Obsolete Commands

The following commands have either been replaced with more feature rich commands or are no longer needed. To support older programs, most of these commands still work in the SilverLode servos, they are just not the best choice if writing a program with the current product line. If the command is no longer supported, the revision it was last support will be specified in the Command Info section.

ATR: Add to Register

See Instead: CLX: Calculation, Extended, CLD: Calculation Extended with Data

Description

The Add to Register command adds the included data into the selected 32-bit Data Register. This command is similar to the Write Register commands except it is designed to add to the existing value instead of overwriting it. The data parameter is "signed" so that a negative value can be added, which works as subtraction for decrementing.

Command Info

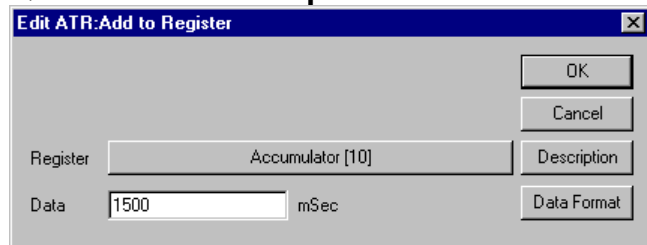| Command	Command Type/Num	Parameters	Param Type	Parameter Range
ATR	Program Class D 248 (0x9A) 4 words Thread 1&2	Data Register	U16	Standard Register Range
		Data	S32	-2,147,483,648 to +2,147,483,647

Example

Add the number "1.5 SEC." to data register #10.

@16 248 10 12500 (CR)

Response

ACK only

QuickControl Example

CTW: Calculation Two Word

See Instead: CLX: Calculation Extended

Description

This is the same as the Calculation (CLC) command except the parameters are split up into two words instead of being combined. See the CLC command for details.

Command Info

Command	Command Type/Num	Parameters	Param Type	Parameter Range
CTW	Program Class D 215 (0xD7) 3 Words Thread 1&2*	Operation	U16	See Previous Table
		Data Register	U16	Standard Register Range

*Thread 2 maintains its own copy of the Accumulator (Register 10) and the zero/positive/negative bits. See Multi-Thread in User Manual for more details.
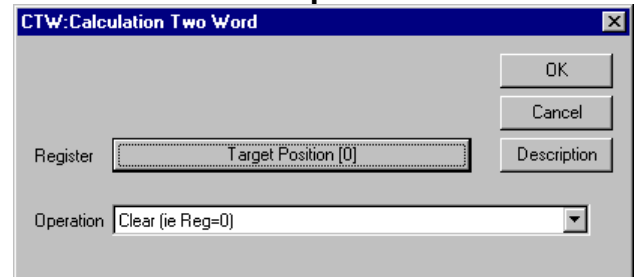
Example

Clear Accumulator

@16 215 0 10 (CR)

Response

ACK only

QuickControl Example

PCG: Pre-Calculated Go

See Also: PCM: Pre-Calculate Move

Description
After a Pre-Calculate Move (PCM) command has been successfully executed, the pre-calculated move is in a ready state. The PCG command initiates the move, which will begin immediately (within 120 μsec).

If the pre-calculation was bad (parameters out of range) or a second motion command precedes the PCG, a program error will result, and the motor will be shut down.

It is not required for the PCG command to immediately follow the motion command. Other commands that do not affect the Motion intermediate values can be executed before the PCG. A second motion command or the velocity mode command before the PCG will cause a program error.

This command was no longer needed with the faster DSPs on the SilverNugget and beyond.

Command Info

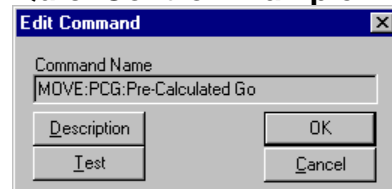| Command	Command Type/Num	Parameters	Param Type	Parameter Range
PCG	Program Class D 232 (0xE8) 1 word Thread 1	NONE	NONE	NONE

Example
Perform the Calculation Task on following Motion command.

@16 232 (CR)

Response
ACK only

QuickControl Example

PCM: Pre-Calculate Move

See Also: PCG: Pre-Calculate Go

Description

The Pre-Calculate Move command causes the device to perform just the calculation task on a motion command. The motion command to be pre-calculated must immediately follow the Pre-Calculate Move command or no action is taken. When this command has been successfully executed, the Pre-Calculated Move will be in a ready state waiting for the Pre-Calculated Go command.

Only velocity/acceleration or Time-based moves are pre-calculated. Profile moves and moves based on the external encoder or analog inputs are calculated at run time.

This command was no longer needed with the faster DSPs on the SilverNugget and beyond.

Command Info

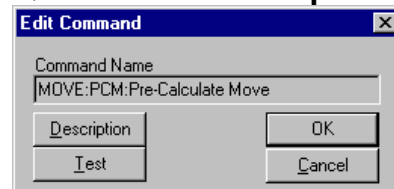| Command	Command Type/Num	Parameters	Param Type	Parameter Range
PCM	Program Class D 231 (0xE7) 1 word Thread 1	NONE	NONE	NONE

Example

Start the pre-calculated move.

@16 231 (CR)

Response

ACK only

QuickControl Example

RLN: Register Load Non-Volatile

See Instead: RLM: Register Load Multiple

Description

Loads data from the selected non-volatile Memory address into the selected Data Register. A Checksum value is verified to insure good data. Data may only be loaded into writable registers.

See Non-Volatile Memory in User Manual for details on loading and storing data.

The loading process is the same as used by the Register Load Multiple with only one register being loaded. The data selected must be stored using the Register Load Non-volatile or the Register Load Multiple using "1" for the Number of Registers.

See RLM for more parameter information.

NOTE: If this command is used in QuickControl's "Normal Mode", many of the complexities go away.

Command Info

Command	Command Type/Num	Parameters	Param Type	Parameter Range
RLN	Program Class D 199 (0xC7) 3 words Thread 1&2*	Data Register	S16	Standard Data Range > 10 0 for indirect addressing Negative to suppress Command Error
		NV Memory Address	U16	Max Size of NV Memory

*Non-Volatile memory can only be accessed by one thread at a time. Other thread will automatically wait to access Non-Volatile memory.

Example

Load data register #12 with data from NV memory address 1000.

@16 199 12 1000 (CR)

Response

ACK only

RSN: Register Store Non-Volatile

See Instead: RSM: Register Store Multiple

Description

Stores data from a Data Register to the selected Non-volatile Memory address. A Checksum value is calculated from the data and stored with the data.

The storing process is the same as used by the Register Store Multiple with only one register being stored. The data selected may be loaded using the Register Load Non-volatile or the Register Load Multiple using "1" for the Number of Registers.

See command Register Store Multiple (RSM) for more details.

Command Info

Command	Command Type/Num	Parameters	Param Type	Parameter Range
RSN	Program Class D 198 (0xC6) 3 words Thread 1&2*	Data Register	S16	Standard Data Range 0 for indirect addressing Negative to suppress Command Error
		NV Memory Address	U16	Max Size at NV Memory

*Non-Volatile memory can only be accessed by one thread at a time. Other thread will automatically wait to access Non-Volatile memory.

Example

Store data register #1 to NV memory address 1612.

@16 198 1 1612 (CR)

Response

ACK only

QuickControl Example