

Micro Ensemble Kurzweil

Reference Guide

INTRODUCTION

Thank you for choosing the Kurzweil Micro Ensemble. It's use will greatly enhance your music with many of the same Kurzweil sounds that have won numerous Music Industry awards. The Micro Ensemble is a half-rack sized MIDI sound module with 256 sound programs taken from Kurzweil's world-renowned PC2. It is 16 channel multi-timbral and has 32 voices of polyphony for accurately playing multi-part MIDI music.

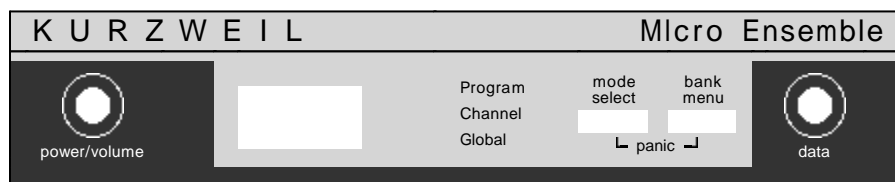
You will find the Micro Ensemble to be an effective solution whether you are a beginner or advanced computer musician and whether you wish to enhance your present setup or replace older equipment with a compact, moderately priced source of the best sounds in the industry. So let's look into your new Micro Ensemble and get started!

1. Micro Ensemble Unit Contents

The contents and accessories you should find in the packing box are:

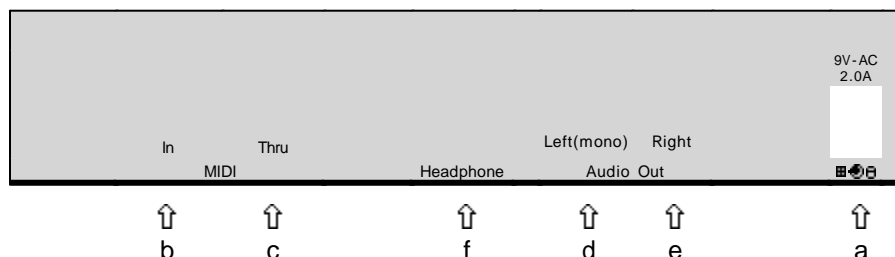
- Micro Ensemble unit
- External power supply Adaptor
- 4 Rubber feet
- This Reference Guide
- Warranty Card

2. Operation Controls and Connectors Overview



- a. Power / Volume Knob : Turns Micro Ensemble On and Off and controls its volume.
- b. Dot Matrix Display : Shows current operating status and parameter settings.
- c. Mode LEDs : Distinguishes the current Display Mode - Program, Channel, or Global.
- d. Mode Select Button : Used to change the Display Modes.
- e. Bank/Menu Select Button : Selects Program or Bank display in Program mode; selects submenus in Global Mode.
- f. Data Knob : Used to adjust parameter values.

- PANIC : When both buttons are pressed at once, all notes being played are silenced.



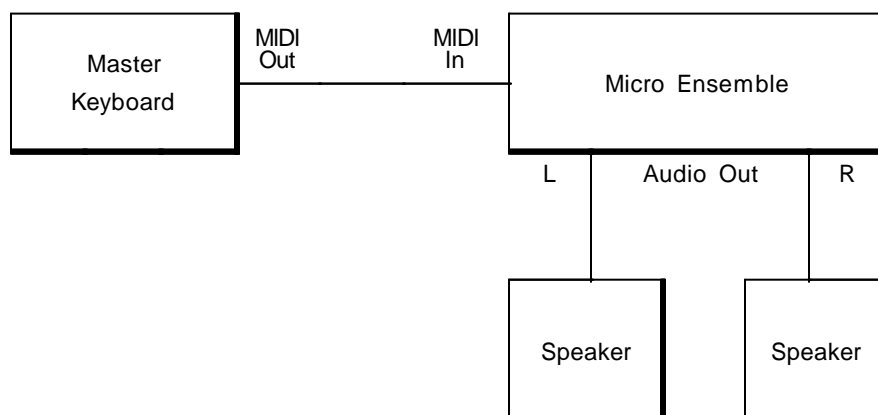
- a. Power Supply Connector : The power supply cord should be plugged into this connector.
- b. MIDI In port : This connector receives MIDI signals from your keyboard or computer via standard MIDI cable.
- c. MIDI Thru port : This connector provides a copy of the MIDI In signal that can be passed on to other devices via standard MIDI cable.
- d. Audio Out Left(mono) : Mono output signal or left channel stereo output signal.
- e. Audio Out Right : Right channel stereo output signal.
- f. Headphones : Plug standard stereo headphones into this jack.

