

## WSI Supplement

# Tabular Text Reports (ww\_showtxt)

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Use the tabular text report utility to create a table of pre-specified weather data based on any decoded data type supported by the system.

**Figure 1: Sample tabular text report**

```
Tabular Data for 96:09:27:12:00:00
  STATN      Temp      DewPt      Wndspd      Wnddir      Gust
  =====
NSI          57          50          6           300         30.0
GRK          55          52          14          0
OSC          70          64          20          190         29
SMN          34          21          0           0
CVN          41          36          7           0
```

To create a tabular text report, click the Tabular Text icon on the system desktop (or type **ww\_showtxt -i** at the prompt). A system window opens and the system prompt turns red to indicate that you are in the *interactive mode*. Use this prompt to enter the commands that create tabular text reports. At the prompt, you can use one of the tabular text macros or you can create your own tabular text report command strings.

## Tabular text macros

A number of macros come with your system that allow you to quickly create a tabular text report. Tabular text macros are pre-defined commands that specify the parameters, data source, and formatting for the tabular text report.

In the winterm window, type one of the pre-installed macros and any necessary information (arguments) such as station ID or data time and press the Enter button. The system will prompt you for any missing arguments. The specified tabular text report displays directly in the winterm window.

For a list of available macros, type a ? at the prompt. A table appears showing the macro, required arguments, and the information provided by the table.

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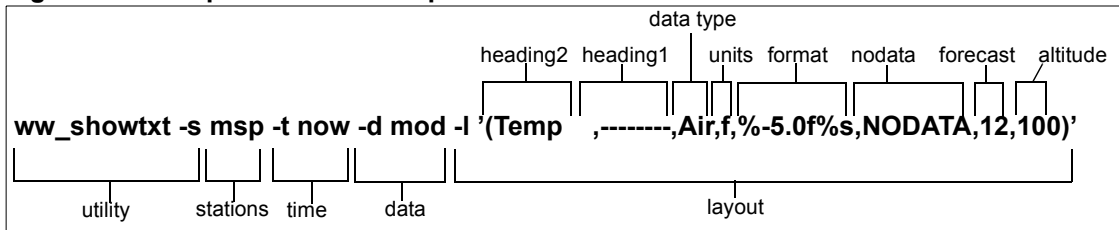
**NOTE: UNIX is case-sensitive. If you type a capital letter where a lower-case letter is required, the system will not process the command correctly.**

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## Tabular text command

To create your own tabular text commands and build reports not covered by one of the macros enter the tabular text interactive mode, then use the syntax (format) shown in Figure 2 and explained below. The command string components can be saved as a file for ease and consistency. Create the component file using a text editor (vi, Jot, or Wordpad) and save to the wxws\_exe directory. To use a component file, type the file name, preceded by an @ symbol.

**Figure 2: Sample tabular text report command**



There are five key components to any tabular text report command string as described below.

### Utility

The command string that initiates the tabular text report utility is `ww_showtxt`. Type the utility command at the beginning of the string.

### Stations

The stations argument (`-s`) determines which stations are used to collect data. The stations argument can use either a list of individual stations or a pre-defined station list, preceded by a `-s`.

A station is defined as an alphanumeric station identifier, as a regular pattern that matches one or more alphanumeric identifiers, or as a latitude-longitude pair. The latitude and longitude values should be separated by one or more spaces. Latitude-longitudes should only be used with gridded data. Regular expressions should only be used with textual data.

- When specifying multiple stations use a comma between each station and enclose the group in single quotes:  
`'bos, mia, den'`
- To specify latitude-longitude locations, separate the latitude-longitude pair with commas and enclose the entire string in single quotes.  
`'40.45 -100.3, 41.03 -101.25'`
- To specify regular expression patterns, put the patterns in single quotes.
  - to get all stations, use `'*'`
  - to get all stations that start with the letter C, use `'C.*'`
- To specify a station list precede the station list (path) name with the at (@) character:  
`@/wxdisk/wxws/wxws_data/station/stationlist.txt`
- To specify a station list in the Time Free datastore precede the station list name with the bang (!) character:  
`!station_list`
- To specify additional station lists follow each station list name (with the exception of the last name) with the back slash (\) character: `!station_listA\ station_listB\ station_listC`

For a list of available station lists, enter `ww_showtxt -s ?`

## Data time

The time argument (**-t**) indicates the data time. Enter a time, preceded by **-t**. Formats for time are *hh*, and *hh:mm*. For multiple times use either the *hh - hh*, or *hh:mm - hh:mm* format. Or, use *Now* for the current conditions, or *Most* for the most recent conditions. For additional time formats refer to the product online documentation (see product Help menu).

