Doc No.: TN20-76
Version: 1.0
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Subject: FLASHVR Enhancements

Application Note

1. Introduction:

The FLASHVR command may be used on *Motion Coordinators* to store the TABLE memory area into permanent flash memory. This facility has been extended to allow pages of 16000 TABLE locations to be stored into alternative pages in the internal flash chip of the *Motion Coordinator*. This allows very large amounts of data to be stored for machine recipes etc.

2. Applicability:

MC224 and EURO205X only with system software version 1.6411 or higher.

3. BASIC command enhancements:

There are 2 new forms of the FLASHVR command:

Write a page TABLE data into flash memory:

```
FLASHVR(-3,flashpage,tablepage)
```

Read a page of flash memory into TABLE data:

```
FLASHVR(-4,flashpage,tablepage)
```

flashpage : There are 16 flash pages available numbered 0..15. Each can store 16000 TABLE values. The total storage capacity is therefore 256000 values or 2Mbytes.

tablepage : the tablepage should be 0 or 1 when using a EURO205X. 0..15 when using an MC224. If the tablepage is 1, for example, TABLE values 16000..31999 will be transferred into flash memory.

4. Example programs:

A machine setting requires 100 data values. Using FLASHVR(-3) we can store 2560 sets of machine settings in the flash data area. In this example the settings are held in VR(100) to VR(199):

```
settoflash:

' transfer data to flash at location# setnum (0..2559)
' value of "setnum" must be set prior to call



flashpage=INT(setnum/160)
pageoff=setnum-flashpage*160

' Get a whole page:

FLASHVR(-4,flashpage,1)

' transfer into page:

FOR v=0 TO 99
    TABLE(v+16000+pageoff*100,VR(v+100))
NEXT v

' write to flash:

FLASHVR(-3,flashpage,1)
RETURN



readfromflash:

' transfer data to VR from location# setnum (0..2559)
' value of "setnum" must be set prior to call

flashpage=INT(setnum/160)
pageoff=setnum-flashpage*160
```

```
FLASHVR(-4,flashpage,1)


' transfer back into VR's


FOR v=0 TO 99
    VR(v+100)=TABLE(v+16000+pageoff*100)
NEXT v


return
```