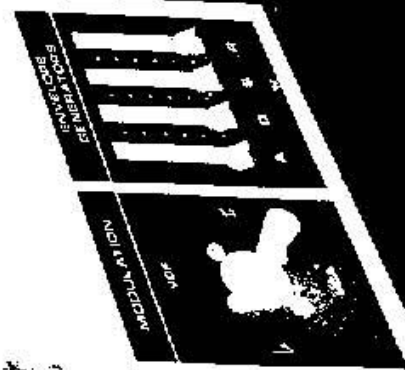
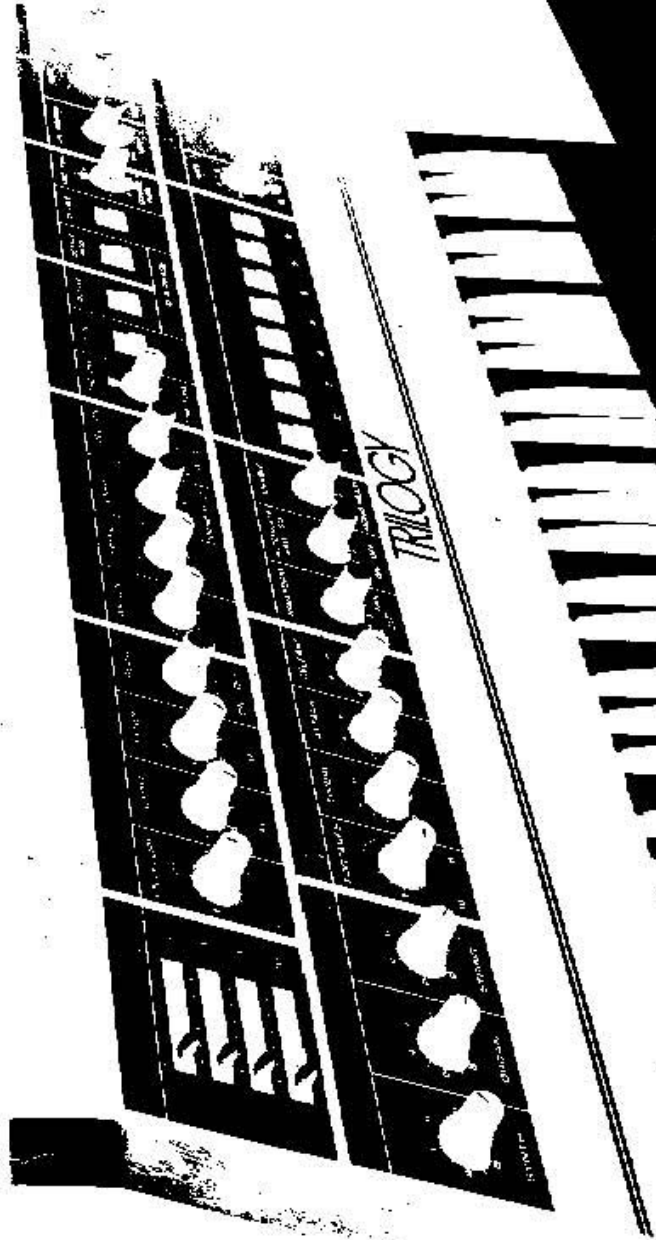


CRUMAR

TRILOGY

**REFERENCE
MANUAL**



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TRILOGY REFERENCE MANUAL

CONGRATULATIONS! *Your purchase of the TRILOGY synthesizer opens up a new world of polyphonic playing, once affordable by only a few people. Not only are you not limited to the number of keys you can depress at one time, but you also have the ability to have more than one musical event take place as each key goes down! Each key can trigger a synthesizer sound, a cathedral organ note, and strings, giving you the layering capability that doesn't even exist on most synthesizers that cost a whole lot more! This manual has been written to allow you to get to the most important points of operation QUICKLY. You can achieve a complete operational grasp of the TRILOGY by understanding the:*

*PURPOSE BEHIND THE DESIGN
HOW TO CONNECT THE TRILOGY TO AMPLIFICATION
HOW THE FRONT PANEL CONTROLS WORK, AND WHAT THEY DO
PATCHES THAT SOUND GOOD, AND MAKE USE OF THE FUNCTIONS
LAYERING TECHNIQUES
USE OF ACCESSORIES
BLANK PATCH SHEETS FOR YOUR OWN SOUNDS*

PURPOSE BEHIND THE DESIGN

There are many different features available on synthesizers. Some lend themselves to lead line playing, others to chordal or "polyphonic" playing. Naturally some features are more useful than others. The best features of both lead line and polyphonic synthesizers are seldom on the same instrument, but that is exactly what the hundreds of musicians we consulted wanted. They asked for the ability to make sounds that show up on the most popular recordings. They asked for features that would provide some new and unique sounds that could be used often, not just once in a while. They said they needed lead line sounds that could cut through. They said they needed polyphonic textures that could provide "fat" sounds. They all asked for controls that would allow them to play EXPRESSIVELY. They suggested only those effects that could be used often. Unique....Fat....Expressive....Light....Easy to play.....Few controls...

But, they asked for more....they wanted to add layers of sounds one over the other. Polyphonic orchestral STRINGS. Full cathedral ORGAN. All going on at once! That's what we wanted too, when we designed the TRILOGY. SIX SETS of filters and envelopes that would let you play all the keys, along with the very suggestions you made. It was designed for musicians by musicians. It was designed for YOU! Enjoy it!

Thomas D. Piggott
THOMAS D. PIGGOTT

CONNECTING THE TRILOGY TO AMPLIFICATION

1. Plug your instrument in, using the power cord supplied with it. The power receptacle is on the rear panel of the TRILOGY, and connects to a standard electrical outlet. Switch the instrument on with the power switch also located on the rear panel. In a few seconds you should see the red pilot light go on, indicating that you have power.
2. Connect a patch cord (guitar cable) from the polysynth output , which is also the main output , from the back of the TRILOGY to a musical instrument amplifier channel, or to a channel of a mixer. Be sure there is power to your amplification system too. Set the tone and volume controls at moderate levels. Using this output from the TRILOGY only, will pass the strings and organ to that amplification channel too. If you prefer stereo or separate channel treatment of the TRILOGY's sections, you can connect a second and third guitar cable from the string and organ outputs marked on the back of the instrument, to another two channels of your amplifier or mixer.

NOTE ON AMPLIFICATION: A reasonable quality amplifier or full range PA system with tone controls and reverb are ideal for TRILOGY sound reproduction. Your music dealer can suggest models and types of amplification that will suit your needs and applications. (If you happen to be using a guitar amplifier, be aware that overloading the input stage will cause distortion....great for guitars...not for synthesizers!)

