MiDiPLU

EK490 Owner's Manual



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Preface

Congratulations on your purchase of the MIDIPLUS EK490. Thank you for purchasing the EK490, a real versatile intelligent keyboard. The EK490 high quality sounds compatible with the General MIDI Format and others. it is designed to provide everything to the serious artists and amateur musicians needs on stage, or at home. Thus, if used your EK490 in conjunction with a computer with the appropriate music soft ware, it will turn into a more powerful musical instrument or workstation.

What's in the Box?

Included in the MIDIPLUS EK490 package, you should find:

- One (1) **MIDIPLUS EK490** USB MIDI keyboard with styles
- One (1) owner's manual
- One (1) 9V DC adaptor

EK490 Keyboard Overview:

Here are the features including in the EK490 keyboard:

- 49-note semi-weighted keyboard.
- Pitch Bend wheel
- Modulation wheel
- Sustain pedal interface (sustain pedal does not include).
- LCD display screen
- Power supply: External 9V DC power, USB power or 6 AA type batteries.

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Chapter 1. Quick Start

1.1. EK490 Overview

1.1.1. Front Panel



1: VOLUME sliders

2: RHYTHM SELECT button

3: NORMAL MODE button

4: ONE FINGER button

5: MULTI FINGER button

6: DRUMMER button

7: SYNC button

8: START/STOP button

9: FILL A button

10: FILL B button

11: INTRO/ENDING button

12: VOLUME button (VOICE1 · VOICE2 ·

ACCOMPANIMENT)

13: SPLIT button

14: PLAY button

15: RECORD button

16: DOUBLE KEYBOARD button

34 ARR 35 (V) (A) 36 37

17: LAYER button

18: TEMPO SELECT button

19: DEMO SELECT button

20: VOLUME SELECT button

21: LCD display screen

22: VOICE1 SELECT button

23: VOICE2 SELECT button

24: METRONOME button

25: VELOCITY button

26: TRANSPOSE - button

27: TRANSPOSE + button

28: SUSTAIN button

29: REVERB button

30: CHORUS button

31: Preset 1~4

32: DATA encoder

33: Number buttons $0\sim9$, - \times +

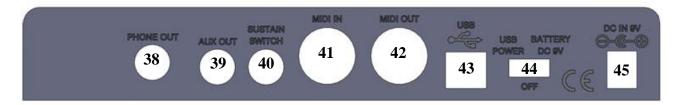
34 : OVTAVE▲

35 : OVTAVE▼

36: PITCH wheel

37: MODULATION wheel

1.1.2. Rear Panel



38: PHONE jack

39: AUX OUT jack

40: SUSTAIN SWITCH jack

41: MIDI IN jack

42: MIDI OUT jack

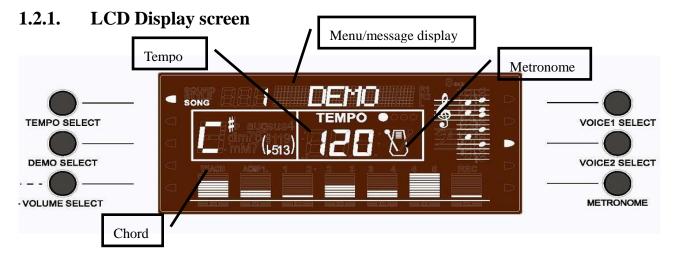
43: USB jack

44: Power switch (USB POWER

/BATTERY or DC 9V)

45: DC IN 9V jack

1.2. Basic Functions



1.2.2. TEMPO SELECT

Tempo or speed, at which the rhythm accompaniment & DEMO is played.

- Press the **TEMPO SELECT** •
- Use the Date encoder to select tempo.
 (Use the number buttons or [+/-] button, effect after 3 seconds, Press the [+] and [-] button simultaneously to instantly reset the tempo value to "0").

1.2.3. DEMO SELECT

EK490 demonstration tracks, and allows you to appreciate the different styles demo songs:

- Press the 【DEMO SELECT】 button.
- Use the 【DATA】 encoder to select DEMO.
 (Use the number buttons or 【+/-】 button, effect after 3 seconds)

• Press the **[START/STOP]** button •

1.2.4. VOLUME SELECT

Individually control the volume: ACCOMPAINMENT, VOICE1, VOICE2.

for example: you want to adjust the volume of automatic accompaniment to 60.

- Press the **[VOLUME SELECT]** button.
- Press the [ACCOMPAINMENT] button.(LED lit)
- Use to turn the Date encoder, setting the value to 60.
 (Use the number buttons or [+/-] input [6]+[0] button)

1.2.5. VOLUME sliders

Adjusts the overall volume of the unit.

1.2.6. OCTAVE up/down

- By pressing the Octave key, you will shift the active keyboard range one octave higher, or lower. For example, if you want to change the octave 2 octaves down: Press Octave Key twice.
- Press the [up] button & [down] button simultaneously to instantly reset the octave value to "0".

