SmartLine

Finish Line Timer

COMMAND MANUAL

VERSION 4.0

eTekGadget
36 Matuk Drive
Hyde Park, NY 12538

(845)-229-5189

www.eTekGadget.com

1 The SmartLine Finish Line Overview

We thank you for purchasing the eTekGadget SmartLine Finish Line system. This command manual will assist you with the communication between the SmartLine Finish Line system and a computer.

The eTekGadget SmartLine Finish Line produces consistent instant race results. The SmartLine is designed to produce results with excellent precision and ease.

Special features of the SmartLine include:
- 1 to 8 lanes supported.
- Large (2 ¼ inch) displays, readable across a large room.
- 6-7 inch clearance above track.
- Race results instantly displayed to race spectators.
- Useable with or without a computer connection.
- Computer interface standard.
- Race times resolved to .00005 seconds.
- Race times selectable to send 3, 4 or 5 decimals.
- Reset button and/or timed automatic reset. (settable time or disabled).
- Start gate switch.
- Built-in sensor IR illuminators (no lamps are required).
- Photo finish trigger.
- Built-in test functions.
- Flexible display configuration.
- Flexible output configuration.
- Displays are mounted on clear Lucite panel with black trim.
- Space Derby race with optional sensors.
- Your preferences such as number of decimals stored in unit.
- Easy to install.

The SmartLine lends itself to dynamic racing, since the on-board co-processor can complete timing calculations with results being passed to a computer.

SmartLine system consists of:
1- SmartLine system unit with 1 – 8 displays.
2- SmartLine Setup Program (LINESETUP2.EXE) on CD.
3- AC Power Adapter.
4- RS-232 cable attached to frame.
5- Reset/Start gate switch included on 35' or 50' cable

2 General Operating Instructions

The SmartLine Finish Line System may be set up for use as a race timer or it may be set to test mode to test the sensors.

The SmartLine Setup Program (LINESETUP2.EXE) is supplied with the finish line so that operating parameters may be easily set or changed to your preference without having to know the commands.

2.1 Setup SmartLine Finish Line hardware

Follow these simple steps to install the SmartLine Finish Line over the track. For a complete description of the installation of the SmartLine Finish Line on your track, refer to the Installation Manual.

1. Peel off the paper on the double-sided tape and stick the Plexiglas panel to the frame making sure to line up the screw holes. Attach the panel on the opposite side from the SmartLine label with the displays facing the same direction as the label. The double-sided tape gives the panel stability. Attach the display to the frame legs from the back with the screws that are taped onto the legs.

2. Anchor the SmartLine Finish Line Timer to the track using the method that is appropriate for your track.

   - Method 1:The Piantedosi type sensor bar has holes positioned where the sensors are installed.   We supply a wooden sensor bar with your timer that is mounted onto the bottom of the timer feet. The sensors are pre-mounted in the sensor bar that we supply. Piantedosi will supply an aluminum bar if you have requested it.   If you need to remove the sensors from the bar we supplied, be sure to push them out from the topside with the back of a ¼ or 3/16inch drill. Do not pull them out from the back or push on the center black part.

   - Method 2: The BestTrack type sensor bar is an aluminum bar with foam pads installed to hold the sensors in place. It is mounted onto the bottom of the timer feet when shipped. The sensors are pre-mounted on the sensor bar. We supply nuts and bolts to secure the timer onto the BestTrack track.

   - Method 3: For custom tracks with wooden side rails. Screw the side C-brackets to the track and set the legs of the finish line into the brackets Refer to figure 2.1 below for a visual example of this method.
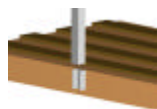

figure 2.1

3. Plug the display connector into the outside leg of the timer. IMPORTANT: Be careful not to jam the connector in. It is a keyed connector that fits in one direction. Match up the RED marks on the plug and connector.

4. Plug the power supply into the mating connector on the SmartLine timer unit.

5. Plug the 9-pin RS-232 interface cable into the SmartLine timer and any COM port on your PC. You may also use an RS-232 to USB conversion cable to use a USB connector on your computer. Use the CD that comes with the USB converter to install the driver.

6. Plug the Reset/Start Switch cable into the leg of the timer. You may mount the Start Switch onto your track or use the timer without it. If you do decide to mount the start switch, please follow the wiring instructions carefully.

