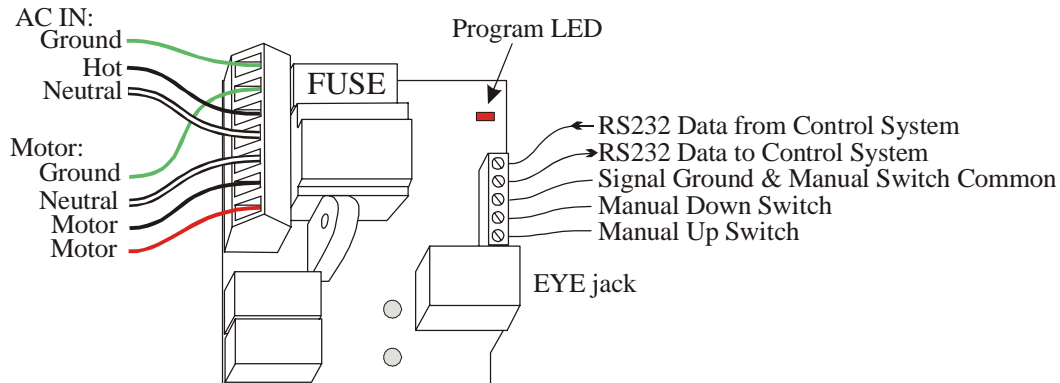


## MC1 V3 Installation & Programming

The MC1 receiver has a built in fuse that provides protection from electrical shorts and overload.

Avoid static discharge, especially to the screw terminals and the eye jack.

Connections to the receiver are indicated in the drawing below and all connection wires must conform to the motor manufacture's recommendation and prevailing electrical codes. The switch and control system wires should be at least 24 AWG and no larger than 18 AWG. The AC power connection wires must be no larger than 12AWG solid or stranded, one wire per terminal.



115VAC version:

Rated at 3.8 Amps, 1/8th HP, fuse should be 4 Amp 250V 5x20mm fast or slow blow.

230VAC version:

Rated at 1.9 Amps, 1/8th HP, fuse should be 2 Amp 250V 5x20mm fast or slow blow.

5 Volt power from the eye jack is limited to one eye. **No** other accessories may be powered by this unit. Other accessories may be connected to this unit if they are powered by some other means, e.g. an SC1 system or a DCPM.

With a LEFT hand motor connected as shown with the screen coming off the back of the roller and the control in its default setting:

Open commands on the Bus will cause the screen to retract into the headrail.

This agrees with the top button on the Salara transmitter (printed arrow pointing "up") sending Open 1 command.

Up commands on the serial link will cause the screen to retract into the headrail.

Shorting the Manual Up lead to the common lead will cause the screen to retract into the headrail.

Open commands on the Bus will cause the MC1 to apply power to the RED terminal block (the one on the end).

# DRAPER

# MC1 V3 Installation & Programming

This Sheet uses # for the receiver's main channel number - new units will use a 1 where the # is.  
 Note that # can also be ALL if you want to program several receivers S = Stop C = Close O = Open

