

YAMAHA

Virtual Acoustic Synthesizer
Virtual Acoustic Tone Generator

VL Version 2

Voice Lists & MIDI Data

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Voice Lists

■ VL1/VL1-m Version 2 Voices

● File name: VL1_VER2.ALL

Loading this file with the "ALL" load option restores the VL1 Version 2 to its initial state as shipped from the factory.

The UTILITY/SYSTEM/BREATH MODE parameter is set to "Touch EG", so until this is changed to "BC/WX" the breath controller or a WX wind controller cannot be used. Many voices can be played more expressively with a breath controller, so for the notes, below, we assume that the "Breath Mode" parameter is set to "BC/WX".

Many of these voices can also be used on the VL7 Version 2, so load them and give them a try.

●Voice number	Voice name	Voice explanation
A01 (001)	Vintage VL	Dual Oscillator synth lead with slow attack swell filter EG. Play with MW2 (CC13) at center position or at minimum position for darker sound.
A02 (002)	Jazz Sax	Sweet tenor sax sound with some bite when blown hard. Growl on AT. VL range is Db3 to about Ab5.
A03 (003)	AnaBottle	This voice is a combination of an analog sounding square wave with breath noise. It uses new kind of breath noise and has a very speedy response which is fun for solos.
A04 (004)	JazzTrumpet	A jazz-oriented trumpet with a wide dynamic range.
A05 (005)	Stick	A "hard and sticky" bass sound ... similar to one often used by Peter Gabriel.
A06 (006)	Violin	The breath controller controls both bow pressure and speed on this violin voice. Can also be used in the cello and viola ranges.
A07 (007)	Wet Mini	Powerfull synth-bass with a lot of resonance.
A08 (008)	Pastorale	A mysterious reed/pipe timbre, quite unlike any existing instrument.
A09 (009)	Warm Dist	Distorted amplified electric guitar.
A10 (010)	Super Jam	A trumpet and trombone horn section with wide dynamics.
A11 (011)	Shakuhachi	An excellent Shakuhachi simulation. Best features brought out with breath variations and pitch bend.
A12 (012)	DeepThroat	Strange organ using lots of throat formant.
A13 (013)	XtraX	Acid rave lead string sound.
A14 (014)	EnglishHrn	The sound of the oboe's bigger brother, the english horn. The range is F2 to about A4.
A15 (015)	MuteCone	Simulation of the muted trumpet.
A16 (016)	Acid Bass	A perfect bass sound for "acid" basslines.

●Voice number	Voice name	Voice explanation
B01 (017)	Brassyn	Bright analog synth-brass.
B02 (018)	Tenor Sub	Sax with a strong sub-tone content. A good choice for jazzy phrases.
B03 (019)	SaxyTrump	A strange combination of a trumpet-like sound mixed with a saxophone sound. Higher breath pressure adds more beat to the sax element. Throat is controlled by aftertouch for a sax type growl.
B04 (020)	Trumpet	Bright trumpet. Suitable for a wide range of styles.
B05 (021)	FingerBass	A fingered bass simulation.
B06 (022)	Cello	A natural-sounding cello simulation.
B07 (023)	Soft Mini	An emulation of the classic moog bass sound. The filter resonance and the filter envelope depth are on the continuous sliders (CC16, CC17).
B08 (024)	Thai Reed	Simulation of a South East Asian (mainly Thailand) reed instrument.
B09 (025)	GuitarHero	A distortion guitar. Controlling the feedback with aftertouch is particularly effective.
B10 (026)	DynaTp&Sx	A trumpet and sax ensemble using the new dynamic split capabilities of Version 2. The split point is C4 when the voice is initially selected, but will shift dynamically according to what you play. Add vibrato with aftertouch.
B11 (027)	C Flute	Flute for a wide range of musical styles.
B12 (028)	Moby	Mysterious sound in which the basic sound components increase successively as the key is gradually pressed. Best features brought out with aftertouch.
B13 (029)	MechaHorse	Aftertouch and MW2 (CC13) are the key controllers for this voice ... but don't neglect the others.
B14 (030)	Oboe	An oboe sound which is somewhat darker than the original VL oboe. The range is Bb2 to about G5.
B15 (031)	Mute Boyz	Unison layered muted trumpets. PB controls embouchure to create parallel tuned intervals. PB at minimum transposes element 1 down a 4th, 3rd or minor 3rd, and PB at maximum transposes element 2 up a 4th, 3rd or minor 3rd (key range dependent) .
B16 (032)	Wah Man	Cry-baby wah-pedal effect on the BC.

Voice Lists

●Voice number	Voice name	Voice explanation
C01 (033)	Ossyncro	An analog synthesizer, oscillator-sync, cross-modulation sound.
C02 (034)	SopranoSax	Try using after touch.
C03 (035)	FlutoPhone	Flute/Sax hybrid. Velocity is assigned to Embouchure, producing an interesting unstable attack in the upper registers for fast staccato trills in intervals a fifth or more.
C04 (036)	FlugelHorn	A flugelhorn simulation with outstanding expressive characteristics in the low-pressure range.
C05 (037)	Fretless	Fretless bass ... this one is ideal for melodic lines.
C06 (038)	JetLipBow	A delicate sound combining reed (oboe type) and flute sounds ... with a violin-like attack.
C07 (039)	OldMini	Solo sound typical of saw-tooth waveforms in analog synthesizers. You can control the balance using CS1 (CC16) and CS2 (CC17) .
C08 (040)	Japanesque	Another Shakuhachi with breath noise.
C09 (041)	JazzGuitar	Electric guitar-like timbre. An obvious choice for jazz.
C10 (042)	40'sSaxes	A sax ensemble with that '40's jazz feel.
C11 (043)	Tull Flute	A noisy flute. MW2 (CC13) adjusts growl . Aftertouch is recommended.
C12 (044)	Mad Tube	An extremely aggressive sound that lies somewhere between synth lead and distortion guitar.
C13 (045)	HydroStorm	MW1 and Velocity are important controllers for this voice ... but try them all.
C14 (046)	Jazz Clari	Bright clarinet for jazz/big band solos. MW2 (CC13) controls tonguing: move towards maximum to soften the tonguing transient.
C15 (047)	Croma Harp	A chromatic harmonica simulation
C16 (048)	JungleBass	Sliding bass for jungle music.

●Voice number	Voice name	Voice explanation
D01 (049)	SynthSplit	Dual Oscillator synth lead with slow attack swell filter EG. Play with MW2 (CC13) at center position or at minimum position for darker sound.
D02 (050)	BaritonSax	Baritone sax suitable for lead lines.
D03 (051)	RoundBreth	An ethnic flute sound in octaves.
D04 (052)	JazzBone	A trombone simulation.
D05 (053)	Tube Bass	Similar to the sound produced by striking the tops of cylindrical plastic pipes of differing lengths. Vary the velocity for dynamic timbre changes.
D06 (054)	Viol Outt	Bright violin. Full bodied, especially above G3. MW2 (CC13) for tremolo. Vary BC pressure for bowing effects. Tonguing of the BC produces a good hard bowed attack. Try the poly mode.
D07 (055)	Mr. Mogue	Synthesized bass in octaves.
D08 (056)	Bagpipes	Sounds below Bb2 are drones. Scottish folk songs are often performed with drones on Bb, and playing in Bb Mixolydian mode in the right hand.
D09 (057)	Cruncher	Distortion guitar. Subtle picking nuances can be controlled via velocity.
D10 (058)	Mrs.Yang	Combination of Chinese violin and violin.
D11 (059)	Piccolo	Simulation of the piccolo.
D12 (060)	No Harm AT	Synthetic pipe instrument with Aftertouch control of Embouchure and Pitch Change effect depth for a unique 'car horn' style effect.
D13 (061)	Crystal	ME type pad effect.
D14 (062)	Clarinet	A light clarinet sound useful for classical music. Range is Db2 to about Ab5.
D15 (063)	Blues Harp	A miked harmonica, played through a guitar amplifier.
D16 (064)	PowerBass	Big rave bass sound.

Voice Lists

●Voice number	Voice name	Voice explanation
E01 (065)	AnorakSyn	Unstable oscillator analog synth.
E02 (066)	Bell Miked	A simulation of saxophone miked close to the bell.
E03 (067)	Taped Jet	Analog tape sampler type sound. Could be flute or recorder.
E04 (068)	MelTrump	Mellow trumpet.
E05 (069)	Birdland	A sound somewhere between an analog synthesizer and electric bass. The bass harmonics are emphasized in the high range.
E06 (070)	DoubleBow	A bass with strong "stringed instrument" characteristics. CS2 varies the timbre.
E07 (071)	Igneous	Feedback synthesized lead. A simulation of an analog-synthesized distortion guitar.
E08 (072)	Solitude	A delicate wind sound.
E09 (073)	IndoPluck	A Mideastern plucked sound.
E10 (074)	Elec Lips	Combination of lead voice, synth lead & shakuhachi. Shakuhachi mode changes produced by MW2 (CC13).
E11 (075)	Pan Pipes	Pan flute simulation. Be sure to use MW2 (CC13). Aftertouch is extremely effective.
E12 (076)	PlastiSax	An alto sax ... sounding the way it might if played through a plastic body.
E13 (077)	Black Hole	Try every controller.
E14 (078)	BassClari	The sound of the Bb bass clarinet. Range is D2 to F5.
E15 (079)	Lead Bows	A new violin-like instrument that happens to sound like detuned sawtooth waves layered in octaves. Try BC tonguing for a nice hard bowed attack. Range C2-C6.
E16 (080)	Sub Bass	A bass sound for the subsonic range.

●Voice number	Voice name	Voice explanation
F01 (081)	Funny Cat	Filter-sweep synth sound.
F02 (082)	Old Tenor	A dry, jazzy tenor sax.
F03 (083)	SteamLead	Soft lead w/hard attack. Velocity controls the brightness of the "steam." MW2 (CC13) brings the sound up an octave and changes the timbre.
F04 (084)	Horn	A poly-mode horn voice.
F05 (085)	ThumBass	Thumped Bass.
F06 (086)	Viowind	A new type of sound, not belonging to any existing instrumental group. Play using MW2 (CC13), BC, and aftertouch.
F07 (087)	50 / 50	Solo sound using simple analog synthesizer square waves.
F08 (088)	Digeritek	Includes elements of distorted guitar, sax, and bowed strings. Use of the breath controller is recommended.
F09 (089)	Sitar	Simulation of a sitar. Effective if you play the bass in the left hand and the melody in the right. Use of aftertouch and pitch bend is very effective. Velocity controls dynamic timbral effects.
F10 (090)	The Cool	Combination of Flugelhorn & AltoSax. Good for the melody in 4-beat jazz styles.
F11 (091)	BassFlute	The sound of the rarely heard bass flute, extending an octave below the C flute. Range: C3 to C6.
F12 (092)	BuzzSax	A bright, buzzy tenor sax that is very responsive to breath pressure. Try aftertouch for various squeaks and growls.
F13 (093)	Freezing	Experiment with all controllers.
F14 (094)	Dubble	New acoustic double reed. Wide dynamic range with BC. Warm reedy timbre at low pressure. MW2 (CC13) controls tonguing: move towards maximum to soften the tonguing transient.
F15 (095)	BowByBlow	Hard bowed flute/wind hybrid. Very slowly blowing BC pressure sounds octave overtone during attack before stabilizing at fundamental.
F16 (096)	Outback	A sound incorporating two types of ethnic timbres. Dynamic timbre change is possible using the aftertouch from the lowest note to D2.

