Doc No.:   TN20-83
Version: 1.0
Date: 24th Jan 2006
Subject: Backlash Compensation

Application Note

Applications:

Some applications require the "backlash" in a linear axis to be compensated for. This is achieved by applying an offset move when the motor demand is in one direction, then reversing the offset move when the motor demand is in the opposite direction. These moves are superimposed on the commanded axis movements.

Controllers:

System software version 1.6469 or higher is required.

KEYWORDS:

- BACKLASH(on/off, distance, speed, accel) – This new axis function allows the parameters for the backlash compensation to be loaded.

  on/off   - The backlash compensation can be switched on and off. BACKLASH(off) requires no further parameters.

  distance   - The distance to be offset in user units.

  speed   - The speed at which is compensation move is applied in user units.

  accel   - The accel/decel rate at which is compensation move is applied in user units.

- DPOS   - The backlash compensation is applied after a change in the direction of change of the DPOS parameter.

- TRANS_DPOS   - The backlash compensation can be seen in the TRANS_DPOS axis parameter. This is effectively DPOS + backlash compensation.

Example:

```
' Apply backlash compensation on axes 0 and 1:

BACKLASH(ON,0.5,10,50) AXIS(0)
BACKLASH(ON,0.4,8,50) AXIS(1)
```