

Help for QPEEK version 2017.205

QUICK START

1. Start QPEEK by entering `qpeek` or `qpeek.py` or `./qpeek.py` or by clicking on QPEEK's icon depending on the operating system of the computer and how the program was installed.
- 2a. Normal mode: If this is the first time QPEEK has been run on the computer or in the user account a file navigation dialog will show up. Navigate to a directory with some data source files and click OK.
- 2b. Antelope mode: If your intention is to run in Antelope mode and the file navigation box described above shows up just OK out of it. QPEEK defaults to the Normal mode, so select Options | AntRT, then click the Main Data Directory button and navigate to the directory with the "db" sub-direcotry.
3. A list of data source files or stations should show up in the file list area.
4. If this is the first time QPEEK has been run select one of the data source files/stations of interest in the file list area (just one click) and then select the menu item Commands|Scan For Channel IDs (or click the "S" button). If applicable, select data/ or sdata/ on the scan form if a .bms folder is to be scanned.
5. Click the Scan button. The function will read through the selected data source directory/files and produce a button for each channel (like "LHZ") that it finds. You can either select the buttons one at a time and add them to the long empty field on the Scan For Channel IDs form in the order you want them plotted, or you can just click the All button to copy them all to the field in alphabetical order. Yellow buttons are channels that QPEEK does not know how to plot.
6. Once the list of channels has been made click the Copy button. This puts the list of channels on a 'clipboard' in QPEEK.
7. Click the Channel Preferences button on the scan form. On the form that comes up select one of the radiobuttons next to the Name labels (an empty line, or a previously used one) and click the Paste button at the bottom of the form. This will place the list of channels into the selected slot.
8. Now go back to the main display and double-click the same data source file that was scanned, or click the Read button, to read and plot the data.

Once you have "standard" sets of channel IDs in the Channel Preferences form you don't need to scan files anymore. If there are different sets of channels for different sets of stations (like POLENET or GLISN stations, as an example) or sets of equipment (like Guralp or Streckeisen stations) you just put together different lists of channels for those, select the right set for the data you are going to read, and then Read the data. If there are channels in the list that are not in the data, or vice versa, it won't matter. Messages about that will show up in the Error Messages display. You can then just alter the list of channels in use as needed and Read again.

DESCRIPTION

QPEEK is a graphical data visualizer program for examining the data files produced by Quanterra Q330 recorders and programs used to retrieve data from Quanterra Balers. QPEEK will read data from B44 baler memory sticks, .ALL and .SOH files produced by programs like EzBaler, and files that were created by splitting the data using a program like sdrsplit. QPEEK will also read data offloaded from the SD cards recorded by Nanometrics TitanSMA units. Reading these data sources is done when QPEEK is in the "Normal" mode. When it is switched to the "AntRT" mode (Antelope Realtime) QPEEK will read Antelope database data.

Starting QPEEK is dependent on the operating system of the computer it is running on, and how it was installed. It may be by entering qpeek or qpeek.py on the command line, or by double-clicking on an icon.

The first time QPEEK is started in an account it will request an initial directory to look in for data source files and sub-directories. This, and all of the program's settings, will be saved when QPEEK is stopped, so this should not need to be done on subsequent starts.

Since any combination of channels may be in a data source file or directory QPEEK must be told which channels to look for and plot. This can be done by first scanning the data source that is going to be plotted using the Commands | Scan For Channel IDs function. The list of channels it produces can then be copied and pasted into a slot on the Commands | Channel Preferences form. This list will tell QPEEK which channels to look for. This list can be use when reading data files from any similarly programmed station/recorder. The scanning does not need to be done for each individual recorder.

DATA SOURCE FILE FORMATS

There are two different operating modes; Normal and AntRT (Antelope Realtime). The Normal mode reads files and directories from Quanterra Q330 and Nanometrics recorders. The AntRT mode reads the seed/mseed files created by Antelope. The operating mode is selected in the Options menu.

