pro – 800 PROGRAM SOUND DESIGN

PERF

Perf pressed twice – once perf light is on steady, you're operating in pure physical synth mode, what you see on the knobs is what you get as far as the main synth controls, and no presets are selected – in this mode pressing numbers on the numeric keypad takes you immediately to the function list described below

Perf pressed once while Preset light is on – if both perf and preset lights are flashing, you can enter the sound design sub menus in the program select section simply by pressing the corresponding buttons, you press the corresponding button multiple times to cycle through the lettered items below and press a new number to that numbered item. Once you're at a lettered item, the value knob changes between the actual values for that item. *All changes here are saved when you save the preset.*

The functions of this mode are as follows when pressing the numerical keypad.

1. ***LFO – Controls settings for the on-panel LFO in the following ways:***
   a) ***LFO shape –*** *as per the LFO switch on controls, you move through column 1,2,3 and the switch controls the lower or higher option such as pulse/triangle, sin/random, saw/noise*
   b) ***LFO Target (changes the target of the LFO settings and amount on the main painel –*** *A (Osc A), B (Osc B), AB (Both oscs at same time), VCA (Tremolo effect)*
   c) ***LFO Speed –*** *Fast or Slow*

2. ***Vibrato – This is a second LFO only for pitch, (Note if the mod wheel target is vibrato, amount is zero unless mod wheel is up and the setting affects mod wheel amount, if mod wheel target is LFO. Amount works right away as per setting)***
   a) ***Amount –*** *strength of vibrato*
   b) ***Speed –*** *speed of vibrato*

3. ***Mod wheel – Controls mod wheel routing***
   a) ***Amount –*** *Controls how "full" mod wheel effect is, from light effect-fine control, to very heavy -coarse control*
   b) ***Mod wheel target – LFO/ Vibrato –*** *if mod wheel is at vibrato, vibrato will have no effect unless mod wheel is up and then goes up to a blend of its max amount x the mod wheel amount setting. If mod wheel is at LFO, the LFO starts at its initial amount on the panel, and then goes up a further amount depending on the a) amount setting for the mod wheel.*
   c) ***Modulation Delay -*** *Creates a fade in effect for the mod wheel strength as decided by the selected time.*

4. ***Envelope Shapes***
    a) ***VCA Env –*** *SLin (Slow linear), FLin (Fast Linear), FEXP (Fast Exponential) SEXP (Slow Exponential)*
    b) ***VCF Env –*** *SLin (Slow linear), FLin (Fast Linear), FEXP (Fast Exponential) SEXP (Slow Exponential)*
5. ***Pitchbend Target –*** *Pitchbend controls VCO (pitch), VCF (filter), VOL (volume), OFF – no effect*
6. ***Oscillator Pitch Functions***
    a) ***Osc A Frequency Pot Node – controls function of Osc A frequency knob –*** *Semi (semitones), Oct (octaves), Fixd (no keyboard tracking full range fixed oscillator), Free (an open tuning standard for totally flexible pitch control)*
    b) ***Osc B Frequency Pot Node – controls function of Osc A frequency knob –*** *Semi (semitones), Oct (octaves), Fixd (no keyboard tracking full range fixed oscillator), Free (an open tuning standard for totally flexible pitch control)*
    c) ***Keyboard Tracking –*** *This affects the filter keyboard tracking mode as far as which octave it counts as its "center", lower or higher.*
7. ***Velocity settings***
    a) ***VCA Velocity –*** *Controls the amount the velocity of each key press affects the volume of a note*
    b) ***VCF Velocity -*** *Controls the amount the velocity of each key press affects the filter/brightness of each note – note that on this synth this affects the filter envelope amount as the way which it works.*
8. ***Aftertouch settings*** *– useful if you have a keyboard with aftertouch function*
    a) ***VCA AT Amount –*** *Controls the degree to which the aftertouch affects the volume*
    b) ***VCF AT Amount –*** *Controls the degree to which the aftertouch affects the filter cutoff*
    c) ***LFO AT Amount -*** *Controls the degree to which the aftertouch affects the LFO amount strength - affecting whatever the LFO is routed to*
9. ***Unison and Voice Spread Settings***

