

^PART ESQ1 - SOUNDSET

GENERAL ^PART

MANUAL

excerpts edition



The double ^PART Sound Set for ESQ-1 / ESQ m (& SQ-80)

Version 1.0 (1991) Sound Set with ^PART Patch Manual

Version 1.1 (1992) updated Sound Set with ^PART Manual

Version 1.2 (1993) with revised ^PART Manual: General ^PART
& Patch ^PART

Electronical Edition in PDF-format (2004) excerpts edition

Last update 1993 => NO update 2004!

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^PART ESQ1 - SOUNDSET

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GENERAL INTRODUCTION

The quality and originality of a new synthesizer sound depends on the interaction between

- the musical intentions of the patch maker (sound designer)
 - his developmental stage and musical intuition
- and
- the environment within which this sound has to be operational.

Programming sounds is an ART. It's like composing a piece of music.

The sound programmer has to compose a not yet released patch. Every sound configuration is the result of an aesthetical choice between his personal (musical) inspirations and needs and the physical possibilities of the musical tools (architecture of musical hardware and software/ waveforms and parameters).

Remember: there are never "good" sounds which are aesthetically for everybody, or good enough for all music styles.

Having this in mind, the ^PA R T sounds for the ESQ-1 are a wonderful set for the musician who likes to explore undiscovered dimensions of this "oldfashioned" MIDI-instrument of the late eighties.

For the musician who loves the raw base sound of the ENSONIC ESQ-1 or SQ-80, I promise a facelift to the ENSONIC instrument. A new release-like soundmachine will surface.

A good synthesizer should be a musical instrument that enables the gifted musician to develop full knowledge and skills, just like mastering an artisanal instrument.

The double ^PART-soundset for the ESQ-1 includes various aspects of the ART of programming patches.

All rules or tricks - ever published by TRANSONIC HACKER- have been included.

Set A of 40 ESQ-1 sounds requires set B of 40 other patches to complete the full spectrum of hidden possibilities in the ESQ-1(SQ-80). The ^PART-set 'touches' your unexplored personal world. The new soundpatches enhance the fully creative music tool that the ESQ-1 still incorporates.

In the ^PART- patches for ESQ-1 you will be surprised by the great flexibility of the expressivity range, by the hidden waveforms and last but not least by the possibility of making alternate tuning scales: all of them are much easier available in the ESQ-1 (and SQ-80) than synthesizers like the SQ-1, SQ-2 or KS-32. Just verify for yourself.

The new double ^PART - set for the ESQ-1 (SQ-80) is not a sum of still pictures.

Contrary, all ESQ-1-patches represent a dynamic entity. This soundset wasn't developed as 'closed' units - where you are forced to buy each new sound from any third party company or person.

THE USER doesn't have to be A SLAVE .

The patches however have been designed as WORKSHOPS,i.e. as a real CLINIC to open new musical perspectives ...

IF THE ESQ-1 USER INTENDS TO SCULPTURE SOUNDS, he needs the extended ^PART-PATCH-MANUAL that has been developed as a integrate part of the ART of programming ESQ-1-patches.

The ^PART-set is accompanied by an extensive PATCH MANUAL.

The ^PART-guide is meant as a wonderful tool to help everybody who likes to re-discover new incredible features of the ESQ1.

Using the manual, you can change and store many alternatives or variations of the ^PART-patches. The double soundset (40+40) can be easily augmented to more than eighty patches. It won't be hard to store for example 140 patches: 79 based on set A and 61 derived from set B.

P-A R T

stands for the initials of patch composer Paul A.R. Timmermans

P.S.

Last update = 1993. There are NO updated chapters, editors or other information about newest music tools 2004!

