

Transmission Data:

1001nnnn 0kkkkkkk 0vvvvvvv	Key ON/Channel Number (n=0..15;Channel=1..16) Key Number (k=36;C1 - k=96;C6) Velocity (v=0;Key OFF, v=1..127;ppp..fff)
1011nnnn 0ccccccc 0vvvvvvv c = 1 c = 7 c = 64	Control Change/Channel Control number Control value Modulation (v=0;OFF, v=127;ON) Pedal volume (v=0..127) Sustain foot switch (v=0;OFF, v=127;ON)
1100nnnn 0pppppppp	Sound change/Channel Soundnumber (p=0..95;Sound=1..96)
1101nnnn 0vvvvvvv	After touch/Channel Touch value (v=0..127)
1110nnnn 0vvvvvvv 0vvvvvvv	Pitch bender/Channel value LSB value MSB (v(LSB)=00;v(MSB)=64;centre)

Reception Data:

1000nnnn 0kkkkkkk 0vvvvvvv	Key OFF/Channel Key number Velocity (ignored)
1001nnnn 0kkkkkkk 0vvvvvvv	Key ON/Channel Key number Velocity (v=0;Key OFF, v=1..127;ppp..fff)
1011nnnn 0ccccccc 0vvvvvvv c = 1 c = 7 c = 64	Control change/Channel Control number Control value Modulation (v=16;OFF, v=16;ON) Pedal volume (v=0..127) Sustain foot switch (v=0;OFF, v=127;ON)
1100nnnn 0pppppppp	Sound & Performance change/Channel Sound number (p=0..95;Sound=1..96) Performance number (p=96..111;Performance=1..16)
1101nnnn 0vvvvvvv	After touch/Channel Touch value (v=0..127)
1110nnnn 0vvvvvvv 0vvvvvvv	Pitch bender/Channel value LSB (Bits 0..5 ignored) value MSB (v(LSB)=00;v(MSB)=64;centre)

FORMAT:

11110000	STATUS
0iiiiiii	Identification Number (ELKA=47)
0ffffnnnn	Function/Channel
0cccccccc	Synthi-Code
0pppppppp	Parameter or Parameter group
0ddddddd	DATA)
(	)
((	)
((	)
((	0ssssssss Checksum))
11110111	EOT (End of Transmission)

- 1) Function (-fff...) 4 = Sound Parameter group write
5 = Sound Parameter group Dump-Request
6 = Performance-register change
- 2) Syst.excl. Channel (-...nnnn) 0..15 = Channel of first Split
- 3) Synthi-Code (-cccccccc) 0..127 = ELKA-Synthi-Number
6 = EK22/EM22
- 4) Parameter (-pppppppp) 64..95 = Sound number (f=4)
or 0..127 = Sound number (f=5)
or 0..15 = Perf. register (f=6)
- 5) Data (-ddddddd) 0..127 = Value or ASCII
- 6) Checksum (-ssssssss) 0..127 = Modulo 128 Sum of all Data-Bytes

System exclusive Functions cont.

Transmission Data:

11110000	STATUS / Performance register change
0iiiiiii	(i=47)
0ffffnnnn	(f=6, n=0)
0cccccccc	(c=6)
0pppppppp	(p=0..15; Performance register 1..16)
11110111	EOT

11110000	STATUS / Sound parameter dump
0iiiiiii	(i=47)
0ffffnnnn	(f=4, n= see Syst.excl.FORMAT)
0cccccccc	(c=6)
0pppppppp	(p=0..95; Sound intern, p=96..127; Sound cartridge)
0ddddddd	(d=0..127; Data)

Data bytes see Table I

0ssssssss	(s= see Syst.excl.FORMAT)
11110111	EOT

Reception Data:

11110000	STATUS / Performance register change
0iiiiiii	(i=47)
0ffffnnn	(f=6, n=ignored)
0ccccccc	(c=ignored)
0pppppppp	(p=0..15; Performance register 1..16)
11110111	EOT
11110000	STATUS / Sound parameter dump-request
0iiiiiii	(i=47)
0ffffnnn	(f=5, n= see Syst.excl.FORMAT)
0ccccccc	(c= see Syst.excl.FORMAT)
0pppppppp	(p=0..95; Sound intern, p=96..127; Sound cartridge)
11110111	EOT (Transmission begins after reception of EOT)
	(Transmission format see syst. excl. transmission data)

Reception of the performance parameter dump and sound parameter dump is of the same format as transmission (see Syst. excl. transmission data)

(Sound parameter dump permitted only on p=64..95; Sound 65..96)

