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.

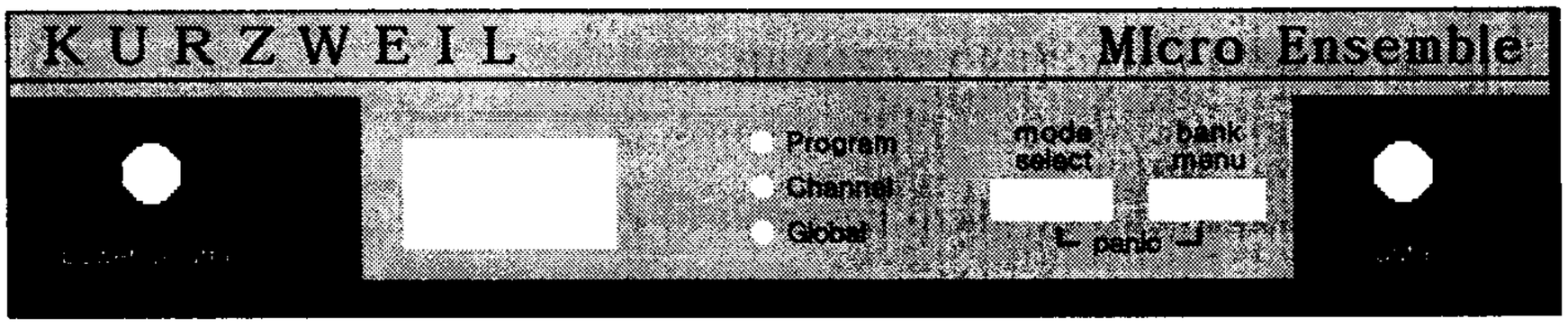
You will find the Micro Ensemble to be an effective solution whether you are a beginner or advanced computer musician and whether you wish to enhance your present setup or replace older equipment with a compact, moderately priced source of the best sounds in the industry. So let's look into your new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

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.

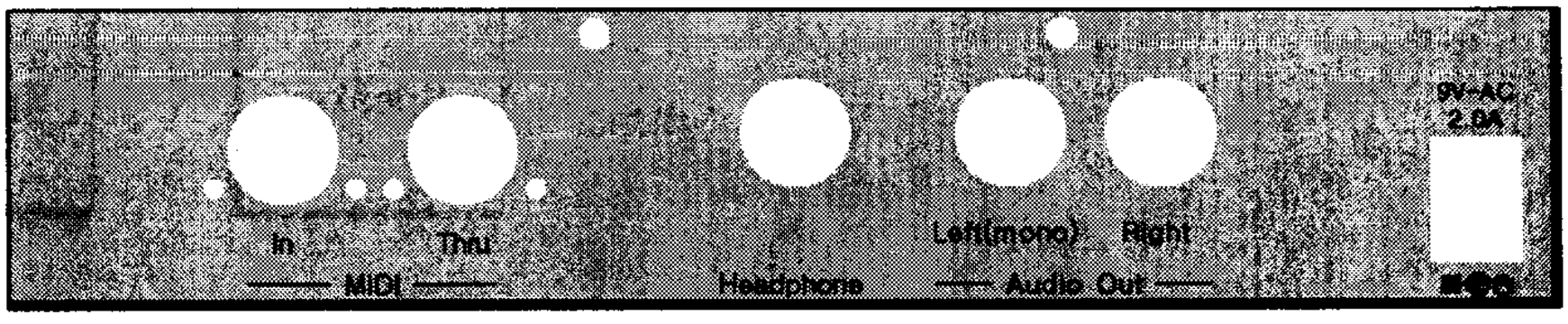
c. Mode LEDs : Distinguishes the current Display Mode - Program, Channel, or Global.

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.



⇧ b ⇧ c ⇧ f ⇧ d ⇧ e ⇧ a

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.