HOW THE FRONT PANEL CONTROLS WORK AND HOW THEY FUNCTION

The following sections will graphically point out the various functions and usage of the front panel controls. Placement of any of these controls in a particular position, to make a certain sound quality, is called a PATCH. The first few patches will give you a functional knowledge to help you understand how the electronics work together to make sound. This knowledge can then be applied to making your own sound creations. Then you will be able to expand the possibilities further, by looking over the section on ACCESSORIES and SPECIAL WAYS TO CONNECT THE TRILOGY.

Above all, ENJOY YOURSELF. There is a lot to learn, but you can apply many of the materials in manual to other synthesizers too. Sound Synthesis can be as much fun as performing in front of an appreciative audience. It's a lot easier when you have a good instrument. The TRILOGY is among the VERY BEST!

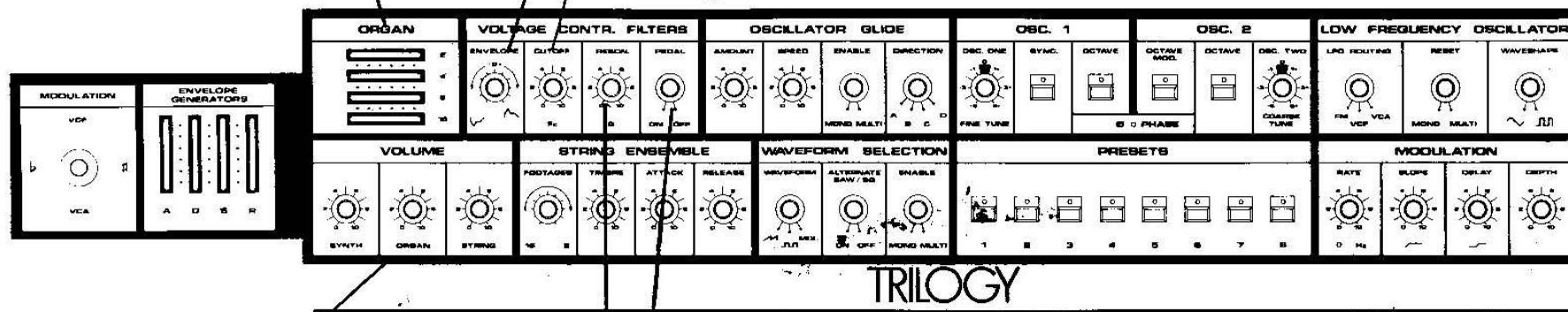
HOW THE FRONT PANEL CONTROLS WORK AND WHAT THEY DO

Volume relationship between the four mixable organ footages. These are "square waves" that can also be combined to create **ADDITIONAL WAVEFORMS!**

2 **VOLTAGE CONTROLLED FILTERS ARE USED TO SHAPE SOUNDS.**

ENVELOPE amount lets you determine how much effect the envelope generators have on the filters. When moved clockwise, the filters start in a closed position and open to the maximum setting of this control. When moved counterclockwise, the filters are in an open but silent position, and are allowed to close down from the starting place.

CUTOFF is the silent position of the filters before the envelope generators have an effect on them. (5 = half opened 10 = full open 0 = fully closed)



3 **OUTPUT** volumes for the synthesizer, strings, and organ.

4 **RESONANCE** lets you emphasize harmonics. It is responsible for the "wo" sounds associated with synthesizers. In a high position it lets you hear each of the harmonics as you sweep the filter with the envelope generators or the filter foot pedal accessory.

5 **PEDAL** lets you control the filter sweep by pedal or envelope generators by choice.

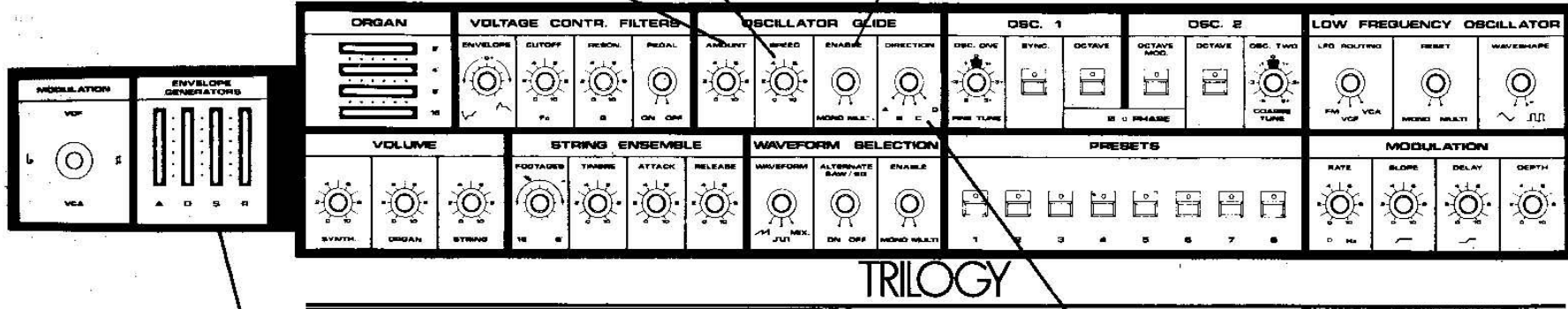
HOW THE FRONT PANEL CONTROLS WORK AND WHAT THEY DO

1 OSCILLATOR GLIDE is used to bend the pitch of the oscillators (pitch producing devices.) It serves as an automatic pitch bend and portamento function. It is effective in exaggerating attacks and producing ensemble effects.

↳ AMOUNT determines the degree of pitch bend.

↳ SPEED determines how fast or slow the bending oscillator moves.

↳ ENABLE: In MONO position, legato playing will not activate the pitch bend. Detached playing of keys will. In MULTI position, every key depressed will activate the pitch bend, regardless of keyboard technique.





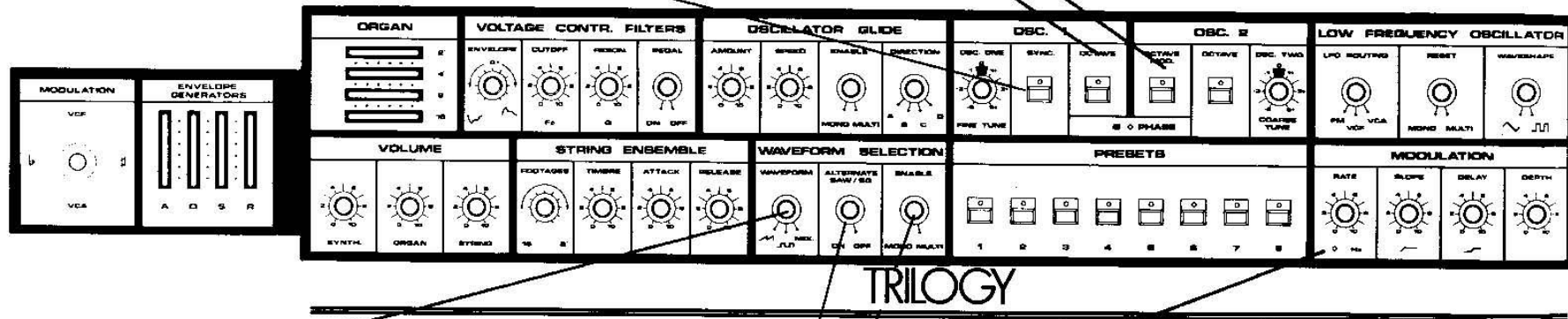
2 ENVELOPE GENERATORS let you determine the speed at which the filters are opened. They are activated by depressing a KEY. This allows you to match the way you want sounds to begin and end, or start and stop. ATTACK is how the sound begins. A "0" attack is like a piano, while a "4" is like a brass attack. "10" gives a very slow opening of the filter, great for synthesizer effects. DECAY lets you determine how quickly the filter closes down after the attack. SUSTAIN represents the volume level maintained as you hold a key down, and at what point the filter is held open. RELEASE determines how long it takes for the sound to die out after you've released the key.