SETTING UP THE MICRO ENSEMBLE

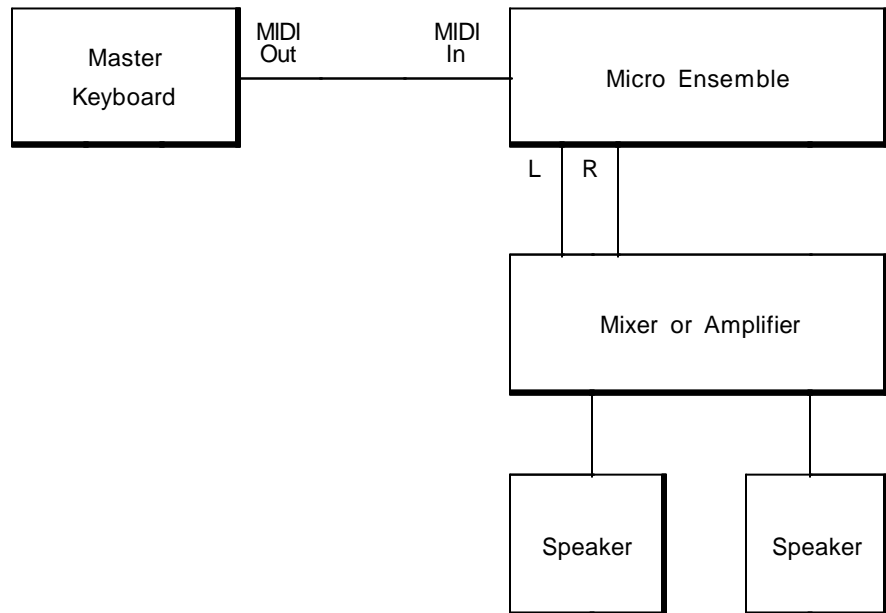
1. SETUP WITH A MASTER KEYBOARD

When connecting the Micro Ensemble to your master keyboard (or any other MIDI device), use a standard MIDI cable to connect the MIDI Out port of your keyboard or device to the MIDI In port of your Micro Ensemble.

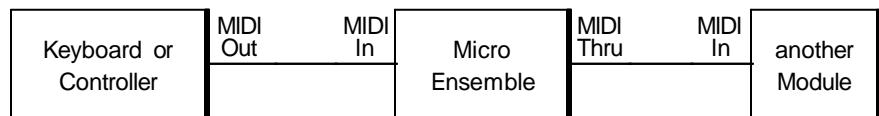
For audio connections, you may use headphones or external powered speakers or component amplifier and speakers. You may also use headphones and speakers at the same time. See the illustration below for use with powered speakers, such as computer speakers or a keyboard amplifier.



If the speakers do not have built-in amplifiers, the audio signals from the Micro Ensemble should first go into an amplifier or mixer/amplifier before the speakers. See the drawing below:

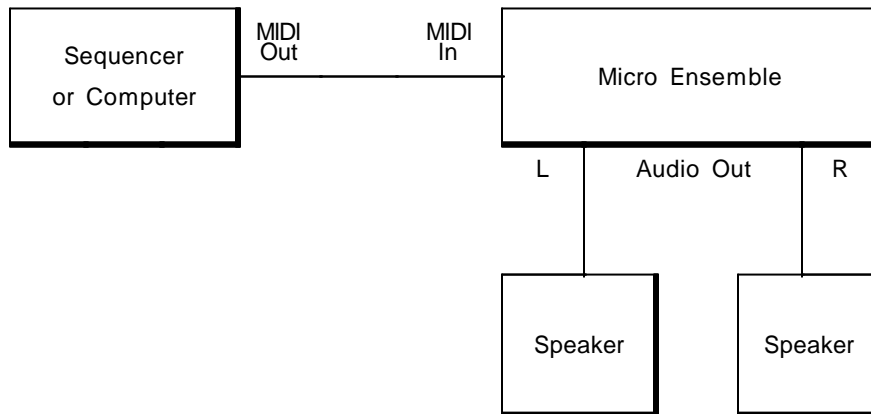


If you want to use your Micro Ensemble with another MIDI module and hear sounds from both, you can connect your system as follows:



