Owner's Manual
Ensemble™, Ensemble Division™

Ensemble, Ensemble Division
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I.   GENERAL INFORMATION

The Ensemble™ and/or Ensemble Division™, hereafter referred to as Ensemble™, is a MIDI sound module that supplies a vast array of sounds from the standard General MIDI to an advanced Allen Organ soundset. The General MIDI soundset includes 128 different sounds arranged in the familiar General MIDI format, plus, an additional 127 sounds from the Allen Organ sample library. The Ensemble™ also contains 8 complete drum kits. In addition, the Ensemble™ has 128 preset combinations that are user programmable and can be saved and loaded via MIDI. All preset combinations are stored in non-volatile memory, with no batteries to wear out or replace.

II.   FRONT/BACK PANEL

1.   FRONT PANEL DESCRIPTION
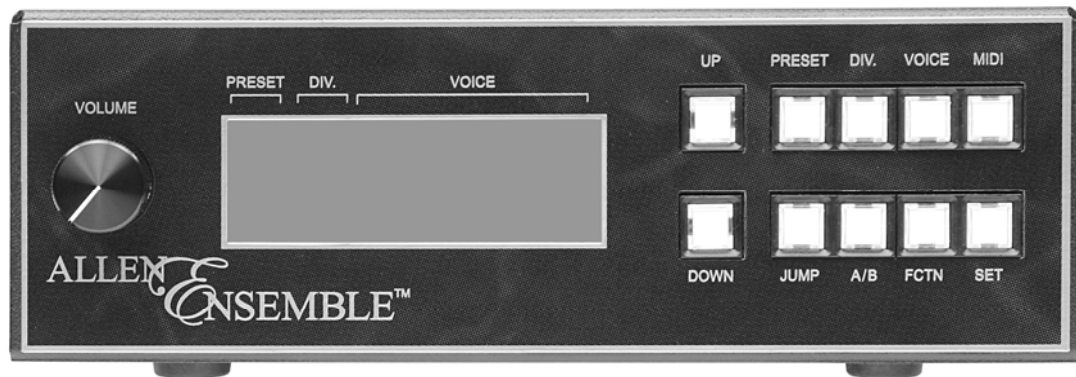
❑   The Volume knob controls the main volume output of the Ensemble™.

❑   The LCD is a 4 line type, although it is actually capable of displaying eight lines of information *(see A/B button below)*. The LCD displays all pertinent user information at the touch of a button for ease of use.

❑   UP & DOWN buttons: These controls are used to change the settings of all functions (PRESET, DIV, VOICE, etc.). To change a function setting, first press the desired function button, and then use the UP or DOWN buttons to change the setting within that function. To save changes, press the SET button and then press the PRESET button. The UP and DOWN buttons are repeating functions, holding either button will cause a continuous change.
Note: with the exception of MIDI functions and tuning, changes in settings will only affect the current preset. MIDI and tuning settings are "global" and do not need to be changed for each preset.

❑   PRESET button: Moves line cursor to "Preset" sector of display. Subsequent use selects next preset number. Pressing the "PRESET" button while in any other window function will return the display to this mode. Therefore the "PRESET" button functions as an "abort" key.

❑   DIV button: Moves blinking cursor to the arrow which points to the specific division sector of display. Subsequent use selects next division.

❑   <u>VOICE button</u>: Moves blinking cursor to first letter of the voice of the currently selected division. Subsequent use selects next voice for that division.

❑   <u>A/B button</u>: "Flips" the display to show the remaining 4 lines of information. When in "Preset" mode the display will show a single letter, "A" or "B", in the lower left side. When "A" is shown, the first voice setting for each division is shown in the display. Pressing the A/B button will then change the letter to "B" displaying the second voice setting for each division.

❑   <u>FCTN button</u>: Enters the function mode. The function mode contains "global" settings and actions for 1) Play Mode Type, 2) Tuning, 3) Saving Presets, 4) Loading Presets.

❑   <u>SET button</u>: Used to program presets to internal and external combinations *(only on organs whose pistons transmit MIDI program change information)*.

2.   BACK PANEL
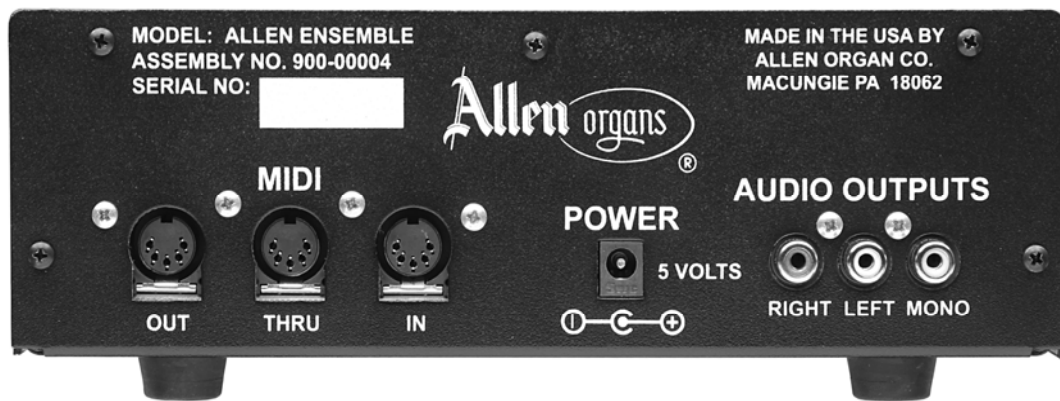
❑   <u>MIDI IN, OUT, THRU</u>: These ports are used to connect to an organ, sequencer, computer, or keyboard. **Note:** MIDI OUT is only used to save preset data via external sequence or computer.

