

EMRCM Interface

Control & Communication Protocol

Version 3 10-6-11

These instructions are supplemental to the primary DDI Lift Manual. Please review that manual first to become familiar with the lift operation before attempting to control lift by RS232 interface.

Button Control

In Auto Mode (automatic movement) only STOP is functional, and enter manual mode sequence.

To enter Manual Mode, press and hold OVERRIDE, press UP, release UP, release OVERRIDE (in that order).

While in Manual Mode the following functions are available:

DOWN – press and hold down button for lift to move down.

UP – press and hold up button for lift to move up.

Clear electronic lowest limit – At HOME, press & hold OVERRIDE, press SET, release SET, release OVERRIDE.

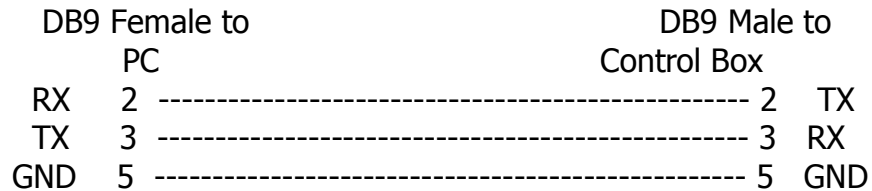
Set electronic lowest limit – Move lift to low point, press & hold OVERRIDE, press SET, release SET, release OVERRIDE.

Exit Manual Mode - press and hold OVERRIDE, press STOP, release STOP, release OVERRIDE (in that order).

WARNING – Rotating section must be facing front to go UP/DOWN (or press bottom bypass button).

Serial Control

RS232 Lift Interface Cable Diagram



Hardware:

- * 9600 baud, no parity, one stop and start bits.
- * RS-232 connection.

Software:

All commands to the lift are terminated with CR (ASCII 13).
All responses from the lift are one letter, no terminator.

Commands to Lift	Responses from Lift
`A' (65) - Stop	`R' (82) - Received Command / Ready
`B' (66) - Down	`T' (84) - Done Moving
`C' (67) - Up	`Z' (90) - Not Ready
`D' (68) - Start Manual Mode	`X' (88) - Error! Reset Needed
`E' (69) - End Manual Mode	`U' (85) - Invalid Command
`H' (72) - Go to rotate home	`J' (74) - Communication Error
`I' (73) - Ready Query	
`K#' (75)(48 to 57) - Recall Preset 1-9 `K0' will send lift to Home	
`N#' (78)(49 to 57) - Save Preset 1-9	
`L' (76) - rotate left	
`P' (80) - rotate right	
`S' (83) - stop rotate	

NOTES:

Use 10ms delay between bytes in serial string.

Save command (N), manual rotate (H, L, P, S), manual lift movement (B, C) are only operational in manual mode (D).

In automatic mode, recall command (K) will lower lift and rotate to saved position # (1 to 9).

Down, Up, commands will stop automatically only in 'automatic mode' (non-Manual Mode).

Down command and Up command will run until Stop command is issued *if in Manual mode*. There is considerable danger of running till bottom limit is reached.

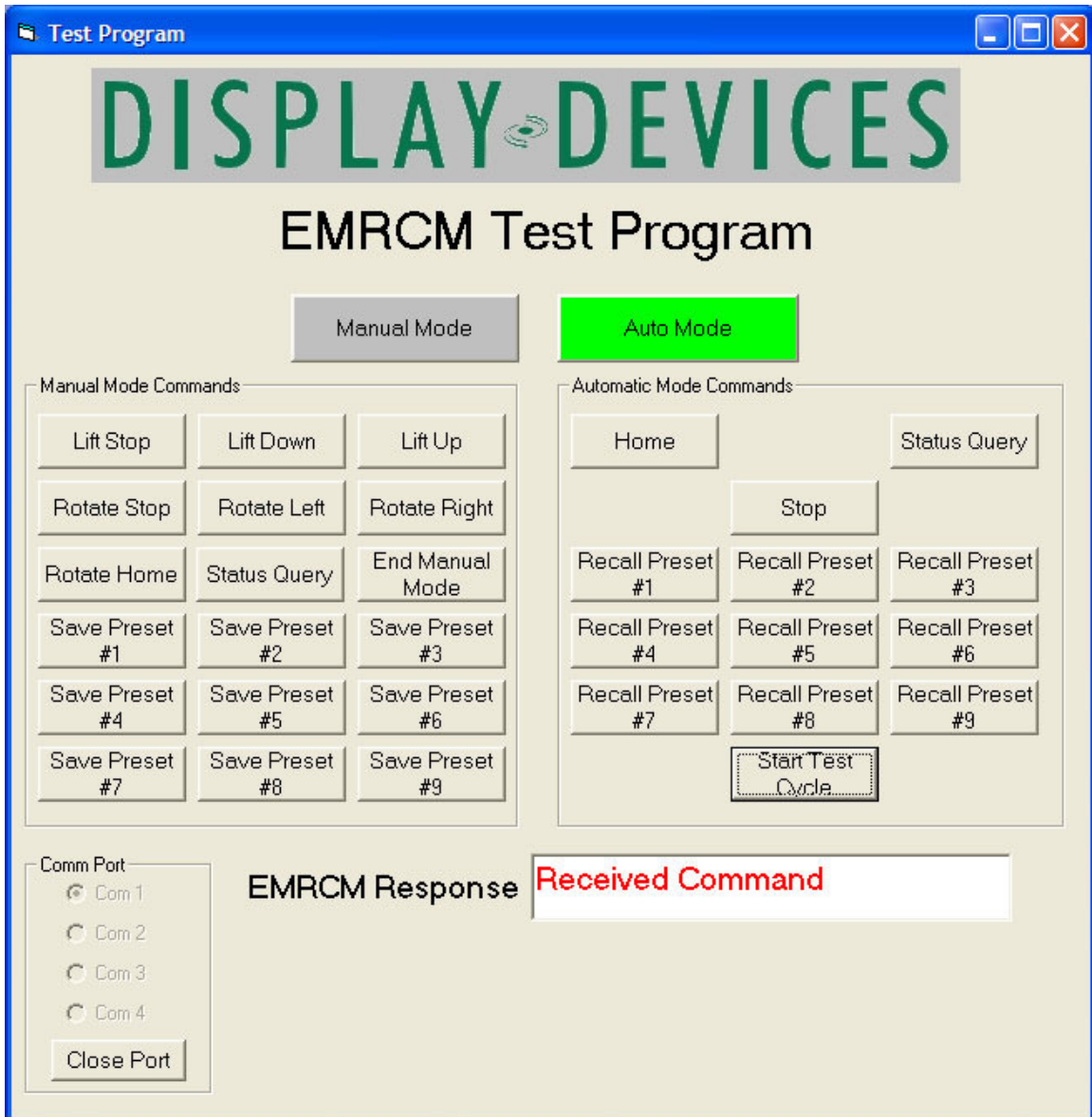
Always be careful when using lift in manual mode. Make sure rotate section is aligned to enter ceiling.

Always exit Manual Mode after use!

The response R is issued after every valid command. Other responses occur periodically. The response T is issued when the lift has stopped after reaching a saved preset.

Lift will automatically rotate back to home position when given the home command (K0) command.

DO NOT ROTATE LIFT WHEN NEAR CEILING!



This is a test program which is used to test the lifts in production.