



ARPAVATARARPAXXEARPODYSSEYARP2600
ARPSEQUENCERARPOMNII-2ARPPRO/DGX

Arp understands that musicians are not electrical engineers, and vice versa. We're committed to the idea that synthesizers should be treated as musical instruments, not do-it-yourself engineering projects made up of boxes of circuits and bales of wire. That's why we work so long and hard at making synthesizers that are easier and more



Jean-Luc Ponty

expressive to play. We emphasize human engineering, using advanced technology to simplify our synthesizers rather than complicate them.

We started with the control panels. Functions and their controls are color-coded for faster recognition and reading. Control pots have been replaced with precisely calibrated sliders, so that the exact

setting is always in view.

Extensive "software" is included with each instrument, giving you a fundamental knowledge of synthesizer theory in general and a better grasp of your instrument in particular.



We've added some hardware, too, in the form of PPC, our unique Proportional Pitch Control that lets you bend pitches or add vibrato



by literally digging your fingers into your music.

We've also beefed up our synthesizers with steel chassis sturdy enough to withstand the knocking around that a working musician gives any instrument. Arp has been knocked around by the best of

ARP PERFORMS

them, appearing on stage and on record with the likes of Stevie Wonder, George Duke, The Who, Santana, Edgar Winter and more of the world's finest rock and jazz artists.

Work on any new Arp product begins in our Research and Development Department. We try to develop new products that will fill a specific need, but we also encourage our musician/new product specialists to follow-up on any hunches or seemingly wild theories they have. (Arp's brand of creative



thinking has paid off; we hold 12 patents in the synthesizer field and have 33 more pending.) Prototypes are then extensively tested and refined before they're released.

When a new product is chosen from the prototypes, it goes on to Manufacturing. The chassis is formed, the circuitry wired, the control panels printed, and the instrument is assembled. After final assembly, all Arp instruments are put through a torturous 2 week burn-in period, in which they are run continuously

and scrutinized for flaws. Since most equipment failures occur in the first 100 hours of a synthesizer's use, this process assures you of getting an instrument that has already passed this stage and shaken out all its bugs.

After being shipped from the factory, Arp synthesizers end up at a Certified Arp Dealer's, the



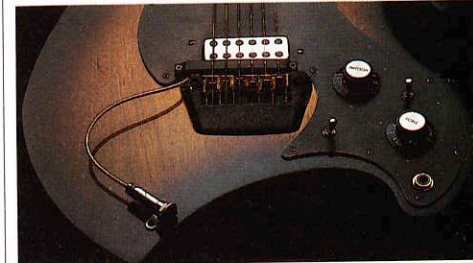
place to go to see the entire line of Arp synthesizers. You can hear them demonstrated, and compare them with the other synthesizers your Arp Certified Dealer carries. When you compare them all, you'll see that only the Arp synthesizers are so advanced that you just have to be a musician, not an engineer, to play them.

The Arp Avatar is a synthesizer that lets the guitar player achieve a range of timbres and textures never before attainable on the electric guitar. The Avatar produces string, brass, reed and percussive instrument sounds; wind, rain, explosions, and other startling sound effects; stage-rattling bass and super-synthesizer

of the guitar signal, including finger bends, finger vibrato, hammer-downs and glissando.

The pitch extractor receives its signals from a specially-designed pickup which can be mounted on most solid-body electric guitars between the treble pickup and the bridge. This hexaphonic pickup transmits a completely separate signal for each string.

The pickup connects to the main synthesizer console through a miniature connector. Each string is connected to its own low-noise preamplifier with adjustable gain so that each string can be perfectly



balanced with the others. Each string also has its own fuzz circuit which permits clean fuzz. You can play a full chord without any string crossover, talk-back or distortion.

The Avatar is also touch responsive. An envelope follower translates the strength of the guitar signal into a control voltage that can be used to control dynamics. Adjustable trigger sensitivity allows the musician to set a minimum picking force necessary to trigger the synthesizer. When you play softly on the guitar, just the straight guitar sounds are produced. When the strings are picked harder, the synthesizer is activated and follows

lead solos; plus dramatic combinations of straight or processed guitar with synthesizer.

The sounds generated by the Avatar are controlled directly from your guitar and are responsive to a variety of playing techniques.

At the heart of this process is the digital pitch extractor. The pitch extractor follows every nuance

ARPAVATAR

the pitch being played. LED status lights give you a visual representation of the trigger sensitivity.

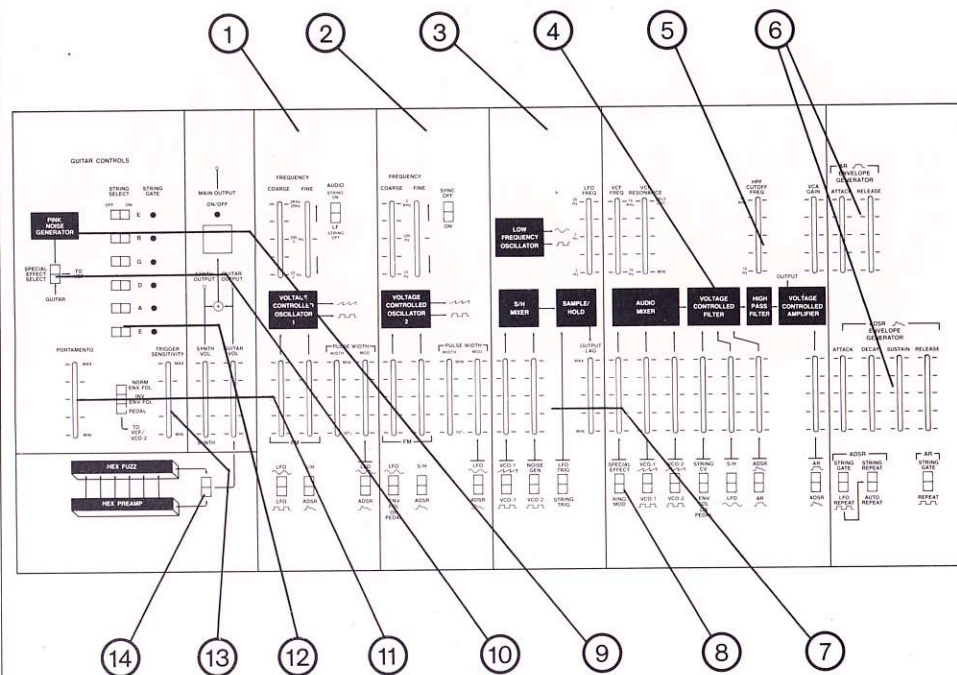
The control panel of the Avatar is human engineered in the ARP tradition. A logically arranged system of sliders and switches gives you quick access to every control function. Several other features add to the Avatar's performance flexibility. Mono performance and split-stereo studio outputs are available on the rear panel. In stereo, the E, A and D strings can be sent through one channel, while the G, B and E strings are sent through a second channel.