TABLE 1 - Preset Parameters

1	0..63		DCO1 WFA SQ
2	0..15		DCO1 WFB SW
3	0..31		DCO1 WFA LFO PWM
4	0..127		DCO1 VIB LFO DEP
5	0..3		DCO1 RN 16842
6	0..15		DCO1 TUNE S/TONE
7	0..1		DCO1 TUNE P. ENV: E1/E2
8	0..2		DCO1 P. ENV: POLTY
9	0..127		DCO1 P. ENV: DEPTH
10	0..3		DCO2 WAV/NS1/NS2
11	0..63		DCO2 WFA SQ
12	0..15		DCO2 WFB SQ
13	0..31		DCO2 WFA LFO PWM
14	0..127		DCO2 VIB LFO DEP
15	0..3		DCO2 RN 16842
16	0..15		DCO2 TUNE S/TONE
17	0..31		DETUNE
18	0..1		DCO2 P. ENV: E1/E2
19	0..2		DCO2 P. ENV: POLTY
20	0..127		DCO2 P. ENV: DEPTH
21	0..1		DCO SYNC OFF=0
22	0..127		DCO XMOD CUTOFF
23	0..127		DCO BALANCE
24	0..1		DCO ENV BAL 1/2
25	0..1		DCO ENV BAL POL
26	0..127		DCO ENV BAL DEP
27	0..7		DCO ENV BAL KVS
28	0..3		LFO SI SW SQ RND
29	0..127		LFO FREQUENCY
30	0..127		LFO DELAY TIME
31	0..127		LFO 2nd TCH DEP
32	0..127		ENV1 ATTACK a
33	0..127		ENV1 DECAY 1 d1
34	0..127		ENV1 BREAKPNT
35	0..127		ENV1 DECAY 2 d2
36	0..127		ENV1 SUSTAIN s
37	0..127		ENV1 RELEASE r
38	0..7		ENV1 ATTACK KVS
39	0..3		ENV1 KEY FOL[TR]
40	0..127		ENV2 ATTACK a
41	0..127		ENV2 DECAY 1 d1
42	0..127		ENV2 BREAKPNT
43	0..127		ENV2 DECAY 2 d2
44	0..127		ENV2 SUSTAIN s
45	0..127		ENV2 RELEASE r
46	0..7		ENV2 ATTACK KVS
47	0..3		ENV2 KEY FOL[TR]
48	0..3		CHORUS OFF/1/2
49	0..7		VCA ENV1: KVS
50	0..127		VCA LFO MOD DEP
51	0..31		VCA VOLUME
52	0..127		VCF CUTOFF
53	0..127		VCF RESONANCE
54	0..127		KEY VCF FOLLOW
55	0..127		VCF LFO MOD DEP
56	0..1		VCF ENV1/ENV2
57	0..1		VCF ENV: POLARITY
58	0..127		VCF ENV: LEVEL
59	0..7		VCF KEY VEL SENS
60	0..31		VCF 2nd TCH SENS
61	0		must be 0
62	0		must be 0
63	0		must be 0
64	0..9	A..Z	NAME 1" ch.
65	0..9	A..Z	NAME 2" ch.
66	0..9	A..Z	NAME 3" ch.
67	0..9	A..Z	NAME 4" ch.
68	0..9	A..Z	NAME 5" ch.
69	0..9	A..Z	NAME 6" ch.
70	0..9	A..Z	NAME 7" ch.
71	0..9	A..Z	NAME 8" ch.
72	0..9	A..Z	NAME 9" ch.
73	0..9	A..Z	NAME 10" ch.
74	0		must be 0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Channel	1-16 1-16	1-16 1-16	Memorized
Mode	Default Messages Altered	3 0 0	0	Memorized in Performance Registration
Note Number	True Voice	36-96 36-108	36-108 36-108	
Velocity	Note ON Note OFF	X 0	X 0	
After Touch	Key's Ch's	X	X	
Pitch Bender		X	X	
Control Change	1 Modulation 7 Main Volume (Pedal)	X X	X X	
	64 Sustain Pedal	X	X	
Prog Change	True*	Ø....95	Ø....95	
System Exclusive		X	X	
System Common	:Song Pos :Song Sel :Tune	0 0 0	0 0 0	
System Real Time	:Clock :Commands	0	0	
Aux Mes-sages	:Local ON/OFF :All Notes Off :Active Sense :Reset	0 0 X 0	0 0 X 0	
Notes				

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 3: OMNI OFF, MONO

X: Yes
0: No