



## **Linear Positioning Module Series C, Revision B**

Catalog Number 1771-QB

### **Use These Release Notes**

Use these release notes with your Linear Positioning Module User Manual, publication 1771-6.5.44, published in September 1993.

### **New For This Release**

This document contains information about these features:

- RSLogix5 software for the Allen-Bradley Hydraulic Configuration and Operation Option (HCO) features
- Increased functionality of the stop/start enhancement bit
- Additional motion segments
- Recall of command blocks, parameter blocks, and set point blocks
- Enhanced Block Transfer Read functionality
- New diagnostic error code

### **Hydraulic Configuration and Operation Option (HCO)**

All functionality of the ControlView Hydraulic Configuration and Operation Option (HCO), catalog number 6190-HCO, now resides in the RSLogix5 software.

If you are **not** using RSLogix5 software, contact your local distributor or Rockwell Automation representative to purchase this software.

### **Stop/Start Enhancement Bit**

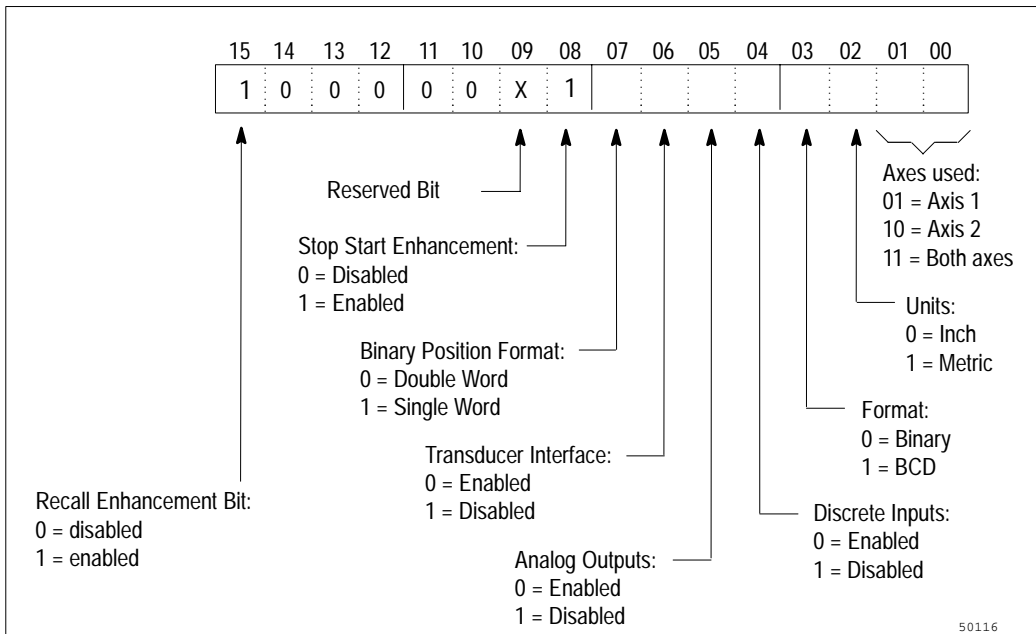
All the enhancements for the QB Series C described in this document, including support for the Allen-Bradley HCO Option, require that the Stop/Start Enhancement bit (bit 8, word 1 of the parameter block) be enabled, that is, set to 1. If you want to use the Series C features, be sure that your application does not clear this bit. All the Stop/Start Enhancement bit's previous functionality, as described in Chapter 7 of the Linear Positioning Module (Cat. No. 1771-QB) User Manual, is still provided.

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### Recall Enhancement Bit

When the Series C features are implemented, that is, when the Stop/Start Enhancement bit is enabled, the high bit (Bit 15) in the Module Configuration Word of the Status Block is also set. PLC programs can use this bit to determine whether parameter, setpoint, and command blocks can be recalled.