3 DIRECTION: A causes both oscillators to bend up to center pitch. B causes only one oscillator to bend up to center pitch against the other, causing ensemble effects. C causes one oscillator to bend down to center pitch against the other. D causes both oscillators to bend down to center pitch.

HOW THE FRONT PANEL CONTROLS WORK AND WHAT THEY DO

1 PITCH CONTROL allows you to tune and slightly detune the oscillators using the fine and coarse tuning controls. The " PHASE " LED lets you see the phase of one oscillator's tuning against the other. OCTAVE lets you select between 2 octave ranges for each or both of the oscillators. OCTAVE MODULATION causes an octave trill of oscillator 2 when sync is off. SYNC tunes both oscillators to a perfect unison for lead line playing and a thinner tone quality that is not chorusie.

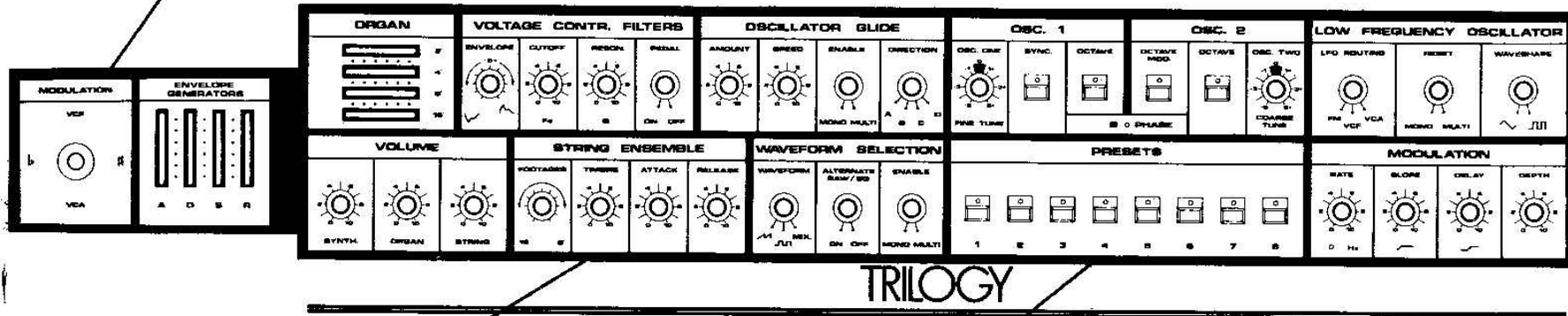
2 LOW FREQUENCY OSCILLATOR causes vibratos, tremolos and filter sweeps or modulations. ROUTING determines which synthesizer section is effected by the LFO. FM = vibrato, VCF = filter modulation, VCA = tremelo. RESET lets you reset the delay time with each key down (multi only.) WAVESHAVE  = smooth  = not smooth



- 3 WAVEFORM SELECTION lets you choose from the brassy sawtooth, hollow square wave, or mix of both.
- 4 ALTERNATE SAW/SQ lets you automatically go from one waveform timbre to the other. This is great for sequential sounding lines.
- 5 ENABLE lets you choose from mono (in which detached playing will allow for the change to take place, legato will not) or multi (every key down changes the waveform) modes.

- 6 MODULATION
- 1 RATE is the speed of modulation.
 - 2 SLOPE allows you to determine if the modulation effect will build gradually or come on all at once, subject to the delay.
 - 3 DELAY determines how long it will take for the modulation to begin once a key is depressed and held.
 - 4 DEPTH represents the degree of modulation.

1 **JOYSTICK** control for expressive playing has been added to the left side of the keyboard. Moving it away from you gradually introduces **FILTER MODULATION**. Toward you will introduce **VCA MODULATION** (tremelo.) Both of these are at the **RATE** set in the **MODULATION** section. Moving the joystick to the left will gradually cause the pitch to bend down or "flat." Moving it to the right will gradually cause the pitch to go up or "sharp." Subtle use of any of these effects can make the difference between good sounds and fantastic and expressive sounds. You should practice using the **JOYSTICK** as much as possible, to make your lines smooth and interesting.



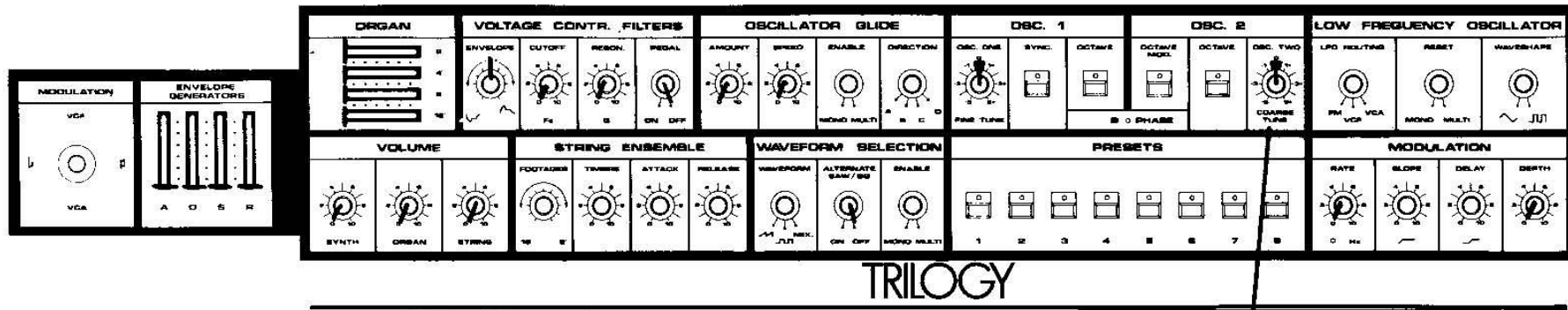
2 **STRING ENSEMBLE** allows you to choose a 16', 8' or mixture of these octaves of strings. The **TIMBRE** control adds an unmodulated sawtooth wave to the strings. This allows you to add an acoustical dimension that helps to cut through during solos. The **ATTACK** and **RELEASE** (how the strings start and stop) are separate from the synthesizer envelopes. This allows you to delay the strings, make them sustain longer, and "react differently" than the synthesizer section.

