![ARP logo]

ARP ODYSSEY

DUOPHONIC SYNTHESIZER

Forty years later, a complete revival.

The ARP Odyssey was an analog synthesizer, originally produced in 1972 by the American manufacturer ARP Instruments, Inc., that quickly garnered a faithful following among musicians. Well respected for its high value, ease to play and portability, the ARP Odyssey had undergone several improvements during its history and continued to be a long-seller until 1981. Its sound can be heard on numerous classic songs.

Now in 2015, KORG has brought back the ARP Odyssey for today. With the advisory assistance of David Friend, the original designer and co-founder of ARP Instruments, KORG has completely reproduced the original circuitry for artists looking to recreate classic sounds and explore new ones. Together the engineers at KORG and ARP were able to nail the sound and feel of the original. Every detail of this faithful reproduction has been carefully considered to stay true to the quality of the original.

The legendary ARP sound is loved to this day. Long stopped, the wheels of history have again begun to move.

ARP HISTORY

ARP synthesizers are loved by countless musicians for their innovative sound. The classic models, produced from the 1960's to the 1980's, had an enormous impact on the subsequent history of synthesizers and the evolution of music making. Today, ARP maintains its position as a pioneer and as one of the great synthesizer brands.

1969

ARP Instruments, Inc. (subsequently referred to as ARP) was founded. The name came from the initials of one of the founders, Alan Robert Pearlman. Co-founders included Lewis G. Pollock and David Friend, who was the chief engineer and later designed the ARP Odyssey.

It was an age when gigantic modular systems dominated the synthesizer world. However, the tuning of these instruments was usually unstable and each manufacturer struggled with this problem. ARP decided the development of a highly stable oscillator was important so they dedicated research and product development towards achieving this goal.

1970

The model they first developed was the ARP 2500, a large modular synthesizer. The design on this model used a large number of matrix switches, by replacing the patch cord design used on other manufacturer's products of the time. Thanks to ARP's research, tuning was now extremely stable and the ARP 2500 became a hit product as a research tool for universities. It even appeared in the film "Close Encounters of the Third Kind" (1977) as a device used to communicate with an alien spacecraft.

ARP 2500

1971

The next well-known model was the ARP 2600. This synthesizer was designed with the sound generator and the keyboard as separate units. It was a three-VCO unit in which the main modules were internally wired, but patch cords could also be connected to create complex sounds.

ARP 2600

The special features and sounds caused the ARP 2600 to be used in many recordings and by significant musicians such as Stevie Wonder and Joe Zawinul.

1972

The ARP Odyssey was released, establishing ARP's position as the world's leading synth brand. Most notable for its sharp sound and the versatile sound-creating possibilities not available on other small synthesizers of the time. The ARP Odyssey was used by noteworthy musicians including Herbie Hancock, George Duke, John Lord, Kraftwerk, and YMO. It is responsible for many songs that remain historical classics, and giving birth to new types of music.

The ARP Odyssey's signal path had a major impact on synthesizer manufacturers that followed. It became the standard for subsequent eras, influencing even the polyphonic and digital synthesizers that were to come later.

After it went on sale in 1972, the ARP Odyssey continued to undergo improvements. Broadly speaking, there were three versions divided by their date of production.

Rev1: The white model 2000 produced during 1972–1974.

Rev2: The black model 2810 produced during 1975–1976.

Rev3: The black panel and orange printing models 2820–2823 produced during 1978–1981.

The favorable reception of the ARP Odyssey gave rise to further expansion of the ARP synthesizer lineup.