**Figure 1 Module Configuration Word (Word 1)**

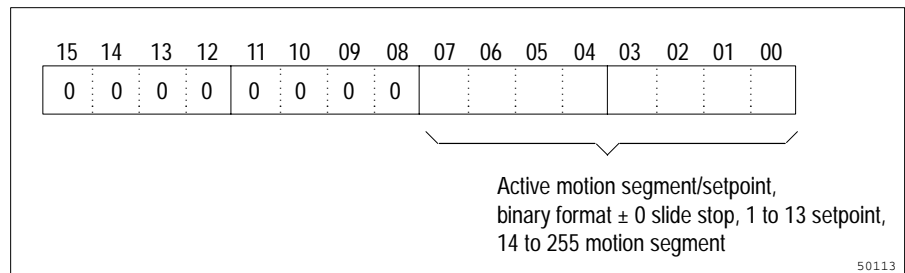


## Increased Number of Motion Segments

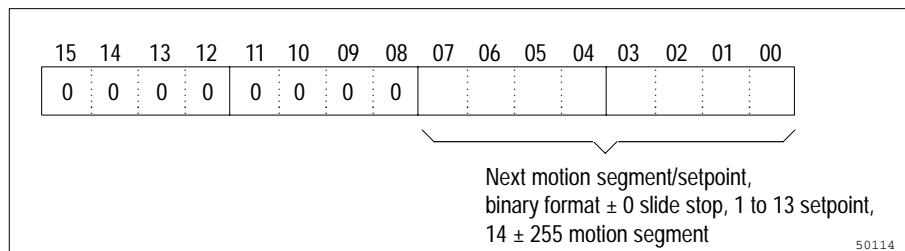
In previous revisions of the Linear Positioning Module, the motion segments were identified using 7 bits. In Series C, the motion segment number has been increased to 8 bits. The number of motion segments has been increased from 114 to 242, allowing you finer resolution for CAM (Computer Assisted Manufacturing) emulation.

This requires changes to a number of words in various data blocks. Figure 2 through Figure 4 show the changes.

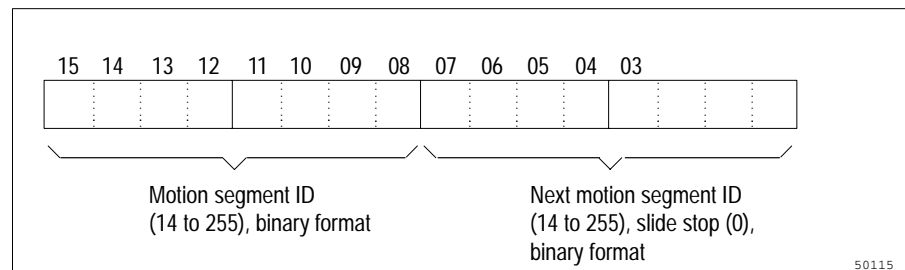
**Figure 2 Status Block, Active Motion Segment/Setpoint (Words 10, 11, Bit 7)**



**Figure 3 Command Block Axis, Axis Control Word 2 (Words 2, 9, Bit 7)**



**Figure 4 Motion Segment, Motion Segment Control Word 1 (Bits 7, 15)**



Each of the above formats previously had 7 bit numbers, with a zero in bit positions 7 and 15.

## Recall of Command, Parameter and Setpoint Blocks

All parameters written to the Linear Positioning Module are now available to you through block transfer reads. You will probably find access to the parameter block useful for setup purposes, and access to setpoints and command blocks useful for debugging motion profiles.

BTR commands of specific lengths read specific blocks. The Block Length Identifier (BLI) tells the Linear Positioning Module what length of block to transfer to the PLC controller. The length of the block identifies the information to be returned to the PLC controller.

**Table 1 Block Length Identifier (BLI) List for QB Series C**

BLI	Information sent back to PLC controller
0	Default Status Block, 5 words for 1 axis, 9 words for 2 axes
5	Status Block for 1 axis
9	Status Block for 2 axes
33	Extended Status Block
40	Reserved
41	Reserved
42	Reserved
48	Command Block
49	Reserved
59	Parameter Block
61	Reserved
62	Setpoint Block Axis 1
63	Setpoint Block Axis 2

### Reserved Block Transfer Reads

As indicated in Table 1, lengths of 40, 41, 42, 49, and 61 are reserved. These lengths support the features of the HCO Option. Attempting BTRs of these lengths without the HCO Option will return unpredictable information.

## Undefined Block Transfer Reads

Series C revisions of the Linear Positioning Module accept only certain lengths of Block Transfer Reads. If you enter an undefined length, that is, a length that is both greater than 33 words and not defined in Table 1, the Linear Positioning Module will return the status block padded with zeroes, and will set the diagnostic word to the new diagnostic error code 26.

## Reserved Bit

Bit 9 of the status block's Module Configuration Word (See Figure 1) can change between 0 and 1 when the unit is used with the HCO Option.