WIRING INSTRUCTIONS: The supplied sensor switch has three terminals marked C(Common), NC(Normally Closed) and NO(Normally Open). The preferred method is to have the switch pressed before the race and un-pressed when the race starts. This method requires the use of the C and NC contacts.
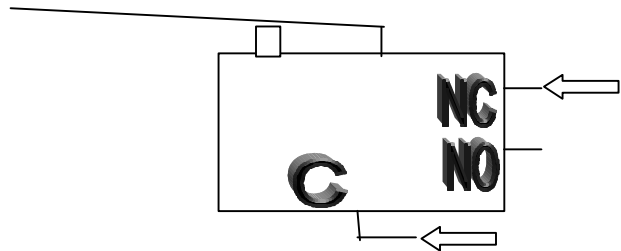
 If you want the switch to be un-pressed before the race and pressed when the race starts, then the push-on terminal needs to be on the NO contact as indicated below. **The timer is shipped with the green wire on C and the white wire on NO for testing purposes.**
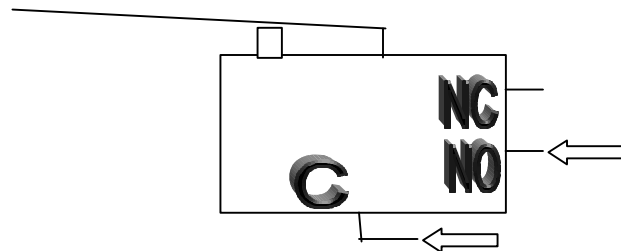
7. Peel the protective paper off the face of the displays.

8. Lastly, using the AC adapter, plug the SmartLine Finish Line timer into a source of power.

2.2 Run the SmartLine Setup Program

We supply the SmartLine Setup Program (LINESETUP2.EXE) on a CD to establish the initial communication and also for updating any settings that you may wish to change.

You may use the LINESETUP2 program directly from the CD or copy it to any directory of your choice. You only need the one file: LINESETUP2.EXE to run this program.

Before you start the LINESETUP2.EXE program make sure that the SmartLine Finish Line Timer is plugged into the computer and turned on.

Make sure that you do **NOT** have any other programs running that use the same COM port, such as a race manager program.

To start the SmartLine Setup Program, simply double-click on the LINESETUP2.EXE program name.

Select the COM port you will be using for communication in the Connection box.

Click the "CONNECT/AUTO" button. The "CONNECT" button is currently displaying "DISCONNECT" in the picture below because it has already been pressed and the status is "Connected".

The SmartLine Version should appear at the top of the box. The Track Sensors area will show the state of the sensors and switches. You may check the Auto Update checkbox to obtain continuous readings of the sensors and switches. These don't work correctly in DTX mode.

This is the display as it appears when there are 4 lanes and communication has been established successfully. Waving a hand under the sensors triggered the timer and the 'Get Results' button was pressed in order to see the result string from the timer.

In the new version, if you see "forced connection" instead of the "version" the timer is not connected properly. Use the explicit "CONNECT/" buttons to connect to the timer and recycle power.

2.3 Setup the SmartLine Timer for use with various race management software packages.

RaceTender –
Select the SmartLine Timer in the RaceTender's Race Setup Track Configuration screen. The RaceTender Software will send the appropriate commands to setup the SmartLine Timer. You may set the photo finish delay times at any time during the race.

GrandPrix Race Manager V5.0 –
Select the SmartLine Timer in the GrandPrix Race Manager's Hardware Setup Options screen. Select the COM port that will be used.
You may test the communications at this point by pressing the Start Test button. The GrandPrix Race Manager V5.0 will send the appropriate commands to the SmartLine Timer to get the readings from the next race. You may trigger the sensors, simulating a race, and the results will be displayed. You may also send individual commands to the timer.
When you select the SmartLine Timer in the Hardware Setup screen, a new tab will appear for setting the Photo Finish values. You may set the photo finish delay times at any time during the race. This option is available only in the GrandPrix Race Manager V5.0.1 upgrade.

DerbyMaster, RaceView and GrandPrix Version 4.0 or less –
SmartLine Setup Program –
In the 'Output Format Options' box set the checkbox to use DTX000 mode. The SmartLine Timer will automatically restart in the DTX000 mode.

Race Management Program –
Select DTX000 mode.

2.3.1 An optional method of setting up the timer parameters.

You may use a terminal program such as Tera Term Pro if you are familiar with communications protocols. This program is free and may be found as a link through our web site http://www.eTekGadget.com or at the Tera Term web site: http://www.vector.co.jp/authors/VA002416/teraterm.html

Select the COM port you will be using and select 9600 as the baud rate. We use the 8 bit, no parity, 1 stop bit settings.