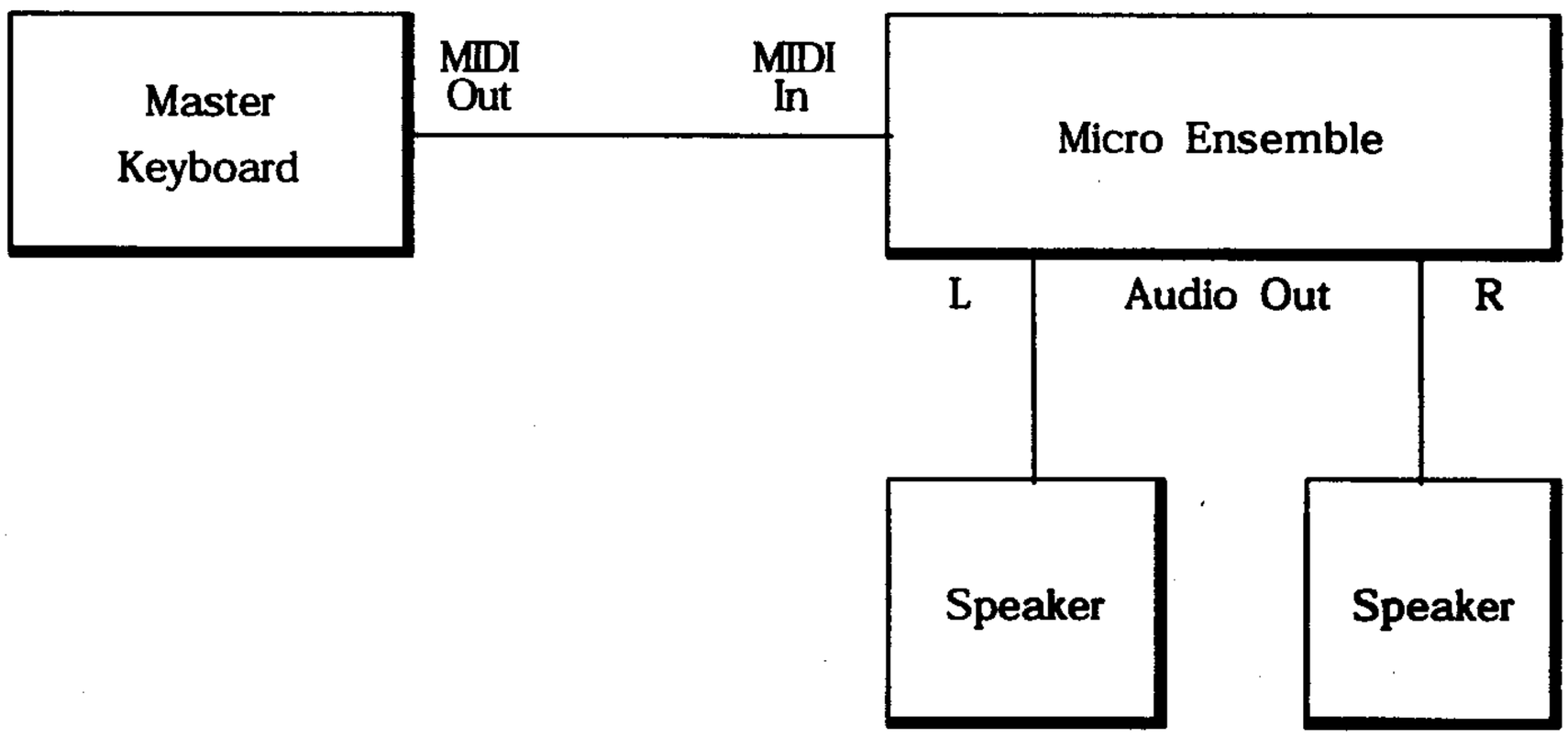
f. Headphones : Plug standard stereo headphones into this jack.