Voice Lists

●Voice number	Voice name	Voice explanation
G01 (097)	AirSqueezer	Simple octave analog synth.
G02 (098)	Nat Tenor	Tenor sax with a unique attack.
G03 (099)	Sarangi	Traditional Indian string instrument. Use aftertouch vibrato and pitch bend for microtonal ornaments, and for timbral variation.
G04 (100)	Cornet	A cornet for easy-listening styles.
G05 (101)	Square	Synth bass with emphasized filter.
G06 (102)	Nu Viola	Mellow, woody viola. Range C2-G6. MW2 (CC13) for tremolo. Vary BC pressure for bowing ... try tonguing BC for hard bowed attack.
G07 (103)	MoreGrunge	A new type of deep synthesized lead.
G08 (104)	Aerophone	Hollow, breathy, new woodwind instrument. Play in tenor and alto ranges. MW2 (CC13) to Embouchure for alternate bend effect. Aftertouch for growl.
G09 (105)	Spanish	Spanish type acoustic guitar.
G10 (106)	FluBassoon	A classical woodwind ensemble.
G11 (107)	Floboe	A combination of properties of several different woodwind instruments.
G12 (108)	PlastcReed	The sound of a plastic reed instrument that is warm at low pressures but thin at higher pressures. Growl on aftertouch.
G13 (109)	Mu	Noise produced by MW1. The tone is controlled by MW2 (CC13).
G14 (110)	DarkBassoon	A dark, but lighter bassoon voice than the original VL bassoon. Range is Bb1 (oct down) to Eb5.
G15 (111)	Faerie Bow	A new "violin" instrument that happens to sound like a bright, vocal, "gizmo" motorized synth. Try BC tonguing for a nice hard bowed attack. MW2 (CC13) controls attack tightness. Range C2-C6.
G16 (112)	Yamasteel	A steel drum-like percussion sound. MW2 (CC13) changes the timbre.

●Voice number	Voice name	Voice explanation
H01 (113)	Afterwork	This voice benefits from extensive use of aftertouch.
H02 (114)	Alto Sax	Bright alto sax simulation.
H03 (115)	Tenor Air	Unique tenor lead tone. MW2 (CC13) controls Embouchure for subtle pitch bend effects.
H04 (116)	Lite Tuba	A "light" tuba simulation.
H05 (117)	Brite Bass	Artificial slap-bass. Low velocity for thumped notes; high velocity for slapped notes.
H06 (118)	Lite Cello	A "light" cello simulation.
H07 (119)	FunkyLead	Funky wah synth for percussive riffs. Very velocity sensitive.
H08 (120)	Syraphone	Unique transient attack response when playing intervals over a fifth with fast, staccato articulation ... gives a nice tongued/bowed attack to the sound. Plays very smoothly with legato articulations and BC tonguing.
H09 (121)	AsianPick	Oriental plucked sound.
H10 (122)	BaroqueDuet	A dynamic split with a recorder sound on top and baroque sounding cello on the bottom. Velocity controls the volume of the cello; breath controls the volume of the recorder. Vibrato for both voices is on aftertouch.
H11 (123)	GrassHarp	A harmonica type sound with grass reeds. Use a sustain pedal to switch to the mono mode for an ethnic sounding woodwind solo.
H12 (124)	CombMute	Imaginary trumpet type instrument with a very strange mute. Try moving MW2 (CC13) for a more natural vibrato.
H13 (125)	Haze	A psychedelic fuzzy organ in fifths, with breath control routed to the filter.
H14 (126)	AltoRecrdr	A duophonic alto recorder for imitating renaissance recorder duets. Range is F3 to F5.
H15 (127)	Bowed Saw	Sound of a bowed saw. Has the character of Ondes Martenot or Theremin (pioneer electronic instruments).
H16 (128)	Waterphone	Mysterious percussion instrument. Attack is softened with MW1. Squeakiness (embouchure) on MW2 (CC13). Violent SCRAPE sound with aftertouch.

Voice Lists

■ VL1/VL1-m Version 2 WX Voices

● File name: VL1V2_WX.ALL

The 32 voices included in this file have been programmed specifically for optimum playability with a Yamaha WX-series wind controller (WX7/WX11). It is assumed that you will be using the WX Tight Lip mode (see Note 1, below). Also, make sure that the VL1 Version 2 or VL1-m Version 2 UTILITY/SYSTEM/TG SETTING "WX Lip" parameter is set to "Expand" (see Note 2).

If playing is too difficult with these settings, try the Loose Lip mode and set the VL "WX Lip" parameter to "Normal".

Note 1: The WX-series wind controllers have "Tight Lip" and "Loose Lip" modes. Refer to the WX7 or WX11 owner's manual for details.

Note 2: When the VL1V2_WX.ALL file is loading using the "ALL" load option, the "WX Lip" parameter is automatically set to "Expand".

In order to produce the correct pitch with a WX-series controller when the "Tight Lip" mode is selected, it is necessary to apply the right amount of pressure to the WX reed (i.e. sax-type embouchure). Adjust the WX controller so that a Pitch Bend value of "0" appears in the VL1-m monitor display screen (Press [F7] in the PLAY mode to see this display — see Note 3). The VL1 does not have a monitor display.

Note 3: When the WX controller is set to the "Tight Lip" mode and the VL "WX Lip" parameter is set to "Expand", the Pitch Bend value in the monitor display should vary from "-64" to "63" in response to variations in lip pressure.

This selection also includes many voices which can be effectively played via a keyboard with breath control. Many voices are suitable for the rock and pop genres, so don't overlook them for keyboard control.

The A01, A06, A10, and B14 voices are programmed with a delay vibrato effect (i.e. the vibrato effect comes in gradually after a note is played). To turn this effect off, set the "Sustain Lvl" parameter in the EDIT/E1/ENV/VIBRATO parameter page to "0".

●Voice number	Voice name	Voice explanation
A01 (001)	Hey! Kenny	A soprano sax simulation with delayed vibrato.
A02 (002)	AcoEkoSyn	A grass-reed type synth voice that takes full advantage of VL technology. Take advantage of the light portamento effect.
A03 (003)	BrassSectn	An ensemble with different voices assigned to the two elements. Timing, pitch, and timbre can be effectively controlled via breath and reed (pitch bend).
A04 (004)	MutedLipWX	A muted trumpet suitable for "old" jazz styles.
A05 (005)	GlassAlto	Bright alto sax, suitable for pop styles. Wide variation with breath pressure.
A06 (006)	C Flute 2	Attack and light pressure produce the sound of air flowing through the tube. Lip pressure can raise pitch an octave.
A07 (007)	WXTenorSax	Use lower breath pressures to produce a "gravelly" sound with more subtones. Higher pressure produces a tone that is ideal for jazz and fusion styles.
A08 (008)	WahUpHarp	Use breath control the wah effect.
A09 (009)	C Trumpet	Trumpet for a wide range of styles ... from classic to rock. Loosen lip pressure to bend down; tighten for lip slur.
A10 (010)	Shakuhachi	Use lip pressure to shift the fundamental tone.
A11 (011)	WX Bariton	A baritone sax that can be used for bass lines or solos. Best played with a distinct rhythm.
A12 (012)	AnaEkoSyn	An analog synth with phaser effect. Good for long-tone solos.
A13 (013)	GuitarHero	Reed and breath control can produce some remarkable effects with a distortion guitar voice.
A14 (014)	LonelyPhone	Pitch variations from pianissimo to fortissimo. Use this characteristics to play soul-searching melodies.
A15 (015)	MoreGrunge	An analog type voice with a long delay. Use over about a 5-octave range.
A16 (016)	Horn 2	Simulates the long tube — and hard-to-play pitch characteristics — of a real horn. You might want to keep an eye on the monitor display while playing this one.

Voice Lists

●Voice number	Voice name	Voice explanation
B01 (017)	MildAltSax	Alto sax with excellent mid- to high-range projection. Ideal for rock and pop styles.
B02 (018)	JazzBone	Soft timbre on soft passages; brighter when played fortissimo.
B03 (019)	BrightTenr	Tenor sax with a solid attack.
B04 (020)	Clarinet 2	A clarinet simulation with realistic pitch and timbre variation in response to lip pressure. Very expressive.
B05 (021)	Blues Harp	A blues harp suitable for punchy lines.
B06 (022)	PanPiccol	Somewhere between pan pipes and piccolo.
B07 (023)	OldMini	Analog synth. Breath control produces cutoff resonance type effects. Useful over an extremely wide range.
B08 (024)	HarpSoprn	A combination of soprano sax and harp.
B09 (025)	WX Trumpet	Tonguing can produce sounds ranging from flugelhorn to bright trumpet. Try applying gradual upward pitch bend.
B10 (026)	Andean	Andean flute. Use the WX controller to apply breath and pitch variations to each individual note. Can also be played as a pan pipe.
B11 (027)	Air Saxes	A dry sax sound.
B12 (028)	Marsaloboe	Somewhere between sax, flute, and oboe. Use lip pressure for wide-range pitch control.
B13 (029)	JazzGuitar	Where else can you play jazz guitar with tonguing? Very expressive.
B14 (030)	DoubleBow	Breath control produces effects like bowing a cello. Breath is assigned to bow speed.
B15 (031)	Nz Piccolo	Ebony piccolo with outstanding breath noise at low pressures.
B16 (032)	LM AltoSax	Alto sax for pops or fusion styles.

Voice Lists

■ VL7 Version 2 Voices

● File name: VL7_VER2.ALL

Loading this file with the "ALL" load option restores the VL7 Version 2 to its initial state as shipped from the factory.

The UTILITY/SYSTEM/BREATH MODE parameter is set to "Touch EG", so until this is changed to "BC/WX" the breath controller or a WX wind controller cannot be used. Many voices can be played more expressively with a breath controller, so for the notes, below, we assume that the "Breath Mode" parameter is set to "BC/WX".

●Voice number	Voice name	Voice explanation
A01 (001)	Brassyn	Bright analog synth-brass.
A02 (002)	Jazz Sax	Sweet tenor sax sound with some bite when blown hard. Growl on AT. VL range is Db3 to about Ab5.
A03 (003)	AnaBottle	This voice is a combination of an analog sounding square wave type sound with breath noise. It uses the straight horn algorithm and new fricative waves. It has a very speedy response which is fun for solos.
A04 (004)	JazzTrumpet	A jazz-oriented trumpet with a wide dynamic range.
A05 (005)	Stick	A "hard and sticky" bass sound ... similar to one often used by Peter Gabriel.
A06 (006)	Violin	The breath controller controls both bow pressure and speed on this violin voice. Can also be used in the cello and viola ranges.
A07 (007)	Wet Mini	Powerfull synth-bass with a lot of resonance.
A08 (008)	Pastorale	A mysterious reed/pipe timbre, quite unlike any existing instrument.
A09 (009)	Warm Dist	Distorted amplified electric guitar.
A10 (010)	IndoPluck	A Mideastern plucked sound.
A11 (011)	Shakuhachi	An excellent Shakuhachi simulation. Best features brought out with breath variations and pitch bend.
A12 (012)	DeepThroat	Strange organ using lots of throat formant.
A13 (013)	Freezing	Experiment with all the controllers.
A14 (014)	EnglishHrn	The sound of the oboe's bigger brother, the english horn. The range is F2 to about A4.
A15 (015)	MuteCone	Simulation of the muted trumpet.
A16 (016)	Acid Bass	A perfect bass sound for "acid" basslines.

