

DCP PRODUCTIONS'



OWNER'S MANUAL

Introduction

Thank you for purchasing the “Vintage Keys” sound library for the Yamaha Motif XS. This sound library contains 128 voices and 1 user arpeggio which is required for use with one of the voices.

“Vintage Keys” was the second DCP Productions sound library made for the Yamaha Motif series synthesizer/workstations – dating all the way back to 2003 and the original Motif “Classic”. This, the “XS” version, represents a considerable leap forward from the Motif Classic and ES-series versions, and includes significant re-workings of the original voices, as well as a large number of brand new voices. Additional research into the keyboards and synths emulated, plus extensive use of the new features in the Motif XS (such as assignable switches, 8 element architecture, key-off triggering, etc.) result in what is the most comprehensive and authentic collection of vintage keyboard and synth sounds ever created for any Yamaha workstation.

The library is divided into two groups of 64 voices each. The first group (A1 to D16) consists of electric pianos, clavinetts and other “keyboard” sounds. The second group (E1 to H16) consists of classic “synthesizer” sounds. By “vintage”, we refer to keyboards and synthesizers built before 1987.

It would be impossible to include emulations of every electric keyboard or synth ever built. For that reason, this collection largely contains emulations of what could more or less be considered the “greatest hits” of vintage keys - the Rhodes and Wurlitzer electric pianos, the Hohner clavinet, Yamaha CP70, Yamaha FM synthesizers, the Moog Minimoog and Memorymoog, ARP Odyssey and 2600, Sequential Prophet 5 and T8, Oberheim OB synths, and Roland Jupiter/Juno synths, with the occasional “honorable mention” synth such as the Korg Polysix and EMS Synthi AKS.

There are a number of voices which are emulations of the hallmark keyboard or synth sounds for particular classic songs, such as Van Halen's "Jump", Edgar Winter Group's "Frankenstein", Emerson Lake and Palmer's "Welcome Back My Friends (actually the song's title was "Karn Evil 9 First Impression Part 2")", the Who's "Baba O'Riley" and "Won't Get Fooled Again", and so on. Again, there simply wasn't room to include every emulation for every synth sound that ever appeared on a hit recording. This is where the Performance mode comes in handy - any voice can be altered in Performance mode (for example, changing the filter cutoff or resonance, or the attack time or release) thus creating, in effect, as many variations on the existing Vintage Keys voices as the user so desires.

TO LOAD THE VOICES:

FROM THE DOWNLOADED ZIP FILE TO USB DEVICE (JUMP DRIVE or FLASH DRIVE):

CAUTION: Before you load “Vintage Keys” into your Motif XS, MAKE SURE you have backed up any data you want to save onto a USB storage medium (and your computer). Loading “Vintage Keys” will overwrite the data that exists in the Voice and Performance banks.

1. Insert your USB device into your computer's available USB slot. It's icon should appear on your desktop.
2. Navigate to the “VINTAGE KEYS MOTIFXS” folder and double-click on it to open it.
3. Navigate to the folder called “Vintage Keys Motif XS ALL File” and double-click to open it.
4. Copy the file called “VintageKeysXS.X0A” to your USB device's icon (by either dragging the file directly to the icon, or going to your file menu and choosing “Copy” and “To” and selecting the USB device as your destination).
5. When the file has copied completely to your USB device, properly eject the USB device and insert it in the slot labeled “TO DEVICE” on the rear

- panel of your Motif XS. You will see a screen message that says “Connecting to USB device...”.
6. Press the FILE button on the front panel of the Motif XS. Use the cursor buttons to move up to the top of the screen so that the “Device” field is highlighted and turns blue-green. If necessary, turn your jog wheel to the right until you see the name of your USB device in the field. This will indicate that your USB device has been selected.
 7. Using the cursor down buttons, cursor down to the first named folder in the display and then turn the jog wheel to further move to the file called “VintageKeysXS.X0A”. The file name will highlight in blue-green.
 8. Using the cursor buttons, cursor down to the field marked “Type” and make sure it is set to “all”.
 9. Press SF2 “LOAD”. Then press the “YES” button on your XS.
 10. The Vintage Keys library will load 128 voices to your VOICE User 3 bank.
 11. To select the first voice, press the “VOICE” button, then the User Bank 3 button, and then button A1 to begin.

FROM THE DOWNLOADED ZIP FILE TO USB CD DRIVE:

CAUTION: Before you load “Vintage Keys” into your Motif XS, MAKE SURE you have backed up any data you want to save onto a USB storage medium (and your computer). Loading “B’s Knees” will overwrite the data that exists in the Voice and Performance banks.

1. Connect a USB CD-ROM drive to your Motif XS’ “To Device” slot located on the rear panel of the Motif XS. Power up the drive. You will see a message in the XS display that reads “Connecting to USB device...”.
2. Insert a blank CD in your computer’s CD drive. Its icon should appear on your desktop..
3. Navigate to the folder called “Vintage Keys Motif XS ALL File” and double-click to open it.
4. Copy the file called “VintageKeysXS.X0A” to the CD (by either dragging the file directly to the icon, or going to your file menu and choosing “Copy” and “To” and selecting the CD as your destination).
5. When the file has copied completely to your CD, rename the CD to something you want (like “Motif XS stuff”), properly eject it and insert it in the CD-ROM drive connected to your Motif XS.
6. Press the FILE button on the front panel of the Motif XS. Use the cursor buttons to move up to the top of the screen so that the “Device” field is highlighted and turns blue-green. If necessary, turn your jog wheel to the

- right until you see the name of your CD in the field. This will indicate that your CD has been selected..
7. Using the cursor down buttons, cursor down to the first named folder in the display and then turn the jog wheel to further move to the file called "VintageKeysXS.X0A". The file name will highlight in blue-green.
 8. Using the cursor buttons, cursor down to the field marked "Type" and make sure it is set to "all".
 9. Press SF2 "LOAD". Then press the "YES" button on your XS.
 10. The Vintage Keys library will load 128 voices to your VOICE User 3 bank.
 11. To select the first voice, press the "VOICE" button, then User Bank 3 button, and then button A1 to begin.

About the VOICES

As previously stated, the voices are divided into two groups of 64 each, explained in all the sordid details below.

CONTROLLERS –

The Motif XS features an expanded set of controlling knobs – 8 altogether, with assignable Knobs 1 and 2 at the far right of the row. Additionally, there are two assignable switches (labeled "Assignable Function") immediately to the left of the eight sliders on the XS. The assignable knobs 1 and 2, and the assignable switches 1 and 2, almost always control some aspect of the voice sound. Turn the knobs or press the switches to see what happens! The ribbon controller and arpeggio on/off button are not assigned to the "keyboard" voices of Vintage Keys. However, they *are* assigned to *some* of the "synthesizer voices, where appropriate. More on that in the notes preceding the synthesizer voice descriptions.

THANKS AGAIN –

To Julian Colbeck, whose book "Keyfax:Omnibus Collection" once again proved to be an invaluable source of research data, and from which I shall often quote liberally.

Thanks also to the entire staff of Keyfax New Media, who maintain the site <http://www.motifator.com>, where you purchased and downloaded this library.

GROUP 1 - electric pianos, clavinet, and related sounds.

Rhodes electric pianos A1 thru B16.

The most popular electric piano of all time and still cherished and used in music today, the Rhodes was invented by one Harold Rhodes, who had the idea for building an electro-mechanical piano using spun metal rods, or "tines" struck by hammers (you might think of a tine as a cousin to the tuning fork). Harold's first Rhodes piano was the 32-note PianoBass, used by notables such as Ray Manzarek of the Doors for his bass sounds. In 1965 the design for the PianoBass was modified and enlarged to create an 88-key piano, complete with amplification and speaker enclosure. Thus began a line of Rhodes electric pianos, manufactured until 1984.



Harold Rhodes with his first design for the "therapeutic" piano, to be distributed to disabled World War II serviceman recuperating in hospitals.

Rhodes pianos (also referred to as Fender Rhodes as they were marketed by the Fender company for quite a number of years) were a

lot like people - each one had its own character. Some were temperamental, some sounded beautifully chime-like, others sounded more harsh and squawky like an electric guitar, and many sounded just plain bad. And so presented here are 32 Rhodes pianos, ranging from the good (most of them) to the bad to the ugly.