Systems interface jacks on the rear panel permit expansion of the Avatar with other ARP synthesizers.

The Avatar also accepts a filter pedal, sustain switch and portamento switch, which allow foot control of various effects in live performance, including infinite sustain.

The Avatar comes with a 48-page owner's manual that will help you learn the basics of electronic sound synthesis, and a 35-minute cassette tape of the Avatar in action. Many experiments and patches are duplicated on tape so that you can hear and see what is happening.

1. VCO 1: Creates raw pitch. Sawtooth (brassy), square (hollow) and pulse (reedy) available. Pitch control sliders create variable vibrato and trill depth or sample/hold and envelope control. Pulse width controls create nasal, chorus or saxophone sounds.
2. VCO 2: Similar to VCO 1. Input for pedal-controlled preset intervals. Phase-sync switch slaves VCO 2 to VCO 1 for dramatic emphasis of harmonic series. Touch sensitive via envelope follower control.
3. LFO: Creates vibrato, trill, tremolo and repeat. Controls VCOs and VCF. Variable rate.
4. VCF: Adds, subtracts or emphasizes harmonics. Controllers include: pedal-controlled wah-wah; ADSR; sample/hold; LFO for tremolo; and envelope follower for touch responsive wah-wah.
5. HPF: Removes all low harmonics from sound to create thin textures.
6. ADSR, AR: Envelope generators that control articulation from percussive to lethargic.
7. S/H: Controls either VCOs or VCF for random patterns or rhythms.
8. Ring Modulator: Creates gongs, chimes or special ethereal effects.
9. Noise Generator: Used to create sounds of wind, surf, steam, bombs, trains, etc.
10. Guitar to VCF Switch: Processes guitar audio through VCF for polyphonic effects.
11. Portamento: Creates automatic glissando or sliding sound between any interval. Variable speed.
12. String Select Controls: Designates strings to "trigger" synthesizer; e.g., select low E only to control synthesizer and play chords on remaining strings.
13. Trigger Sensitivity: Adjusts to each guitarist's playing style.
14. Hex Fuzz/Preamp Select Switch: Allows guitarist to choose clean sound with extended high frequency range or polyphonic "clean" fuzz.



The Arp Axxe has been acclaimed as the best synthesizer value on the market. Priced well within the limits of the average keyboard player's budget, the Axxe surprises you with its full complement of sound sources, modifiers and controllers, all logically arranged and color-coded for playing simplicity. The Axxe serves as a perfect



lead line, or solo, instrument. It's equipped with Proportional Pitch Control (PPC), Arp's latest innovation in performance-oriented design. With PPC, you can add expressive coloration to melody lines simply by exerting pressure on a three-position touch sensitive area. PPC permits you to bend pitches sharp and flat and add

vibrato, allowing you to simulate guitar string-bending techniques and enhancing the realism of voices like flute, saxophone, brass and other sounds of your own creation.

The Axxe is also perfect for creating numerous bass voices, including acoustic, electric, funk and bowed bass, which are especially useful to the keyboardist who plays left hand bass.

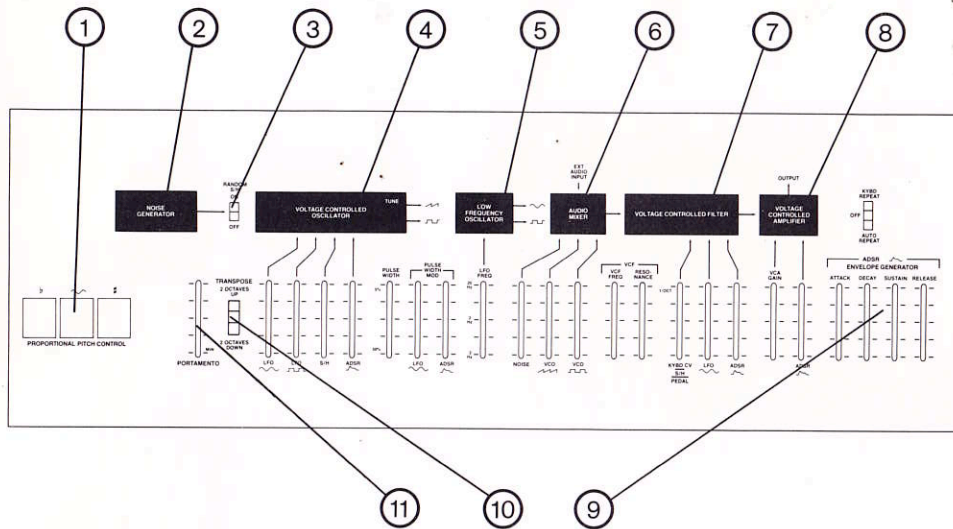
Though inexpensive, the Axxe uses the same high quality filters and oscillators used in larger models. These components are world famous for their high stability and reliability under the most demanding circumstances.

The Axxe is also expandable. Systems interface jacks located on the back panel let you interconnect the Axxe with Arp's variable 2600, Odyssey and 16-position Sequencer, as well as expander modules.

