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Software Version History

Product: **ARM7 based Controllers**
 Applies to: **MC302-L**
 Started: **Version 1.9101**
 Notes: **Versions with 0.001 increments are development builds ONLY**

Current Manufacturing Release:

1.xx Released xxx

Version Number:	Bug Fixes:	New Features:	Notes:
1.9101	<p>Programs halted using 'stop' are now correctly flagged to be stopped - previously any process that matched the program identifier was tagged for halting even if it wasn't active leading to a program halting as soon as it was started.</p> <p>A program still awaiting compilation, when run from another program caused misbehaviour because the compilation progress text was directed to TX channel '-1' but wasn't inhibited.</p>	<p>Supports MC302-L Stepper/Encoder Output axis types.</p> <p>VERIFY/INVERT_STEP axis attributes now supported.</p>	First Released Version.
1.9200	<p>Corrected problem of printing to a port other than #0 when disconnected from MotionPerfect - potential lockups with serial communication could occur.</p> <p>Corrected problem when transmitting characters with ASCII codes of 28 and 30 on port #1; these were both incorrectly substituted with 2 characters with codes 10 and 13.</p> <p>MotionPerfect would timeout with errors if an INPUT/LINPUT command was used in the command window and the data entered not quickly enough - this was because MotionPerfect communications would freeze until any command was completely processed.</p> <p>Port #1 not correctly initialised at power-up - both Modbus and normal (transparent) comms protocols were activated by mistake, only a SETCOM command would correct the behaviour.</p> <p>When compiling code containing active breakpoints, incorrect line numbers would be resolved for labels after any breakpoints leading to incorrect execution.</p>	<p>Increased number of local variables supported from 127 to 255.</p> <p>RUN_ERROR, ERROR_LINE and PP_STEP now supported.</p> <p>Timeouts added for Flash programming commands with errors now reported.</p> <p>As a result of parallel MC302-X development to support legacy commands and also missing commands that should have been implemented the following commands/parameters are now supported: FLAG, FLAGS, AFFGAIN, FWD_JOG, REV_JOG, FAST_JOG, PROCNUMBER, PROC_LINE, INDEVICE, OUTDEVICE, AIN0-3, AINBIO-3, COMMSERROR, PORT_CHECKSUM and CHECKSUM.</p>	12 th April 2006

	<p>The MoveModify command sometimes caused misbehaviour because random data was being loaded into the Datum modes by mistake.</p> <p>OP command corrected for writing to a range of outputs using a single OP command (ie with 3 parameters).</p> <p>Using the PROC modifier could cause misbehaviour because the process executing the PROC modifier would then assume the same process number as specified within the modifier.</p> <p>CAN_ADDRESS now replaced with CANIO_ADDRESS for consistency with other controllers. CANIO_STATUS now implemented.</p>		
1.9201	<p>ADDAX did not work when a CONNECT was also active for the same axis.</p> <p>Potential for axis measured position to be outside of REPDIST for 1 servo cycle.</p>	Added VRSTRING command.	12 th May 2006
1.9202	<p>Specifying a DECEL value for an axis other than the base axis by using an axis modifier (eg DECEL AXIS(1)=50000) did not work correctly resulting in the wrong deceleration for AXIS 1 and also AXIS 0.</p> <p>Using port #0 for Modbus via SETCOM sometimes caused the controller to reset.</p>		17 th May 2006
1.9203	<p>Corrected REP_OPTION=1 bug whereby it did not allow MPOS=0 to be a valid position.</p> <p>TICKS now managed correctly – previously it always counted in 250us steps regardless of Servo Period, now it counts in Servo Periods.</p>	<p>Added Program Encryption.</p> <p>Added CANopen support via axis types 18 (position) & 19 (velocity) and CAN_ENABLE/CAN_ADDRESS axis parameters.</p>	14 th July 2006
1.9204	<p>32-Bit Floating-Point Modbus protocol (SETCOM mode 7) corrected.</p>	Added DIM variable types STRING, VECTOR and ARRAY.	20 th September 2006
1.9205	<p>32-Bit Floating-Point Modbus (SETCOM mode 7) did not read (via function 03) the correct VR data, the address specified by the HMI should be divided by 2 before accessing the VR variable, hence only the base address of 0 would work correctly.</p>		29 th September 2006
1.9300	<p>New flash management for parameters incorporated – there was a potential problem when storing a parameter that required a new flash page to be initialised, plus flashing VRs above 253 would not work correctly.</p> <p>DeviceNet command now successfully stores a startup baud rate for CAN in flash.</p> <p>The 'Control' parameter now behaves correctly when the controller is LOCKed – the previous behaviour meant that MotionPerfect thought the controller was unlocked even when it was locked.</p>	The serial number can now be read via SERIAL_NUMBER.	16 th November 2006