A1 – Suitcase 1965

Modeled after a 1965 Suitcase 88. Called the Suitcase because it consisted of two "suitcases" - a piano section with a detachable lid and a curved black plastic top, and an amplified speaker section, same length and depth as the piano section which fitted on top of the speaker cabinet. A metal rod connected the keyboard to the sustain pedal which was housed in the speaker cabinet.

At this time the tremolo circuit for the amp/speaker was mono, not stereo, and felt hammer tips were used which gave the piano its characteristic softer, more bell-like tone.



"Silver-top" Fender Rhodes Suitcase 73, circa 1965 (note Rhodes Piano Bass in the bottom of the photo)

A2 - Suitcase 1971

Modeled after a 1969 Suitcase 73, with a stereo tremolo circuit.

A3 - Babe

Modeled after the Rhodes sound on the Styx hit "Babe". That Rhodes had a "Dyno-My-Piano" modification – in the late 70's thru the mid-80's, Chuck Monte of Los Angeles retrofitted Rhodes pianos with a stereo tri-chorus and active equalization controls. The tines were also moved closer to the hammers, and all this resulted in a crystalline/metallic chorused tonal quality.

Mark I Stage 73

Probably the most popular model of Rhodes piano. The Stage series were identical to the Suitcase models, except they didn't come with a speaker cabinet. Instead the piano rested on four tubular metal legs which screwed into the bottom of the piano. This is a model of a Stage 73 with the Neoprene hammers which replaced the earlier felt ones, resulting in a harder more aggressive sound with a bit less bottom end and more midrange tone.



Mark I Stage 73 piano.

A5 – Stereo Phaze

Modeled after a Stage 73 run through a phaser pedal.

A6 – Transistor 1

You could say this piano sounds bad, and you'd be right. You could say it sounds cool and you'd also be right. I actually had a Rhodes Stage 73 that sounded just like this - there was something rather strange going on with the pre-amp which caused the piano to sound distorted and brash no matter what the loudness was. It was "bitchin' cool" in its own metallic weird way as well, depending on how you looked at the situation.

A7 – Transistor 2

Variation on the same theme - a Stage 73 with pre-amp distortion.

A8 - Transistor 3

And yet another Stage 73 with cool/terrible pre-amp distortion of a different color. Notice the uneven timbre and loudness response in the upper octaves - ah, the memories.

A9 – Rhodes Compressed

Rhodes Suitcase 73, circa 1975, fed through a compressor unit. You can hear this kind of sound on Chick Corea/Return to Forever's album "Where Have I Known You Before".

A-10 – Felt Hammers

Suitcase 73 with felt hammers and very soft bell-like tone.

A11 – Neoprene Hammers

Modeled after a 1976 Suitcase piano with Neoprene (hard rubber) hammers.

A12 - Sunshine

The famous Rhodes sound from Stevie Wonder's "You re the Sunshine Of My Life" hit song. Warmer, darker Suitcase piano sound with stereo tremolo engaged.

A13 - Mutron

Classic sound of a Rhodes through a Mutron Bi-Phase pedal. The Mu-Tron BiPhase featured two independent phasers, which could be switched on and off independently of each other (both phaser switches could be on simultaneously as well – which is the effect you hear on this voice).



Mu-Tron Bi-Phase pedal.

A14 – Suitcase Speaker

Rhodes suitcase piano with a noisy amp/speaker system.

A15 – Piano Bass

This was Harold Rhodes first successful commercial creation - the 32-note PianoBass. Used by keyboardists for playing - what else - left hand bass lines. Since it only had 32 notes, this voice is zoned so the main 32 notes fall in the correct range - E1 to E4. Additional bass sounds are on either side of that range.



Rhodes Piano Bass.

A16 - Lacquered

Some folks would do anything to get more brightness out of their Rhodes pianos, including lacquering the rubber tips, which resulted in a tone like this - thinner, percussive, and very very bright.

B1 - Dayride

Modeled after the sound of Chick Corea's Rhodes on the song "Dayride" from Return to Forever's album *No Mystery*. Highly compressed, bright, thin and metallic.

B2 - Distorted 1

Rhodes through a distortion pedal - a la Corea's sound on some of the cuts like "Captain Senor Mouse" and "The Game Maker" from Return to Forever's *Hymn To The Seventh Galaxy*.

B3 - Distorted 2

Variation on Voice B2

B4 - Distorted 3

Another variation on the same theme.

B5 – Felt Hammers 2

Another soft bell-like Rhodes tone.

B6 - 80's Session

There's a story that back in the early 80's, the best Rhodes to rent for a particularly heavy session was one owned by Leeds Rentals in L.A., referred to as the "Stage Model E" piano. Solid and bright, it usually was run through a chorus pedal and eq'd even brighter at the mixing console. This voice was modeled with that Rhodes in mind - that classic 80's electric piano sound.

B7 - Amp Noise

Stage 73 Rhodes fed through a noisy small combo amp. Perfect for rap and hip-hop.

B8 - Filtered

Rhodes through an external envelope filter, giving it that "nasal" quality for funk'n'.

B9 - Bad Ground

Okay, this one is like a blind date gone wrong. Rhodes with a noisy amp/speaker and a bad electrical ground to boot - which sometimes happened. As said before, not all Rhodes pianos were pretty.

B10 - Led Song

That swirling moody sound you heard John Paul Jones wring from his Rhodes in the Led Zeppelin concert film *The Song Remains The Same*.

B11 - Nosy Tine

Another thinner, more nasal Rhodes piano tone.

B12 – Wah-Wah Rhodes

Rhodes through a wah-wah pedal.

B13 - Mark II Suitcase 73

Although production standards got better and the Rhodes pianos generally got more reliable as the years went on, there isn't any truth to the rumor that the Rhodes Mark II sounded different than the Mark 1. It *looked* different - the top of the piano was redesigned to be flat, so you could put another keyboard (or two) on top of it. That, and Rhodes changed the piano's control panel to include sliders for the EQ. The classic combo was a Rhodes and a Minimoog synth, or a Rhodes with a Clavinet on top of it and the minimoog on top of the clav.



Mark II stage piano – same as the suitcase Mark II, but no speakers.



Rhodes Mark II control panel.

B14 – Compressed 2

Another Fender Rhodes Stage piano through a compressor.

B15 – Mark II Stage 73

Another Rhodes Stage 73 with a unique character (see picture above).

B16 - No AC

Since the Rhodes was mechanical as well as electronic, it could still produce a little bit of sound even when the power went out or someone accidentally tripped over the piano amplifier's AC cord. To hear the sound of the Rhodes unplugged in all its glory, you had to go one step further and pull the lid off, revealing the harp assembly. One also did this if the Rhodes needed tuning (which you did by physically repositioning the individual tines).

Wurlitzer electric pianos - C1 thru C7.

The moniker "Mighty Wurlitzer" referred to the huge theatre organs the Wurlitzer Company built in the first third of the twentieth century. But one could argue that the little Wurlitzer electric piano was a bit of a scrappy contender in music as well, having fueled hits by Supertramp, Queen, Rod Stewart and the Faces, and many others in the late 60's, 70's and 80's. Later in the 90's, artists like Lenny Kravitz and Jellyfish also employed the retro sound of the Wurlitzer.

Though not as popular (and certainly not as well-built) as the Rhodes pianos, Wurlitzers maintained a special charm and possessed a unique, clarinet-like tone and a wobbly tremolo, controlled by a push-pull switch which you turned to increase or decrease the tremolo speed. They were quite a bit lighter and easier to move than the Rhodes as well. And best of all, the later models came in different colors!

C1 - Vintage Wurly

Classic Wurlitzer tone with a bit of compression and equalization.



Wurlitzer Model 200A – the most popular model.

C2 – Ray’s Wurli

The classic sound of Ray Charles’ Wurlitzer 200 piano, like the one heard on his smash hit “What’d I Say”.

C3 – Queen “Best Friend”

Modeled after the unique sound from Queen's mega-hit "You're My Best Friend" (*A Night At The Opera* album). There's argument as to whether it was actually a Rhodes piano used on the recording, but close listening reveals what is unmistakably Wurlitzer. Curiously, producer Roy Thomas Baker split the piano sound so that the lowest notes (the song is in the key of C) are panned hard left and the body of the piano sound is panned slightly off to the right. As the Wurlitzer wasn't a stereo instrument, one can only conclude that Baker tracked the left and right hand parts separately.

C4 – Faces Wurly

Modeled after the heavily overdriven Wurly sound from the Rod Stewart/Faces hit "Stay With Me."