For gridded data, the data time refers to the initialization time of the model run. The valid time of the grid is determined by adding the forecast period specified in the layout to the initialization time.

## Data source

The data source argument (**-d**) identifies the data source for the product. Use one of the following data type ids preceded by a **-d**.

```
ww_showtxt -t 12 -d sad
```

For a complete list of data sources, type `ww_showtxt -d ?` at the system prompt and press the Enter key on your keyboard.

**Figure 3: Some GRIDDED DATA source ids**

"HRAVNNMC" = AVN Global	"ETAYZ" = Eta 80 km CONUS"
"AVNYZ" = AVN 80 km CONUS	"MESOETA_212" = Eta 40 km CONUS
"MRFNMC" = MRF Global	"MESOETA20" = Eta 20 km CONUS"
"MRF_201" = MRF 380 km Northern Hemisphere	"NGMYZ" = NGM 80 km CONUS
"MRF_202" = MRF 190 km CONUS	"RUCYZ" = RUC 80 km CONUS (12 hour forecast issued every 3 hours)
MRF_203" = MRF 190 km Alaska	"RUC_211" = RUC 80 km CONUS (3 hour forecast issued every hour)
"MRF_204" = MRF 160 km Hawaii	"SNOW_COVER" = Snow Cover analysis
"MRF_205" = MRF 190 km Puerto Rico	"WXPRED_GRID2" = Predictor 30 km (for Predictor clients only)
"ECMWF" = ECMWF Global	"WXPRED_GRID3" = Predictor 10 km (for Predictor clients only)

