Parameter HOAX3-Firmware ab Version #3.21

Kommunikation mit serieller TTL-Schnittstelle PL3 (bzw. PL2 bei HOAX1) - für RS-232 Pegelwandler oder USB-Adapter FTDI TTL-232R-5V verwenden!
Schnittstellen-Parameter: 57600 Bd, 8n1. Backspace (#8) löscht letztes Zeichen aus dem Befehlszeilenpuffer, andere Control-Zeichen werden ignoriert.
HOAX liefert kein Echo, bei einem Terminal-Programm deshalb ggf. lokales Echo einstellen. Nur ein Befehl pro Zeile. Befehle werden erst nach dem Empfang von CR oder CR/LF verarbeitet.
Lässt man bei Ausgabe-Befehlen das "!" weg, erfolgt keine Ausgabe des "#0:255=0 [OK]" Prompts (vermindert Datenmenge bei kritischen Anwendungen)
Werte werden nur dauerhaft (im EEPROM) gespeichert, wenn dem Befehl unmittelbar eine Schreibfreigabe mit WEN=1 vorangeht!
Serial communication (PL26) at 57600 Bd, 8n1 - use USB adaptor cable FTDI TTL-232R 5V
Each command/request may be given by SubCh or Mnemonic plus offset (if available).
Examples separated by comma. Each command/request must be terminated by <CR> (ASCII 13).
Values will be stored in non-volatile EEPROM if preceeded by WEN=1 command

Allgemein

Mnem.	Argument	SubCh	Range	Example	Example Resonse	Factory Default	Remarks
IDN	--	254		IDN?	#0:255=1.74 [HOAX ...]		Identify, Serial Number
STR**	--	255		STR?, 255?	#0:255=0 [OK]		Status Request
ERC	--	251	Integer	ERC?	#0:251=0		Error Counter Read
WEN	--	250	0..1	WEN=1!, 0:250=1!, WEN=1, 250=1	#0:255=16 [OK]		**EEPROM Write Enable, store next param permanently to EEPROM (non-volatile)**
RST	--	9999		RST, 9999?	(Reboot)		System Reset, reboot
	--	9998	--	9998?			Reload all params

Parameter Table Live Upper/Lower

Mnem.	Argument	SubCh	Range	Example	Example Resonse	Remarks
VAL**	0..3**	0..3	LongInt	VAL 0?, 0:7?	#0:2=0.0	FPGA Register direct access from HOAX-Core, raw values, for debug use. VAL 3 yields FPGA date code like [$24012011]
VAL*	4..249*	0..127	LongInt	16?	#0:16=255	FPGA Register direct access to HOAX-Core, raw values (may be overwritten by firmware) - see note at bottom
VAL**	2**	2	LongInt			Letzter empfangener MIDI-Befehl aus FIFO, 3 Bytes CMD, DB1, DB2
…		0..9999	verschiede	16?, 999, 300, 305=44	#0:16=255	allg. Form <SubCh>=<wert> für Zuweisung oder <SubCh>? für Abfrage
		400..408	0..127			**Parameter Table Upper Drawbars**
		409	0..5	409?, 409=3	#0:409=3	**Parameter Table Upper, 9=Vibrato-Knopf-Position 0 bis 5 (6 Stellungen V1, C1, V2, C2, V3, C3)**
		410	0..1			**Parameter Table Vibrato On Upper, Wert 0=OFF, 1=ON**
		411	0..2			**Parameter Table Percussion SelectTab, Wert 0=OFF, 1=2nd, 2=3rd**
		412	0..1			**Parameter Table Percussion LengthTab, Wert 0=Short, 1=Long**
		413	0..1			**Parameter Table Percussion VolumeTab, Wert 0=Soft, 1=Normal**
		416..424	0..127			**Parameter Table Lower Drawbars**
		425..426	0..127			**Parameter Table Bass, Argument/SubCh: 0=Bass 16', 1=Bass 5 1/3', 2=Bass 8'**
		428	0..127			**Parameter Table Bass Sustain**
		429	0..1			**Parameter Table Vibrato On Lower, Wert 0=OFF, 1=ON**
		430				Parameter Table SplitOpt, 0=OFF, 1=Lower To Upper, 2=Bass To Upper, 3=Bass To Lower - nur bei bestimmten Scan-Boards!