C5 – Wurlitzer 129 Woodie

More “throaty” sound of the Wurlitzer 129, one of the early “wooden” models. The electronics “short out” when you turn assignable knob 2 to the right.



Wurlitzer Model 129.

C6 – Paisely Wurli

"Psychedelic" Wurlitzer sound. And you'd have to be trippin' indeed to have heard this from an original Wurly's mono audio output.



Blonde Wurlitzer 200 – trip out on this.

C7 – Wurly Phazor

Another Wurlitzer with a bit of studio trickery involving stereo phasing.

Hohner keyboards - C8 thru C16.

Hohner, an old German musical instrument company which sold a lot of harmonicas, dreamed up their electric keyboards in response to requests for something like a harpsichord that was portable and easy to maintain. Well, they got the portable part sort of right and did a little better than that on the maintenance end. But the sound of their clavinet became THE staple sound for funk and disco in the 70's, and continues to make its presence felt today in everything from rock to country to r&b to rap and hip-hop. Or at least synthesizer patches that sound like it carry on the torch. I've met some musicians who thought "clavinet" was the name of a synth patch and wasn't a real instrument....that's how prevalent the sound is on everything from megabuck synth workstations to home digital pianos.

C8 - Pianet

What better way to start off a collection of Hohner sounds than with the sound of something other than the clavinet - like the pianet? Sounding like a cross between an anemic Wurlitzer and a ukulele, the Pianet nevertheless found its way onto recordings by superstar acts like Fleetwood Mac and others. I happened to own one at one time, and was recently reminded by Mr. Julian Colbeck in his book *Keyfax Omnibus Edition* that the Pianet didn't require a power cord - which was true. You plugged it into a pre-amp and it drew its power through the connecting plug - truly genius! It had no sustain pedal, and the keyboard had a curious sticky action - almost like some sort of delay occurred between the time you depressed a key and the time you heard a note sound.



Dig the 60's ad for the Pianet – what a crazy way to pick up chicks!

C9 – Clavinet D6

Although Hohner marketed other models of Clavinet, and the D6 wasn't the first, it was truly the model that everyone refers to when speaking of the "clavinet sound".

The D6 was wooden, more or less rectangular and boxy, and despite its seemingly smaller size it weighed what felt like a ton.

When a key on a clavinet is depressed, a plunger underneath touches what is essentially a guitar string and presses it onto an anvil. Depending on velocity, the string changes tone and dynamics. When the key is released, contact between the plunger and anvil is

broken, and the string's vibration is muted. The clavinet has a simple damper mechanism operated by a lever (not a foot pedal) which allows the player to let notes ring or remain muted. For the most part, this means that less than superstar clav jockeys end up playing parts that don't bother with the damper mechanism. To make a long story short, try NOT using the sustain pedal for your authentic clavinet-ness.



Hohner Clavinet D6

C10 - Wonderclav -

Yes, it's the clavinet sound from Stevie Wonder's "Superstition" - probably the song that defined the use of the clav in pop music.

C11 - Stickyclav

Clavinet with a different tonality and a little more of that sticky "pull" sound so characteristic of it.

C12 – Wah-Wah Clavinet

Clavinet through a wah-wah pedal - a classic funk sound.

C13 - Amped Clav 1

Clavinet through a guitar amp on overdrive.

C14 - Amped Clav 2

Overdriven, amped clavinet sound.

C15 - Amped Clav 3

Clavinet through a different guitar amp.

C16 - Amped Clav 4

Clavinet through amp with slight overdrive.

YAMAHA KEYBOARDS D1 thru D11

With groundbreaking FM instruments like the GS1 and GS2, its mega-selling DX series of synths and its innovative CP electric grand pianos, Yamaha easily lived up to the claim made by one of its DX7 wall posters, which promoted the DX7 as being just as significant an invention as the light bulb. Many companies claim to have products in development for a significant time before they come to market, but in Yamaha's case development was (and continues to be) *years* ahead of a product's actual release. Sometimes as many as ten years.

A very astute young Yamaha engineer by the name of Mr. Ichimura was dispatched to Stanford University in 1971 to observe a form of synthesis invented by electronic music teacher John Chowning. Chowning's associates had convinced him that his synthesis method, called *FM* (Frequency Modulation) might be of interest to organ companies. Chowning had approached several other organ manufacturers, none of whom were either interested or even understood what it was. Mr. Ichimura understood, and the result was that Yamaha took a ten-year license out on FM technology. The first commercial FM product was the GS1, released in 1982. Its asking

price was \$16,000. Soon after that there followed the GS2 which retailed for about half that, and then followed the DX7, and the rest is history, as they say...

D1 – Classic DX7 EP

"That DX7 Rhodes sound". You've heard it, everyone's heard it - so why not hear it again here. This sound found its way onto about a bazillion records in the 80's, and continues to be heard today (although people try disguising it a bit with software plug-ins and other types of sonic mangling).



The "classic" DX7.

D2 - DX7 Electric Piano 2

Another DX electric piano type sound. Similar to the timbre heard on the Motels' 80's hit "Only The Lonely".

D3 – DX7 Electric Piano 3

Flutey "tine piano" sound.

D4 – GS2 Tines

Similar to the GS1 Tines sound (which I also programmed) on the original Motif factory set. This one has more metallic ring and overtones to it.

You might ask why this particular sound and instrument. And I'll tell you even if you don't want to know. I saw my first GS1 and GS2 (yes, both) in a little music store in Apple Valley, California in the late summer of 1982. I hadn't heard FM before - and the sound coming from these keyboards was nothing short of a spiritual experience. Judging from their price tags, I imagined the store wouldn't be selling them anytime soon, and since the cover band I was in had a month long stint at the nearby bar, I knew where I was going to be spending my free afternoons. I probably wrote twenty songs on both of those keyboards, and it was a sad day when we had to head back to L.A.

D5 – DX-1

It was actually the first commercially available "DX" synthesizer. It was big. It had a weighted keyboard, and a beautiful wooden case. It was the equivalent of two DX7's, and you could split and layer sounds. And it was only about ten thousand dollars. Why, who wouldn't want one? A bargain at twice the price. Well, okay, not many people bought it. Still, it was the kind of legendary behemoth that you might wish to have in your collection, simply to gaze at.

Legend has it that the opening keyboard riff on Chicago's song "Hard Habit to Break" was played on a DX1. I can't confirm that, but it is the sound I emulated for this voice.



The rare and beautiful DX-1.

D6 - DX Synth

When the DX7 tried to sound "analog", it fell pretty far short of that goal. However, the sound wasn't uninteresting or useless - this is a typical DX7 "synth" style sound, particularly good for reggae, of all things.

D7 - DX Wireclav

Metallic, wirey sound similar to the one from the old 80's John Parr hit "Naughty Naughty".

D8 – CP70 Electric Grand

When I first moved to L.A. in 1979, I had a Hammond B3, two Minimoogs, an Elka string machine, and a Baldwin Electropiano in tow. I thought I had my ticket as a top session player all written out. Then I went to the Starwood club one night and saw the keyboard player from John Q. Public (that was the band's name) hammering away at a Yamaha CP80 with a Sequential Circuits Prophet 5 synth on top of it. That was the L.A. keyboard rig at the time. I sold everything I had and still couldn't come up with enough money for the CP80, let alone both it and the Prophet 5.

The thing about the CP80 was, it felt like a real piano, because it pretty much was. Hammers, 88 keys, strings, metal harp. And it

looked cool. And you could amplify it, you didn't have to put microphones on it. The lowest notes had this weird almost non-pitched sound to them, and the highest notes sounded more like a Rhodes in a way, but it didn't matter. The CP80 was cool. It also went out of tune, though not as often as a real piano did, and it wasn't the lightest thing to move. But if you owned one in L.A. in the early 80's, you were the business, and that was that.

Since the Motif XS has samples of a Yamaha CP70, that's what this voice refers to. But sound-wise, there is no difference between the CP70 and the CP80 – just a difference in the number of keys



CP70B Electric Grand.



CP70B Electric Grand with top pulled to view the harp assembly.

D9 – CP70 Flanger

CP70 through an MXR rack mount flanger (the blue-plated one).

D10 – CP70 Phazer

CP70 with phaser effect.

D11 – CP70 Chorus

CP70 with chorus effect.