1972
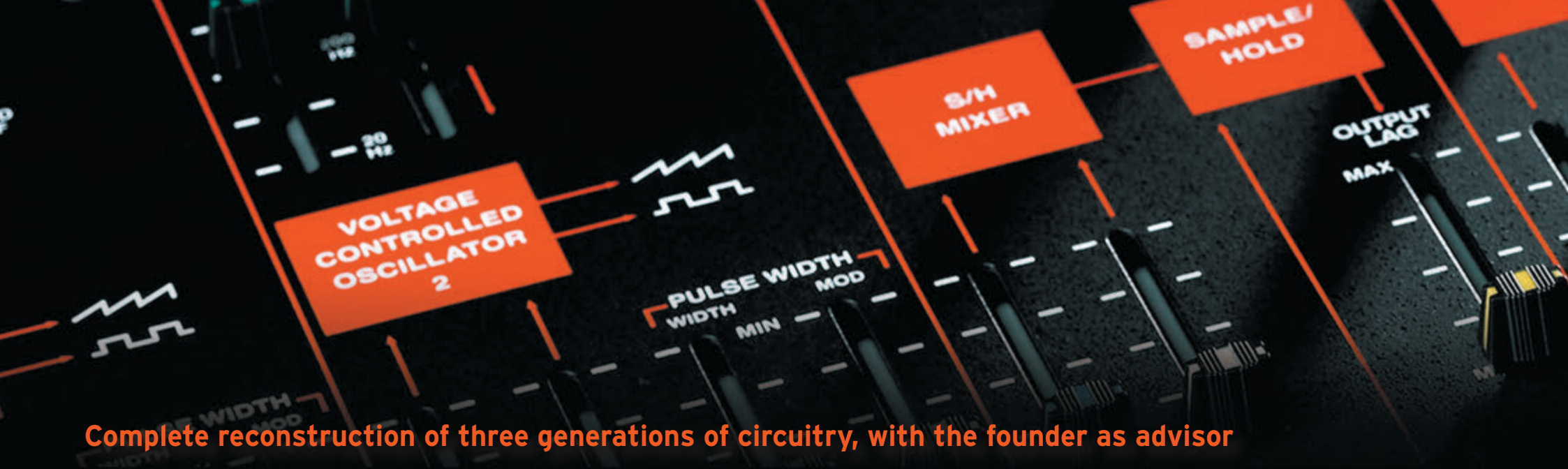
ARP Pro Soloist

1975

ARP Omni 2

ARP Axxe

1978

ARP Quadra

1980

ARP Solus

ARP Odyssey Rev1

ARP Odyssey Rev2

ARP Odyssey Rev3

Complete reconstruction of three generations of circuitry, with the founder as advisor

The distinctive synthesis of the ARP Odyssey has been reproduced from the circuit level up.

The original ARP Odyssey was a 2VCO duo-phonic instrument. Its most distinctive feature was its sharp, penetrating sound and its rich range of tonal variation. With a variety of functions and modulation possibilities provided by oscillator sync, sample & hold, pulse width modulation, high-pass filter, two types of envelope generator, and pitch bend using the PPC, it was able to create a versatile range of sounds.

The ARP ODYSSEY reproduces the sounds of these components at the circuit level. Under the supervision of David Friend, parts were carefully selected and every detail was adjusted to replicate the original unit's distinctive synthesis.

Filters of all three generations are provided

Broadly speaking, there were three versions of the original ARP Odyssey, divided by the date of production, with the major difference being the filter circuit. The ARP ODYSSEY provides all three of these different filter circuits, and allows you to select one of them with a single switch.

TYPE I (Rev1) is a 12 dB/Oct circuit that produces a sharp, punchy sound. TYPE II (Rev2) is a 24 dB/Oct filter with great-sounding lows. TYPE III (Rev3) maintains excellent stability even when resonance is raised. These distinctive filters have been reproduced just as they originally were.

Portamento behaviors of both Rev1 and Rev2/3 are provided

On the original ARP Odyssey, the behavior of portamento when using the transpose function differed between Rev1 and Rev2/3. The ARP ODYSSEY reproduces both of these behaviors and lets you select the desired one with a switch.

Rev1 and Rev2 designs also revived as limited-edition models

Of the various designs that differed by production date, the ARP ODYSSEY uses the Rev3 design with a black panel silk-screened in orange. The white-paneled Rev1 and the black panel with gold-printed Rev2 designs have also been revived as limited-edition models. If you're an original user, you can choose the design that brings back those fond memories; if you're a new user, choose the model that you like best.
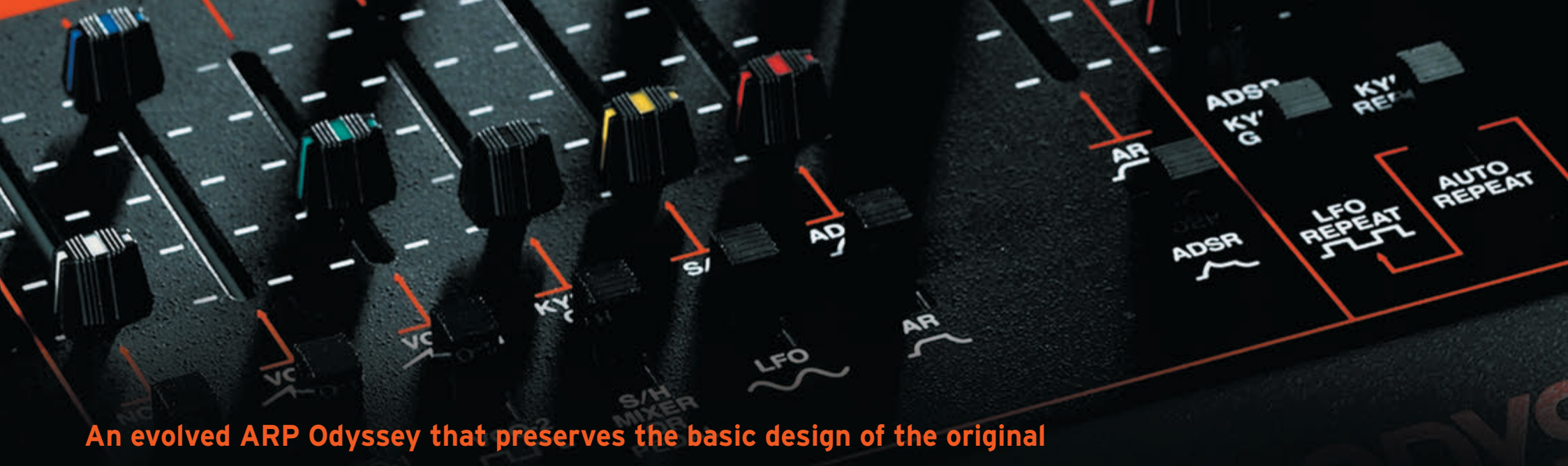
ARP ODYSSEY Rev1
(limited-edition model)

