1 - Regular Menu Settings - ArcStar v1.27

Blue = Speed Green = Height Plum = Time

	Item	Remarks	Range	1.5mm / 16 Gauge Mild Steel				.37mm / .0145 Mild	
				Standard		FineCut 45A		FineCut 30A	
				Metric	Inch	Metric	Inch	Metric	Inch
0	Cut Spd	Cutting Speed		5600	220	6400	252	3800	150
	Idle Spd	Speed table moves between cuts		10000	394	10000	394	10000	394
	Simu Spd	Speed table moves during simulation mode		10000	394	10000	394	10000	394
	Fw/Bw Spd	Backward / Forward speed when cut paused		3000	118	3000	118	3000	118
	Reset Spd	Table speed when table is reset		6000	236	6000	236	6000	236
Auto	(Z) Kerf	Kerf width - (program half the chart value)		(1.4) 0.7	(.055) .028	(1.2) 0.6	(.047) .024	(0.6) 0.3	(.024) .012
	(F) CutSpdL (1)	Cut speed limit		6600	260	6400	252	3800	150
	(R) ManSpdL	Table jog speed		8000	315	8000	315	8000	315
	(V) Set Arc	Arc Voltage		128		78		69	
	(K) Locate H (initial arc strike height)	Locate Height = (Arc Transfer H) x (Cutting Height)		1.50	.06	1.50	.06	1.50	.06
Regular	Speed Limit	Maximum speed limit for any type of cutting	20 - 90000	10000	394	10000	394	10000	394
	Flame Cutting Speed Limit	Maximum speed when flame cutting	20 - 90000	7000	276	7000	276	7000	276
	Plasma Cutting Speed Limit	Maximum speed when plasma cutting	20 - 90000	10000	394	10000	394	10000	394
	Backward / Forward Speed	Backward / Forward speed when cut is paused	20 - 90000	3000	118	3000	118	3000	118
	Speed Adjustment Angle	If the angle of change between two straight segments is ≥, the maximum speed immediately between them is limited to 'Start Spd'. Acceleration and deceleration time between the segments controlled by the 'Accel / Decel' values.	0 - 90	30		30		30	
	Corner Speed Limit	If 'Corner Speed Limit' > 'Start Spd', the corner transition speed above (if triggered) is increased to a value between the two.	20 - 90000	400	16	400	16	400	16
	Climb Speed Ratio	Used when first accelerating from a pierce point. Limits speed to a % of Cut Speed for a period of time equal to 'Climb Time'.	0 - 100	40		40		40	
	Cutting Mode			Plasma		Plasma		Plasma	

(1) If CutSpdL (Regular menu) < Plasma Cutting Speed limit, the Cut Speed will be displayed at the top of the Auto menu as a %. This percentage influences the calculated 'Start Spd' and 'Circle Speed' (System menu).

2 - Plasma Menu Settings - ArcStar

Blue = Speed Green = Height Plum = Time

Item	Remarks	Range	1.5mm / 16 Gauge Mild Steel				.37mm / .0145 Mild	
			Standard		FineCut 30A		FineCut 30	
			mm	Inch	mm	Inch	mm	Inch
Mode Disable	Allows user to disable arc voltage control		○		○		○	
Set Arc Voltage	Cutting height is adjusted by inputting an arc voltage value		●		●		●	
Sample Arc Voltage	Cutting height is adjusted by sampling arc voltage		○		○		○	
Set Arc VoltageA	Arc Voltage (obtain from Hypertherm cut charts)	10 - 300	128		78		69	
Cutting HeightA	Cutting Height (obtain from Hypertherm cut charts)	0.0 - 50.0	1.500	.059	1.500	0.059	1.500	0.059
Pierce Height	Pierce Height (obtain from Hypertherm cut charts)	0.0 - 50.0	3.800	.150	3.800	0.150	3.800	0.150
Pierce Delay	Delay at pierce height before moving (obtain from Hypertherm cut charts)	0.0 - 10.0	0.2		0.4		0.0	
Skip IHS Dist	When the distance between the end point of the previous cut and the next pierce point is less than the designated value, skips locating process	0.0 - 1000.0	0.000		0.000		0.000	
Arc Transfer H (%)	(Arc Transfer H) x (Cutting Height) = Locate Height = Initial arc strike height	50 - 500	100		100		100	
Arc Check Delay	For each cut, time delay between arc failure and error message	0.0 - 20.0	1.0		1.0		1.0	
Retry Times	If arc strike fails, sets maximum number of times to retry arc strike	0 - 5	3		3		3	
Arc Strike Time	Time at Locate Height before raising to Pierce Height	0.0 - 10.0	0.2		0.2		0.0	
Melt Jump Height (%)	Percentage of Cutting Height. Used to skip over and avoid getting excess material blown back into the torch. Only active when using AVC	50 - 500	150		150		150	
AVC Delay	After torch begins to move, turning THC on is delayed for this duration	0.0 - 10.0	0.1		0.1		0.1	
Arc Break Time	During cutting, if the arc is lost for a period > this value, alarm is triggered	0.0 - 10.0	1.0		1.0		1.0	
Retraction Height	Torch retraction height between cuts (if not deactivated by 'Skip IHS Dist')	0.0 - 100.0	20.000	.787	20.000	0.787	20.000	0.787
Cutting Height Delay	Time of maintaining torch at Melt Jump Height before lowering to Cut Height	0.0 - 10.0	0.1		0.1		0.1	
Climb Time	After torch begins to move, controls how long 'Climb	0.0 - 30.0	0.0		0.0		0.3	

