

MultiCam FlashRam H971-r4b/J930-r2 Control Boards

Parameter Number Locations (28/Jun/2001)

Type Key
 F = Floating point #
 I = Integer
 (Floating Point #'s, Integers, & Strings)

Description	Param#	Type	Init Link	Settings & Comments
X-Axis Resolution	1	F		
Y-Axis Resolution	2	F		
Z-Axis Resolution	3	F		
Theta Axis Resolution	4	F		
X-Axis Negative Stroke	5	F		Negative Distance from X-Axis Limit Offset.
Y-Axis Negative Stroke	6	F		Negative Distance from Y-Axis Limit Offset.
Z-Axis Negative Stroke	7	F		Negative Distance from Z-Axis Limit Offset.
	8			
X-Axis Table Size	9	F		Positive Travel Distance from X-Axis Limit Offset
Y-Axis Table Size	10	F		Positive Travel Distance from Y-Axis Limit Offset
Z-Axis Stroke Size	11	F		Positive Travel Distance from Z-Axis Limit Offset
	12			
X-Axis Limit Offset	13	F		
Y-Axis Limit Offset	14	F		
Z-Axis Limit Offset	15	F		
Theta-Axis Origin Offset	16	F		
X-Axis Limit Seek Speed	17	F		Homing Speed X-Axis. (Loc#170=Y-Axis)
X-Axis Back Off Speed	18	F		Homing Speed X-Axis. (Loc#171=Y-Axis)
Z-Axis Limit Seek Speed	19	F		Homing Speed Z-Axis.
Z-Axis Limit Off Speed	20	F		Homing Speed Z-Axis.
Use Step Delay	21	I		(1)Stepper (0)Servo

Arc Set Res	22	F	set_res	Default .001
XSQUARE Value	23	F	XSQUARE	
CYCLE START Mode	24	I		(0)Auto (1)Keypad (2)Input
Vertex Angle	25	F	set_vertex_angles	0.0 to 1.0
Dual X-Axis Mode	26	I	DUALX?	(0)Single (1)Dual
Limit Mask (<i>Limit Sseeked</i>)	27	I	LIMIT_MASK	(0)No Limits (13)Single X (15)STD (95)Y-Ovr (143)ATC **See Below**
<i>Limit Mask Bit Values</i>	<i>Add Limit Numbers That Are Used</i>			(1)XA (2)XB (4)Y (8)Z1 (16)Z2 (32)Z3 (64)Y-Ovr (128)ATC Home
Number of AXIS	28	I	NUM_AXIS	(3)Std (4)Servo\Knife
	29			
Limit Mask 2	30	I		Sets Mask for Servo Fault, Inverter Fault and CE Safety.
Head #1 Depth	31	F		
Head #2 Depth	32	F		
Head #3 Depth	33x	F		Removed 9/15/2000
	34			
Device On Delay (ms)	35	I	PENDOWN_DELAY	Set to 0 to increase plunge time. No dwell for mister.
Device Off Delay (ms)	36	I	PENUP_DELAY	Set to 0 to increase plunge time. No dwell for mister.
Default Cutspeed		F	XYDN_FEED	
	38	F	ZDN_FEED	
	39	F	ZUP_FEED	
Tool Lift Distance	40	F	Z_LIFT	
Feedrate Factor	41	F	TIMESCALE	(1.0)Inches/sec (60.0)Inches/min
X-Axis Soft Home	42	F	X_HOME	Saved X-Axis Soft Home (Automatically Stored)
Y-Axis Soft Home	43	F	Y_HOME	Saved Y-Axis Soft Home (Automatically Stored)
Knife Min Radius F	44	F	knife_init	
Knife Closeness	45	F	knife_radius	
Knife Max Angle	46	F	knife_max_angle(degrees)	
Default Spindle Speed	47	I		RPM
Minimum Spindle Speed	48	I		RPM