1.2.7. PITCH wheel

The Pitch Bend wheel is used for raising or lowering the pitch of a voice during performance. The range of pitch values depends on the sound generator (sound card or module) being used.

1.2.8. MODULATION wheel

It is very common to use the modulation wheel to change the intensity of effects: mainly vibrato(pitch change),tremolo(change the volume),and modulation(change the tone). The modulation wheel produces a vibrato effect shortly after the sound is generated. It is most effective for voice such as saxophone strings and Oboe.

1.2.9. VOICE SELECT

Select the voice you want to the keyboard.

- Press the [VOICE1] button.
- Use to turn the 【DATA】 encoder for select voices name.
 (Use the number buttons or 【+/-】 button, effect after 3 seconds)

1.2.10. METRONOME SELECT

- Press the [METRONME SELECT] button, the metronome name will be displayed.
- Use to turn the **[** DATA **]** encoder to select metronome, the number buttons NO.1~NO.6 or **[**+/-] button, effect after 3 seconds.
- Press the **[START/STOP]** button.

Note: The time signature changes automatically when a rhythm is selected.

Chapter 2. Basic Operations

2.1. Playing Operation

2.1.1. VELOCITY

Press the **[VELOCITY]** button to turn velocity response on.

2.1.2. TRANSPOSE

- Press the TRANSPOSE [+] and [-] button, select the desired level, base on a semitone increment, the transpose range is from −5 to +6.
- Press the TRANSPOSE [+] and [-] button simultaneously to instantly reset the transpose value to "C"(LED unlit).

2.1.3. LAYER

Press the **[LAYER]** button ,indicates that the dual voice is.

2.1.4. DOUBLE KEYBOARD

The preset tones split the keyboard and assign VOICE 1& VOICE 2 sounds.

• Press the [DOUBLE KEYBOARD] button.

With such a preset tone, the sound produced depends on what position of the keyboard you play. For example, BASS/PIANO 1 puts Bass on the left and PIANO on the right of the keyboard.

2.1.5. SUSTAIN

The sustain function lets you produce a natural sustain as you play by press the 【SUSTAIN】, use it to switch on and off.

2.1.6. REVERB

The reverb function lets you produce a natural reverb as you play by press the 【REVERB】, use it to switch on and off.

2.1.7. CHORUS

The chorus function lets you produce a natural chorus as you play by press the 【CHORUS】, use it to switch on and off.

2.1.8. NORMAL MODE

Press the [NORMAL MODE] button ,indicates that the grand piano voice is or VOICE 1& VOICE 2 sounds, not left-hand accompaniment part.

2.1.9. DRUMMER

Press the [DRUMMER] button, indicates that the drum voice is.

2.1.10. RHYTHM SELECT

- Press the [RHYTHM SELECT] button.
- Use the [DATA] encoder, the number buttons or [+/-] button, effect after 3 seconds to select a rhythm.

2.2. AUTO ACCOMPANIMENT

The auto accompaniment feature puts a full backing band at your fingertips. To use it, all you have to do is play the chords with your left hand as you perform, and the selected accompaniment style matching your music will automatically play along, instantly following the chords you play. With auto accompaniment, even a solo performer can enjoy playing with the backing of an entire band or orchestra.

2.2.1. SYNC/VARIATION

- Press the [ONE FINGER] or [MULTI FINGER] button.
- Press the **[SYNC/VARIATION]** button.(LED lit)
- As soon as you play a chord with your left hand, the auto accompaniment starts. (LED unlit)
- When Accompaniment starts, press the **[SYNC/VARIATION]** button(LED lit is variation, unlit is sync).

2.2.2. START/STOP

Press the [START/STOP] button to start the rhythm track auto accompaniment.

2.2.3. INTRO

This is used for the beginning of the song. When the intro finishes playing, accompaniment shifts to the main section. The length of the intro (in measures) differs depending on the selected rhythm.

- Press the [INTRO/ENDING] button.
- press the **[START/STOP]** button.

2.2.4. ENDING

This is used for the ending of the song. When the ending is finished, the auto accompaniment stops automatically. The length of the ending (in measures) differs depending on the selected rhythm.

• Press the INTRO/ENDING button to start the ending section. When the ending is over, auto accompaniment will stop.

2.2.5. FILL A/B

[SYNC/VARIATION] LED unlit: press [FILL A] or [FILL B] button to fill in other accompaniment.

[SYNC/VARIATION] LED lit: press [FILL A] or [FILL B] button to variation fill in other accompaniment.

2.2.6. ONE FINGER

- Press the [ONE FINGER] button.
- Press the **[SYNC/VARIATION]** button.

Single-finger accompaniment makes it simple to produce beautifully orchestrated accompaniment using major, seventh, minor and minor-seventh chords by pressing a minimum number of keys on the Auto accompaniment section of the keyboard. The following abbreviated chord fingerings are used:

- For a major chord, press the root key only.
- For a seventh chord, simultaneously press the root key and a white key to its left.
- For a minor chord, simultaneously press the root key and a white key to its left.
- For a minor-seventh chord, simultaneously press the root key and both a white and black key to its left.