❑   <u>Power Connection</u>: Use only approved Allen Organ power source *(refer to Power Requirements later in this manual)*.

❑   <u>Audio Outputs</u>: Connect left and right audio outputs to a mixer or amplifier. Mono output (non-stereo) is combination of the left and right audio signals.

3.   MODIFYING PRESETS

1.   Select desired preset: press PRESET, then UP or DOWN
2.   Select division for modification: press DIV, then UP or DOWN
3.   Select desired voice: press VOICE, then UP or DOWN
4.   Save settings: press SET, then PRESET

Example: To change the voice assigned to a division, press the DIV button and use the UP or DOWN buttons to move the flashing cursor to the desired division. Press the VOICE button and use the UP or DOWN buttons to select the desired voice. To save changes as part of the current preset, press the SET button and then press the PRESET button.

4. RESTORING FACTORY SETTINGS FOR PRESETS

The Ensemble™ allows the organist a great deal of flexibility in programming and configuration. Use the following procedure if it becomes necessary or desirable to restore the factory pre-programmed settings for presets combinations and MIDI functions.

With the Ensemble's power turned <u>off</u>, press and hold the PRESET and DIV buttons simultaneously. While holding the PRESET and DIV buttons, turn the Ensemble™ on. The Ensemble™ will delay starting the factory restoration process for 10 seconds, giving the organist time to decide whether to proceed with the restoration process or not. If the organist wants to stop the restoration process, simply turn the Ensemble's power off. When power is re-applied to the Ensemble™, all organist settings will be retained. If the organist proceeds with the factory restoration process, the Ensemble™ will display that it is restoring all factory settings, then automatically restart the Ensemble™. All preset combinations, tuning, and MIDI functions are now returned to factory status.

5. ASSIGNING PRESETS TO GENERAL ORGAN PISTONS

1. Select desired Preset: press PRESET, then UP or DOWN.
2. Press SET button on the Ensemble™.
3. Press the organ General piston to which Preset is to be set.

6. ASSIGNING VOICES TO DIVISIONAL PISTONS

1. Select division to which organ division is connected: press DIV, then UP or DOWN
2. Select desired voice: press VOICE, then UP or DOWN.
3. Press SET button on the Ensemble™.
4. Press an organ Divisional Piston to which the voice is to be set.

7. DISABLING A DIVISION

There are two ways to disable a single division while still accessing the other divisions.

1. Turn off the associated organ MIDI coupler.
2. Select "MIDI OFF" as the division's voice (See instructions for "VOICE button" above). The organ will continue sending MIDI information to any other MIDI device in use on that port. The division will continue to respond to program change information (including program change information sent by pistons).

Note: The "MIDI OFF" setting may be selected on more than one division simultaneously, and can be saved as part of a preset. Later use of other divisional pistons will select the voice currently assigned to these other pistons.

8. **TUNING**

The tuning can be adjusted so that it will play in (or out of) tune with the organ. Press the "FCTN" button until the Tune function appears on the display, the current tuning amount will also be displayed. then use the UP and DOWN buttons to raise or lower the pitch. The tuning can be raised or lowered by up to 100 cents or one semitone.

III. POWER REQUIREMENTS

The Ensemble™ is powered from a standalone 5V power supply (905-00055) *(the Ensemble Division™ is directly powered from the console's power supplies)*. Do not use any other type of power supply as it may permanently damage the internal circuitry of the Ensemble™. A replacement power supply may be obtained through your local Allen representative.

IV. FUNCTION OPERATIONS

9. **MIDI FUNCTIONS**

Note: The "MIDI Functions" section includes information regarding features that are factory preset and do not require in-field modifications under normal circumstances.

There are several MIDI window functions. To access the MIDI window functions, press and hold "MIDI" button for 4 seconds. Subsequent use of the MIDI button will advance to additional MIDI window functions. To return to normal playing mode, continue pressing the "MIDI" button until the Preset combination screen appears or press the "PRESET" button to return directly to the Preset combination screen.

Control Channel: This setting is the MIDI channel on which the Ensemble™ will interpret MIDI program changes as PRESET combination changes. Allen Organs send MIDI messages from General pistons on MIDI channel 8. *(This is true when the MIDI base channel is set to 1).* Changing the MIDI base channel of the organ also changes the channel of transmission for General Pistons. For more information on this subject, consult your Allen Organ owner's manual. The MIDI control channel is factory preset to Channel 8. The Ensemble's MIDI Control Channel must be the same as the organ's General Pistons' MIDI channel in order for the organ's General Pistons to change Preset combinations.