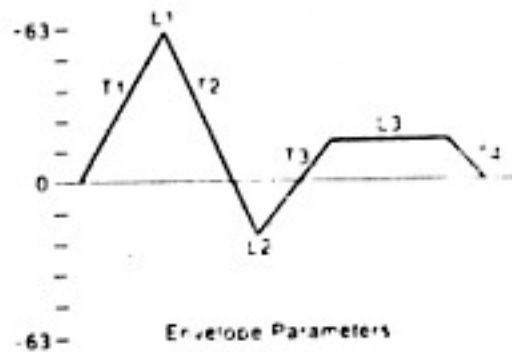
I. UNEXPLORED SIDES OF THE ESQ-1/SQ-80

1. SOUND

Do you understand the basics of your sound-machine ?

Don't forget the existing architecture of the ESQ-1 (and SQ-80).

There are 3 voice-generators, each based on one of the regular 32 (and more hidden!) WAVEFORMS, with a separate TUNING LEVEL and a specific VOLUME level (finishing in a global amplitude).



The FILTER-section determines the degree of colouring in the waveforms.

Each parameter can be influenced by two modulators, creating variation of the pitch, vibrato, time-process, attack, reverb, 'spacing' of the sound.... All this can be controlled by your ESQ-1(SQ-80) very easily!

The ESQs and SQ80s of Ensoniq still have plenty of unexplored sides of the synthesized world like audio-frequency amplitude modulation and filtermodulation which don't exist in the newer Ensoniq synths VFX, SQ-1/2 and KS-32. The A.M. function, available on the ESQ-1 and SQ-80, accepts two inputs!

John Mc DANIEL has explored the harmonic spectra with amplitude modulation on the ESQ-1 and the SQ-80 in Transoniq Hacker, Issue # 38, August, 1988, p. 9-11.

Kirk SLINKARD has explained the amplitude modulation of ESQ-1 for MIDI-woodwinds in Transoniq Hacker, Issue # 68, Febr.,1991, p. 20-21.

On the Master page, setting the PITCH BEND to HELD mode allows the keyboard to bend only those notes which are actually being held down by fingers, while ignoring notes that are being held by the sustain pedal. (Sam MIMS, Transoniq Hacker, # 74 , August, 1991, p. 13-14).

Put your favourite patch into the Compare buffer ("c") and change anyone of the values of this patch. Your patch is temporarily stored in this buffer. (B. WHITLOCK, Sound Shuffling on the ESQ-1, T H # 61, Juli, 1990, p. 11).

Read in Transoniq Hacker about reverberating(T H #77, Nov.,1991, p. 18-20 and #70, April, 1991, p. 22), echoes(T H # 46, April, 1989,p. 9), stereo panning(T H #60, Juni, 1990), splits (T H # 31, Januar, 1988) and Control Voltage PEDAL(T H # 46, April 1989, p. 15-16).

II. THE PART OF PROGRAMMING PATCHES

1. FLEXIBLE APPROACH: TAKE ANOTHER DOOR TO COME IN

It is important to maintain a *flexible approach*. Different points of view may be integrated in your programming:

You can start from a FAVOURITE soundpatch

OR from any sound you meet in your soundbank

OR you select intentionally a totally *different* patch as profile of the master-template. When starting from a DRUMpatch to initiate the digits from a soundsheet, you may perhaps find THE original new FLUTE-wave envelope which you were looking for so long

OR don't indicate immediately the appropriate *waveform(s)* of the intended patch on the soundsheet.

OSC1-OSC2-OSC3

octave:	+2	+2	+2
semi:	11	11	3
fine:	0	30	0
wave:	sine	bell	nois2
mod1:	LF01	LF02	LF03
depth:	-15	-6	-15
mod2:	KBD2	KBD2	KBD2
depth:	-63	-63	-60

DCA1-DCA2-DCA3

level:	63	0	0
output:	on	on	on
mod1:	LF01	LF02	LF03
depth:	+63	+63	+63
mod2:	WHEEL	WHEEL	WHEEL
depth:	-50	+50	+38

FILTER

freq:	35
reson:	26
kybd:	13
1: *OFF* + 0	
2: VEL + 6	

DCA4

ENV4:	63
pan pos	8
mod:	KBD2
depth:	+63

*****HAZON*****

LF01-LF02-LF03

freq:	11	15	31
reset:	off	off	off
human:	on	on	on
wave:	saw	saw	saw
L1:	63	63	63
delay:	63	63	0
L2:	63	63	63
mod:	VEL	*OFF*	*OFF*