Various classic keyboards - D12 thru D16

D12 - RMI

You might not know what it was, but chances are you've heard an RMI more than a few times. Rick Wakeman used an RMI extensively, especially on Yes hits like "Long Distance Runaround", and on his

solo album *Six Wives of Henry VIII*. Edgar Winter (of "Frankenstein" fame) played one. And although I don't know for sure, I'd swear that's an RMI on its harpsichord setting that I hear Keith Emerson using on a few ELP tunes (like "Benny the Bouncer" from *Brain Salad Surgery*).

And yours truly also owned - er, borrowed, for a prolonged period of time - an RMI. RMI stood for Rocky Mount Instruments (not Rocky Mountain Instruments as some people think). It was covered in blue tolex vinyl, it stood on four spindly chrome legs. It had rocker switches which controlled various voice settings, but overall it always sounded about the same - like a raspy harpsichord/Farfisa organ but with slightly more bottom end.



RMI electric piano – appropriately beat-up.

D13 – Vox Continental

The organ sound that defined the 60's. The Beatles used one. Ray Manzarek of the Doors used one. The Dave Clark Five used one. The Animals used one. So did numerous other American, British, and

European rock acts, famous and nameless. Despite this fact, very few Continentals survive to this day, due to poor construction, or parts wearing out and disintegrating. Very sad – considering that the Vox Continental was just about the most wicked-looking piece of 60's kitsch-cool you ever saw. And wicked sounding – in a brash, cutting way. Nothing like its chief rival, the weighty, massive Hammond B3. That was for soul-men, prog-rockers and church types. Not for skinny stovepipe pant-wearing, paisley-shirted mods. I've included all seven "drawbars" for this Vox Continental voice – so you can move the sliders and adjust the sound. Instant "Austin Powers" vibe. Yeah, baby, yeah.



Vox Continental – look, someone added pedals!

D14 – Farfisa Compact

The “other” combo organ of the 60’s. Actually, there were quite a few combo organs around – the Fender Contempo (which looked suspiciously like the Compact), the Gibson Combo Organ, the Elka Panther (the one I actually used), and the Vox Continental’s little sibling, the Vox Jaguar. But aside from the Continental, the combo organ heard most on records was the Farfisa Compact. Elton John used it on “Crocodile Rock”, one of the more familiar “Farfisa” hit songs. Screechy, buzzy, transistorized, and loud – just the ticket to complement jangly, overdriven guitars.



Farfisa Compact.

D15 – Electric Harpsicord

Roger Manning, of the Moog Cookbook and formerly the brilliance behind the 90's band Jellyfish, is one of the few people who knows what a Baldwin Electric Harpsichord was. I saw one at a music store in Boulder, Colorado, in 1971. That's how I know.

The Baldwin Electric Harpsichord actually was quite beautiful - metal piano-shaped casing, with a clear plexiglass top. And it sounded great, when plugged into an amp. The Baldwin Company went on to produce the Baldwin Electro Piano, which was a small portable piano with a real harp assembly, designed for teaching music. Both instruments are now sadly long gone and very hard to find.



Baldwin Electric Harpsichord

D16 - Toy Piano

You could call the Schoenhut Toy Grand Piano - which is what this sound is modeled after - the "ultimate vintage keyboard". In a depressing twist of fate where technology has made things worse, the wonderful sounding mechanical toy pianos of old have been replaced by electronic ones, all of which sport dozens of bells and whistles, digital readouts, and simply awful tone. If you're lucky, you can find a mechanical toy piano in good condition on eBay for around \$100 to

\$500, although I've seen some collector's items that were fetching as much as \$2500.



Schoenhut toy piano – the exact model I own.

GROUP 2 - classic analog synthesizers.

NOTE:

The analog synth patches in this soundbank utilize a proprietary programming method which imitates the natural and slightly random pitch "drift" of real analog oscillators. For example, on Voice E-1, "Classic Minimoog", hold a note and listen, you will hear the pitches drift slowly and randomly between the two oscillators.

SYNTHESIZER VOICE CONTROLLERS AND SWITCHES

Arpeggios are assigned to voices where it is appropriate. For example, Voice E-13, "SH 101 Saw" features the arpeggiator turned on, because the real SH101 had an arpeggiator. If a voice emulates an instrument that didn't have an arpeggiator, then no arpeggios are assigned to that voice. This doesn't mean, of course, that you can't assign some on your own, from the XS' vast collection of arpeggios.

Similarly, the ribbon controller is assigned to one voice, G-11 "U.K. CS80". Aftertouch to pitch modulation is also assigned to this voice. That's because the real Yamaha CS80 had a ribbon controller, and aftertouch control.

Moog Minimoog - E1 thru E11

E1 – Classic Minimoog

One can refer to the Yamaha Motif, The Korg Triton, or the Roland Fantom as synthesizers - and technically they are, because they offer ways to manipulate and create sounds electronically. But when old school playas like me think of synths, we usually think of the analog kind. The vintage kind. The wood panel and knobs kind. And no synth exemplifies that more than the Moog Minimoog.

Bob Moog (it's pronounced "mohg", or "mogue", not "moog" like in "moo-cow") started out as a young man building theremin kits as a paid hobby. Graduating to more serious electronic musical instruments, he moved on to build quite large (some say monstrous) modular synthesizers which looked like big telephone patchboards, connected up to dozens of wires and controlled by detachable keyboard controllers.

This was in the late 60's and Bob was making a comfortable living doing it. Among his clients was composer Wendy Carlos (at the time she was Walter Carlos - you do the math). Carlos used the Moog synthesizer to record one of the first commercially successful electronic albums, *Switched On Bach*. "Synthesizer" became a household word, and eventually Bob met up with a very young musician named Keith Emerson, with whom he worked to design a portable version of his huge modular synth. Out of this collaboration the Moog Minimoog was born. And it was a beautiful baby, not only to play but also, quite frankly, to look at.

The Minimoog sported a 44-note keyboard, three oscillators, a filter section and an amplifier section, and knobs and switches to control it all. The bulk of the knobs and switches were on a hinged panel which could be propped up at an angle above the keyboard (the whole thing was self-contained, you could fold the panel back down and put the Minimoog in a small suitcase). Directly to the left were two modulation wheels, an innovation at the time which later became standard on synths. In addition to the wheels were switches which turned on release (so notes could ring out, like using a sustain pedal) and an off-on switch enabling the "glide" (or what we now call portamento). A separate panel knob controlled portamento time.

It was all very functional, ergonomic and incredibly easy to use. And the tone was awesome. Fat, thick, shimmering, aggressive, pure, all of these and more. You could add noise, and the third oscillator could also function in low-frequency mode modulating the first two, so you could produce ring-modulation style effects.

Keith Emerson even took to pitching knives at his Minimoog as part of his wild onstage act. Personally, I couldn't afford to do that to my Minimoogs. But they kept me gigging as I was one of the few musicians in my town at the time who had any synthesizers at all, let alone knowing how to use them.

The downside? Well, Minimoogs didn't stay in tune very well. In fact it was customary to arrive at least an hour and a half early to the gig to turn the unit on and let it warm up to stability. And they weren't programmable, a feature which Bob Moog has had the fortune to introduce on his new Minimoog Voyager released in 2003. On the original Mini. one could almost never get the exact same sound one had the night before.

Although polyphonic synths like the Prophet, and later sample playback keyboards like the M1, almost killed off the Minimoog, it did survive in studios, long after production ceased in 1982, due to the constant demand for the bass tone you could produce with it. "Minimoog bass" became a staple of funk, techno, electronic and dance music.

The sound never really went away, ever. In its heyday, EVERY heavy group, from Styx to REO Speedwagon to Rush to Pink Floyd to Yes and countless others, used the Minimoog.

Sadly, Bob Moog passed away in 2006. But his company, Moog Music, lives on and thrives, as does the Minimoog, now reincarnated as the Minimoog Voyager.

OH YEAH, I ALMOST FORGOT – ABOUT THIS VOICE –

This sound is the classic Minimoog dual-oscillator open filter sawtooth sound, As with many of the Moog sounds in "Vintage Keys", Assignable Knob 1 controls portamento time, and Assignable Knob 2 controls release, imitating what the controls on the real Mini did. And yes, pitch bend range is set to a fifth, as it was on the original. This is the sound used for the lead on Rush's "Tom Sawyer", as well as REO Speedwagon on their hit "Ridin' the Storm Out".

Note: Assignable Function Switch 1 adds classic Minimoog "overdrive" or "overload" sound, a saturation type of effect activated by feeding the mini's output(via a splitter)back into the external input on the rear panel, overdriving the oscillators. Assgn. Function Switch 2 emulates the effect of switching the Minimoog's Oscillator 3 to be a control source as well as an audio signal, leaving the keyboard tracking switch (switch B) on, and feeding the output of Oscillator 3 to the modulation mix.