Maximum Spindle Speed	49	I		RPM
Spindle Delay (ms)	50	I	SPINDLE_DELAY	(Milliseconds)
Solenoid Delay (ms)	51	I	AUX_DELAY	(Milliseconds)
Extruder/Mister Bit	52	I	EM_BITS	Each tool is a bit. (0)Top On (1)Bottom On
Pause Lift Disable	53	I	P_LIFT_DISABLE	(0)Lift (1)Disable Lift
Slew Speed	54x	F	XYUP_FEED X,Y	Speed used in Slew Mode. (Replaced By #100 & 101.)
Z-Axis Device Bit	55	I	ZAXIS?	(1)Standard <i>(Only Bit used on H971/J930 Controllers.)</i>
Arrows Direction Bit	56	I	set_xy_mode	(1)Side Mount (2)Front Mount
Setup Units	57	I	UNITS	(0)Inch (1)MM (2)CM
Slew Accel	58	F	XYUP_ACCEL	Acceleration used in Slew Mode.
Pendant Comm Type KDM #	59	I	kdm_init	(2)Serial (5)Parallel (20)TwoTech[Handheld]
Self Test Mode	60	I	SELF_TEST_MODE	(1)Keypad (2)Motion (4)Origin (8)Surface Block
SelfTest Origin Accuracy	61	F	ALLOWED_ERROR	Allowed Self Test Accuracy.
	62	I		
Feedrate Override Knob	63	I	FEEDOVER?/set_override	(0)Disable (1)Enable
ATC Air Blast Height	64	F		For cone blowoff.
# of Z AXIS's Heads	65	I	NUM_Z_HEADS	Does not include Drills or AUX Heads.
	66			
Reverse Delay	67	I	set_reverse_delay	
Restart Tolerance	68	F	restart_cmd	Proximity Restart Tolerance.
Boot Mode	69	I	BOOT_MODE	(0)uCito (1)HPGL (2)CNC
	70			
ATC Tool Y Coordinate	71	F	TOOL_Y_COORD	ATC
ATC Tool Z Coordinate	72	F	TOOL_Z_COORD	ATC
	73			
ATC Tool Change Lift	74	F	PEN_CHANGE_LIFT	ATC
ATC Selection Mode	75	I		(1)Rotary (2)Linear (4)Manual
ATC Maximum Tools	76	I	ATC_MAX_TOOLS	ATC

ATC Rotor Resolution	77	F		ATC (Pulses/rev)
ATC Rotor Limit offset	78	F		ATC (Pulses/rev)
	79			
Spindle2 X-Axis Offset	80	F		
Spindle2 Y-Axis Offset	81	F		
Spindle3 X-Axis Offset	82x	F		Removed 9/15/2000
Spindle3 Y-Axis Offset	83x	F		Removed 9/15/2000
Gang Drill X-Axis Tool Offset	84	F		Drill offset from Drill #1.
Gang Drill Y-Axis Tool Offset	85	F		Drill offset from Drill #1.
Drill-1 X-Axis Offset	86	F		
Drill-1 Y-Axis Offset	87	F		
Drill-2 X-Axis Offset	88	F		
Drill-2 Y-Axis Offset	89	F		
	90			
	91			
Cal. Block X-Axis Coordinate	92	F	CAL_BASE	(ATC) X-Axis Calibration Block Location.
Cal. Block Y-Axis Coordinate	93	F		(ATC) Y-Axis Calibration Block Location.
Pulse Jog Distance	94	F		Jogging key distance (single press).
Surface Block Seek Speed	95	F	ZCAL_FEED	Surface/Calibration Block Seek Speed (Z-Axis).
Surface Block Thickness	96	F	SB_THICKNESS	
Surface Block Enable Bit	97	I	SURFACE_BLOCK?	(0)Disable (1)Enable
Surface Block Input Location	98	I	SURFACE_BIT	(2)H5 Pin 2 (32)H5 Pin 6 {H23 ONLY}
Drill Input Delay	99	I		Noise delay filter time.
X-Axis Slew Speed	100	F	X_MAX	X-Axis Max Slew Velocity. Replaces #54 (Added LDR v4.43)
Y-Axis Slew Speed	101	F	Y_MAX	X-Axis Max Slew Velocity. Replaces #54 (Added LDR v4.43)
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	103			

