

SUPERNOVA II



SNV II / NOVA II Manual Addendum

For Operating System Version 1.4

Introducing

 DoubleSaw



 **novation**
In music, anything is possible.

FOREWORD

This is the latest OS version for the Supernova II Series & Nova II Series Synthesiser and has many new features. This OS contains a significant upgrade with the introduction of the new Double Saw Special waveform allowing the use of up to 6 oscillators simultaneously with NO reduction in polyphony.

In addition, this upgrade includes a new Soundset with more than 60 new sounds including a new Drum Bank.

Happy tweaking!

The Novation design team.

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DoubleSaw

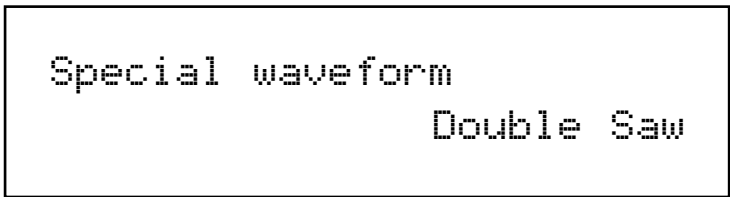
This is one of the main new features of this upgrade. The Oscillator now features a new Oscillator waveform type, Double Saw. When this wave form is selected, the Oscillator actually becomes 2 Saw waves that can be independently phase shifted or detuned with the use of a LFO. If all Oscillators are set to Double Saw then each voice has effectively 6 Oscillators. This has no effect on total Polyphony & can allow Unison type sounds to be created without the need to use the Unison feature, thereby saving voices, but then again it is possible to Unison a Double Saw Program to create truly HUGE sounds. (Whoever said size does not matter is deluding themselves!)



NOTE:
All the functions like Mix, Pitch, Sync* & Hardness still apply but modulate both Saw waves simultaneously.

Special Waveform - Button

When the Special button in the Oscillator Section is pressed the Display shows:



The parameter is "Special Wave" In this case with a value of Double Saw.
This parameter determines what special waveform the currently selected oscillator is going to have. Use the lower Data knob to adjust this parameter. If this parameter is set to Audio input (1), Audio input 1 will be substituted for the standard Oscillator. If this parameter is set to Audio input (2), Audio input 2 will be substituted for the standard Oscillator. If this parameter is set to Double Saw the Double saw waveform as described above will be substituted for the standard Oscillator. The range of this parameter is Audio input (1), Audio input (2) & Double Saw. This parameter is memorised with a Program.

Width - Button Level - Knob

When the Double Saw wave is selected the Width part of the matrix is used to control the "Difference" in phase between the 2 Saw waves.
The Level control controls the static phase difference between the 2 Saw waves. When this is set to 000 there is no difference between the waves and so at this setting Double Saw waves sound just the same as a standard Saw wave.



NOTE:
As both waves are adding together exactly when no phase difference is set between the 2 Saw waves the resulting "Single" Saw wave is twice as loud as a standard Saw wave. This can be handy when severe filtering is being employed.

When this parameter is set to a positive value the phase difference between the 2 Saw waves is modulated by a positive amount. Similarly negative values produce a negative phase shift between the 2 Saw waves. Fully clockwise or fully anticlockwise the phase shift is 180° has been shifted positive or negative respectively. The range of this parameter is -64 to +63. This parameter is memorised with a program.

USING AN LFO TO CREATE DETUNING EFFECTS WITH DOUBLE SAW

The key way to understand how this works is to get your head around the fact that detuning can be expressed as continually accelerating (or decelerating) phase shift. When looking at the waves of detuned Oscillators on an Oscilloscope it can be clearly seen that one waveform accelerates (or decelerates, the result is the same) in respect to the other. The greater the detuning the greater the difference in phase shift acceleration or deceleration between the two Oscillators.

So how is this done? The answer is with an LFO. Because the modulation of an LFO has been tailored to modulate a Double Saw wave exactly from 0° phase shift to 360° when set to FULLY positive or negative modulation (180° phase shift of modulation of each positive & negative cycle are used providing 360° of phase shift) continuous detuning effects can be reproduced.

To create straight pitch shift detuning effects use a Saw wave on the modulating LFO. Moderate speed is required. Typically 110 when set to "Slow". Slow speeds produce small pitch shifts. Fast speeds produce large ones.

To create chorus like detuning effects use a Tri wave on the modulating LFO. Fairly slow speeds are all that is required.



NOTE:

Anything less than FULL positive or negative modulation will result in less than 360° phase shift and clicks will occur.



NOTE: *

Sync sounds can cause clicks when LFOs are used to detune Double Saw waves. This will happen when the modulating LFO is set to anything BUT Tri waves.

Tips and Tricks

Try setting the modulating LFOs Keysync parameter to Keysync to get really percussive attacks to Double Saw sounds. This simulates all the Oscillators starting in phase. Setting this parameter to Freewheel means all Oscillators will start a random phase locations.

Below is an example of how to set up a detuning effect using a Double Saw wave.

Width	-	Button
Mod Depth	-	Knob
LFO 1	-	Button

This combination can be used to create a Pitch shift using LFO 1. The first this that needs to be done is set (in this case LFO 1) to a Saw wave running at a moderate speed, i.e. 110 when set to Slow, Turning the Mod Depth Knob clockwise introduces a pitch shift in one of the Saw waves in a positive direction. Turning the Mod Depth Knob anticlockwise introduces a pitch shift in one of the Saw waves in a negative direction. In the "Mid" position there is no modulation at all. The range of this parameter is -64 to +63.