ARP ODYSSEY Rev2
(limited-edition model)

ARP ODYSSEY
(standard model)

An evolved ARP Odyssey that preserves the basic design of the original

Compact body, highly operable sliders, and a slim keyboard that's easy to play

The ARP Odyssey has been downsized to 86% of the original ARP Odyssey. Carefully selected parts are used in the familiar slider section, providing an operating feel that's even smoother than the original. The keyboard uses a 37-note slim keyboard that features lighter weight and excellent playability. While making the instrument more compact and easier to use, we have also paid attention to ensuring that the mini-keyboard is uncompromisingly "playable." Although the keyboard has 37 keys, the transpose function lets it cover a broad range of seven octaves.

The new DRIVE switch

In order to deliver a more powerful analog sound, a DRIVE switch is provided as a new function. Turning this switch on makes the VCA distort, generating a rough and raw sound.

Added connectors such as MIDI and headphone output

The connectors provided on the original ARP Odyssey differed by production date, but based on Rev3 of the original, the ARP ODYSSEY brings the specifications up to a modern standard. In addition to a MIDI IN connector and USB-MIDI port, we've added a headphone jack with adjustable volume. The XLR output jacks which had been unbalanced have been changed to noise-resistant balanced outputs.

Patch cables included

Quarter-inch and mini-size patch cables are included. If you connect a patch cable from the newly added headphone jack to the external audio input jack, you can produce a powerful sound by applying self-feedback. If you connect the GATE OUT jack to the TRIG IN jack, the EG won't be retriggered, allowing you to play legato.

Dedicated semi-hard case included

A dedicated semi-hard case that's ideal for storage and transportation is included. It sports the classical ARP logo, and has a sophisticated finish in a black tone. The corrugated shell structure ensures excellent impact resistance, and internal cushioning and pocket for small items is also provided.

In 1979 everything was going digital and it looked like the analog synthesizers were just going to disappear. But there was a certain sound that was not exactly the same as what you could make with the digital synthesizers. Just like people like vinyl records still, people just found that the original sound was better than what you can get with these much more modern digital instruments.

So, I was delighted when KORG called and said they wanted to make a replica of the original Odyssey and be very faithful to all the circuit design and all the different nuances that went into the design. I have to say when I opened the box and looked at the one that you sent me from the factory, it was like going back in time.

Back in 1970 when I helped start the ARP company with Al Pearlman, there was really no such thing as a stage synthesizer. And it was great during the 70s to see that we could actually change the sounds of music that you heard it on your radio when you went to work in the morning. Here we are at 40 years later and these original classic instruments like the Odyssey are still being used and that really to me as an inventor feels great to see these things that we worked on back then, that at one time was just a pencil sketch on my piece of paper, not only still being used but actually growing in popularity again.

David Friend (Co-Founder of ARP Instruments)

Profile of David Friend:
Co-founder of ARP Instruments, Inc. together with the founder Alan Robert Pearlman. In addition to designing the ARP Odyssey, he was involved with the development of numerous products, and subsequently entered management, eventually becoming president of the company. His achievements as an entrepreneur have also been acclaimed, and in 2010 he received the "Entrepreneur of the Year" (Emerging Technology category) award from Ernst & Young. Currently he serves as the chairman and CEO of Carbonite, Inc., as well as being a lecturer at MIT's Sloan School of Management. He is also an emeritus professor of the New England Conservatory and Berklee College of Music.