Number of Manuals displayed: There can be up to 4 divisions displayed and/or played at one time. This function permits selection of the number of divisions that will be displayed by the Ensemble™. For example, a two manual organ requires only three display lines (Swell, Great and Pedal.) Use the UP and DOWN buttons to change the setting. The Ensemble's divisions are factory preset to match the organ's divisions.

Division/Channel Assignments: Permits configuration of the Ensemble's MIDI channels, divisions, and display characteristics. "Line" refers to the display line on the Ensemble™ screen where a desired division and channel will be displayed in normal playing mode. Use the UP and DOWN buttons to select the organ division abbreviation (symbol) that will be displayed on the line indicated by the line sector (see division abbreviation list below) Once you have selected the desired abbreviation, press the "MIDI" button to move the cursor to the MIDI_A channel sector. Use the UP and DOWN buttons to select the desired MIDI channel that will play the A voice on the displayed division. Any MIDI channel *(not already assigned to another division)* between 1 and 16 and "--" (Off) can be selected. Pressing the "MIDI" button again moves the cursor to the MIDI_B channel sector. By default, MIDI channel B should be set to MIDI channel A's value +10. For example, if MIDI channel A's value is 2 then MIDI channel B's value should be set to 12. Subsequent use of the MIDI button will change the display to lines 2, 3, & 4 *(depending on the number of manuals displayed)*. **Note:** These changes will affect all presets.

Division abbreviations available: SW, GT, PD, CH, RC, GO, PO, SO, HW, AC, MN, CL, BD, or MIDI channel number.

10. GENERAL MIDI/ENSEMBLE NORMAL PLAY MODES

There may be times that you may wish use the Ensemble™ as a General MIDI module, such as playing back a General MIDI sequence to accompany the organ. In these situations it is possible to place the Ensemble™ in General MIDI Play mode. Pressing the "FCTN" button will ask you which mode you wish to place the Ensemble™ in. Use the UP and DOWN buttons to select the play mode the "X" will change position to indicate which mode you are currently in. Once the selection is complete, press the "PRESET" button to return to the Preset combination screen.

Ensemble Normal Mode: This mode is for normal use of the Ensemble™. By default, the Ensemble™ will start-up in this mode. The Ensemble™ will interpret General piston program change messages as Preset combination changes.

General MIDI Play Mode: This mode disables the receiving of General piston program change messages. (*For example: Pressing General pistons will not change the Preset combinations.)* Ensemble™ voices may be selected via MIDI bank select and program change messages. In this mode the Allen Organ voices may be selected by issuing a Bank select message of 2. The General MIDI voices are in Bank 0 *(see the voice assignment list later in this manual)*.

11. PRESET SAVE/LOAD

All 128 Preset combinations as well as stored divisional piston and MIDI settings can be saved and loaded via external MIDI storage device such as a MIDI sequencer or personal computer. **Note:** For these functions to operate correctly both MIDI IN and OUT ports must be connected to the external MIDI storage device.

To **SAVE** the Ensemble™ Preset data, press the "FCTN" button until the SAVE PRESETS window function appears. Follow the instructions on the display. **Note:** This function will take time, so be patient. The display will indicate "DONE!" when the save is complete. Press the "PRESET" button to return to the Preset combination screen.

To **LOAD** Ensemble™ Preset data, press the "FCTN" button until the LOAD PRESETS window function appears. Follow the instructions on the display. **Note:** This function will take time, so be patient. The display will indicate "DONE!" when the load is complete. You must press the "FCTN" button again to make the load permanent. MAKING PERMANENT will be displayed when the Ensemble™ is moving the currently loaded Preset data from RAM to internal memory. The display will automatically return to the Preset combination screen when the load process is completed.