ENV1-ENV2-ENV3-ENV4

L1:	+63	+63	+63	+63
L2:	+0	-40	+30	+63
L3:	+0	-33	+1	+63
LV:	63	0	59	24
T1V:	0	0	22	20
T1:	0	0	0	19
T2:	63	0	28	0
T3:	0	0	47	0
T4:	0	0	37	47
TK:	62	0	15	27

MODES

sync:	off
AM:	off
mono:	off
glide:	0
restrt:	off
env:	off
osc:	off
cyc:	on
time:	1.3s

MENU

F 1	vc banks
F 2	envelopes
F 3	system
F 4	comp/copy
F 5	undo
F 6	store vc
F 7	randomize
F 8	rand mask
F 9	get voice
F10	print

SPLIT/ S/L:off Int 1
LAYER LAY:off Int 1
key: C 3 SPL:off Int 1

Suppose. We start from the soundsheet of AMAZON, a patch of the PARTB set. Please don't put in the values as a slave! Search for flexible inputs. Don't start from the top of the soundsheet. By changing the OSC-page you loose too fast the existing tuning level and soundcolours of the used waveforms. Changing waveforms at the beginning of a sound program have a major influence on the entire appearance of the soundpatch.

Reading the soundsheet, the startposition to a new patch should be

- * the ENV-page
- * OR the FILTER-page
- * OR the LFO-page

and finally introduce the major waveforms and modulators in the OSC-page.

P.S. To start again on the same patch, switch to another patch in the sound bank, then modify ONE value up or down and RETURN to your selected patch.

III. HIDDEN WAVEFORMS IN THE ESQ-1

The highest regular waveform on your ESQ-1 is the 32th wave OCT+5. Transoniq Hacker(Issue # 54,December 1989 and #60, June, 90) has mentioned how to access 43 additional waveforms in the ESQ-1. The Phantom Waveforms story goes about the 75th highest (hidden) waveform in the SQ-80 (= the upgraded ESQ-1): put the 80/160 RAM-storage soundcartridge from your ESQ1 in the slot of a SQ-80, store this 75th waveform (called DRUMwave) from the SQ80 in your ESQ-1 soundcartridge, and finally copy this SQ-patch in the internal soundbank of your ESQ-1.

Attention: This trick is only possible by the latest available O.S. upgrade-versions 3.4 or 3.5 of the ESQ-1.

About the numbers of the oscillatorwaves:

1. Waveform # 64 is indicated as WAV063 in the OSC-page of your ESQ-1 because WAVE # 0 refers to SAW (= the first waveform).
2. You can't scroll from low to higher numbers of hidden waveforms in your ESQ-1. Remember this limitation: you can only change from WAV074 to WAV032, from high to low.

Once I have experimented with wrong loaded events in my ESQ-1: blank spaces, unusual codes or digits in the soundbank display of my ESQ-1. In the oscillators-PAGE appeared very high # of HIDDEN WAVEFORMS, f.e. the 215th (OSC1) , the 195th (OSC2) and 129th waveform (OSC3)!!!! Of course, the TAPE-events (the TAPE input) were not compatible with the normal ESQ-1 format : it was a sequence-datastream, saved on a Roland MC-202 Micro Composer, stored on datacassette and then loaded in the ESQ-1. These very high hidden waveforms in the ESQ-1 produce "handicapped" sounds and incomplete keymaps (f.e. soundgaps between C2 and F3): not so practical in the sense of normal synth music, except for those who want to make inventive music pieces with

unusual sounds or surprising effects.

Some ' marked patches of the double PART-soundset use waveforms, which sound clean and nice over the total keyboard.