NOTE:

This is actually set up in Program D123 "DOUBLE SAW Init". In this program LFO1 is used positively and negatively on 2 oscillators & LFO2 is used at a slightly different speed to make sure all 6 oscillators are at different pitches.



NOTE:

The detune effect will not be smoothly produced if anything less than a modulation level of -64 to +63. Anything else may produce clicky artifacts, But these in themselves may be interesting.

ARPEGGIATOR SECTION

The Arpeggiator has been enhanced in this upgrade as well. Firstly, in the Supernova II Series the total number of User Arpeggiator patterns has been trebled. There is now a total of 3 banks of User patterns. In the Nova II series there are now 2 banks of User Patterns. Patterns 000 to 063 in each of these user banks are Monophonic ones. Patterns 064 to 127 in each of these user banks are Polyphonic ones. The first (U)ser bank is called bank U. There are two extra banks (Called V & W) on the SuperNova II Series, and one extra bank (Called V) on the Nova II Series.

Arpeggiator Section

Menu - Button

Page 1 looks like so:

Pattern Bank	User(U)
Pattern no.	120

The higher parameter is "Pattern bank". In this case with a value of User(V). This parameter determines the type of Pattern the Arpeggiator will use. Use the upper Data knob to adjust the value. The "Mono" Bank is 128 preset patterns that are Monophonic, (a single note is played at any one time) The "Poly" Bank is 128 preset patterns that are Polyphonic. (all the notes played on the keyboard are played at once & transposed) The "User(U)" Bank is a Bank 128 patterns that are user programmable in the Global Mode. The "User(V)" Bank is another Bank of 128 patterns that are user programmable in the Global Mode. The "User(W)" (Supernova II Series only) Bank is another Bank of 128 patterns that are user programmable in the Global Mode. In all the "User" Banks Patterns 000 to 063 are Monophonic & 064 to 127 are Polyphonic. The range of this parameter is Mono, Poly, User(U), User(V) & User(W). (Supernova II Series only) This parameter is normally memorised with a Program, however if in Performance mode & the Arpeggiator bank & pattern used parameter on page 1 of the Special menu in the Part Edit section is set to Part, then the parameter is memorised with a Performance.

It is now possible to define a MIDI channel for each Arpeggiator that will be used to transmit Note On/Off data. A new parameter is available in the Arpeggiator menu for this. (previously, the MIDI channel used was always the Arpeggiator's input channel) This feature gives more flexibility to master keyboard possibilities and also provides an easy way of avoiding MIDI / Control note feedback when outputting the Arpeggiator into a sequencer and avoids potential conflict when Parts are layered. A page has been inserted in the Arpeggiator Menu.

Page 6 looks like so:

Output MIDI ch	Input
----------------	-------

The parameter is "Output MIDI ch" In this case with a value of Input. This parameter determines what MIDI note data is transmitted on the currently selected Program or Part. Use the higher Data knob to adjust this parameter. If this parameter is set to Input, the unit will behave as it does now, i.e. If the Arpeggiator is active and the Arpeggiator notes to: parameter is set to Program only then the chord being played will be transmitted. If Arpeggiator notes to: is set to Program & MIDI or MIDI then the Arpeggiator will be transmitted. If this parameter is set from 1 to 16 then the Arpeggiator is transmitted on the channel specified here. If in performance mode and using an Arpeggiator on Part 1 with its MIDI channel set to 1 and the Output MIDI ch parameter set to 2, then the chord played on the keyboard will be transmitted on MIDI ch 1 & the Arpeggiator will be transmitted on MIDI ch 2. If in performance mode and using an Arpeggiator on Part 1 with its MIDI channel set to 1 and the Output MIDI ch parameter set to 1, then the chord played on the keyboard will NOT be transmitted & the Arpeggiator will be transmitted on MIDI ch 1. The range of this parameter is Input, 1-16. This parameter is memorised with a Program.



NOTE: SuperNova II Keyboard & Nova II Keyboard only

Parts using the Arpeggiator will now transmit the notes played on the keyboard, but only if (a) The Arpeggiator is configured to pass its output only to the Program (i.e. - NOT Program and MIDI or MIDI only) OR (b) the Arpeggiator's output channel (see above) is set to a different MIDI channel than the Arpeggiator's input channel.

These changes to the Arp section have meant some related changes have been made in the Global mode.

Mode Section

Global - Button

There are extra options available in the System Exclusive pages in the Global Menu that take into account the new Pattern Banks.

Page 2 looks like so:

```
Sysex transmission -
                Single program
```

The higher parameter is "Sysex transmission". In this case with a value of Single Program.

This parameter selects the type of data to be dumped via MIDI. Use the lower Data knob to adjust this parameter. Whatever value is set on the lower line of the display is transmitted when the MIDI button is pressed in the Part edit section. The range of this parameter is Single program, All programs, Single prog request, All progs request, Single performance, All performances, Single perf request, All perfs request, Single arp pattern, All arp patterns, Single patt request, all patts request, Global parameters, Globals request, Program bank A, Program bank B, Program bank C, Program bank D, Program bank E, Program bank F, Program bank G, Program bank H, Program bank A request, Program bank B request, Program bank.C request, Program bank D request, Program bank E request, Program bank F request, Program bank G request, Program bank H, Performance bank A, Performance bank B, Performance bank C & Performance bank D, Performance bank A request, Performance bank B request, Performance bank C request, Performance bank D request, Drum map a, Drum map b, Drum map c, Drum map d, Drum map e, Drum map f, Drum map g, Drum map h, Drum map a request, Drum map b request, Drum map c request, Drum map d request, Drum map e request, Drum map f request, Drum map g request, Drum map h request, Patt bank U, Patt bank V, Patt bank W, Patt bank U request, Patt bank V request, Patt bank W request, Total data & Total data request. This parameter is memorised as Global.