	104			
	105			
X-Axis Tool Change Offset	106	F	X_ATC_OFFSET	(ATC) X-Axis Distance From Tool Location.
Y-Axis Tool Change Offset	107	F	Y_ATC_OFFSET	(ATC) Y-Axis Distance From Tool Location.
Tool Blast Delay	108	I		Delay for Tool Blast (0 for HSD Spindles)
No Spindle Spin Location	109	I		Set to a tool number for no spin. (For pen holder and ATC)
	110			
	111			
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	119			
Auto Job File #1	120	String		The File Name Used for Job1 with Auto Job Module.
Auto Job File #2	121	String		The File Name Used for Job2 with Auto Job Module.
Enable Global Home 6-9	122	I		Enable Recording Global Home for Homes 6 - 9 w/Z-Surface set.
	123			
	124			
	125			
Check Chuck	126	I	Chuck Sensor Installed?	(0)Not Installed (1)Installed
Retractable ATC Carousel	127	I	ATC_MT?	(0)No (1)Yes Moving ATC Carousel, Retract / Extend.
Retractable ATC Delay	128	I		Delay when retracting MT ATC Carousel (Milliseconds)
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ATC Rotor Min Velocity	140	F		Rate parameters for the ATC Rotor
ATC Rotor Max Velocity	141	F		Rate parameters for the ATC Rotor
ATC Rotor Accel	142	F		Rate parameters for the ATC Rotor
ATC Rotor Vertex Accel	143	F		Rate parameters for the ATC Rotor
Spindle Off Delay	144	I	SPINDLE_OFF_DELAY	Ramp Down Time for ATC Spindle before TC(Loc50 RampUp)
Spindle Sensor?	145	I	SPINDLE_SENSOR?	(0)No Sensor (1)Sensor Present. (Input on X-Axis OvrTrvl limit).
Knife Wrap Min Angle(Degs)	146	F		Max - Min must be > 448 degrees. (N/A On J930 Controllers)
Knife Wrap Max Angle(Degs)	147	F		Max - Min must be > 448 degrees. (N/A On J930 Controllers)
Plasma Cutter	148	I	PLASMA?	(0)No Plasma (1)Plasma Cutter. (Added v1.57)
Gang Drill Installed	149	I		(0)Not Installed (1)Installed
Gang Drill Tool Length	150-159	F		Individual Gang Drill Tool Lengths
Gang Drill Bank Lower Delay	160	I		Delay to Lower Drill Bank (Milliseconds)
Gang Drill Tool Fire Delay	161	I		Delay for each Drill Tool to Fire. (Milliseconds)
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Y-Axis Limit Seek Speed	170	F		Homing Speed Y-Axis. (Added v1.52)
Y-Axis Limit Back Off Speed	171	F		Homing Speed Y-Axis. (Added v1.52)
Device to Turn on at Power-up	172	I		Must be 0 to 32. (0)No Device. (Added LDR v1.68)
Knife Up Delay	173	I		Milliseconds. (Added KNF v1.14)(N/A On J930 Controllers)
Knife Down Delay	174	I		Milliseconds. (Added KNF v1.14)(N/A On J930 Controllers)
Number of Drills	175	I		(Added HLDR v1.76)
Spindle Ready Input?	176	I	NO_SPINDLE_READY?	(0)Use Input (1)Don't Use Input. (Added LDR v1.84)
Number of Aux. Heads	177	I		Gang Drills. (Added LDR 1.93)
Knife Tool 99 Enable/Disable	178	I	99Option	(1)Allow Tool 99 to Enable/Disable Knife. (Added KNF v1.25)
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	188			
	189			
Open Chuck Delay	190	I		Milliseconds - For ATC.
Open Dust Collector Delay	191	I		Milliseconds - Delay to allow Dust Collector to open.
Linear Prestage Distance (X-Axis)	192	F		Added so the Linear ATC could be at the front of the table.
Arc Speed Factor	193	F		
Arc Work Radius	194	F		
Arc Minimum Velocity	195	F		
Mod Bus Enable	196	I		(0)Disabled (1)Enabled. (H4 Controls ONLY)