●Voice number	Voice name	Voice explanation
B01 (017)	AnorakSyn	Unstable oscillator analog synth.
B02 (018)	Tenor Sub	Sax with a strong sub-tone content. A good choice for jazzy phrases.
B03 (019)	SaxyTrump	A strange combination of a trumpet-like sound mixed with a saxophone sound. Higher breath pressure adds more beat to the sax element. Throat is controlled by aftertouch for a sax type growl.
B04 (020)	Trumpet	Bright trumpet. Suitable for a wide range of styles.
B05 (021)	FingerBass	A fingered bass simulation.
B06 (022)	Cello	A natural-sounding cello simulation.
B07 (023)	Soft Mini	An emulation of the classic moog bass sound. The filter resonance and the filter envelope depth are on the continuous sliders (CC16, CC17).
B08 (024)	Thai Reed	Simulation of a South East Asian (mainly Thailand) reed instrument.
B09 (025)	GuitarHero	A distortion guitar. Controlling the feedback with aftertouch is particularly effective.
B10 (026)	Spanish	Spanish type acoustic guitar.
B11 (027)	C Flute	Flute for a wide range of musical styles.
B12 (028)	Moby	Mysterious sound in which the basic sound components increase successively as the key is gradually pressed. Best features brought out with aftertouch.
B13 (029)	MechaHorse	Aftertouch and MW2 (CC13) are the key controllers for this voice ... but don't neglect the others.
B14 (030)	Oboe	An oboe sound which is somewhat darker than the original VL oboe. The range is Bb2 to about G5.
B15 (031)	Cornet	A cornet for easy-listening styles.
B16 (032)	Wah Man	Cry-baby wah-pedal effect on the BC.

Voice Lists

●Voice number	Voice name	Voice explanation
C01 (033)	Ossyncro	An analog synthesizer, oscillator-sync, cross-modulation sound.
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C03 (035)	FlutoPhone	Flute/Sax hybrid. Velocity is assigned to Embouchure, producing an interesting unstable attack in the upper registers for fast staccato trills in intervals a fifth or more.
C04 (036)	FlugelHorn	A flugelhorn simulation with outstanding expressive characteristics in the low-pressure range.
C05 (037)	Fretless	Fretless bass ... this one is ideal for melodic lines.
C06 (038)	JetLipBow	A delicate sound combining reed (oboe type) and flute sounds ... with a violin-like attack.
C07 (039)	Solitude	A delicate wind sound.
C08 (040)	Floboe	A combination of properties of several different woodwind instruments.
C09 (041)	JazzGuitar	Electric guitar-like timbre. An obvious choice for jazz.
C10 (042)	Sitar	Simulation of the sitar.
C11 (043)	Pan Pipes	Pan flute simulation. Be sure to use MW2 (CC13). Aftertouch is extremely effective.
C12 (044)	Mad Tube	An extremely aggressive sound that lies somewhere between synth lead and distortion guitar.
C13 (045)	Mu	Noise produced by MW1. The tone is controlled by MW2 (CC13).
C14 (046)	Jazz Clari	Bright clarinet for jazz/big band solos. MW2 (CC13) controls tonguing: move towards maximum to soften the tonguing transient.
C15 (047)	Croma Harp	A chromatic harmonica simulation.
C16 (048)	Dubble	New acoustic double reed. Wide dynamic range with BC. Warm reedy timbre at low pressure. MW2 (CC13) controls tonguing: move towards maximum to soften the tonguing transient.

●Voice number	Voice name	Voice explanation
D01 (049)	AirSqueezer	Simple octave analog synth.
D02 (050)	BaritonSax	Baritone sax suitable for lead lines.
D03 (051)	Aerophone	Hollow, breathy, new woodwind instrument. Play in tenor and alto ranges. MW2 (CC13) to Embouchure for alternate bend effect. Aftertouch for growl.
D04 (052)	JazzBone	A trombone simulation.
D05 (053)	Tube Bass	Similar to the sound produced by striking the tops of cylindrical plastic pipes of differing lengths. Vary the velocity for dynamic timbre changes.
D06 (054)	Viol Outt	Bright violin. Full bodied, especially above G3. MW2 (CC13) for tremolo. Vary BC pressure for bowing effects. Tonguing of the BC produces a good hard bowed attack. Try the poly mode.
D07 (055)	Mr. Mogue	Synthesized bass in octaves.
D08 (056)	Old Tenor	A dry, jazzy tenor sax.
D09 (057)	Cruncher	Distortion guitar. Subtle picking nuances can be controlled via velocity.
D10 (058)	AsianPick	Oriental plucked sound.
D11 (059)	Piccolo	Simulation of the piccolo.
D12 (060)	No Harm AT	Synthetic pipe instrument with Aftertouch control of Embouchure and Pitch Change effect depth for a unique 'car horn' style effect.
D13 (061)	Crystal	ME type pad effect.
D14 (062)	Clarinet	A light clarinet sound useful for classical music. Range is Db2 to about Ab5.
D15 (063)	Blues Harp	A miked harmonica, played through a guitar amplifier.
D16 (064)	Waterphone	Mysterious percussion instrument. Attack is softened with MW1. Squeakiness (embouchure) on MW2 (CC13). Violent SCRAPE sound with aftertouch.

Voice Lists

■ VL7 Version 2 WX Voices

● File name: VL7V2_WX.ALL

The 32 voices included in this file have been programmed specifically for optimum playability with a Yamaha WX-series wind controller (WX7/WX11). It is assumed that you will be using the WX Tight Lip mode (see Note 1, below). Also, make sure that the VL1 Version 2 or VL1-m Version 2 UTILITY/SYSTEM/TG SETTING "WX Lip" parameter is set to "Expand" (see Note 2).

If playing is too difficult with these settings, try the Loose Lip mode and set the VL "WX Lip" parameter to "Normal".

Note 1: The WX-series wind controllers have "Tight Lip" and "Loose Lip" modes. Refer to the WX7 or WX11 owner's manual for details.

Note 2: When the VL7V2_WX.ALL file is loading using the "ALL" load option, the "WX Lip" parameter is automatically set to "Expand".

In order to produce the correct pitch with a WX-series controller when the "Tight Lip" mode is selected, it is necessary to apply the right amount of pressure to the WX reed (i.e. sax-type embouchure). Adjust the WX controller for optimum response.

This selection also includes many voices which can be effectively played via a keyboard with breath control. Many voices are suitable for the rock and pop genres, so don't overlook them for keyboard control.

The A01, A06, A08, A10, B07, and B14 voices are programmed with a delay vibrato effect (i.e. the vibrato effect comes in gradually after a note is played). To turn this effect off, set the "Sustain Lv!" parameter in the EDIT/EL/ENV/VIBRATO parameter page to "0".

●Voice number	Voice name	Voice explanation
A01 (001)	Hey! Kenny	A soprano sax simulation with delayed vibrato.
A02 (002)	AcoEkoSyn	A grass-reed type synth voice that takes full advantage of VL technology. Take advantage of the light portamento effect.
A03 (003)	PanPicol	Somewhere between pan pipes and piccolo.
A04 (004)	MutedLipWX	A muted trumpet suitable for "old" jazz styles.
A05 (005)	GlassAlto	Bright alto sax, suitable for pop styles. Wide variation with breath pressure.
A06 (006)	C Flute 2	Attack and light pressure produce the sound of air flowing through the tube. Lip pressure can raise pitch an octave.
A07 (007)	Bassoon 2	An extraordinarily realistic bassoon simulation. Applying reed pressure above F4 shifts the fundamental.
A08 (008)	BreathBow	A bowed string instrument with breath noise.
A09 (009)	C Trumpet	Trumpet for a wide range of styles ... from classic to rock. Loosen lip pressure to bend down; tighten for lip slur.
A10 (010)	Shakuhachi	Use lip pressure to shift the fundamental tone.
A11 (011)	WX Bariton	A baritone sax that can be used for bass lines or solos. Best played with a distinct rhythm.
A12 (012)	AnaEkoSyn	An analog synth with phaser effect. Good for long-tone solos.
A13 (013)	GuitarHero	Reed and breath control can produce some remarkable effects with a distortion guitar voice.
A14 (014)	LonelyPhone	Pitch variations from pianissimo to fortissimo. Use this characteristics to play soul-searching melodies.
A15 (015)	Ophelia	Synth lead with a soft, comfortable delay.
A16 (016)	Horn 2	Simulates the long tube — and hard-to-play pitch characteristics — of a real horn.

●Voice number	Voice name	Voice explanation
B01 (017)	MildAltSax	Alto sax with excellent mid- to high-range projection. Ideal for rock and pop styles.
B02 (018)	JazzBone	Soft timbre on soft passages; brighter when played fortissimo.
B03 (019)	BrightTenr	Tenor sax with a solid attack.

Voice Lists

B04 (020)	Clarinet	A clarinet simulation with realistic pitch and timbre variation in response to lip pressure. Very expressive.
B05 (021)	Blues Harp	A blues harp suitable for punchy lines.
B06 (022)	Ocarina	Somehow more "intimate" than a real ocarina. Make good use of the portamento effect.
B07 (023)	Oboe 2	An oboe simulation with delayed vibrato.
B08 (024)	HarpSoprn	A combination of soprano sax and harp.
B09 (025)	WX Trumpet	Tonguing can produce sounds ranging from flugelhorn to bright trumpet. Try applying gradual upward pitch bend.
B10 (026)	Andean	Andean flute. Use the WX controller to apply breath and pitch variations to each individual note. Can also be played as a pan pipe.
B11 (027)	Air Saxes	A dry sax sound.
B12 (028)	Marsaloboe	Somewhere between sax, flute, and oboe. Use lip pressure for wide-range pitch control.
B13 (029)	Alto Oboe	A somewhat "sweet" oboe simulation that sounds a bit like a clarinet. Middle register ideal for soft melodies.
B14 (030)	DoubleBow	Breath control produces effects like bowing a cello. Breath is assigned to bow speed.
B15 (031)	Nz Piccolo	Ebony piccolo with outstanding breath noise at low pressures.
B16 (032)	LM AltoSax	Alto sax for pops or fusion styles.

■ Additional Version 2 Voices

● File name: ADDITION.ALL

This file includes some excellent voices that are not in the VL1_VER2.ALL or VL7_VER2.ALL files. Most are single-element voices, so the VL1 voices can be used effectively on the VL7.

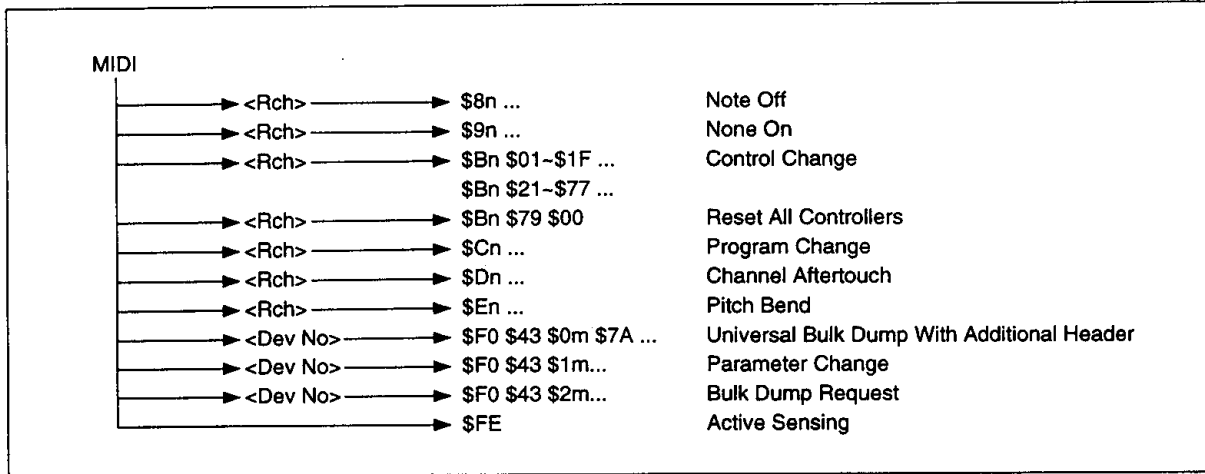
In all these voices the BREATH MODE is set to "BC/WX".

