



## USING HTREND

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Revision:  
B

# Using HTrend –History Trending Reports

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The HTrend program is launched by typing **HTREND** in a System window.

**Best Practice:** While it can be run from an XView command target, it behaves in a non-standard manner and is not advised.

**HTREND** produces scatter plots and time interval trends based on information stored in MISER history files. Up to eight trends can display in a single window with each one distinguished by color. The trend window opens to a default size, even if only a portion of the trend is visible. You can resize the window or iconify it in the usual ways. When you expand or contract the window, the trend expands or contracts to the space allotted. Increasing the window in the horizontal direction expands the range of time displayed. Increasing it vertically, resizes the trend in relationship to the area in the window.

The trend window defaults to a standard black background. To solarize the display, especially useful when printing, press <F3> or type <s>. The trend window can display from one to eight trend lines or scatter (x, y) plots. Each one can have unique colors and each trend line can be defined with a different color for the normal state, the alarm state, and the point down state. Trend windows may be as plentiful and as large or as small as you want.

To adjust the trend to the left or right, press the left or right arrow keys. The up and down arrow keys change the scale proportion between the minimum and maximum Y axis settings. The up arrow key doubles the Y axis range using the existing minimum point and setting a new maximum value. The down arrow halves the Y range from the same existing minimum point to a new maximum value.

**HTREND** begins by prompting you for the trending parameters (point acronyms, time intervals, colors, etc.). Trends can be drawn horizontally or vertically. A small diamond shape appears outside the graphing area towards the upper right. Initially, the diamond marks the starting time and date. It can be moved to the left and then back again using the mouse, <F1>, <Spacebar>, or <Return>. Values in the legend show point status at an offset from the real time. The offset is equal to a relative time that is also displayed.

You can expedite **HTREND** processing by saving the trend parameters to a command file and launching it each time you want to trend the same points. Adding the file name to the **HTREND** command skips the intervening prompts, but still requires a time to be specified.

**NOTE:** History trends can be displayed for as long as desired. To close the history trend, press <F2> or type <q>.

## USING HTREND

### Launching HTrend from the Command Line

Type **HTREND** and press <Return>.

– or –

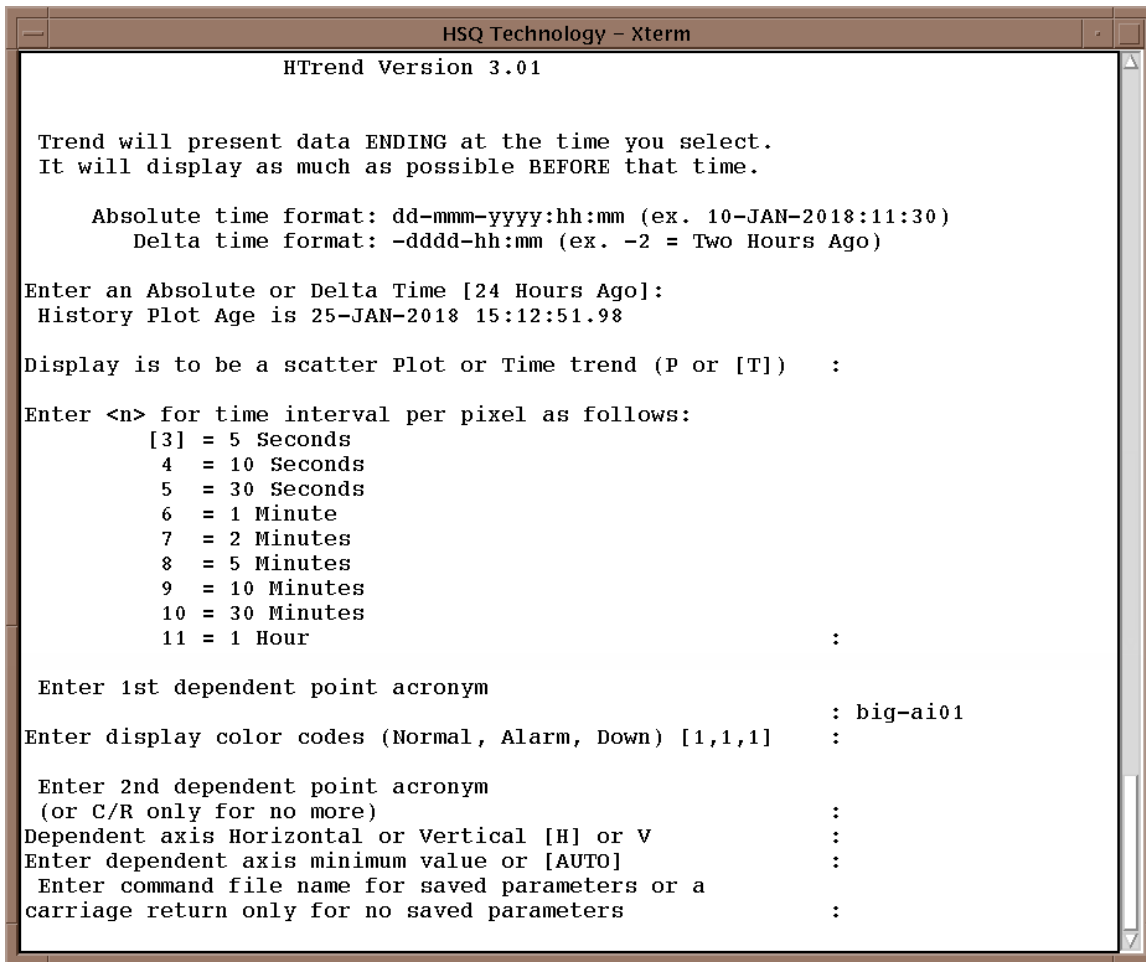
If trend parameters were previously saved, type HTREND, a space, an “at” sign (@), and the filename. It is assumed the file extension is “.COM”. If not, include it. For example:

```
HTREND
```

```
HTREND @filename
```

```
HTREND @filename.extension
```