Baler Memory Sticks (Normal mode)

The data on USB memory sticks writtin by Quanterra B44s can be read by QPEEK if the files and directories on a memory stick are dragged to a folder/directory that ends in .bms. A folder named WHIT1.bms, for example, would be created and then the contents of the first memory stick from the station WHIT could be placed in there. The contents of a second stick could be placed in WHIT2.bms. WHIT1.bms and WHIT2.bms would then show up in the file list when QPEEK is pointed at the parent directory where the two folders are located.

The B44's usually record a data/ and an sdata/ directory. Which directory gets read when a .bms folder is selected can be controlled using the '.bms Dir' radiobuttons on the main display.

.ALL And .SOH Files (Normal mode)

These types, usually produced by EzBaler or some such program, can be read directly by QPEEK without renaming them or placing them in a specially named folder or sub-directory. There names must just end with .all or .soh.

Files From sdrsplit (Normal mode)

If, for example, a .ALL or .SOH file is split up using a program like sdrsplit into a file for each channel these can be read by QPEEK if they are all placed into a folder/directory whose name ends with .sdr.

This method can also be used when reading real time data files created by Antelope. If each file is a separate channel in something like a directory for each day, then the day directory need only be renamed so it ends with .sdr and QPEEK will be able to read the data for the day. If there is data from more than one station in the day directory the Station field on the main display can be used to filter out and plot data from only one of them.

Files From An Antelope Archive (Normal mode)

Data files created by Antelope can be read using the .sdr extension, but only if the individual files are one channel per file. If the files are multiplexed, then the .ant extension should be used for the day directories in the example above.

Files From Nanometrics Sources (Normal mode)

I only have access to data from a few of these units, so things may still need to be changed.

Generally, Nanometrics recorders write seismic data to seed/mini-seed files, and State Of Health (SOH) information to ASCII Comma Separated Values (CSV) files. QPEEK will read through directories whose names end with .nan and plot the information from those two file types.

GPS position information, if found in the CSV files, will be converted to LOG file lines and displayed in the LOG Messages window so their values can be plotted using the Commands | GPS Data Plotter function. The positions are recorded every minute, which for seismic work is a bit excessive. QPEEK only generates a LOG line once every 30 minutes.

Newer Nanometrics units can write the SOH information to miniseed files, instead of to the CSV files. QPEEK can decode that information as well. Most of the channels that are made up from the CSV files and the channels recorded to miniseed have different channel names in QPEEK, eventhough they may be the same data point. Which ones get plotted can be controlled by changing the channel preferences list. In some cases duplicate points may be plotted if both miniseed and CSV recording is enabled in the recorder.

GPS position information recorded to the miniseed SOH files will be converted to LOG lines, instead of being plotted, just like the position information in the CSV files.

Antelope Realtime Databases (AntRT mode)

Reading Antelope databases requires using the AntRT operating mode. This gives QPEEK a chance at figuring out what it is reading when there are no file or directory extentions, like .ant. When operating in this mode QPEEK must be pointed at the directory that contains the "db" (NOT inside the db directory), and the directory structure must be

[db dir]/YEAR/DOY/(data files)

The data files must be one channel per file. If there are multiple stations the first part of the data file names must be

[station].(usually net code).?.?.year?.doy?

The only part of the file name QPEEK looks at will be the station name before the first period. The YEAR directories must be 4-digit numbers, and the DOY directories must be 3-digit numbers.

The program will display YYYY-Station in the file list when in this mode.

TO READ OR NOT TO READ

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To see some settings take effect a source data file will need to be read or re-read, while other settings will only need the display to be replotted. Some of the tooltips indicate (Read), (Read or Replot), or (Replot) to indicate what needs to be done. The Detect Gaps checkbox tooltip indicates (Read or Replot). This means that if a file is read with gap detection turned off you cannot just turn it on and Replot to display the gaps. The file must be re-Read. If it is selected when the file is read then it can be turned off and it will not show up in a Replot. It can then subsequently be turned back on and show up again.