Include Start in Digitize (Gcode)	197	I		(0)Enabled (1)Disabled. Places START at the beginning of digitized files.
Auto Unload	198	I		(0)Disable (1)Enable. Doesn't unload tool at the end of a job.
	199			
Enable Pulse Doubling	200	I		(0)Disable (1)Enable. Doubles Pulse Output when Enabled.
Dust Collector Sensor?	201	I		(0)Not Installed (1)Installed
Disable Local Replay	202	I		(0)Replay Enabled (1)Disabled. Added v4.49 (10/26/00)
Enable Manual TC Command	203	I		(0)Skip (G00 C) (1)Enable Manual TC Command (G00 C)
Enable Long Filenames	205	I		(0)Disable (1)Enable. Enables long filenames on Pendant. (v4.98)
Enable Job Monitoring	206	I		(0)Disable (1)Enable. Enables Job Monitoring. (v4.98)
Drill Speed	208	I		ModBus Controlled Pneumatic Drill Speed.
Inverter Settings Spindle1	300	I		Mod Bus ONLY. Set for Type of Inverter and Spindle.
Inverter Settings Spindle2	301	I		Mod Bus ONLY. Set for Type of Inverter and Spindle.
Inverter Settings Spindle3	302	I		Mod Bus ONLY. Set for Type of Inverter and Spindle.
Inverter Settings Spindle4	303	I		Mod Bus ONLY. Set for Type of Inverter and Spindle.
Inverter Settings Spindle1 Head3	304	I		Mod Bus ONLY. Set for Type of Inverter and Spindle. Head3 Only
X&Y Axis Programmed Home	310-329	F		X & Y Axis Programmed Home locations.
Saved Z-Axis Location	330-339	F		Saved Z-Axis for X/Y Programmed Homes. (Homes 6,7, & 8 Only Used)
IP Address	401	I		Controller's IP Address (Not Captured when Uploading NVRAM)
Sub Net Mask	402	I		Controller's Net Mask (Not Captured when Uploading NVRAM)
Set Receive Buffer Size	404	I		(0)16k (1)32k (2)48k . . . (Add 16 for next bit.)
Rates - Min Velocity	5x0	F	load_axis_params	Replace "x" with Axis Number Below.
Rates - Max Velocity	5x1	F	load_axis_params	Replace "x" with Axis Number Below.
Rates - Acceleration	5x2	F	load_axis_params	Replace "x" with Axis Number Below.
Rates - Vertex Acceleration B	5x3	F	load_axis_params	Replace "x" with Axis Number Below.
Rates - Max Jog Velocity	5x5	F	load_jog_params	Replace "x" with Axis Number Below.
Rates - Max Jog Acceleration	5x6	F	load_jog_params	Replace "x" with Axis Number Below.

Rates - Min Jog Velocity	5x7	F	load_jog_params	Replace "x" with Axis Number Below.
Rates - Joystick	5x8	F		Replace "x" with Axis Number Below.
Rates - Reverse Fraction	5x9	F	(0.0 to 1.0)	Replace "x" with Axis Number Below.
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Axis 0 Rates (X-Axis)	500..509	F		All rates for the X-Axis. <i>(Rates listed out Above)</i>
Axis 1 Rates (Y-Axis)	510..519	F		All rates for the Y-Axis. <i>(Rates listed out Above)</i>
Axis 2 Rates (Z-Axis)	520..529	F		All rates for the Z-Axis. <i>(Rates listed out Above)</i>
Axis 3 Rates (Theta Axis)	530..539	F		All rates for a Theta Axis if used. ** Not Available for J930. **
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X Tool Location	700-709	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Y Tool Location	710-719	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Z Tool Location	720-729	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Tool Calibration (Tool Lengths)	730-739	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Maximum RPM for Tool	740-749	I		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Tool Comp Values	750-759	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
X Pre-Stage area	760	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Y Pre-Stage area	761	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Z Tool Blast height	762	F		Special Tools (Tool Numbers 51-60). Added v4.48 (10/17/00)
Minimum Z Lift under Dust Hood	765	F		
Minimum Z Lift under Gantry	766	F		
Individual X_Axis Prestage	770-779	F		Special Tools (Tool Numbers 51-60). Added v4.97 (05/14/01)
Individual Y_Axis Prestage	780-789	F		Special Tools (Tool Numbers 51-60). Added v4.97 (05/14/01)
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Tool Length Offset Z-Axis (ATC)	800-849	F		Calibraton for ATC Z-Axis lengths.
Tool Comp Value	850-899	F		
X-Axis Tool Change Locations	900-949	F		Linear ATC. (Previous locations 150-159)
Y-Axis Tool Change Locations	950-999	F		Linear ATC. (Previous locations 160-169)