NOTE:

The Supernova II keyboard can accept System Exclusive dumps while in any mode.



NOTE:

The Nova II Series does not have the Pattern Bank W options.



NOTE:

To write any changes to this parameter into memory press the "Write" button while in this mode. Also note the "Memory Protect" has to be set to "Off" for this to be possible.

Page 3 looks like so:

```
Sysex reception -
                Normal (RX as sent)
```

The higher parameter is "Sysex Reception". In this case with a value of Normal (Rx as sent).

This parameter determines if incoming Sysex data will be received & if it is a bank dump, which bank it will be written in. Use the lower Data knob to adjust this parameter. If this parameter is set to "Normal (Rx as sent)" the system exclusive is enabled & any incoming bank dumps will be stored in the same location as they were sent. i.e. a Prog bank A dump will be written to Prog bank A. If this parameter is set to "All progs to bank A", any incoming Program bank dump will be written into Program bank A regardless of its original location when transmitted. If this parameter is set to "All perfs to bank A", any incoming Performance bank dump will be written into Performance bank A regardless of its original location. If this parameter is set to "Disabled" no sysex messages will be recognised. The range of this parameter is Disabled, Normal (Rx as sent), All progs to bank A, All progs to bank B, All progs to bank C, All progs to bank D, All progs to bank E, All progs to bank F, All progs to bank G, All progs to bank H, All progs to Dmap a, All progs to Dmap b, All progs to Dmap c, All progs to Dmap d, All progs to Dmap e, All progs to Dmap f, All progs to Dmap g, All progs to Dmap h, All perfs to bank A, All perfs to bank B, All perfs to bank C, All perfs to bank D, All patts to user (U), All patts to user (V) & All patts to user (W). This parameter is memorised as Global.



NOTE:

The Nova II Series does not have the Pattern Bank W options.



NOTE:

To write any changes to this parameter into memory press the "Write" button while in this mode. Also note the "Memory Protect" has to be set to "Off" for this to be possible.

When restoring "All Arp patterns" from ROM, it is now possible to write all ROM based patterns (the whole of User bank U) to User bank V (or on the SuperNova II Series, User Bank W).

Page 8 looks like so:

```
Restore from ROM:
                One program
```



NOTE:

Pressing the Write button while this page is displayed starts the Restore procedure.

The parameter is "Restore from ROM:". In this case with a value of One program.

This parameter allows the factory Programs, Performances & Global data & Arp Pattern data to be restored to the Factory settings. Use the lower Data knob to adjust this parameter. Whatever selection is made with the lower Data knob is restored into memory (ERASING WHAT WAS THERE!!) when the "Write" button is pressed while in this mode. Additional pages appear depending on the selection. i.e. if "All data" is selected Supernova II keyboard asks for confirmation which is set with the lower Data knob, if you set this to "Yes" & press the "Write" button again all the factory setting will be restored. If however "One prog" was selected Supernova II keyboard asks which Program you want to restore, which is selected using the lower Data knob, & then pressing the "Write" button again Supernova II keyboard asks for the location (Program bank & number) that you wish to store the program in. The range of this parameter is One prog, One perf, One patt, All progs, All perfs, All patts, Globals, Favourites, All data, Prog bank A, Prog bank B, Prog bank C, Prog bank D, Perf bank A, Perf bank B, Dmap a, Dmap b, Dmap c & Dmap d.



NOTE:

When All arp patterns is selected, pressing the Write button will bring up another page, this looks like so:

```
Write whole bank to
                Arp pattern bank U
```

Here it is possible to restore the Factory User pattern Bank to any of the 3 User Pattern Banks. Use the lower Data knob to select the destination Bank. The Range of this parameter is Arp pattern bank U, Arp pattern bank V & Arp pattern bank W.



NOTE:

The Nova II Series does not have the Pattern Bank W options.

Page 18 looks like so:

User pattern	U000
No of steps	32

The higher parameter is "User Pattern". In this case with a value of U000.

This parameter determines which of the User Patterns for the Arpeggiator is to be edited with the following pages. Use the upper Data knob to adjust this parameter. Use the Bank Buttons to change between the U, V & W User Pattern Banks. The range of this parameter is U000 to U127, V000 to V127 & W000 to W127. (W Bank is only available in the Supernova II series) This parameter is memorised as Global.



NOTE:

User Patterns 000 to 63 are User Monophonic Patterns & User Patterns 64 to 127 are User Polyphonic Patterns.



NOTE:

To write any changes to the currently selected pattern into memory press the "Write" button while any of the pattern edit pages are displayed. Also note the "Memory Protect" has to be set to "Off" for this to be possible.

Page 19 looks like so:

Step	Note	Vel.	Gate
01	01	127	Norm

While on the pattern editing page in the Global Menu, these new functions may be accessed by pressing the Bank buttons.

Pressing Bank Up will take you directly to the "Insert" page, while pressing Bank Down will take you directly to the "Delete" page.

All three options form a sub - menu of three linked pages. To access the "Rotate" page you must therefore press a Bank button and then use Page Up until you reach the Rotate page.