3 **PRESETS**: Preset number 1 places the synthesizer in the **VARIABLE** mode, where all synthesizer functions are freed up for creation of your own sounds. Presets 2 through 8 are the most popular synthesizer sounds ready to be played at a flick of a switch. In these presets, the filters, envelopes, and waveforms are already chosen for you. You simply add the degree of detuning, octave ranges, oscillator glide and modulation you wish to use. Of course, these can be played along with the strings and organ sections.

TRYING THE PATCHES

BEFORE you try the patches in this manual, there are a few things to remember. Due to subtle calibration differences, feel free to brighten or darken the filter settings to suit your ears. Experiment with the controls after you set up each patch. Try different balances between the volumes of the sections. Mark any setting changes you prefer right on the original sheet. Remember you can alter the detunings, octaves, modulations, and other controls to experiment with the patch.

PATCH 1 *This patch places the controls of the TRILOGY in a NEUTRAL position of all sound off, and all musical effects cleared. This is a good patch to start off with, since it clears all sounds, and gives you the chance to start fresh each time. Simply match the control settings with the markings on the patch sheet. Sliders and rotary pots are marked with lines. The LED switches are ON and LIGHTED when the switch is darkened. Anything not marked will not effect the sound regardless of position.*



HELPFUL HINTS

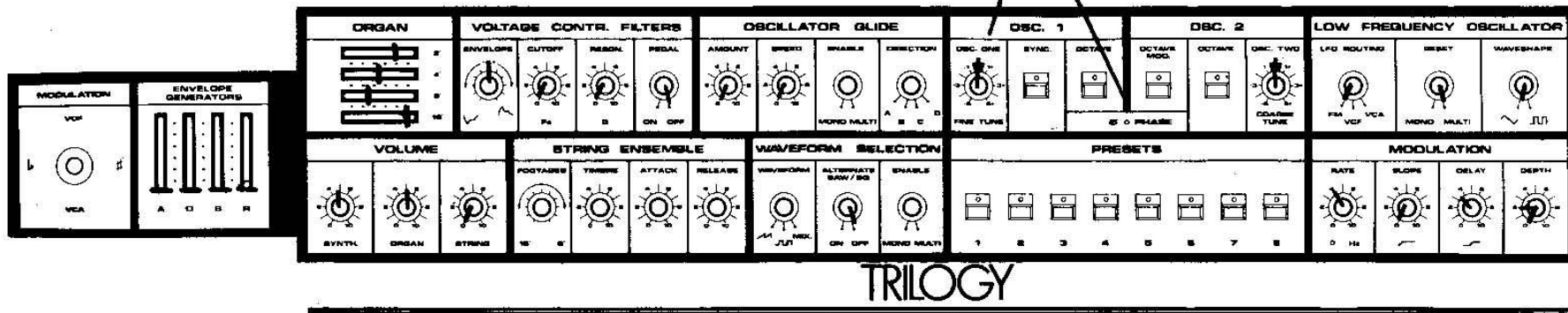
Eventually you will become familiar enough with the controls and what they do that you will be able to "hear" what is going on even when there is no one playing. Try to accomplish this by memorizing the functions. When you can close your eyes and call out the function names as you run your hands over the panel, you will have maximized your ability to make quick changes when going from patch to patch. This not only makes for performance efficiency when playing in low light situations, but it looks great on stage to spectators.

NOTE: THE COARSE TUNE CONTROL HAS A CENTER DETENT THAT IS CALIBRATED AT A-440. USE THE FINE TUNE CONTROL FOR THE SLIGHT DETUNINGS THAT GIVE THE FAT ENSEMBLE SOUNDS. LEARN TO USE THE PHASE LED FOR REFERENCE AS TO THE DEGREE OF DETUNING.

PATCH 2 ORGAN sounds and mixable waveforms are achieved by mixing the organ footages as desired. Try experimenting with different combinations of footages. For example, placing the organ sliders in this arrangement will yield a rich sawtooth waveform. The arrangement in the patch will give a more hollow quality organ.



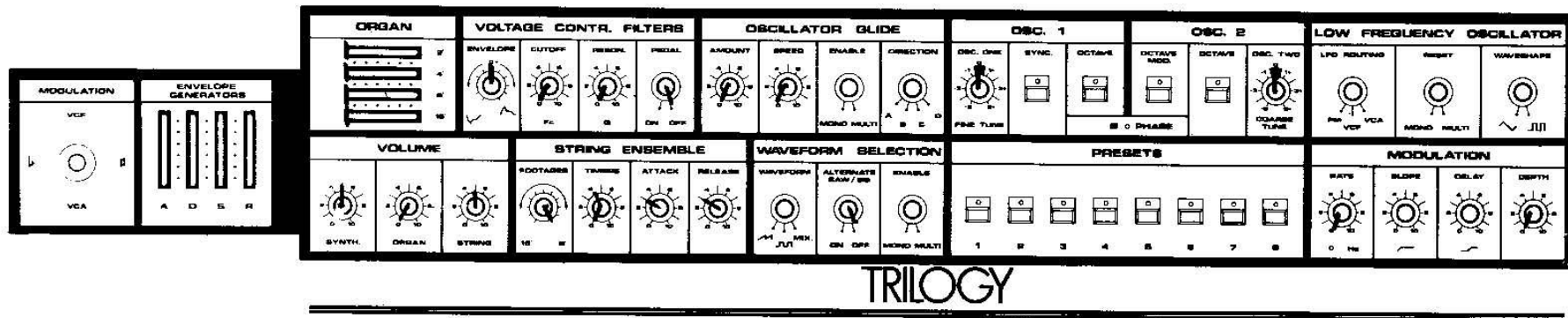
The tuning of the oscillators will effect the organ phasing sound .



To give you an idea of the possibilities you may apply to each patch, here is a list of the functions that can be added to this patch to give more interesting variations and sound. These will be a part of other patches as we form new sounds later in the manual: PITCH CONTROLS (all, including octaves), ORGAN VOLUME, OSCILLATOR GLIDE, LOW FREQUENCY OSCILLATOR (FM position.)

NOTES:

PATCH 2A: STRINGS are an important part of your TRILOGY. After you have set the patch as shown here, try changing the attack (turn it clockwise) so the strings build up slowly. Turn the release control clockwise and the strings will die away more slowly. Playing quick lines usually requires a quick attack and a brighter sound. You can make the strings brighter and more cutting, by adding the timbre feature to your patch. Experiment with all the controls in the string section. THEN add the organ section from patch 2 on the previous page to hear the first example of sound layering, strings upon organ.