Since the Axxe is a great place to begin your journey through synthesized sound, Arp makes available several publications to help you on your way. The Axxe Owner's Manual is a complete guide to the instrument, featuring experiments and patch diagrams you can try immediately. Lessons in Electronic Music offers 155 pages of electronic music instruction based on the Arp Axxe. The Axxe Patch Book contains more patches, 50 in all, including traditional instrument sounds, sound effects and advanced synthesizer techniques.

ARPAxxE

1. PPC: Includes three separate "live" rubber pads that respond to finger pressure (pitch bend up, vibrato, pitch bend down). Vibrato rate is controlled by LFO SPEED.
2. Noise Generator: Used to create sounds of wind, surf, steam, bombs, trains.
3. S/H: Controls either VCO or VCF for random computer-like sound or funky rhythmical effects.
4. VCO: Creates "raw" pitch. Sawtooth (brassy), square (hollow) and pulse (reedy) waveforms available. Pitch control sliders create variable vibrato and trill depth or sample/hold (random pitch sequence) and envelope control. Pulse width controls are used to create nasal, chorus or saxophone sounds.
5. LFO: Used to control VCOs, VCF, to create vibrato, trill, tremolo and repeated effects. Variable rate.
6. Audio Mixer: Mixes any combination of three "source" sliders.
7. VCF: Changes timbre by adding, subtracting or emphasizing harmonics. Various controllers control VCF by: pedal, for pedal-controlled wah-wah; ADSR; sample/hold, for funky rhythmical effects; LFO for tremolo; and keyboard.
8. VCA: Controls overall volume.
9. ADSR: Controls every aspect of articulation. Useful for creation of percussive, lethargic and other articulations.
10. Transpose: Shifts VCO pitch up 2 octaves above normal or down 2 octaves below normal.
11. Portamento: Works between any two keys depressed. Creates automatic glissando or slider sound between notes. Variable speed.



If you're looking for a synthesizer with a fine balance of price, function, sound versatility and road-worthy construction, the Arp Odyssey is sure to be your choice. It's a two-oscillator synthesizer with a patented duophonic keyboard, and it's played by some of the world's most respected keyboard artists: George Duke, Herbie

wind, gongs, chimes, bombs, sirens, and automatic sample/hold rhythms represent just a few of the weapons in the Odyssey's audio arsenal. You can also create virtually all traditional instrument sounds, including strings, brass, percussion, woodwinds, incredibly realistic alto saxophones and lilting flutes.

No patch cords are required. All sounds are created on the Odyssey's control panel, which has been human engineered with logically-arranged, color-coded block diagrams, sliders and switches that make playing the Odyssey fast and easy.

The Odyssey is just as much at home in the studio as it is on stage. Arp's advanced circuitry gives you rock-stable accuracy for professional quality recording, and the systems interface jacks on the back panel allow you to expand the Odyssey by interconnecting it with other Arps. Electric piano, guitar and voice can also be processed through the Odyssey's filter and control circuits by using the external audio input on the back panel.

The Odyssey is also equipped with Proportional Pitch Control (PPC), Arp's latest contribution to more expressive synthesizer performance. This triple-pad, pressure-sensitive controller lets you bend notes sharp and flat, and add vibrato, all without moving a single slider or switch. In live performance, PPC lets you introduce expressive nuances into a melody, and it gives you more physical



Hancock, Chick Corea and thousands of other professionals making names for themselves right now.

The Odyssey can electronically create an enormous variety of sounds in live performance, with nearly 70 parameters of sound under your direct command. Stunning solo lines, heavy bass effects, screaming phase-sync guitar solos,

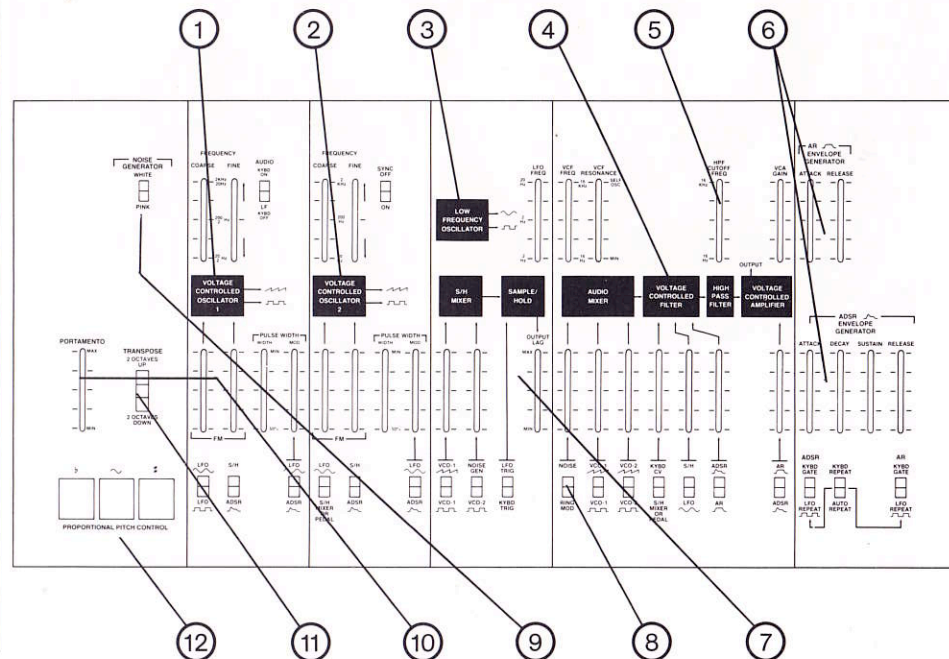
ARPODYSEY

control over the synthesizer than ever before.

A complete and detailed owner's manual accompanies the Odyssey. A 213-page textbook based on the Odyssey, Learning Music With Synthesizers, is now the most popular classroom guide to electronic music. The Odyssey Patch Book, also available from your Arp dealer, contains 75 control panel diagrams contributed by professional musicians, musical engineers and Arp's own product specialists.