2. SET UP WITH A SEQUENCER

To use your Micro Ensemble with a computer or standalone sequencer, connect the MIDI cables as follows:



3. DEMONSTRATION SONGS

Now that you have finished setting up the Micro Ensemble's MIDI, power and audio connections, let's try playing the demonstration songs. Please follow this procedure in order:

- Turn the Micro Ensemble on by rotating the Power/Volume knob clockwise until it clicks, then about 1/4 turn more. Within a second all of the front panel LEDs and the display will light briefly. Next the letters K-U-R-Z-W-E-I-L will scroll across the display. Finally the Program Mode LED will light and a "1" will show in the display which indicates that Sound Program #1 is current.
- Press the Mode Select Button twice so that the Global Mode LED is lit.
- Press the Menu Button 5 times until the display shows "DE".
- Select a Demo song by rotating the Data Knob. The song number (1-4) will show in the display. The song will now start to play.
- Always turn the Volume control knob slowly to avoid damaging your audio system or speakers from sudden excessive sound levels.
- To select another demo song, just select it by rotating the Data Knob.
- To stop the Demo song, press the Menu Button to select other menus in Global Mode, or press the Mode Select Button to return to Program Mode.

PLAYING THE MICRO ENSEMBLE

1. PROGRAM MODE

The Micro Ensemble has 16 Banks of Programs (sounds), and each Bank has 16 single Programs. The whole list of the Programs is as follows.