Other '-sounds from the PART set are multi split-patches (for example sounds # A22 and 'ANDAL # A29 'INTER) due to the incompleted waveforms. The patchnames in the PART- banks beginning with the special ' mark refer to ESQ-1 sounds based on hidden waveforms located above the regular waveform #32 (=OCT+5). The '-patches work on the hidden waveforms and parts of multiwaves above or behind the 32 'normal' waveforms of your ESQ-1. Consequently, I recommand the ESQ-1 with O.S. version 3.4 or 3.5 to use these ' patches. The ' patches do not work exactly as programmed for the SQ-80 or ESQ-1 with O.S. lower than 3.4. On the other side, the owner of a ESQ-1 with O.S. lower than 3.4 can be surprised by new particular effects caused by the ROM-waveforms in his ESQ-1. He can adjust these ' patches alternating with one of the 32 normal waveforms.

IV. MICROTONAL MUSIC ON THE ESQ-1/SQ-80

Temperament is the system of tuning in which intervals are "tempered" (slightly lessened or enlarged) away from their "natural" or "pure" form. There is contemporary interest in other tuning scales than the twelve-tone equal temperament for keyboards. A basic guide to alternate scales (= temperaments) on synths is **TUNING IN (Temperaments and Microtuning using Synthesizers)** by Scott R. WILKINSON published in 1988 by Hal Leonard Books. However, Wilkinson didn't mention the strong quality of the ESQ-1/SQ-80 in this matter! Yes, you don't even need a VFX or SD synthesizer to make Quarter-tone music.

I would like to explain **new ways for various tuning scales by modulating the full keyboard range of the ESQ-1 without calibrating individual keys**. In this last case I recommand DICK LORDs alternate O.S. for the MIRAGE sampler or the tuning tables for the newer ENSONIQ EPS+.

Pitch bend modulation is a common method to vary the individual pitch of the ESQ-1 keys you play. Comments and tables of values of pitch control of the ESQ-1 were included in articles published by TRANSONIQ HACKER. Read *Microtonality and Just Intonation on the ESQ-1* in TransonIQ Hackers Issues # 73 (Juli, 1991, p. 13-14) and # 64 (October, 1990, p. 15-16). It seems very difficult to program maps - pseudo pitch tables (TransonIQ Hacker, 1992, August, p.9) - for the newer ENSONIQ synths: SQ-1, SQ-2 and KS-32. Making alternate scales on the ESQ1 shouldn't be a time consuming job. It is easy to change, listen and control instantly the result. You don't even have to make difficult calculations on paper or computer. Believe your ears and make a choice for the most musical solution.

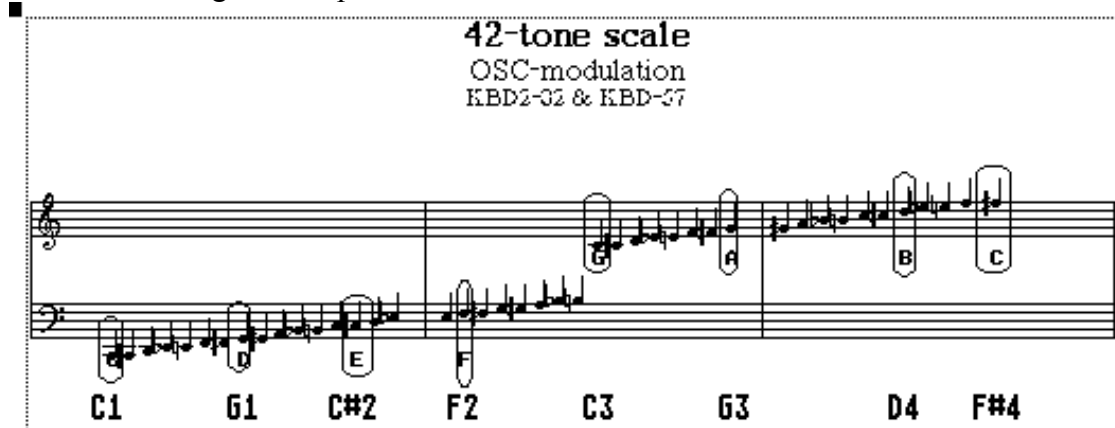
Wendy CARLOS discussed her new released album "Switched-on Bach " in **Back to Bach** of KEYBOARD (August, 1992). She mentioned her difficulties to store and to use

several alternate scales or to swap between different alternate tuning scales within the same composition (Brandenburg Three). Strange enough, Wendy Carlos was looking for fast solutions for downloading and switching tuning scales on the actual and best equipped synthesizers but the YAMAHA SY77 has just two user tunings.