	Speed Ratio' is applied							
Stop / Start Time	Before / after a cut - pause time that torch remains motionless	0.0 - 30.0	0.2		0.2		0.2	
Close THC Ratio (%)	If (Cut Speed / Plasma Cutting Speed Limit:) is < this ratio, THC is deactivated	0 - 100	20		20		20	
Close THC Distance	Distance from the end point where THC is turned off	0 - 300	0.500	0.020	0.500	0.020	0.000	0.000
Close Arc Delay	After THC is deactivated, time delay of turning the arc off	0.0 - 10.0	0.0		0.0		0.0	
Locate After Pause	Causes the torch to locate the material after a pause and restart		●		●		●	
Small Circle Open THC	Disables THC on small circles		●		●		●	

3 - System Menu Settings - ArcStar

Blue = Speed Green = Height Plum = Time

Item	Remarks	Range	Metric	Inch
Numerator X	Sets the machine accuracy. Press the 'F' button to open the calculation menu. Input the displayed (code) distance and the actual distance, then press 'Enter', then 'Save' (F8)	1 to 65535	1497 / 1497	
Denominato X		1 to 65535	500 / 500	
Origin X	When the user pushes the 'Res' button, X and Y are set to these values	-300.0 to 3000.0	0.000 / 0.000	
Reset Dir X	-1= moves axis in negative direction, 0 = no movement, 1= positive direction	-1 to 1	-1 / -1	
Backlash X	Compensates for the mechanical backlash of the machine - not recommended	0.000 to 10.000	0.000 / 0.000	
Soft+Limit X	Setting soft limits sets the maximum allowed movement or travel. Protects the machine from over traveling or moving beyond it's physically capable range. Normally set to a value 'inside' the limit switches	0 to 31000	0 / 0	0 / 0
Soft-Limit X		-31000 to 0	0 / 0	0 / 0
Plate Size X	Sets the default preview figure display size	0 to 15000	8000 / 8000	47 / 47
Start Spd X	Transition speed between straight ‘segments’ of parts. X and Y axis value are set independently. Activated when transition angle between them > ‘Speed Adjustment Angle’ (above). Must be < Cut Spd.	20 to 8000	140 / 140	5 / 5
Ac/De T X	Acceleration and deceleration time between ‘Start’ and ‘Cut’ speeds. X and Y axis values are set independently (milliseconds)	0 to 10000	160 / 140	
Reset Spd	Designates what speed the torch moves during a reset	20 to 6000	6000	236
Metric/Britis	Sets display distance value - choose '0' for Metric or '1' for Imperial	0 to 1	0	1
Coordinate	-1: clockwise 90 degrees, 0: no rotation, 1: counter-clockwise 90 degrees	-1,1	0	
Code	0: default, 1: compatible with alternative code	0,1	0	
Smoothness	Smooths 'rough' shapes, but any value can distort them. Recommend very low or 0	0.000 to 100.000	0.000	0.000
Bridge Length		0.0 to 100.0	20.000	0.787
Stir Time	Not used	0.0 to 20.0	0.0	
Drill-on Time	Not used	0.0 to 20.0	0.0	
Drill Lift T	Not used	0.0 to 1000.0	0.0	
Circle Speed (1) (2)	If part arc dia < 'Circle Dia' then 'Circle Speed' limits are activated. If angle of change between arc entry and arc exit is: < Circle Corner, max speed on arc = 'Circle Speed' > Circle Corner, max speed on arc = (Part Dia +/- Kerf) / (Circle Dia) x Circle Speed. ***May cause error if > Cut Spd***	20 to 5000	5000	196
Circle Dia	Activates speed limit along arc, see 'Circle Speed' above	0.0 to 5000.0	8.000	0.315
Circle Corner	Modifies speed limit along arc, see 'Circle Speed' above (degrees)	0 to 90	45	