2.2.7. MULTI FINGER

As soon as the left hands play the chord, this instrument will auto accompaniment when using the Multi Finger Chord Auto accompaniment.

2.3. Saving to the Registration Memory

2.3.1. PRESET

The preset ton selected by each selector depends upon status (lit or unlit) of button lamps.

• Press the preset [1] \[2] \[3] or [4] button a few seconds (about 3 seconds), until the "ding" sound to store the current panel settings to the specified registration memory.

2.3.2. RECORD

• Press the [RECORD] button when light flashes three times to engage the record mode.

2.3.3. PLAY

Press the [PLAY] button to playback the recording.

Chapter 3. Auxiliary jack

3.1. Basic jack

3.1.1. PHONE jack

Headphone Out: This jack is a 1/4 TRS stereo headphone output this plays the same signal as the main outputs.

3.1.2. AUX OUT jack

You can use the speaker of preference.

3.1.3. SUSTAIN SWITCH jack

This jack allows you to connect an optional Sustain Footswitch to the keyboard.

3.1.4. DC 9V jack

Use only a genuine external 9V DC adaptor with the same voltage rating as the power supply in

your area to prevent damage to internal components.

3.2. MIDI jack

3.2.1. MIDI OUT jacks

Sends MIDI messages to external devices.

3.2.2. MIDI IN jacks

Receives external MIDI messages.

3.2.3. USB port

This jack is used to connect the keyboard with the computer, to get power and send MIDI messages directly to the sound card

Appendix 1: Specification

ModelMIDIPLUS EK490DescriptionPORTABLE E. PIANO

Keyboard 49 velocity sensitive piano-style key

Maximum Polyphony 64 notes

Instruments 128 GM list sound

Quickly Sound x Rhythm Style 100 Demo Song 20

Sound Effect Velocity · Sustain · Reverb · Chorus · Split · Double keyboard · Double voice · Drum

Auto Accompaniment Normal · One finger · Multi finger

Other Control Transpose \ Data Encoder \ Numeric 0~9 \ \ + \ \ -

LCD Large LCD screen with blue back-light

Volume Control Total \(\text{Accompaniment} \(\text{Voice1} \) Voice2

Record Control Record · Play

Preset 5

Rhythm Control Sync/variation \Start/Stop \Fill-in A \Fill-in B \Intro/Ending

Octave Up · Down

Wheels Pitch · Modulation

Tempo Control 30-250

MIDI 16 multi-timbre received, GM Level 1 standard

Socket Sustain pedal input \ Aux out \ MIDI IN/OUT \ USB to computer \ Stereo headphone

Speaker Output 2W+2W **Power Adapter** DC 9V / 2A

Power Batteries 6 x AA or equivalent batteries (not included)

Dimensions About 83 x 25.5 x 8 cm

Weight About 3.6 kg (without batteries)