Desired Change	LED:	on	blink	blink	off
Reset EVERYTHING to factory default	S+7+7	O ALL	hold 5 sec. until blink		S
Reset everything <i>except</i> main channel to factory default	S+7+7	O #	C ALL		S
Main Channel to "N" (N= 1 through 60)	S+7+7	O #	C 1	O "N"	S
1 <sup>st</sup> Group Channel to "N" (N= 1 through 60)	S+7+7	O #	C 2	O "N"	S
1 <sup>st</sup> Group Channel OFF	S+7+7	O #	C 2	O ALL	S
Set 2 <sup>nd</sup> Group Channel (same as above)	S+7+7	O #	C 3	O "N"	S
Set 3 <sup>rd</sup> Group Channel (same as above)	S+7+7	O #	C 4	O "N"	S
Set 4 <sup>th</sup> Group Channel (same as above)	S+7+7	O #	C 5	O "N"	S
Set 5 <sup>th</sup> Group Channel (same as above)	S+7+7	O #	C 13	O "N"	S
Set 6 <sup>th</sup> Group Channel (same as above)	S+7+7	O #	C 14	O "N"	S
Set "Sequential Action" Channel (same as above)	S+7+7	O #	C 20	O "N"	S
Set "Specific Stop" Channel (same as above)	S+7+7	O #	C 22	O "N"	S
Reset the following options to factory default	S+7+7	O #	C 6	O ALL	S
Momentary Motor Action <sup>2</sup>	S+7+7	O #	C 6	O 1	S
Reverse Motor Direction	S+7+7	O #	C 6	O 2	S
Do NOT Act on ALL buttons from Transmitter	S+7+7	O #	C 6	O 3	S
Fast IR Release Time <sup>2</sup>	S+7+7	O #	C 6	O 7	S
Stop On Transmitter Button Release <sup>1</sup>	S+7+7	O #	C 6	O 8	S
Demo mode on: quick deadbeat <sup>10</sup>	S+7+7	O #	C 6	O 9	S
Disable the Deadbeat Counter	S+7+7	O #	C 6	O 11	S
Enable the Deadbeat Counter, and reset it to 120 <sup>10</sup>	S+7+7	O #	C 6	O 12	S
Reset the following options to factory default	S+7+7	O #	C 7	O ALL	S
SPST Manual switch <sup>3</sup>	S+7+7	O #	C 7	O 1	S
X10 Timing on Manual Switches	S+7+7	O #	C 7	O 2	S
Stop On SPDT Manual Switch Release <sup>1</sup>	S+7+7	O #	C 7	O 3	S
"Sticky" action on SPDT Manual Switches <sup>1</sup>	S+7+7	O #	C 7	O 4	S
Swap Open and Close on SPDT, Invert SPST	S+7+7	O #	C 7	O 5	S
Enable SPST Magnetic Switch as Override <sup>3</sup>	S+7+7	O #	C 7	O 6	S
Set the Run Time to 100x+10y+z seconds min = 0 0 1 (1 sec), max = 2 9 9 (299 sec) use O10 for 0	S+7+7	O #	C 8	Ox Oy Oz	S
Reset the following options to factory default	S+7+7	O #	C 23	O ALL	S
Enable "Sticky" on main channel <sup>1</sup>	S+7+7	O #	C 23	O 1	S
Enable "Sticky" on 1 <sup>st</sup> group channel <sup>1</sup>	S+7+7	O #	C 23	O 2	S
Enable "Sticky" on 2 <sup>nd</sup> group channel <sup>1</sup>	S+7+7	O #	C 23	O 3	S
Enable "Sticky" on 3 <sup>rd</sup> group channel <sup>1</sup>	S+7+7	O #	C 23	O 4	S
Enable "Sticky" on 4 <sup>th</sup> group channel <sup>1</sup>	S+7+7	O #	C 23	O 5	S
Enable "Sticky" on 5 <sup>th</sup> group channel <sup>1</sup>	S+7+7	O #	C 23	O 6	S
Enable "Sticky" on 6 <sup>th</sup> group channel <sup>1</sup>	S+7+7	O #	C 23	O 7	S
Turn OFF "Sticky" action on ALL buttons <sup>1</sup>	S+7+7	O #	C 23	O 8	S