●Voice number	Voice name	Voice explanation
A01 (001)	GlassTenor	Tenor sax with a glass-like resonance.
A02 (002)	Old Tenor2	Tenor sax suited for "old" jazz styles.
A03 (003)	FunkyTenor	Good with heavy backing. Use aftertouch.
A04 (004)	Nat Alto	A natural-sounding alto sax for pops styles. Edit the Modifiers to create your own sound.
A05 (005)	HarpAlto	A blend of harp and alto sax — or a heavily-processed sax, depending on how you play.
A06 (006)	HarpSoprn	Somewhere between soprano and alto sax. Unique sound in the high register.
A07 (007)	SharpTrmp	Bright trumpet with a distinctive upper register.
A08 (008)	MuteLipJaz	Muted trumpet for a wide range of styles.
A09 (009)	Lite Horn	A solo voice with a brass-like harmonic structure.
A10 (010)	DubleDuble	A variation of the Duble voice.
A11 (011)	Floboe 2	A variation of the Floboe voice.
A12 (012)	Cello 2	A variation of the Cello voice.
A13 (013)	JetLipBow2	A variation of the JetLipBow voice.
A14 (014)	LiteViolin	This strings voice is suited for delicate phrases.
A15 (015)	CelleSynth	Anal strings with the Celeste effect.
A16 (016)	WahGtr BC	Wah guitar with the Distortion+Wah effect.

MIDI Data Format

■ MIDI Data Format for VL1, VL1-m, VL7 Version 2

1 MIDI receive



Note : <Rch> : MIDI receive channel switch
 <Dev No> : Device number switch
 n : MIDI channel
 m : Device number

Ignores the third byte of Note Off.
 Ignores the second byte of Pitch Bend.
 No incoming MIDI signals will be recognized in Demo mode.

The Voice number changes according to received Program Changes.

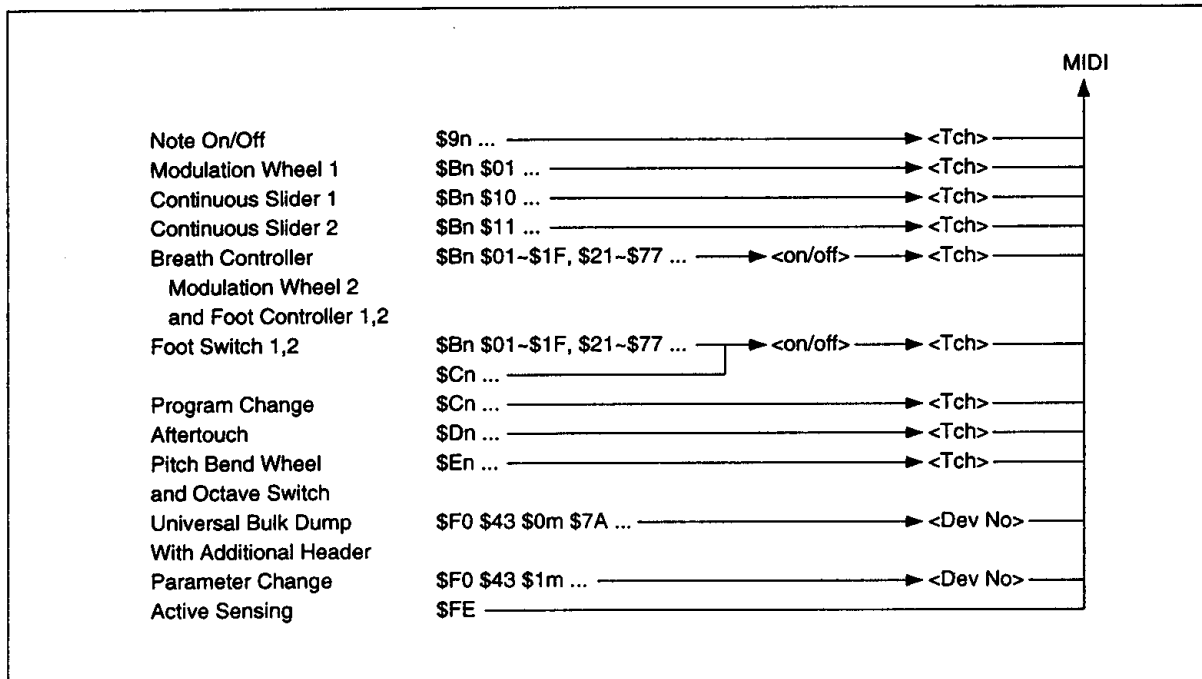
	Program Change data	Voice number
VL1,1-m	: \$00 ~ \$7F	A01(001) - H16(128)
VL7	: \$00 ~ \$3F \$40 ~ \$7F	A01(001) - D16(064) A01(001) - D16(064)

Reception may not be possible if Memory protect is ON in Bulk Dump.
 Details of System Exclusive Messages are given later.

While Active Sensing is on, if no MIDI Active Sensing signals are received for more than around 330 msec, the MIDI receive buffer will be cleared, and any sound being generated will be cut off.

2 MIDI transmit

[for VL1, VL7]



MIDI Data Format

Note : <Tch> : MIDI transmit channel switch
 <Dev No> : Device number switch
 n : MIDI channel
 m : Device number

The normal transmitted note numbers corresponding to the keyboard are \$30 ~ \$60.

Use of Keyboard Transpose can shift these values by -\$0C ~ +\$0C, and use of Octave Switch can shift them a further -\$0C ~ +\$0C.

Pitch Bend has 7 bit resolution.

In Demo mode, only Demo sequence data will be transmitted (not keyboard data).

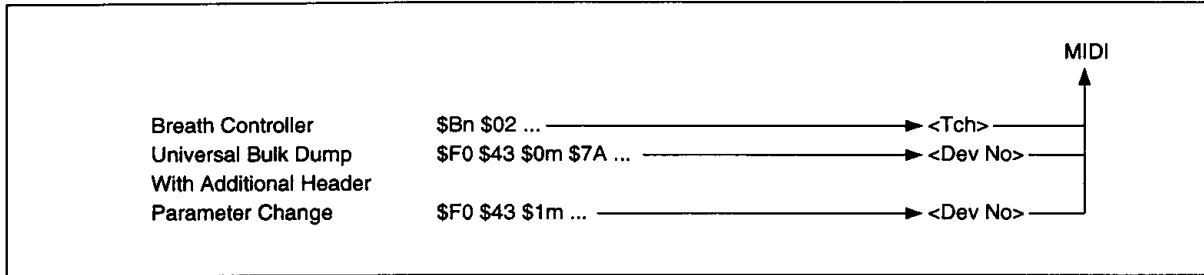
If the unit is in Play mode, or if Footswitches 1 or 2 are assigned to Program Increment in any mode, then Program Increments of any type will cause a Program Change message corresponding to the Voice number after the change to be transmitted.

	Voice number	Program Change data
VL1	: A01(001) ~ H16(128)	\$00 ~ \$7F
VL7	: A01(001) ~ D16(064)	\$00 ~ \$3F

Details of System Exclusive Message are given later.

Active Sensing will be transmitted every 270 msec approximately.

[for VL1-m]



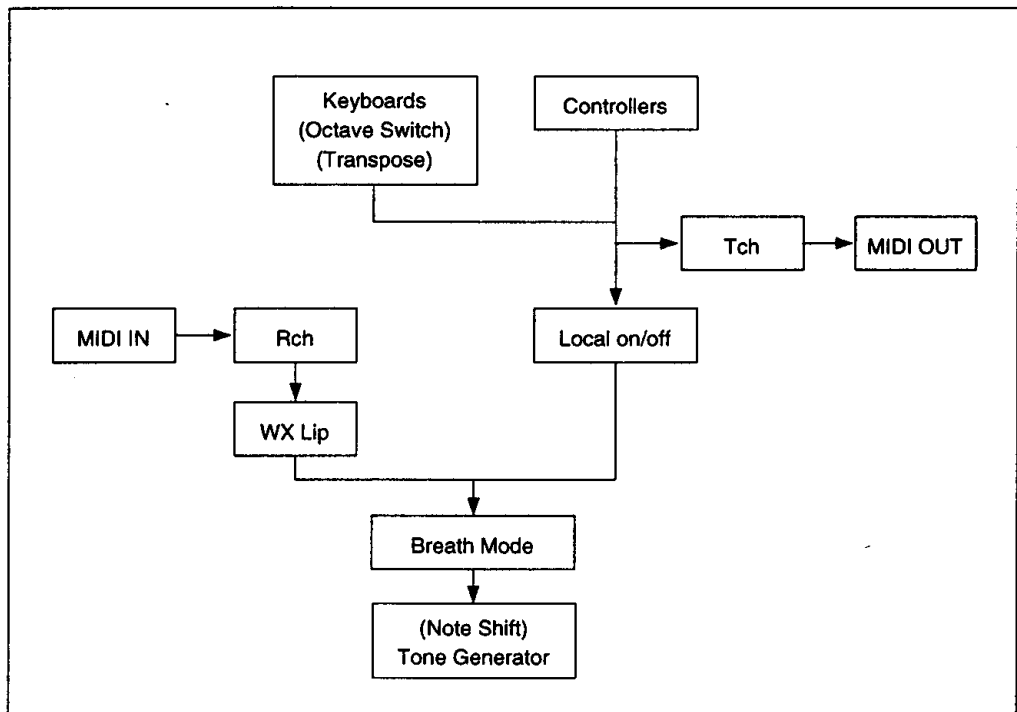
Note : <Tch> : MIDI transmit channel switch
 <Dev No> : Device number switch
 n : MIDI channel
 m : Device number

In Demo mode, only Demo sequence data will be transmitted.
 Details of System Exclusive Message are given later.

3 Keyboard and Tone Generator Configuration

Note : Note On/Off messages received from the keyboard and from MIDI are indistinguishable. This also applies to controller data. Local keyboard and controller data will always be received, irrespective of the Transmit and Receive channel settings.

VL1-m does not have Keyboards and only have Breath Controller as a controller.



MIDI Data Format

4 System Exclusive Message

The following Bulk Dump Data will be transmitted on the Utility/Bulk screen.

System

Program Change Table Bulk refer to 4.1(VL1-m only)
 Micro Tuning Bulk,memory no.=0,1 refer to 4.5.1
 System Bulk refer to 4.1

All Voice

Voice Bulk,memory type=0,memory no.=
 \$00-\$7F VL1,1-m refer to 4.1
 \$00-\$3F VL7 refer to 4.1

Current Voice

Voice Bulk,memory type=\$7F refer to 4.1

When Voice Data is changed in Edit Mode or System Data is changed in Utility Mode,a Parameter Change formatted as described in the separate tables,4.2,4.4,4.5.2 will be transmitted.

4.1 Bulk Dump

th transmitted and received. Universal Bulk Dump With Additional Header is used.

Count	Value	\$	Description
0	11110000	F0	
1	01000011	43	
2	0000nnnn	n	= device number
3	01111010	7A	
4	0bbbbbbb	b	= MSB of byte count
5	0bbbbbbb	b	= LSB of byte count
Byte count is from count 6 to the beginning of check sum.			
6	01001100	4C	ascii"L"
7	01001101	4D	ascii"M"
8	00100000	20	ascii" "
9	00100000	20	ascii"2"
10	00110000	30	ascii"0"
11	00110001	31	ascii"1"
12	00110001	31	ascii"1"
13	00110111	37	ascii"7"
14	0aaaaaaa	a	= data type
15	0aaaaaaa	a	= data type
56,43(ascii"V","C") : Voice			
53,59(ascii"S","Y") : System			
50,52(ascii"P","R") : Program Change Table (VL1-m only)			
16	0ttttttt	t	= memory type
0 : Memory, 7F : Edit Buffer			
17	0uuuuuuu	u	= memory number
Ignored when memory type = 7F.			
When memory type = 0, indicates the voice number.			
0 ~ 7F : A01(001) ~ H16(128) VL1,1-m			
0 ~ 3F : A01(001) ~ D16(064) VL7			
18	00000000	00	
↓			
31	00000000	00	
32	0ddddddd	d	= data
↓			
↓			
	0sssssss	s	= check sum (The 2's complement of the 7 bit sum of the data)
	11110111	F7	EOX

Counts 16 and 17 ignored when receiving "SY" and "PR" data.