Front Panel Program Selection

Bank A	Bank B	Bank C	Bank D
1=Stereo Grand 2=Classic Grand 3=DynamicGrand 4=WarmGrand 5=SoloGrandPiano 6=Concert Grand 7=MonoGrandPiano 8=Piano for layers 9=Sweet Ivories 10=Nice Touch Grand 11=Piano Solitude 12=Piano Recital 13=Full Bloom Piano 14=Pianetta 15=Suite Piano 16=Dreamy Piano	1=Hard Rock Piano 2=Rock Grand 3=Grand Piano 440 4=Mono Stage Piano 5=Dyn StagePiano 6=Ragtime Piano 7=Tack Piano 8=Piano & Strings 9=Basement Upright 10=Chiano 11=Way Back Piano 12=Dance Piano 13=Cloud Ride Piano 14=Organic Piano 15=Piano & Wash 16=Piano & Vox Pad	1=Classic E Piano 2=Serious Classic 3=That 70's E Pno 4=Hard E Pno 5=Lounge E Piano 6=Dyno E Pno 7=Soft E Piano 8=Hybrid E Piano 9=Mello E Piano 10=Tines Square 11=Brunch In Seoul 12=Classy Roadz 13=Barking Tines 14=Clean and Soft 15=Ballad Keys 16=Lotus Keys	1=My Best Wurly 2=Big Red Wurly 3=Brkfst in Korea 4=Soft Wurly 5=Wurly Road 6=Pearly Keys 7=Digital E Piano 8=Ballad E Piano 9=Soft Ballad 10=70's FM Tines 11=90's FM Ballad 12=Chorus Rock Pno 13=Bright Pianotone 14=Family Portrait 15=Harpesi- Piano 16=Fantasy Keys
Bank E	Bank F	Bank G	Bank H
1=C3PO 2=Digi E Grand 3=Rock Grand 4=FantAsmAttron 5=Atmaz 6=Celestial Comet 7=Comp Time 8=Ruth Buzzy 9=Janet's Comp 10=Mild Sheen 11=Scrape Glass 12=Air Society 13=Push Air 14=Dronin' 15=Alien Salt Mine 16=Imperfect Storm	1=Clav Classic 2=Touch Clav 3=Dual Wah Clav 4=Harpichord 5=Modern Harpsi 6=CrystalClavchd 7=Accordion 8=Celesta 9=Mod Clavier 10=Belly Celeste 11=Harpichordion 12=Circus Keys 13=Cosmic Calliope 14=Calliope Keys 15=Chiff Attack 16=Spaced Harmonix	1=The Reverend's 2=Ballad Of 3 Bars 3=Prog Rocker's B 4=All Out Full On 5=Grungy Overdrive 6=Uptown Gospel 7=Retro Roto 8=Pipe Organ 9=BackgroundOrgan 10=Mello Tone Wheel 11=Piped Organ 12=Playful Piper 13=Peter's Pan 14=Imaginary Flute 15=Bright Koreana 16=Bouncin' BassBall	1=Big Brass 2=Saxes/Trumpets 3=Split Sections 4=Broadway Brass 5=Trombones 6=Bari/Tenor Sect 7=Solo Tenor Sax 8=Williams Brass 9=Goosed Riff Sect 10=Fatso Sax 11=Big&Beefy Saxes 12=Goosed Unison 13=Anabrass 14=Honk'n Dyn Sax 15=Saxy Lush 16=Classical Brass
Bank I	Bank J	Bank K	Bank L
1=Lyrical Strings 2=Slow Strings 3=Marcato Strings 4=Layer Strings 5=Fast Strings 6=Touch Strings 7=Velocity Strings 8=Phantom Strings 9=Fast Vtrig Rosin 10=Emotional String 11=Octave Strings 12=Emphatic Strings 13=Rosin Section 14=Resolute Section 15=Tender Strings 16=Flute & Strings	1=Ooh><Aah 2=Doo><Daa 3=Baa stacc.Bop 4=Doo stacc.Doop 5=Daa stacc.Dot 6=Scatman 7=The Croons 8=Cathedral Vox 9=Bright Voices 10=Crystal Voices 11=Vox & Organ 12=BiG Ooh Voices 13=BiG Voices 14=Bright Syn Vox 15=Vox Orgel 16=Vox & Strings	1=Solar Lead 2=Vox Lead 3=Alazawi 4=Slo Wood Flute 5=Groove Bass 6=1/3 Pulse Bass 7=Sweeper Bass 8=Lowdown Bass 9=Subdivide 10=Rezy Bass/Poly 11=Technicolor 12=Elan Lead 13=Sun Spot Lead 14=Dinosaur's Lead 15=Sawyer's Bomb 16=Reverse Feedback	1=Rez Aah Pad 2=Crypt 3=Meteor Strings 4=Orch Pad 5=Neptune 6=Analogy 7=Dream Catcher 8=U Say Tomita... 9=Poseldon 10=Analogica 11=Anti Rez 12=Spider's Web 13=Ethereal Strings 14=FreeResAhh Notch 15=Ooh><Aah Pad 16=Vocalicious
Bank M	Bank N	Bank O	Bank P
1=Acoustic Guitar 2=Strummer 12 Str 3=Rich 6 String 4=12 String Guitar 5=Chorus Elec Gtr 6=Elec 12 String 7=Jazzy Frets 8=Lead Rock Gtr 9=Titanium Guitar 10=Latin Lover 11=Roto 12 String 12=Electric 12 13=Twangy Guitar 14=Chr Elec & Mute 15=Comp Chr E Gtr 16=Trashed Tubes	1=Round and Wound 2=Punch Bass 3=Two Finger Bass 4=Dual- Tri Bass 5=Clav o' Bass 6=Fret Not Bass 7=Upright Bass 1 8=Upright Bass 2 9=Gimme The Finger 10=Bright E Bass 11=Bright A Bass 12=Triangle Bass 13=Yow Bass 14=Mono Synth Bass 15=400 HP Bass 16=Base in Face	1=Studio Drums 1+2 2=Studio Drums 3+4 3=Ambient Rock Kit 4=Coliseum Kit 5=Resonant Traps 6=Tripkit/Trashkit 7=Beat Box 8=Electro Kit 9=Radio Kings/Rods 10=Ripper Kit/Vinyl 11=LA Drums/Brk Bt. 12=Compact/Raw Kit 13=TubeTraps/lb.der 14=Acoustic/HipKit 15=Dirt/Triphop Kit 16=SumPumpKit MWSus	1=Virtuoso Perc 2=Rhythm Maker 3=Woody Marimba 4=African Marimba 5=Vibes 6=New Fluid Vibes 7=Aborigine Jam 8=Drums 'n Bells 9=Marimba 10=Milky Way Vibes 11=Percussionist 12=Carnival 13=Primitive Perc 14=Bunch of Perc 15=Perc Party 16=Perc Circle

You can select a sound in Program Mode (the Program LED is on) by first finding the corresponding Bank letter and Program number in the above list. The Bank letters are A through P and each Bank has Program numbers 1 through 16.