12. VOICE ASSIGNMENTS
a. GENERAL MIDI MODE

BANK 0

#	Voice		#	Voice		#	Voice		#	Voice
1	Grand Piano		33	Acoustc Bass		65	Soprano Sax		97	Rain
2	Bright Piano		34	Finger Bass		66	Alto Sax		98	Soundtrack
3	El Gnd Piano		35	Picked Bass		67	Tenor Sax		99	Crystal
4	Honky-Tonk		36	Frtless Bass		68	Baritone Sax		100	Atmosphere
5	El Piano 1		37	Slap Bass 1		69	Oboe		101	Brightness
6	El Piano 2		38	Slap Bass 2		70	English Horn		102	Goblins
7	Harpsichord		39	Synth Bass 1		71	Bassoon		103	Echoes
8	Clavinet		40	Synth Bass 2		72	Clarinet		104	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	Trem String		77	Blown Bottle		109	Kalimba
14	Xylophone		46	Pizz String		78	Shakuhachi		110	Bag Pipe
15	Tubular Bell		47	Orch Harp		79	Whistle		111	Fiddle
16	Dulcimer		48	Timpani		80	Ocarina		112	Shanai
17	Drawbar Orgn		49	String En 1		81	Lead1-sqr		113	Tinkle Bell
18	Percuss Orgn		50	String En 2		82	Lead2-saw		114	Agogo
19	Rock Organ		51	Synth Str 1		83	Lead3-calli		115	Steel Drums
20	Organ		52	Synth Str 2		84	Lead4-Chiff		116	Woodblock
21	Reed Organ		53	Choir Aahs		85	Lead5-chrng		117	Taiko Drum
22	Accordion		54	Voice Oohs		86	Lead6-Voice		118	Melodic Tom
23	Harmonica		55	Synth Voice		87	Lead7-5ths		119	Synth Drum
24	Tango Accord		56	Orch Hit		88	Lead8-bass+		120	Revrs Cymbal
25	Ac Guitr-nyl		57	Trumpet		89	Fantasia		121	Fret Noise
26	Ac Guitr-stl		58	Trombone		90	Warm		122	Breth Noise
27	El Guitr-jaz		59	Tuba		91	Polysynth		123	Seashore
28	El Guitr-Cln		60	Muted Trmpt		92	Choir		124	Bird Tweet
29	El Guitr-Mut		61	French Horn		93	Bowed		125	Phone Ring
30	Ovrdr Guitar		62	Brass Sect		94	Metallic		126	Helicopter
31	Distor Guitr		63	Syn. Brass 1		95	Halo		127	Applause
32	Guitar Harm		64	Syn. Brass 2		96	Sweep		128	Gunshot

BANK 1

#	Name	#	Name	#	Name	#	Name
1	32 Violone	33	1 1/7 Septim	65	8 Musette	97	Bugle
2	16 Diapason	34	1 Fife	66	8 Musette+Tr	98	Bugle + Trm
3	16 Diaphone	35	Zimbel III	67	8 Krumet	99	Strng Ensmbl
4	16 Gamba	36	Cymbale III	68	8 Krumet+Trm	100	Cello Ensmbl
5	16 Bourdon	37	Mixture IV	69	8 CorAnglais	101	8va Violin
6	16 Quintaden	38	Grand Mix IV	70	8 CorAng+Trm	102	S Piano 16-4
7	10 2/3 Quint	39	Sesquialt II	71	8 French Hrn	103	Piano 16
8	8 Principal	40	Sesq II+Trm	72	8 Fr Horn+Tr	104	Harpsi 8-4
9	8 Princ+Trem	41	Cornet V	73	8 Clarinet	105	Harpsi 16-8
10	8 Englsh Dia	42	Cornet V+Tr	74	8 Clarint+Tr	106	Vibraharp B
11	Eng Dia+Trm	43	32 Posaune	75	8 Schalmei	107	Chrysoglott
12	8 Bourdon	44	16 Posthorn	76	8 Schalmi+Tr	108	Orch Bells
13	8 Bourd+Trem	45	16 Posaune	77	Vox Humana8A	109	Wood Harp 8
14	8 Quintadena	46	16 Tuba	78	Vox Humana8B	110	Wood Harp 4
15	Quntadena+Tr	47	16 C Trumpet	79	4 Klarine	111	Marimba
16	8 Gedackt	48	16 Clarinet	80	4 Clarion	112	Chimes
17	Gedackt+Trm	49	16 Clarnt+Tr	81	4 Schalmei	113	Carillon
18	8 Harm Flute	50	16 Dulzian	82	4 Schalmi+Tr	114	Handbells
19	Harm Flt+Trm	51	16 Rankett	83	2 Zink	115	Bell Tree
20	8 Viole Cel	52	16 Musette	84	Organ – MF	116	Snare Roll
21	8 Flute Cel	53	16 Muset+Tr	85	Organ – F	117	Cymbal Roll
22	8 Dulcin Cel	54	16 Vox Hum A	86	Organ – FF	118	Crash Cymbal
23	5 1/3 Quinte	55	16 Vox Hum B	87	Organ – FFF	119	Thunder
24	5 1/3 Quint	56	8 Span Trpt	88	8-4 Flute	120	Cannon
25	4 Octave	57	8 Posthorn	89	8-4 Flt+Trm	121	Ac Bass Sub
26	4 Englsh Oct	58	8 Tuba	90	8-2 Flute	122	FngrBass Sub
27	4 Harm Flute	59	8 Trumpet	91	Tibia 8	123	PckdBass Sub
28	4 Harm Fl+Tr	60	8 Trmpt+Trm	92	Tibia-Vox 8	124	FrtlessB Sub
29	4 Viole	61	8 Trompette	93	Tib/Vox 8-4	125	SlapBass Sub
30	4 Viole+Trm	62	8 Cromorne	94	Tiba 16-8-4	126	SynBass1 Sub
31	2 Piccolo	63	8 Cromorm+Tr	95	Brass Ensmbl	127	SynBass2 Sub
32	1 1/3 Larigo	64	8 Rankett	96	Brass En+Trm	128	MIDI OFF