On reception, counts 18 ~ 31 are ignored as they are sent as 0's.

Data for "VC" is

nos.32 ~ 139 Common Data Separate table 5.1,nos.0 ~ 107
 nos.140 ~ 1619 Element 1 Data Separate table 5.2,nos.0 ~ 1479
 nos.1620 ~ 3099 Element 2 Data Separate table 5.2,nos.0 ~ 1479 (VL1,1-m only)

Data for "SY" is

nos.32 ~ 95 System Data Separate table 5.3,nos.0 ~ 63

Data for "PR" is

nos.32 ~ 159 Program Change Table Data Separate table 5.6, nos.0 ~ 127

4.2 Parameter Change

Both transmitted and received.

Count	Value	\$	Description
0	11110000	F0	
1	01000011	43	
2	0001nnnn	n	= device number
3	01010100	54	
4	0000tttt	t	= parameter type
0 : Common parameter			
1 : Element parameter			
2 : System parameter			
5 : Remote Switch(device number is ignored)			
7 : Program Change Table parameter (VL1-m only)			
8 : Element,Effect and Modifier on/off			
Element, Effect and Modifier on/off is effective in Edit Mode only. Element on/off is ineffective for VL7.			
5	0000000e	e	= element number
0 : element 1			
1 : element 2			
When parameter type = 1, the element number is effective, otherwise ignored.			
Ignored on VL7.			
6	000000cc	c	= data count
1 : 1byte parameter			
2 : 2byte parameter			
When parameter type=2,5,7,8, data count=1.			
7	0ppppppp	p	= MSB of parameter offset
8	0ppppppp	p	= LSB of parameter offset
Taken as the offset of the leading parameter when data count is 2.			
9	0vvvvvvv	v	= parameter value
(10)	0vvvvvvv	v	= parameter value when data count is 2)
	11110111	F7	EOX

Master Tuning of System Parameters can only be performed during reception. Transmission will be performed using the 4.4 DX1 Master Tuning Compatibility format. In addition, Device Number Parameter Change cannot be received or transmission.

Refer to 5 Appended Tables regarding the parameter offset.

4.3 Bulk Dump Request

Performed only during receive.

Count	Value	\$	Description
0	11110000	F0	
1	01000011	43	
2	0010nnnn	n	= device number
3	01111010	7A	
4	01001100	4C	ascii"L"
5	01001101	4D	ascii"M"
6	00100000	20	ascii" "
7	00100000	20	ascii"2"

MIDI Data Format

8	00110000	30	ascii"0"
9	00110001	31	ascii"1"
10	00110001	31	ascii"1"
11	00110111	37	ascii"7"
12	0aaaaaaa	a	= data type
13	0aaaaaaa	a	= data type
			56,43(ascii"V","C") : Voice
			53,59(ascii"S","Y") : System
			50,52(ascii"P","R") : Program Change Table (VL1-m only)
14	Ottttttt	t	= memory type
			0 : Memory, 7F : Edit Buffer
15	Ouuuuuuu	u	= memory number
			Ignored when memory type = 7F
			When memory type = 0, indicates the voice number.
			0 ~ 7F : A01(001) ~ H16(128) VL1,1-m
			0 ~ 3F : A01(001) ~ D16(064) VL7
16	00000000	00	
			↓
29	00000000	00	
30	11110111	F7	EOX

Counts 14 and 15 ignored when receiving "SY" and "PR" data.
On reception, counts 16 ~ 29 are ignored as they are sent as 0's.

4.4 DX1 Master Tuning Compatibility

The System Master Tuning Parameter Change is transmitted / received in DX1 compatible format.

Count	Value	\$	Description
0	11110000	F0	
1	01000011	43	
2	0001nnnn	n	= device number
3	0000100	04	
4	01000000	40	
5	0vvvvvvv	v	= parameter value
			-64 ~ +63 (o/b)
6	11110111	F7	EOX

(o/b): offset binary (The 2's complement sign bit reversed.)

4.5 SY77/99 Micro Tuning Compatibility

The Bulk Dump, Bulk Dump Request, and Parameter Change messages for Micro Tuning are in SY77/99 compatible format.

4.5.1 Bulk Dump

Transmit / receive

Count	Value	\$	Description
0	11110000	F0	
1	01000011	43	
2	0000nnnn	n	= device number
3	01111010	7A	
4	0bbbbbbb	b	= MSB of byte count
5	0bbbbbbb	b	= LSB of byte count
			Byte count is from count 6 to the beginning of check sum.
6	01001100	4C	ascii"L"
7	01001101	4D	ascii"M"
8	00100000	20	ascii" "
9	00100000	20	ascii" "
10	00111000	38	ascii"8"
11	00110001	31	ascii"1"
12	00110000	30	ascii"0"

13	00110001	31	ascii"1"
14	01001101	4D	ascii"M"
15	01010100	54	ascii"T"
16	00000000	00	
			↓
30	00000000	00	
31	0uuuuuuu	u	= memory number
			0,1,2 ~ 55 : l-1,l-2,P-1 ~ P-84
32	0vvvvvvv	v	= data
			↓
297	0vvvvvvv	v	
298	0sssssss	s	= check sum
299	11110111	F7	EOX

On reception, memory number 2--P-1~ is received as 1:l-2.
Data is

nos.32 ~ 297 Separate table 5.4 Micro Tuning Parameters, nos.0 ~ 265

4.5.2 Parameter Change

Performed only during receive.

Count	Value	\$	Description
0	11110000	F0	
1	01000011	43	
2	0001nnnn	n	= device number
3	00110100	34	
4	00001011	0B	
5	0000000u	u	= memory number
			0 : l-1 , 1 : l-2
6	000000pp	p	= MSB of parameter offset
7	0ppppppp	p	= LSB of parameter offset
8	0vvvvvvv	v	= parameter value
9	0vvvvvvv	v	= parameter value
10	11110111	F7	EOX

Refer to the separate table 5.4 Micro Tuning Parameters of the values of p and v.

4.5.3 Bulk Dump Request

Performed only during receive.

Count	Value	\$	Description
0	11110000	F0	
1	01000011	43	
2	0010nnnn	n	= device number
3	01111010	7A	
4	01001100	4C	ascii"L"
5	01001101	4D	ascii"M"
6	00100000	20	ascii" "
7	00100000	20	ascii" "
8	00111000	38	ascii"8"
9	00110001	31	ascii"1"
10	00110000	30	ascii"0"
11	00110001	31	ascii"1"
12	01001101	4D	ascii"M"
13	01010100	54	ascii"T"
14	00000000	00	
			↓
28	00000000	00	
29	0uuuuuuu	u	= memory number
			0,1,2 ~ 55 : l-1,l-2,P-1 ~ P-84
30	11110111	F7	EOX

MIDI Data Format

5 Appended Tables

In this table -

no.	is the parameter number	(decimal)
c	is the data count	(decimal)
p	is the offset (MSB, LSB)	(hexadecimal)
v	is the value	(decimal)

Values may be of four types given below, depending on the range of the values. These values are expressed in MIDI data in hexadecimal.

0 ~ 127	: 00 ~ 7F
0 ~ 127, 128 ~ 16383	: 00 00 ~ 00 7F, 01 00 ~ 7F 7F
-64 ~ -1, 0, 1 ~ 63	: 40 ~ 7F, 00, 01 ~ 3F (2's compliment)
-128 ~ -1, 0, 1 ~ 127	: 01 00 ~ 01 7F, 00 00, 00 01 ~ 00 7F (2's compliment)

Table 5.1 Common Parameters

no.	c	p	v	name	
0-9	1	00 00 ~ 00 09	32 ~ 126	Voice Name 1-10	
10-15		00 0A ~ 00 0F	0	reserve	
16	1	00 10	0 ~ 3	Key Mode	VL1,1-m only
17	1	00 11	0 ~ 1	Voice Mode	VL1,1-m only
	1	00 12	0 ~ 2	Split Mode	VL1,1-m only
19	1	00 13	0 ~ 127	Split Point	VL1,1-m only
20	1	00 14	0 ~ 24	Split Interval	VL1,1-m only
21	1	00 15	0 ~ 15	Elem1 MIDI Rch	VL1,1-m only
22	1	00 16	0 ~ 15	Elem2 MIDI Rch	VL1,1-m only
23	1	00 17	0 ~ 31	Poly Expand Mode	VL1,1-m only
24	1	00 18	0 ~ 31	Poly Expand No.	VL1,1-m only
25	1	00 19	0 ~ 2	PB,AT&MOD Mode	VL1,1-m only
26	1	00 1A	0 ~ 119	Polyphony Control	VL1,1-m only
27	1	00 1B	0 ~ 1	Sustain	
28	1	00 1C	0 ~ 2	Pitch Bend Mode	VL1,1-m only
29	1	00 1D	0 ~ 2	Assign Mode	
30	1	00 1E	0 ~ 127	Brth Atck Time	
31	1	00 1F	0 ~ 127	Brth Atck Gain	
32	1	00 20	0 ~ 127	Touch EG Time	
33	1	00 21	0 ~ 127	Touch EG Gain	
34	1	00 22	0 ~ 1	Portamento Time MIDI Control	
35	1	00 23	0 ~ 1	Portamento Mode	
36	1	00 24	0 ~ 127	Portamento Time	
37	1	00 25	0 ~ 1	Elem1 Portamento	
38	1	00 26	0 ~ 1	Elem2 Portamento	VL1,1-m only
39	1	00 27	-7 ~ 7	Elem1 Detune	
40	1	00 28	-7 ~ 7	Elem2 Detune	VL1,1-m only
	1	00 29	-64 ~ 63	Elem1 Note Shift	
42	1	00 2A	-64 ~ 63	Elem2 Note Shift	VL1,1-m only
43	1	00 2B	0 ~ 7	Elem1 Rand Pitch	
44	1	00 2C	0 ~ 7	Elem2 Rand Pitch	VL1,1-m only
45	1	00 2D	0 ~ 86	Elem1 MicroTuning	
46	1	00 2E	0 ~ 86	Elem2 MicroTuning	VL1,1-m only
47	1	00 2F	0 ~ 127	Elem1 Level	
48	1	00 30	0 ~ 127	Elem2 Level	VL1,1-m only
49	1	00 31	-64 ~ 63	Elem1 Pan L	
50	1	00 32	-64 ~ 63	Elem1 Pan R	
51	1	00 33	-64 ~ 63	Elem2 Pan L	VL1,1-m only
52	1	00 34	-64 ~ 63	Elem2 Pan R	VL1,1-m only
53	1	00 35	0 ~ 4 (0 ~ 2)	CS1 Class (Voice Mode=0 or VL7)	
54	2	00 36	0 ~ 150 (0 ~ 47)	CS1 Assign (CS1 Class=1)	
56	1	00 38	0 ~ 4 (0 ~ 2)	CS2 Class (Voice Mode=0 or VL7)	
57	2	00 39	0 ~ 150 (0 ~ 47)	CS2 Assign (CS2 Class=1)	
59	1	00 3B	0 ~ 3	Destination Effect	
60	1	00 3C	0 ~ 122	Effect Controller	
61	1	00 3D	0 ~ 9	Mod Effect Type	
62	1	00 3E	0 ~ 1	Elem1 on/off	VL1,1-m only
63	1	00 3F	0 ~ 1	Elem2 on/off	VL1,1-m only
64-73		00 40 ~ 00 49		Refer to Table 5.1.1 Mod Effect no.0 ~ 9.	