The Delete Page looks like so:

Delete step at	
pattern step	16

The Insert Page looks like so:

Insert rest at	
pattern step	16

The Rotate Page looks like so:

Rotate pattern by :	
	-15

To Insert a step or Delete a step you may select explicitly the step you wish to affect with the lower fast data pot. (The initial default is the currently selected step). To execute the insertion/deletion, press the Write button. You will then be taken back to the pattern editing page in the Global Menu. To return directly back to the Global Menu without inserting or deleting, simply press the Global button.

To rotate the pattern, you must select how many steps you wish to rotate with the lower fast data pot. Positive values rotate the pattern forwards, negative values rotate the pattern backwards. Initially, this value is set to 0 (no rotation). The number of steps you may rotate the pattern depends on how many steps are used by the pattern. To execute the rotation, press the Write button. You will then be taken back to the pattern editing page in the Global Menu. To return directly back to the Global Menu without rotating, simply press the Global button.



NOTE:

All changes to the pattern using these options affects only the pattern buffer. To make the changes permanent, the pattern must still be written to Flash in the normal way.

General Improvements.

The PHASER has been improved yet again! The Phaser is now a 6 pole Phaser. (It was 4 pole on OS Version 1.3) and although there is no difference functionally, it sounds significantly deeper and you get this nice sweep as the stereo peaks cross. In short it just sounds better.

The menu Page Up and Page Down buttons now auto-repeat if they are pressed and held.

It is now possible to cancel a system exclusive dump in progress by pressing the Midi button again.

0	Sintillator M-Wh	64	Pulsebass
1	Skewed Arp 2	65	Synth Scratch
2	Softena Bass M-Wh	66	Staccato Filter
3	Velo 303	67	Vienna Bender
4	Velocity Mutes	68	Piki
5	Its Not OK	69	Rez Square M-Wh
6	Garage Kick	70	DetuneBass M-Wh
7	FM EP	71	Randevous 2 harp
8	T-chu Wave	72	DX Bass 1
9	Ravin On	73	Arpy 30Dist
10	Velo 303 Dist	74	Hard Bass
11	SyncHeathHazard	75	Prelude
12	Stringz 2	76	Arp Fingers
13	Garage Organ	77	Sweep 12 dB
14	Synthi Harp M-Wh	78	Strillan M-Wh
15	Square Basics	79	Waterphones
16	Synus M-Wh	80	Pulse Clav M-Wh
17	PunchiPick M-Wh	81	Velo Sync M-Wh
18	Sparkx	82	Burbler
19	Morph Brass M-Wh	83	InVinceable M-Wh
20	Flathead Bass	84	2 Osc Pad
21	U-no polysynth 1	85	Down Osc
22	MW BPF	86	Ana Organ
23	Perc Organ Bass1	87	Sinker M-Wh
24	FM Pickled on...	88	No FM Huh?
25	Slynkie Slide	89	909 Clap
26	Full Organ	90	Perckie Saw M-Wh
27	Vorsprung...M-Wh	91	Coke Filter M-Wh
28	808 Snare 2	92	Sup Jup Horn M-Wh
29	Pad 4 Landing	93	Clockworks M-Wh
30	DigiTrouserCough	94	Comatose
31	Anafuzzy logik	95	Open High Hat 1
32	Spectra Pad	96	Your Pad or Mine
33	Vindalo Noise	97	Xtal Drop
34	SlapBass1	98	S-ash Tray M-Wh
35	Techno crat	99	Uplifting M-Wh
36	Obie Paddiviv	100	Subbass M-Wh
37	Deadly Sync M-Wh	101	Clix Organ M-Wh
38	Echoed Maj 3rd	102	Swidge M-Wheel
39	Naked	103	Delicate Arp
40	U-no Bass1	104	Syncapation
41	EP	105	Closed High Hat 1
42	Ambient Line	106	Flange Pad
43	RainPicks	107	X mod Bass
44	No Moralies M-Wh	108	Collision M-Wh
45	Highly Strung 2	109	Obie Jumpin
46	Westerly Lead	110	Novebella
47	Filth 5th	111	Pianola M-Wh
48	Clock Clang	112	E-Dreamsynk
49	Skwusha 2 M-Wh	113	Poms Bass3
50	Jungle sine	114	Just Cant Get It
51	303 Groover 1 M-Wh	115	Bubble Arp
52	Distillia	116	Velo Trance
53	Sonar (C3) M-Wh	117	Virtual Panpipe
54	TeaSub Bass	118	Glider 2 Pad M-Wh
55	Bright EP	119	Hard Nosed
56	Brass	120	Nadia M-Wh
57	Eleventh HourPad	121	Piano Pad M-Wh
58	SuperStrings1	122	Raver Pad M-Wh
59	FM Strat Program	123	Roundhouse Bass
60	All The Rave	124	Pick 'n' Mix
61	Voxi Organ M-Wh	125	Rain Piz
62	Velochord	126	Mechatron Arp
63	Cheesy Spice	127	Poms Bass2