In today's music, you hear the Arp Odyssey more than any other synthesizer made. The fact that the Odyssey is the overwhelming choice of the world's leading professional musicians says more than anything else about the musical flexibility and reliability of this classic design.

1. VCO 1: Creates "raw" pitch. Sawtooth (brassy), square (hollow) and pulse waves (reedy) available. Pitch control sliders create variable vibrato and trill depth or sample/hold (random pitch sequence) and envelope control. Pulse width controls are used to create nasal, chorus or saxophone sounds.
2. VCO 2: Similar to VCO 1. Has pedal input to control pitch for pedal-activated preset intervals. Phase-sync switch slaves VCO 2 to VCO 1 for dramatic emphasis of harmonic scales. Good for creating screaming guitar-like solos.
3. LFO: Used to control VCOs, VCF to create vibrato, trill, tremolo, and repeated effects. Variable rate.
4. VCF: Changes timbre by adding, subtracting or emphasizing harmonics. Various controllers control VCF: pedal, for pedal controlled wah-wah; ADSR; sample/hold, for funky rhythmical effects; LFO, tremolo; and keyboard.
5. HPF: Removes all low harmonics (bass) from sound. Useful for creating "thin" textures.
6. ADSR, AR: These are envelope generators that control every aspect of articulation. Useful for creation of articulations ranging from percussive to lethargic.
7. S/H: Controls VCOs 1 and 2 or VCF for random, computer-like sound or funky rhythmical effects.
8. Ring Modulator: Essential in the creation of gongs, chimes or special ethereal effects.
9. Noise Generator: Used to create sounds of wind, surf, steam, bombs, trains.
10. Portamento: Works between any two keys depressed. Creates automatic glissando or sliding sound between notes. Variable speed.
11. Transpose: Shifts VCO pitch up 2 octaves above normal or down 2 octaves below normal.
12. PPC: Includes three separate "live" rubber pads that respond to finger pressure (pitch bend up, vibrato, pitch bend down). Vibrato rate is controlled by LFO speed.



The Arp 2600 synthesizer has set a standard against which all synthesizers are measured. No other instrument offers the musician such a balanced combination of studio and live performance options.

Creative artists like Joe Zawinul and Stevie Wonder are just two of the many who have chosen the



2600 as their synthesizer. A major reason for its popularity is its open-ended flexibility. The 2600 offers an unlimited range of sound production, modification and processing functions. On concert stages, in recording studios and in the music departments of the world's most prestigious colleges and universities, the 2600 synthesizer

performs brilliantly year after year.

A look at the control panel, or "brain" of the 2600, tells you of its awesome musical power. The instrument utilizes the block diagram concept of electronic sound creation similar to that found on Arp's smaller, less complex variable models. Linear sliders and switches are used throughout for ease of programming, and to provide the user with a quick visual record of signal flow.

The 2600 can be operated with or without patchcords. All of the functions are internally wired and can be controlled via sliders and switches. Female panel jacks provide access to every function on the 2600, so that you may override any prewired internal connection. This gives you complete control of the synthesizer process, allowing you to choose the raw signal, then determine the exact sequence of modification and control required to create just the sound or effect you desire.

New keyboard electronics have recently been added to the 2600 to expand its live performance capability. A compact panel to the left of the keyboard offers two-voice dual memory, a low frequency oscillator for trills and vibrato, single/multiple trigger selection, vibrato depth and delay controls, portamento, pitch bend and an interval latching device that lets you memorize, delete and call back selected intervals using a footswitch controller.

Through Arp systems inter-

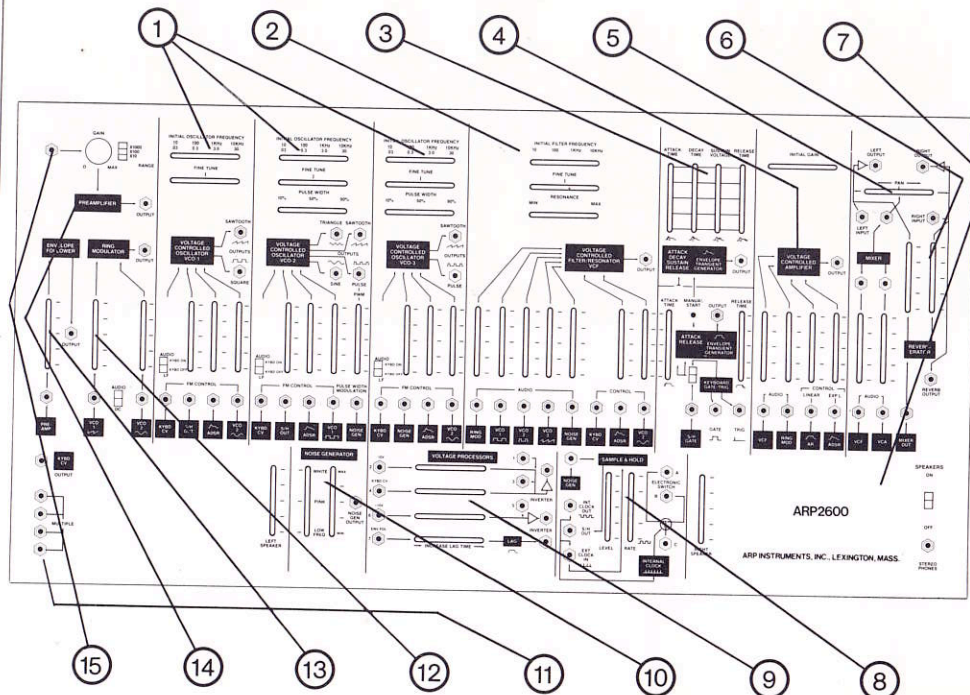
ARP 2600

facing, the 2600 may also be interconnected with other Arp synthesizers. Headphone jacks, monitor speakers and built-in reverb are also included.