ARP ODYSSEY Specifications

Keyboard
37-note (Slimkey, No velocity sensitivity, No aftertouch)

Maximum Polyphony
2 voices for duophonic; normally monophonic

Controllers
Transpose Positions: 2 octaves down, normal, 2 octave up
Proportional Pitch Control:
b (Pitch down) Pad: about -2 / 3 octave - (Modulation) Pad
(Pitch-up) Pad: about +2 / 3 octave

Noise Generator
Noise Spectrum Types (white and pink)

Portamento
Maximum Speed: about 0.01 msec./oct
Minimum Speed: about 1.5 sec./oct

VCO (Voltage Controlled Oscillator)
Waveforms: Sawtooth, Square, Pluse (Dynamic Pluse)
Frequency Range: VCO-1 in low freq. mode, 0.2 Hz – 20 Hz: VCO-1 and VCO-2 (audio range) about 20 Hz – 20 kHz
Warm Up Drift: 1/30 semitone from turn on max
Pulse Width: 50 % – 5 %
Pulse Width Modulation: ADSR, +45 %; LFO, +15 %
Voltage Controlled Response: 1 V/oct
Maximum Frequency Shifts: LFO sin wave, +1/2 oct.; LFO square wave, +1.5 oct.; ADSR, +9 oct.; S/H, +2 oct.

* VCO-1 is low note priority, VCO-2 is high note priority.

VCF (Voltage Controlled Filter)
Types: Low pass (I: 12 dB/oct., II III: 24 dB/oct.)
Frequency Range: 16 Hz - 16 kHz
Maximum Usable Q: 30
Resonance: 1/2 - self oscillate
Voltage Controlled Response: C3 key (left edge): 0 V, C6 key (right edge) 3 V

VCA (Voltage Controlled Amplifier)
Dynamic Range: 80 dB

Ring Modulator
Type: Digital
Input Signal: VCO-1, VCO-2 (square wave)

Sample & Hold
Command Sources: Keyboard or LFO trigger
Sampled Signals: VCO-1 sawtooth wave and square wave, VCO-2 square wave and pink noise

ADSR Envelope Generator
Attack Time: 5 msec. – 5 sec
Decay Time: 10 msec. - 8 sec.
Sustain Level: 0 - 100 % or Peak
Release Time: 15 msec. - 10 sec.

AR Envelope Generator
Attack Time: 5 msec. - 5 sec.
Release Time: 10 msec. - 8 sec.

Control Input Jacks
Pedal: Φ6.3 mm monaural phone jack
Portamento Foot Switch: Φ6.3 mm monaural phone jack

Audio Output Jacks

LOW:
Connector: Φ6.3 mm monaural phone jack
Maximum Output Level: -20 dBu@ 10 kΩ load
Output Impedance: 10 kΩ

HIGH:
Connector: XLR connector
Maximum Output Level: +4 dBu@ 1 kΩ load
Output Impedance: 330 Ω

Headphones Jack
Connector: Φ6.3 mm stereo phone jack
Maximum Output Level: 50 mW + 50 mW@ 33 Ω load
Output Impedance: 10 Ω

* Controllable by volume knob.

External Audio Input (Ext Audio Input) Jack
Connector: Φ6.3 mm monaural phone jack
Maximum Input Level: -10 dBu
Input Impedance: 22 kΩ

MIDI Connector
IN

USB Connector
Type B

CV IN/OUT Jacks
Keyboard CV (IN/OUT): 1 V/oct.
Connector: Φ3.5 mm monaural phone jack

GATE IN/OUT Jacks
GATE IN: +3 V (minimum)
GATE OUT: +10 V, key down; 0 V all keys up
Connector: Φ3.5 mm monaural phone jack

TRIG IN/OUT Jacks
TRIG IN: +3 V pulse min., 10 μsec. Duration minimum
TRIG OUT: +10 V pulse on key depression, 10 μsec. Duration
Connector: Φ3.5 mm monaural phone jack

Power Supply
AC adapter jack (DC 9 V)

Power Consumption
6.5W

Dimensions (W x D x H)
502 x 380 x 120 mm / 19.76" x 14.96" x 4.72"

Weight
5 kg / 11.02 lbs

Accessories
AC adapter, phone cable, mini-phone cable, owner's manual, dedicated semi-hard case

Options
VP-10 Volume Pedal, PS-1/PS-3 Pedal Switch

KORG

ARP

http://www.arpsynth.com/