BANK 2

1	32 Violone	33	1 1/7 Septim	65	8 Musette	97	Bugle
2	16 Diapason	34	1 Fife	66	8 Musette+Tr	98	Bugle + Trm
3	16 Diaphone	35	Zimbel III	67	8 Krumet	99	Strng Ensmbl
4	16 Gamba	36	Cymbale III	68	8 Krumet+Trm	100	Cello Ensmbl
5	16 Bourdon	37	Mixture IV	69	8 CorAnglais	101	8va Violin
6	16 Quintaden	38	Grand Mix IV	70	8 CorAng+Trm	102	S Piano 16-4
7	10 2/3 Quint	39	Sesquialt II	71	8 French Hrn	103	Piano 16
8	8 Principal	40	Sesq II+Trm	72	8 Fr Horn+Tr	104	Harpsi 8-4
9	8 Princ+Trem	41	Cornet V	73	8 Clarinet	105	Harpsi 16-8
10	8 Englsh Dia	42	Cornet V+Tr	74	8 Clarint+Tr	106	Vibraharp B
11	Eng Dia+Trm	43	32 Posaune	75	8 Schalmei	107	Chrysoglott
12	8 Bourdon	44	16 Posthorn	76	8 Schalmi+Tr	108	Orch Bells
13	8 Bourd+Trem	45	16 Posaune	77	Vox Humana8A	109	Wood Harp 8
14	8 Quintadena	46	16 Tuba	78	Vox Humana8B	110	Wood Harp 4
15	Quntadena+Tr	47	16 C Trumpet	79	4 Klarine	111	Marimba
16	8 Gedackt	48	16 Clarinet	80	4 Clarion	112	Chimes
17	Gedackt+Trm	49	16 Clarnt+Tr	81	4 Schalmei	113	Carillon
18	8 Harm Flute	50	16 Dulzian	82	4 Schalmi+Tr	114	Handbells
19	Harm Flt+Trm	51	16 Rankett	83	2 Zink	115	Bell Tree
20	8 Viole Cel	52	16 Musette	84	Organ – MF	116	Snare Roll
21	8 Flute Cel	53	16 Muset+Tr	85	Organ – F	117	Cymbal Roll
22	8 Dulcin Cel	54	16 Vox Hum A	86	Organ – FF	118	Crash Cymbal
23	5 1/3 Quinte	55	16 Vox Hum B	87	Organ – FFF	119	Thunder
24	5 1/3 Quint	56	8 Span Trpt	88	8-4 Flute	120	Cannon
25	4 Octave	57	8 Posthorn	89	8-4 Flt+Trm	121	Ac Bass Sub
26	4 Englsh Oct	58	8 Tuba	90	8-2 Flute	122	FngrBass Sub
27	4 Harm Flute	59	8 Trumpet	91	Tibia 8	123	PckdBass Sub
28	4 Harm Fl+Tr	60	8 Trmpt+Trm	92	Tibia-Vox 8	124	FrtlessB Sub
29	4 Viole	61	8 Trompette	93	Tib/Vox 8-4	125	SlapBass Sub
30	4 Viole+Trm	62	8 Cromorne	94	Tiba 16-8-4	126	SynBass1 Sub
31	2 Piccolo	63	8 Cromorm+Tr	95	Brass Ensmbl	127	SynBass2 Sub
32	1 1/3 Larigo	64	8 Rankett	96	Brass En+Trm	128	MIDI OFF

BANK 3

1	Grand Piano	33	Acoustc Bass	65	Soprano Sax	97	Rain
2	Bright Piano	34	Finger Bass	66	Alto Sax	98	Soundtrack
3	El Gnd Piano	35	Picked Bass	67	Tenor Sax	99	Crystal
4	Honky-Tonk	36	Frtless Bass	68	Baritone Sax	100	Atmosphere
5	El Piano 1	37	Slap Bass 1	69	Oboe	101	Brightness
6	El Piano 2	38	Slap Bass 2	70	English Horn	102	Goblins
7	Harpsichord	39	Synth Bass 1	71	Bassoon	103	Echoes
8	Clavinet	40	Synth Bass 2	72	Clarinet	104	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	Trem String	77	Blown Bottle	109	Kalimba
14	Xylophone	46	Pizz String	78	Shakuhachi	110	Bag Pipe
15	Tubular Bell	47	Orch Harp	79	Whistle	111	Fiddle
16	Dulcimer	48	Timpani	80	Ocarina	112	Shanai
17	Drawbar Orgn	49	String En 1	81	Lead1-sqr	113	Tinkle Bell
18	Percuss Orgn	50	String En 2	82	Lead2-saw	114	Agogo
19	Rock Organ	51	Synth Str 1	83	Lead3-calli	115	Steel Drums
20	Organ	52	Synth Str 2	84	Lead4-Chiff	116	Woodblock
21	Reed Organ	53	Choir Aahs	85	Lead5-chrng	117	Taiko Drum
22	Accordion	54	Voice Oohs	86	Lead6-Voice	118	Melodic Tom
23	Harmonica	55	Synth Voice	87	Lead7-5ths	119	Synth Drum
24	Tango Accord	56	Orch Hit	88	Lead8-bass+	120	Revrs Cymbal
25	Ac Guitr-nyl	57	Trumpet	89	Fantasia	121	Fret Noise
26	Ac Guitr-stl	58	Trombone	90	Warm	122	Breth Noise
27	El Guitr-jaz	59	Tuba	91	Polysynth	123	Seashore
28	El Guitr-Cln	60	Muted Trmpt	92	Choir	124	Bird Tweet
29	El Guitr-Mut	61	French Horn	93	Bowed	125	Phone Ring
30	Ovrdr Guitar	62	Brass Sect	94	Metallic	126	Helicopter
31	Distor Guitr	63	Syn. Brass 1	95	Halo	127	Applause
32	Guitar Harm	64	Syn. Brass 2	96	Sweep	128	Gunshot