74	1	00 4A	0 ~ 1	FBD/Reverb Mode
75	1	00 4B	0 ~ 3	FBD Type
76	1	00 4C	0 ~ 100	FBD Return
77-94		00 4D ~ 00 5E		Refer to Table 5.1.2 FBD no.0 ~ 17.
95	1	00 5F	0 ~ 8	Reverb Type
96-105		00 60 ~ 00 69		Refer to Table 5.1.3 Reverb no.0 ~ 9.
106-107		00 6A ~ 00 6B		reserve

Table 5.1.1 Modulation Effect Flanger

no.	c	v	name
0	1	0 ~ 2	Wave
1	1	0 ~ 127	Freq
2	1	0 ~ 100	Depth
3	1	0 ~ 126	Delay
4	1	-8 ~ 8	Phase
5	2	-100 ~ 100	FB Gain
7	1	0 ~ 9	High
8	1	0 ~ 10	Analog Feel
9	1	0 ~ 100	Wet/Dry Balance

Pitch Change

no.	c	v	name
0	1	0 ~ 1	Mode
1	1	-12 ~ 12	Pitch 1
2	2	-100 ~ 100	Fine 1
4	1	0 ~ 100	Out 1
5	1	-12 ~ 12	Pitch 2
6	2	-100 ~ 100	Fine 2
8	1	0 ~ 100	Out 2
9	1	0 ~ 100	Wet/Dry Balance

Distortion

no.	c	v	name
0	1	0 ~ 100	Overdrive
1-2			reserve
3	1	0 ~ 4	Device
4	1	0 ~ 5	Speaker
5	1	-10 ~ 10	Presence
6	1	0 ~ 100	Output Level
7-9			reserve

Chorus

no.	c	v	name
0	1	0 ~ 1	Mode
1	1	0 ~ 127	Freq
2	1	0 ~ 100	Depth
3	1	0 ~ 126	Delay
4	2	-100 ~ 100	FB Gain
6	1	0 ~ 9	High
7	1	0 ~ 100	Wet/Dry Balance
8-9			reserve

Phaser

no.	c	v	name
0	1	0 ~ 1	Mode
1	1	0 ~ 1 (0 ~ 3)	Stage (Mode=0)
2	1	0 ~ 127	Freq
3	1	0 ~ 100	Depth
4	1	0 ~ 100	Offset
5	1	-8 ~ 8 (0 ~ 1)	Phase (Diffusion when Mode=0)
6	2	-100 ~ 100	FB Gain
8	1	0 ~ 100	Wet/Dry Balance
9			reserve

MIDI Data Format

Symphonic

no.	c	v	name
0	1	0 ~ 1	Mode
1	1	0 ~ 127	Freq
2	1	0 ~ 100	Depth
3	1	0 ~ 10	Diffusion
4	1	0 ~ 12	Lo-Fi
5	1	0 ~ 100	Wet/Dry Balance
6-9			reserve

Celeste

no.	c	v	name
0	1	0 ~ 1	Mode
1	1	0 ~ 127	Freq
2	1	0 ~ 100	Depth
3	1	0 ~ 126	Delay
4	2	-100 ~ 100	FB Gain
6	1	0 ~ 12	Lo-Fi
7	1	0 ~ 100	Wet/Dry Balance
8-9			reserve

Distortion+Flanger

no.	c	v	name
	1	0 ~ 100	Overdrive
1	1	0 ~ 5	Speaker
2	1	0 ~ 100	Output Level
3	1	0 ~ 127	Freq
4	1	0 ~ 100	Depth
5	1	0 ~ 126	Delay
6	1	-8 ~ 8	Phase
7	1	0 ~ 100	FB Gain
8	1	0 ~ 9	High
9	1	0 ~ 100	Flanger Balance

Distortion+Wah

no.	c	v	name
0	1	0 ~ 100	Overdrive
1	1	0 ~ 5	Speaker
2	1	0 ~ 100	Output Level
3	1	0 ~ 3	Mode
4	1	0 ~ 1	Wah Pre/Post
5	1	0 ~ 127	Cutoff Freq
6	1	0 ~ 127	Resonance
7	1	0 ~ 100	Sens
8-9			reserve

Table 5.1.2 Feedback Delay Mono

no.	c	v	name
0-5			reserve
6	2	0 ~ 1024	Delay Time
8	1	0 ~ 100	Level
9	2	0 ~ 1024	FB Delay Time
11	1	0 ~ 100	FB Gain
12	1	0 ~ 9	High
13-17			reserve

L/R

no.	c	v	name
0	2	0 ~ 512	Lch Delay Time
2	1	0 ~ 100	Lch FB Gain
3	1	0 ~ 9	Lch High
4	1	0 ~ 100	Lch Level
5	2	0 ~ 512	Rch Delay Time
7	1	0 ~ 100	Rch FB Gain
8	1	0 ~ 9	Rch High
9	1	0 ~ 100	Rch Level
10-17			reserve

L/C/R

no.	c	v	name
0	2	0 ~ 1024	Lch Delay Time
2	1	0 ~ 100	Lch Level
3	2	0 ~ 1024	Rch Delay Time
5	1	0 ~ 100	Rch Level
6	2	0 ~ 1024	Cch Delay Time
8	1	0 ~ 100	Cch Level
9	2	0 ~ 1024	FB Delay Time
11	1	0 ~ 100	FB Gain
12	1	0 ~ 9	High
13-17			reserve

Table 5.1.3 Reverberation

no.	c	v	name
0	1	0 ~ 100	Return
1	1	0 ~ 95	Reverb Time
2	1	0 ~ 9	High Control
3	1	0 ~ 10	Diffusion
4	2	0 ~ 405	Initial Delay
6	1	-21 ~ 12	Treble
7	1	-21 ~ 12	Bass
8	1	0 ~ 3	Feel
9	1	0 ~ 10	Reverb Time Boost

Table 5.2 Element Parameters

no.	c	p	v	name
0	1	00 00	0 ~ 124	Pressure Control
1	1	00 01	-16 ~ 16	Pressure Curve
2	2	00 02	-127 ~ 127	Pressure Depth
4	1	00 04	0 ~ 124	Embouchure Control
5	1	00 05	0 ~ 1	Embouchure Mode
6	2	00 06	-127 ~ 127	Embouchure Upper Depth
8	2	00 08	-127 ~ 127	Embouchure Lower Depth
10	1	00 0A	0 ~ 124	Pitch Control
11	1	00 0B	0 ~ 1	Pitch Mode
12	1	00 0C	-12 ~ 12	Pitch Upper Depth
13	1	00 0D	-12 ~ 12	Pitch Lower Depth
14	1	00 0E	0 ~ 124	Vibrato Control
15				reserve
16	2	00 10	-127 ~ 127	Vibrato Depth
18	1	00 12	0 ~ 124	Tonguing Control
19	1	00 13	-16 ~ 16	Tonguing Curve
20	2	00 14	-127 ~ 127	Tonguing Depth
22	1	00 16	0 ~ 124	Amplitude Control
23	1	00 17	-16 ~ 16	Amplitude Curve
24	2	00 18	-127 ~ 127	Amplitude Depth
26	1	00 1A	0 ~ 124	Scream Control
27	1	00 1B	0 ~ 127	Scream Value
28	1	00 1C	-16 ~ 16	Scream Curve
29	2	00 1D	-127 ~ 127	Scream Depth
31	1	00 1F	0 ~ 124	B.Noise Control
32	1	00 20	0 ~ 127	B.Noise Value
33	1	00 21	-16 ~ 16	B.Noise Curve
34	2	00 22	-127 ~ 127	B.Noise Depth
36	1	00 24	0 ~ 124	Growl Control
37	1	00 25	0 ~ 127	Growl Value
38	1	00 26	-16 ~ 16	Growl Curve
39	2	00 27	-127 ~ 127	Growl Depth
41	1	00 29	0 ~ 124	T.Formant Control
42	1	00 2A	0 ~ 127	T.Formant Value
43	1	00 2B	-16 ~ 16	T.Formant Curve
44	2	00 2C	-127 ~ 127	T.Formant Depth
46	1	00 2E	0 ~ 124	D.Filter Control
47	1	00 2F	-16 ~ 16	D.Filter Curve