PROGRAM BANK B

0	.Filtered H2O	64	SuperBassSt'n 1
1	SuperBassSt'n 19	65	Synth Backslip
2	Width Bass M-Wh	66	Staccato Square
3	Wheel 303	67	Leader
4	Lonely Olive	68	D'you know Pick
5	Z-Plane VeloPick	69	Perci Blip M-Wh
6	Harder Kick M-Wh	70	Simple Bass 2
7	Giggin EP	71	Snotty Nose
8	U-no Brass	72	Digi Slappa!
9	Screaming Raver	73	Harmonic Dist303
10	DistortOrgan M-Wh	74	Hardbasssweep
11	Bigger 1	75	Obie String Pad
12	Polysikz Strings	76	Random Arp
13	Chime Pad	77	Sweep 24dB
14	Lead Gat	78	Filmskore
15	HolidayLeadBass	79	Liquinova M-Wh
16	Sine-us	80	FM Clav
17	Bottie End	81	VeloReso
18	StaccatoString	82	PVC Pipe/Tom M-Wh
19	Obie Brass	83	Rhythm Sweep
20	Flatter Head M-Wh	84	Pollox pad
21	Synthi Trumpet	85	Self Osc
22	Squeege M-Wh	86	Organ 1 M-Wh
23	Organ Perc Bass2	87	Syncker
24	Don't Pick!	88	Psy1
25	Stab	89	808 Clap 3
26	FullerOrgan M-Wh	90	Perckie Sq M-Wh
27	Hartkern M-Wh	91	Obie Extravert
28	808 Snare 1	92	SupJup BrassM-Wh
29	Devolution M-Wh	93	Throbba M-Wh
30	Modebas M-Wh	94	Wineglass
31	Syn Section M-Wh	95	HiRage Kick M-Wh
32	Spectrux Pad M-Wh	96	Phillharmonic
33	Filter Sweep KHz	97	Obie Tootle
34	SlapBass2	98	Wheelreso
35	Hard House	99	Slow Sweepa
36	Choral Pad M-Wh	100	2 Osc & M-Wh Sub
37	Messy Sync M-Wh	101	Boogie Lead
38	Old'n'Rickety	102	Radar>Comms
39	Dist FM Sync Pro	103	Rio Mod Wheel
40	U-no Bass2	104	DistLead
41	Tine1Program	105	MultiHigh Hat
42	Dreamy Arp	106	Emerald
43	Ringglass	107	FilterBass M-Wh
44	Handbagin Bass	108	Rubber Filter M-Wh
45	Stringie Thingie	109	Sync Brass Pad
46	Lead 1	110	Tinkerbell
47	Worry free Pad	111	BP Barker
48	FM Velo Chimes	112	Whiteout
49	Garage Swelch	113	FM Bass 1
50	Single Sub Wheel	114	Needle Pick M-Wh
51	303 Groover 2 M-Wh	115	Electro Wire
52	PWM Crunchie	116	POT LID
53	Staccato	117	Low Transmitter
54	Simple Bass	118	Synth Ensemble
55	Super Nova TramP	119	OrganDraw M-Wh
56	Brassic	120	Pad
57	Upstairs@Holgers	121	Unison DaDaDaa
58	SuperStrings2	122	SyncSaturation
59	Fin FM Jazz 2	123	Tin Can Wire M-Wh
60	Attacka M-Wh	124	Clickie Pickie
61	Xfade HPF	125	Chirpy Novae
62	Explosion	126	Simple Arp M-Wh
63	Pocket stylophone	127	Init Program

0	Neuroglider	64	Basse
1	Electro Koto M-Wh	65	Synth Stop Scratch
2	Bace	66	Staccato Pulse
3	TB Vac>scene	67	In Sync M-Wh
4	Gated Pad	68	Poppy
5	Utopian Sweep Wh	69	Lucked Out M-Wh
6	FX Kick M-Wh	70	ThunderFloorBass
7	Phased EP	71	Synced M-Wh Muck
8	Jubrassic	72	Wabblers
9	Raversiren	73	TB2
10	Trance-Atlantic	74	PsyGrund M-Wh
11	Lead or Bass	75	Airy Fairy
12	Smooth Strings	76	Synth Moutharp
13	Digital Klangg!	77	Vector Synth
14	ElectroStratGat	78	Film Pad
15	Drubex SQ	79	Tubus
16	Softena	80	Clavi
17	Nasty Bass	81	Drum'n'Bass 1
18	5th Lead	82	Mallet
19	Jupiter Slapper	83	Jazzier Lead Gat
20	Fathead	84	Pad Sweep
21	U-no polysynth 2	85	Eclipse M-Wh
22	Zumph	86	Pianova
23	Garage Organ Bass	87	Simple Sync
24	Sass Pick	88	Psy2
25	7th Stak	89	D'you know Sq
26	ClickOrgan	90	Perckie Pulse M-Wh
27	Dutch M-Wh	91	PS_Strings 7th
28	909 Snare 2	92	Echoed Strings
29	Glider	93	TripletTwista Wh
30	U-no Sub	94	MusicBox
31	Its OK as it is	95	808 OHH
32	Inverse Square	96	SoftStrings
33	Velo Spitz	97	Pluck Knows M-Wh
34	SlapBass3	98	Deep Lord M-Wh
35	Zing Leak	99	Nova Railway M-Wh
36	Plated analogue	100	Crystal Shimmer MWh
37	SN Pro Sync M-Wh	101	Force Field
38	Digi Lead M-Wh	102	Science lab
39	Sass!	103	AfterTouchie Mh
40	Americana	104	Jazz Guitar
41	Sanxion Filtered	105	808 CHH
42	Heavenly Slide	106	Strung Up
43	Ring>Vince	107	Poms Bass4
44	Simpler Bass	108	Drum'n'Bass 2
45	Sollie strings 1	109	SupJupVelBrass1
46	Sync Lead M-Wh	110	Downloading
47	Poly 303 M-Wh	111	Obie Wurlie
48	FM TUBE	112	Synced Swimin
49	R'n'B Glide M-Wh	113	SyncBass
50	Pulsering Bass	114	Needle Pulse M-Wh
51	U-know Bleep Wh	115	HC Bass M-Wh
52	Syncronicity	116	Pot Cover
53	Phatties Diet	117	Brillo Pad M-Wh
54	Bass4	118	Chord Lead M-Wh
55	Whirly	119	DistortOrganM-Wh
56	Swishi	120	Spectrum
57	PurrFlange	121	Die Roboter
58	PolyNova 1	122	Saturated Square
59	TB Poly Arp	123	Trans Euro Exprs
60	Our Friend PWM	124	Seq Nova M-Wh
61	PolyNova 5	125	Nics Diver M-Wh
62	Pulse 5th M-Wh	126	Arp Sync M-Wh
63	Whistle	127	Simplest Bass

