

		6K Command	ACR Command*	Shorthand version	See Also	ACR Command Not
Scaling Setup		SCLA SCLD SCLV SCLMAS	PPU PPU PPU GEAR PPU			Requires RES after changing PPU " "
Limits		LH3,1 INFNCn-mR INFNCn-mS INFNCn-mT LHAD100,200 LS2,3 LSNEG -1: LSPOS +1 LIMLVL000 TLIM	HLIM X3 Y1 HLBIT Xn <i>no equivalent</i> <i>no equivalent</i> HLDEC X100 Y200 SLIM X2 Y3 SLM X1 SET 16144 : SET 16145 : CLR16146 ?BIT16132 ?BIT16133 ?BIT 16130			Can only assign Positive EOT. Negative and home in Negative automatically assigned as next contiguous ir Home input automatically assigned as next contiguou: Could also set differently SLM X(-10,25) Axis0 bits shown. SET and CLR bits as appropriate (I Positive EOT (bit shown is for axis0) Negative EOT Home Input
Homing		HOMZ HOM0 HOM1 HOMVF HOMA HOMAA/HOMADA HOMAD HOMBAC1 HOMDF1 HOMEDG1 PSET	MSEEK JOG HOME X1 JOG HOME X-1 MSEEK JOG HOMVF JOG ACC JOG JRK JOG DEC SET16152 SET16154 SET16153 RES REN		JOG RES, GEAR RES, CAM RES JOG REN	Home to a z-channel (mode 0) ACR90x0 only command ACR90x0 only command Home to a trigger input (mode 2) Home Backup Enable bit must be on (BIT 16152) Use to reset or preset the position counters for an axis Zeroes the Current Position (MOV) register and adds parameter
Non-Interpolated Motion	Incremental Motion	D+4:MC0:MA0:GO1 D+4,-3:MC00:MA00:GO11	JOG INC X4 JOG INC X4 Y-3		JOG ACC, JOG DEC, JOG VEL	
	Absolute Motion	D:MC0:MA1:GO1	JOG ABS X4		JOG ACC, JOG DEC, JOG VEL	Move to the JOG OFFSET register's absolute position
	Continuous Motion	D+:MC1:GO1 D-:MC1:GO1 S1	JOG FWD X JOG REV X JOG OFF X	SET 796 SET 797 CLR 796 CLR 797	JOG ACC, JOG DEC, JOG VEL	Flags shown for Axis0
Non-Interpolate Motion Trajectory		A AD V AA/ADA	JOG ACC JOG DEC JOG VEL JOG JRK		Scaled by PPU to user units/second*2 Scaled by PPU to user units/second*2 Scaled by PPU to user units/second Scaled by PPU to user units/second*3. Pure S-Curve	
Interpolated Motion		S K !K KDRIVE	SET BIT 523 SET BIT 522 CTRL-X or CTRL-Z SET BIT 8471	SET 523 SET 522 SET 8471		Flags shown for Master0. Uses DEC setting Uses no deceleration ramp. CTRL-X stops all motion for all programs , CTRL-Z aka clears KAMR bits BITS 8471, 8503, 8535, 8567, 8599, 8631, 8663, 869:
	Linear	D2,3:MC00:MA11:GOL11 D7,8:MC00:MA00:GOL11 D4,5:MC00:MA10:GOL11	MOV X2 Y3 MOV X/7 Y/8 MOV X4 Y/5	X2 Y3 X/7 Y/8 X4 Y/5		Absolute moves Incremental moves Mixed moves
	Circular 2D	PARCOM PARCOP PARCOM/PARCOP PARCM PARCP	CIRCCW CIRCW SINE <i>no equivalent</i> <i>no equivalent</i>			Counter-clockwise Clockwise
	Circular 3D	no equivalent	TARC			Axes must have same PPU
Interpolated Motion Trajectory		PA PAD	ACC DEC/STP			Scaled by PPU to user units/second*2 Scaled by PPU to user units/second*2