The Minimoog Model D (with clear acrylic wheels).



Minimoog Model D with white acrylic wheels and “maple” cabinet.



Full frontal view of a nice “walnut” Minimoog Model D.

E2 – “Abacab” Mini

The Minimoog “5th” lead sound similar to the one on Genesis’ song “Abacab”. Two oscillators set to the same pitch and detuned, third oscillator set a fifth interval from the first two. Assgn. Switch 1 sets all oscillators to unison with heavy detuning. Assgn. Switch 2 sets Oscillator 3’s pitch 3 octaves below that of Oscillator 1.

E3 – Mini 3-Osc 5th

Triple oscillator “5th” minimoog lead, with less detuning between the two unison oscillators. Assignable Function Switch 1 engages “overdrive” sound, as outlined in voice E1’s description (above).

E4 – 3-osc Octave Mini

3-oscillator “octave” Minimoog lead sound. Assgn. Switch 2 changes filter cutoff and resonance, Switch 2 changes portamento time.

E5 – Minimoog Overdrive

Detuned, overdriven “spitting” 3-oscillator Minimoog sound, similar to the one used by Jan Hammer on the tune “Celestial Terrestrial Commuters” from the Mahavishnu Orchestra album *Birds of Fire* (circa 1973). In addition to 3 oscillators, this sound mixes in white noise which tracks the keyboard. Assgn. Switch 1 lowers noise volume, Assgn Switch 2 sets pitch of oscillator 3 to 32 steps below that of osc. 1 & 2.



Minimoog panel shot showing external input volume and noise amount controls. The audio output of the Minimoog could be run first into a splitter, then back into the external input, to overdrive the oscillators (the “OVERLOAD” lamp would light up). Notice noise could be either white or pink – different “flavors” of noise.

E6 – Minimoog Ramp

Dual ramp waves set an octave apart drive this lead sound. Assgn. Function Switch 1 adds the third oscillator set to unison with Oscillator 1 and detuned slightly. Assgn. Function Switch 2 sets oscillator 3 to Hi-rate Lo Frequency mode, tracking the keyboard.



Minimoog panel shot showing the switches and controls for oscillator 3. Switching “OSCILLATOR MODULATION” on caused oscillator 3 to be both a modulation source and audio source. “OSC 3 CONTROL” switch determined oscillator 3’s keyboard tracking mode. The “MOD MIX” knob determined the mix of Oscillator 3’s control/audio signal and the level of noise – with the 12 o’clock position mixing equal amounts of both. This is where all the wild and fun stuff happened, and shows that the Minimoog, despite its small size, was quite deep and powerful.

E7 – Minimoog Sineclick

Spacey sine-wave lead with filter “click” transient. Assignable Function switches add oscillators 2 and 3 at different pitch intervals.

E8 – Mini Filtered 5th

“5th” interval lead with contoured filter envelope. Assign. Switch 1 adds noise, Assign. Switch 2 sets oscillator 2’s pitch to three octaves below that of oscillator 1.

E9 – Wakeman Mini

I call this “Wakeman Mini” in honor of Rick Wakeman and the type of sound he used on his solo albums like *Six Wives of Henry the VIII*. Or many of the Yes albums he played on. Assign. Function Switch 1 adds a third oscillator, and Assign. Function Switch 2 re-tunes that oscillator to a 7th interval.

E10 – Styx Moog

Triple oscillator Minimoog lead from Styx’s song “Fooling Yourself” (*Grand Illusion* album). Assign. Function Switches 1 and 2 change oscillator tuning intervals.

E11 – E.L.P. “Lucky Man”

The thick detuned square-wave lead sound used by Keith Emerson for the song “Lucky Man” on the first Emerson, Lake and Palmer album. The Minimoog hadn’t arrived at the studio at the time the track was recorded, so Keith used his huge Moog Modular for the lead sound. Assign. Function Switch 1 performs a very important function for this voice – it changes the filter contour so that the filter whistles and descends in pitch, as happens with the low notes at the very end of the song. Engage Assignable Function Switch 1, and play C1 or lower on the keyboard to hear the effect. Assignable Function Switch 2 increases the amount of reverb, simulating the increase in reverb applied to the Moog at the end of the “Lucky Man” track. Hey, as they say, God (or the devil) is in the details.

Sequential, Roland, ARP, and Korg sounds – E12 thru F1

E12- Cars “Let’s Go” Sync

I remember the day I bought my Hammond B3. Or more to the point, I remember the day after, when I walked into a music store and saw the Prophet 5 for the first time. Sleek, wooden casing, knobs and switches, a lot like the Minimoog, only better looking. Fantastic, sexy looking, actually, as Julian Colbeck points out in his book *Keyfax: Omnibus Collection*.

And it had an organ sound, which made me question my Hammond purchase. Weighed a lot less - hmm, what had I been thinking. Of course, nowadays I wish I had both. At the time though, a polyphonic synthesizer with sounds that were memorized - absolutely stunning.

On the whole, the Prophet's sound tends to be on the brassy side. Even strings sound like they're half-brassed (pardon the pun). It does have a feature called hard sync which made possible the signature sound used by the Cars' Greg Hawkes on their hit "Let's Go" (from *Candy-O*). More recently this sound has shown up on songs like No Doubt's "Just A Girl". That's the sound this voice models. While it doesn't behave exactly like true hard sync does (because the Motif XS is a sample-playback synth, not a true analog synth), this voice does recall the signature hard sync sound. Assgn. Function Switch 1 brightens things up and gives the sound more edge.



The Sequential Prophet 5 – more than a synth, a gorgeous work of art.

E13 – SH 101 Saw

Roland's SH-101 was pre-MIDI, pre-digital, and small. But it packed a powerful punchy sound, was simple to use, and best of all, you could strap it around your neck and join the guitar players up at the front of the stage! The SH-101 featured a one oscillator design, with the addition of a “sub-oscillator” which added some lower octave support to the sound. Additionally, the SH-101 sported a simple arpeggiator – thus, this sound includes the arpeggiator as well.



Roland SH-101.

E14 – Chick's Odyssey

Pity the poor ARP Odyssey. It always ran a distant second to the Minimoog, both in terms of looks and, some would argue, sound. As Julian Colbeck states in his book *Keyfax Omnibus Collection*, ARP always had to do things a little differently. The Moog had knobs, the ARP had sliders. The Moog had a pitch wheel, the ARP had a pitch knob.

Well we should say, the ARP Odyssey had these features. Because many hit records saw the use of the ARP 2600, which was the modular, bigger brother to the Odyssey. Patch chords, telephone switchboard to plug them into, modulating anything with anything - that was the ARP 2600's game. Giant bubbling, burbling swooshing space sounds were its forte. The skinny little lead sounds like those Chick Corea used on the Return to Forever records - those were all ARP Odyssey. In fact, this voice refers to one of Chick's lead sounds from the Return to Forever album *Where have I Known You Before*.



ARP Odyssey – "Black and Gold" version.

E15 – ARP Highpass Lead

The ARP Odyssey did have one thing the Minimoog didn't have – a hi-pass filter, in addition to a low pass filter. Years after the Odyssey was discontinued and ARP went out of business, the Odyssey's high-pass filtered lead sound found its way onto the first rap and hip-hop records (thanks in no small part to numerous used Odysseys showing up in pawn shops at cheap prices). The classic "Dr. Dre" lead sound is typical ARP Odyssey.

E16- Odyssey Ramp

Ramp-wave ARP Odyssey lead sound with portamento. Another good sound for rap and hip-hop.

F1 – Korg Mini-Korg

For those who couldn't afford a Minimoog, Korg released their first synth in 1973, the MiniKorg. It was a single-oscillator synth, offering a choice of waveforms. A pair of sliders controlled filter cutoff and resonance (Korg dubbed this the "Traveler" section), a slider controlling vibrato, and a curious switch called "brilliance" which either added extra filter resonance or switched the filter to a steeper slope, I'm not sure which. Price? \$1000 in 1973, which was still a lot of money for the time.



Korg Mini-Korg

SYNTH BASSES – F2 thru F8.

F2 – Minimoog Bass Warm

The classic Minimoog bass sound, like you might have heard on a Stevie Wonder record in the 70's or on the dance floor in the 80's, as well as today.

