

ALLEN DATAGRAPH

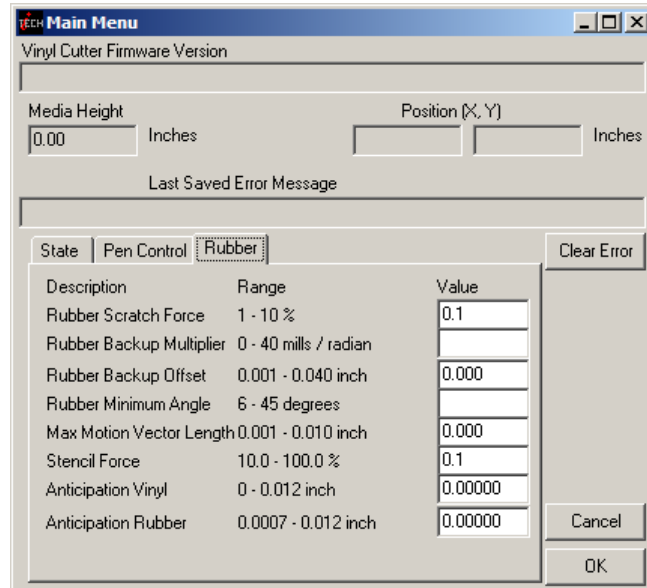
Technical Support Bulletin: Model i-536 Adjustable Parameters

Last Update January 17, 2006

Note: Parameters listed below are adjustable through the Allen Remote Panel Program. See your Allen CD for details on its operation.

Open the main menu on the Remote Panel

Open the Rubber Tab



Description	Range	Value
Rubber Scratch Force	1 - 10 %	0.1
Rubber Backup Multiplier	0 - 40 mills / radian	
Rubber Backup Offset	0.001 - 0.040 inch	0.000
Rubber Minimum Angle	6 - 45 degrees	
Max Motion Vector Length	0.001 - 0.010 inch	0.000
Stencil Force	10.0 - 100.0 %	0.1
Anticipation Vinyl	0 - 0.012 inch	0.00000
Anticipation Rubber	0.0007 - 0.012 inch	0.00000

Rubber Minimum Angle

displays and sets the angle between consecutive vectors that when exceeded will invoke the tangential emulation mode. At angles less than the value set in this parameter the cutter will move between vectors without evoking the tangential emulation mode.

Stencil Force is the force separation between drag knife mode and tangential emulation cut mode. Tangential emulation cut mode is normally used for rubber or very heavy material.

Advanced menu items (These menu items appear if you select the advanced menu on the Setup Option menu)

Rubber Scratch Force displays and sets the down force used during tangential emulation. This is primarily used when cutting thick materials such as sandblast rubber. Tangential emulation simulates a tangential or servo controlled rotating knife by moving to a position short of the vector to be cut and putting the knife blade down with a very light force while moving toward the direction of cut to align the knife before applying the full cutting force. This improves the cut quality in thick materials. (default 0.1%)

Rubber Backup Multiplier (default 20) displays and sets the distance the knife will be dragged at the light force used to align it. This parameter is used with and is additive to the **Rubber Backup Offset** (default 0.02). The Rubber Backup Multiplier is based on the change of angle between vectors and the Rubber Backup Offset is a constant added to the distance calculated based on angle.

Rubber Minimum Angle (default 19) is the rotation angle between two vectors that enables tangential emulation. Subsequent vectors that have angle between them exceeding this

parameter cause the pen to be picked up, dragged along the surface to align the knife and plunged into the media at the beginning of the next vector. Subsequent vectors that have angle between them less than this parameter will perform a drag rotation.

Max Motion Vector Length (default 0.001) (Named after the driver that outputs very small vectors) Allen Cutters very accurately replicate the vectors in the HPGL plot file. Some design programs output vectors that are very short. It is sometimes desirable to combine some of these vectors into a longer vector to eliminate jagged edges or slow cutting. This parameter works like a curve-smoothing algorithm and is used to improve poor HPGL files.

Anticipation Rubber (default 0.002) **and Anticipation Vinyl** (default 0.0004) is a parameter that adjusts the backlash compensation in the cutter. The Anticipation Rubber is the parameter used when the cutter is in tangential emulation mode and the Anticipation Vinyl is the parameter used when not in tangential emulation mode. Heavier materials require more backlash compensation. These numbers are individually set at the factory and should not require adjustment except when cutting heavy materials. If you are experiencing thick and thin lines or misshaped letters, adjust the anticipation parameter to obtain satisfactory results. (see also) [Web Site Copy](#) / [CD Copy](#)