    NOTE Unison Modes – Unison is controlled via the unison track switch on the main panel

    - *When you hold no key and turn unison track on you get a full monophonic unison glide mode – all 8 voices are active monophonically*
    - *When you hold a single note and turn unison track on while holding the note you get a single voice mono-synth mode, no unison, just turns the synthesizer into a MiniMoog style mono synth, great for basslines, leads, etc*
    - *When you hold a chord up to 8 notes and turn on unison track while holding the chord, the unison gets spread into a chord transposed by each key press chromatically – great for retro techno and house chord stabs for example.*

    a) ***Unison Detune –*** *Controls the detuning voice spread of the unison mode from a narrow thin detune effect to a very wide spread and noisy detune effect*
    b) ***Voice Spread –*** *NOTE: This control specifically acts when NO unison mode is activated. What it does is apply your unison-detune amount setting to playing*

normal polyphonic chords, creating an extra-detuned effect while playing the synth in normal polyphonic mode when it is turned "On"

0. ***Glide Mode –*** *Time – more rhythmic based like a 303, the glide knob on the synth changes the literal time length of the glide effect, - Speed – to create effects more based around pitch – with a longer glide on notes further apart and vice versa rather than stable time.*

PRESET/ REC

Preset light stable - A preset is selected, and is not modified in any way

Preset light flashing – The selected preset has been modified, modifications will be lost if another preset is selected (and changes can be cleared by pressing preset button again), unless saved using the rec-save process

Preset Saving Procedure:

With Preset Selected – modifying a preset

1. Modify the preset however you want, preset light should be flashing
2. if you don't want to save the changes and want to keep original preset, just press preset button again and it will stop flashing and you will immediately re-load the unmodified original preset sound
3. To save the preset, when its flashing, remember your preset number (eg.21), press REC (now both REC and PRESET are flashing) , type in your preset number you want to save it to, to overwrite type your original number you remembered (eg. 21), or type a different preset to save the modification to a different preset.
4. Once you type in the preset number, click PRESET to finalize the save to that number
5. If you changed your mind on saving, press REC again instead of preset and the save will cancel and your preset will remain unsaved

In physical control mode (2x PERF – so PERF is glowing solid)

1. Dial in the sound as you want on the synth controls and performance parameters as mentioned above
2. Make sure you have pre-planned a good preset number to save it to that's blank or can be overwritten (eg.23) , you will get no warning overwriting a good preset and there is no undo
3. Press REC press REC (now REC is flashing) , type in your preset number you want to save it to (eg. 23), or type a different preset to save the modification to a different preset.
4. Your preset is now **saved** without having to press the preset button again.
5. You can now press PRESET to scroll presets, or press PERF twice again to go back to physical editing mode.

GENERAL PRESET AND BANK MANAGEMENT:

PRESET PARAMETERS

To access the PRESET parameters hold the PRESET button and use the keypad buttons to select the parameter required.

Key	Parameter	Comments
1	Bank A	-
2	Bank B	-
3	Bank C	-
4	Bank D	-
5	Preset Copy	(copies the current preset values)
6	Preset Paste	(pastes the copied preset to a new location. Second press confirms)
7	Randomise Preset	-
8	Bank Copy	First press copies current bank. Then navigate to another bank and use 9
9	Bank Paste	Hold PRESET and press twice to paste the copied bank to its new location
0	Reset to basic patch	

GENERAL OVERVIEW OF OTHER FUNCTIONS:

1. **Tune –** Tunes your synthesizer, long press is a light calibration good for when its already up and running for a while just to tune it up a bit, short press is a full re calibration good for when starting up
2. **Settings –** Controls various midi and global synth related parameters, these are for global control and are not saved with any of the presets individually, be aware the settings "stick" so they will stay even if you turn your synth off and on and across all presets so be careful what you change.
3. **Sync source –** Selects what your midi sync source is, anything from the internal BPM clock to USB from your computer to Midi, to the sync in on the patch panel
4. **Sync clock –** Determines the tempo of the sync as well as sync divisions like ¼ notes 1/16 notes etc
5. **Seq 1 / Seq 2 –** Two sequences can be loaded on the internal sequencer, use the manual to get the precise directions and steps for this, note its all controlled by the sync options set above when it comes to tempo

