEMPO is changed. When turning the encoder while pressing it, [NOTE] is changed.

Display Mode	Display example
ms	Time L : 500ms
BPM	Time L : 4/120

The BPM range is between 60 and 240 BPM, the note values are from quarter and triplet-sixteenths.

	TEMPO	60	120	240
NOTE	4	1000.0ms	500.0ms	250.0ms
	.8	750.0ms	375.0ms	187.5ms
	8	500.0ms	250.0ms	125.0ms
	.16	375.0ms	187.5ms	93.7ms
	16	250.0ms	125.0ms	62.5ms
	T4	666.6ms	333.3ms	166.6ms
	T8	333.3ms	166.6ms	83.3ms
	T16	166.6ms	83.3ms	41.6ms

Delay is converted from ms to BPM as shown in the table below.

DelayTime	NOTE	BPM
greater than 1000.0ms	quarter note	4/60
between 250.0ms and 1000.0ms	quarter note	4/**
between 125.0ms and 249.9ms	eighth note	8/**
between 62.5ms and 124.9ms	sixteenth note	16/**
between 41.6ms and 62.4ms	triplet sixteenth note	T16/**
less than 41.6ms	triplet sixteenth note	T16/240

Parameter List

Tone List

Tone Group No	Instruments	Effect(Algorithm)	
GRP A-01/10	I01:Harmo Drum	E01:Harmo D.Rev	(REV)
GRP A-02/10	I02:Hyper Pot	E02:Hyper P.Rev	(REV)
GRP A-03/10	I03:Psyco Skin	E03:Psyco S.Rev	(REV)
GRP A-04/10	I04:Spanky	E04:Spanky.Rev	(REV)
GRP A-05/10	I05:Bessel Clone	E05:Bess.DlyP.S	(DLY)
GRP A-06/10	I06:Stereo Skin	E06:S.Skin.Ambie	(REV)
GRP A-07/10	I07:Incantation	E07:Incant.PhsPM	(PHS)
GRP A-08/10	I08:BassOnBoard	E08:BassOnB.Rev	(REV)
GRP A-09/10	I09:BalaPhonic	E09:BalaPh.DlyPM	(DLY)
GRP A-10/10	I10:HarmoVoice	E10:HarmoV.Rev	(REV)
GRP B-01/10	I11:Quajon	E11:Quajon Rev	(REV)
GRP B-02/10	I12:Taikology	E12:TaikologyRev	(REV)
GRP B-03/10	I13:Bamboo Drum	E13:Bamboo Rev	(REV)
GRP B-04/10	I14:Tunnel Drum	E14:Tunnel Rev	(REV)
GRP B-05/10	I15:Framey	E15:Framey Rev	(REV)
GRP B-06/10	I16:Goblet Drum	E16:GobletD.Rev	(REV)
GRP B-07/10	I17:Candeiro	E17:Candeiro.Rev	(REV)
GRP B-08/10	I18:Snappin'Kit	E18:Snappy Rev	(REV)
GRP B-09/10	I19:MetalSurface	E19:MetalS.Rev	(REV)
GRP B-10/10	I20:Paper Drum	E20:Paper D.Rev	(REV)
GRP C-01/10	I21:NeoHarmoDrum	E21:NeoHarmD.Rev	(REV)
GRP C-02/10	I22:DwarfOnGiant	E22:Dwarf.DlyP.S	(DLY)
GRP C-03/10	I23:ParticleDrum	E23:ParD.PresRev	(REV)
GRP C-04/10	I24:DrumDroid	E24:DrmDroid.Cho	(CHO)
GRP C-05/10	I25:CrazyMetal	E25:CrazyM.Rev	(REV)
GRP C-06/10	I26:Fragile	E26:Frgi.DlyP.S	(DLY)
GRP C-07/10	I27:OverDriven	E27:OverDriveRev	(REV)
GRP C-08/10	I28:SpankEchoDrm	E28:SpED.PresRev	(REV)
GRP C-09/10	I29:Micro Chat	E29:MiC.PresFlg	(FLG)
GRP C-10/10	I30:WowWah!	E30:WohWah!Wah	(WAH)
GRP D-01/10	I31:CtrlRev-/SD	E31:CtrlRevLevl-	(REV)
GRP D-02/10	I32:CtrlRev+/BD	E32:CtrlRevLevl+	(REV)
GRP D-03/10	I33:CtrlDlyS/SD	E33:CtrlDlySend+	(DLY)
GRP D-04/10	I34:CtrlDly-/SD	E34:CtrlDlyTime-	(DLY)
GRP D-05/10	I35:CtrlDly+/SD	E35:CtrlDlyTime+	(DLY)
GRP D-06/10	I36:CtrlPhsM/SD	E36:CtrlPhsManu+	(PHS)
GRP D-07/10	I37:CtrlFlgM/SD	E37:CtrlFlgManu+	(FLG)
GRP D-08/10	I38:CtrlWah/SD	E38:CtrlWah	(WAH)
GRP D-09/10	I39:Chorus/Vib	E39:Chorus	(CHO)
GRP D-10/10	I40:Naked	E40:Delay Zero	(DLY)