The 2600 has been carefully designed for the discerning professional musician, whether composer, performer, creative audiophile, teacher, student or combination of all. Several books and performance aids are available to further enhance the enjoyment of 2600 ownership. The 2600 Owner's Manual is a text used for electronic music courses in addition to its use as a practical operational guide. The 2600 Patch Book is the collected wisdom of dozens of 2600 owners, featuring 100 control settings for basic and advanced synthesizer patches.

Complete with owner's manual, integrated travelling case, interval latch foot switch and patch cords, the Arp 2600 will provide you with years of exciting musical rewards.

1. VCO 1, 2, 3: Create raw pitch. Sawtooth (brassy), square (hollow), pulse (reedy), triangle (mellow) and sine (very mellow) waves available. Pitch control sliders include: vibrato, trill, sample/hold and ADSR control. All oscillators can double as controllers via AUDIO/LF switch. Pulse width modulation (available on VCO 2) can produce saxophone sounds, dynamic brass ensemble effects and other heavy synthesizer sounds.
2. VCF: Changes timbre by adding, subtracting or emphasizing harmonics. Various controllers control VCF by keyboard, VCO 2 (Tremolo LFO), ADSR or any other controller that can be patched into the control input jacks.
3. ADSR/AR: Envelope generators that control every aspect of articulation.
4. VCA: Used as a voltage-controlled volume control. Essential to any patch when the performer desires to have the VCF open in a static mode.
5. Pan: Pan pot locates any two sounds in the stereophonic image.
6. Reverb: Enhances and adds richness and concert-hall depth to a patch.
7. Internal Speaker: Allows low volume monitoring of patch.
8. S/H: Controls VCOs for random computer like sound, or VCF for funky effects. Rate governed by internal clock.
9. Voltage Processors: Functions include sources for positive or negative voltage (changes pitch of VCOs), voltage inverters (invert keyboard, envelopes, etc.). Can be used as audio mixers or attenuators.
10. Noise Generator: Creates sounds of wind, earthquake, surf, steam, bombs, etc.
11. Multiple: Splits signals into four outputs.
12. Ring Modulator: Creates gongs, chimes, or special ethereal sounds.
13. Envelope Follower: Used with external input (mic., guitar). Produces a voltage proportionate to the amount of input volume. Good for touch responsive wah-wah.
14. Preamplifier: Boosts low-level external audio signals.
15. Mini "D" Jacks: Allows the performer to override any prepatched effect.



The Arp Sequencer provides live performance control over pre-programmed rhythmic or melodic sequences. It's a perfect accessory for a dual or multi-oscillator synthesizer like the Arp Odyssey, 2600 or the Avatar guitar synthesizer. Interconnecting the Sequencer to any of these instruments through our systems interface jacks allows

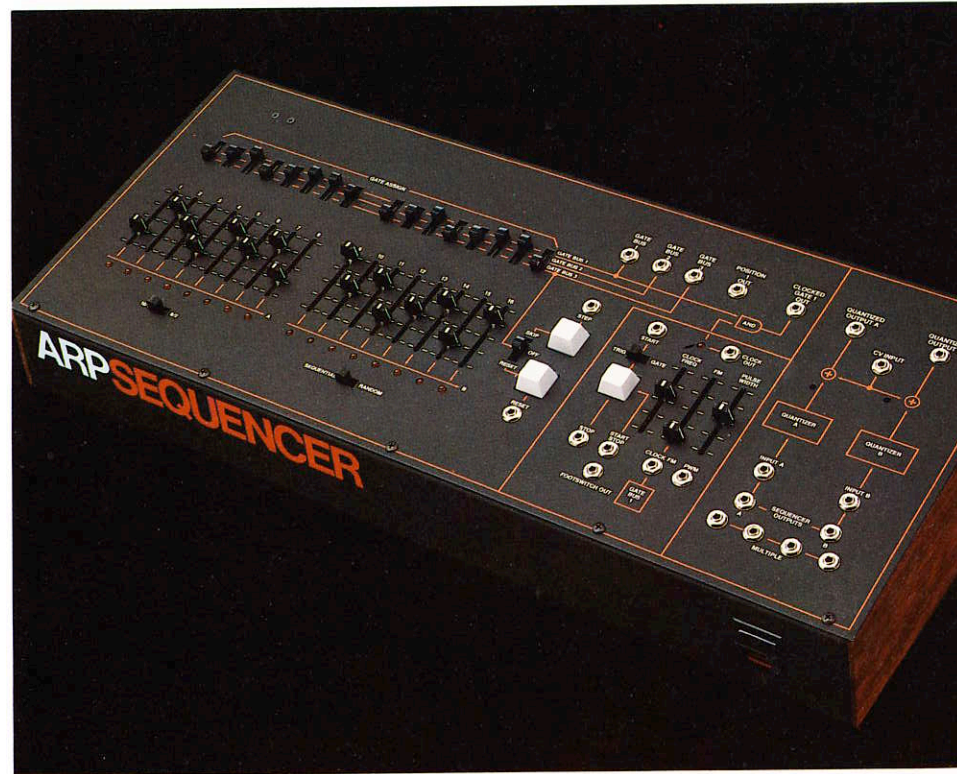
variation and other dynamic changes, and in live performance is free to use his hands for additional keyboard or guitar work. Obviously, the Sequencer is a great addition to an electronic music studio and can be equally effective on-stage for producing Who-like textures reminiscent of the haunting Arp-produced sequence heard on "We Won't Get Fooled Again."

Each of the sixteen positions on the Sequencer features a chromatically-scaled tuning slider for accuracy and speed in sequence programming. You have the option of programming up to sixteen notes controlled by one quantizer, or up to eight two-note intervals controlled by two quantizers for rich harmonic textures.

Computer-grade pushbutton switches let you skip and reset a sequence at any point. Starts, stops, skips and steps can be controlled automatically or with the foot switch provided with the instrument.

Lifetime light emitting diodes (LEDs) indicate the note being played and let the performer visually track the sequential progression for quick change.