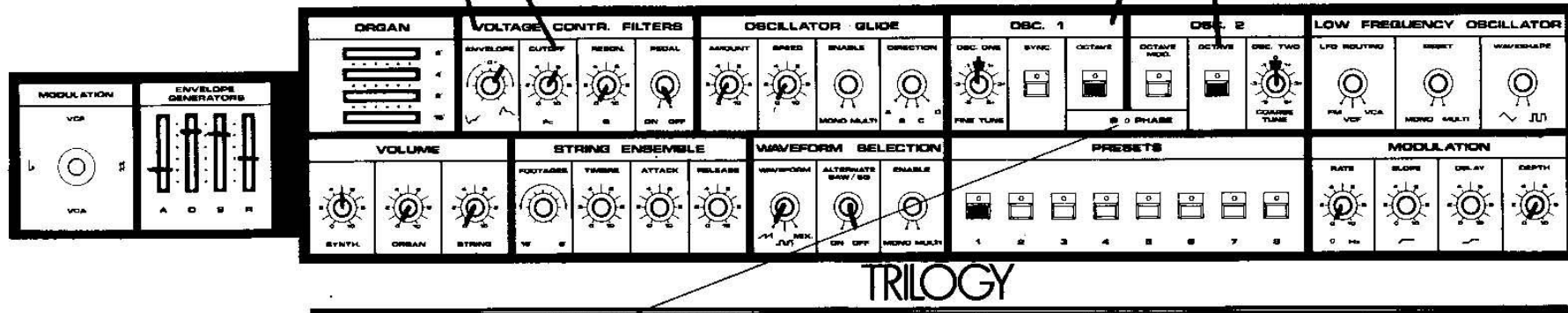
NOTE: YOU CAN ADD THE STRINGS AND ORGAN TO ANY OF THE FOLLOWING PATCHES WHENEVER YOU WISH TO HAVE MORE LAYERS OF SOUND!

NOTES: _____

PATCH 3: FAT BRASS

ALWAYS use these two controls to make the sound darker or brighter, as desired.

Turn off for higher range.



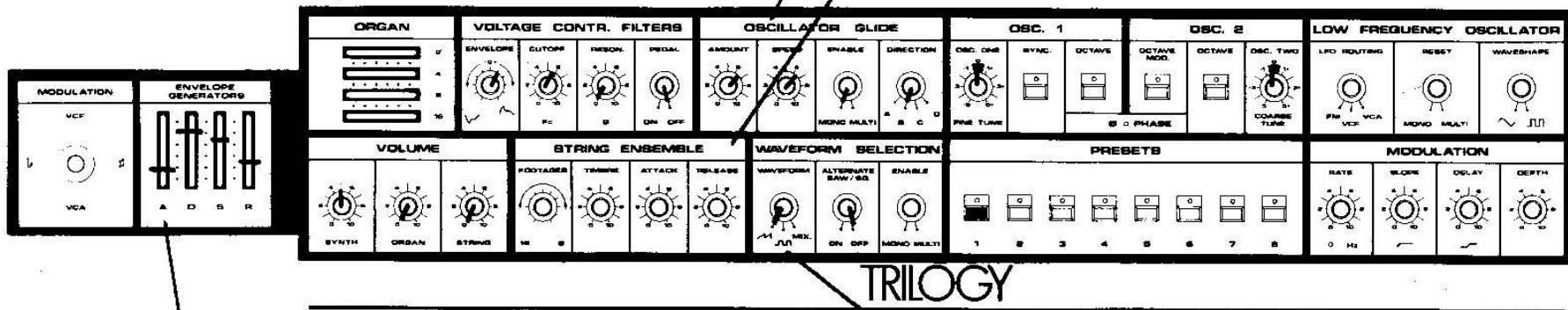
NOTE: Detune the phase until slightly flashing. (Use fine Tune .) Choose the octave ranges you wish, but try all combinations of both off, both on, or one of each.

Notes: _____

PATCH 4 : FATTER BRASS WITH GLIDE

Try different combinations of the glide controls.

Try adding strings to this patch.



Experiment with different attacks. Then change the waveform to square for a completely different sound.

NOTES: _____

PATCH 5 : STRINGS FROM THE SYNTHESIZER 1

NOTE: PLAY *lightly* and use simple chords in a string like fashion. Adjust vibrato to suit taste. Use LOTS of REVERB.

NOTES:

DETUNING EFFECTS THE QUALITY OF STRING ENSEMBLE.

TRY MIXING WITH THE STRING SECTION, FOR STRINGS WITH STRINGS. IT'S A DYNAMIC COMBINATION!

PATCH 6: STRINGS FROM THE SYNTHESIZER 2

PATCH 7 : HARPTRICORD

NOTES: _____

Turn the SYNC on and off for solo or chorus effects.

MODULATION
 VCF
 VCA

ENVELOPE GENERATORS
 A D S R

ORGAN
 ENVELOPE CUTOFF RESON. PEDAL AMOUNT SPEED ENABLE DIRECTION OSC. ONE SYNC OCTAVE OCTAVE MOD. OCTAVE OSC. TWO LFO ROUTING RESET WAVESHAPE

VOLUME
 SYNTH ORGAN STRING

STRING ENSEMBLE
 FOOTAGE TRIMS ATTACK RELEASE

WAVEFORM SELECTION
 WAVEFORM ALTERNATE RAW/SQ ENABLE

OSC. 1
 OSC. ONE SYNC OCTAVE

OSC. 2
 OCTAVE MOD. OCTAVE OSC. TWO COARSE TUNE

LOW FREQUENCY OSCILLATOR
 LFO ROUTING RESET WAVESHAPE

PRESETS
 1 2 3 4 5 6 7 8

MODULATION
 RATE SLOPE DELAY DEPTH

TRILOGY

PATCH 8: TRIPCORD

MODULATION
 VCF
 VCA

ENVELOPE GENERATORS
 A D S R

ORGAN
 ENVELOPE CUTOFF RESON. PEDAL AMOUNT SPEED ENABLE DIRECTION OSC. ONE SYNC OCTAVE OCTAVE MOD. OCTAVE OSC. TWO LFO ROUTING RESET WAVESHAPE

VOLUME
 SYNTH ORGAN STRING

STRING ENSEMBLE
 FOOTAGE TRIMS ATTACK RELEASE

WAVEFORM SELECTION
 WAVEFORM ALTERNATE RAW/SQ ENABLE

OSC. 1
 OSC. ONE SYNC OCTAVE

OSC. 2
 OCTAVE MOD. OCTAVE OSC. TWO COARSE TUNE

LOW FREQUENCY OSCILLATOR
 LFO ROUTING RESET WAVESHAPE

PRESETS
 1 2 3 4 5 6 7 8

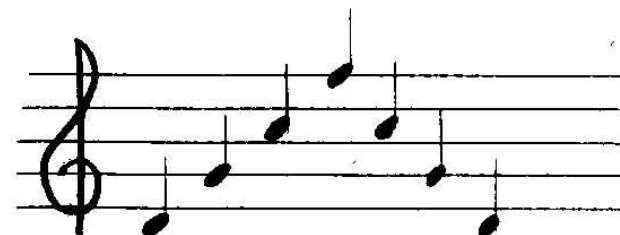
MODULATION
 RATE SLOPE DELAY DEPTH

TRILOGY

PATCH 9: MULTI-FILTER-SWEEP

Play a key, let it build up, add another, let it build up and so on. Try releasing one key at a time and you'll hear the separate filters closing down independently.