Appendix 2: Voice List

1 Acoustic Grand Piano 33 Acoustic Bass 65 Soprano Sax 97 Fx1 (rain) 2 Bright Acoustic Piano 34 Finger Bass 66 Alto Sax 98 Fx2 (soundtrack) 3 Electric Grand Piano 35 Picked Bass 67 Tenor Sax 99 Fx3 (crystal) 4 Honky-Tonk Piano 36 Fretless Bass 68 Baritone Sax 100 Fx4 (atmosphere) 5 Electric Piano 1 37 Slap Bass 1 69 Oboe 101 Fx5 (brightness) 6 Electric Piano 2 38 Slap Bass 2 70 English Horn 102 Fx6 (goblins) 7 Harpsichord 39 Synth Bass 1 71 Bassoon 103 Fx7 (echoes) 8 Clavi 40 Synth Bass 2 72 Clarinet 104 Fx8 (sci-fi) 9 Celesta 41 Violin 73 Piccolo 105 Sitar 10 Glockenspiel 42 Viola 74 Flute 106 Banjo 11 Music Box 43 Cello 75 Recorder 107 Shamisen 12 Vibraphone 44 Contrabass 76 Pan Flute 108 Koto 13 Marimba 45 Tremolo Strings			T	<u> </u>		1	
3 Electric Grand Piano 35 Picked Bass 67 Tenor Sax 99 Fx3 (crystal) 4 Honky-Tonk Piano 36 Fretless Bass 68 Baritone Sax 100 Fx4 (atmosphere) 5 Electric Piano 1 37 Slap Bass 1 69 Oboe 101 Fx5 (brightness) 6 Electric Piano 2 38 Slap Bass 2 70 English Horn 102 Fx6 (goblins) 7 Harpsichord 39 Synth Bass 1 71 Bassoon 103 Fx7 (echoes) 8 Clavi 40 Synth Bass 2 72 Clarinet 104 Fx8 (sci-fi) 9 Celesta 41 Violin 73 Piccolo 105 Sitar 10 Glockenspiel 42 Viola 74 Flute 106 Banjo 11 Music Box 43 Cello 75 Recorder 107 Shamisen 12 Vibraphone 44 Contrabass 76 Pan Flute 108 Koto 13 Marimba 45 Tremolo Strings 78 Shakuhachi 110 Bagpipe 15 Tubular Bells 47 Orchestral Harp 79 Whistle 111 Fiddle 16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percus	1	Acoustic Grand Piano	33 Acoustic Bass	65	Soprano Sax	97	Fx1 (rain)
4 Honky-Tonk Piano 36 Fretless Bass 68 Baritone Sax 100 Fx4 (atmosphere) 5 Electric Piano 1 37 Slap Bass 1 69 Oboe 101 Fx5 (brightness) 6 Electric Piano 2 38 Slap Bass 2 70 English Horn 102 Fx6 (goblins) 7 Harpsichord 39 Synth Bass 1 71 Bassoon 103 Fx7 (echoes) 8 Clavi 40 Synth Bass 2 72 Clarinet 104 Fx8 (sci-fi) 9 Celesta 41 Violin 73 Piccolo 105 Sitar 10 Glockenspiel 42 Viola 74 Flute 106 Banjo 11 Music Box 43 Cello 75 Recorder 107 Shamisen 12 Vibraphone 44 Contrabass 76 Pan Flute 108 Koto 13 Marimba 45 Tremolo Strings 77 Blown Bottle 109 Kalimba 14 Xylophone 46 Pizzicato Strings 78 Shakuhachi 110 Bagpipe 15 Tubular Bells 47 Orchestral Harp 79 Whistle 111 Fiddle 16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive O	2	Bright Acoustic Piano	34 Finger Bass	66	Alto Sax	98	Fx2 (soundtrack)
5 Electric Piano 1 37 Slap Bass 1 69 Oboe 101 Fx5 (brightness) 6 Electric Piano 2 38 Slap Bass 2 70 English Horn 102 Fx6 (goblins) 7 Harpsichord 39 Synth Bass 1 71 Bassoon 103 Fx7 (echoes) 8 Clavi 40 Synth Bass 2 72 Clarinet 104 Fx8 (sci-fi) 9 Celesta 41 Violin 73 Piccolo 105 Sitar 10 Glockenspiel 42 Viola 74 Flute 106 Banjo 11 Music Box 43 Cello 75 Recorder 107 Shamisen 12 Vibraphone 44 Contrabass 76 Pan Flute 108 Koto 13 Marimba 45 Tremolo Strings 77 Blown Bottle 109 Kalimba 14 Xylophone 46 Pizzicato Strings 78 Shakuhachi 110 Bagpipe 15 Tubular Bells 47 Orchestral Harp 79 Whistle 111 Fiddle 16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive Organ 50 String Ensemble 2 82 Lead2 (sawtooth) 114 Agogo 19 Rock Organ <td>3</td> <td>Electric Grand Piano</td> <td>35 Picked Bass</td> <td>67</td> <td>Tenor Sax</td> <td>99</td> <td>Fx3 (crystal)</td>	3	Electric Grand Piano	35 Picked Bass	67	Tenor Sax	99	Fx3 (crystal)
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7 Harpsichord 39 Synth Bass 1 71 Bassoon 103 Fx7 (echoes) 8 Clavi 40 Synth Bass 2 72 Clarinet 104 Fx8 (sci-fi) 9 Celesta 41 Violin 73 Piccolo 105 Sitar 10 Glockenspiel 42 Viola 74 Flute 106 Banjo 11 Music Box 43 Cello 75 Recorder 107 Shamisen 12 Vibraphone 44 Contrabass 76 Pan Flute 108 Koto 13 Marimba 45 Tremolo Strings 77 Blown Bottle 109 Kalimba 14 Xylophone 46 Pizzicato Strings 78 Shakuhachi 110 Bagpipe 15 Tubular Bells 47 Orchestral Harp 79 Whistle 111 Fiddle 16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive Organ 50 String Ensemble 2 82 Lead 2(sawtooth) 114 Agogo 19 Rock Organ 51 Synth Strings1 83 Lead3 (calliope) 115 Steel Drums 20 Church Organ 52 Synth Strings2 84 Lead4 (chiff) 116 Woodblock 21 Reed Organ </td <td>5</td> <td>Electric Piano 1</td> <td>37 Slap Bass1</td> <td>69</td> <td>Oboe</td> <td>101</td> <td>Fx5 (brightness)</td>	5	Electric Piano 1	37 Slap Bass1	69	Oboe	101	Fx5 (brightness)