F3 – Minimoog Bass Attack

Mini Bass sound that levels off at a slightly brighter tone, more aggressive attack.

F4 – Mini Bass Punch

Darker, rubbery bass sound with punchy attack.

F5 – Mini Bass Filter

Minimoog bass with “bowng” filter contour.

F6 – Modular Rezo Bass

Resonant bass produced by a modular Moog. (See description for Voice H5). Assignable Function Switch 1 calls up a “super modular” sound, Assignable Function Switch 2 adds yet another oscillator and changes the filter contour.



Moog modular synth, circa 1960's. Keyboard was separate from the main unit.

F7 – Taurus Bass Pedal 1

Question - how was Rush's Geddy Lee able to sing and play keyboards AND bass at the same time live? Answer - he used (at least in the 70's and early 80's) a set of Bass pedals marketed by Moog. The Moog Taurus bass pedals looked like a set of organ pedals, placed on the floor at the player's feet. The typical Taurus Bass pedal sound - long and droning, detuned, with some resonance - is represented here.



Taurus Bass Pedals

F8 – TB-303 Bassline

The Roland TB303 Bassline is well- known for its characteristic spiky or pointed tone. Poor tone, as measured against most other synths. Actually it really wasn't playable in any sense of the word, even though it had tiny little "chicklet" keys. Difficult to use, too – one entered notes in a step fashion, inserting rests and slurs (usually by trial-and-error) and the TB-303 supposedly replaced your bass player. It was a disaster for Roland. So how did it end up with such a significant place in synth history? Well, two things. One, a lot of young musos bought used TB-303's in junk and pawn shops for something less than a song, took them home, and decided that the

squawky, distorted sound and robotic bass patterns were just what their new music called for. And two, a little synth company called Novation created a rackmount synth module version of the TB-303, called the Bass Station. It was the Bass Station that really took off, and the TB-303 sound wedged itself into tons of electro, dance, house, and industrial tracks. Where it remains to this day.



Roland TB-303 Bassline (shown about one-third actual size).

Various Synth Effects - F9 thru F16

F9 – Oscillator Mod 1

Type of sound achieved by modulating filter self-oscillation with another source. On the Minimoog, ARP, and later the Prophet and Oberheim synths, the filter itself could be driven far enough into resonance that it "whistled" or self-oscillated on its own. One could then play discrete pitches on the keyboard using the filter alone - although the pitches weren't exact incremental steps like a scale, nor did they behave predictably interval-wise. But that was where the fun was. Since the third oscillator on the Minimoog could be switched to sub or low-frequency oscillation, it could modulate (affect) the self-oscillating filter. In essence, you were using the predictable waveform

cycle of one oscillator to interact with the unpredictable intervals of the filter which in self-oscillation mode becomes a sort of "fourth oscillator". All kinds of electronic havoc could be produced this way.

My wife, a non musician, also refers to these sounds as simply "spaceship noises", so I guess that's a little more down-to-earth explanation of their character.

F10 – Oscillator Mod 2

Another sound produced in the manner described above, but with a "falling bomb whistle" character to it.

F11 – Oscillator Mod 3

It sweeps up, then it sweeps back down - it's all over the place.

F12 – S & H Generator

Ah, the famous sample and hold generator. Like the mutant offspring of a cheap 50's Sci-Fi soundtrack (which is where the first electronic synthesizers of any note were used), the sample and hold seemed destined to lead a charmed life, appearing in modular synths, disappearing with the portable lead synths like the Minimoog, reappearing later as a waveform in modern sample-playback workstations.

The sample and hold generator "samples" an oscillator frequency, "holds" it for a brief period of time, then releases it and takes a sample of another frequency, holds that, then releases it, picks up another frequency, and so on. It produces a random set of tones, therefore, since it is never sampling the same frequency twice (or at least not so often that you'd notice it). And so is born the sound we've come to associate with R2 D2, computers gone berserk and other science fiction stereotypes.

F13 - Syndrums

This is sort of a collection of synthesized drum sounds, from the disco era Syndrums to the Moog percussion sounds triggered by Carl Palmer's drumming on ELP's "Toccatta" Not classic "keys" per se, but still a hallmark sound collection from that era.

F14- Theremin

Most widely recognized as the haunting lead sound heard on the Beach Boys "Good Vibrations" (and some say that wasn't actually a Theremin at all, I have no way of verifying this). Jimmy Page controlled a Theremin with his hands in the movie "The Song Remains The Same". Clara Rockmore, a European woman who passed away some time ago, was probably the world's best Theremin player. It was and is still a very difficult instrument to play, not a keyboard, but a sort of plate mechanism between two antennae. Don't ask me exactly how it works, I only know you wave your hands between the antennae and something resembling music is produced. Quite lovely music at that if you're good enough at it, although probably not for everyone.



Ethervox Theremin. Note one antennae sticking up, the other antennae laying horizontally on the left.



Moog Theremin



Clara Rockmore – the most accomplished Theremin artist who ever lived. Photo is from the early twentieth century.



Leon Theremin – the Russian-born inventor of the Theremin, which was the world's first commercially available electronic instrument, making its debut in 1919.

F15 – AKS Synthi A

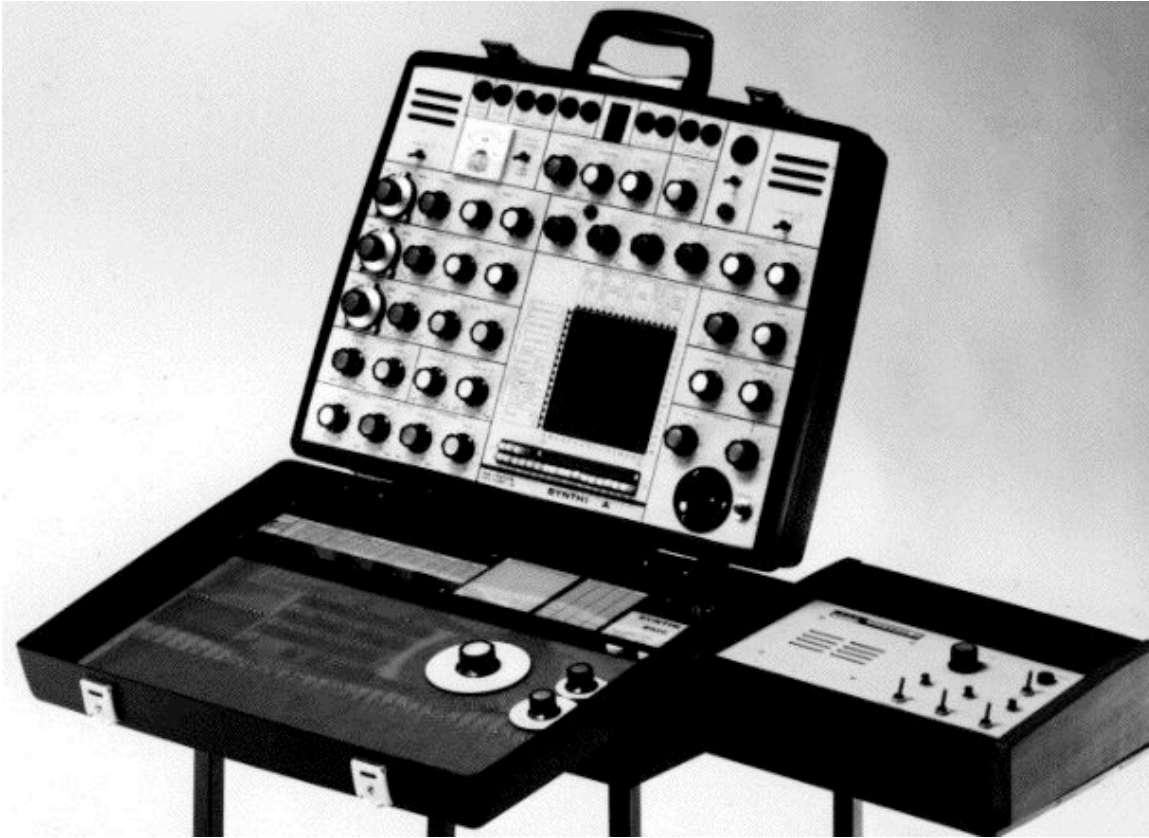
The EMS Synthi AKS is part of, as Julian Colbeck states in his book *Keyfax Omnibus Collection*, the “longest-running saga in synthesis”. Dating all the way back to 1968, it can still be custom-ordered and handbuilt (as of this writing, May 2007). Looking like something from a 60's gadget lab, and not capable of staying in tune or even producing much in the way of musical notes, the Synthi was nevertheless prized for the astounding amount of sci-fi blips, whooshes, metallic creepy-crawls, and other-worldly tones it could produce. Used extensively for 60's and 70's BBC television shows (including the original Dr. Who series), the Synthi also found favor with electronic music pioneers such as Klaus Schulze of Tangerine

Dream. And oddly enough, I was in a band in college with a guy who owned one, probably the only one in the entire Western United States at the time.