Items that will change with a Replot:

- Options | MP Coloring...
- Options | Show YYYY... (any of the date formats)
- Magnify radiobuttons
- Background color radiobuttons
- Gap Len value
- Removing channels from a channel list

Items that need source data to be (re)Read:

- Options | Whack Antelope Spikes
- Station name filtering
- Changing to a different channel list, or adding channels to the current list
- Changing .bms Dir radiobuttons
- Detect Gaps checkbox (maybe - see above)
- Turning on TPS plot

DATE FORMATS

QPEEK understands the date as
 YYYY-MM-DD like 2012-11-10
 YYYY:DOY like 2012:315
 YYYYMMMDDD like 2012NOV10

Text messages from the Q330 seem to use the YYYY-MM-DD format so it is the default. Changing how QPEEK displays the dates it displays can be changed with the Options menu items.

COLORS

Categories of items that are plotted using one color (i.e. not items like mass positions) use the same color for the lines and points when on a black background. Most of the items are plotted with black or dark blue on a white background since those are about the only colors that show up well.

- Raw data is green.
- Electrical current readings are red.
- Voltages are green.
- Temperatures are cyan (blue).
- Counts of things (bytes, reboots, etc.), control signal values, amount of buffers used, etc. are white.
- Realtime communications-related items are orange.
- Time or timing-related values (data and communications) are yellow.

MAIN DISPLAY BUTTONS AND FIELDS

Main Data Directory Button

Click this item to open a directory selection dialog and use it to navigate to a folder/directory where .bms/.ALL/.SOH/.sdr/.nan data source files/folders/directories are located. When the OK button on the directory selector is clicked the file list area will be filled in with the data source files and folders that QPEEK understands.

A directory path may also be entered directly into the file path field and the Return key pressed to change directories, or to reload the list of files.

From And To Date Fields

Dates can be entered in these fields that will restrict the reading of data source files to just those two dates from 00:00 on the From date to 24:00 on the To date. The date can be entered in any of the formats described in the DATE FORMATS section.

The C buttons open a calendar whose dates can be clicked on to select a data for each field.

The File Selection List

The file selection list displays all of the data format types that QPEEK knows how to deal with based on the file extensions (.bms, .All, .SOH, .srd, .ant and .nan) of the names of the files and directories in the Main Data Directory in the "Normal" operating mode. In the "AntRT" mode YYYY-Station will be displayed.

The Options | Calculate File Sizes menu item will toggle showing the sizes of the sources or the number of files for each station when in the AntRT mode. This can sometimes take a while to calculate, so it can be turned off.

----- Find:= Field and Clear Button

Text can be placed in the Find field, the Return key pressed, and the list of files will be rearranged such that the items containing the entered text will be listed in a group at the top of the list. You could use this to pull out all of the "WHIT" station files from a long list of files, for example. The Clear button clears the field and updates the list of items.

----- Reload Button

Just refreshes the list of items in case items have been added to the data directory or renamed.

Station Field

Sometimes there may be more than one station's information in a source file or directory/folder. If that happens you can enter the name of the station of interest in this field and records from any other station will be ignored. Using the Scan For Channel IDs function will list the stations found in a data source when it is finished scanning.

This only applies to seed/mini-seed data sources. Nanometrics CSV files do not contain any information about which station they are information for, so QPEEK will read and plot all of the CSV files in its path without knowing which station the data belongs to even if it is correctly filtering the seed/mini-seed information.

Replot Button

This can be used to redo the plots after changing the background color radiobuttons, changing the channel list (with the exception of adding channels to the current list -- that will require a re-Read), changing the magnification level, changing the gap detection length, changing the date format, or changing the mass position coloring ranges.

The Replot button cannot be used when adding channels to the current channel list to get those channel to plot, or when changing the station name in the Station field, or when turning on Detect Gaps when it was off during the initial reading of the data source.

Background: B W Radiobuttons

The background color of the main and the TPS display plot areas are controlled with this. The choices are "B"lack or "W"hite. Black is good for viewing on a computer and White is good for saving toner when printing. The Replot button can be used to replot if the background color selection is changed.