If you like fast access to different tuning scales without losing time, then use the good old ESQ-1. In this instrument you may store and practice up to 40 internal tuning scales. Without loading and losing time, the tone-scale of the ESQ-1 patch is always integrated IN the soundprogram itself. If you like more than 40 scales, take a ESQ-1 sounds RAM-cartridge. Theoretically, you have instant access to at most 200 alternate scales using the 160 sounds RAM-cartridge! Isn't this great?

In the PART-set there are a few such patches integrated.

The trick of microtonal scales on the ESQ-1/SQ-80 is to find the relationship between the OSC-modulating and the pitch intervals.



1. Increasing or decreasing only the KBD-modulation of the OSC-pitch does affect a small impact on the intervals between the keys.

KBD + 63 : the tuning level is high;

KBD - 63 : the tuning level is low.

3. Stretching or compressing of pitchintervals by KBD and KBD2 (MOD.) don't result everytime in equal distance between the keys.

There are other increasing and decreasing levels for KBD- than for KBD2-modulation of the oscillator. Read your ESQ-1 manual to see again the characteristic curves from -63 to +63 for KBD- or KBD2-modulation.

There are a few combinations:

only one modulator: KBD

or KBD2

adding a second modulator:

KBD and KBD

KBD2 and KBD2

KBD and KBD2

KBD2 & KBD

00 00 normal equal tempered *12-tone scale*, OF COURSE.

+16 - 63 normal equal tempered 12-tone scale

-24 + 10 normal equal tempered 12-tone scale

+24 - 10 *9-tone scale* (=soundpatch # A25: 9-T EP):
 it's pretty to play normal chords and hear other tones.
 Only C4 is the same pitch as C4 in standard scale.

-63 - 63 56 (!) tones in 1 octave

REVERSED : deep E1= high C

high C6= low C

One reference to standard tuning: middle G3 = G

-63 + 63 *45-tone scale*: 1 octave is stretched from C2 to A5!

-32 - 57 42-tone scale! very small(micro)

pitch-progression from low to high keys.

The diatonic standard notes of this keymap are

C1- G1- C#2- F2- C3- G3- D4 F#4

(C D E F G A B C)

+32 + 32 14-tone scale C3- G4 = 1 octave (D3= pitch D3)
(decrease OCT-tuning level to -2)

Experiment by yourself different tuning scales! Make FUN in this fascinating world of micro- and macro-tuning. Building *meaningful* microtonal scales on the ESQ-1 is easier as on many contemporary synthesizers and samplers. The architecture of the ESQ-1 offers the opportunity to produce *quickly* microtonal scales.

Some of the new patches in the double set P ART are interesting base voices to create microtonal music (for example: MABO sound #A28). Other patches of the double PART- set are based on the higher described modulation in the OSCILLATOR-page (for example: MEET ME #B22 and 'TUNY #B37).

In many cases of **macro tuning**, the range of the voice over the keyboard is TWO or more octaves smaller than a normal 61-keyboard. Of course, some of this KBD- and KBD2-modulations can be applied to normal patches : piano, organ, strings, percussion ...

Starting from patches with *at least one free modulator* in one OSC-page you may develop your own microtuned scales. Read the possibilities on the table. Don't forget : it's easier to listen to the microtuning effect when working on a single open oscillator once a time. The end-patch of course can be based on several OSCs. To achieve a meaningful microtuning patch using the three oscillators, is a masterpiece build on chance.