The Synthi sported three oscillators, with independent range, level, and waveform controls, variable-color noise generators, a ring modulator, envelope shaper, and its own spring reverb unit. But most notably, it featured a patchboard pin matrix, which looked like the pinboard for the game "Battleship". One created sounds using the pin matrix, putting pins into different holes, and modified them using a joystick controller. "Created" is a generous use of the term, because the results were almost always unpredictable, sometimes poor (as in no sound at all), but most of the time amazingly cool. Although, my old college bandmate somehow knew how to get a few sounds consistently.

The AKS Synthi A, and its wooden-cabinet cousin the VCS3 Putney, did not have keyboards attached to them. EMS produced a separate controller keyboard for its synthesizers. The Synthi A's controller keyboard could be placed in the carrying case lid.

In keeping with the true spirit of the Synthi A, this voice has modulation routed to just about everything, and does not produce anything musical or entirely predictable.



The AKS Synthi A (without controller keyboard).

F16 – Sequential Pro-One

The Sequential Circuits Pro-One was a monophonic synth based on the same circuitry as the Prophet 5. In fact it really was a monophonic Prophet 5. Plus, it had a very cool arpeggiator. The spirit of the Pro-One carries on today in the form of the Dave Smith

Instruments Evolver. Designed by Dave Smith – the same guy who created the Sequential Prophet 5.



Sequential Pro-One.

**CLASSIC POLYPHONIC SYNTHS AND KEYBOARDS -
G1 thru G16.**

G1 – Prophet T8 Brass

I had a Sequential Prophet T8, and man I wish I still did. It was big, had wooden end panels, 76 weighted keys, and was velocity sensitive. Big and beautiful. And it didn't sell that well.

Sequential's biggest hit was the Prophet 5, the first programmable polyphonic synth released commercially. For reasons unclear even to yours truly, the company felt it needed a successor to the Prophet 5. And so it announced, two years before actual delivery, that the T8 was that successor. By the time the T8 appeared in 1983, the Yamaha DX7 had taken over and the Korg M1 was on its way. Too expensive for most consumers, and short on ooh-aah features like reverb and delay, not to mention sample playback, the T8 was doomed from the get-go.

It did sound awesome, however, essentially two Prophet 5's packed into a single box, with all the Prophet features, a small-memory sequencer (I used it to play the brass theme from "The Wild Wild West" TV show during my club-days keyboard solo) and that wonderful velocity-sensitive weighted keyboard which was later used on the Synclavier system as a controller keyboard.



The big, bad, powerful Sequential Prophet T-8.

G2 – Memorymoog Sweep

Bob Moog didn't even develop the Memorymoog. Which is probably the reason one of my buddies, who saw it at a trade show the day before I went, called me and said, "Moog blew it!"

It certainly had a huge, expansive sound, and was pretty much what Moog Music (by then under new ownership and out of Bob's hands) had been hinting it would be - a polyphonic Minimoog. But it was obviously unstable, judging from the fact that when you hit the keys the display would exhibit bad jitter or sometimes shut off completely.

And worst of all, it had no MIDI, and came out right on the eve of MIDI's introduction. The keyboard didn't respond to velocity either. Nevertheless, it was a beautiful instrument to look at, had a wicked cool arpeggiator, and hard sync, all of which make it extremely useful even today. MIDI kits for it are available these days, of course.



Full-frontal shot of the Moog Memorymoog.



Angled view of the Memorymoog. It certainly looked the business.

G3 - OB8 Comp

The most famous Oberheim synth sound ever is arguably the one from Van Halen's "Jump". But Oberheim had been around quite awhile by the time Van Halen used it. The company started making polyphonic synths very early, about the same time as Sequential Circuits started making Prophet 5's. The first Oberheim modulares were sort of like boxes that you connected up to make a bigger synth - very flexible, but rather tedious and demanding on the setup and teardown end of things. The Oberheim OBX was the first of their all-in one Polyphonic synths, later followed by the OBX-A, and then the OB8. The OB8 and OBX-A look very similar and have the same basic (and very cool) Oberheim sound, which is often described as more of a pure sound, not as edgy and aggressive as the Prophet's. This sound is typical of one that might have been used by groups like the Police for comping and rhythm parts with a brassy tone but a closing filter envelope.



Oberheim OB-8.

G4 – OB-X Strings

The OBX preceded the OB-8. It was the first commercially available Oberheim product that featured a built-in keyboard. And the string sounds it produced still find favor in modern music production.



Oberheim OB-X

G5 – Prophet T8 Strings

Analog strings from the Prophet T8, different character altogether.

G6 - 1999/Crazy

This is that souped up and chorused oscillators in octaves sound that Prince used for 1999 and Let's Go Crazy. It was Oberheim, to be sure (You couldn't miss seeing the logo in the movie *Purple Rain*), but there was something else added to it - compression, chorusing, delay, who knows what all - that made it seem tall and orchestral.

G7 – Jupiter-8 Split

"Tuned to a fifth" polyphonic synth sound typical of the Roland Jupiter 8 synth – with a bass voice below the split point at E2. Used by groups like Duran Duran, it was quite the space-age thingie, all silver metallic with brightly colored graphics.

The Jupiter-8 didn't have quite the razor edge of the Prophet or the purer tone of the Oberheim, and you couldn't get the filters to self-oscillate very comfortably like you could on the Prophet or Moog products. It's sound fit in nicely with the overall band sound, though,

and it had quite a few synth tricks up its sleeve like an arpeggiator, hard sync, and more.



Roland Jupiter-8

G8 – Juno-60 Pad

Like Korg's Polysix, the Juno-60 was Roland's answer to those who wanted a polyphonic synth, but couldn't afford a megabuck bruiser like the Sequential Prophet 5 or the Oberheim OBXa. I can recall the Juno-60 ads that L.A.'s Guitar Center posted in the local trades like *Music Connection* – "Now everyone can afford a polyphonic synth!"

The Juno-60 featured one oscillator, plus a "sub-oscillator" which could be switched on to "fatten up" things. And it included Roland's famous "bend-lever" which could be assigned not only to pitch, but also to filter cutoff. An analog chorus added thickness and detuning to the analog sound of the Juno-60, and an arpeggiator rounded out the menu.

The Juno-60 excelled at two things – bass sounds, and pad/string sounds. True to the original Juno-60's controller behavior, the pitch-bend wheel controls filter cutoff as well as pitch bend on this voice. And the arpeggiator is there when you need – just hit the arpeggio on/off button.



Roland Juno-60.

G9 – Korg Polysix

The Korg Polysix was the first polyphonic analog synth I owned. And due to its (relatively) low 1982 price of \$1799, it was the first analog polyphonic synth for a lot of other musicians as well. I figured, that was as good a reason as any to include it in “Vintage Keys”.

Like the Roland Juno-60, the Polysix had only one oscillator. But it disguised that with a fat sounding analog chorus/phaser/ensemble effect, and it naturally had a bitchin’ arpeggiator. One could switch the Polysix to Unison mode, which produced super-fat mono lead sounds that didn’t need the chorus or phaser effects and that really cut through the mix. If that wasn’t enough, the Polysix also sported a chord memory “Hold” mode – you hit the “Hold” button, then played a chord of up to 6 notes, and the Polysix memorized your chord. Anytime you subsequently engaged the “Hold” button, the Polysix would re-trigger that chord with just one finger on the keyboard. (On this voice, you can activate the memorized chord by pressing Assignable Function Switch 2). This feature was ahead of its time and is still sorely missing from most modern-day synths.

The Polysix was followed by its digitally-controlled successors, the Poliy-61 and Poly-800. But I personally thought they sounded crap. It was the Polysix that was the coolest of all of them.



Korg Polysix

G10 – Solina Strings

The Solina was one of the first synthesizers devoted to string sounds. Truthfully, that's all it did - somewhat cheezy "string" sounds which really didn't sound too much like strings. But it was polyphonic, cheaper than a Mellotron, and weighed a lot less as well. It's shining moment was probably when it was used (with phaser effect) on the soundtrack for the old "Charlie's Angels" TV show back in the 70's.