NOTES: _____



PATCH 10: SQUATTOOTH (alternating waveforms)

NOTES:

TRIOLOGY

PATCH 11 : " OH BOY "

TRIOLOGY

PATCH 12: LEAD SYNTH #1

NOTE: Use joystick pitchbend for expression. Lead lines are usually more effective with subtle pitchbends (as a guitarist does when he bends strings.)

NOTES:

TRIOLOGY

PATCH 13: LEAD SYNTH # 2

TRIOLOGY

PATCH 14: PIANO

NOTES: USE SYNC for chorus or solo effect.
ADD Tremelo by increasing depth in modulation section.

NOTES: _____

TRIOLOGY

PATCH 15: CHORUS CHOIR NOTE: timbre of voices USE LOTS OF REVERB
ADD STRINGS!

TRIOLOGY

PATCH 16: GROSS MODULATION

NOTES: *Fubane Vignette*

MODULATION
VCF
VCA

ENVELOPE GENERATORS
A B C D

ORGAN
1 2 3 4 5 6 7 8

VOLTAGE CONTR. FILTERS
ENVELOPE CUTOFF RESON. PEDAL
F0 B ON OFF

OSCILLATOR GLIDE
AMOUNT SPEED SHAPES DIRECTION
MONO MULTI A B C D

OSC. 1
OSC. ONE SYNC. OCTAVE
FINE TUNE

OSC. 2
OCTAVE MOD. OCTAVE
B 0 PHASE

LOW FREQUENCY OSCILLATOR
LFO ROUTING FM VCF VCA MONO MULTI WAVEFORM

VOLUME
SYNTH ORGAN STRINGS

STRING ENSEMBLE
PORTAMENTO TREMOLO ATTACK RELEASE

WAVEFORM SELECTION
WAVEFORM ALTERNATE SAW/SB SQUARE
MONO MULTI ON OFF

PRESETS
1 2 3 4 5 6 7 8

MODULATION
RATE SLOPE DELAY DEPTH

TRILOGY

PATCH 17: ECHO AND FADE

MODULATION
VCF
VCA

ENVELOPE GENERATORS
A B C D

ORGAN
1 2 3 4 5 6 7 8

VOLTAGE CONTR. FILTERS
ENVELOPE CUTOFF RESON. PEDAL
F0 B ON OFF

OSCILLATOR GLIDE
AMOUNT SPEED SHAPES DIRECTION
MONO MULTI A B C D

OSC. 1
OSC. ONE SYNC. OCTAVE
FINE TUNE

OSC. 2
OCTAVE MOD. OCTAVE
B 0 PHASE

LOW FREQUENCY OSCILLATOR
LFO ROUTING FM VCF VCA MONO MULTI WAVEFORM

VOLUME
SYNTH ORGAN STRINGS

STRING ENSEMBLE
PORTAMENTO TREMOLO ATTACK RELEASE

WAVEFORM SELECTION
WAVEFORM ALTERNATE SAW/SB SQUARE
MONO MULTI ON OFF

PRESETS
1 2 3 4 5 6 7 8

MODULATION
RATE SLOPE DELAY DEPTH

TRILOGY

PATCH 18: FADE AWAY AND RETURN

Be sure to hold chord down for effect!

NOTES: _____

The control panel for Patch 18 features the following settings:

- MODULATION:** VCF knob at approximately 10 o'clock, VCA knob at approximately 12 o'clock.
- ENVELOPE GENERATORS:** Sliders for A, O, S, R are all set to their maximum (right) positions.
- ORGAN:** Four horizontal sliders are all set to their maximum (right) positions.
- VOLTAGE CONTR. FILTERS:** ENVELOPE knob at 12 o'clock, CUTOFF knob at 10 o'clock, RESON knob at 10 o'clock, PEDAL knob at 12 o'clock.
- OSCILLATOR GLIDE:** AMOUNT knob at 12 o'clock, SPEED knob at 12 o'clock, ENABLE knob at 12 o'clock, DIRECTION knob at 12 o'clock.
- OSC. 1:** OSC. ONE knob at 12 o'clock, SYNC knob at 12 o'clock, OCTAVE knob at 12 o'clock, OCTAVE MOD. knob at 12 o'clock, OSC. TWO knob at 12 o'clock, COARSE TUNE knob at 12 o'clock.
- OSC. 2:** OSC. TWO knob at 12 o'clock, COARSE TUNE knob at 12 o'clock.
- LOW FREQUENCY OSCILLATOR:** LFO ROUTING knob at 12 o'clock, RESET knob at 12 o'clock, WAVEFORM knob at 12 o'clock.
- VOLUME:** SYNTH knob at 12 o'clock, ORGAN knob at 12 o'clock, STRING knob at 12 o'clock.
- STRING ENSEMBLE:** FOOTAGE knob at 12 o'clock, TIMBRE knob at 12 o'clock, ATTACK knob at 12 o'clock, RELEASE knob at 12 o'clock.
- WAVEFORM SELECTION:** WAVEFORM knob at 12 o'clock, ALTERNATE SAW/SDO knob at 12 o'clock, ENABLE knob at 12 o'clock.
- PRESETS:** Preset buttons 1 through 8 are all set to their default (off) positions.
- MODULATION:** RATE knob at 12 o'clock, SLOPE knob at 12 o'clock, DELAY knob at 12 o'clock, DEPTH knob at 12 o'clock.

TRIOLOGY

PATCH 19: SWEEP DELAY

ADD STRINGS AND ORGAN!