SETING UP THE MICRO ENSEMBLE

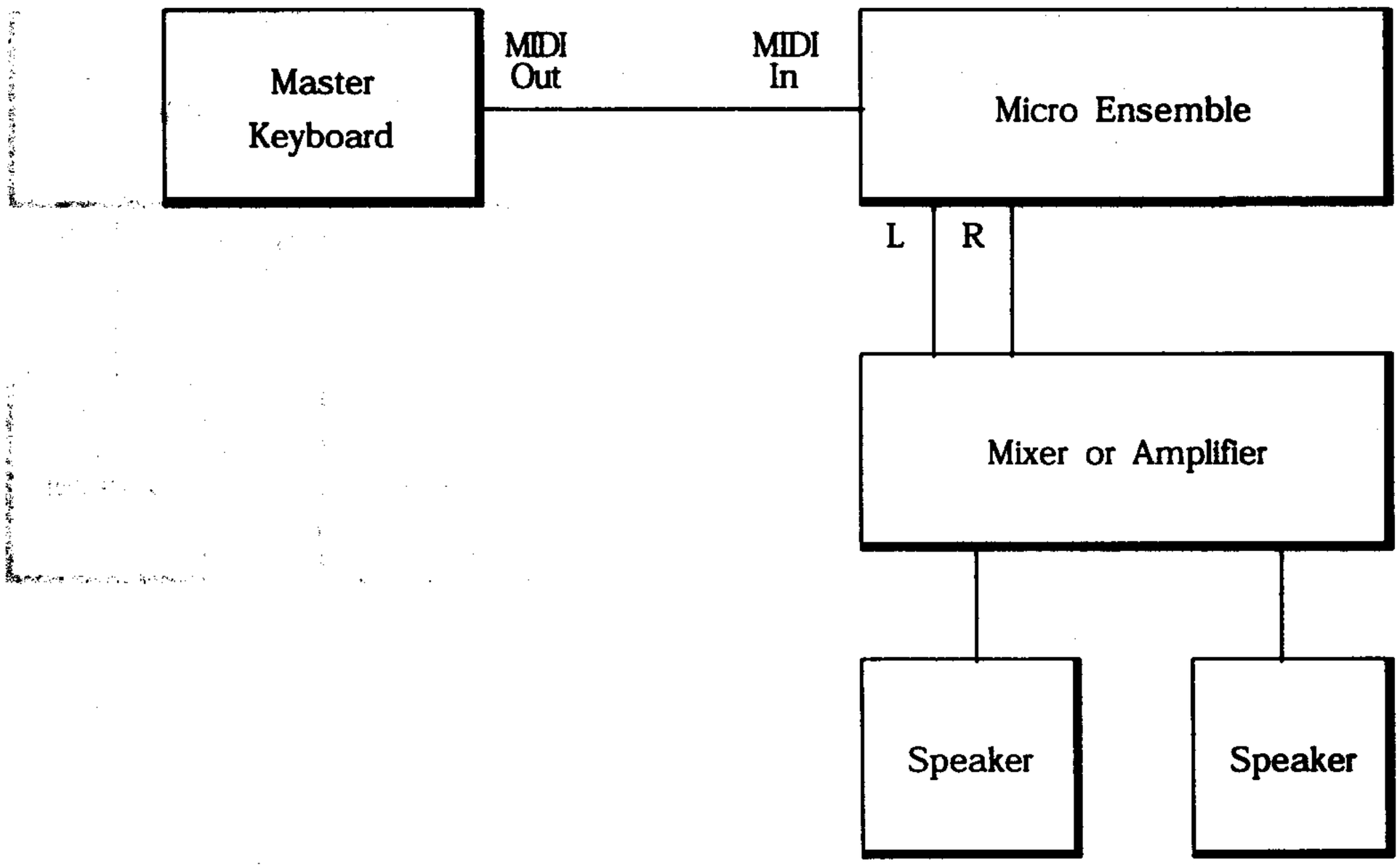
1. SETUP WITH A MASTER KEYBOARD

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.

