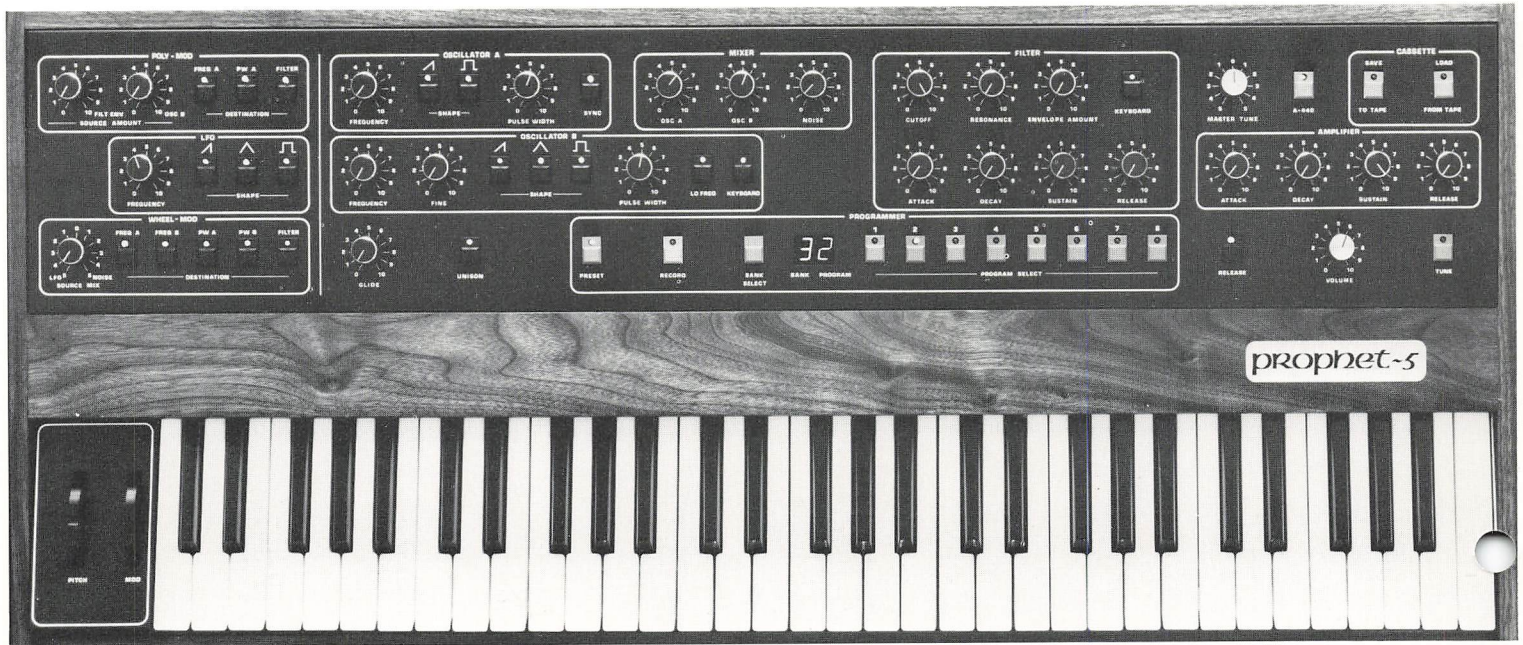# prophet~5

SPEC SHEET

SEQUENTIAL CIRCUITS INC

The Completely Programmable Polyphonic Synthesizer

The **PROPHET** 5 from Sequential Circuits is a completely programmable polyphonic synthesizer, the world's first in fact. The **PROPHET** has 5 complete voices with two voltage controlled oscillators, a noise source, a voltage controlled lowpass filter and two 4 stage envelope generators per voice. The voices can be controlled by either the front panel knobs and switches or by one of the programs in storage.

The **PROPHET** comes with 40 patches preprogrammed. Included are standard orchestral sounds (brass, strings, organs, electric pianos, etc.), special effects (bells, wind, helicopters, etc.), in addition to pure synthesizer sounds. Any or all of these sounds can be modified or replaced by your own sounds. The **PROPHET** has many outstanding features to further enhance its versatility.

It's easy to use: plug it into an amp, turn on the power switch and it's ready to play.