b. ENSEMBLE MODE

1	Grand Piano	33	Acoustc Bass	65	Soprano Sax	97	Rain
2	Bright Piano	34	Finger Bass	66	Alto Sax	98	Soundtrack
3	El Gnd Piano	35	Picked Bass	67	Tenor Sax	99	Crystal
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29	El Guitr-Mut	61	French Horn	93	Bowed	125	Phone Ring
30	Ovrdr Guitar	62	Brass Sect	94	Metallic	126	Helicopter
31	Distor Guitr	63	Syn. Brass 1	95	Halo	127	Applause
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131	16 Diaphone	163	Zimbel III	195	8 Krumet	227	Strng Ensmbl
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134	16 Quintaden	166	Grand Mix IV	198	8 CorAng+Trm	230	S Piano 16-4
135	10 2/3 Quint	167	Sesquialt II	199	8 French Hrn	231	Piano 16
136	8 Principal	168	Sesq II+Trm	200	8 Fr Horn+Tr	232	Harpsi 8-4
137	8 Princ+Trem	169	Cornet V	201	8 Clarinet	233	Harpsi 16-8
138	8 Englsh Dia	170	Cornet V+Tr	202	8 Clarint+Tr	234	Vibraharp B
139	Eng Dia+Trm	171	32 Posaune	203	8 Schalmei	235	Chrysoglott
140	8 Bourdon	172	16 Posthorn	204	8 Schalmi+Tr	236	Orch Bells
141	8 Bourd+Trem	173	16 Posaune	205	Vox Humana8A	237	Wood Harp 8
142	8 Quintadena	174	16 Tuba	206	Vox Humana8B	238	Wood Harp 4
143	Quntadena+Tr	175	16 C Trumpet	207	4 Klarine	239	Marimba
144	8 Gedackt	176	16 Clarinet	208	4 Clarion	240	Chimes
145	Gedackt+Trm	177	16 Clarnt+Tr	209	4 Schalmei	241	Carillon
146	8 Harm Flute	178	16 Dulzian	210	4 Schalmi+Tr	242	Handbells
147	Harm Flt+Trm	179	16 Rankett	211	2 Zink	243	Bell Tree
148	8 Viole Cel	180	16 Musette	212	Organ – MF	244	Snare Roll
149	8 Flute Cel	181	16 Muset+Tr	213	Organ – F	245	Cymbal Roll
150	8 Dulcin Cel	182	16 Vox Hum A	214	Organ – FF	246	Crash Cymbal
151	5 1/3 Quinte	183	16 Vox Hum B	215	Organ – FFF	247	Thunder
152	5 1/3 Quint	184	8 Span Trpt	216	8-4 Flute	248	Cannon
153	4 Octave	185	8 Posthorn	217	8-4 Flt+Trm	249	Ac Bass Sub
154	4 Englsh Oct	186	8 Tuba	218	8-2 Flute	250	FngrBass Sub
155	4 Harm Flute	187	8 Trumpet	219	Tibia 8	251	PckdBass Sub
156	4 Harm Fl+Tr	188	8 Trmpt+Trm	220	Tibia-Vox 8	252	FrtlessB Sub
157	4 Viole	189	8 Trompette	221	Tib/Vox 8-4	253	SlapBass Sub
158	4 Viole+Trm	190	8 Cromorne	222	Tiba 16-8-4	254	SynBass1 Sub
159	2 Piccolo	191	8 Cromorm+Tr	223	Brass Ensmbl	255	SynBass2 Sub
160	1 1/3 Larigo	192	8 Rankett	224	Brass En+Trm	256	MIDI OFF

c: DRUM SET TABLE (MIDI Channel 10)