## Corrections to the User Manual

### Fault Indicators, p. 11–1

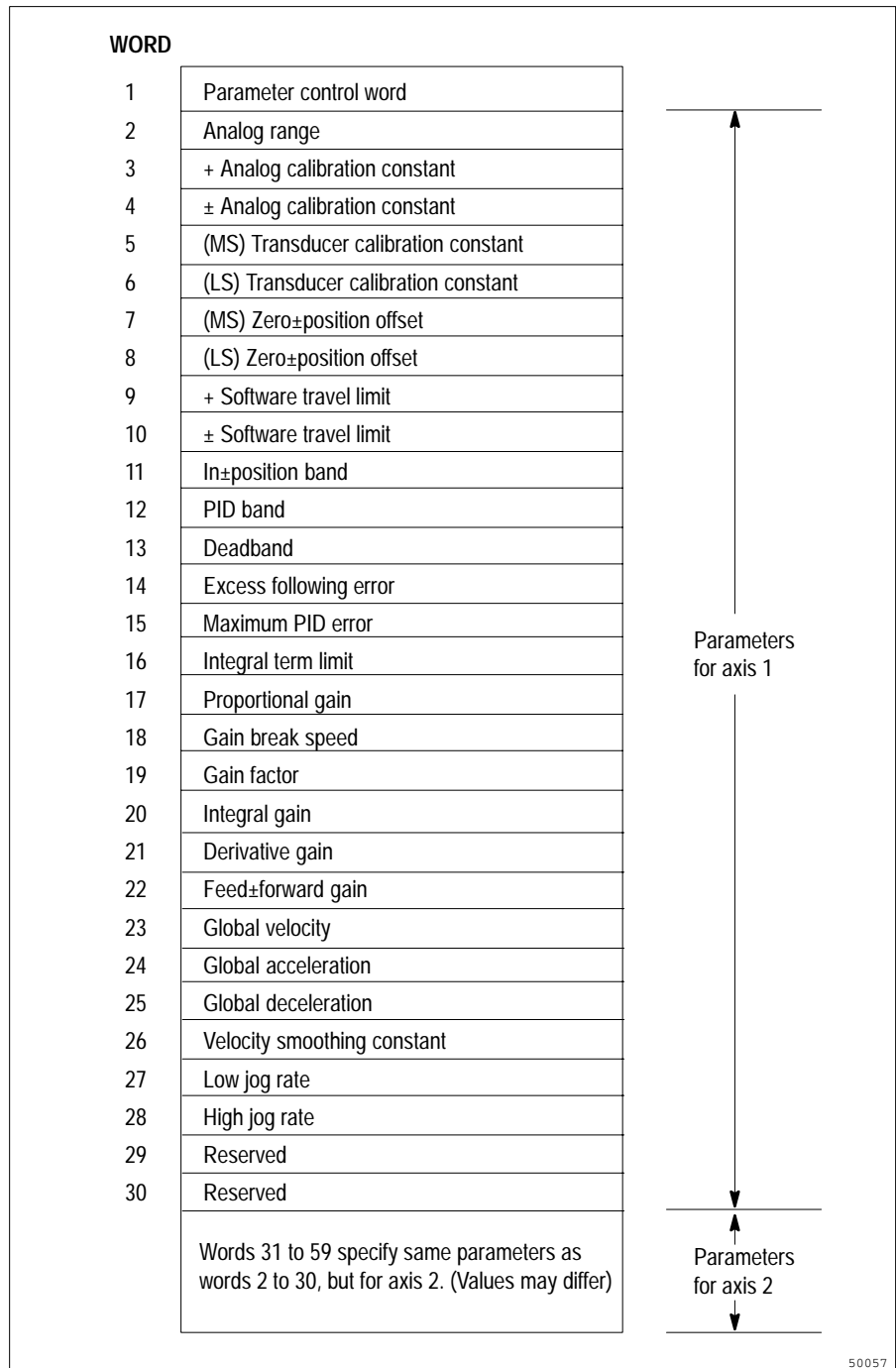
In previous versions of the Linear Positioning Module, the FAULT indicator would light up for a second after powerup diagnostics. This function has been corrected so that the FAULT indicator will light up only when powerup diagnostics detect a fault.

### Parameter Block Word Assignments, pp. 7–2 and C–1

The Parameter Block Word Assignments table appears in the Allen-Bradley Linear Positioning Module User Manual as Figure 7.1 and Figure C.1. It shows words 1 to 30 as parameters for axis 1. **This is incorrect.** Word 1 is the parameter control word. Words 2 to 30 are parameters for axis 1, while words 31 to 59 are the same parameters for axis 2.

See Figure 5 on page 6 for the correct table.

**Figure 5 Parameter Block Word Assignments**



**Notes:**

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Rockwell Automation provides technical information on the web to assist you in using our products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

## Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running:

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

## New Product Satisfaction Return

Rockwell tests all of our products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned:

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Outside United States	Please contact your local Rockwell Automation representative for return procedure.

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