Tone Group No	Instruments	Effect(Algorithm)	
GRP A'01/10	I41:GlassyFrame	E41:GlassyFr.Rev	(REV)
GRP A'02/10	I42:BurstingPot	E42:BurstPotPRev	(REV)
GRP A'03/10	I43:DimensionDrm	E43:DmsnDr.Ambie	(REV)
GRP A'04/10	I44:ElephantDrum	E44:ElephDrm.Rev	(REV)
GRP A'05/10	I45:MosquitoDanz	E45:MosquitoDLY	(DLY)
GRP A'06/10	I46:MarsOceanDrm	E46:MarsOceanCho	(CHO)
GRP A'07/10	I47:NomadExpress	E47:NomdExpRev	(REV)
GRP A'08/10	I48:MetaKendang	E48:MetKnd.Rev	(REV)
GRP A'09/10	I49:CosmicTampra	E49:CosTampRev	(REV)
GRP A'10/10	I50:Sanctuary	E50:SanctuaryRev	(REV)
GRP B'01/10	I51:Shekereka	E51:Shkrkk.Rev	(REV)
GRP B'02/10	I52:MonsterTom	E52:MonsterTRev	(REV)
GRP B'03/10	I53:YosackDance	E53:YosackRev	(REV)
GRP B'04/10	I54:BendirQuaked	E54:BendirQ_Cho	(CHO)
GRP B'05/10	I55:Framey2	E55:Framey2Rev.	(REV)
GRP B'06/10	I56:Kanjirretta	E56:Kanjirtt_REV	(REV)
GRP B'07/10	I57:BangBourin	E57:BangBour.Rev	(REV)
GRP B'08/10	I58:GlassyTab1a	E58:GlassTabRev	(REV)
GRP B'09/10	I59:Kengerhythm	E59:Kengari._REV	(REV)
GRP B'10/10	I60:AsianFesta	E60:AsianFesRev	(REV)
GRP C'01/10	I61:Enchanted	E61:Enchnt.Ambie	(REV)
GRP C'02/10	I62:CaveExplorer	E62:CavExPresRev	(REV)
GRP C'03/10	I63:PrayingGong	E63:PryGgPresRev	(REV)
GRP C'04/10	I64:PunkyDroid	E64:PunkyDrd_DLY	(DLY)
GRP C'05/10	I65:Alien'sCuica	E65:AlienCuiTDLY	(MDLY)
GRP C'06/10	I66:VolcanoDance	E66:VolcanD.Rev	(REV)
GRP C'07/10	I67:Harmo-Flare	E67:HrmFlrPdlyPS	(DLY)
GRP C'08/10	I68:CritterYodel	E68:CrittPresRev	(REV)
GRP C'09/10	I69:SlimyStroke	E69:SlmyPresFlg	(FLG)
GRP C'10/10	I70:Drum Whippy	E70:DrmWhip/Wah	(WAH)
GRP D'01/10	I71:Flex-Ambient	E71:FlxAmbRvLev-	(REV)
GRP D'02/10	I72:Underground	E72:UdGrdRevLev+	(REV)
GRP D'03/10	I73:ClockwiseDrm	E73:Cloc.DlyP.S	(DLY)
GRP D'04/10	I74:Tablatron	E74:TblTroDlyTm-	(DLY)
GRP D'05/10	I75:FaintInCoils	E75:FaintDlyT+	(DLY)
GRP D'06/10	I76:ThirdEarDrum	E76:3rdEarPhsMn+	(PHS)
GRP D'07/10	I77:VeggieDrum	E77:MTDlyVegiDrm	(MDLY)
GRP D'08/10	I78:ThunderStorm	E78:MTDlyThunder	(MDLY)
GRP D'09/10	I79:Li'lEmperor	E79:ChorusEmpero	(CHO)
GRP D'10/10	I80:TribeTriplet	E80:Tribe_DlyP.S	(DLY)