The control panel for Patch 19 features the following settings:

- MODULATION:** VCF knob at approximately 10 o'clock, VCA knob at approximately 12 o'clock.
- ENVELOPE GENERATORS:** Sliders for A, O, S, R are all set to their maximum (right) positions.
- ORGAN:** Four horizontal sliders are all set to their maximum (right) positions.
- VOLTAGE CONTR. FILTERS:** ENVELOPE knob at 12 o'clock, CUTOFF knob at 10 o'clock, RESON knob at 10 o'clock, PEDAL knob at 12 o'clock.
- OSCILLATOR GLIDE:** AMOUNT knob at 12 o'clock, SPEED knob at 12 o'clock, ENABLE knob at 12 o'clock, DIRECTION knob at 12 o'clock.
- OSC. 1:** OSC. ONE knob at 12 o'clock, SYNC knob at 12 o'clock, OCTAVE knob at 12 o'clock, OCTAVE MOD. knob at 12 o'clock, OSC. TWO knob at 12 o'clock, COARSE TUNE knob at 12 o'clock.
- OSC. 2:** OSC. TWO knob at 12 o'clock, COARSE TUNE knob at 12 o'clock.
- LOW FREQUENCY OSCILLATOR:** LFO ROUTING knob at 12 o'clock, RESET knob at 12 o'clock, WAVEFORM knob at 12 o'clock.
- VOLUME:** SYNTH knob at 12 o'clock, ORGAN knob at 12 o'clock, STRING knob at 12 o'clock.
- STRING ENSEMBLE:** FOOTAGE knob at 12 o'clock, TIMBRE knob at 12 o'clock, ATTACK knob at 12 o'clock, RELEASE knob at 12 o'clock.
- WAVEFORM SELECTION:** WAVEFORM knob at 12 o'clock, ALTERNATE SAW/SDO knob at 12 o'clock, ENABLE knob at 12 o'clock.
- PRESETS:** Preset buttons 1 through 8 are all set to their default (off) positions.
- MODULATION:** RATE knob at 12 o'clock, SLOPE knob at 12 o'clock, DELAY knob at 12 o'clock, DEPTH knob at 12 o'clock.

TRIOLOGY

PATCH 20: PORTOGLIDE

NOTES: _____

TRILOGY

PATCH 21: GUITAR For BASS, alter decay, add resonance to 4 or 5, alter octave switches.

TRILOGY

ADDITIONAL NOTES

The rear panel has four outputs. The POLYSYNTH output can be used as a main output for all the TRILOGY's sounds. The ORGAN and STRING outputs can be fed to separate channels for stereo and spatial separation. When used this way, the POLYSYNTH output carries only the synthesizer signal.

The SIGNAL output is a raw sawtooth output that can be processed through phase shifters, delay lines, flangers, and other outboard effects devices, adding a fourth layer to the TRILOGY. There are no limits to the possible sounds when this output is connected to the effects devices you probably own already!

The SIGNAL output just described was also designed for use with the MASTER's TOUCH, pictured on the back of this manual. This is an effects device that is actually a wind controller. It lets you articulate the signal output, producing powerful brass sounds and lead horn sounds, complete with the expressive nuances that a solo horn player would give to his sound. The TM connection on the rear panel is also designed for the MASTER's TOUCH, providing the capability to make pitch bends and vibratos that are very "human." This is achieved using the mouth articulator tube supplied with the MASTER's TOUCH.

After you have become familiar with the TRILOGY, you may wish to put all three of the outputs (organ, strings and synthesizer) into other effects devices too. For example, many artists use phase shifters on their string sounds, producing a great string treatment. Strings are also made effective when used with digital delays and professional reverb systems.

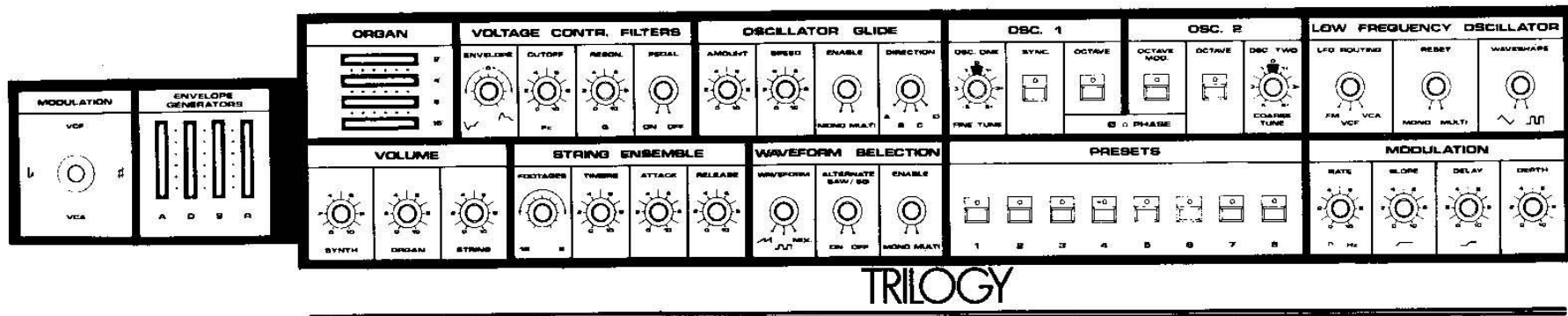
NOTE on RECORDING: Laying down tracks with the TRILOGY is a treat, especially when you realize how quiet it is. The separate outputs are also a blessing, since you can take the outputs to separate tracks of a multi track recorder, then EQ the tracks during the mix as you wish.

The true power of the TRILOGY lies in your ability to master the controls, then put them to work for you. Even those with five and six thousand dollar instruments will not be able to compete with the massive sound layering you can achieve by combining the strings and organ with the synthesizer section. We hope you will get years of musical satisfaction with it. We designed it to give you years of service.

WHAT THE PEDALS DO

Inserting the VCF (larger) pedal into the back panel jack with the same label, and placing the front panel rotary in the PEDAL ON position will allow you to sweep the filter with your foot. This is used to increase brightness, to add expression, and add effects like the wah wah pedals provide.

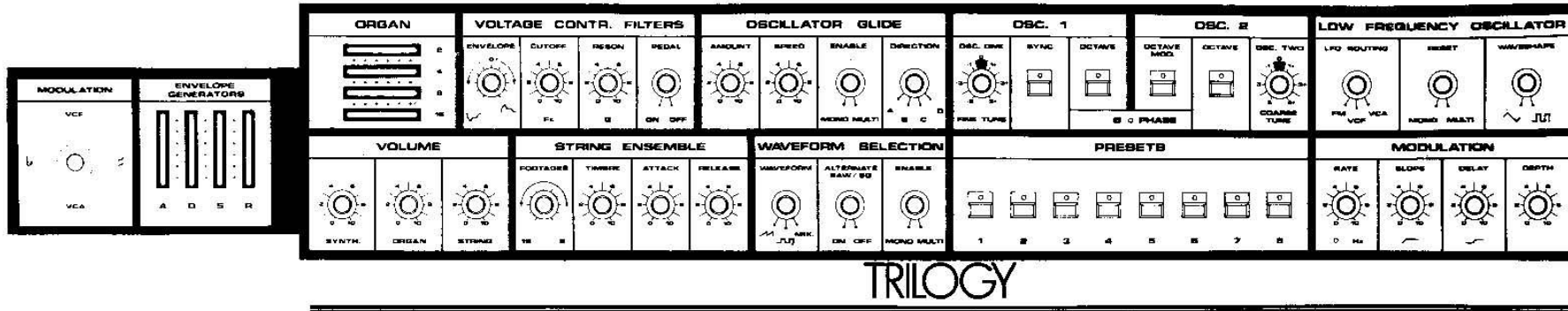
Inserting the jack of the small momentary footswitch into the back panel jack with the " SYNC " label, will let you go quickly from the detuned chorus effects to the SYNC unison effects without taking your hands away from the keyboard. This is great for multi keyboard players!