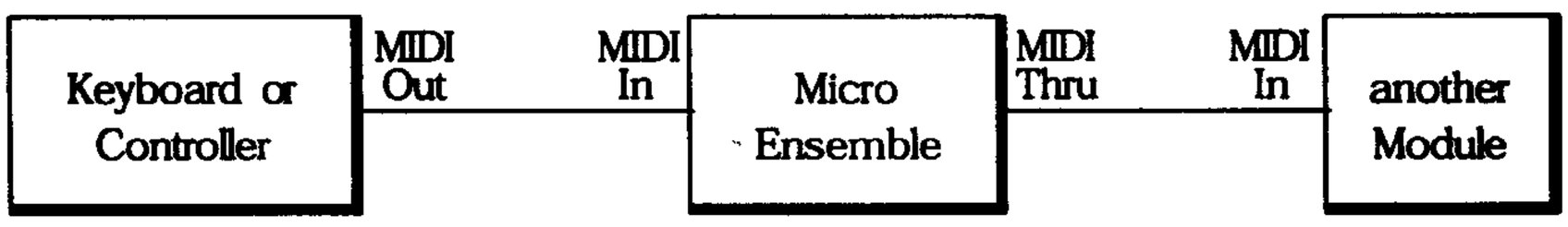
For audio connections, you may use headphones or external powered speakers or component amplifier and speakers. You may also use headphones and speakers at the same time. See the illustration below for use with powered speakers, such as computer speakers or a keyboard amplifier.



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:

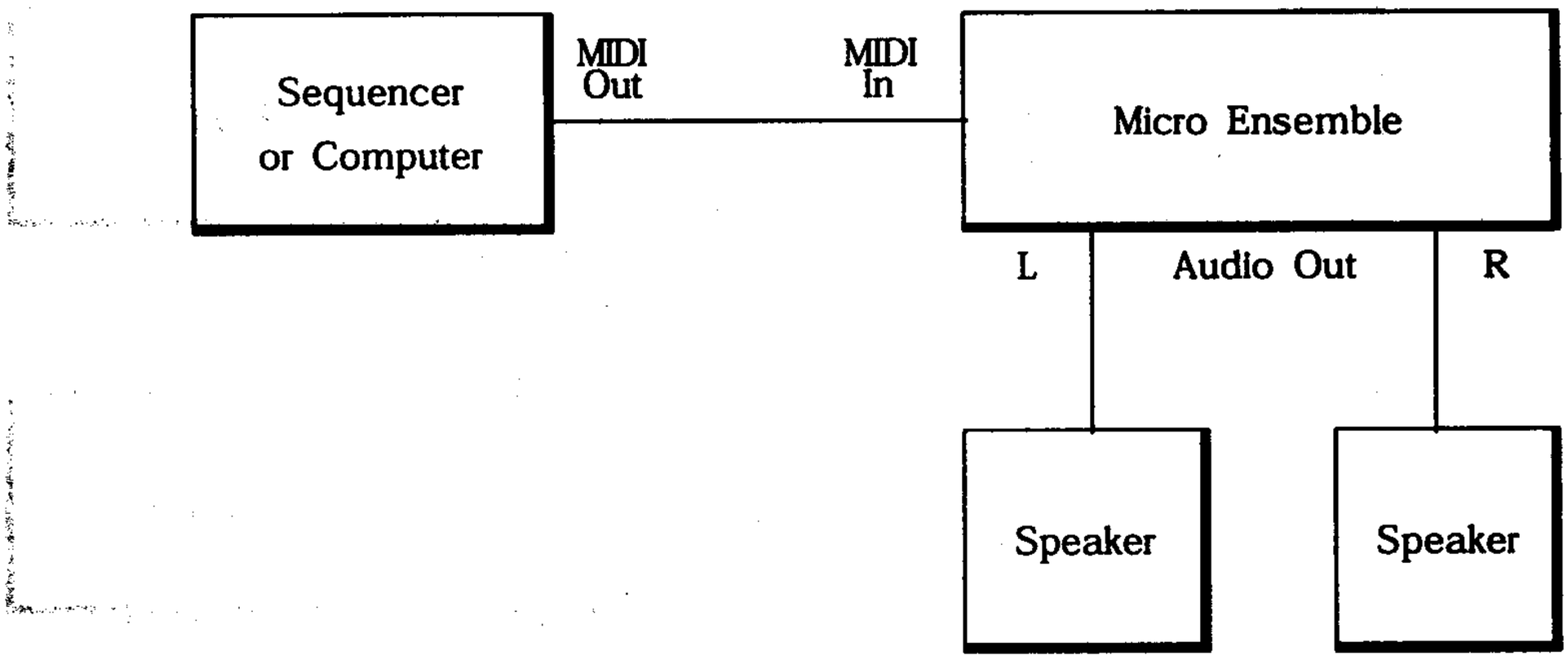


If you want to use your Micro Ensemble with another MIDI module and hear sounds from both, you can connect your system as follows:



