



Logic Controls pole display are controlled by command codes and data from the computer. The model of pole display that you have will determine which command set works with your pole. Refer to the model identification chart for further information.

Commands are transmitted to the pole display as ASCII codes. The command codes listed below are expressed in hexadecimal (base 16) numbers enclosed inside angle brackets < >, in decimal numbers enclosed in parenthesis (), and in ASCII characters enclosed in curly brackets { }. Do **not** include the brackets as part of the command. ' ^ ' character denotes 'Ctrl' in the keyboard. Press and hold 'Ctrl', then press the next key.

LOGIC CONTROLS COMMAND SET (LD9000, LD9000X, LT9000):

1. **Vertical Scroll Mode <12>, (18), {^R}:**
Data is written into the second row and transferred to the first row when carriage return is received, leaving the second row empty.
2. **Normal Display Mode <11>, (17), {^Q}:**
Data can be written into either row. Moves to the left most digit of the other row when line is full.
3. **Brightness Control <04>, (04), {^D}:**
The brightness of the display can be adjusted using this command followed by a data byte <FF>, <60>, <40> or <20>.

| | | |
|----------|---|-----------------|
| <04><FF> | - | 100% Brightness |
| <04><60> | - | 60% Brightness |
| <04><40> | - | 40% Brightness |
| <04><20> | - | 20% Brightness |
4. **Back Space <08>, (08), {^H}:**
The cursor position moves one digit to the left erasing the previous information.
5. **Horizontal Tab <09>, (09), {^I}:**
The cursor position shifts one digit to the right without erasing character at original cursor position.
6. **Line Feed <0A>, (10), {^J}:**
The cursor position moves to the same position in the other row. In vertical scroll mode, if cursor was in second row, the cursor will not move and display will scroll up.



7. Carriage Return <0D>, (13), {^M}:

The cursor moves to the left most digit of the row it is in.

8. Digit Select <10>, (16), {^P}:

Moves the cursor to any position on the display with this command followed by a data byte of <00> to <27>, or in decimal (00) to (39).

e.g. <10><00> - MSD of top row
 <10><13> - LSD of top row
 <10><14> - MSD of bottom row
 <10><27> - LSD of bottom row

9. Cursor On <13>, (19), {^S}:

Turns on the cursor.

10. Cursor Off <14>, (20), {^T}:

Turns off the cursor.

11. Reset <1F>, (31), {^_}:

All characters are erased and all settings are returned to the power-on reset conditions.

12. Down Load Font <03><X> <F> <F> <F> <F> <F>:

Assign a keyboard key (ASCII code <20> to <7F>) to a different style font. The "X" represents the ASCII code for the selected key. The "F's" represent the 5 segments that will make up the special font. These bytes are translated to binary (1 and 0) to indicate whether a dot is to be turned ON or OFF. The 5 bytes form 35 bit stream of 1's and 0's starting from the top-left corner of the character, running from left to right (each data byte is interpreted from LSB to MSB).

e.g. Character '8' is composed of <2E>, <46>, <17>, <A3>, <03>

| | | | | | |
|---|---|---|---|---|----------------|
| 0 | 1 | 1 | 1 | 0 | 2E (0010 1110) |
| 1 | 0 | 0 | 0 | 1 | 46 (0100 0110) |
| 1 | 0 | 0 | 0 | 1 | |
| 0 | 1 | 1 | 1 | 0 | 17 (0001 0111) |
| 1 | 0 | 0 | 0 | 1 | A3 (1010 0011) |
| 1 | 0 | 0 | 0 | 1 | 03 (0000 0011) |
| 0 | 1 | 1 | 1 | 0 | |

13. Message Scroll Left on Top Line

<05><X><X><X> ... <X><0D>:

Scrolls a continuous message of up to 45 characters from right to left on the top line. The message must be terminated with <0D>.



14. Message Scroll Left on Bottom Line

<1B><06><X><X><X> ... <X><0D>:

Scrolls a continuous message of up to 45 characters from right to left on the bottom line. The message must be terminated with <0D>.

15. Message Scroll Right on Top Line

<1B><07><X><X><X> ... <X><0D>:

Scrolls a continuous message of up to 45 characters from left to right on the top line. The message must be terminated with <0D>.

16. Message Scroll Right on Bottom Line

<1B><0B><X><X><X> ... <X><0D>:

Scrolls a continuous message of up to 45 characters from left to right on the bottom line. The message must be terminated with <0D>.

17. Both Side Display <1B><0C>, (27)(12), {^[]{^L}:

After this command, all messages followed are displayed on both sides of double sided displays.

18. Front Side Display <1B><0E>, (27)(14), {^[]{^N}:

After this command, all messages followed are displayed only on front side of double sided displays.

19. Back Side Display <1B><0F>, (27)(15), {^[]{^O}:

After this command, all messages followed are displayed only on back side of double sided displays.

20. Clock Display <1B><1A><h><h><3A><m><m>:

Displays real time clock on bottom line in the 12 hour format hh:mm.

21. Smart Message Scroll Left on Top Line

<1B><15><X><X><X> ... <1C> ... <1C> ... <X><0D>:

Scrolls a multi-part message of up to total of 45 characters from right to left on the top line. Message parts are separated by <1C> and each part must be less than 20 characters.

22. Smart Message Scroll Left on Bottom Line

<1B><16><X><X><X> ... <1C> ... <1C> ... <X><0D>:

Scrolls a multi-part message of up to total of 45 characters from right to left on the bottom line. Message parts are separated by <1C> and each part must be less than 20 characters.



23. Smart Message Scroll Right on Top Line

<1B><13><X><X><X> ... <1C> ... <1C> ... <X><0D>:

Scrolls a multi-part message of up to total of 45 characters from left to right on the top line. Message parts are separated by <1C> and each part must be less than 20 characters.

24. Smart Message Scroll Right on Bottom Line

<1B><14><X><X><X> ... <1C> ... <1C> ... <X><0D>:

Scrolls a multi-part message of up to total of 45 characters from left to right on the bottom line. Message parts are separated by <1C> and each part must be less than 20 characters.

PASS-THRU COMMAND SET (LD9100-PT, LD9100X-PT):

All software commands of the non-pass-thru single sided model are available with following additional commands for pass-thru and double-sided display control. When power is turned on or after a reset command has been initiated, all text is displayed on the pole display.

Standard Pass-thru Command Set

1. Data to Peripheral <01>, (01), <^A>:

All data following this command will be sent to the peripheral / backside display until a "Data to Display" command is received.

2. Data to Display <21><23><02>, (33)(35)(02), {!}{#}{^B}:

All data following this command will be sent to the pole display until a "Data to Peripheral" command is received.

Extended Pass-thru Command Set (Optional)

1. Data to Peripheral <01><1C><1D><1E>, (01)(28)(29)(30):

All data following this command will be sent to the peripheral / backside display until a "Data to Display" command is received.

2. Data to Display <17><18><19><02>, (23)(24)(25)(02):

All data following this command will be sent to the pole display until a "Data to Peripheral" command is received.