	6K Command	ACR Command*	Shorthand version	See Also	ACR Command Not
	PV PAA/PADA	VEL JRK		IVEL, FVEL, F	Scaled by PPU to user units/second Scaled by PPU to user units/second^3. Pure S-curve ACC**2/VEL"
<i>Interpolated Motion (cont'd)</i>	PAXES	TANG			
<i>Following</i>	FOLEN FOLMAS FOLRN FOLRD FOLMD SCLMAS FMCLEN NMCY	GEAR ON/OFF GEAR SRC GEAR RATIO GEAR RATIO GEAR ACC/DEC GEAR PPU No direct equiv. Use MOD No direct equiv.		LOCK can be used for gantry axes GEAR RATIO	Control flags may be used to control gearing GEAR RATIO sign determines direction Use ratio rather than decimal number, ex. "(1/10)" inst GEAR RATIO is a 64-bit floating point value GEAR ACC/DEC is change in ratio over time EncPos MOD PPU Can use simple division algorithm and use whole num
<i>Tuning</i>	SGP (mV) SGV (uV) SGI (mV) SGILIM (mV) SGVF (uV) SGAF (uV) DACLIM (V) TDAC DAC	PGAIN DGAIN IGAIN ILIMIT FFVEL FFACC TLM PRINT P6400 P6400	?P6400	Scale gains accordingly. All ACR gains are in volts , 6K gains are in volts, millivolts or microvolts. See Torque Mode Tuning document on "Sample Files" webpage for tuning tutorial.	PGAIN = SGP/1000 DGAIN = SGV/1e6 IGAIN = SGI/1000 ILIMIT = SGILIM/1000 FFVEL = SGVF/1e6 FFACC = SGAF/1e6 TLM = DACLIM ?Pnnnn prints the value in parameter nnnn
<i>Communications (defaults shown)</i>	NTADDR192,168,10,30 NTMASK255,255,255,0 BAUD	IP "192.168.10.40" IP MASK "255.255.255.0" uses autobaud detect		P7013, P7029	Requires ESAVE and REBOOT to take effect Use P7013 to disable autobaud detect. Example "P7 no parity, 8 data bits, 1 stop bit. ESAVE!
<i>Variables</i>	VARB1 VARI1 VARS1 VAR1 - 255 VAR1 - 255 <i>No Equivalent</i>	<i>User Flag Parameters</i> LV0 \$V0 SV0 or DV0 P0 - P4095 DIM		P4100-4104, P4156-4159	Must dimension variables first. DIM SV(10) would dir Variables start at "0" for ACR controllers. LV, SV, DV programs. Must dimension number and length of string variables ension 10 variables at 80 characters each. 32/64-BIT floating point local variables. Dimension in 64-BIT floating point global variables. Need to dimen Used at various prompts to find variables dimensione
<i>Position Counters</i>	1TPC 1TPE 1TPER !TPCE ENCPOL1 SMPER 0.25,0.33 SMPER0	?P12295 ?P12290 ?P12291 ?P12292 ENC0 MULT -4 EXC X0.25 Y0.33 CLR 8469		INTCAP, HSINT, GEAR ON/OFF TRG	"Secondary Setpoint" in raw counts. IT is the sum off and BSC Actual Position in raw counts, depends upon ENC SR Following Error in raw counts Hardware Position capture in raw counts valid values are "4" and "-4" for ACR9000. EPL axes Does not get changed when PPU changed EXC X0 does disable excess error checking
<i>Program</i>	BREAK COMMENT (:) DEL DEF END GOTO <i>label</i> GOTO <i>program</i> GOSUB <i>label</i> GOSUB <i>program</i>	END REM <i>Apostrophe (')</i> NEW PROGRAM ENDP GOTO <i>label</i> GOTO <i>line number</i> GOTO <i>label</i> GOSUB <i>label</i> GOSUB <i>label</i>		RETURN RETURN	Used to terminate program Comment is stored Comment is stripped. MUST be on it's own line in pro Automatically performed by ACR-View, not needed in Starts program definition Used to terminate program definition If using auto-numbered programs If using manual-numbered programs You cannot GOSUB to another program with ACR cor denoted by label in the same program.

	6K Command	ACR Command*	Shorthand version	See Also	ACR Command Not
<i>Program (cont'd)</i>	IF-NIF IF-NIF JUMP PASSWD PLCP RESET RETURN STEP1 STEP0 STARTP T TPROG TRACE1 TRACE0 WAIT (IN.1 = b1) WAIT (1PE > 10) WHILE NWHILE REPEAT/UNTIL	IF-THEN IF-ELSE-ENDIF No equivalent command PASSWORD PLCn REBOOT RETURN BLK AUTO PBOOT DWL LIST TRON TROFF INH 0 IHPOS P6144(10*P12375,0) WHILE WEND No equivalent command		BIT 5651 *must then LISTEN or LRUN	Use GOTO, but nesting is not destroyed. n = PLC number 0 - 7 All PROG's and PLC's can PBOOT Minimum dwell time is 1 millisecond "SET5651" to show line numbers with LIST command Use ESC key to get out of listen mode. TRON only s SET5651 then LIST program to see program line num Position values are in raw counts in ACR. Position va (P12375) before using. The ",0" denotes timeout peri
<i>Drive Commands</i>	DRIVE0 DRIVE1 <i>No equivalent</i>	DRIVE OFF X DRIVE ON X DRIVE RES X	CLR 8465 SET 8465		AXIS0 DRIVE OFF AXIS0 DRIVE ON, start EPLC first on 9030/9030 EPL <i>Axis LED: Green = Enabled, Red = Disabled and Fau.</i> AXIS0 DRIVE RES, toggles reset input on certain driv
<i>I/O Control</i>	OUT1 OUT0 OUTXXX1 OUTXXX0 TIN TIN.1 1TIN TOUT 1TOUT TOUT.1	SET 32 CLR 32 SET 35 CLR 35 ?P4096 ?BIT0 ?P4104 ?P4097 ?P4105 ?BIT32	BIT32 = 1 BIT32 = 0		Could also use P4097 = P4097 OR 1 Could also use P4097 = P4097 AND 2**31 Response is a decimal representation of binary bit pat Reports back a 0 (zero) for inactive, -1 for active input Response is a decimal representation of binary bit pat Response is a decimal representation of binary bit pat Response is a decimal representation of binary bit pat Reports back a 0 (zero) for inactive, -1 for active outp
<i>Other</i>	SSFR BAUD TREV TCOM ENCSDND0 ENCSDND1 CMDDIR EPM ANI ANO AS, ASX	PERIOD P7013 = nnnnn VER HELP ENC0 SRC0 ENC0 SRC1 ENC0 SRC2 ENC0 SRC3 SCALE PM P6408 P6400 P4120, 4168, 4296, 4360, 4600		AXISn OFF/ON ESAVE required ENC WIDTH, ENC CLOCK, ENC LIMIT, ENC WIDTH PM REN, PM SCALE, PM VEL, PM ACC, PM ON, PM OFF	Turn off unused axes to reduce DSP load P7013 = 33664 : ESAVE : REBOOT will force 38400,1 Also can use P7042 and P7043 to retrieve VER and L Shows a list of reserved words to not be used as alias Quadrature encoder mode Step and Direction encoder mode CW/CCW Encoder mode SSI Encoder mode Could also use ENC MULT and DAC GAIN together t PM REN will also set MULT command ADC object parameters DAC object parameters There are five groups of flags for ACR9000

* "P" parameters and flags will show the first axis or master flag. The others can be found in help file.