The internal computer of the **PROPHET** automatically tunes and scales all 10 oscillators, and virtually eliminates the need for periodic internal tunings.
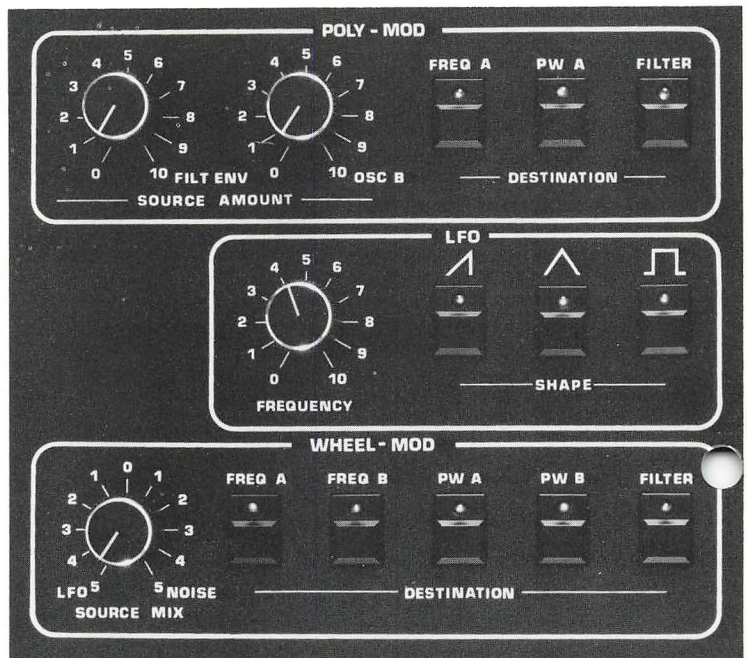
The left-hand controls (pitch bend and modulation wheels) enable you to control entire chords as well as solos.

The **PROPHET** has complete edit facilities. Any program in memory can be instantly modified by simply turning the knobs or hitting the switches desired. The modified program can then be permanently saved, or the old program can be recalled. No special "edit" mode switches need to be hit.

Another totally unique feature of the **PROPHET** is the ability to use different tuning scales. A special "variable scale" mode allows you to actually tune each of the 12 notes in an octave to different frequencies. The range for each is about ±½ semitone from its normal equal tempered value. These tunings can then be programmed into memory, which enables instantaneous switching from one scale or key to the next. Since they reside in memory, they can be stored on cassettes with the other programs for future use. For the first time, in a standard commercially available instrument, you can use other scales: such as, just intonation, mean tone, Pythagorean, etc., as well as their variations.

Additional features of the **PROPHET** include the following:
- A full 5 octave keyboard
- Extremely compact, 37″ x 16½″ x 4½″, well-suited for stacking with other keyboards
- Back up battery with a 10 year life ensures that all programs will remain stored, even when the machine is turned off.
- A voice defeat system enables you to easily disable a defective voice in an emergency situation, even while playing.

POLY-MOD SECTION

The controls in this section allow a mixture of the filter envelope and the output of oscillator B to be used to affect oscillator A frequency, oscillator A pulse width and filter cutoff frequency individually for each voice.

SOURCE AMOUNT Knobs determine the relative mixture of filter envelope and oscillator B output taken as modulation source.
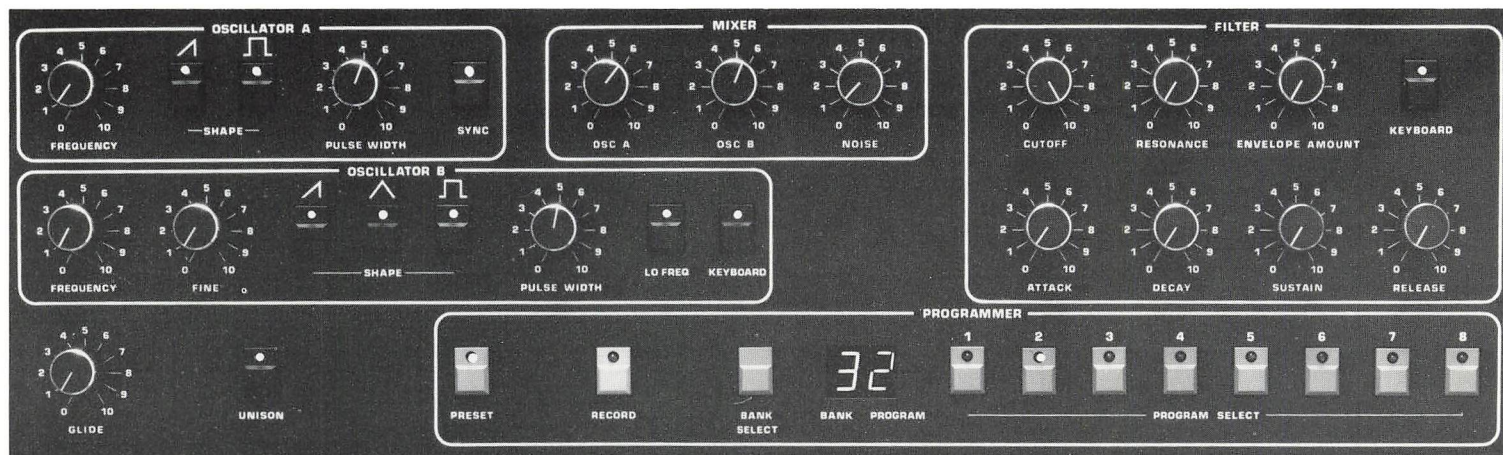
DESTINATION Buttons. When on, the modulation source mixture is routed as a control source to the indicated destination.