The Arp Sequencer includes five Gate outputs, Pulse Width Modulation control and pedal jack for external control and/or interfacing with additional sequencers or Arp synthesizers. The unit is also equipped with mini "D" patching jacks, a compact and professional system first pioneered by Arp on the Arp 2600 synthesizer.

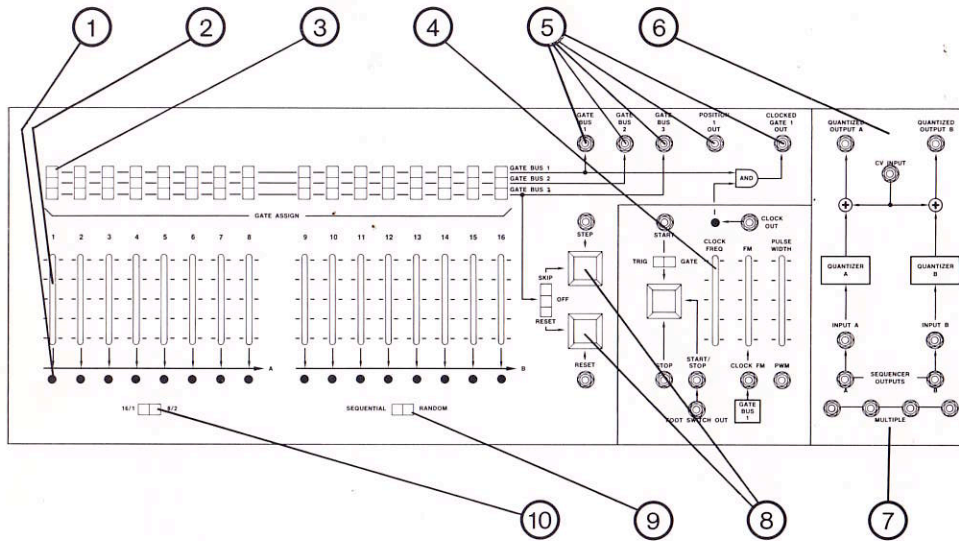


you to program various musical lines using the Sequencer to control the synthesizer oscillators.

As an example, the 2600 and the Sequencer can be easily set up to produce a walking bass line, accompanied by synthesized percussion in a rhythmic sequence. The performer has complete control over speed, accents, rhythmic

ARP SEQUENCER

1. LED: Light-emitting diodes indicate speed, type and position of sequence.
2. Position Tuning Sliders: Allow performer to tune individual steps via variable slider.
3. Gate Bus Switches: These can be used for: skip, reset function; controlling rate of internal clock (produces complex rhythms); triggering a synthesizer's envelope generators; opening VCFs, VCAs for accents.
4. Internal Clock: Controls speed and rhythmic variation of sequence. Voltage controlled.
5. Various Gate Jacks: Used for triggering a synthesizer's envelope generators.
6. Quantizer: A two-channel device that rounds off the voltage received from the sequencer position outputs to the nearest 1/12th volt. Enables performer to tune in perfect chromatic increments.
7. Multiple: Splits any signal into four outputs.
8. Step/Reset: Step moves position of sequence one step forward. Reset places sequence back to position 1.
9. Sequential/Random: In the sequential mode, the sequence moves in an orderly stepped pattern. The random continuously changes its position.
10. 16/1, 8/2 Switch: In the 16/1 mode, a 16-note sequence is possible. In the 8/2 mode, both the A and B banks are stepped in eight positions in parallel. Allows the performer to tune an eight-note melody in bank A and a discrete eight-note harmony in bank B.



The Arp Omni-2 is an improved version of the popular Omni. It features all-electronic switching, single/multiple triggering and a separate bass synthesizer. The Omni-2 is actually three separate instruments in one package—1) a highly evolved string chorus, 2) polyphonic synthesizer section and 3) separate bass synthesizer.



All three sections of the Omni-2 can be played simultaneously for impressively-rich orchestral effects. Dozens of combinations of strings, brass choruses, electric piano, funky bass, vibes and polyphonic synthesizer sounds can be selected by touching a few switches. The Omni-2 has controls to balance the volume of each section,

selectable waveforms and chorus phaser controls. Each section has its own output so that the Omni-2 can be played in stereo or even dramatic “triphonic.” You can, for instance, have strings on the left, brass on the right and bass in the middle for overwhelming fullness of sound.

Through a new Arp process called Asynchronous Phase Modulation, the Omni-2 achieves string sounds that are rich, silky and breathtakingly realistic. The highs are crisp and clean, with frequency response extending right out to the limits of audibility, providing resonant violas, cellos and string bass.

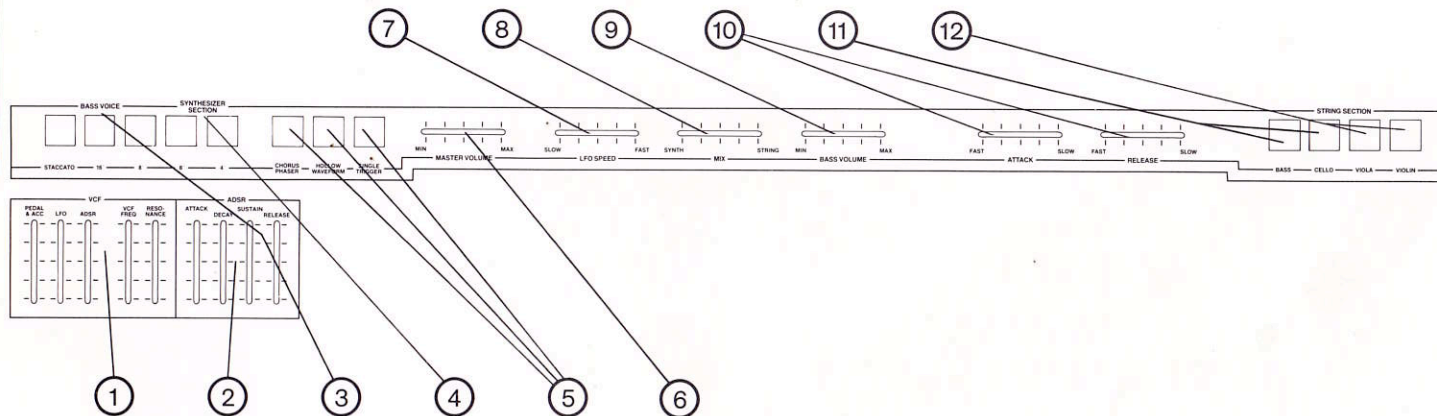
The Omni-2’s brass sounds give you that unmistakable punch that you expect only from real horns. A patented low-noise filter and adjustable ADSR envelope generator let you adjust four parameters of articulation, brightness, resonance and tremolo, to get just the kind of horn section you want.