	Prog 1: (Standard)	Prog 9: (Room)	Prog 17: (Power)	Prog 25: (Electric)
27 - D#1	High Q			
28 - E1	Slap			
29 - F1	Scratch Push			
30 - F#1	Scratch Pull			
31 - G1	Sticks			
32 - G#1	Square Click			
33 - A1	Metronome Click			
34 - A#1	Metronome Bell			
35 - B1	Kick Drum 2			
36 - C2	Kick Drum 1		Power Kick	
37 - C#2	Side Stick			
38 - D2	Snare Drum 1		Gated Snare	
39 - D#2	Hand Clap			
40 - E2	Snare Drum 2			Gated Snare
41 - F2	Low Floor Tom	Room Low Tom 2	Room Low Tom 2	Electric Low Tom 2
42 - F#2	Closed Hi Hat			
43 - G2	High Floor Tom	Room Low Tom 1	Room Low Tom 1	Room Low Tom 1
44 - G#2	Pedal Hi Hat			
45 - A2	Low Tom	Room Mid Tom 2	Room Mid Tom 2	Room Mid Tom 2
46 - A#2	Open Hi Hat			
47 - B2	Low-Mid Tom	Room Mid Tom 1	Room Mid Tom 1	Room Mid Tom 1
48 - C3	Hi-Mid Tom	Room Hi Tom 2	Room Hi Tom 2	Room Hi Tom 2
49 - C#3	Crash Cymbal 1			
50 - D3	High Tom	Room Hi Tom 1	Room Hi Tom 1	Room Hi Tom 1
51 - D#3	Ride Cymbal 1			
52 - E3	Chinese Cymbal			Reverse Cymbal
53 - F3	Ride Bell			
54 - F#3	Tambourine			
55 - G3	Splash Cymbal			
56 - G#3	Cowbell			
57 - A3	Crash Cymbal 2			
58 - A#3	Vibraslap			
59 - B3	Ride Cymbal 2			
60 - C4	Hi Bongo			
61 - C#4	Low Bongo			
62 - D4	Mute Hi Conga			
63 - D#4	Open Hi Conga			
64 - E4	Low Conga			
65 - F4	High Timbale			
66 - F#4	Low Timbale			
67 - G4	High Agogo			
68 - G#4	Low Agogo			
69 - A4	Cabasa			
70 - A#4	Maracas			
71 - B4	Short Whistle			
72 - C5	Long Whistle			
73 - C#5	Short Guiro			
74 - D5	Lone Guiro			
75 - D#5	Claves			
76 - E5	Hi Wood Block			
77 - F5	Low Wood Block			
78 - F#5	Mute Cuica			
79 - G5	Open Cuica			
80 - G#5	Mute Triangle			
81 - A5	Open Triangle			
82 - A#5	Shaker			
83 - B5	Jingle Bell			
84 - C6	Belltree			
85 - C#6	Castanets			
86 - D6	Mute Surdo			
87 - D#6	Open Surdo			

	Prog 26: (TR-808)	Prog 41: (Brush)	Prog 49: (Orchestra)	Prog 57: (SFX)
88 - E6				
27 - D#1			Closed Hi Hat	
28 - E1			Pedal Hi Hat	
29 - F1			Open Hi Hat	
30 - F#1			Ride Cymbal	
31 - G1				
32 - G#1				
33 - A1				
34 - A#1				
35 - B1				
36 - C2	808 Bass Drum			
37 - C#2				
38 - D2	808 Snare Drum	Brush Tap	Snare Drum 2	
39 - D#2		Brush Slap	Castanets	High Q
40 - E2		Brush Swirl	Snare Drum 2	Slap
41 - F2	808 Low Tom 2		Timpani F	Scratch Push
42 - F#2	808 Closed Hi Hat		Timpani F#	Scratch Pull
43 - G2	808 Low Tom 2		Timpani G	Sticks
44 - G#2	808 Closed Hi Hat		Timpani G#	Square Click
45 - A2	808 Mid Tom		Timpani A	Metronome Click
46 - A#2	808 Open Hi Hat		Timpani A#	Metronome Bell
47 - B2	808 Mid Tom 1		Timpani B	Guitar Slide
48 - C3	808 Hi Tom 2		Timpani C	
49 - C#3	808 Cymbal		Timpani C#	
50 - D3	808 Hi Tom 1		Timpani D	
51 - D#3			Timpani D#	
52 - E3			Timpani E	
53 - F3			Timpani F	
54 - F#3				
55 - G3				
56 - G#3				
57 - A3				
58 - A#3				Applause
59 - B3				
60 - C4				
61 - C#4				
62 - D4	808 High Conga			
63 - D#4	808 Mid Conga			
64 - E4	808 Low Conga			
65 - F4				
66 - F#4				
67 - G4				
68 - G#4				
69 - A4				
70 - A#4				Helicopter
71 - B4				
72 - C5				Gun Shot
73 - C#5				
74 - D5				
75 - D#5				
76 - E5				
77 - F5				
78 - F#5				Birds
79 - G5				Rain
80 - G#5				
81 - A5				Wind
82 - A#5				Sea Shore
83 - B5				Stream
84 - C6				
85 - C#6				
86 - D6				
87 - D#6				
88 - E6			Applauses	