ARP Solina (with ARP Explorer synth on top).

G11 – U.K. CS80

Back in the early 80's, there was a band called UK. They didn't have any hits, but old-school keyboard players remember them for a certain synth sound used at the beginning of their track, "Alaska".

That was done on a Yamaha CS80, a classic polyphonic synth which made its mark but was overshadowed by the Sequential and Oberheim synths. The CS80 was big, heavy (amazingly heavy), had ONE programmable setting (you lifted up a lid to reveal a compartment containing a "mini-panel" where you set sliders to store the sound) and a neat ribbon controller. One basically hoped that you had a house gig for two months or more so you wouldn't have to move it much.

The famous "THX" sound logo was inspired by the CS80's "polyphonic sweep" created using a very long portamento time (you can easily reproduce the effect by turning Assignable Knob 2 to the 3' o'clock position).

This voice includes aftertouch control of pitch modulation, and ribbon control of pitch – just like the original CS80.



Yamaha CS-80 – in someone's 80's style rec-room..

G12 – Prophet 5 Brasscomp

The contoured-filter brass sound similar to the one used on Nightranger's 80's hit "Don't Tell Me You Love Me". Also works well for some Loverboy (another popular U.S. 80's band) songs.

G13 – PPG Wave 2.2

The PPG Wave 2.2 was way ahead of its time. So far ahead that most people missed it the first time.

It was one of the very first "wavetable" synthesizers – drawing on "tables" of waveforms that loaded into its two digital oscillators. It featured a step sequencer and arpeggiator. And Thomas Dolby used one (quite extensively, in both the studio and on tour). It foreshadowed both the Korg M1 and Wavestation, and its inventor, Wolfgang Palm, went on to design synthesizers for Waldorf. Today we take the PPG's features for granted on sample playback workstations, such as the Motif XS. But in 1984 – the PPG was groundbreaking and entirely unique sounding, if not entirely user-friendly.

The PPG "sound" tended to be on the edgy-metallic side of things, similar to the Roland D-50's overall timbre, albeit a bit thinner. It looked radical, with metallic blue faceplate, LCD screen, and IBM-computer style pushbuttons. In the pantheon of obscure but notable synths, the PPG certainly deserves its place at the head of the table. Perhaps because it led to the development of so many other electronic musical instruments.



PPG Wave 2.2

G14 – Mellotron

It wouldn't be a vintage keys collection without some Mellotron voices.

The Mellotron was probably the world's first sample-playback "synth". Sounds were generated from recorded reels of tape. The recordings were of actual instruments, and when you pressed a key, one of the reels would start its spoolout. However, the Mellotron had a curious quirk - tape playback lasted about 8 seconds, then the tape would stop and rewind. So the trick became to try and play successive new notes just as previous notes were nearing the end of their "8-second run". That behavior is imitated here as well - hold down a chord, after 8 seconds or so it will cut out.

Recording playback was a generous 2-bits (not 16 or 24 bits) and generally the Mellotron sounds pretty bad but in a hip way. Distorted, grainy, low fidelity, screeching, whining, gear grinding - yes, I'll take some of that for my next hip-hop track. And oh yes, most people used it for strings, choirs, and the occasional flute sound, although the Mellotron libraries were actually quite extensive and featured dozens of different sounds and instruments.



Mellotron Model 400, in classic white.

G15 – Mellotron Choir

Mellotron choir sound.

G16 – Strawberry Flutes

The classic Mellotron flute sound from the Beatles "Strawberry Fields Forever".

Greatest Hits of Vintage Keys/FX Sounds - H1 thru H16

H1 - Tom Sawyer

That deep, resonant sweeping bass sound from Rush's hit song "Tom Sawyer". Originally played by Geddy Lee on an Oberheim OB-8.

Hit E2 and hold it for the full Tom Sawyer vibe.

H2 - Jump

As said before, probably the best known hard-rock synth sound of all time. Originally done on an Oberheim OBX-A, Eddie Van Halen at the controls.

H3 - Baba O'Riley

From the Who song "Baba O'Riley" on their *Who's Next* album. Most people think the song is called "Teenage Wasteland." At any rate, the song is in the key of F. To play the sound properly, arpeggiate F1, C2 and F2 in the left hand, in time to the LFO rhythm, and trill on C4,D4, E4 and F4 in the right hand.

Massively familiar sound now, due to the worldwide popularity of the television show *CSI:NewYork* which features the song on the opening credits.

H4 – Won't Get Fooled Again

The triggered organ sound from the Who's "Won't Get Fooled Again". It's not really a synth sound, but it was originally a Lowrey organ triggered by a VCS3 Putney synth, so technically it's still in the running. The song is in the key of A.

Again, due to the use of the song on the popular TV show *CSI: Miami*, this sound is lodged in the collective consciousness of millions.

H5 - Welcome Back My Friends

The famous synth sound that opens Emerson Lake and Palmer's "Karn Evil 9 First Impression - Part 2" on their *Brain Salad Surgery* album. Most people refer to this song as "Welcome Back My Friends To The Show That Never Ends". This sound is a good example of sample and hold modulating the filter. Yes, the song is in A flat, which of course required Keith to play all his amazing stuff on the BLACK keys - an incredible feat.

The sound itself was created on a modular Moog system (System 55, most likely), using patchcords connected from outputs of modules to the inputs of other modules, like an old telephone switchboard. In fact, the term "patch", used now to describe a synthesizer sound, came from the way sounds were created on a modular synth.



Moog modular with keyboard controller – quite a job for the roadies to haul around.

H6 – Journey SeparateWays

Jonathan Cain's Jupiter 8 sound for Journey's hit song "Separate Ways". Key of E.

H7 – Toto “Africa” Horns

The synth horn sound from Toto's monster hit, "Africa". (*Toto IV* CD).

H8 – “FinalCountdown” Ld

So many DCP customers requested this sound that I decided it had to be included in this library. It's the lead “synth-horn” sound from the 80's hit “The Final Countdown” by the band Europe. I'm not sure what synth was used for the original, but I suspect it was a Minimoog or possibly a Prophet 5.

H9 - Frankenstein

The ARP 2600 modulated filter sweep sound from the Edgar Winter Group hit "Frankenstein". As the filter closes down, use the mod wheel to animate it, opening and closing it again rhythmically, to imitate what's going on the original song.



ARP 2600.

H10 – Prophet UFO

Pitch/filter sweep “UFO landing: sound, good for sci-fi effects, as well as the intro on Styx’s song “Too Much Time On My Hands”. Typical of the kind of sound produced by the Sequential Prophet 5’s “poly-mod” section (see next voice description).

H11 – Prophet Poly-mod

I loved the Poly-mod section on the Prophet 5. Because I love big, noisy, gloopy, ring-modulated metallic slabs of industrial audio. Which was what the Poly-mod feature delivered, in spades. You could also use it with more subtlety, to add a brush of metallic edge, or a furry dash of modulated bleepiness.

The poly-mod section enabled one to route modulation sources to more than one destination, and to use things like the filter to modulate oscillators. It wasn't really a walk in the park to grasp, but it was where incredibly complex sounds could be created, and was one of the Prophet's most distinctive features, the other being hard sync.



Shot of Prophet 5 panel, showing "Poly-mod" section.

H12 – Ringmod Bell A

Low pitched ring mod tones, easily produced on the Minimoog, Prophet 5, Oberheim OB-8, and Roland Jupiter-8. Good for sci-fi, ambient, and soundscapes., The type of sound heard on the soundtrack for the film *Blade Runner*.

H13 – Ringmod Bell B

Variation of the ringmod bell sound.

H14 – Pink Floyd 1

The famous sequenced bass line from the song “On The Run” on Pink Floyd’s *Dark Side of the Moon* album.

H15 – Pink Floyd 2

The bubbling-filter synth and diving helicopter sounds from the same song on *Dark Side of the Moon*.

H16 – Clockwork Orange

The eerie Moog modular sound from Wendy Carlos’ soundtrack for the early 70’s cult movie hit *A Clockwork Orange* (which starred a much younger Malcolm McDowell). Carlos created the entire soundtrack and orchestral score for the movie on her Moog modular, tracking individual monophonic parts one at a time to tape – brilliant, and almost unbelievable.

To get the right sound, simultaneously play E1 in the left hand, and a chord consisting of B3, E4, and G4, in the right hand.