Preset/Program Change

Mnem.	Argument	SubCh	Range	Example	Example Resonse	Remarks
		350	0..15	350=4		**Program/Preset Change Upper**
		351	0..15			**Program/Preset Change Upper**
		352	0..3	352=3!		**EFX Change (Reverb-Stufe)**

Parameter Table Organ Defaults

Commands preceeded by WEN=1 will be non-volatile

Mnem.	Argument	SubCh	Range	Example	Example Resonse	Default	Remarks
VAL		500	0..15	500=0		0	Parameter Table Default Preset Lower
...		501	0..15	501=0		0	Parameter Table Default Preset Upper
		502	Byte	502=14		29	Parameter Table Defaults Vib1 amplitude modulation depth
		503	Byte			55	Parameter Table Defaults Vib2 amplitude modulation depth
		504	Byte			95	Parameter Table Defaults Vib3 amplitude modulation depth
		505	Byte	505=17		70	Parameter Table Defaults Vib1 phase/frequ modulation depth
		506	Byte			120	Parameter Table Defaults Vib2 phase/frequ modulation depth
		507	Byte			180	Parameter Table Defaults Vib3 phase/frequ modulation depth
		508	Byte			167	Parameter Table Defaults ChorusDryMix
		509	Byte			154	Parameter Table Defaults ChorusVibMix (wet)
		510	Byte			2	Parameter Table Defaults MIDI Option, 0=Thru, 1=Send, 2=Merge/Receive
		511	0..15			0	**Parameter Table Defaults MIDI cannel 0..15 (i.e. channel 1..16)**
		512	0..63			180	Parameter Table Defaults PercNormalLevel
		513	0..64			88	Parameter Table Defaults PercSoftLevel
		514	Byte			11	Parameter Table Defaults PercLongTimer
		515	Byte			35	Parameter Table Defaults PercShrtTimer
		516	0..15	516=7		7	Parameter Table Defaults Flutter

	517	0..3		2	Parameter Table Defaults Leakage (0 minimal, 3 maximal)
	518	0..1		0	Parameter Table Defaults Vintage ("alte Kondensatoren")
	519	0..31	519=6		Parameter Table Defaults Scan Core Select, 0 = Chained OrganScan61, 1 = MIDI receive, 2 = FatarScan2, 3 = OrganScan16/Bass parallel 44 Tasten, 4 = OrganScan16/Bass parallel 49 Tasten, 5 = OrganScan16/Bass parallel 61 Tasten, 6 = Test-Routine, 7 = OptoScan by Gerrit. Wird nur bei Reboot/reset mit 9999 übernommen!
	520	Byte		0	Parameter Table Defaults ScanOpt, je nach PicoBlaze-Scan-Routine, Default 4014-SR an AUXPORT (=0), SCANPORT (=1) oder einmanualig an SCANPORT (=2, für HOAX1), Default Fatar an SCANPORT mit Basspedal an AUXPORT (=0), ohne Basspedal (=1)
	521	Byte		0	Parameter Table Defaults AuxOption, Local controllers DISABLED when "1"
	522	Boolean	522=255	255	**Swell Pot Enable**
	523	Byte		220	Swell value if pot disabled
	524	Boolean	524=0	0	**Tone Pot Enable**
	525	0..127		50	Tone Pot value if TonePot disabled
	526	0..127		63	AO28 Preamp Lowpass 125 Hz Equalizer Bass
	527	Boolean		255	**Disable 1' on Percussion**
	528	Boolean	528=255	0	**Disable 16' Foldback on lowest octave**
	529	Boolean	529=0	0	Relais port invert mask (Leslie Interface)
	530	0..3		2	Default reverb program
	531	Byte	531=1	0	**MIDI CC set: 0=NI B4, 1=Voce, 2=Hamichord, 3=Hammond**

Parameter Table Leslie Defaults

Commands preceeded by WEN=1 will be non-volatile

Mnem.	Argument	SubCh	Range	Example	Default	Remarks
		600..631	Byte	602=75		Parameter table Leslie level, FM and AM
		602	Byte		129	Horn Phase 1 FM
		603	Byte		60	Horn Phase 2 FM
		604	Byte		124	Horn Phase 3 FM
		605	Byte		47	Horn Phase 2 Level
		606	Byte		147	Horn Phase 3 Level
		607	Byte		101	Horn Phase 1 Level
		608	Byte		170	Horn 2 kHz Highpass Filter AM
		609	Byte		4	Triode k2 distortion
		611	Byte		25	Initial 147 Amp level (Leslie volume)
		618	Byte		135	Rotor Phase 1 FM
		619	Byte		120	Rotor Phase 2 FM
		620	Byte			not used
		621	Byte		113	Rotor Phase 1 Level
		622	Byte		93	Rotor Phase 2 Level
		623	Byte		85	Rotor Dry Level, bypass non-modulated
		624	Byte		55	Rotor AM
		640..655	Byte			Parameter Tabelle Leslie Timers/Speeds
		642	Byte		16	Horn Speed Slow
		643	Byte		14	Rotor Speed Slow
		644	Byte		138	Horn Speed Fast
		645	Byte		129	Rotor Speed Fast
		646	Byte		4	Horn Ramp Up
		647	Byte		20	Rotor Ramp Up
		648	Byte		3	Horn Ramp Down
		649	Byte		25	Rotor Ramp Down
		650	Byte		255	Amp 122 Volume Potentiometer Enable
		651	Byte		70	Amp 122 Fixed Volume if disabled
		652	Byte		0	not used (was Bass on Leslie on pre 3.0 Firmware)
		660..691	Integer		0	Parameter table Leslie equalizer
		660	Integer		0	Horn Filter replaced by FIR, params no longer used
		661	Integer		0	Horn Filter replaced by FIR, params no longer used
		662	Integer		0	Horn Filter replaced by FIR, params no longer used
		663	Integer		0	Horn Filter replaced by FIR, params no longer used
		664	Integer		0	Horn Filter replaced by FIR, params no longer used
		665	Integer		0	Horn Filter replaced by FIR, params no longer used
		666	Integer		0	Horn Filter replaced by FIR, params no longer used
		667	Integer		0	Horn Filter replaced by FIR, params no longer used
		668	Integer		0	Horn Filter replaced by FIR, params no longer used
		676	Integer		19	Rotor Bandpass 0 Frequenz
		677	Integer		32	Rotor Bandpass 1 Dämpfung/Güte
		678	Integer		130	Rotor Bandpass 1 Pegel
		679	Integer		103	Rotor Bandpass 1 Frequenz
		680	Integer		55	Rotor Bandpass 1 Dämpfung/Güte
		681	Integer		18	Rotor Bandpass 1 Pegel
		682	Integer		87	Horn Throb (AM) frequency
		683	Integer		109	Horn Throb (AM) damping
		684	Integer		0	Horn Throb (AM) min. level