Inserting the jack from the momentary pedal into the rear panel where it is marked release will provide you with a " piano like " sustain pedal, that actually controls the release section of the ENVELOPE GENERATORS.

The presets are factory set synthesizer sounds, carefully chosen to give you a range of musically useful sounds. Simply press the switch of the preset desired (numbers 2 through 8) and you can hear and play that sound. Try to get a " feel " for them by phrasing them as they " sound." Play them alone, then try each one in combination with the organ and strings. This gives you many combinations of LAYERINGS to experiment with; that's something most synthesizers cannot do!

If you ever wish to change the presets to some of your own, a service center can set up new sounds for you. CRUMAR will provide them with a " LIBRARY " of sound possibilities, and the calibrations required to make new presets. In many cases, you will find the existing presets to be just right, and you still have the first switch as your own variable mode.



Here are a few notes about the existing presets:

- #2 = good synthesizer brass
- #3 = good synthesizer lead
- #4 = a pianolike quality
- #5 is a short clavichord sound that is best when the SYNC switch is on
- #6 = a great lead square synthesizer sound
- #7 = a reverse envelope string sound that is terrific when blended with the separate string section
- #8 = fantastic filter sweeps that work best when holding and releasing chords slowly. This last one really shows off the independent filters of the TRILOGY, as they sweep with different resonant points of the filter.

REMEMBER: You can add the LFO for vibrato, detune the oscillators, change octave ranges, add organ, and add strings to any of the presets. One useful way to get more from your TRILOGY is to leave a large amount of detuning (the LED flashes quickly next to the word 'phase') and use the SYNC switch for the unison sound. In this way you have twice as many presets, half of the solo and cutting type when the SYNC is on, and the other half rich and chorus like when the SYNC is off.

MODULATION

VCF

VCA

ENVELOPE GENERATORS

A D S R

ORGAN	VOLTAGE CONTR. FILTERS				OSCILLATOR GLIDE				OSC. 1			OSC. 2			LOW FREQUENCY OSCILLATOR							
[ORGAN KEYS]	ENVELOPE	CUTOFF	RESON.	PEDAL	AMPLVT	SPEED	ENABLE	DIRECTION	OSC ONE	SYNC	OCTAVE	OCTAVE MOD.	OCTAVE	OSC TWO	LFO ROUTING	RESET	WAVE/SHAPE					
	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]					
		F ₀	B	ON OFF			MONO MULTI	A B C	FINE TUNE			B 0 PHASE		COARSE TUNE	FM VCF VCA	MONO MULTI	~ [WAVE]					
VOLUME			STRING ENSEMBLE				WAVEFORM SELECTION			PRESETS				MODULATION								
SYNTH.	ORGAN	STRING	FOOTAGE	TRIM	ATTACK	RELEASE	WAVEFORM	ALTERNATE SAW/SG	ENABLE	1	2	3	4	5	6	7	8	RATE	SLOPE	DELAY	DEPTH	
[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]
			16 B	A 0	A 0	A 0	[KNOB]	ON OFF	MONO MULTI									0 Hz				

TRIOLOGY

MODULATION

VCF

VCA

ENVELOPE GENERATORS

A D S R

ORGAN	VOLTAGE CONTR. FILTERS				OSCILLATOR GLIDE				OSC. 1			OSC. 2			LOW FREQUENCY OSCILLATOR							
[ORGAN KEYS]	ENVELOPE	CUTOFF	RESON.	PEDAL	AMPLVT	SPEED	ENABLE	DIRECTION	OSC ONE	SYNC	OCTAVE	OCTAVE MOD.	OCTAVE	OSC TWO	LFO ROUTING	RESET	WAVE/SHAPE					
	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]					
		F ₀	B	ON OFF			MONO MULTI	A B C	FINE TUNE			B 0 PHASE		COARSE TUNE	FM VCF VCA	MONO MULTI	~ [WAVE]					
VOLUME			STRING ENSEMBLE				WAVEFORM SELECTION			PRESETS				MODULATION								
SYNTH.	ORGAN	STRING	FOOTAGE	TRIM	ATTACK	RELEASE	WAVEFORM	ALTERNATE SAW/SG	ENABLE	1	2	3	4	5	6	7	8	RATE	SLOPE	DELAY	DEPTH	
[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]
			16 B	A 0	A 0	A 0	[KNOB]	ON OFF	MONO MULTI									0 Hz				

TRIOLOGY

MODULATION

VCF

VCA

ENVELOPE GENERATORS

A D S R

ORGAN	VOLTAGE CONTR. FILTERS				OSCILLATOR GLIDE				OSC. 1			OSC. 2			LOW FREQUENCY OSCILLATOR							
[ORGAN KEYS]	ENVELOPE	CUTOFF	RESON.	PEDAL	AMPLVT	SPEED	ENABLE	DIRECTION	OSC ONE	SYNC	OCTAVE	OCTAVE MOD.	OCTAVE	OSC TWO	LFO ROUTING	RESET	WAVE/SHAPE					
	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]					
		F ₀	B	ON OFF			MONO MULTI	A B C	FINE TUNE			B 0 PHASE		COARSE TUNE	FM VCF VCA	MONO MULTI	~ [WAVE]					
VOLUME			STRING ENSEMBLE				WAVEFORM SELECTION			PRESETS				MODULATION								
SYNTH.	ORGAN	STRING	FOOTAGE	TRIM	ATTACK	RELEASE	WAVEFORM	ALTERNATE SAW/SG	ENABLE	1	2	3	4	5	6	7	8	RATE	SLOPE	DELAY	DEPTH	
[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]	[KNOB]
			16 B	A 0	A 0	A 0	[KNOB]	ON OFF	MONO MULTI									0 Hz				

TRIOLOGY

TRILOGY REFERENCE MANUAL

The MASTER's TOUCH is designed to allow any sustaining keyboard or any synthesizer to be "articulated" by breath control. The musical result is the production of brass and synthesizer sounds in addition to the instrument's already existing sound qualities. Connections that will apply to almost any synthesizer are on the MASTER's TOUCH itself.

*Signal input, three outputs,
Voltage Controlled Filter,
two triggers out, three
transducer voltages out,
Touch Modulator pad, bite
and breath attenuators, and
sensitivity adjustments.
Comes with connection cables
and Breath tube.*



*Information about the MASTER's TOUCH,
additional owner's manuals for the Trilogy , and
additional blank patch sheets can be purchased at any
Music Dealer selling the Trilogy .*

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sound design for the creative musician

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