- When the aFrame is shipped from the factory, 40 instruments and 40 effects are assigned to I01-I40 and to E01-E40 respectively.
- By execution of Sys:Init Project(System Edit), new instruments and effects are assigned to I41-I80 and E41-E80.
- When the aFrame is shipped from the factory, the maximum number of tones in each group is set to 10.

Instrument List

A' Neo-acoustic	Sounds that illustrate the electrorganic character of the aFrame
GlassyFrame	3 drum sound elements—lower, higher, and attack—are mixed with 3 timbres. It sounds metallic, but still has a skin-head-drum character. It is sensitive and expressive.
BurstingPot	A very unique tone, with a big bass sound in the center and metallic noise at the edge. Press the surface to bring in a beautifully rich reverb. This tone showcases a new kind of expressiveness.
DimensionDrum	This tone gives you the sound a huge, deformed metal plate. Excite rich overtones by scratching. Pressure control gives you new expressiveness.
ElephantDrum	2 OSC in Extra timbre expands the expressiveness using various new parameters. 2 OSC is one of new features found in firmware v1.20.
MosquitoDanz	You get a 1 second endless delay in higher sound when you hit the edge while pressing, but no delay in the bass sound. It is similar to a looper effect.
MarsOceanDrum	Simulates the character of an ocean drum, but within a more electronic frame-drum sound. It is very responsive to both pressure and friction.
NomadExpress	This tone has a super low sound in center; with the high sound playing a melodic scale. There are many more scale types in v1.20 firmware—27 total. Each scale has up and down types.
MetaKundang	Inspired by an Indonesian Gamelan double-headed drum. This sound uses new short tap delay parameters in Sub and Extra timbres to harness even more expression possibilities.
CosmicTampura	Main and Sub timbres have similar overtone order and type, with each panned to left and right. Tone and stereo image respond to well to delicate playing.
Sanctuary	This is created with the vibraphone overtone type. It changes pitch with pressure, using one of 27 scale types. The new tone name/cent tuning parameter makes for easy key transposition.