LFO SECTION

The controls in this section determine the frequency and output waveform of the **PROPHET**'s low frequency oscillator which is then routed as a modulation source via the **WHEEL-MOD** section.

FREQUENCY Knob varies LFO frequency over a range of .01 to 20 Hertz.

SHAPE Buttons. When on, the corresponding waveshape is mixed into the LFO output at full level.

WHEEL-MOD SECTION

The controls in this section determine the mix between noise and LFO and designation of modulation via the MOD wheel.

SOURCE MIX Knob determines the mixture of noise to LFO as the wheel source.

DESTINATION Buttons. When on, the corresponding destination is modulated in an amount determined by the **MOD** wheel to the left of the keyboard.

OSCILLATOR SECTIONS

The controls in these sections determine the relative oscillator frequencies and the output waveforms sent to the **MIXER** and **POLY-MOD** sections for each of the **PROPHET's** voices.

FREQUENCY Knob. Frequency varying in semitones over a 4 octave range.

FINE Knob (B only). Frequency varying continuously over a range of approximately one whole-tone.

LOW FREQUENCY Button (B only). When lit, oscillator 2 functions in low frequency range (approximately .4 to 10 Hz).

KEYBOARD Button (B only). When off, oscillator B frequency is not affected by the keyboard.

SHAPE Buttons. When lit, the corresponding waveform is mixed at full level into oscillator output.

PULSE WIDTH Knob determines pulse wave duty cycle (0% to 100%).

SYNC Button (A only). When lit, oscillator A frequency follows oscillator B frequency in "hard synchronization."

MIXER SECTION

The **OSC A**, **OSC B** and **NOISE** control settings determine the amount of each signal which will be input to the low pass filter.

FILTER SECTION

CUTOFF Knob determines the cutoff frequency for the **PROPHET's** 24 db/octave low pass filter.

RESONANCE Knob determines the amount of resonance of the filter. When fully clockwise the filter will oscillate in a sine wave.

ENVELOPE AMOUNT Knob determines that the filter cutoff frequency is affected by the ADSR envelope in the filter section.

ATTACK Knob varies attack time from 1 millisecond to more than 30 seconds.

DECAY Knob varies decay time from 1 millisecond to more than 30 seconds.

SUSTAIN Knob varies sustain level from 0 to full level.

RELEASE Knob varies release time from 1 millisecond to more than 30 seconds.
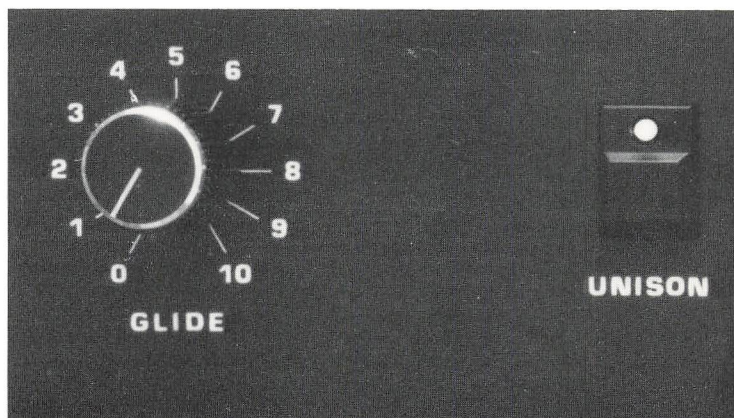
PROGRAMMER SECTION

The controls in this section are used for recording manual control settings selecting between previously recorded programs and shifting between preset and manual operation.

PRESET Button. When on, the **PROPHET** is under computer memory program control. If a preset program has been altered by front panel control, the original program may be retrieved by pressing the corresponding **PROGRAM SELECT** button.

RECORD Button. In order to record, the **PRESET** button must be off. Once the desired program is set up using the manual control settings, push the desired **BANK** and **PROGRAM SELECT** buttons. Hit the **RECORD** button and the **RECORD** light will come on.