### Xterm Prompts



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HSQ Technology - Xterm
HTrend Version 3.01

Trend will present data ENDING at the time you select.
It will display as much as possible BEFORE that time.

    Absolute time format: dd-mmm-yyyy:hh:mm (ex. 10-JAN-2018:11:30)
    Delta time format: -ddd-hh:mm (ex. -2 = Two Hours Ago)

Enter an Absolute or Delta Time [24 Hours Ago]:
History Plot Age is 25-JAN-2018 15:12:51.98

Display is to be a scatter Plot or Time trend (P or [T])  :

Enter <n> for time interval per pixel as follows:
    [3] = 5 Seconds
    4   = 10 Seconds
    5   = 30 Seconds
    6   = 1 Minute
    7   = 2 Minutes
    8   = 5 Minutes
    9   = 10 Minutes
    10  = 30 Minutes
    11  = 1 Hour      :

Enter 1st dependent point acronym                          : big-ai01
Enter display color codes (Normal, Alarm, Down) [1,1,1]   :
Enter 2nd dependent point acronym                          :
(or C/R only for no more)                                 :
Dependent axis Horizontal or Vertical [H] or V            :
Enter dependent axis minimum value or [AUTO]              :
Enter command file name for saved parameters or a        :
carriage return only for no saved parameters              :
```

Figure 1 - HTrend Parameters

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Absolute time format: dd-mm-yyyy:hh:mm (ex. 10-JAN-2018:11:30)  
 Delta time format: -dddd-hh:mm (ex. -2 = Two Hours Ago)

Enter an Absolute or Delta Time [24 Hours Ago]:  
 History Plot Age is 25-JAN-2018 15:12:51.98

The default start time is twenty-four hours in the past. To accept the default, press <Return>. Otherwise, enter the time when history trending should begin.

Display is to be a scatter Plot or Time trend (P or [T]) :

- **T** — (Time trend) Time interval trends map independent point activity for a period determined by the interval selected. This is the default.
- **P** — (Scatter Plot) Scatter plots map an independent point against one or more dependent points.

Enter <n> for time interval per pixel as follows:  
 [3] = 5 Seconds  
 4 = 10 Seconds  
 5 = 30 Seconds  
 6 = 1 Minute  
 7 = 2 Minutes  
 8 = 5 Minutes  
 9 = 10 Minutes  
 10 = 30 Minutes  
 11 = 1 Hour

- **3** — (Default) Sets a five second time interval.
- **4-11** — Sets other time intervals.

The choices range from five seconds to one hour. The time interval determines how the point activity is mapped.

**NOTE:** An interval should be chosen that is compatible with the sampling interval of each dependent point. If a time interval is selected that is the same or smaller than the sampling interval, the trend will be based on the value taken from one reading.

**Table 1: HTrend Time Intervals**

#	Time Interval/Pixel	Length of Time
3	5 Seconds	Nine Ticks = Five Minutes/Tick = 30 minutes (half hour)
4	10 Seconds	Nine Ticks = Ten Minutes/Tick = 60 minutes (one hour)
5	30 Seconds	Nine Ticks = Thirty Minutes/Tick = 180 minutes (three hours)
6	1 Minute	Nine Ticks = One Hour/Tick = 360 minutes (six hours)
7	2 Minutes	Nine Ticks = Two Hours/Tick = 720 minutes (twelve hours)
8	5 Minutes	Nine Ticks = Five Hours/Tick = 1,800 minutes (thirty hours)

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#	Time Interval/Pixel	Length of Time