PROGRAM BANK D

0	Synced Formant 1	64	Max Bass
1	Sawtooth Seq. jh	65	Communicator
2	Click Bass M-Wh	66	Xpander 2000 jh
3	Trance4 M-Wh	67	FiltaMatrix M-Wh
4	SimpleEnvVeloArp	68	Fin Pluck it!
5	"I"	69	FM Bell Lead
6	909 Kick	70	Wart Bass
7	Metal Knoll	71	ComeToDance M-Wh
8	Slide Brass M-Wh	72	FM Lead 1
9	Gritty Program	73	Hard Cheese M-Wh
10	Soft Brit Sound?	74	In-Your-Ear M-Wh
11	Uni*Syn	75	Strings'R'Talkin
12	ItsKindaPhasedWh	76	NeedleBleep M-Wh
13	House Organ jh	77	Gusset Pad M-Wh
14	BP 303 2	78	EuphoricNag M-Wh
15	Given Bass M-Wh	79	Gated Noise M-Wh
16	Ahh Voices 2	80	AnaKey M-Wh
17	VeloQuack	81	Synced
18	Ballsy Anal-Log!	82	FM Block
19	Electric Insect	83	Dat D'n'BassM-Wh
20	Drum'n'BassBass	84	Soft Pad
21	Synth Sektor FX	85	Tranceypants
22	LFO madness	86	BP Organ
23	SimpleAnaBass-Wh	87	Plug'n'Sync jh
24	Pinchi Pick M-Wh	88	Sqaurx M-Wh
25	FM Glockenspiel	89	Kraft M-Wh
26	DontSurrender-Wh	90	Tottie Arp
27	TecknoTecknoM-Wh	91	Lush
28	909 Snare 1	92	3'0'Trance 1
29	Vector Pad	93	Funk WahWah M-Wh
30	Juice Bass	94	Polynova 3
31	Grunge Pick M-Wh	95	Iridium
32	Orbit Pad M-Wh	96	Phase Strings jh
33	FM Sweep jh	97	Bottle Arp
34	Pick Bass M-Wh	98	Buzz Bass
35	Talker	99	Fin Mono Arp 1
36	Strings Ens	100	Low Bass
37	Sync it M-Wh	101	Show U the Organ
38	A To B PB-Wh	102	Drum'n'Bass 3
39	BP 303 M-Wh	103	Trance7 M-Wh
40	SoloAnaTrumpet	104	Clean'n'Clear jh
41	FM Piano/Guitar	105	Aggrosweeper
42	Chatter Arp M-Wh	106	1osc pad
43	ModW Surprise jh	107	BasikBass
44	Dance Bass	108	3'0'Trance 2
45	DualFiltStringWh	109	Dark Talker
46	VeloUniSync	110	Trance Bass M-Wh
47	"EEW"	111	Trance1 M-Wh
48	FM Marimba	112	Low Organ
49	Trance6 M-Wh	113	Bottie Bass
50	Reso Bass	114	FM Bass
51	Gated Noise M-Wh	115	FM Xylo Lo
52	Growla BP303M-Wh	116	FM Xylo Hi
53	Scammy Chord	117	Orgpt ClkLo Dry
54	Boot Bass	118	Orgpt DX Lo Dry
55	AnaPiano M-Wh	119	Orgpt DX Hi Dry
56	Bottled Genie	120	FMpt RhodeDt Wfx
57	Ahh-Yeah M-Wh	121	FMpt RhodeBd Wfx
58	DualFiltPWMingWh	122	FMpt RhodeTn Wfx
59	BlubberPick M-Wh	123	DOUBLE SAW Init
60	BowedMetal M-Wh	124	Vocoder In 1
61	ThrobiMemberM-Wh	125	Input/sw1Program
62	Winge Forum M-Wh	126	FM Init Program
63	Trance2 M-Wh	127	2 Osc Init M-Wh