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9 Celesta 41 Violin 73 Piccolo 105 Sitar 10 Glockenspiel 42 Viola 74 Flute 106 Banjo 11 Music Box 43 Cello 75 Recorder 107 Shamisen 12 Vibraphone 44 Contrabass 76 Pan Flute 108 Koto 13 Marimba 45 Tremolo Strings 77 Blown Bottle 109 Kalimba 14 Xylophone 46 Pizzicato Strings 78 Shakuhachi 110 Bagpipe 15 Tubular Bells 47 Orchestral Harp 79 Whistle 111 Fiddle 16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive Organ 50 String Ensemble 2 82 Lead 2(sawtooth) 114 Agogo 19 Rock Organ 51 Synth Strings1 83 Lead3 (calliope) 115 Steel Drums 20 Church Organ 52 Synth Strings2 84 Lead4 (chiff) 116 Woodblock 21 Reed Organ 53 Choir Aahs 85 Lead5 (charang) 117 Taiko Drum 22 Accordion 54 Voice Oohs 86 Lead6 (voice) 118 Melodic Tom 23 H	7	Harpsichord	39 Synth Bass 1	71	Bassoon	103	Fx7 (echoes)
10Glockenspiel42Viola74Flute106Banjo11Music Box43Cello75Recorder107Shamisen12Vibraphone44Contrabass76Pan Flute108Koto13Marimba45Tremolo Strings77Blown Bottle109Kalimba14Xylophone46Pizzicato Strings78Shakuhachi110Bagpipe15Tubular Bells47Orchestral Harp79Whistle111Fiddle16Dulcimer48Timpani80Ocarina112Shanai17Drawbar Organ49String Ensemble 181Lead 1(square)113Tinkle Bell18Percussive Organ50String Ensemble 282Lead 2(sawtooth)114Agogo19Rock Organ51Synth Strings183Lead3 (calliope)115Steel Drums20Church Organ52Synth Strings284Lead4 (chiff)116Woodblock21Reed Organ53Choir Aahs85Lead5 (charang)117Taiko Drum22Accordion54Voice Oohs86Lead6 (voice)118Melodic Tom23Harmonica55Synth Voice87Lead7 (fifths)119Synth Drum24Tango Accordion56Orchestra Hit88Lead8 (bass+lead)120Reverse Cymbal25Acoustic Guitar (nylon) <td>8</td> <td>Clavi</td> <td>40 Synth Bass2</td> <td>72</td> <td>Clarinet</td> <td>104</td> <td>Fx8 (sci-fi)</td>	8	Clavi	40 Synth Bass2	72	Clarinet	104	Fx8 (sci-fi)
11 Music Box 43 Cello 75 Recorder 107 Shamisen 12 Vibraphone 44 Contrabass 76 Pan Flute 108 Koto 13 Marimba 45 Tremolo Strings 77 Blown Bottle 109 Kalimba 14 Xylophone 46 Pizzicato Strings 78 Shakuhachi 110 Bagpipe 15 Tubular Bells 47 Orchestral Harp 79 Whistle 111 Fiddle 16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive Organ 50 String Ensemble 2 82 Lead 2(sawtooth) 114 Agogo 19 Rock Organ 51 Synth Strings1 83 Lead3 (calliope) 115 Steel Drums 20 Church Organ 52 Synth Strings2 84 Lead4 (chiff) 116 Woodblock 21 Reed Organ 53 Choir Aahs 85 Lead5 (charang) 117 Taiko Drum 22 Accordion 54 Voice Oohs 86 Lead6 (voice) 118 Melodic Tom 23 Harmonica 55 Synth Voice 87 Lead7 (fifths) 119 Synth Drum 24 Tango Accordion 56 Orchestra Hit 88 Lead8 (bass+lead) 120 Reverse Cymbal 25 Acoustic Guitar (nylon) 57 Trumpet 89 Pad1 (new age) 121 Gt. Fret Noise 26 Acoustic Guitar (steel) 58 Trombone 90 Pad2 (warm) 122 Breath Noise	9	Celesta	41 Violin	73	Piccolo	105	Sitar
12Vibraphone44Contrabass76Pan Flute108Koto13Marimba45Tremolo Strings77Blown Bottle109Kalimba14Xylophone46Pizzicato Strings78Shakuhachi110Bagpipe15Tubular Bells47Orchestral Harp79Whistle111Fiddle16Dulcimer48Timpani80Ocarina112Shanai17Drawbar Organ49String Ensemble 181Lead 1(square)113Tinkle Bell18Percussive Organ50String Ensemble 282Lead 2(sawtooth)114Agogo19Rock Organ51Synth Strings183Lead3 (calliope)115Steel Drums20Church Organ52Synth Strings284Lead4 (chiff)116Woodblock21Reed Organ53Choir Aahs85Lead5 (charang)117Taiko Drum22Accordion54Voice Oohs86Lead6 (voice)118Melodic Tom23Harmonica55Synth Voice87Lead7 (fifths)119Synth Drum24Tango Accordion56Orchestra Hit88Lead8 (bass+lead)120Reverse Cymbal25Acoustic Guitar (nylon)57Trumpet89Pad1 (new age)121Gt. Fret Noise26Acoustic Guitar (steel)58Trombone90Pad2 (warm)122Breath Noise<	10	Glockenspiel	42 Viola	74	Flute	106	Banjo