B' Acoustic	Sounds that simulate the characteristics of various acoustic sounds
Shekereka	This simulates a Shekere, but with different expression. It has a natural response, and is comfortable to play with hands and fingers, like a hand drum.
MonsterTom	This aggressive tom-tom sound has pitch controlled by pressure. It is easy to edit the range of pitch-bend up and pitch-bend down, as well as decay time.
YosackDance	Simulates a Vibraslap using new parameters found in v1.2 firmware. New minus value parameters in mute and tap delay bring added possibilities to sound creation and playability.
BendirQuaked	Inspired by the Bendir, a North African frame drum. The sound changes depending on where the surface is hit and muting pressure. There is an enormous amount of sound color.
Framey2	A variation of the frame drum (A06) sound, but with more of a Central Asian influence. It has a realistic acoustic-like playing feel.
Kanjiretta	This tone blends characters of the South Indian Kanjira drum and an Asian cymbal. It extends the expressiveness of the acoustic instruments that inspired its creation.
BangBourine	Created while imagining a huge tambourine. With the new parameter mute minus value, you get one jingle sound while pressing the surface. This effect can be used as a snare sound.
GlassyTabla	Inspired by North Indian Tabla. It is very sensitive to the touch. Pitch control via pressure on the low drum sound responds well to any playing style.
Kengarhythm	Simulates a small Korean Kwenggari gong, which has a unique deep sound character. This dynamic and brilliant sound changes dramatically when played with finger tips, nails, or palm of the hand.
AsianFesta	This tone was created while imagining an East Asian folk festival. Melodic expression using pitch control plays a pentatonic scale with a sound rich in overtones.

C' Electronic	Sounds that, while electronic, provide the same performance experience as an acoustic instrument
Enchanted	Even though this electronic sound has metallic + noise elements, the acoustic elements give it an organic feel. The high-quality reverb adds even more magic to the tone.
CaveExplore	The aFrame has enormous potential for creatives in sound production for, sound effects, TV/video/ film scoring, and visual arts sound design. Its many parameters allow you to create a never-heard-before sonic palette.
PrayingGong	Expressiveness is a must for this type of gong sound. The aFrame can easily control this type of nuanced expression using dynamics and pressure.
PunkyDroid	This electronic tone with a mechanical flavor that uses a short delay to create a funky groove. The aFrame gives it much more expressiveness than other electronic instruments.
Alien'sCuica	To create this crazy Cuica, we used many of the new firmware 1.2 parameters, such as 2 OSC in Extra Timbre, minus value pressure pitch and mute control, as well as the multi-tap delay effect.
VolcanoDance	This tone is perfect when creating soundscapes for visual productions. The super-low explosive sound and deep reverb can be muffled by pressure. Pressure reverb mute is a new expression experience.
Harmo-Flare	Firmware v1.2 enables simultaneous, bi-directional pitch and scale control. It is easy to create interesting and complex harmonic combinations using these new parameters.
CritterYodel	In this tone, each timbre uses the full range of overtones. This, coupled with the delay tap parameter, creates an eerie soundscape; imagine the haunting call of an unknown creature, emanating from an alien world.
SlimyStroke	aFrame built-in effects can be controlled by pressure. In this tone, pressure controls the manual value of the flanger effect. It can best be described as a comical percussive effect with amazing expressiveness.
DrumWhippy	It's fun to play this funky tone! Pressure controls the manual value of the Wow effect, bringing super-wide dynamics that respond your every touch.

D' Effect	Sounds that have pressure controlled effect
FlexAmbient	Pressure controlled reverb level is a new type of expressiveness. Muting the infinity reverb effect is an interesting expression.
Underground	This tone uses the pressure effect control—more pressure, more reverb. Depending on how hard you press, you will get the gated reverb or reverse reverb effect.
ClockwiseDrum	Panning delay level is controlled by pressure and only affects the high-pitched sound on the edge. It doesn't affect the bass tone in the center.
Tablatron	Pressure controls delay time, a new way to experience expression. Delay time speeds up with increased pressure.
FaintingCoils	Delay time slows with increased surface pressure. This unique effect is a new and different kind of expressiveness.
ThirdEarDrum	Manual value of the Phaser effect is controlled by pressure, acting like a filter control on white noise. Using pressure, the pitch of the bass follows an Arabic minor scale.
VeggieDrum	A typical Clap sound. It uses a mute tap delay (with 12 steps of editable time) and pan level. All of these can be gradually muted by increased pressure.
ThunderStorm	By using delay tap with a minus value and the fluctuation parameter in Extra timbre, you can create a complex decay and release effect. The multi-tap delay brings even more complexity.
LittleEmperor	2 OSC of Extra timbre creates a synthetic sound. The marimba sound of Main and Sub timbres is great for playing melodies. The high-quality, multi-layered chorus makes the tone alive with color.
TribeTriplet	Only the low noise sound triggers the pressure-controlled panning delay effect. The high-pitched woody sound is minimally effected. The delay creates polyrhythmic interaction.