9	10 Minutes	Nine Ticks = Ten Hours/Tick = 3,600 minutes (sixty hours)
10	30 Minutes	Eleven Ticks = 1.25 Hours/Tick = 180 hours (seven and a half days)
11	1 Hour	Twenty-one Ticks = 2.5 Days/Tick = 360 hours (fifteen days)

**NOTE:** Trend will present data *ending* at the time selected. It will display as much as possible *before* that time.

Enter Independent point acronym:

This prompt displays only when setting up a scatter plot. Enter the acronym for the independent axis.

Enter 1st dependent point acronym:  
Enter 2nd dependent point acronym:

Enter the acronym for the first dependent point to be trended. After entering the display color codes (in the following prompt), the prompt repeats for the second through the eighth points. After the eighth point (or a null return) **HTREND** continues.

Enter display color codes (Normal, Alarm, Down) [1,1,1]:  
Enter display color codes (Normal, Alarm, Down) [2,2,2]:

This prompt repeats for each dependent point acronym selected. Enter the codes for the colors that should represent this point when its status is normal, alarm, and down. A complete entry consists of three selections separated by commas. The default colors for the first dependent point are 1, 1, 1 and the for the second dependent point are 2, 2, 2. Standard colors are:

- 1 — Red
- 2 — Green
- 3 — Yellow
- 4 — Blue
- 5 — Magenta
- 6 — Cyan
- 7 — White
- 8 — Black

Dependent axis Horizontal or Vertical [H] or V:

- H — (Default) Plots the dependent axis horizontally.
- V — Plots the dependent axis vertically.

Enter dependent axis minimum value or [AUTO]:

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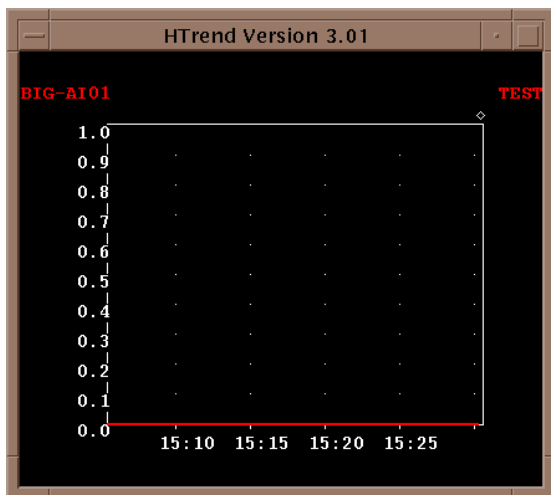
The default AUTO scale is based on the current value of the points being trended. Point values are scaled around ten tick marks. To accept auto scaling, press <Return>. Otherwise, enter the minimum scale value.

```
Enter dependent axis maximum value:
```

This prompt appears only when a scale minimum has been specified. Enter the maximum value.

```
Enter command file name for saved parameters or a  
carriage return only for no saved parameters:
```

To omit setting up a command file with the current trend parameters, press <Return>. To write the trend parameters from this session to a separate command file, enter a name for that file. HTREND adds the default file extension of “.COM”. To use another file extension, enter it (and remember it when executing the file). Command files are saved in the current default directory. Next, a separate window opens and the trend displays. The values at the top of the screen reflect point status at the diamond marker.



**Figure 2 - HTrend window**

The Trend range that is displayed can be adjusted forward and backward in time by using the keyboard arrow keys. Pressing the right arrow moves range forward in time equivalent to the time interval originally displayed (e.g., if the time interval was five seconds then the graph will display the next thirty minutes of trend). Comparably, pressing the left arrow key will move the range backward in time equivalent to the original time interval.

To close the trend window, press <F2> or type <q>.