13Marimba45Tremolo Strings77Blown Bottle109Kalimba14Xylophone46Pizzicato Strings78Shakuhachi110Bagpipe15Tubular Bells47Orchestral Harp79Whistle111Fiddle16Dulcimer48Timpani80Ocarina112Shanai17Drawbar Organ49String Ensemble 181Lead 1(square)113Tinkle Bell18Percussive Organ50String Ensemble 282Lead 2(sawtooth)114Agogo19Rock Organ51Synth Strings183Lead3 (calliope)115Steel Drums20Church Organ52Synth Strings284Lead4 (chiff)116Woodblock21Reed Organ53Choir Aahs85Lead5 (charang)117Taiko Drum22Accordion54Voice Oohs86Lead6 (voice)118Melodic Tom23Harmonica55Synth Voice87Lead7 (fifths)119Synth Drum24Tango Accordion56Orchestra Hit88Lead8 (bass+lead)120Reverse Cymbal25Acoustic Guitar (nylon)57Trumpet89Pad1 (new age)121Gt. Fret Noise26Acoustic Guitar (steel)58Trombone90Pad2 (warm)122Breath Noise	11	Music Box	43 Cello	75	Recorder	107	Shamisen
14Xylophone46Pizzicato Strings78Shakuhachi110Bagpipe15Tubular Bells47Orchestral Harp79Whistle111Fiddle16Dulcimer48Timpani80Ocarina112Shanai17Drawbar Organ49String Ensemble 181Lead 1(square)113Tinkle Bell18Percussive Organ50String Ensemble 282Lead 2(sawtooth)114Agogo19Rock Organ51Synth Strings183Lead3 (calliope)115Steel Drums20Church Organ52Synth Strings284Lead4 (chiff)116Woodblock21Reed Organ53Choir Aahs85Lead5 (charang)117Taiko Drum22Accordion54Voice Oohs86Lead6 (voice)118Melodic Tom23Harmonica55Synth Voice87Lead7 (fifths)119Synth Drum24Tango Accordion56Orchestra Hit88Lead8 (bass+lead)120Reverse Cymbal25Acoustic Guitar (nylon)57Trumpet89Pad1 (new age)121Gt. Fret Noise26Acoustic Guitar (steel)58Trombone90Pad2 (warm)122Breath Noise	12	Vibraphone	44 Contrabass	76	Pan Flute	108	Koto
15 Tubular Bells 47 Orchestral Harp 79 Whistle 111 Fiddle 16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive Organ 50 String Ensemble 2 82 Lead 2(sawtooth) 114 Agogo 19 Rock Organ 51 Synth Strings1 83 Lead3 (calliope) 115 Steel Drums 20 Church Organ 52 Synth Strings2 84 Lead4 (chiff) 116 Woodblock 21 Reed Organ 53 Choir Aahs 85 Lead5 (charang) 117 Taiko Drum 22 Accordion 54 Voice Oohs 86 Lead6 (voice) 118 Melodic Tom 23 Harmonica 55 Synth Voice 87 Lead7 (fifths) 119 Synth Drum 24 Tango Accordion 56 Orchestra Hit 88 Lead8 (bass+lead) 120 Reverse Cymbal 25 Acoustic Guitar (nylon) 57 Trumpet 89 Pad1 (new age) 121 Gt. Fret Noise 26 Acoustic Guitar (steel) 58 Trombone 90 Pad2 (warm) 122 Breath Noise	13	Marimba	45 Tremolo Strings	77	Blown Bottle	109	Kalimba
16 Dulcimer 48 Timpani 80 Ocarina 112 Shanai 17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive Organ 50 String Ensemble 2 82 Lead 2(sawtooth) 114 Agogo 19 Rock Organ 51 Synth Strings1 83 Lead3 (calliope) 115 Steel Drums 20 Church Organ 52 Synth Strings2 84 Lead4 (chiff) 116 Woodblock 21 Reed Organ 53 Choir Aahs 85 Lead5 (charang) 117 Taiko Drum 22 Accordion 54 Voice Oohs 86 Lead6 (voice) 118 Melodic Tom 23 Harmonica 55 Synth Voice 87 Lead7 (fifths) 119 Synth Drum 24 Tango Accordion 56 Orchestra Hit 88 Lead8 (bass+lead) 120 Reverse Cymbal 25 Acoustic Guitar (nylon) 57 Trumpet 89 Pad1 (new age) 121 Gt. Fret Noise 26 Acoustic Guitar (steel) 58 Trombone 90 Pad2 (warm) 122 Breath Noise	14	Xylophone	46 Pizzicato Strings	78	Shakuhachi	110	Bagpipe
17 Drawbar Organ 49 String Ensemble 1 81 Lead 1(square) 113 Tinkle Bell 18 Percussive Organ 50 String Ensemble 2 82 Lead 2(sawtooth) 114 Agogo 115 Steel Drums 20 Church Organ 52 Synth Strings2 84 Lead4 (chiff) 116 Woodblock 21 Reed Organ 53 Choir Aahs 85 Lead5 (charang) 117 Taiko Drum 22 Accordion 54 Voice Oohs 86 Lead6 (voice) 118 Melodic Tom 23 Harmonica 55 Synth Voice 87 Lead7 (fifths) 119 Synth Drum 24 Tango Accordion 56 Orchestra Hit 88 Lead8 (bass+lead) 120 Reverse Cymbal 25 Acoustic Guitar (nylon) 57 Trumpet 89 Pad1 (new age) 121 Gt. Fret Noise 26 Acoustic Guitar (steel) 58 Trombone 90 Pad2 (warm) 122 Breath Noise	15	Tubular Bells	47 Orchestral Harp	79	Whistle	111	Fiddle
18 Percussive Organ50 String Ensemble 282 Lead 2(sawtooth)114 Agogo19 Rock Organ51 Synth Strings183 Lead3 (calliope)115 Steel Drums20 Church Organ52 Synth Strings284 Lead4 (chiff)116 Woodblock21 Reed Organ53 Choir Aahs85 Lead5 (charang)117 Taiko Drum22 Accordion54 Voice Oohs86 Lead6 (voice)118 Melodic Tom23 Harmonica55 Synth Voice87 Lead7 (fifths)119 Synth Drum24 Tango Accordion56 Orchestra Hit88 Lead8 (bass+lead)120 Reverse Cymbal25 Acoustic Guitar (nylon)57 Trumpet89 Pad1 (new age)121 Gt. Fret Noise26 Acoustic Guitar (steel)58 Trombone90 Pad2 (warm)122 Breath Noise	16	Dulcimer	48 Timpani	80	Ocarina	112	Shanai