Acoustic or electric piano sounds are enhanced by a sustain foot switch that works like a sustain pedal on a piano. An optional filter pedal produces great wah-wah and other electronic coloration.

The Omni-2 is human engineered with a logical panel control arrangement. LED status indicators help you locate switches even in total darkness. A split keyboard permits a separate bass line on the lower end while you play strings alone or in combination with other sounds on the upper end.

ARPOMNII-2

1. VCF: Changes timbre by adding, subtracting or emphasizing harmonics. Various controllers include pedal (for pedal controlled wah-wah), ADSR, LFO (for tremolo).
2. ADSR: These are envelope generators that control every aspect of articulation. Useful for creation of articulations ranging from percussive to lethargic.
3. Preset Synthesizer Bass: Creates 16' and 8' electric bass sound. Staccato changes decay speed.
4. 8', 4' Synthesizer Section: Produces raw polyphonic waveform which is processed by VCF and controllers to create brass, piano, funky sounds, etc.
5. Chorus Phaser: Slows phaser speed and patches 8' and 4' synthesizer directly into phaser.
6. Master Volume: Controls volume of strings, synthesizer and bass voices.
7. LFO Speed: Controls rate of tremolo into VCF.
8. Mix: Governs amount of string vs. synthesizer to main output.
9. Bass Volume: Controls volume of 16' and 8' preset bass, bass and cello voices.
10. String AR: This is an envelope generator that allows variable amount of attack and release to the strings. Different types of bowing can be achieved by varying these two parameters.
11. Bass/Cello: These string voices are somewhat darker in tone color than the viola and violin. Bass is tuned one octave below cello.
12. Viola/Violin: Viola is tuned one octave below violin and is voiced slightly mel-lower, like real violas. Both string voices are used to create expansive orchestral textures polyphonically.



The Pro/DGX was designed to create the most realistic and expressive voices possible. The Pro/DGX is a model of operational simplicity, yet its internal analog and digital circuitry is among the most sophisticated in use today. The Pro/DGX's tone generators, programmable filters and digital-control circuitry account for the



piano, harpsichord, tuba, piccolo, space bass, noze, comic wow and twenty-four other traditional and not-so-traditional instruments, with each sound stored in a computer memory for immediate access.

For that extra touch of realism, the Pro/DGX also features a pressure-sensitive keyboard that lets you add wows, growls, brilliance, vibrato, volume and more, just by exerting extra pressure on the keys. Fast-action switches to the left of the keyboard select any combination of touch sensor effects. Sliders controlling brilliance, volume and portamento are located just below. A repeat switch lets you achieve very realistic plucked-string sounds when playing guitar or banjo, and a vibrato speed control proves quite useful for realistic woodwind voicings.

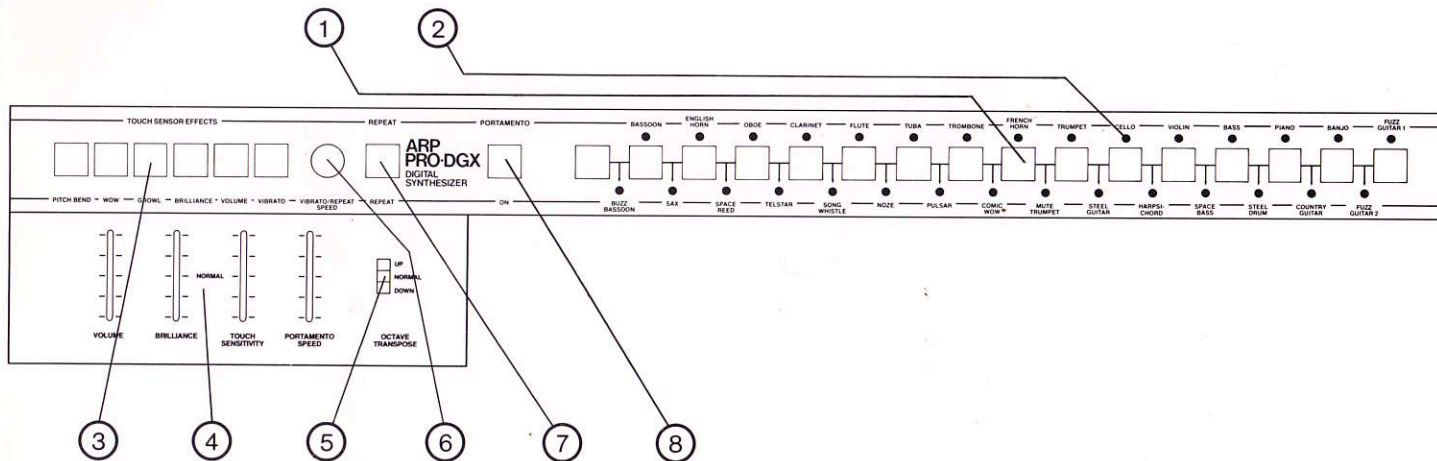
The combination of thirty contrasting voices and six different touch sensor effects expands the Pro/DGX's versatility beyond that of any other preset synthesizer. LED status indicators, a professional XLR Cannon connector for balanced line hookup, and a solid-steel chassis for life on the road put the Pro/DGX in a class by itself.

remarkable difference in tone quality that separate it from all other preset synthesizers. Uncompromised voicing takes a lot of circuitry, but it's worth it when your sound cannot be second best.