1.9301	INPUTS0/1 now correctly accessed via Scope feature.	Added CANopen IO functionality.	21 st February 2007
1.9302		The commands IF, REPEAT, WEND, WHILE, WAIT and WA are now available on the command line.	28 th February 2007
1.9303	Fix in 1.9301 for INPUTS0/1 storage via the scope introduced a bug – only 16 inputs for each should be stored in the Table.		6 th March 2007
1.9304	Fixed CONNECT bug – a new CONNECT command issued for an axis that is already connected shouldn't cause any break in its position profile; this was happening for 1 servo cycle.		26 th March 2007
1.9305	Low-level CAN message reading was not implemented correctly, it was reading 1 more byte than necessary causing overflow of array elements when reading a fully loaded 8-byte CAN message ie. Stomping on RAM locations causing random side effects. Corrected bug preventing certain types of functions being used as parameters for other commands eg CAN(-1,7,1,VR(0),VR(1)) would not work but CAN(-1,7,1,TABLE(0),TABLE(1)) did work.	Added FASTDEC support. Added new axis types 26 (Position) & 27 (Velocity) for extended CANopen support – as axis types 18 & 19 but with Status & Control Words cyclically transferred. New DRIVE_CONTROL axis parameter added. CAN command function 2 can now be used to read the current baud rate setting eg PRINT CAN(-1, 2). CAN command functions 8 & 9 for SDO access modified to be consistent with all other controllers.	11 th May 2007
1.9306	The fix in 1.9305 to correct a bug when using function calls as parameters for other functions introduced a new bug causing unexpected BASIC errors to be produced at random intervals when running more than 1 program.		21 st May 2007
1.9307	CANIO modules were not always initialised correctly when powered-up at the same time as the controller. DeviceNet protocol problems when handling Expicit Message requests at the same time as Polled IO requests.		22 nd May 2007
1.9308			MC302X Update Only
1.9309	Resource management problems when processes are halted – a halted process may not relinquish all held resources.		8 th August 2007
1.9310		Added RS232_SPEED_MODE as per other Trio controllers – default setting is for High Speed 38400 baud comms. New SETCOM functions 10&11 added to allow the command line to be disabled with port#0 available for program use instead. 10=XON/XOFF disabled, 11=XON/XOFF enabled	13 th November 2007
1.9311		Added Virtual IO access for unused Outputs. Added support to Modbus protocol for configuring VR/TABLE as the data source – achieved through a 7 th parameter in the SETCOM command (0=VR, 1=TABLE), if not specified the default is VR.	23 rd November 2007

1.9312	<p>Version 1.9310 prevented registration from operating for axis type 4 (Stepper/Encoder with position feedback).</p> <p>REG_POS was incorrectly updated following a DEFPOS operation.</p> <p>Corrected VR range checking for various commands that specify a VR index.</p>	12 th March 2008
1.9400	<p>Low-level floating-point multiplication problem – if 2 small numbers very close to 0.0 are multiplied that should give a result of 0.0 then the exponent is miscalculated causing the result to be a potentially large number. This is particularly noticeable when applying a MOVE operation close to 0.0 because the motion calculations involve a square of the distance to move.</p>	23 rd April 2008
1.9401		MC302X Update Only
1.9402	<p>The INPUT command was echoing an extra SPACE character before the CR/LF sequence.</p>	27 th May 2008