19 Rock Organ51 Synth Strings183 Lead3 (calliope)115 Steel Drums20 Church Organ52 Synth Strings284 Lead4 (chiff)116 Woodblock21 Reed Organ53 Choir Aahs85 Lead5 (charang)117 Taiko Drum22 Accordion54 Voice Oohs86 Lead6 (voice)118 Melodic Tom23 Harmonica55 Synth Voice87 Lead7 (fifths)119 Synth Drum24 Tango Accordion56 Orchestra Hit88 Lead8 (bass+lead)120 Reverse Cymbal25 Acoustic Guitar (nylon)57 Trumpet89 Pad1 (new age)121 Gt. Fret Noise26 Acoustic Guitar (steel)58 Trombone90 Pad2 (warm)122 Breath Noise	17	Drawbar Organ	49 String Ensemble 1	81	Lead 1(square)	113	Tinkle Bell
20 Church Organ52 Synth Strings284 Lead4 (chiff)116 Woodblock21 Reed Organ53 Choir Aahs85 Lead5 (charang)117 Taiko Drum22 Accordion54 Voice Oohs86 Lead6 (voice)118 Melodic Tom23 Harmonica55 Synth Voice87 Lead7 (fifths)119 Synth Drum24 Tango Accordion56 Orchestra Hit88 Lead8 (bass+lead)120 Reverse Cymbal25 Acoustic Guitar (nylon)57 Trumpet89 Pad1 (new age)121 Gt. Fret Noise26 Acoustic Guitar (steel)58 Trombone90 Pad2 (warm)122 Breath Noise	18	Percussive Organ	50 String Ensemble 2	82	Lead 2(sawtooth)	114	Agogo
21 Reed Organ53 Choir Aahs85 Lead5 (charang)117 Taiko Drum22 Accordion54 Voice Oohs86 Lead6 (voice)118 Melodic Tom23 Harmonica55 Synth Voice87 Lead7 (fifths)119 Synth Drum24 Tango Accordion56 Orchestra Hit88 Lead8 (bass+lead)120 Reverse Cymbal25 Acoustic Guitar (nylon)57 Trumpet89 Pad1 (new age)121 Gt. Fret Noise26 Acoustic Guitar (steel)58 Trombone90 Pad2 (warm)122 Breath Noise	19	Rock Organ	51 Synth Strings1	83	Lead3 (calliope)	115	Steel Drums
22 Accordion54 Voice Oohs86 Lead6 (voice)118 Melodic Tom23 Harmonica55 Synth Voice87 Lead7 (fifths)119 Synth Drum24 Tango Accordion56 Orchestra Hit88 Lead8 (bass+lead)120 Reverse Cymbal25 Acoustic Guitar (nylon)57 Trumpet89 Pad1 (new age)121 Gt. Fret Noise26 Acoustic Guitar (steel)58 Trombone90 Pad2 (warm)122 Breath Noise	20	Church Organ	52 Synth Strings2	84	Lead4 (chiff)	116	Woodblock
23 Harmonica55 Synth Voice87 Lead7 (fifths)119 Synth Drum24 Tango Accordion56 Orchestra Hit88 Lead8 (bass+lead)120 Reverse Cymbal25 Acoustic Guitar (nylon)57 Trumpet89 Pad1 (new age)121 Gt. Fret Noise26 Acoustic Guitar (steel)58 Trombone90 Pad2 (warm)122 Breath Noise	21	Reed Organ	53 Choir Aahs	85	Lead5 (charang)	117	Taiko Drum
24 Tango Accordion56 Orchestra Hit88 Lead8 (bass+lead)120 Reverse Cymbal25 Acoustic Guitar (nylon)57 Trumpet89 Pad1 (new age)121 Gt. Fret Noise26 Acoustic Guitar (steel)58 Trombone90 Pad2 (warm)122 Breath Noise	22	Accordion	54 Voice Oohs	86	Lead6 (voice)	118	Melodic Tom
25 Acoustic Guitar (nylon) 57 Trumpet 89 Pad1 (new age) 121 Gt. Fret Noise 26 Acoustic Guitar (steel) 58 Trombone 90 Pad2 (warm) 122 Breath Noise	23	Harmonica	55 Synth Voice	87	Lead7 (fifths)	119	Synth Drum
26 Acoustic Guitar (steel) 58 Trombone 90 Pad2 (warm) 122 Breath Noise	24	Tango Accordion	56 Orchestra Hit	88	Lead8 (bass+lead)	120	Reverse Cymbal
	25	Acoustic Guitar (nylon)	57 Trumpet	89	Pad1 (new age)	121	Gt. Fret Noise
27 Electric Guitar (jazz) 59 Tuba 91 Pad3 (polysynth) 123 Seashore	26	Acoustic Guitar (steel)	58 Trombone	90	Pad2 (warm)	122	Breath Noise
	27	Electric Guitar (jazz)	59 Tuba	91	Pad3 (polysynth)	123	Seashore
28 Electric Guitar (clean) 60 Muted Trumpet 92 Pad4 (choir) 124 Bird Tweet	28	Electric Guitar (clean)	60 Muted Trumpet	92	Pad4 (choir)	124	Bird Tweet
29 Electric Guitar (muted) 61 French Horn 93 Pad5 (bowed) 125 Telephone Ring	29	Electric Guitar (muted)	61 French Horn	93	Pad5 (bowed)	125	Telephone Ring
30 Overdriven Guitar 62 Brass Section 94 Pad6 (metallic) 126 Helicopter	30	Overdriven Guitar	62 Brass Section	94	Pad6 (metallic)	126	Helicopter
31 Distortion Guitar 63 Synth Brass 1 95 Pad7 (halo) 127 Applause	31	Distortion Guitar	63 Synth Brass 1	95	Pad7 (halo)	127	Applause
32 Guitar harmonics 64 Synth Brass 2 96 Pad8 (sweep) 128 Gunshot	32	Guitar harmonics	64 Synth Brass 2	96	Pad8 (sweep)	128	Gunshot