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	1=Hard Rock Piano	1=Classic E Piano	1=My Best Wurly
2=Classic Grand	2=Rock Grand	2=Serious Classic	2=Big Red Wurly
3=DynamicGrand	3=Grand Piano 440	3=That 70 s E Pno	3=Brkfst in Korea
4=WarmGrand	4=Mono Stage Piano	4=Hard E Pno	4=Soft Wurly
5=SoloGrandPiano	5=Dyn StagePiano	5=Lounge E Piano	5=Wurly Road
6=Concert Grand	6=Ragtime Piano	6=Dyno E Pno	6=Pearly Keys
7=MonoGrandPiano	7=Tack Piano	7=Soft E Piano	7=Digital E Piano
8=Piano for layers	8=Piano & Strings	8=Hybrid E Piano	8=Ballad E Piano
9=Sweet Ivories	9=Basement Upright	9=Mello E Piano	9=Soft Ballad
10=Nice Touch Grand	10=Chiano	10=Tines Square	10=70 s FM Tines
11=Piano Solitude	11=Way Back Piano	11=Brunch In Seoul	11=90 s FM Ballad
12=Piano Recital	12=Dance Piano	12=Classy Roadz	12=Chorus Rock Pno
13=Full Bloom Piano	13=Cloud Ride Piano	13=Barking Tines	13=Bright Pianotone
14=Pianetta	14=Organic Piano	14=Clean and Soft	14=Family Portrait
15=Suite Piano	15=Piano & Wash	15=Ballad Keys	15=Harpsi-Piano
16=Dreamy Piano	16=Piano & Vox Pad	16=Lotus Keys	16=Fantasy Keys

Bank E	Bank F	Bank G	Bank H
1=C3PO	1=Clav Classic	1=The Reverend s	1=Big Brass
2=Digi E Grand	2=Touch Clav	2=Ballad Of 3 Bars	2=Saxes/Trumpets
3=Rock Grand	3=Dual Wah Clav	3=Prog Rocker s B	3=Split Sections
4=FantAsmAtron	4=Harpsichord	4=All Out Full On	4=Broadway Brass
5=Atmaz	5=Modern Harpsi	5=Grungy Overdrive	5=Trombones
6=Celestial Comet	6=CrystalClavchd	6=Uptown Gospel	6=Bari/Tenor Sect
7=Comp Time	7=Accordion	7=Retro Roto	7=Solo Tenor Sax
8=Ruth Buzzy	8=Celesta	8=Pipe Organ	8=Williams Brass
9=Janet s Comp	9=Mod Clavier	9=BackgroundOrgan	9=Goosed Riff Sect
10=Mild Sheen	10=Belly Celeste	10=Mello Tone Wheel	10=Fatso Sax
11=Scrape Glass	11=Harpsichordion	11=Piped Organ	11=Big&Beefy Saxes
12=Air Society	12=Circus Keys	12=Playful Piper	12=Goosed Unison
13=Push Air	13=Cosmic Calliope	13=Peter s Pan	13=Anabrass
14=Dronin	14=Calliope Keys	14=Imaginary Flute	14=Honk n Dyn Sax
15=Alien Salt Mine	15=Chiff Attack	15=Bright Koreana	15=Saxy Lush
16=Imperfect Storm	16=Spaced Harmonix	16=Bouncin BassBall	16=Classical Brass