**Figure 4: Some TEXT DATA source ids**

"DCDREPORT" = Decoded Data	"CSUS2" = Daily Climate Report	"AIRMZT" = Airmet Z Report
"SAD" = SA Report	"FEUS1" = Local Metro/3-5 Day Outlook	"SIGMT" = Sigmet Report
"SPD" = SA Special Report	"FPUS3" = State Forecast Discussion	"CSIGMT" = Convective Sigmet Report
"SASPV" = SA/SP Combined Report	"FPUS5" = Zone Forecast	"ISIGMT" = International Sigmet Report
"ASOSD" = ASOS Report	"FXUS21" = Short Term Forecast	"WATCH_WARNING_REPORT" = Watch / Warning Reports
"ASOSSPD" = ASOS Special Report	"FZUS6" = Marine Forecast	
"ASOSSPV" = ASOS/SP Combined Report	"ABUS22" = State Weather Roundup	"BULLETIN" = Bulletins
"MESAV" = SA - METAR	"ABUS30" = State Weather Summary	"GENERAL" = General Bulletin
"MESPSASPV" = SA/SP - Metar/SP	"FXUS01" = NMC Forecast Discussion	"SAB" = SA Bulletin
"MESPASOSSPASPV" = Metar/SP ASOS/SP SA/SP	"FXUS02" = NMC Extended Discussion	"MEB" = Metar Bulletin
"ASOSSAV" = ASOS - SA	"FXUS03" = NMC Hemispheric Discussion	"SMB" = SM Bulletin
"ASOSSPASPV" = ASOS/SP - SA/SP	"FOUS11" = NMC Heavy Snow/Rain Forecast	"TAFB" = TAF Bulletin
"SALOCV" = SA - Local Report	"FOUS30" = NMC Excessive Rainfall Potential	"F14B" = FOUS14 Bulletin
"SASPLOCV" = SA/SP - Local Report	"FXUS4" = NMC QPF Discussion	"FP4B" = FPUS4 Bulletin
"MED" = Metar Report	"FXUS06" = NMC 6-10 Day Outlook	"MRFB" = MRF MOS Bulletin
"MESPD" = Metar Special Report	"ABNT20" = NWC Tropical Atlantic Outlook	"AVNB" = AVN MOS Bulletin
"MESPV" = Metar/SP Combined Report	"ABNT30" = NWC Tropical Atlantic Report	"RAFB" = RAFs Bulletin
"MESMV" = Metar - SM	"AXNT20" = NWC Tropical Weather Discussion	"ETAB" = ETA Bulletin
"MESPMV" = Metar/SP - SM	"FA1B" = FA Hazard Bulletin	"UMB" = UM Bulletin
"LOCALMED" = Local Reports		"PRB" = PIREP Bulletin
"MELOCV" = METAR - Local Report		"FDB" = FD Bulletin
"MESPLOCV" = METAR/SPECI - Local Report	"FA5B" = FA Significant WX/Cloud Bulletin	"ASUS1B" = US Surface Analysis Bulletin
"SMD" = SM Report	"WWUS40" = Preliminary Coordinates	"FSUS2B" = US Surface Forecast Bulletin
"TAFD" = TAF Report	"WUUS1" = T-Storm Warning	"SCASTB" = Storm Cast Bulletin
"FCD" = FC Report	"WWUS9" = MKC T-Storm/Tornado Watch	"HURCNEB" = Hurricane Track Bulletin
"F14D" = FOUS14 Report	"FLOOD" = Flash Flood Statements/Watches/Warnings	"NOTAMB" = NOTAM Bulletin
"FP4D" = FPUS4 Report	"TXTJUNK" = Text Junk	"FDCNOB" = FDC NOTAM Bulletin
"MRFD" = MRF MOS Report	"NOUS40" = Family of Services Notices	"ISIGMB" = International Sigmet Bulletin
"AVND" = AVN MOS Report	"FPCN10" = Canadian Regional Forecasts	"SIGMB" = Sigmet Bulletin
"NAVND" = New AVN MOS (MAV MOS)	"FPCN54" = Canadian Extended Forecasts	"CSIGMB" = Convective Sigmet Bulletin
"NMRFD" = New MRF MOST (MEX MOS)	"WWCN11" = Canadian Regional Warnings	"CWAB" = CWA Bulletin
"RAFD" = RAFs Report	"FPCN20" = Canadian Marine Forecasts	"AIRMB" = Airmet Bulletin
"ETAD" = ETA Report	"URGENT" = WSI Urgent Status Messages	"WATCHBOX_BULL" = Tornado/Thunderstorm Watch Bulletin
"UMD" = UM Report	"DAILY" = WSI Daily Status Messages	"SDUS8B" = Manually Digitized Radar Bulletin
"PRD" = PIREP Report	"PRODUCT" = WSI Product Announcements	"JUNK" = Junk Bulletin
"FDD" = FD Report	"FOUS44" = County Flash Flood Guidance	"UNUSED" = Unused Bulletin
"NOTAMD" = NOTAM Report	"FZCA42" = Marine Weather Statements	"ALERT" = Alerts
"FDCNOTD" = FDC NOTAM Report	"WHCA42" = Coastal Flood Watch/Warning	"IDLEALERT" = Idle Alerts
"FDCCAND" = FDC NOTAM Cancellation	"WTPZ" = Tropical Forecast/Advisory/Discussion	"IDLEALERTONCLEAR" = Idle Alert On Clear
"TXTREPORT" = NWS Text Reports	"NATURAL_PHENOMENA" = Other Natural Phenomena	"COUNTALERT" = Count Alerts
"ABUS1" = US Weather Summary	"SDUS8T" = Manually Digitized Radar Report	"COUNTALERTONCLEAR" = Count Alert On Clear
"ACUS1" = Severe Weather Outlook #1	"ASUS1T" = US Surface Analysis Report	"EVENTALERT" = Event Alerts
"ACUS2" = Severe Weather Outlook #2	"FSUS2_12HR" = US Surface 12Hr Forecast	"EVENTALERTONCLEAR" = Event Alert On Clear
"WATCHES" = Local Special/Severe Report	"FSUS2_24HR" = US Surface 24Hr Forecast	
"WWUS32" = Local Area Storm Watch	"AIRMST" = Airmet S Report	
"WWUS34" = Local Severe Weather Statement	"AIRMTT" = Airmet T Report	
"WWUS35" = Local Special Weather Statement		
"ABUS34" = Public Weather Statement		
"WFUS1" = Tornado Warning		

## Layout

Use the layout argument (-l) to determine the appearance of the report. The utility is designed to easily create a multi-column format. Create a separate layout string for each parameter you want in the report.