Program Mode has two sub modes - Program Number Select and Bank Letter Select. While in Program Mode, pressing the Bank Button selects these sub modes alternately. If the Program LED is on continuously, the Program number is displayed. If the Program LED is blinking, the Bank Letter is displayed. In either sub mode, the Data Knob may be turned to select the desired Program or Bank.

Now let's select and play the "Scatman" program by following the instructions below:

- Press the Mode Select button until the Program LED lights.
- If necessary, press the Bank button so the Program LED is blinking.
- Turn the Data Knob until the display shows bank "J".
- Press the Bank button again; the Program LED should stop blinking.
- Rotate the Data Knob again to select "6" on the Display.
- Now play the keys on your keyboard to hear an example of Kurzweil's realistic voice sounds.

When you play the Micro Ensemble with a master keyboard, computer-based sequencing software or a standalone sequencer, you can use MIDI program and bank numbers from the following list. Note that the list shows true MIDI program numbers from 0 to 127. Some sequencers use a 1 to 128 numbering scheme. In that case, add 1 to the program number shown in the list.

A few computer-based sequencers, such as Cakewalk, Cubase, etc., allow you to use program names directly. The Micro Ensemble uses the same program name/number/bank assignment as the Kurzweil PC2 so set your sequencer to "PC2 mode" to take advantage of this feature. (Note that the Micro Ensemble does not provide the KB3 Mode programs that are in the PC2.)