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48	2	00 30	-127 ~ 127	D.Filter Depth	199	1	01 47	-64 ~ 63	Offset 1
50	1	00 32	0 ~ 124	H.Enhancer Control	200-213		01 48 ~ 01 55		Break Point/Offset 2-8
51	1	00 33	-16 ~ 16	H.Enhancer Curve	214	1	01 56	0 ~ 127	Amplitude Level
52	2	00 34	-127 ~ 127	H.Enhancer Depth	215	1	01 57	0 ~ 127	Break Point 1
54	1	00 36	0 ~ 124	Damping Control	216	1	01 58	-64 ~ 63	Offset 1
55	1	00 37	-16 ~ 16	Damping Curve	217-230		01 59 ~ 01 66		Break Point/Offset 2-8
56	2	00 38	-127 ~ 127	Damping Depth	231-240		01 67 ~ 01 70	32 ~ 126	Element Name 1-10
58	1	00 3A	0 ~ 124	Absorption Control	241-707		01 71 ~ 05 43		reserve
59	1	00 3B	-16 ~ 16	Absorption Curve	708	2	05 44	-127 ~ 127	Excitation Level To Pipe/String
60	2	00 3C	-127 ~ 127	Absorption Depth	710	1	05 46	0 ~ 127	Break Point 1
62	1	00 3E	0 ~ 1	Trigger Mode	711	2	05 47	-127 ~ 127	Offset 1
63	1	00 3F	0 ~ 96	Xfade Speed	713-718		05 49 ~ 05 4E		Break Point/Offset 2-3
64	1	00 40	0 ~ 50	Interpolate Speed	719-725		05 4F ~ 05 55		reserve
65	1	00 41	0 ~ 127	B.Noise Level	726	2	05 56	-127 ~ 127	Excitation Level To Driver
66	1	00 42	0 ~ 127	Break Point 1	728	1	05 58	0 ~ 127	Break Point 1
67	1	00 43	-64 ~ 63	Offset 1	729	2	05 59	-127 ~ 127	Offset 1
68-77		00 44 ~ 00 4D		Break Point/Offset 2-6	731-736		05 5B ~ 05 60		Break Point/Offset 2-3
78	1	00 4E	0 ~ 125	B.Noise HPF	737	1	05 61	0 ~ 127	Excitation LPF Cutoff Freq
79	1	00 4F	0 ~ 127	Break Point 1	738	1	05 62	0 ~ 127	Break Point 1
80	1	00 50	-64 ~ 63	Offset 1	739	1	05 63	-64 ~ 63	Offset 1
81-82		00 51 ~ 00 52		Break Point/Offset 2	740-743		05 64 ~ 05 67		Break Point/Offset 2-3
83	1	00 53	0 ~ 127	B.Noise LPF	744	1	05 68	0 ~ 16	Excitation Velo Sens To Level
84	1	00 54	0 ~ 127	Break Point 1	745	1	05 69	0 ~ 16	Excitation Velo Sens To LPF
	1	00 55	-64 ~ 63	Offset 1	746	1	05 6A	-16 ~ 16	Excitation Velo Sens To P.Width
86-87		00 56 ~ 00 57		Break Point/Offset 2					
88	1	00 58	0 ~ 22	B.Noise Noise	747	1	05 6B	0 ~ 127	Excitation Pulse Width
89	1	00 59	0 ~ 1	B.Noise Key On Reset	748	1	05 6C	0 ~ 127	Break Point 1
90	1	00 5A	0 ~ 32	B.Noise Slit Drive	749	1	05 6D	-64 ~ 63	Offset 1
91	1	00 5B	-64 ~ 63	B.Noise Control Balance	750-753		05 6E ~ 05 71		Break Point/Offset 2-3
92	1	00 5C	0 ~ 1	T.Formant Pitch Tracking	754		05 72		reserve
93	2	00 5D	0-176(-128-127)	T.Formant Pitch (Tracking=1)	755	1	05 73	0 ~ 5	HE Carrier Signal
				Break Point 1	756	1	05 74	0 ~ 127	HE Carrier HPF
95	1	00 5F	0 ~ 127	Offset 1	757	1	05 75	0 ~ 127	Break Point 1
96	2	00 60	-127 ~ 127	Break Point/Offset 2-8	758	1	05 76	-64 ~ 63	Offset 1
98-118		00 62 ~ 00 76		Break Point/Offset 2-8	759-764		05 77 ~ 05 7C		Break Point/Offset 2-4
119	2	00 77	-127 ~ 127	T.Formant Intens	765	1	05 7D	-64 ~ 63	HE Carrier Overdrive
121	1	00 79	0 ~ 127	Break Point 1	766	1	05 7E	0 ~ 127	Break Point 1
122	2	00 7A	-127 ~ 127	Offset 1	767	1	05 7F	-64 ~ 63	Offset 1
124-132		00 7C ~ 01 04		Break Point/Offset 2-4	768-773		06 00 ~ 06 05		Break Point/Offset 2-4
133	1	01 05	-64 ~ 63	T.Formant Amount	774	1	06 06	0 ~ 127	HE Carrier Level
134	1	01 06	0 ~ 127	Break Point 1	775	1	06 07	0 ~ 127	Break Point 1
135	1	01 07	-64 ~ 63	Offset 1	776	1	06 08	-64 ~ 63	Offset 1
136-141		01 08 ~ 01 0D		Break Point/Offset 2-4	777-786		06 09 ~ 06 12		Break Point/Offset 2-6
142	1	01 0E	0 ~ 125	T.Formant HPF	787	1	06 13	0 ~ 5	HE Modulator Signal
143	1	01 0F	0 ~ 127	Break Point 1	788	1	06 14	0 ~ 127	HE Modulator HPF
144	1	01 10	-64 ~ 63	Offset 1	789	1	06 15	0 ~ 127	Break Point 1
145-148		01 11 ~ 01 14		Break Point/Offset 2-3	790	1	06 16	-64 ~ 63	Offset 1
149	1	01 15	0 ~ 127	T.Formant LPF	791-792		06 17 ~ 06 18		Break Point/Offset 2
150	1	01 16	0 ~ 127	Break Point 1	793	1	06 19	-64 ~ 63	HE Modulator Overdrive
151	1	01 17	-64 ~ 63	Offset 1	794	1	06 1A	0 ~ 127	Break Point 1
152-155		01 18 ~ 01 1D		Break Point/Offset 2-3	795	1	06 1B	-64 ~ 63	Offset 1
156	1	01 1C	0 ~ 127	Driver Output	796-797		06 1C ~ 06 1D		Break Point/Offset 2
157	1	01 1D	0 ~ 127	Break Point 1	798	1	06 1E	0 ~ 127	HE Modulator Phase
158	1	01 1E	-64 ~ 63	Offset 1	799	1	06 1F	0 ~ 127	HE Modulator Index
159-168		01 1F ~ 01 28		Break Point/Offset 2-6	800	1	06 20	0 ~ 127	Break Point 1
169	1	01 29	0 ~ 127	Pipe/String Output	801	1	06 21	-64 ~ 63	Offset 1
170	1	01 2A	0 ~ 127	Break Point 1	802-807		06 22 ~ 06 27		Break Point/Offset 2-4
171	1	01 2B	-64 ~ 63	Offset 1	808	1	06 28	-64 ~ 63	HE Balance
172-181		01 2C ~ 01 35		Break Point/Offset 2-6	809	1	06 29	0 ~ 127	Break Point 1
182	1	01 36	0 ~ 127	Tap Output	810	1	06 2A	-64 ~ 63	Offset 1
183	1	01 37	0 ~ 127	Break Point 1	811-816		06 2B ~ 06 30		Break Point/Offset 2-4
184	1	01 38	-64 ~ 63	Offset 1	817	1	06 31	0 ~ 3	DF Filter Mode
185-194		01 39 ~ 01 42		Break Point/Offset 2-6	818	1	06 32	0 ~ 127	DF Input Gain
195	1	01 43	0 ~ 1	Tap Sign	819	1	06 33	0 ~ 1	DF Cutoff Tracking
196	1	01 44	0 ~ 4	Tap Setting	820	1	06 34	0-127(-64-63)	DF Cutoff Freq (Tracking=1)
197	1	01 45	0 ~ 127	Tap Location	821	1	06 35	0 ~ 127	Break Point 1
198	1	01 46	0 ~ 127	Break Point 1	822	1	06 36	-64 ~ 63	Offset 1

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823-826	06 37 - 06 3A	Break Point/Offset 2-3	970-971	07 4A - 07 4B	Break Point/Offset 2
827	1 06 3B 0 - 127	DF Resonance	972	1 07 4C 0 - 127	E&P EG Attack Level
828	1 06 3C 0 - 127	Break Point 1	973	1 07 4D 0 - 127	Break Point 1
829	1 06 3D -64 - 63	Offset 1	974	1 07 4E -64 - 63	Offset 1
830-833	06 3E - 06 41	Break Point/Offset 2-3	975-976	07 4F - 07 50	Break Point/Offset 2
834	1 06 42 -64 - 63	DF Balance	977	1 07 51 0 - 127	E&P EG Decay Rate
835	1 06 43 0 - 127	EQ Input Gain	978	1 07 52 0 - 127	Break Point 1
836	1 06 44 0 - 127	EQ HPF	979	1 07 53 -64 - 63	Offset 1
837	1 06 45 0 - 127	Break Point 1	980-981	07 54 - 07 55	Break Point/Offset 2
838	1 06 46 -64 - 63	Offset 1	982	1 07 56 0 - 64	E&P EG Depth To Embouchure
839-844	06 47 - 06 4C	Break Point/Offset 2-4	983	1 07 57 0 - 64	E&P EG Depth To Pitch
845	1 06 4D 0 - 127	EQ LPF	984	1 07 58 0 - 127	Vibrato Delay Time
846	1 06 4E 0 - 127	Break Point 1	985	1 07 59 0 - 127	Break Point 1
847	1 06 4F -64 - 63	Offset 1	986	1 07 5A -64 - 63	Offset 1
848-853	06 50 - 06 55	Break Point/Offset 2-4	987-988	07 5B - 07 5C	Break Point/Offset 2
854	1 06 56 -8 - 8	EQ Post EQ Boost	989	1 07 5D 0 - 127	Vibrato Attack Rate
855	1 06 57 0 - 48	EQ Band1 Freq	990	1 07 5E 0 - 127	Break Point 1
856	1 06 58 0 - 127	Q	991	1 07 5F -64 - 63	Offset 1
857	1 06 59 -64 - 63	Level	992-993	07 60 - 07 61	Break Point/Offset 2
858	1 06 5A 22 - 70	EQ Band2 Freq	994	1 07 62 0 - 127	Vibrato Sustain Level
859-860	06 5B - 06 5C	Q and Level	995	1 07 63 0 - 127	Vibrato Depth
861	1 06 5D 42 - 90	EQ Band3 Freq	996	1 07 64 0 - 127	Break Point 1
862-863	06 5E - 06 5F	Q and Level	997	1 07 65 -64 - 63	Offset 1
864	1 06 60 64 - 112	EQ Band4 Freq	998-999	07 66 - 07 67	Break Point/Offset 2
865-866	06 61 - 06 62	Q and Level	1000	1 07 68 0 - 127	Vibrato Depth To Embouchure
867	1 06 63 84 - 127	EQ Band5 Freq	1001	1 07 69 0 - 127	Vibrato Depth To Pitch
868-869	06 64 - 06 65	Q and Level	1002	2 07 6A -127 - 127	Vibrato Offset
870	1 06 66 0 - 1	IE on/off	1004	1 07 6C 0 - 127	Vibrato Speed
871	1 06 67 0 - 127	IE Density	1005	1 07 6D 0 - 127	Break Point 1
872	1 06 68 0 - 127	IE Dispersion	1006	1 07 6E -64 - 63	Offset 1
873	1 06 69 0 - 16	IE Roughness	1007-1008	07 6F - 07 70	Break Point/Offset 2
874	1 06 6A 0 - 127	IE Wet Level	1009	1 07 71 0 - 16	Vibrato Speed Shift
875	1 06 6B -64 - 63	IE Level Balance	1010	1 07 72 0 - 10	Vibrato Randomness
876	1 06 6C 0 - 1	RSN on/off	1011	1 07 73 0 - 127	Growl Depth To Pressure
877	1 06 6D 0 - 127	RSN Input Gain	1012	1 07 74 0 - 127	Growl Depth To B.Noise
878-887	2 06 6E - 06 77	RSN Delay Time 1-5	1013	2 07 75 -127 - 127	Growl Offset
888	1 06 78 0 - 127	RSN Decay Time	1015	1 07 77 0 - 127	Growl Speed
889	1 06 79 0 - 127	RSN LPF	1016	1 07 78 0 - 127	Break Point 1
890	1 06 7A -64 - 63	RSN Conjunction	1017	1 07 79 -64 - 63	Offset 1
891	1 06 7B 0 - 16	RSN Diffusion	1018-1019	07 7A - 07 7B	Break Point/Offset 2
892	1 06 7C -16 - 16	RSN Phase	1020	1 07 7C 0 - 10	Growl Randomms
893	1 06 7D 0 - 127	RSN Wet Level	1021	1 07 7D 0 - 16	Growl Speed Shift
894	1 06 7E -64 - 63	RSN Level Balance	1022	1 07 7E 0 - 1	Growl Vibrato Sync
895	1 06 7F 0 - 127	IE&RSN Dry Level	1023	1 07 7F 0 - 16	A&F EG Velocity Sens To Level
896	1 07 00 -16 - 16	Pres EG Attack Rate Offset	1024	1 08 00 0 - 16	A&F EG Velocity Sens To Rate
897	1 07 01 -16 - 16	Pres EG Release Rate Offset	1025	1 08 01 0 - 127	A&F EG Attack Rate 1
898	1 07 02 0 - 16	Pres EG Velocity Sens To Level	1026	1 08 02 0 - 127	Break Point 1
899	1 07 03 0 - 16	Pres EG Velocity Sens To Rate	1027	1 08 03 -64 - 63	Offset 1
900-953	07 04 - 07 39	reserve	1028-1029	08 04 - 08 05	Break Point/Offset 2
954	1 07 3A 0 - 2	Pres EG Mode	1030	1 08 06 0 - 127	A&F EG Attack Level 1
955	1 07 3B 0 - 16	E&P EG Velocity Sens To Level	1031-1034	08 07 - 08 0A	Break Point/Offset 1-2
956	1 07 3C -16 - 16	E&P EG Velocity Sens To Rate	1035	1 08 0B 0 - 127	A&F EG Attack Rate 2
957	1 07 3D 0 - 127	E&P EG Hold Time	1036-1039	08 0C - 08 0F	Break Point/Offset 1-2
958	1 07 3E 0 - 127	Break Point 1	1040	1 08 10 0 - 127	A&F EG Decay Rate
959	1 07 3F -64 - 63	Offset 1	1041-1044	08 11 - 08 14	Break Point/Offset 1-2
960-961	07 40 - 07 41	Break Point/Offset 2	1045	1 08 15 0 - 127	A&F EG Sustain Level
962	1 07 42 -64 - 63	E&P EG Initial Level	1046-1049	08 16 - 08 19	Break Point/Offset 1-2
963	1 07 43 0 - 127	Break Point 1	1050	1 08 1A 0 - 127	A&F EG Release Rate
964	1 07 44 -64 - 63	Offset 1	1051-1054	08 1B - 08 1E	Break Point/Offset 1-2
965-966	07 45 - 07 46	Break Point/Offset 2	1055	1 08 1F 0 - 127	A&F EG Depth To Amplitude
967	1 07 47 0 - 127	E&P EG Attack Rate	1056	2 08 20 -127 - 127	A&F EG Depth To Filter
968	1 07 48 0 - 127	Break Point 1	1058-1479	08 22 - 0B 47	reserve
969	1 07 49 -64 - 63	Offset 1			