**Figure 5: Sample tabular text layout argument**

```
( Temp, =====, air, f, %8.f, nodata )
```

↑ heading 1      ↑ heading 2      ↑ parameter      ↑ unit      ↑ format      ↑ nodata

The different parts of the layout argument are:

- **Heading1.** Descriptive text header.
- **Heading 2.** A character (number, hyphen, or underscore) to separate the text header from the following data.
- **Data Type.** Defines the individual data type to display (e.g. "Air" for air temperature, "Wind Dir" for wind direction, "Wind Spe" for wind speed). There are literally hundreds of data types. To hunt for available data types run `ww_showtxt` for one station only using the data type "XXXX".
- **Units.** The units associated with the above data type (e.g. "C" for Celcius, "knots", "points"). To hunt for available unit types run `ww_showtxt` for one station only specifying a particular data type and "XXXX" for units.
- **Format.** Use the format data to define the size of the columns, the (decimal point) precision of the numbers, the justification, and the white space. The format string follows standard UNIX printf syntax. Refer to the table below for the recommended formats. For best results, use only the %s (text string) or %f (floating point number) formats.

**Table 1: Format specifications for the Layout field**

Format	Description
<b>Alpha string</b>	
%s	A right-justified character string
\$Xs	A right-justified character string up to X characters in length.
-\$Xs	A left-justified (-) character string up to 5 characters in length.
%X.Ys	A right-justified character string which truncates at X characters on the left side of the decimal point and Y characters on the right side.
<b>Whole number</b>	
%Xd \$s	A right-justified whole number with up to X characters followed by a space and the units (\$s).
%0Xd	A right-justified whole number with X digits. The 0 indicates that 0's should fill any empty spaces to the left of the number (e.g. '0062').
<b>Floating point number</b>	
%X.Yf	A right-justified floating point number with up to X total characters: Y digits to the left of the decimal point, the decimal point, and (X-Y-1) digits to the right of the decimal point.
%-X.Yf \$s	A left-justified floating point number (see above) with the units (\$s).

- **Nodata.** Displayed whenever a specific data parameter for a particular station is not available. You may use `NO_REPORT` as a place holder. This does not force data to display if no data was retrieved.
- **Forecast.** (optional) When applicable, the forecast period should be specified as a number of hours after the data time. Fractional hours are allowed.

If the forecast period is the same for all parameters in the layout, it can be specified for the entire command using the `-ft` option, and the forecast group can be omitted from all the layout strings.

- **Altitude.** (optional) When applicable, specifies an atmosphere level as a whole number according to pressure level in mb (e.g. "700" for 700 mb level).

Special altitudes can be specified using textual names (e.g. Surface, Fixed Height AGL, Tropopause, Maximum Wind). The names are the same as those shown in the WeatherWorkstation user interface.

If the altitude is the same for all the parameters in the layout, it can be specified for the entire command using the `-alt` option, and the altitude group can be omitted from all the layout strings.

For upper air soundings (data type UMD), the data at all reported altitudes can be retrieved using the option `"-alt sounding"`. Each level of the sounding will be displayed as a separate record.

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**NOTE: To keep columns consistent, use the same number of spaces in the literal string (heading1, heading2, format, nodata) in each layout argument.**

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## Create a component file

By creating a file of component information, you can quickly run the tabular text utility without entering the layout information each time. As well, other users can use the same component file, ensuring consistency across reports.

- Create the component file using a text editor, such as vi, Jot, or Wordpad.
- Type a number of parameters using the outlines above. Save the file to the `wxws_exe` directory.

To use a component file, type the file name, preceded by an `@` symbol, in place of the component information in the tabular text utility command. The following commands use a component file for the layout and stations respectively:

```
ww_showtxt -d sad -t 12 -l @sad.tab -s 'nsi,grk,osc,smn,cvn'
```

```
ww_showtxt -d sad -t 12 -l '( temp, =====, air, f, %8.f,)' -s @stations.tab
```

You can also create a single file containing all component information, for example:

```
-d med -t Now -s bos,msp,lax -l @layout.info
```

To use the file, type the following command:

```
ww_showtxt @filename
```

### Figure 6: Sample tabular text component file

```
; Control file to produce a tabular report using ww_showtxt
;
( STATN, =====,stat,x, %7s, nodata )
( Temp, =====,air,f,%8.f, nodata )
( DewPt, =====,dew,f,%8.f, nodata )
( Wndspd, =====,Wind Speed,m,%8.f, nodata )
( Wnddir, =====,Wind Dir,d,%8.f, nodata )
( Gust, =====,Gust,m,%8.f, nodata )
( Press, =====,Press,in,%8.f, nodata )
( Max, =====,Max,f,%8.f, nodata )
( Min, =====,Min,f,%8.f, nodata )
```