Instrument edit parameters

Important All parameters including changing setting method and range are described.

Main Parameter		
Main In	C0/E100 ... C50/E50 ... C100/E0	Main Input Balance
MainOvt	Natural ... Organ (*1)	Main Overtone
MainHrmNo.	1 ... 32	Main Harmonics Number
MainTune	16 ... 12544Hz / C0/-50 ... G9/+49	Main Tuning
MainDcay	0.1 ... 10.0sec	Main Decay Time
Main HFD	-1.00 ... +1.00	Main High Frequency Damping
Main DQM	0 ... 100	Main Dynamics Q Modulation
Main DFM	-100 ... +100	Main Dynamics Frequency Modulation
Main PFM	-100 ... +100	Main Pressure Frequency Modulation
Main PSC	OFF, MTriad ... Mixoly (*3)	Main Pressure Pitch Scale Control
MainMute	-100 ... -1, OFF, ON(nnn), +1 ... +100	Main Pressure Mute Switch
Main OD	-100 ... +100	Main Over Drive
Sub Parameter		
Sub In	C0/E100 ... C50/E50 ... C100/E0	Sub Input Balance
Sub Ovt	Natural ... Organ (*1)	Sub Overtone
Sub HrmNo.	1 ... 32	Sub Harmonics Number
Sub Tune	16 ... 12544Hz / C0/-50 ... G9/+49	Sub Tuning
Sub Dcay	1 ... 3000ms	Sub Decay Time
Sub HFD	-1.00 ... +1.00	Sub High Frequency Damping
Sub DQM	0 ... 100	Sub Dynamics Q Modulation
Sub DFM	-100 ... 100	Sub Dynamics Frequency Modulation
Sub PFM	-100 ... 100	Sub Pressure Frequency Modulation
Sub PSC	OFF, MTriad ... Mixoly (*3)	Sub Pressure Pitch Scale Control
Sub Mute	-100 ... -1, OFF, ON(nnn), +1 ... +100	Sub Pressure Mute Switch
Sub OD	-100 ... +100	Sub Over Drive
Sub Delay	0 ... 200ms	Sub Delay Time
Sub D.Tap	0 ... 8	Sub Delay Tap Number