0	909 Kick 2
1	Rim Shot
2	808 Snare 2
3	808 Clap
4	909 Snare
5	Electro Low Tom 1
6	Closed High Hat 1
7	Electro Low Tom 2
8	Closed High Hat 2
9	Electro Mid Tom
10	Open High Hat 1
11	Electro Hi Tom 1
12	Electro Hi Tom 2
13	Crash Cymbal 1
14	Crash Cymbal 3
15	Crash Cymbal 4
16	909 Clap 3
17	909 Low Tom 1
18	808 Closed HiHat
19	909 Low Tom 2
20	808 Cowbell
21	909 Mid Tom
22	808 Open HiHat
23	909 Hi Tom 1
24	909 Hi Tom 2
25	808 Kick Click L
26	808 Low Conga
27	Noisy Kick
28	808 Mid Conga
29	808 Hi Conga
30	Snova2 Kick5
31	808 Low Tom
32	Snova2 Kick4
33	808 Mid Tom
34	808 Maracas
35	808 Hi Tom
36	808 Kick Click
37	Dodger Rodger
38	Noisy Kick 1
39	808 Clave
40	FM Block
41	Bottle
42	Simple Low Conga
43	Simple Mid Conga
44	Simple Hi Conga
45	Snova Kick5
46	Snova2 Kick4
47	Snova2 Kick3
48	Snova2 Kick2
49	General kit 1 FX

DRUM MAP B

0	909 Kick 2
1	Rim Shot
2	808 Snare 2
3	808 Clap
4	909 Snare2
5	Electro Tom 5
6	Closed High Hat 3
7	Electro Tom 4
8	Closed High Hat 4
9	Electro Tom 3
10	Open High Hat 2
11	Electro Tom 2
12	Electro Tom 1
13	Crash Cymbal 1
14	Crash Cymbal 2
15	Ride Cymbal
16	Clap 3
17	Disco Tom 5
18	808 Closed HiHat
19	Disco Tom 4
20	808 Cowbell 2
21	Disco Tom 3
22	808 Open HiHat
23	Disco Tom 2
24	Disco Tom 1
25	808 Kick Click L
26	808 Low Conga
27	808 Snare
28	808 Mid Conga
29	808 Hi Conga
30	Snova2 Kick1
31	Garage Snare 4
32	Breakdown Kick
33	Velo Spitz
34	Maracas 2
35	Electro Guiro
36	Synth Scratch
37	Sonar
38	Synth Backslip
39	808 Clave 2
40	Wah 4
41	Wah 3
42	MultiHigh Hat
43	Wah 2
44	Hi Hat (Closed)
45	Wah 1
46	Hi Hat (Open)
47	909 Kick + Click
48	808 Kick No Clk
49	General kit 2 FX

0	Res FX 1
1	Wip 1
2	Res FX 2
3	Force Field 2
4	Res FX 3
5	Res FX 4
6	Vindaloo Noise
7	Spit U Like M-Wh
8	RainPicks
9	Spit U Like2M-Wh
10	Infiltrator SFX
11	Burbler
12	Down Osc
13	Rain Piz
14	Filter Sweep KHz
15	Ringglass
16	Explosion
17	Liquinova M-Wh
18	Self Osc
19	Radar>Comms
20	Whiteout
21	Low Transmitter
22	RaverSiren
23	Ring>Vince
24	Wabblers
25	Tubus
26	Force Field
27	Science Lab
28	Downloading
29	LFO Madness
30	Res FX 10
31	Res FX 11
32	Noise Sweep
33	Velo Spitz M-Wh
34	Noise Sweep 1
35	Noise Sweep 3
36	Noise Sweep 4
37	Noise Sweep 5
38	REZ1
39	REZ2
40	REZ3
41	Noise Sweep 6
42	CHIRP 1
43	CHIRP 2
44	CHIRP 3
45	CHIRP 4
46	CHIRP 5
47	CHIRP 6
48	CHIRP 7
49	SFX Kit FX

DRUM MAP D

0	FM 808 Kick
1	Rim Shot 2
2	909 Snare 2
3	808 Clap 3
4	808 Snare 3
5	Tom1
6	808 CHH
7	Tom2
8	808 CHH 2
9	Tom3
10	808 OHH
11	Tom4
12	Tom5
13	Crash Cymbal 2
14	Noise Shot
15	Ride 2
16	China Cymbal
17	Nova Crash 2
18	Rev High Hat 1
19	Noise Sweep
20	FM Cowbell
21	Lo Timbale/SN
22	Rev High Hat 2
23	Hi Timbale/SN
24	High Conga 4
25	High Conga 3
26	High Conga 2
27	High Conga 1
28	Low Conga 1
29	Low Conga 2
30	Low Conga 3
31	FM GarageSnare 1
32	FM GarageSnare 2
33	Timpani
34	Timpani
35	Timpani
36	Timpani
37	Timpani
38	Timpani
39	Timpani
40	Timpani
41	Timpani
42	Timpani
43	Timpani
44	Timpani
45	Triangle 2
46	Triangle 1
47	FM 909 Kick 1
48	FM 909 Kick 2
49	FM Kit FX