6. **Arp Up-Dn –** Turns on or off the arpeggiator, holding it with number keys 1-4 determines the direction and arpeggiator type – check the manual
7. **Arp Assign -** when pressed and held with numbers 1 or 2 clicked at same time it determines if your arp plays in random order or per the order of your keys pressed
8. **Value pot –** Scrolls through many values of sub menus

GLOBAL SETTINGS MENU

Access Global Settings by pressing **SETTINGS** once and use the keypad numbers to scroll through the options.

Key	Parameter	Choices / (Comments)
1	MIDI Rx Channel	Off / 1 – 16 / All / Dipswitch
	MIDI Tx Channel	Thru / 1 – 16 / All / Dipswitch
	MIDI CC	Off / Tx / Rx / TxRx
	MIDI PC	Off / Tx / Rx / TxRx
	Sync In Forward	On / Off
	Sync In Polarity	Rise / Fall
	Sync In Start/Stop	On / Off
	Sync In PPQN	1 PPS / 2 PPQ / 4 PPQ / 24 / 48
	Local	On / Off
	Soft Thru	On / Off
2	Transpose	-
3	Preset Dump	(Second press to confirm SysEx dump)
4	Voice Select	1 – 8
	Voice Kill	On / Kill
5	Retune Element	Osc A / Osc B / VCF
	Octave	All / Oct 0-7
6	Retune Encoder	Second press to initiate
7	Screen Brightness	-
	Display Parameter Time	-
	Preset Name Display	
8	Autotune Precision	0.5 c / 1.0 c / 1.5 c / 2.0 c
9	External Filter Mod	-
	Voice Priority	Last / Low / High
0	Factory Reset	(second press confirms restoration of factory settings)

Holding the SETTINGS button and pressing the TUNE button lets you tune the last note played.

This will be saved in the preset data.

ARPEGGIATOR

The arpeggiator has two buttons to set its parameters. To set the arpeggio type hold the ARP UP-DN button and use the keypad to select:

1 – Arpeggio Up
2 – Arpeggio Down
3 – Arpeggio Up and Down
4 – Arpeggio Up then Down

To assign the arpeggiator hold the ARP ASSIGN button and use the keypad to select:

1 – Played order
2 – Random order

Holding ARP button and pressing REC holds the current notes played. The foot switch input can also be used to hold the arpeggiator.

Holding a note or chord then pressing the ARP UP-DN button holds the note/chord in a drone without arpeggiation.

SEQ RECORDING

1. Switch RECORD on.
2. Press either SEQ 1 or SEQ 2.
3. Start playing. (Recording does not begin until the first key is pressed.)
4. When finished, press the footswitch or RECORD at the end point you want.
5. The sequence will play continuously loop until the appropriate SEQ switch is switched off. Adjust the SPEED control as required.
6. Care must be taken to not exceed the note limit, which is approximately 400, but may be less if the specific sequence contains long rests. If the note limit is exceeded, the sequence will only contain the last 400 notes— the earliest notes will be lost.
7. When both banks are being used, care must also be taken to not exceed the 400-note limit. The sequencer assigns memory priority to the bank which is currently being recorded, and will "steal" notes from the other bank once the 400 total note limit is reached. For example, if SEQ 1 already has a 250-note sequence recorded in it, you will erase SEQ 1 if you attempt to record more than about 150 notes in SEQ 2.

SEQ PLAYBACK

1. To playback a sequence, press SEQ 1 or SEQ 2.
2. The playback speed can be varied from 1/4 to 4X real-time. The SPEED control position for 1:1 playback speed is to the left of centre. This provides more control range of higher speeds.
3. The playback speed can also be programmed. As the sequencer is playing back, set SPEED as desired, then press the RECORD switch (which will not light). Now whenever the sequence is selected it will play at this speed. The programmed speed can be edited and re-recorded (just like the synthesizer controls).

To stop, press the appropriate SEQ switch or the footswitch