Extra Parameter		
Xtra In	C0/E100 ... C50/E50 ... C100/E0	Extra Input Balance
XtraType	WhiteNz ... Jx SxR (*2)	Extra Type
XtraTune	16 ... 12544Hz / C0/-50 ... G9/+49	Extra Tuning
XtraDcay	1 ... 3000ms	Extra Decay Time
XtraHold	0 ... 500ms	Extra Hold Time
XtraFltQ	0.5 ... 16.0	Extra Filter Q
Xtra DQM	0 ... 100	Extra Dynamics Q Modulation
Xtra DFM	-100 ... +100	Extra Dynamics Frequency Modulation
Xtra PFM	-100 ... +100	Extra Pressure Frequency Modulation
XtraMute	-100 ... -1, OFF, ON(nnn), +1 ... +100	Extra Pressure Mute Switch
XtraDelay	0 ... 200ms	Extra Decay Time
XtraD.Tap	-3000 ... 8	Extra Delay Tap Number
XtraD.Fluct	0 ... 100	Extra Delay Fluctuation (Time & Level)
XtraD.Atck	0 ... 200ms	Extra Delay Attack Time
XtraD.Dcay	1 ... 999ms	Extra Delay Decay Time
XtraJxF.Type	LPF, HPF, BPF	Extra JingleX Filter Type
XtraJxFR	16 ... 12544Hz / 0.10 ... 10.00	Extra JingleX Filter Frequency/Ratio
XtraJxMR	1 ... 12544Hz / 0.10 ... 10.00	Extra JingleX Modulator OSC Frequency/Ratio
XtraJxXMod	-100 ... +100	Extra JingleX X-Frequency Modulation
XtraJxCarLev	0 ... 127(100: 0dB, 127: +6dB)	Extra JingleX Carriery Output Level
XtraJxModLev	0 ... 127(100: 0dB, 127: +6dB)	Extra JingleX Modulator Output Level
XtraJxRingLv	0 ... 127(100: 0dB, 127: +6dB)	Extra JingleX Ring Modulation Output Level
XtraPSC	OFF, MTriad ... Mixoly (*3)	Extra Pressure Pitch Scale Control
Dry Signal Parameter		
DryC.EqF	20 ... 20000Hz	Dry Center Signal EQ Frequency
DryC.EqG	-18.0 ... +18.0	Dry Center Signal EQ Gain
DryC.EqQ	0.5 ... 16.0	Dry Center Signal EQ Q
DryE.EqF	20 ... 20000Hz	Dry Edge Signal EQ Frequency
DryE.EqG	-18.0 ... +18.0	Dry Edge Signal EQ Gain
DryE.EqQ	0.5 ... 16.0	Dry Edge Signal EQ Q
CentrLPF	20 ... 20000Hz	Center Input LPF Frequency
Edge HPF	20 ... 20000Hz	Edge Input HPF Frequency

Pressure Parameter		
Mute Sens	0 ... 100	Pressure Mute Sens
Mute Mask	0 ... 500ms	Pressure Mute Mask
Mute Dcay	0 ... 100	Pressure Mute Dcay
Bend Curve	A0 ... A8	Pressure Bend Curve
Mixer Parameter		
Mix Main Pan	L63 ... C00 ... R63	Mixer Main Pan
Mix Sub Pan	L63 ... C00 ... R63	Mixer Sub Pan
Mix Xtra Pan	L63 ... C00 ... R63	Mixer Extra Pan
Mix DryC Pan	L63 ... C00 ... R63	Mixer Dry Center Pan
Mix DryE Pan	L63 ... C00 ... R63	Mixer Dry Edge Pan
Mix Main Lev	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Main Level
Mix Sub Lev	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Sub Level
Mix Xtra Lev	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Extra Level
Mix DryC Lev	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Dry Center Level
Mix DryE Lev	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Dry Edge Level
Mix Main Snd	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Main Effect Send Level
Mix Sub Snd	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Sub Effect Send Level
Mix Xtra Snd	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Extra Effect Send Level
Mix DryC Snd	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Dry Center Effect Send Level
Mix DryE Snd	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Dry Edge Effect Send Level
MixMasterLev	0 ... 127 (100: 0dB, 127: +6dB)	Mixer Master Level
MixMasterBal	L63 ... C00 ... R63	Mixer Master Balance

***1 Overtone List**

Tone	Description
Natural	Natural Number 1,2,3,4,5,,,,,
Odd No.	Odd Number 1,3,5,7,9,,,,,
PrimeNo.	Prime Number 1,3,5,7,11,13,,,,,
BesselM0	Bessel Function Zero MODE(0)
BesselM1	Bessel Function Zero MODE(1)
BesselM2	Bessel Function Zero MODE(2)
BesselM3	Bessel Function Zero MODE(3)
BesselM4	Bessel Function Zero MODE(4)
BesselM5	Bessel Function Zero MODE(5)
BesselM6	Bessel Function Zero MODE(6)
BesselM7	Bessel Function Zero MODE(7)
Membran	Vibrations of Membranes Basic
MembrnH1	Vibrations of Membranes High1
MembrnH2	Vibrations of Membranes High2
MembrnH3	Vibrations of Membranes High3
MembrnH4	Vibrations of Membranes High4