0	Blaster Master	64	Juicy Gaff
1	Pad on Spec	65	Agro Pad
2	Tech Terror	66	Ambi Bambi
3	Liquid Goo	67	Solaris
4	Layered Pianos	68	Perci Organ
5	SuperStabber	69	Brass+Lead
6	Popsickle	70	TooPad
7	SintillatedWorry	71	Chime On
8	Cool Pad	72	Choccie
9	The Pizzacato	73	PaddiWhack
10	Klavikle	74	OrchStrings
11	Ravers in 7th!	75	Liquid Sweep
12	Donna Supernova!	76	Classic Combo
13	AbsoluteMassive	77	Multimode BPF
14	The Glide	78	Annialator
15	Skwelchi 7th	79	Masterbasse
16	Electric Aaah	80	Swept
17	Hypersynus	81	Analogue Bleep!
18	Ambient Nation	82	Synced Clavinux
19	Brass Section	83	Tinkler
20	HardToTheKore!	84	The Three Arps
21	Pink Phycosis	85	Synced Twice
22	Fatty	86	I Feel Funky
23	Naked String	87	A Bunch Obiewan
24	TwinOvaHead303's	88	Staccato Square
25	Puff Pipe	89	Worry Free
26	Deep Stringz	90	Ambient Groover
27	SupSupSupJup	91	Twin Organ
28	Pionus	92	Lead & Pad
29	Worry Free	93	2ForkinRavers
30	Conetik	94	Synth Strings
31	Layered Spectra	95	Agro Pad
32	Novestra	96	Psy Pad
33	Forkin Expensive	97	7th Heaven
34	EP & Strings	98	3rd & 7th
35	String+PluckLead	99	Perky Synth Pad
36	Good Ole 80's	100	MooZ At 7200z..
37	Filming in Space	101	Staccato Saw
38	AttackVelo-Chord	102	Blip & Co
39	Probe	103	Trouser Fat
40	3rd Party Pad	104	Invert Filta Pad
41	Two Big Ones	105	Perci Fellow
42	Trance Nation	106	Flutter Pad
43	Morphwave	107	Liquid Sweep
44	Synth Section	108	JammyLoop
45	LiquidNarcotic	109	When U Wanna...
46	Piano+Padding	110	Chimez
47	1 Finger LSO	111	Layered Sweeps
48	Teci	112	TinCanDiffusion
49	Fantasam	113	Brass Section 2
50	Tingly & Drugged	114	Endless Arps
51	Sync's 'R' Us!	115	Atmospherics
52	Layered Pianos 2	116	Super Unisyn 2
53	Super Fat	117	Twin Organ 2
54	Squelchie	118	Get Off Yer Ass!
55	Heaven OrganPad	119	The Pizzacato 2
56	Super Unisyn	120	Padnus
57	Space Pad	121	Layered Neuro
58	PiciGater Pad	122	The Strings
59	Multimode BPF	123	Init Velo Xfade
60	2 Nasties	124	Init VeloSw V110
61	Lead & H20	125	Init Split at C3
62	Minor Evil	126	Multi Ch 1-8
63	Botty & Sparks	127	Init Perf

PERFORMANCE BANK B

0	Energy Rusher!	64	Pianas Pad
1	SQ Law	65	SuperObiewan 2
2	Enormous 5th	66	Syncathetic
3	SuperUtopian	67	3 Slappa Bass
4	Plastic Crackpot	68	A Pile of Perf
5	FM Rhodes 3PtWfx	69	AtmosSpace
6	Can Basher!	70	SuperHard
7	The Dark Horse	71	SuperSaturated
8	News & Weather	72	Slow'n'Slippery
9	SuperGlider	73	Picked Gat/Harp
10	On Your Face	74	Arty Farty
11	SuperMorph Brass	75	Slow Pad
12	Euphorik Trancer	76	NetherUltraPulse
13	Ole Genes	77	SuperNeuro
14	Crystal SQ	78	Tranzlator
15	SuperSpectra	79	Stereo HardHouse
16	SuperDutch	80	Sync Knife
17	SuperT-chu	81	5th Padie
18	The Profecy!	82	Cimmie Pad
19	HyperSpace	83	Click Organ
20	WavS'tion	84	Crankie Says
21	Supa PolyNova 1	85	Supa Sync Bass
22	Supa Piana	86	Plucky Tchu
23	SuperObiewan	87	Comp 1
24	Dub'n'Basic!	88	BuzzyBrass
25	FM Xylophone	89	SlightlyDirtyOrg
26	Cave Trippy	90	Glided Arps
27	No FX Strings	91	Supa Sync Lead
28	SuperSynthi Harp	92	Phatt&Wiffy
29	SuperJubrassic	93	SuperHealth Haz
30	Con-figed Arps	94	Master Psy
31	SuperGlider 2	95	Synk Hit
32	Evolution	96	Bouncy Castle
33	SuperLucky	97	SuperEclipse
34	Tink	98	Don't Be Pickie
35	SuperPhattie	99	SuperBrillo
36	Minor Event	100	Strangely
37	Supa D'u Know	101	SuperSimple Sync
38	Transwave	102	Hard'n'Fast
39	Big Bast**d	103	SuperSyncapation
40	2 Giggers	104	Elect Guitar
41	SuperPulse 5th	105	Mellow Man
42	Petz'R'Us!	106	Percy
43	Sq Chorrle	107	Super Attacka
44	DX E Organ	108	Towel Fetish
45	SuperExtravert	109	SuperNics
46	SuperPunch Pick	110	Metaloid
47	SuperBrass	111	SuperSync Pad
48	Cruiser!	112	SuperRickety Syn
49	Spit Bass	113	SuperSyncer
50	Supa PolyNova 5	114	Trippy 9/8
51	SuperStringz	115	SuperTouchie 2
52	SuperPianopad	116	SuperWesterly
53	SuperStrillan	117	SuperBarker
54	Dirty Arps	118	SuperSlapper
55	Wet Sintillation	119	Irradiated Blast
56	Elles Bells	120	Init Perf PartFX
57	SuperBrassik	121	MultCh1-8 PartFX
58	SuperTouchie 1	122	MultCh9-16PartFX
59	SuperSyn Trumpet	123	InitNorm/InvVelo
60	Dub'n'Basser!	124	Init VeloSw V100
61	PluckinNoseHair	125	Init Split at C2
62	Multi Bleep	126	Multi Ch 9-16
63	SuperChoral	127	Demo