Type the r command to reset the SmartLine timer. You may type any commands you wish from the list in section 3. It is a good idea to type the v command to verify communications and the version number of the SmartLine finish line system.

2.4 SmartLine Finish Line Test Mode

The test mode is useful for testing the sensors. To enable the reset mode, hold the reset button down until you see a capital L on the displays. You may then release the reset button.

The L will display for a short time (approximately 2 seconds) and then the lane number will be displayed in the display above the respective lane for approximately 2 seconds. The display will then show either a lower case c or an underscore. The c indicates that the sensor is covered as if a car were sitting on the sensor. The underscore (lowest segment on the display) indicates that the sensor is open (nothing is on the track). To return to the normal Racing Mode simply press the reset button.

3 Command Summary

This is a complete list of the commands that are available in the SmartLine. All commands are Character strings ending with a carriage return<cr>. The SmartLine and will execute the command and respond as required. All responses returned from the SmartLine Finish Line include a carriage return<cr> and a linefeed<lf>.

If any commands are unacceptable or not understood the SmartLine Finish Line will send a question mark (?<cr><lf>).

3.1 Brief List of commands:

3.1.1 Race Result Commands
- ra Force end of race, return results, then reset
- rg Return results when race ends
- rp Return results from previous race
  - See Appendix A for a detailed description of the result string.

3.1.2 Reset
- r Reset

3.1.3 Read Version
- v Report code version

3.1.4 Read Switches
- rr Read reset switch
  - 0(inactive) or 1(active) returned
- rs Read Start Switch
  - 0(inactive) or 1(active) returned
- rl Read finish line
  - 0(inactive) or 1(active) returned for each lane

3.1.5 Set or Read Variables

- on   Set/Read number of lanes
  The total physical number of lanes on your track.
  - on<cr>   Reads the current setting.
  - on4<cr>   Set to 4 lane track

- ol   Set/Read lane character
  Indicates lane 1 in the response to the ra, rg and rp commands.
  - ol<cr>   Reads the current setting.
  - ol0<cr>   Set to 'A'
  - ol1<cr>   Set to '1'
  - ol2<cr>   Set to 'a'
  - ol3<cr>   Set to 'A' (Refer to details for reasoning of this.)

- op   Set/Read place character
  Indicates place in the response to the ra, rg and rp commands.
  - op<cr>   Reads current setting of placement character.
  - op0<cr>   Set to 'a'
  - op1<cr>   Set to 'A'
  - op2<cr>   Set to '1'
  - op3<cr>   Set to '!'

- om   Set/Read lane mask
  Mask off the lane specified until reset with om0,on or power cycle.
  - om<cr>   Reads the current setting.
  - om3<cr>   Mask lane 3
  - om0<cr>   Resets mask to use all lanes

- od   Set/Read number of decimal places in the result values.
  - od<cr>   Reads current number of decimals
  - od3<cr>   Set to 3 decimals
  - od4<cr>   Set to 4 decimals
  - od5<cr>   Set to 5 decimals

- or   Set/Read automatic reset delay
  Set the delay up to 255 seconds.
  - or<cr>   Reads current setting of reset delay in seconds
  - or10<cr>   Set to 10 seconds
  - or30<cr>   Set to 30 seconds
  - or0<cr>   Auto reset off

- of   Set./Read photo finish trigger delay
  Set the delay up to 255 milliseconds.

- ow   Set/Read photo finish trigger length
  Set the trigger length up to 255 milliseconds.

- ox   Set the finish line to DTX000 mode
This changes the SmartLine finish line to use the DTX000 format.
  - ox1<cr>   Go into DTX000 mode
  - ox0<cr>   Return to SmartLine lower and upper case mode

- ov   Set/Read reverse lane numbering
  - ov<cr>   Reads value of 0 or 1 for normal or reverse.
  - ov0<cr>   normal, Lanes displayed left to right [1 2 3 4]
  - ov1<cr>   reverse, Lanes displayed right to left [4 3 2 1]
    (Refer to details for more complete information).

3.1.6 DTX000 mode supported

This is a simple protocol that is supported when you send an ox1<cr> command to the timer. The SmartLine will change the communication parameters and reset into the DTX000 mode until a ox0<cr> command is sent.

The communication parameters for DTX mode are:

This protocol is supported so that you may use the SmartLine finish line with software such as GrandPrix, DerbyMaster and RaceView.