GENERAL MIDI CLASSIFICATION OF THE 80+ PART PATCHES for ESQ1/ESQm/SQ80

P_PART__A.EQV VOICES		P_PART__B.EQV VOICES	
1 CELLO	21 CASTJ	1 MELOG	21 'JZACP
2 BASJCO	22 'ANDAL	2 HAMD W	22 TNGD'A
3 'HARPU	23 'BALI	3 CEREMO	23 'HARM+
4 CLAVRD	24 'INDIA	4 SOFY+5	24 EXFL P
5 KOOR 2	25 9-T EP	5 'ADBAS	25 'AXIGO
6 AMORGP	26 24-TTR	6 PAD	26 N2KICK
7 PIP-VP	27 '6-TFL	7 TRMPTO	27 POLY3P
8 'HISOR	28 MABO	8 'GLANS	28 ETNPER
9 'FLCHR	29 'INTER	9 REPSYN	29 'CLAWY
10 'DESUZ	30 'PIM75	10 DRYBAS	30 BARO
11 MEZSAX	31 FINGER	11 ENS*P	31 'LF074
12 BODEL	32 'FEELS	12 'ENS*C	32 MEETME
13 *MOOI*	33 SENSY3	13 CLAV*E	33 'LF03
14 FGT*CL	34 CHIMES	14 BELLO	34 'BASSY
15 REED 3	35 THEN	15 HORSY	35 MENUET
16 'BS*FL	36 ETERIC	16 DEEPBL	36 NOISY
17 'BASFL	37 AMAZON	17 PEGGIO	37 TUNY
18 FLAUTO	38 SINEN	18 DWINDL	38 'OBSES
19 'ROMA	39 ELEKGO	19 P, GLAS	39 'MID
20 FLUTDR	40 BLANCO	20 POWER	40 'BSORG

GM PARTsoundname (Instrumental Specification)

- #1 B11 ENS *P (Piano + Strings)
- #2 A25 9-T EP (El. Piano: 9-tone Scale)
- #6 B17 PEGGIO (El. Piano: arpeggio)
- #7 B12 'ENS*C (Cembalo + Orchestra)
- #8 A4 CLAVRD (Clavichord)
- #8+ B13 CLAV*E (Clavichord + Strings)

#25 A22 'ANDAL (Ethnic Nylon-Str. Guitar: left side)

#25 A4 BUZUKI (Greek Bouzouki Guitar)

#25+ A31 FINGER (Harpy Strings: one finger touch)

#66 A32 'FEELS (Sax)

#67 A12 BODEL (Tenor Sax)

#68 A11 MEZSAX (Baritone Sax: left side)

#69 A13 *MOOI* (Oboe: right side)

#71 A13 *MOOI* (Bassoon: left side)

#71 A14 FGT*CL (Bassoon:lower part)

#72 A14 FGT*CL (Clarinet: upper part)

#73 A22 'ANDAL (Piccolo: upper side)

#74 A2 BASSCO (Flute: upper side)

#74 A16 'BS*FL (Flute: upper side)

#74 A20 FLUTDR (Flute: upper side + Drum)

#74 A18 FLAUTO (Traverso)

#77 A17 BASFL (Bass Flute)

#78 A24 EXFL P (Japanese Shakuhachi flute + Pedal Modulation)

#81 B30 BARO (Square Wave: hollow sound)

#81 B31 'LFO74 (LFO modulated SQUARE Synth Sound)

#81+ B37 'TUNY (Sine Wave: reversed keyboard scale)

#84 B20 POWER (Dual Lead Synthesizer Sound)

#88 A10 'DESUZ (Bass & Lead)

#100 A36 ETERIC (Atmosphere)

#101 B9 REPSYN (Brightness Effect)

#102 B15 HORSY (Synth Sound Effect)

#103 A38 SINEN (Echo Drops)

#105 A24 'INDIA (Ethnic Indian Tabla + Sharadiya-Vina Lute)

#108 A30 PIM75 (Arabic Lute)

#109 B38 'OBSES (Ethnic Pygmies Music)

#126 B36 NOISY (groovy Drum Noise)

#113 B29 'CLAWY (Bell Toy instrument)

#116 A21 CASTJ (Castanets)

#119 A20 FLUTDR (Drumnoise: left side)