Desired Change	LED:	on	blink	blink	off
Turn off all "A" intermediate stops (factory default) <sup>13</sup>	S+7+7	O #	C 10	O ALL	S
Enable "Intermediate Stop A" on the main channel <sup>5</sup>	S+7+7	O #	C 10	O 1	S
Enable "Int. Stop A" on 1 <sup>st</sup> group channel <sup>5</sup>	S+7+7	O #	C 10	O 2	S
Enable "Int. Stop A" on 2 <sup>nd</sup> group channel <sup>5</sup>	S+7+7	O #	C 10	O 3	S
Enable "Int. Stop A" on 3 <sup>rd</sup> group channel <sup>5</sup>	S+7+7	O #	C 10	O 4	S
Enable "Int. Stop A" on 4 <sup>th</sup> group channel <sup>5</sup>	S+7+7	O #	C 10	O 5	S
Enable "Int. Stop A" on 5 <sup>th</sup> group channel <sup>5</sup>	S+7+7	O #	C 10	O 6	S
Enable "Int. Stop A" on 6 <sup>th</sup> group channel <sup>5</sup>	S+7+7	O #	C 10	O 14	S
Enable "Int. Stop A" on the ALL channel <sup>5</sup>	S+7+7	O #	C 10	O 7	S
Enable "Int. Stop A" on Manual Switches <sup>5</sup>	S+7+7	O #	C 10	O 8	S
Intermediate Stops highest accuracy <sup>7 8</sup>	S+7+7	O #	C 10	O 9	S
Calibrate the travel times <sup>6 11</sup>	S+7+7	O #	C 10	O 10	<sup>6</sup>
Reference the open limit instead of close <sup>8 11</sup>	S+7+7	O #	C 10	O 11	S
<b>"Intermediate Stop A Open Button"</b>					
Set to 10x+y percent of travel time away from reference end min = 0 0 (at ref.), max = 9 9 (opposite limit) use O10 for 0	S+7+7	O #	C 11	Ox Oy	S
Nudge this stop 1/40 <sup>th</sup> second away from reference	S+7+7	O #	C 11	O 11	S
Nudge this stop 1/40 <sup>th</sup> second towards reference	S+7+7	O #	C 11	O 12	S
<b>"Intermediate Stop A Close Button"</b>					
Setting and nudging this stop same as "A Open"			C 12		S
<b>Turn off all "B" intermediate stops (factory default)</b>					
Enable "Intermediate Stop B" on the main channel <sup>5</sup>	S+7+7	O #	C 15	O 1	S
Enable "Int. Stop B" on 1 <sup>st</sup> group channel <sup>5</sup>	S+7+7	O #	C 15	O 2	S
Enable "Int. Stop B" on 2 <sup>nd</sup> group channel <sup>5</sup>	S+7+7	O #	C 15	O 3	S
Enable "Int. Stop B" on 3 <sup>rd</sup> group channel <sup>5</sup>	S+7+7	O #	C 15	O 4	S
Enable "Int. Stop B" on 4 <sup>th</sup> group channel <sup>5</sup>	S+7+7	O #	C 15	O 5	S
Enable "Int. Stop B" on 5 <sup>th</sup> group channel <sup>5</sup>	S+7+7	O #	C 15	O 6	S
Enable "Int. Stop B" on 6 <sup>th</sup> group channel <sup>5</sup>	S+7+7	O #	C 15	O 14	S
Enable "Int. Stop B" on the ALL channel <sup>5</sup>	S+7+7	O #	C 15	O 7	S
Enable "Int. Stop B" on Manual Switches <sup>5</sup>	S+7+7	O #	C 15	O 8	S
<b>"Intermediate Stop B Open Button"</b>					
Setting and nudging this stop same as "A Open"			C 16		S
<b>"Intermediate Stop B Close Button"</b>					
Setting and nudging this stop same as "A Open"			C 17		S
<b>115VAC version: Set Minimum Load Threshold</b>					
Set to [(x+.1y).944] Amps <sup>9</sup> min = 0 0 (see notes), max = 4 1 (3.87A) use O10 for 0	S+7+7	O #	C 18	Ox Oy	S
Nudge this threshold .024A less sensitive (higher current)	S+7+7	O #	C 18	O 11	S
Nudge this threshold .024A more sensitive (less current)	S+7+7	O #	C 18	O 12	S
<b>230VAC version: Set Minimum Load Threshold</b>					
Set to [(x+.1y).472] Amps <sup>9</sup> min = 0 0 (see notes), max = 4 1 (1.94A) use O10 for 0	S+7+7	O #	C 18	Ox Oy	S
Nudge this threshold .012A less sensitive (higher current)	S+7+7	O #	C 18	O 11	S
Nudge this threshold .012A more sensitive (less current)	S+7+7	O #	C 18	O 12	S
Set Stall Load Threshold (same as above)			C 19		