- Race results are sent immediately after the race is completed.
- <SPACE>   Reset timer

3.2 Detailed List of commands:

3.2.1 od#<cr>:Set/Read number of decimal places

Computer→Finish Line

Sends	Description
od<cr>	Read number of decimals currently set.
od3<cr>	Sets the number of decimals;
od4<cr>	allowable range is 3 to 5.
od5<cr>	

Finish Line → Computer

Returns	Description
4<cr><lf>	Value read is the number of decimals set.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.2 of[#]<cr>:Set/Read photo finish trigger delay

This command sets the duration of the delay from the first car crossing the line to the start of the photo finish signal. The number in this command is the number of milliseconds the trigger signal will be delayed. When this delay is set to zero, the photo finish pictures will be taken before the displays indicate the winning lane. You may need to "fine tune" the delay time to capture the picture just after the first place is indicated on the display.

Computer→Finish Line

Sends	Description
of<cr>	Reads current photo finish trigger delay from unit.
of24<cr>	This value may range from 1 to 255 milliseconds.

Finish Line → Computer

Returns	Description
024<cr><lf>	Value set for photo finish trigger delay is returned when reading current setting only.
<cr><lf>	Carriage return sent when setting a new delay value.
?<cr><lf>	Invalid command.

3.2.3 ol[#]<cr>:Set/Read lane character

This command sets the character sequence type that will be used to indicate the lane numbers in the response to the ra, rg and rp commands. The lane indicators sent in response string will be subsequent values of the same sort such as upper case letters: A,B,C,D,E,F,G,H (Depending on how many lanes you have.)

Computer→Finish Line

Sends	Description
ol<cr>	Reads current character type(A,1,a) from unit.
ol0<cr>	Set to A; Upper case letters for lanes
ol1<cr>	Set to 1; Numbers for lanes)
ol2<cr>	Set to a; Lower case letters for lanes
ol3<cr>	Set to A; Upper case letters.

The option settings are given with the following reasoning in mind. Generally you will want to select a lane number and a place indicator that are compatible but not the same. If you choose to set the lane character to upper case letters using the ol0<cr> command it would make sense to use the op0<cr> command to set the place indicator to lower case letters. These are the settings that we prefer to make the parsing of the string more dynamic. You would be able to scan the line and draw out the race time more easily if the upper and lower case letters are used. The ol3<cr> is offered as a paired value with op3<cr> that will set the lane to upper case letters and the placement character to the !"#$%&'(sequence. (The hex values for this sequence begin at 21H). You may, however, set these values to any combination that you prefer.

Finish Line → Computer

Returns	Description
A<cr><lf>	Value read is the lane character set.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.4 om[#]<cr>:Set/Read number of lanes to be used

This command masks off the lane specified until it is reset by either an 'om0' command, 'on' command or power is cycled on the unit.

As an example, you may want to mask out the second and fourth lanes because the cars are being disqualified for any reason. You would send an "om2<cr>" and then an "om4<cr>" to mask out the lanes. The Finish Line will then respond with a string that includes results for every lane, however the masked lane will be sent as a 9.9999 (decimals are set to 4) and the placement will be a space (' ') such as:

 "A=1.3453a B=9.9999 C=1.4324b D=9.9999 E=1.5443c F=1.6355d".

To reset the number of lanes used, you may either set it back to the number of lanes available, for example with the 'on6' for a 6 lane track, or reset it with the 'om0' that will reset the masks so that all lanes are active.   All of the other parameters are persistent across a power cycle because they are stored in non-volatile memory. The mask lanes parameter is NOT persistent. Upon power up, using the 'on' or the 'om0' command the mask will be reset to use all lanes.

Computer→Finish Line

Sends	Description
om<cr>	Reads current setting for the number of lanes.
om3<cr>	Sets number of lanes to 3; allowable range is 1 to total number of physical lanes on track. You will probably never use 1.
om0<cr>	Special case that resets to the number of lanes available. Disables the mask.

Finish Line → Computer

Returns	Description
3<cr><lf>	Reads the current setting for the mask.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.5 on[#]<cr>:Set/Read number of lanes

This command sets the number of lanes there are physically installed on the track. This command should be used only if changing the number of lanes because of an upgrade or change in the total number of lanes.

As an example you may change the number of lanes from a 6-lane track to a 4-lane space derby track with this command. It is not meant to be used as a masking command. This number is used in the finish line timer for many different purposes and must indicate the total number of lanes and displays that exist. To facilitate the masking of lanes use the command om[#].