Tone	Description
Taiko	Taiko (Japanese Drum)
KettleD	Kettle Drum
BassDrm	Bass Drum
Tom	Tom Tom
T.Head	Snare Drum Top Head
B.Head	Snare Drum Bottom Head
T+B Head	Snare Drum Top & Bottom Head
FryPan	Frypan
Cymbal	Cymbal
VibeLow	Vibraphone Low
VibeMid	Vibraphone Mid
VibeHigh	Vibraphone High
Glocken	Glockenspiel
Marimba	Marimba
Organ	Organ

***2 Extra Type**

Type	Description
WhiteNz	White Noise
LPF Nz	White Noise with LPF
HPF Nz	White Noise with HPF
BPF Nz	White Noise with BPF
Jingle1	Jingle1 with BPF
Jingle2	Jingle2 with BPF
Jingle3	Jingle3 with BPF
Click1	Click1 Single Sine Wave
Click2	Click2 Dual Sine Wave (1 + 1.5)
Click3	Click3 4th Sine Wave (Wood)
Click4	Click4 6th Sine Wave (Metal)
Jx TxT	JingleX Dual Triangle Wave (Carrier & Modulator)
Jx RxR	JingleX Dual Rectangle Wave (Carrier & Modulator)
Jx SxS	JingleX Dual Saw Tooth Wave (Carrier & Modulator)
Jx TxR	JingleX Tri (Carrier) and Rect (Modulator)
Jx TxS	JingleX Tri (Carrier) and Saw (Modulator)
Jx RxT	JingleX Rect (Carrier) and Tri (Modulator)
Jx RxS	JingleX Rect (Carrier) and Saw (Modulator)
Jx SxT	JingleX Saw (Carrier) and Tri (Modulator)
Jx SxR	JingleX Saw (Carrier) and Rect (Modulator)

***3 Pressure Pitch Scale Control Parameter**

Value	Description
OFF	OFF
MTriad	Major Triad
mTriad	minor Triad
MPenta	Major Penatatonic
mPenta	minor Penatatonic
MScale	Major Scale
mScale	minor Scale
Sus	Suspended
mHarmo	Harmonic minor Scale
mMelo	Melodic minor Scale
mBlues	minor Blues Scale
WholeT.	Wholetone Scale
Altered	Altered Scale
Lydian	Gregorian Mode Lydian
Dorian	Gregorian Mode Dorian
Phrygi.	Gregorian Mode Phrygian
Mxlydi.	Gregorian Mode Mixolydian
Arabic	Arabic Scale
MHungar	Major Hungarian Scale
mHungar	minor Hungarian Scale
Hindu	Hindu Scale
Ryukyu	Japanese Ryukyu Scale
Minnyou	Japanese Minnyou Scale
Miyako	Japanese Miyako Scale
Ritsu1	China Ritsu1 Scale
Ritsu2	China Ritsu2 Scale
Ryo	China Ryo Scale

Effect Edit Parameters

Important Only additional parameters from aFrame version1.00 are listed.

Multi-Tap DLY

Parameter	Value	Description
Time1	0.0 ... 1200.0ms	Delay Time Tap1
Time2	0.0 ... 1200.0ms	Delay Time Tap2
Time3	0.0 ... 1200.0ms	Delay Time Tap3
Time4	0.0 ... 1200.0ms	Delay Time Tap4
Time5	0.0 ... 1200.0ms	Delay Time Tap5
Time6	0.0 ... 1200.0ms	Delay Time Tap6
Time7	0.0 ... 1200.0ms	Delay Time Tap7
Time8	0.0 ... 1200.0ms	Delay Time Tap8
Time9	0.0 ... 1200.0ms	Delay Time Tap9
Time10	0.0 ... 1200.0ms	Delay Time Tap10
Time FB	0.0 ... 1200.0ms	Delay Time Tap Feedback
Lev1	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap1
Lev2	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap2
Lev3	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap3
Lev4	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap4
Lev5	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap5
Lev6	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap6
Lev7	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap7
Lev8	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap8
Lev9	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap9
Lev10	0 ... 127 (100: 0dB, 127: +6dB)	Delay Level Tap10
Pan1	L63 ... C00 ... R63	Delay Pan Tap1
Pan2	L63 ... C00 ... R63	Delay Pan Tap2
Pan3	L63 ... C00 ... R63	Delay Pan Tap3
Pan4	L63 ... C00 ... R63	Delay Pan Tap4
Pan5	L63 ... C00 ... R63	Delay Pan Tap5
Pan6	L63 ... C00 ... R63	Delay Pan Tap6
Pan7	L63 ... C00 ... R63	Delay Pan Tap7
Pan8	L63 ... C00 ... R63	Delay Pan Tap8
Pan9	L63 ... C00 ... R63	Delay Pan Tap9
Pan10	L63 ... C00 ... R63	Delay Pan Tap10