BANK SELECT Button. Repeatedly pressing this button cycles the **PROPHET** through its 5 memory banks. The bank currently selected is indicated in the left half of the digital display.

PROGRAM SELECT Buttons. Pressing any of these buttons causes the correspondingly numbered program within the currently selected bank to be selected. If the **RECORD** button is lit, pressing a **PROGRAM SELECT** button will cause the current manual control settings to be recorded in the indicated bank and program.

GLIDE Knob. This control is effective only when the **PROPHET** is in unison mode (**UNISON** button lit). In unison mode this knob determines the amount (rate) of glide (portamento) between notes.

UNISON Button. When lit, all the **PROPHET's** voices play in unison (monophonic), following the lowest keyboard note held.

AMPLIFIER SECTION

MASTER TUNE Knob simultaneously varies the frequency of all oscillators to enable tuning with other instruments.

AN A-440 BUTTON introduces the internal crystal referenced oscillator (accurate to .1 Hz) for tuning purposes.

SAVE—TO TAPE enables the cassette interface mechanism to transfer the 40 programs stored in the **PROPHET** on to cassette tape via most cassette recorders.
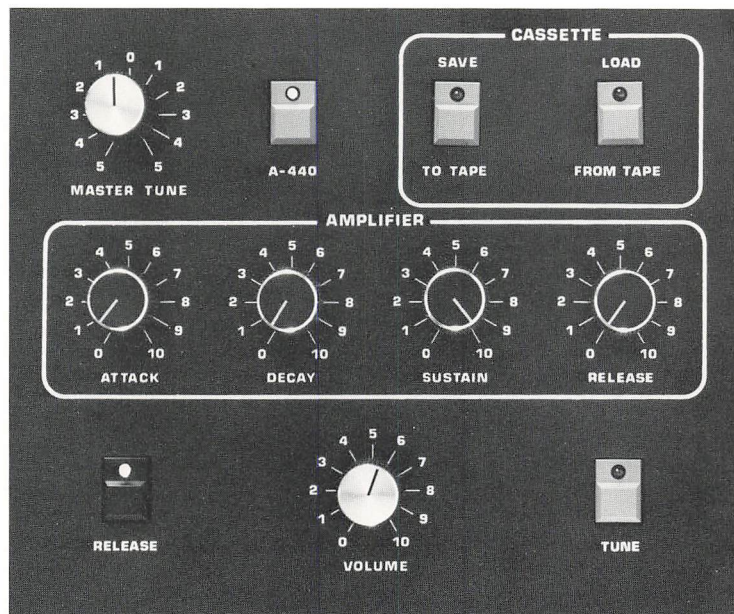
LOAD—TO TAPE allows programs stored on tape to be reloaded into the **PROPHET's** memory banks.

The **ATTACK, DECAY, SUSTAIN** and **RELEASE** knobs in this section determine the envelope applied to the amplifier in the same manner as the similarly named controls in the **FILTER** section.

RELEASE Button. When off, the release time of the amplifier envelope is minimum regardless of the release control setting.

VOLUME Knob determines the overall output level.

TUNE Button. When hit the computer will automatically tune and scale all 10 oscillators in less than 10 seconds.

BACK PANEL FUNCTIONS

ENABLE/DISABLE Switch locks to prevent accidental erasure of programs by disabling the **RECORD** switch on the front panel.

CASSETTE INTERFACE: In and Out jacks connect to any standard cassette recorder (expensive "component" models as well as less expensive portable units) for program storage. Most MIC IN, LINE IN, MONITOR OUT, EARPHONE or LINE OUT jacks on cassette can be used.

RELEASE FOOTSWITCH Jack, when used with the included footswitch, allows the performer to turn the **ADSR** release on and off (acting like a piano sustain pedal).

CONTROL VOLTAGE IN Jacks provide external access to the filters and the amplifiers. The Sequential Circuits Model 840 Voltage Pedal can be used, as well as any other control voltage sources.

SEQUENCER INTERFACE allows the **PROPHET** to be interfaced with the Sequential Circuits Model 800 Digital Sequencer, as well as other synthesizers and synthesizer accessories.

The **TRIGGER** and **VOLTAGE OUT** Jacks follow the last note played on the keyboard, and the **GATE** and **VOLTAGE IN** Jacks control voice 5 (which is automatically disconnected from the keyboard).

AUDIO OUT Jack provides the hi level audio output of the **PROPHET**.

115/230 Switch allows for different AC voltage levels.

POWER Switch turns the **PROPHET's** power on.

For further information, ask your local dealer or write us directly.

SEQUENTIAL CIRCUITS INC

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