Computer→Finish Line

Sends	Description
on<cr>	Reads current setting for the number of lanes.
on4<cr>	Sets number of lanes to 4; allowable range is 1 to 8.

Finish Line → Computer

Returns	Description
4<cr><lf>	Reads the current setting for the number of lanes.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.6 op[#]<cr>:Set/Read place character

This is the character that will be used to indicate first place in the response to the ra, rg and rp commands. The place indicators sent in response string will be subsequent values of the same sort such as upper case letters: A,B,C,D,E,F,G,H (Depending on how many lanes you have.) If the exclamation point is used the placement values will be the following characters starting with the !: **!"#$%&'(**

Computer→Finish Line

Sends	Description
op<cr>	Reads current setting of placement character.
op0<cr>	Sets to 'a'
op1<cr>	Sets to 'A'
op2<cr>	Sets to '1'
op3<cr>	Sets to '!'

The option op3<cr> is given only as a convenience and is not recommended for use unless absolutely necessary. This may seem unusual representation, however, it is what some of the current race management software recognizes and so it is made available. The hex representation for these characters begins at 21H.

Generally you will want to select a lane number and a place indicator that is compatible but not the same. If you choose to set the lane character to upper case letters using the ol0<cr> command it would make sense to use the op0<cr> command to set the place indicator to lower case letters. These are the settings that we prefer to make the parsing of the string more dynamic. You would be able to scan the line and draw out the race time more easily if the upper and lower case letters are used. The ol3<cr> is offered as a paired value with op3<cr> that will set the lane to upper case letters and the placement character to the !"#$%&'(sequence. The hex values for this sequence begin at 21H. You may, however, set these values to any combination that you prefer.

Finish Line → Computer

Returns	Description
A<cr><lf>	Value read is the placement character set.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.7 or[#]<cr>:Set/Read automatic reset delay

This command allows you to disable the automatic reset so that it must be reset manually or set the reset time to anything from 1 to 255 seconds (which is a very long time).

Computer→Finish Line

Sends	Description
or<cr>	Reads the current setting of the reset delay.
or30<cr>	Sets the reset delay to 30 seconds; Allowable range is 1 to 255.

Finish Line → Computer

Returns	Description
30<cr><lf>	Value read is the current delay.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.8 ov[#]<cr>:Reverse lane numbering

This command allows you to change the direction that the results are displayed over the track.

Computer→Finish Line

Sends	Description
ov<cr>	Reads the current setting for direction.
ov0<cr>	Normal numbering, ie Left to Right [1 2 3 4] Lanes begin at the opposite side from the wires.
ov1<cr>	Reverse numbering, ie Right to Left [4 3 2 1]

Finish Line → Computer

Returns	Description
0<cr><lf>	Value read is the current direction.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.9 ow<cr>:Set./Read photo finish trigger length

This command sets the duration of the photo finish signal. Some frame capture devices will take more than one picture if their triggering signal is too long. The number in this command is the number of milliseconds the trigger signal will last.

Computer→Finish Line

Sends	Description
ow<cr>	Read current value of trigger (in milliseconds)
ow20<cr>	Set photo finish trigger length; allowable range is 1 to 255 milliseconds.

Finish Line → Computer

Returns	Description
020<cr><lf>	Value set for photo finish trigger length is returned.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.10   ox<cr>:Set the SmartLine Finish Line to DTX000 mode

This command sets the SmartLine Finish Line into DTX000 mode. The SmartLine will use the DTX000 format to reset when a <SPACE> character is received and to send the response string when the last car finishes. The response string will be in the following format:

1 1.1234 2 2.2345 3 3.3456 and so on.

The placement is determined by the order in which they are returned. For example,

2 0.8984 1 1.2326 4 1.3283 3 1.5339

Computer→Finish Line

Sends	Description
ox1<cr>	Go into DTX000 format mode.
ox0<cr>	Return to SmartLine lower and upper case mode.

Finish Line → Computer

Returns	Description
	No response is sent. Timer is reset to new mode.
?<cr><lf>	Invalid command.

3.2.11 ra<cr>:Force end of race, immediately return results, then reset

Computer→Finish Line

Sends	Description
ra<cr>	Force end of race immediately.

Finish Line → Computer

Returns	Description
A=0.851c B=0.497b C=0.266a D=9.999<cr><lf>	
See Appendix A for a detailed description of the result string.	