V. INSTALLATION

13. HOOK-UP AND CONNECTIONS
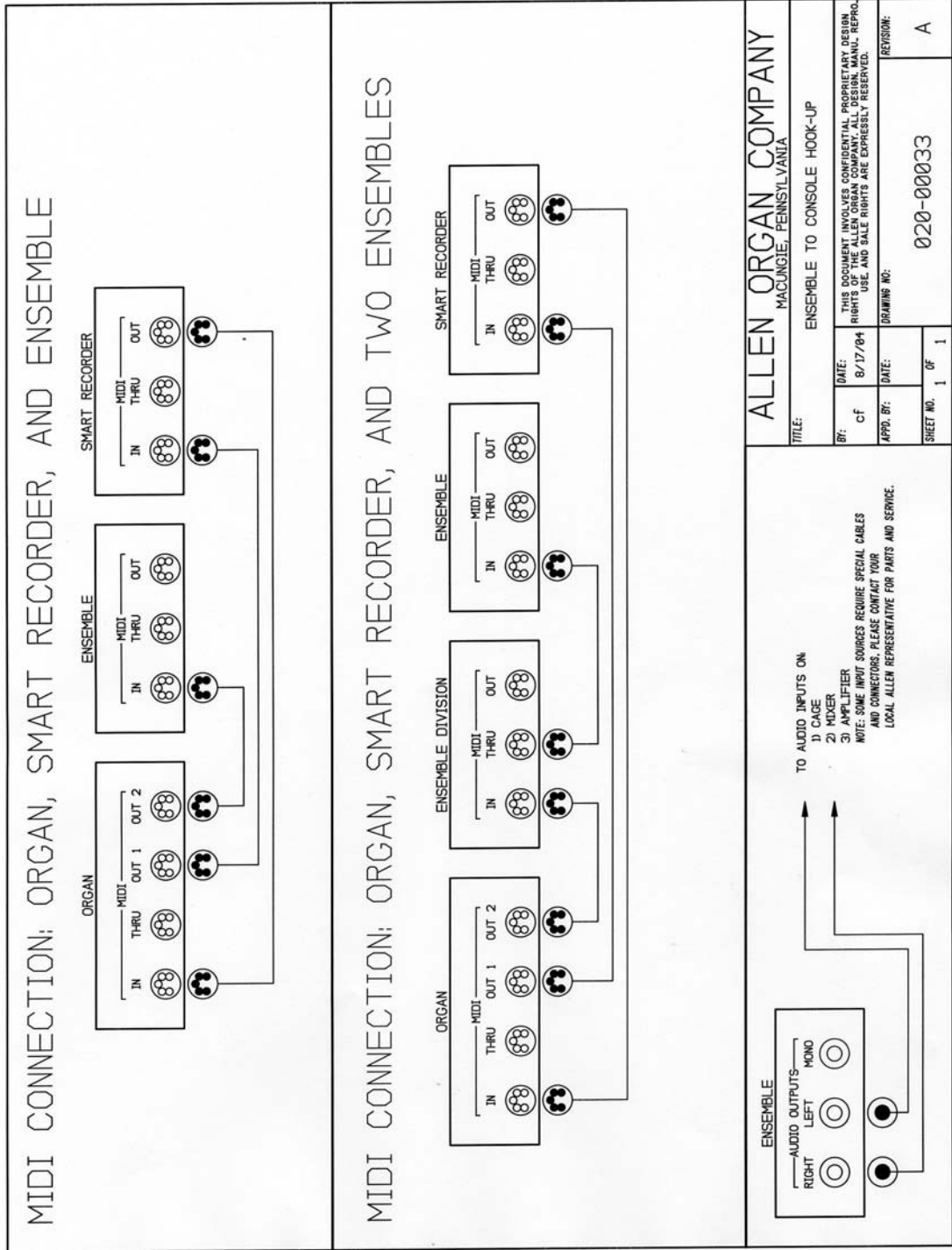
14. MIDI IMPLEMENTATION CHART

FUNCTION		TRANSMITTED	RECEIVED
Basic	Default	X	1 - 16
Channel	Changed	X	1 - 16
	Default	X	3
Mode	Messages	X	X
	Altered	X	X
Note Number		X	O (1 - 127)
Velocity	Note ON	X	9nH, v = 1 - 127
	Note OFF	X	9nH, v = 0
Aftertouch	Keys	X	X
	Channels	X	X
Pitch Bend		X	O
Control Change	0 (bank select)	X	O
	7 (volume)	X	O
	64 (sustain)	X	O
Program Change		X	O (1 - 127)
System Exclusive		O	O
System Common		X	X
System Real Time		X	X
Aux Messages		X	X

Mode 1: Omni On, Poly   Mode 2: Omni On, Mono   O: Yes
Mode 3: Omni Off, Poly   Mode 4: Omni Off, Mono   X: No

Warning: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been type tested and found to comply with the limits for a Class B Computing Device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. Should this equipment cause interference to radio communications, the user at his own expense will be required to take whatever measures may be necessary to correct the interference. Whether this equipment actually causes the interference to radio communications can be determined by turning the equipment off and on. The user is encouraged to attempt to correct the interference by one or more of the following measures:

Reorient the receiving antenna.
Relocate the device with respect to the receiver.
Move the device away from the receiver.
Plug the device into a different electrical outlet, so that the device and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio technician for additional suggestions.

CE mark shows compliance with the EMC Directive.