Parameter	Value	Description
Feedback	0 ... 100	Feedback Level
HF Damp	0.05 ... 1.00	High Frequency Damping
Pan Spread	0 ... 100	Pan Spread
Wet Level	0 ... 100	Wet Level
Dry Level	0 ... 100	Dry Level
Press Mode	OFF, MUTE, LEVEL, SEND, SPREAD	Pressure Control Mode
Press Sens	0 ... 100	Pressure Sens
PressAtck	0 ... 1000ms	Pressure Attack Time
PressRele	0 ... 3000ms	Pressure Release Time
Delay Sw	OFF, ON	Delay Effect Switch

Appendix A Scale Table

PSC	PRESS								Scale Name
	0	1	2	3	4	5	6	7	
MTriad	C	C	E	E	G	G	C2	C2	Major Triad
mTriad	C	C	E _b	E _b	G	G	C2	C2	minor Triad
MPenta	C	C	D	D	E	G	A	C2	Major Pentatonic
mPenta	C	C	E _b	E _b	E	G	B _b	C2	minor Pentatonic
MScale	C	D	E	F	G	A	B	C2	Major Scale
mScale	C	D	E _b	F	G	A _b	B _b	C2	minor Scale
Sus	C	D	D	F	F	G	G	C2	Suspended
mHarmo	C	D	E _b	F	G	A _b	B	C2	Harmonic minor Scale
mMelo	C	D	E _b	F	G	A	B	C2	Melodic minor Scale
mBlues	C	C	E _b	F	G _b	G	B _b	C2	minor Blues Scale
WholeT.	C	C	D	E	F _#	G _#	A _#	C2	Wholetone Scale
Altered	C	C _#	D _#	E	F _#	G _#	A _#	C2	Altered Scale
Lydian	C	D	E	F _#	G	A	B	C2	Gregorian Mode Lydian
Dorian	C	D	E _b	F	G	A	B _b	C2	Gregorian Mode Dorian
Phrygi.	C	D _b	E _b	F	G	A _b	B _b	C2	Gregorian Mode Phrygian
Mxlydi.	C	D	E	F	G	A	B _b	C2	Gregorian Mode Mixolydian
Arabic	C	C _#	E	F	G	G _#	B	C2	Arabic Scale
MHungar	C	D _#	E	F _#	G	A	A _#	C2	Major Hungarian Scale
mHungar	C	D	E _b	F _#	G	A _b	B	C2	minor Hungarian Scale
Hindu	C	D	E	F	G	G _#	A _#	C2	Hindu Scale
Ryukyu	C	C	E	E	F	G	B	C2	Japanese Ryukyu Scale
Minnyou	C	C	E _b	E _b	F	G	B _b	C2	Japanese Minnyou Scale
Miyako	C	C	D	E _b	E _b	G	A _b	C2	Japanese Miyako Scale
Ritsu1	C	C	D	D	F	G	B _b	C2	China Ritsu1 Scale
Ritsu2	C	C	D	D	F	G	A	C2	China Ritsu2 Scale
Ryo	C	C	D	D	E	G	A	C2	China Ryo Scale