3.2.12 rg<cr>:Return results when race ends

Computer→Finish Line

Sends	Description
rg<cr>	The Finish Line will respond when any of the following conditions occur:

- o A car finishes in each lane
- o The auto reset time is reached
- o The reset switch is pressed

Finish Line → Computer

Returns	Description
A=0.851c B=0.497b C=0.266a D=0.976d<cr><lf>	
See Appendix A for a detailed description of the result string.	

3.2.13 rl<cr>:Read the finish line photo sensors

Computer→Finish Line

rl<cr>

Finish Line → Computer

Returns	Description
0000<cr><lf>	Not covered (example for 4 lane track.)
1111<cr><lf>	Covered
	0 or 1 returned for each lane.
<cr><lf>	Carriage return sent when setting a new value.
?<cr><lf>	Invalid command.

3.2.14   rp<cr>:Return results from previous race

Computer→Finish Line
>rp<cr>

Finish Line → Computer
>A=0.851 # B=0.497 " C=0.266 ! D=0.976 $<cr><lf>
>See Appendix A for a detailed description of the result string.

3.2.15   rr<cr>:Read the reset switch

Computer→Finish Line
>rr<cr>

Finish Line → Computer

Returns	Description
0<cr><lf>	Not Pressed
1<cr><lf>	Pressed

3.2.16   rs<cr>:Read the start switch

Computer→Finish Line
>rs<cr>

Finish Line → Computer

Returns	Description
0<cr><lf>	Not Pressed
1<cr><lf>	Pressed

3.2.17   r<cr>:   Reset

Computer→Finish Line
>r<cr>

Finish Line → Computer
>Returns
>
<cr><lf>

3.2.18   v<cr>:   Report code version

Computer→Finish Line
>v<cr>

Finish Line → Computer

Returns	Description
Version<cr><lf>	Current version of SmartLine Finish Line software

Appendix A: Race Result String

If the rg command is sent to the SmartLine Finish Line, a result string will be returned after the race has been completed. The race is not completed until all cars have passed through the finish line or the force finish command is used.

There are several different variations to the result string depending on the values you selected for the lane, placement and number of decimals. Some examples of these are:

```
A=0.851c B=0.497b C=0.266a . . . H=0.976h<cr><lf>
A=0.851C B=0.497B C=0.266A . . . H=0.976H<cr><lf>
A=0.8513 B=0.4972 C=0.2661 . . . H=0.9768<cr><lf>
A=0.851# B=0.497" C=0.266! . . . H=0.976(<cr><lf>

1=0.851c 2=0.497b 3=0.266a . . . 8=0.976h<cr><lf>
1=0.851C 2=0.497B 3=0.266A . . . 8=0.976H<cr><lf>
1=0.8513 2=0.4972 3=0.2661 . . . 8=0.9768<cr><lf>
1=0.851# 2=0.497" 3=0.266! . . . 8=0.976(<cr><lf>

a=0.851c b=0.497b c=0.266a . . . h=0.976h<cr><lf>
a=0.851C b=0.497B c=0.266A . . . h=0.976H<cr><lf>
a=0.8513 b=0.4972 c=0.2661 . . . h=0.9768<cr><lf>
a=0.851# b=0.497" c=0.266! . . . h=0.976(<cr><lf>
```

The letters (A. . .H) indicate the lanes, beginning at the lane opposite the wires if normal direction is selected. The race times are displayed after the lane designator using the number of decimals set with the od command. The default value is 3 decimals. The next character indicates the placement of the car.

The placement characters for the hex 21 values are as follows:

```
First Place:    !
Second Place:   "
Third Place:    #
Fourth Place:   $
Fifth Place:    %
Sixth Place:    &
Seventh Place:'
Eighth Place:   (
```

Immediately after the force end of race (ra) command is sent to the SmartLine Finish Line, a result string is returned such as:

```
A=0.851c B=0.497b C=0.266a D=9.999  <cr><lf>
```

As above, the letters (A..H) indicate the lanes, beginning at the lane opposite the wires if normal direction is selected. The race times are displayed after the lane designator using the number of decimals selected with the od command. The race placement character is displayed next.
If some cars did not go through the finish line before the ra command was sent then the finish line will send back 9.999 for each car that did not finish and the placement character will be a space.

The result string that is sent back in DTX000 mode is as follows:
        1 0.8984 2 1.2326 3 1.3283 4 1.5339
The placement is determined by the order in which they are returned. For example,
        2 1.2326 1 0.8984 4 1.5339 3 1.3283