MIDI Program Selection

MIDI Bank 0		MIDI Bank 6	
0=Stereo Grand	64=Lyrical Strings	0=Sweet Ivories	64=Fast Vtrig Rosin
1=Classic Grand	65=Slow Strings	1=Nice Touch Grand	65=Emotional String
2=DynamicGrand	66=Marcato Strings	2=Piano Solitude	66=Octave Strings
3=WarmGrand	67=Layer Strings	3=Piano Recital	67=Emphatic Strings
4=SoloGrandPiano	68=Fast Strings	4=Full Bloom Piano	68=Rosin Section
5=Concert Grand	69=Touch Strings	5=Pianetta	69=Resolute Section
6=MonoGrandPiano	70=Velocity Strings	6=Suite Piano	70=Tender Strings
7=Piano for layers	71=Phantom Strings	7=Dreamy Piano	71=Flute & Strings
8=Hard Rock Piano	72=Ooh><Aah	8=Basement Upright	72=Bright Voices
9=Rock Grand	73=Doo><Daa	9=Chiano	73=Crystal Voices
10=Grand Piano 440	74=Baa stacc.Bop	10=Way Back Piano	74=Vox & Organ
11=Mono Stage Piano	75=Doo stacc.Doop	11=Dance Piano	75=BIG Ooh Voices
12=Dyn StagePiano	76=Daa stacc.Dot	12=Cloud Ride Piano	76=BIG Voices
13=Ragtime Piano	77=Scatman	13=Organic Piano	77=Bright Syn Vox
14=Tack Piano	78=The Croons	14=Piano & Wash	78=Vox Orgel
15=Piano & Strings	79=Cathedral Vox	15=Piano & Vox Pad	79=Vox & Strings
16=Classic E Piano	80=Solar Lead	16=Mello E Piano	80=Subdevice
17=Serious Classic	81=Vox Lead	17=Tines Square	81=Rezy Bass/Poly
18=That 70's E Pno	82=Alazawi	18=Brunch In Seoul	82=Technicolor
19=Hard E Pno	83=Slo Wood Flute	19=Classy Roadz	83=Elan Lead
20=Lounge E Piano	84=Groove Bass	20=Barking Tines	84=Sun Spot Lead
21=Dyno E Pno	85=1/3 Pulse Bass	21=Clean and Soft	85=Dinosaur's Lead
22=Soft E Piano	86=Sweeper Bass	22=Ballad Keys	86=Sawyer's Bomb
23=Hybrid E Piano	87=Lowdown Bass	23=Lotus Keys	87=Reverse Feedback
24=My Best Wurly	88=Rez Aah Pad	24=Soft Ballad	88=Poseidon
25=Big Red Wurly	89=Crypt	25=70's FM Tines	89=Analogica
26=Brkfst in Korea	90=Meteor Strings	26=90's FM Ballad	90=Anti Rez
27=Soft Wurly	91=Orch Pad	27=Chorus Rock Pno	91=Spider's Web
28=Wurly Road	92=Neptune	28=Bright Pianotone	92=Ethereal Strings
29=Pearly Keys	93=Analogy	29=Family Portrait	93=FreeResAhh Notch
30=Digital E Piano	94=Dream Catcher	30=Harpsi -Piano	94=Ooh><Aah Pad
31=Ballad E Piano	95=U Say Tomita...	31=Fantasy Keys	95=Vocalicious
32=C3PO	96=Acoustic Guitar	32=Janet's Comp	96=Titanium Guitar
33=Digi E Grand	97=Strummer 12 Str	33=Mild Sheen	97=Latin Lover
34=Rock Grand	98=Rich 6 String	34=Scrape Glass	98=Roto 12 String
35=FantAsmAtron	99=12 String Guitar	35=Air Society	99=Electric 12
36=Atmaz	100=Chorus Elec Gtr	36=Push Air	100=Twangy Guitar
37=Celestial Comet	101=Elec 12 String	37=Dronin'	101=Chr Elec & Mute
38=Comp Time	102=Jazzy Frets	38=Alien Salt Mine	102=Comp Chr E Gtr
39=Ruth Buzzy	103=Lead Rock Gtr	39=Imperfect Storm	103=Trashed Tubes
40=Clav Classic	104=Round and Wound	40=Mod Clavier	104=Gimme The Finger
41=Touch Clav	105=Punch Bass	41=Belly Celeste	105=Bright E Bass
42=Dual Wah Clav	106=Two Finger Bass	42=Harpsichordion	106=Bright A Bass
43=Harpsichord	107=Dual - Tri Bass	43=Circus Keys	107=Triangle Bass
44=Modern Harpsi	108=Clav o' Bass	44=Cosmic Calliope	108=Yow Bass
45=CrystalClavchd	109=Fret Not Bass	45=Calliope Keys	109=Mono Synth Bass
46=Accordion	110=Upright Bass 1	46=Chiff Attack	110=400 HP Bass
47=Celesta	111=Upright Bass 2	47=Spaced Harmonix	111=Base in Face
48=The Reverend's	112=Studio Drums 1+2	48=BackgroundOrgan	112=Radio Kings/Rods
49=Ballad Of 3 Bars	113=Studio Drums 3+4	49=Mello Tone Wheel	113=Ripper Kit/Vinyl
50=Prog Rocker's B	114=Ambient Rock Kit	50=Piped Organ	114=LA Drums/Brk Bt.
51=All Out Full On	115=Coliseum Kit	51=Playful Piper	115=Compact/Raw Kit
52=Grungy Overdrive	116=Resonant Traps	52=Peter's Pan	116=TubeTraps/lb.der
53=Uptown Gospel	117=Tripkit/Trashkit	53=Imaginary Flute	117=Acoustic/HiPKit
54=Retro Roto	118=Beat Box	54=Bright Koreana	118=DirT/Triphop Kit
55=Pipe Organ	119=Electro Kit	55=Bouncin'BassBall	119=SumPumpKit MWSus
56=Big Brass	120=Virtuoso Perc	56=Goosed Riff Sect	120=Marimba
57=Saxes/Trumpets	121=Rhythm Maker	57=Fatso Sax	121=Milky Way Vibes
58=Split Sections	122=Woody Marimba	58=Big&Beefy Saxes	122=Percussionist
59=Broadway Brass	123=African Marimba	59=Goosed Unison	123=Carnival
60=Trombones	124=Vibes	60=Anabrass	124=Primitive Perc
61=Bari/Tenor Sect	125=New Fluid Vibes	61=Honk'n Dyn Sax	125=Bunch of Perc
62=Solo Tenor Sax	126=Aborigine Jam	62=Saxy Lush	126=Perc Party
63=Williams Brass	127=Drums 'n Bells	63=Classical Brass	127=Perc Circle

2. CHANNEL MODE

The Channel Mode is used to change the current MIDI Channel. You can change the Program/Bank selection on each channel for live performance or sequencing. Press the Mode Select Button so that the Channel LED is lit. Then change the current MIDI channel by turning the Data Knob. You can assign different programs to each MIDI channel by using the following procedure:

- Select the desired channel using Channel Mode as described above.
- Press the Mode Select Button twice to select Program Mode.
- Use the Bank Button and Data knob to select a Program (for example Bank A, Program 5).
- Return to Channel Mode by pressing the Mode Select Button and choose the next channel.
- Then select Program Mode again and select the second Program (ex. Bank D, Program 9).