<sup>1</sup> Sticky overrides Stop on Button Release if both are enabled



- <sup>2</sup> “Fast” automatically enables Momentary Motor Action
- <sup>3</sup> Override switch is SPST so that mode is automatically enabled,  
WARNING if the OPEN-COM terminals are not shorted, commands will be locked out (programming will still work)
- <sup>5</sup> If both A and B stops are enabled on a channel, A takes precedence.
- <sup>6</sup> Calibration will cause the motor to go full open, then close, then open again, DO NOT interrupt this sequence, STOP will be ignored unless pressed for at least 3 seconds and the calibration will be cancelled.
- <sup>7</sup> High accuracy intermediate stops means always move the same way to get to a stop <sup>8</sup>.
- <sup>8</sup> By default the close limit is the reference. Changing the reference does 2 things: “auto reference” goes to the top instead of the bottom.  
And when moving to a stop in high accuracy mode, the motor only goes open to a stop.
- <sup>9</sup> The current is not actually measured this accurately, use nudge to get to the experimentally correct value (see notes below).
- <sup>10</sup> In demo mode, the deadbeat counter is reset to only 10 times.
- <sup>11</sup> Set the reference and motor direction **before** calibrating.
- <sup>12</sup> Used for tilting blinds (see notes below). Travel time is optional.
- <sup>13</sup> This action also turns off “high Accuracy mode” & resets the reference to be the close limit.  
This action does not effect the travel time, or the stop percentages or nudge amounts.  
This may mean that the unit must be re-calibrated.

## Defaults:

Main Channel = 1, Group Channels 1-6 = off, no sequencing action channel, Maintained Motor Action, Standard Motor Direction, Act on ALL buttons from Transmitter, “Sticky” action on ALL, Standard action on the group buttons, Standard IR Release Time, Do not Stop On Transmitter Button Release. SPDT Manual switch, Standard Timing, Do not Stop On Switch Release, Standard action (not sticky), Switch inputs as labeled, Magnetic Switch Override Disabled.

Intermediate stop reference is at the close limit, Travel Time unknown (i.e., not calibrated).

Run Time = 180 sec.

Intermediate Stop A not enabled on any channel or on the manual switch,  
Open to Int. Stop A = 20%, Close to Int. Stop A = 80%, no nudge amount.

Intermediate Stop B not enabled on any channel or on the manual switch,  
Open to Int. Stop B = 40%, Close to Int. Stop B = 60%, no nudge amount.

115VAC unit:

Minimum Load Threshold = 0 (off) Stall Threshold = 3.87 Amps

230VAC unit:

Minimum Load Threshold = 0 (off) Stall Threshold = 1.84 Amps

Note that these programming steps are a subset of the SC1 control and as such can use the same programming tools. Unsupported programming commands will be ignored.

The Serial RS232 protocol is described on the next page. Examples and further notes follow the protocol description.

Warning – when an IR command is being sent, serial commands may be lost, and when a serial command is received, an IR command may be lost.

The RED LED:

Acts as described above during programming.

On power-up: Blinks quickly 3 times for 115V. Blinks quickly 2 times then 1 longer blink for 230V.

Blinks briefly when ignoring Bus commands while programming other units, during manual switch lockout, or during deadbeat lockout.

Blinks briefly when a deadbeat count happens.

Acts as described below when doing the special sequence to swap motor leads.