G41/G42 Check	When cutting parts, checks for interference due to kerf width	●	Torch Up	Causes torch to raise up to 'Retraction Height' if paused during cutting	●
Edge Pierce	Torch moves to initial pierce point, pauses,	○	Move Tip	Toggling to on causes the screen to display a	○

	and opens up four onscreen options			pop-up reminder before each move	
Corner Arc	Rounds the part at corner transitions using the kerf value.	○	Auto Ref	(Only applicable to parts designed outside the controller). After cut is finished, torch automatically moves to workpiece zero.	●
Separate Reset	When 'Reset' is pushed, allows XY, X or Y workpiece values to be zeroed independently.	○	Separ Ref	When 'Z Return' is pushed, allows independent return to XY, X or Y workpiece zero.	○
Clear Coordi	Only applicable to parts designed without G92 code (workpiece coordinates auto zero function). If option is not selected, when start button activated, torch will first move to workpiece zero, then begin cutting. If this option is selected, when start button is activated, workpiece zero coordinates will automatically zero, then torch will begin cutting from the present table position. Eliminates need to press 'Manual/Clear Co'	●	To Start P	(Only applicable to parts designed outside the controller). After cut is finished, torch automatically moves back to the initial starting point.	○
Preview	If activated without 'Kerf Display' option below, the part shape will show before the cut. After the cut, cutting, part shape and the white movement and red cutting paths remain. It's recommended to turn 'Preview' on and 'Kerf Display' off. If activated with 'Kerf Display' option below, pressing 'Preview' will show the anticipated white cutting path, adjusted for the kerf width. After the cut, the white movement and red cutting path will remain. The part shape is not visible.	●	Kerf Display	If activated without 'Preview' option above, no preview of any sort will show before the cut. After the cut, the white movement and red cutting paths will remain. If activated with 'Preview' option above, pressing 'Preview' will show the anticipated white cutting path, adjusted for the kerf width. After the cut, the white movement and red cutting path will remain. The part shape is not visible.	●
Outline	Display rectangular outline of figure.	○	Pierce No.	Display pierce point numbers onscreen.	○
Multi Break P	Allows the display to save several break points.	○	Slow Stop	Determines if table stops immediately or slows gradually after alarm is triggered.	○
(Plam) craft out		○		Anti-collision	○

4 - Machine Menu Settings - ArcStar

Blue = Speed Green = Height Plum = Time

Item	Remarks	Range	Metric	Inch	Item	Remarks	Metric	Inch
Drill Offset X	Not used	-800.0 to 800.0	0.000		Y	Not used	0.000	
Line Offset X	Not used	-800.0 to 800.0	0.000		Y	Not used	0.000	
Flame Offset X	Not used	-800.0 to 800.0	0.000		Y	Not used	0.000	
Plasma Offset X	Not used	-800.0 to 800.0	0.000		Y	Not used	0.000	
Lim Switch	Enables or disables using limit switches		●		Pneumatic	Enables or disables the pneumatic lifter	○	
Soft Limit	Enables or disables using soft limits		○		Laser Locate	Not used	○	
Collision	Enables torch collision switch		●		Zero Switch	Enables homing function	●	
Ex Dir Button	Not used		○		Dual XZ/YZ	Not used	○	
Built-in Driver	Not used		○		Circle Speed	Activates Diameter / Speed limit chart	●	
Dia 1	Sets speed limit for full circles smaller than value	0.0 to 5000.0	8.000	0.315	SpdLimit 20 to 5000		3400	134
Dia 2	Sets speed limit for full circles smaller than value	0.0 to 5000.0	16.000	0.630	SpdLimit 20 to 5000		4200	165
Dia 3	Sets speed limit for full circles smaller than value	0.0 to 5000.0	20.000	0.787	SpdLimit 20 to 5000		5000	197
IO THC			○		485 THC		●	
ARC Check Mode	1 = Check, 2 = No, 3 = Pause	0 to 2	1					
Thread Pitch	Pitch of lifter leadscrew	1 to 20	10					
Tolerance	Tolerance between set height and actual height	0 to 20	0					
Lift Stroke	Lifter travel	20.0 to 1000.0	140.000	5.512				
Fast Speed	Maximum speed of the lifter	200 to 12000	5000	197				

IHS Speed	Torch speed below ‘Start Height’ and when retracting	20 to 5000	2500	98				
Start Height	Below this value torch slows to 'Slow Speed'	0.0 to 100.0	40.000	1.575				
Sensitivity	1 = High, 10 = Low	1 to 10	8		1 for thin corrugated			
Speed Rate		5 to 30	24		22 for thin corrugated			
Slow Speed	Min speed of adjusting height	200 to 8000	200	8	2100 for thin corrugated	400 for old controllers		
Start Speed	Start speed of lifter	20 to 1000	100	4	600 for thin corrugated	400 for old controllers		
No Collision	When sensing locate height, torch collision signal is ignored	0, 1	0					
THC Auto Zero	Before and after cutting is complete, torch fully raises to zero point switch (K1)		●					
Flame 485Mode	Not used		○					
No Ex Switch			○					

5 - Advanced Menu Settings - ArcStar

Blue = Speed Green = Height Plum = Time

		Old	Old	New
THC	DriveType	QX	QX	QX
	Step Qty	600	600	200
	Run Current	5.0	5.0	2.7
	Lock Current	80	100	30

CCM4.PAR = Menu Parameters
CCM4.IOC = Input / Output / THC Settings