You may repeat the above procedure to set up any of the 16 MIDI channels. You can also go back and check which program is assigned to a MIDI channel by selecting the channel in Channel Mode then returning to Program mode and reading the display. Note that these assignments are lost when the Micro Ensemble power is switched off. In that case all channels revert to the default assignment of Bank A, Program 1

Now when you play on stage, you can select sounds much faster simply by changing the MIDI transmit channel on your master keyboard. Or when using a sequencer, you may play several different instrument sounds at once.

GLOBAL MODE

Global Mode is used to change parameters that affect the sound of all MIDI channels at once, such as transpose, tuning, and effects. Enter Global Mode by pressing the Mode Button until the Global LED is lit. Once in Global Mode, the Menu button may be used to select the parameter to display and change.

TRANPOSE

Transpose is used to play the sounds in a key different from what is played on the keyboard. Transpose is in units of "semitones" which is a one key change (including black keys) in pitch. Thus 12 semitones make an octave.

The Transpose submenu is chosen by pressing the Menu button until the display shows "XP". One click of the Data knob will change the display to show what the current Transpose setting is. You may then change the Transpose setting by turning the Data Knob to any value from -12 (one octave lower) to 12 (one octave higher)..

TUNE

Tune is used to change the Micro Ensemble's pitch very slightly so that it plays in tune with another instrument. Tuning is in units of 1/100 semitone called "cents". Default tuning is 0 which is perfect A 440Hz tuning

The Tune submenu is chosen by pressing the Menu button until the display shows "TU". One click of the Data knob will change the display to show what the current Tune setting is. You may then change the Tune setting by turning the Data Knob to any value from -99 to +99 cents. Positive values (tuning up or sharp) are shown normally with a black background; negative values (tuning down or flat) are shown with a pale background.

EFFECT TYPE (FX)

The FX setting determines the kind of effect (echo, reverberation) and its character (bright, dull, small, large, etc.).

The FX submenu is chosen by pressing the Menu button until the display shows "FX". One click of the data knob will change the display to show what the current effect type is. You may then change the effect by turning the Data knob to any setting from 0 to 9. The following list shows the effect type for each possible setting:

	Effect Name	Description
0	None	The effects unit is turned off
1	Room & Chorus	Short decay, soft reverberation plus chorus
2	Bright Room & Chorus	'Harder' (brighter) reverberation than 1
3	Stage & Chorus	Medium decay, soft reverberation plus chorus
4	Bright Stage & Chorus	'Harder' (brighter) reverberation than 3
5	Hall & Chorus	Long decay, soft reverberation plus chorus
6	Bright Hall & Chorus	'Harder' (brighter) reverberation than 5
7	Large Hall & Chorus	Maximum decay, soft reverberation plus chorus
8	Large Bright Hall & Chorus	'Harder' (brighter) than 7
9	Deep Space	A unique combination of reverberation and echo

Each of the ten effect types listed above has a Chorus Level and a Reverb Level setting. These determine how prominent the effect sound is compared to the original ("dry") instrument sound. The setting can be from 0 (all instrument sound and no effect sound) to 99 (all effect sound and no instrument sound). A setting of 50 gives half of each. Typical settings are between 20 and 40.

CHORUS LEVEL

The Chorus submenu is chosen by pressing the Menu button until the display shows "Ch". One click of the Data knob will change the display to show what the current Chorus setting is. You may then change the effect by turning the Data knob to any setting from 0 to 99.

REVERB LEVEL

The Reverb submenu is chosen by pressing the Menu button until the display shows "Rv". One click of the Data knob will change the display to show what the current Reverb setting is. You may then change the effect by turning the Data knob to any setting from 0 to 99.

DEMO SONG

The Demo submenu is chosen by pressing the Menu button until the display shows "DE". The Data knob then selects which demo to play, from 1 to 4. The demo begins to play after the Data knob stops moving. To stop the demo, press either button, or select a different song.

MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
Basic Channel	Default	✗	1
	Changed	✗	1 - 16
Mode	Default	✗	Multi*
	Changed	✗	Modes 1 & 3
	Altered	✗	
Note Number		✗	0 - 127
	True Voice	✗	1 - 128
Velocity	Note On	✗	
	Note Off	✗	
After Touch	Keys	✗	
	Channels	✗	
Pitch Bender	✗		
Control Change	0,32	✗	bank Select
	1	✗	mod Wheel
	2	✗	breath Controller
	4	✗	foot Controller
	6,38	✗	data Entry
	7	✗	volume
	10	✗	pan
	11	✗	expression
	15,47	✗	AuxBnd 2
	21,53	✗	AuxBnd 1
	64	✗	sustain pedal
	66	✗	sostenuto pedal
	67	✗	soft pedal
	90	✗	Effect Selection
	91	✗	Reverb Wet/Dry
	93	✗	Chorus Wet/Dry
	98,99	✗	non-registered param num
	100,101	✗	registered param num
	120	✗	all sound off
	121	✗	reset all controllers
Program Change		✗	0 - 127
	True #	✗	0 - 127
System Exclusive	✗	*	
System Common	Song Pos.	✗	
	Song Sel.	✗	
	Tune	✗	
System Real Time	clock	✗	
	Messages	✗	
Aux Messages	Local Control	✗	
	All Notes Off	✗	
	Active Sense	✗	
	Reset	✗	
Notes *Manufacturer's ID = 07 Device ID : 0 *Use Multi to assign different programs to each MIDI Channel			

Mode 1 : Onmi On, Poly
Mode 3 : Omni Off, Poly

Mode 2 : Omni On, Mono
Mode 4 : Omni Off, Mono

= yes
✗ = no

Micro Ensemble SPECIFICATION

(Specifications are subject to change without notice)

Physical Specifications

	Unit		Power Adapter (cord type)	
Height	9 ⁹ / ₁₆ in	24.3 cm	3 ³ / ₄ in	9.6 cm
Width	8 ⁵ / ₈ in	22.0 cm	2 ¹ / ₂ in	6.3 cm
Depth	1 ⁹ / ₁₆ in	4.0 cm	2 ¹ / ₈ in	5.5 cm
Weight	3.3 lb	1.5 kg	1.4 lb	0.65 kg

Electrical specifications

Voltage and Frequency Ranges Adapter	120VAC Model PP95-20	230VAC Model PP95-20
Safe Voltage Range	100 ~ 125 Volts RMS	200 ~ 250 Volts RMS
Safe Frequency Range	58 ~ 65 Hz	48 ~ 65 Hz
Power Consumption	0.26 Amps	0.13 Amps

Environmental Specifications

	Minimum		Maximum	
Operation temperature	40F	5C	104F	40C
Storage temperature	-13F	-25C	185F	85C
Operation Humidity	5%		95%(non-condensing)	
Storage Humidity	5%		95%(non-condensing)	

Audio Specifications

Left and Right Analog Audio Outputs		Headphone output	
Connectors	Unbalanced outputs using two 1/4 inch phone plugs	Output Impedance	47 ohms, nominal
Impedance	1000 ohms left & right (stereo) 500 ohms left/mono	Maximum output level	0.9 Volts RMS into 32 ohms (25 mW)
Maximum output level	+ 15 dBu (4.4 Volts RMS) high impedance load		
Frequency response	20Hz - 20Khz +/- 1.0 dB		
Idle channel noise	Less than -112 dBA relative to full-scale signal		
Dynamic range	Greater than 110 dBA using -60 dBFS signal		

Sound Engine Specifications

Number of sound programs	256 in 16 groups of 16 for panel selection 2 banks of 128 for MIDI selection
Sound ROM	16 Megabytes
Number of voices (polyphony)	32
Simultaneous MIDI channels	16
Effects	10 Types Chorus mix level Reverb mix level
Demonstration Songs	Four
Tune	-99 to +99 cents in 1 cent steps re' A=440
Transpose	-12 to +12 semitones

Controls and Connectors

Front Panel	On-Off / Volume knob Data Entry Knob Two selection buttons
Display	5x7 LED dot matrix (letters and numbers) 3 Indicator LEDs
Rear Panel	MIDI In MIDI Thru Headphones (1/4" stereo jack) Left(mono) (1/4" mono jack) Right (1/4" mono jack) 9VAC 2.0A coaxial power jack