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Table 5.3 System Parameters

no.	c	p	v	name
0-19	1	00 00 - 00 13	32 - 126	Greeting Message 1-20
20	1	00 14	-12 - 12	Keyboard Transpose VL1,7 only
21	1	00 15	0 - 1	Local on/off
22	1	00 16	0 - 3	Octave Switch Hold VL1,7 only
23	1	00 17	-64 - 63	Master Tuning
24	1	00 18	0 - 1	Memory Protect
25	1	00 19	0 - 1	Reverb
26	1	00 1A	0 - 1	Output
27	1	00 1B	0 - 127	Velocity Curve VL1,7 only
28	1	00 1C	-16 - 17	After Touch Curve VL1,7 only
29	1	00 1D	-16 - 17	Breath Control Curve
30	1	00 1E	0 - 119	Modulation Wheel 2 VL1,7 only
31	1	00 1F	0 - 120	Foot Switch 1 VL1,7 only
32	1	00 20	0 - 120	Foot Switch 2 VL1,7 only
33	1	00 21	0 - 119	Foot Controller 1 VL1,7 only
34	1	00 22	0 - 119	Foot Controller 2 VL1,7 only
35	1	00 23	0 - 119	Breath Controller VL1,7 only
36	1	00 24	0 - 15	Transmit Channel
37	1	00 25	0 - 16	Receive Channel
38	1	00 26	0 - 17	Device Number
39	1	00 27	0	reserve
40	1	00 28	0 - 1	Display
41	1	00 29	0 - 1	Confirm
42	1	00 2A	0 - 1	WX Lip
43	1	00 2B	0 - 2	Breath Mode
44	1	00 2C	0 - 127	Touch EG Time
45	1	00 2D	0 - 127	After Touch High Offset
46	1	00 2E	-7 - 7	After Touch High Gain
47	1	00 2F	0 - 127	After Touch Low Offset
48	1	00 30	-7 - 7	After Touch Low Gain
49	1	00 31	0 - 127	Velocity Offset
50	1	00 32	-7 - 7	Velocity Gain
51-63	00 33 - 00 3F	0	0	reserve

Master Tuning of System Parameters can only be performed during reception. Transmission will be performed using the 4.4 DX1 Master Tuning Compatibility format. In addition, Device Number Parameter Change cannot be received or transmission.

Table 5.4 Micro Tuning Parameters

no.	c	p	v	name
0-254	2	00 00 - 01 7E	0 - 10794	C-2-G8
36-265	1	02 00 - 02 09	32 - 126	Table Name 1-10

Table 5.5 Remote Switch

no.	c	p	name
0	1	00 00	PLAY
1	1	00 01	EDIT
2	1	00 02	UTILITY
3	1	00 03	COPY
4	1	00 04	STORE
5	1	00 05	Data Dial -1
6	1	00 06	Data Dial +1
7	1	00 07	Data Dial -16
8	1	00 08	Data Dial +16
9	1	00 09	DEC
10	1	00 0A	CURSOR UP
11	1	00 0B	INC
12	1	00 0C	CURSOR LEFT
13	1	00 0D	CURSOR DOWN
14	1	00 0E	CURSOR RIGHT
15	1	00 0F	EXIT

16	1	00 10	ENTER
17-24	1	00 11-18	F1-F8
25-28	1	00 19-1C	A-D VL1,7 only
29-32	1	00 1D-20	E-H VL1 only
33-48	1	00 21-30	1-16 VL1,7 only

value 0 - 63 : off
value 64 - 127 : on

Table 5.6 Program Change Table Parameters (VL1-m only)

no.	c	p	v	name
0-127	1	00 00-7F	0 - 127	001-128

Table 5.7 Element, Effect and Modifier on/off

no.	c	p	name
0	1	00 00	Element 1 on/off VL1,1-m only
1	1	00 01	Element 2 on/off VL1,1-m only
2	1	00 02	Modulation Effect on/off
3	1	00 03	Feedback Delay on/off
4	1	00 04	Reverberation on/off
5	1	00 05	Harmonic Enhancer on/off
6	1	00 06	Dynamic Filter on/off
7	1	00 07	Equalizer on/off
8	1	00 08	Impulse Expander on/off
9	1	00 09	Resonator on/off

value 0 - 63 : off
value 64 - 127 : on

Function ...	Transmitted	Recognized	Remarks
:Basic Default	: 1 - 16	: 1 - 16	: Memorized
:Channel Changed	: 1 - 16	: 1 - 16	:
:Mode Default	: 3	: 1 - 4	: Memorized
:Mode Messages	: x	: x	:
:Mode Altered	: *****	: x	:
:Note Number : True voice	: 24 - 120 : *****	: 0 - 127 : 1 - 127	: Transpose and : Octave switch
:Velocity Note ON	: o 9nH,v=1-127	: o v=1-127	:
:Velocity Note OFF	: x 9nH,v=0	: x	:
:After Key's	: x	: x	:
:Touch Ch's	: o	: o	:
:Pitch Bender	: o	: o 0-12 semi	:7 bit resolution:
:Control Change	1 : o M.Wheel 1 5 : x 7 : x 16 : o CS 1 17 : o CS 2 64 : x 65 : x 1-31 : o Assignable *1 33-119 : o Assignable *1 121 : x	: o : o : o : o : o : o : o : o : o : o	: : Portamento time : Main volume : Gen.pur.cont.1 : Gen.pur.cont.2 : Sustain : Portamento SW : : : : Reset All Cntrls:
:Prog Change : True #	: o 0 -127 : *****	: o 0 - 127 : 0 - 127	: :
:System Exclusive	: o *2	: o *2	: Voice, System
:System : Song Pos	: x	: x	:
:System : Song Sel	: x	: x	:
:Common : Tune	: x	: x	:
:System :Clock	: x	: x	:
:Real Time :Commands	: x	: x	:
:Aux :Local ON/OFF	: x	: x	:
:Aux :All Notes OFF	: x	: x	:
:Mes- :Active Sense	: o	: o	:
:sages:Reset	: x	: x	:
: Notes:*1 Assignable controllers are M.Wheel 2, Foot cont.1&2, : Foot SW1&2 and Breath controller. : *2 Transmit/receive if device No. is not off. : : :			
Mode 1	: OMNI ON, POLY	Mode 2	: OMNI ON, MONO
Mode 3	: OMNI OFF, POLY	Mode 4	: OMNI OFF, MONO
			o : Yes x : No

Function ...	Transmitted	Recognized	Remarks
Basic Default	: 1 - 16	: 1 - 16	: Memorized
Channel Changed	: 1 - 16	: 1 - 16	:
Mode Default	: 3	: 1 - 4	: Memorized
Mode Messages	: x	: x	:
Mode Altered	: *****	: x	:
Note	: x	: 0 - 127	:
Number : True voice	: *****	: 0 - 127	:
Velocity Note ON	: x	: o v=1-127	:
Velocity Note OFF	: x	: x	:
After Key's	: x	: x	:
Touch Ch's	: x	: o	:
Pitch Bender	: x	: o 0-12 semi	: 7 bit resolution:
Control 2	: o	: o	: Breath cont.
Control 5	: x	: o	: Portamento time
Control 7	: x	: o	: Main volume
Control 16	: x	: o	: Gen.pur.cont.1
Control 17	: x	: o	: Gen.pur.cont.2
Change 64	: x	: o	: Sustain
Change 65	: x	: o	: Portamento SW
Change 1-31	: x	: o	:
Change 33-119	: x	: o	:
Change 121	: x	: o	: Reset All Cntrls:
Prog	: x	: o 0 - 127	:
Change : True #	: *****	: 0 - 127	:
System Exclusive	: o	*1 : o	*1 : Voice, System
System : Song Pos	: x	: x	:
System : Song Sel	: x	: x	:
Common : Tune	: x	: x	:
System : Clock	: x	: x	:
Real Time : Commands	: x	: x	:
Aux : Local ON/OFF	: x	: x	:
Aux : All Notes OFF	: x	: x	:
Mes- : Active Sense	: x	: o	:
sages:Reset	: x	: x	:
Notes: *1 Transmit/receive if device No. is not off.			
Mode 1	: OMNI ON, POLY	Mode 2	: OMNI ON, MONO
Mode 3	: OMNI OFF, POLY	Mode 4	: OMNI OFF, MONO
			o : Yes
			x : No

Function ...	Transmitted	Recognized	Remarks
Basic Default	: 1 - 16	: 1 - 16	: Memorized
Channel Changed	: 1 - 16	: 1 - 16	:
Mode Default	: 3	: 1 - 4	: Memorized
Mode Messages	: x	: x	:
Mode Altered	: *****	: x	:
Note Number : True voice	: 24 - 120 : *****	: 0 - 127 : 1 - 127	: Transpose and : Octave switch
Velocity Note ON	: o 9nH, v=1-127	: o v=1-127	:
Velocity Note OFF	: x 9nH, v=0	: x	:
After Key's	: x	: x	:
Touch Ch's	: o	: o	:
Pitch Bender	: o	: o 0-12 semi	: 7 bit resolution:
Control 1	: o M.Wheel 1	: o	:
Control 5	: x	: o	: Portamento time
Control 7	: x	: o	: Main volume
Control 16	: o CS 1	: o	: Gen.pur.cont.1
Control 17	: o CS 2	: o	: Gen.pur.cont.2
Change 64	: x	: o	: Sustain
Change 65	: x	: o	: Portamento SW
Change 1-31	: o Assignable *1	: o	:
Change 33-119	: o Assignable *1	: o	:
Change 121	: x	: o	: Reset All Cntrl's
Prog Change : True #	: o 0 -63 : *****	: o 0 - 127 : 0 - 63	:
System Exclusive	: o *2	: o *2	: Voice, System
System : Song Pos	: x	: x	:
System : Song Sel	: x	: x	:
Common : Tune	: x	: x	:
System :Clock	: x	: x	:
Real Time :Commands	: x	: x	:
Aux :Local ON/OFF	: x	: x	:
Aux :All Notes OFF	: x	: x	:
Mes- :Active Sense	: o	: o	:
sages:Reset	: x	: x	:
Notes: *1 Assignable controllers are M.Wheel 2, Foot cont.1&2, Foot SW1&2 and Breath controller.			
*2 Transmit/receive if device No. is not off.			
Mode 1 : OMNI ON, POLY	Mode 2 : OMNI ON, MONO	o : Yes	
Mode 3 : OMNI OFF, POLY	Mode 4 : OMNI OFF, MONO	x : No	

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