## RS232 Serial Command Protocol

Link must be set to 9600 baud 8N1 (8 data bits, no parity, 1 stop bit). This protocol is very similar to the R2D7.

<i>Control System Serial Port to MC1</i>		
<i>Information</i>	<i>Data</i>	<i># of characters</i>
Header (Start of command)	* (asterisk)	1
Subsystem number or Administration command	Optional 1 digit number which is ignored <sup>1</sup> V = report version F = turn on feedback (verbose) L = limited feedback <sup>2</sup>	0 - 1
Command <sup>3</sup>	o = open u = up c = close d = down s = stop p = program m = move to commanded position r = report current position q = simulate unpush of existing button	1
Channel <sup>4</sup>	00 <sup>5</sup> - 60	0 or 2
Position or "Button Time"	if "m" then 0 0 - 9 9 = commanded position in % otherwise 3 digits ignored unless 0 0 0 <sup>6</sup>	2 0 - 3
Terminator	; (semicolon) or "CR" (enter key)	1

<i>MC1 to Control System Serial Port</i>	
<i>Event</i>	<i>MC1 sends</i>
Powered up	version (same as response to "V") followed by X-on
Response to "V" query	3.0; if 115VAC 3.0; if 230VAC
Response to "r" query with our main address	*nnRpp; (nn = main channel, pp = percent away from reference) *nnRN; (N means position is unknown because not yet calibrated) *nnRU; (U means position is unknown)
Terminator is received with limited feedback	"s" command with our main channel stops and causes "r" response *nnM; if "m" command with our main channel *nnX; if our "m" command cannot be executed (uncalibrated) otherwise no response even if command is bad
Terminator is received with verbose feedback (default)	no response if "r" "m" or "s" command and not our main channel "s" command with our main channel stops and causes "r" response *nnM; if "m" command with our main channel *nnX; if our "m" command cannot be executed (uncalibrated) U; if command is not formatted correctly G; if "s" command with ALL (or no) channel no response to "q" command G; if command formatted correctly (and not shown above)

<sup>1</sup> This is allowed to make the protocol the same as R2D7 which requires a "system number" here.

<sup>2</sup> This can only be changed via serial command, there is no S77 sequence to do this and reset does not change it.

<sup>3</sup> Case is not important: o is the same as O and so on.

<sup>4</sup> If command is stop, then this value is optional, if included, it will be acted on only if it is our main channel or ALL, if not included, it will be interpreted as ALL.

<sup>5</sup> 00 = ALL.

<sup>6</sup> This is allowed to make the protocol the same as R2D7 which has optional "send time" here, if the time is 0 0 0, then the button will start and wait for \*q; to simulate the end of the button, this does not work for "p" commands.



Buffer <sup>7</sup> overflowed and all data was purged	O followed by X-on
Buffer <sup>7</sup> is half full	X-off (Ctrl-S)
Buffer <sup>7</sup> is empty	X-on (Ctrl-Q), but only if X-off was previously sent

X-on / X-off is always active even if “L” mode has been selected.

The “o” “c” “u” or “d” command is treated exactly like a “tap” of the same command on a transmitter unless “button time” is 0 0. If “forever”, then the button is pressed and held until q command is received, or another event happens.

**Protocol Examples:**

\*o03;

Sent to MC1 with main channel 3, motor stopped, not momentary action.  
The motor will immediately run full open.

\*c18; \*o18; or \*s;

Sent to MC1 with main channel 18, motor running, main channel not sticky.  
The motor will stop immediately (any of these commands will work). \*s; will stop all motors on this serial connection.

\*s18;

Sent to MC1 with main channel 18, will stop this motor if it is running without affecting other motors on the same serial connection.

\*m3588;

Sent to MC1 with main channel 35, unit has not been calibrated.  
The motor will not move, the unit will send back: \*35X;

\*m3523;

Sent to MC1 with main channel 35, motor has moved several times and the position is not exactly known.  
The motor will move to the reference, then go back to 23% away from reference.