		685	Integer		200	Crossover frequency
		686	Integer		137	Crossover damping
		687	Integer		115	Crossover level

Parameter Table EFX/Reverb Defaults

Commands preceeded by WEN=1 will be non-volatile

Mnem.	Argument	SubCh	Range	Example	Default	Remarks
		700..715	Byte			Parameter table 4 effect programs DSP, 3 analog values 0..255 and FV-1 program number 0..7
		700..703	Byte		0	not used (Reverb OFF)
		704	Byte		86	PWM Pot 0 FV-1 (Reverb 1)
		705	Byte		0	PWM Pot 1 FV-1
		706	Byte		135	PWM Pot 2 FV-1 (Reverb Output Level)
		707	Byte		1	FV-1 Program number
		708	Byte		0	PWM Pot 0 FV-1 (Reverb 2)
		709	Byte		0	PWM Pot 1 FV-1
		710	Byte		172	PWM Pot 2 FV-1 (Reverb Output Level)
		711	Byte		3	FV-1 Program number
		712	Byte		91	PWM Pot 0 FV-1 (Reverb 3)
		713	Byte		31	PWM Pot 1 FV-1
		714	Byte		205	PWM Pot 2 FV-1 (Reverb Output Level)
		715	Byte		3	FV-1 Program number

Various, Communication

Mnem.	Argument	SubCh	Range	Example	Example Resonse		Remarks
		998**		998?			**MIDI Lockout Status, 0 = user panel ON, 1 = user panel OFF when controlled by MIDI CC**
		999	0..1	999=1, 999?		0	**Local Lockout, 0 = user panel ON, 1 = user panel OFF for remote control by serial interface**
		300..323**	--	300?	#0:723=232		ADC read values raw, 24 analog inputs
		324**					Bitkombination Bedienelemente PL07 direkt lesen
		325**					Bitkombination Bedienelemente PL11 direkt lesen
		326**					Bitkombination Bedienelemente PL05 direkt lesen
		327**					Bitkombination Bedienelemente PL08 direkt lesen
		328**					Bitkombination Bedienelemente PL12 direkt lesen
		1000..1255					Upper Preset Table Bulk, je 16 Werte pro Preset
		1256..1511					Lower Preset Table Bulk, je 16 Werte pro Preset

Mit Vorsicht verwenden - FPGA-Konfiguration kann hierdurch unbrauchbar werden! *Caution! Imprudent use of following commands may render FPGA configuration useless!*

DFP	0..1	9900, 9901		DFP = 4!		PB core config, 9901 = with serial output for debug use
DFC	--	9910	--	DFC?		DataFlash Config, FPGA Reconfiguration from DataFlash
DFS	--	9920		DFS?, DFS=0!		Read DataFlash status or DataFlash write enable mit "DFS=0!" (set write protect OFF)
DFX	0..1	9930, 9931		DFX = 0, DFX 1=3!	XMODEM-Anford.	DataFlash FPGA config (Ar.g=0, absolute block number given by parameter) or PB core (Arg.=1, relative block number/CoreSel after FPGA config data) by XMODEM128 (checksum) receive
DFE	0..2	9940..9942		DFE 2=0		DataFlash Erase, Arg. 0 = without offset, 1 = block after FPGA config data, 2 = chip erase (will erase scan cores as well!)
SFX		9960		SFX=10		SPIN EEPROM Config from Flash Core Block

Commands preceeded by WEN=1 will be non-volatile

KEY	0	9950		9950=1234567, 9950?		**enter/request licence code for organ**
KEY	1	9951		9951=7654321		**enter/request licence code for Leslie**

Legende ***write only** **** read only**

Factory Defaults may change without notice!

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