Bank I	Bank J	Bank K	Bank L
1=Lyrical Strings	1=Ooh><Aah	1=Solar Lead	1=Rez Aah Pad
2=Slow Strings	2=Doo><Daa	2=Vox Lead	2=Crypt
3=Marcato Strings	3=Baa stacc.Bop	3=Alazawi	3=Meteor Strings
4=Layer Strings	4=Doo stacc.Doop	4=Slo Wood Flute	4=Orch Pad
5=Fast Strings	5=Daa stacc.Dot	5=Groove Bass	5=Neptune
6=Touch Strings	6=Scatman	6=1/3 Pulse Bass	6=Analogy
7=Velocity Strings	7=The Croons	7=Sweeper Bass	7=Dream Catcher
8=Phantom Strings	8=Cathedral Vox	8=Lowdown Bass	8=U Say Tomita...
9=Fast Vtrig Rosin	9=Bright Voices	9=Subdevide	9=Poseidon
10=Emotional String	10=Crystal Voices	10=Rezzy Bass/Poly	10=Analogica
11=Octave Strings	11=Vox & Organ	11=Technicolor	11=Anti Rez
12=Emphatic Strings	12=BIG Ooh Voices	12=Elan Lead	12=Spider s Web
13=Rosin Section	13=BIG Voices	13=Sun Spot Lead	13=Ethereal Strings
14=Resolute Section	14=Bright Syn Vox	14=Dinosaur s Lead	14=FreeResAhh Notch
15=Tender Strings	15=Vox Orgel	15=Sawyer s Bomb	15=Ooh><Aah Pad
16=Flute & Strings	16=Vox & Strings	16=Reverse Feedback	16=Vocalicious

Bank M	Bank N	Bank O	Bank P
1=Acoustic Guitar	1=Round and Wound	1=Studio Drums 1+2	1=Virtuoso Perc
2=Strummer 12 Str	2=Punch Bass	2=Studio Drums 3+4	2=Rhythm Maker
3=Rich 6 String	3=Two Finger Bass	3=Ambient Rock Kit	3=Woody Marimba
4=12 String Guitar	4=Dual-Tri Bass	4=Coliseum Kit	4=African Marimba
5=Chorus Elec Gtr	5=Clav o Bass	5=Resonant Traps	5=Vibes
6=Elec 12 String	6=Fret Not Bass	6=Tripkit/Trashkit	6=New Fluid Vibes
7=Jazzy Frets	7=Upright Bass 1	7=Beat Box	7=Aborigine Jam
8=Lead Rock Gtr	8=Upright Bass 2	8=Electro Kit	8=Drums n Bells
9=Titanium Guitar	9=Gimme The Finger	9=Radio Kings/Rods	9=Marimba
10=Latin Lover	10=Bright E Bass	10=Ripper Kit/Vinyl	10=Milky Way Vibes
11=Roto 12 String	11=Bright A Bass	11=LA Drums/Brk Bt.	11=Percussionist
12=Electric 12	12=Triangle Bass	12=Compact/Raw Kit	12=Carnival
13=Twangy Guitar	13=Yow Bass	13=TubeTraps/lb.der	13=Primitive Perc
14=Chr Elec & Mute	14=Mono Synth Bass	14=Acoustric/HiPKit	14=Bunch of Perc
15=Comp Chr E Gtr	15=400 HP Bass	15=Dirt/Triphop Kit	15=Perc Party
16=Trashed Tubes	16=Base in Face	16=SumPumpKit MWSus	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=Subdevide
17=Serious Classic	81=Vox Lead	17=Tines Square	81=Rezzy 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=Acoustric/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.

TRANSPOSE

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 Revervb 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	Key Range
	True Voice	✖	1 - 128	C0 - C8
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 2 : Omni On, Mono ○ = yes
Mode 3 : Omni Off, Poly Mode 4 : Omni Off, Mono ✖ = 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	
Connectors	Unbalanced outputs using two 1/4 inch phone plugs
Impedance	1000 ohms left & right (stereo) 500 ohms left/mono
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

Headphone output	
Output Impedance	47 ohms, nominal
Maximum output level	0.9 Volts RMS into 32 ohms (25 mW)

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