\*m3588;

Sent to MC1 with main channel 35, motor running either direction, reference at bottom.  
The motor will stop, wait 1.5 seconds, then run in the appropriate direction and stop at 88% up position.

\*r35;

Sent to MC1 with main channel 35, reference at top, and stopped at 72% down  
The unit will send back: \*35R72;

\*r47;

Sent to MC1 with main channel 47, motor has moved several times and the position is not exactly known.  
The unit will send back: \*47RU;

\*r24;

Sent to MC1 with main channel 24, unit has not been calibrated.  
The unit will send back: \*24RN;

If the motor is moving when the report command is received, the unit will report where it is at the time the “Terminator” character is received. The result is true at that moment in time and the motor position may have changed a moment later.

Also note that the percentage may have an error of up to 2%.  
0 means at reference, 99 means at limit opposite reference.

The program button cannot “held”, so to reset everything to factory default send \*p00;\*c00;\*c01;\*o01;\*s;

Extraneous characters sent before the start character “\*” are ignored, but do count toward filling the buffer.

---

<sup>7</sup> Buffer is 256 bytes





If 2 way serial is not used, then several MC1 receivers can all be on one RS232 link. The protocol allows each unit to be controlled individually as long as the commands are not sent so fast as to overflow the buffer. The “L” command should be sent to force the MC1 to effectively not talk unless specifically spoken to.

Warning – when an IR command is being sent, serial commands may be lost, and when a serial command is received, an IR command may be lost. Using the send time of 000 and the “q” command at the same time as a real Bus command may cause some confusion and you may get unexpected results.

## Calibration & Intermediate stops:

If you are changing the motor direction (C6 O2) or Using the “top” reference (C10 O11), these options must be selected **before** doing the calibration (C10 O10).

The motor limits must be set **before** doing the calibration. If the limits are changed, then you must recalibrate.

Calibration is required before intermediate stops will work. If the unit is not calibrated correctly, the intermediate stops will be different when going open than when going closed. The stops will also be off if the motor does not move at a constant speed in both directions.

The intermediate stops are calculated based on % of travel time plus nudge offset.

% and nudge can be set before calibration if so desired.

20% = screen mostly down = 20% up from bottom (assuming bottom is reference)

If travel time is unknown (not yet calibrated), all intermediate stop commands are ignored.

If the unit is calibrated and power cycles, and an intermediate stop button is pressed before the unit goes to the reference, then the command will cause the motor to “auto reset,” i.e., go to the reference limit, then back to the intermediate stop.

Standard action:

There is an auto reset every 6th intermediate stop movement if the motor does not go to either limit. Any user action that stops the motor part way will cause the next intermediate stop command to auto reset.

High accuracy action with reference at the top:

There is an auto reset if an intermediate stop command is received that will cause the motor to go up, or if the motor has gone up anytime since being at the top.

High accuracy action with reference at the bottom:

There is an auto reset if an intermediate stop command is received that will cause the motor to go down, or if the motor has gone down anytime since being at the bottom.

When the unit finishes calibration, the run time is automatically set to 1.5 seconds longer than the travel time. If the Minimum load threshold was 0 prior to starting calibration, it will be set to an appropriate value (see the next section).

## Load Sensing:

In V3 the factory default minimum load threshold is 0. This means limits may be set easily. If calibration starts, and the minimum load threshold is still 0, then the threshold will automatically be set to 0.144 Amp (17 Watts) for 115VAC units or 0.047 Amp (11 Watts) for 230VAC units. This allows you to set the minimum load threshold and not have calibration “mess it up.” If calibration does not complete successfully, the minimum load will not be set back to 0.

If load sensing is not working correctly, you will not be able to calibrate, and intermediate stops will not work. If the motor stalls at one end of travel, and stall sensing is not tuned well, then the intermediate stops may not be very repeatable.