The Pro/DGX is thirty different instruments in one portable, practical keyboard. At the touch of a switch, you can play flute,

ARP PRO/DGX

1. Voice Select Switches: Professional click switches select any one of 30 different traditional or synthesized instruments.
2. Computer LEDs: Light Emitting Diodes indicate selected voice.
3. Touch Sensor Effects: Pitch bend, wow, growl, brilliance, volume and vibrato. Keyboard responds to any increase in finger pressure.
4. Variable Slider Parameters: Volume, brilliance, touch sensor sensitivity and portamento. Allows user variability.
5. Transpose: Shifts pitch of entire instrument up one octave from normal or down one octave from normal.
6. Vibrato Speed Control: Changes rate of vibrato, tremolo, repeat.
7. Repeat Switch: Reiterates all percussive instruments.
8. Portamento: Creates automatic sliding sound between any two keys. Variable speed.



VOLTAGE CONTROLLED OSCILLATOR

Frequency Range: 16 Hz to 16 KHz
Waveforms: Sawtooth, Square, Pulse, Dynamic Pulse (Sine/Triangle-2600)
Maximum Vibrato Depth: ± 1 octave
Maximum Trill Depth: +1.2 octaves
Maximum ADSR Frequency Shift: +10 octaves
Pulse Width: 5% to 50%
Pulse Width Modulation: LFO, $\pm 25\%$
ADSR: +45%

VOLTAGE CONTROLLED FILTER

Type: Low Pass 24 dB/oct.
Frequency Range: 16 Hz to 16 KHz
Maximum Usable Resonance: Approximately 30
Maximum LFO Modulation: 1.5 octaves
Maximum ADSR Sweep: 10 octaves

VOLTAGE CONTROLLED AMPLIFIER

Dynamic Range: 80dB

NOISE GENERATOR

Type 1: Digital
Noise Spectrum Type: White, Pink (Low Freq.-2600)

MANUAL CONTROLLED FILTER

Type: High pass

LOW FREQUENCY OSCILLATOR

Waveforms: Square, Sine
Frequency Range: .2 Hz to 20 Hz

ADSR ENVELOPE GENERATOR

Attack Time: 5 msec. to 5 seconds
Decay Time: 10 msec. to 8 seconds
Sustain Level: 0 to 100% of peak
Release Time: 15 msec. to 10 seconds

AR ENVELOPE GENERATOR

Attack Time: 5 msec. to 5 seconds
Release Time: 10 msec. to 8 seconds

PORTAMENTO

Maximum Speed: About .01 msec./oct.
Minimum Speed: About 1.5 seconds/oct.

SAMPLE AND HOLD

Maximum Pitch Deviation in VCO: 2.5 octaves
Maximum Frequency Deviation in VCF: 2.5 octaves

PROPORTIONAL PITCH CONTROL (Three separate touch pads)

Sharp: Maximum +5 semitones, Minimum +4 semitones
Flat: Maximum -5 semitones, Minimum -4 semitones
Vibrato: ± 4 semitones, rate controlled by LFO slider

VOLTAGE PROCESSORS (2600)

Inverters (2): Gain = 1, D.C. coupled (can be used to invert keyboard, envelope, etc.)
Lag Processor: Variable delay, D.C. coupled, gain = 1

ENVELOPE FOLLOWER (2600, Avatar)

Type: Signal amplitude to D.C. voltage converter
Inputs: 1 (with attenuator)
Output: 0 to +10V

INTERFACE JACKS

Control Voltage In/Out: 1V/oct.

Gate Out: Approximately +10 volts

Gate In: (Minimum) 8 volts

Trig Out: 10 volt pulse, 20 microseconds duration

Trig In: 8 volt pulse, 10 microseconds minimum duration

External Audio Input Sensitivity: 50 mv for full output

SEQUENCER

Number of positions: 16

Maximum (unquantized) Control Voltage Output: +12V

Maximum Gate Output Voltage: +14V

16 x 1 Mode: Channels A and B are common

8 X 2 Mode: Channels A and B are separate

Step, Reset, Start, Stop and Start/Stop Jack Inputs: Accepts +3V to +10V Gate

AUDIO OUTPUTS

AVATAR

OUTPUT	JACK TYPE	LEVEL	VOLTAGE	IMPEDANCE
Main 1	XLR Cannon	High/Low Switched	High, .2V PP	200 ohms DC coupled
Main 2	1/4" phone		Low, 2.0V PP	600 ohms DC coupled
Mono Guitar	1/4" phone	Low	.2V PP	600 ohms DC coupled
Synth	1/4" phone	Low	.2V PP	600 ohms DC coupled
Studio EAD	1/4" phone	Low	.2V PP	600 ohms DC coupled
Studio GBE	1/4" phone	Low	.2V PP	600 ohms DC coupled

AXXE

1/4" Phone: High Level, 2.5V PP; 100K ohm impedance

1/4" Phone: Low Level, .25V PP; 10K ohm impedance

ODYSSEY

XLR Cannon: High Level, 2.5V PP maximum; 100K ohm impedance

1/4" Phone: Low Level, .25V PP maximum; 10K ohm impedance

2600

Left and Right Output Jacks: .2V PP, 600 ohm impedance

Input Impedance: 100K typical

OMNI

OUTPUT	JACK TYPE	LEVEL	VOLTAGE	IMPEDANCE
Main 1	XLR Cannon	High/Low Switched	High, 1V PP	100 ohms DC coupled
Main 2	1/4" phone		Low, 200mV PP	720 ohms DC coupled
Strings	1/4" phone	High	2V PP	600 ohms DC coupled
Synth	1/4" phone	High	2V PP	600 ohms DC coupled
Bass	1/4" phone	High	1.5V PP	600 ohms DC coupled

PRO/DGX

XLR Cannon: High Level, 2.5V PP; 100K ohm impedance

1/4" Phone: Low Level, .25V PP; 10K ohm impedance



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