Appendix 3: Demo List

1	Balloon Flower	11	The Flute
2	Papaya Song	12	Fishing Village
3	The Bluebells Of Scotland	13	My hometown
4	The Linden Tree	14	Sunny-side-up
5	Sword Brake	15	Home On The Range
6	In The Sweet Bye And Bye	16	Long Long Ago
7	Coconut	17	River
8	Whispering Pines	18	The harmonious blacksmith
9	Lovely Rose	19	Flow Gently Sweet Afton
10	Mongolian Pastoral Song	20	Women are fickle

Appendix 4: Rhythm List

1	ROCK1	17 BOOGIE	33 BOSSA1	49 SL WALTZ
2	ROCK2	18 ROCK'N1	34 BOSSA2	50 SW WALTZ
3	RAP	19 ROCK'N2	35 LATIN	51 WALTZ
4	HOUSE	20 TWIST	36 CHA CHA	52 MARCH
5	TECHNO	21 SL ROCK1	37 RUMBA	53 FOXTROT
6	DANCE	22 SL ROCK2	38 POPROCK	54 POLKA
7	FUNK1	23 DISCO1	39 BEGUINE	55 BAROQUE
8	FUNK2	24 DISCO2	40 TANGO	56 COUNTRY
9	8BEAT1	25 SWING1	41 SAMBA1	57 SOUL CHA
10	8BEAT2	26 SWING2	42 SAMBA2	58 SL TANGO
11	8BEAT3	27 BLUES	43 SALSA	59 RUM-WAL
12	8BEAT4	28 SL SWING	44 MAMBO1	60 T-RUMBA
13	16BEAT1	29 BIG BAND	45 MAMBO2	61 T-SOUL
14	16BEAT2	30 SHUFFLE	46 CALYPSO	62 T-DISCO
15	16BEAT3	31 DIXIE	47 REGGAE	63 ENKA
16	16BEAT4	32 CHARLEST	48 FUSION	64 SANDI