While the motor is moving, the current is measured to determine if the load has exceeded the stall threshold or if the load has fallen below the minimum load threshold. These thresholds may be nudged in small increments or directly set. C18 Ox Oy is used to set the minimum load and C19 Ox Oy to set the stall threshold. When entering Ox, the command will be ignored if O5 - O9 is entered as that is beyond the range of the unit. Oy does not need to be pressed if it is 0 (O10). Extra digits are ignored after Oy is entered.



A minimum threshold of 0 is special. The minimum load sense is not checked. This is useful if the unit is driving a very small load such as relays that are switching power to a large motor. Zero may be set by C18 O10 or by nudging the threshold down to 0.

To set the unit to stop when the motor just stalls, measure the current the motor draws while running or read the number off the motor rating label. Enter that into the stall threshold. Run the motor to the stall point and verify that the RP relays shut off ¼ second after the motor stalls. If the RP does not shut off, then the stall value is too high. Press stop then set the threshold lower or nudge it down a few times (C19 O12 O12 O12). Repeat the stall test until the RP shuts off appropriately. Verify that the motor runs correctly from limit to limit without stopping somewhere in the middle. If the motor stops in the middle, then the stall threshold is too sensitive, nudge it up once (C19 O11), then re-verify operation. Do not let the motor get very hot during this operation.

If the stall level is set too low, then the motor will only run briefly, then it will only run the other way briefly, because the RP believes it is at the limit when it detects a stall.

Once the motor has started, the current must fall below and stay below the “minimum load threshold” for ½ second for the RP to determine that the motor has reached its limit. This time is not adjustable. Stall sensing requires the motor current to exceed and stay above the “stall load threshold” for ¼ second before power is removed. This time is not adjustable.

### “Specific Stop”:

Set “Specific Stop” Channel (C22 O“N”) allows you to specifically stop this motor with a bus command. This feature allows the home automation programmer to have a specific stop command for a motor. Open or Close command on this channel will stop this motor if running and will not cause motion if already stopped. This is useful mainly from an IR command perspective. If the automator is using serial commands, then specific stop is supported by the “s” command channel without having to use a channel for the feature.

### Deadbeat:

If deadbeat is enabled, the MC1 will count full open and close events (the LED will blink on briefly when the count happens). When the count exceeds the selected value (depends on Demo) then the MC1 will no longer open or go to an intermediate stop, or act on an “M” serial command. If Deadbeat has counted out, then the “M” command is simply ignored.

### New to V3:

Motor Direction may be “Toggled” by pressing stop (with the motor already stopped) and holding it for 5 seconds which will cause the LED to come on. Release stop, then press and release Open1 within 2 seconds (the LED will go out then blink) and the motor leads will be swapped. If any other button, or no button is pressed within the given time, the LED will just go out and nothing is changed. While STOP is pushed, manual inputs are ignored.

Shorting the corner processor pins opposite the divot, near the letters J3 will force program mode. Be very careful doing this.

Support for the 0 0 0 button time as described in the protocol.

Selection of verbose or limited feedback as described in the protocol. This provides better support for multiple units on one serial link. Default is verbose (like it was in v2).

Default minimum load is 0 – see section on calibration and load sensing.





**Appendix:**

<i>Special characters</i>		
<i>Character</i>	<i>Description</i>	<i>ASCII Character Number</i>
“ ; ”	Semicolon, signifies end of command	59 (0x3B)
“ CR ”	Carriage return, signifies end of command	13 (0x0D)
“ * ”	Asterisk, Shift 8 on most keyboards	42 (0x2A)
“ LF ”	Line feed, ignored (not used)	10 (0x0A)
“ X-off ”	Ctrl-S on most keyboards, requests sender to stop sending	19 (0x13)
“ X-on ”	Ctrl-Q on most keyboards, requests sender to resume sending	17 (0x11)