Magnify: 1xL 2xL 4xL Radiobuttons

1xH 2xH Radiobuttons

In 1xL mode all information is plotted in the horizontal space of the plotting area. 2xL and 4xL simply extend the plotting area so that the plots are stretched out two and four times the width of the visible plotting area. The horizontal scrollbar at the bottom of the plotting area would then be used to see all of the data.

The 1xH and 2xH radiobuttons are for doubling the height of the plots.

S,C Buttons, Curr: Field

The S button simply opens the Scan For Channel IDs form.

The C button simply opens the Channel Preferences form.

The Curr: field displays the currently selected slot on the Channel Preferences form. The slot cannot be changed from here. It is just for informational purposes.

.bms Dir: data/ sdata/ Radiobuttons

The B44 memory sticks usually have a sub-directory on them named "data" which contains all channels recorded by the Q330, and a sub-directory named "sdata" which contains only the State Of Health (SOH) channels of data and the low sample rate seismic data. Use these radiobuttons to select which directory to read data from and plot.

Detect Gaps Checkbutton, Len Field

QPEEK can be directed to detect gaps when no data from any channel was recorded. The gaps will appear as red bars above all other plots. The program splits up the range of data into 5-minute blocks (similar to the TPS plot) and keeps track of if there was any data point recorded during each 1-minute block (starting from 00:00:00 UT each day).

Because of the sparse number of data points currently extracted the minimum gap length that can reliably be detected depends on what is being read. For low sample rate SOH-type data sources the minimum gap length may be upto 120 minutes. For any source containing 20sps data and up it can be between 5 and 30 minutes. 40sps and up should be able to always handle 1-minute gap detection.

The gap time length may be entered in the Len field. It must be some multiple of 1 minute, and can be entered like 5m, 300s, 120m, 1h, 2h30m, etc. If just a number is entered it will be treated as seconds.

When the Detect Gaps checkbutton is on it will, of course, slow down the reading of a data source a little bit since the timestamp of every data point will be examined. QPEEK will skip channels that are not in the channel list, and even skip whole files when reading a .sdr data source if that file's channels are not being plotted, there may be a lot of false alarms when just reading a few channels.

----- TPS Checkbutton, Chans Field -----

The TPS checkbutton controls whether or not the Time-Power-Squared plotting form will appear when a data source is read.

The TPS plot shows the square root of the average of the sum of the squares of the data amplitudes over each 5-minute period of each day covering the time range of the data on the main display. Each horizontal line is one UT day. All of the requested data is plotted after the data source has been read, but because it can take a long time to plot everything replotting the information must be done manually using the Plot button on the TPS form. This allows you to quickly zoom in on an area and then redo the TPS plot without having to wait for it every time you zoom in or out.

The Chans field on the main display is used to tell the TPS plotter which channels to plot. The desired seismic data channels to plot should be entered into this field. Multiple channels may be entered separated by a comma. An asterisk can be added to the end of a channel name to cover things like location codes. For example "LHZ*" will cover plotting channels LHZ01 and LHZ02. LHZ02 may also be entered if you just want that channel plotted. If the channels have location codes and you just enter "LHZ" in the list LHZ01 and LHZ02 will not be plotted. The asterisk may only be added at the end of the channel name, and not, for example, in the middle like L*Z.

Each 5-minute block is color-coded according to the average amplitude during the period. There are four ranges, Antarctica, Low, Medium and High.

Antarctica:

Dark Grey/Black - there was no data for that period or the average really was 0.0 (not likely)

Dark blue - the average was +/-10 counts

Cyan - +/-100 counts

Green - +/-1,000 counts

Yellow - +/-10,000 counts

Red - +/-100,000 counts

Magenta - +/-1,000,000 counts

Light Grey/White - > +/-1,000,000 counts

Low:

Dark Grey/Black - there was no data for that period or the average really was 0.0 (not likely)

Dark blue - the average was +/-20 counts

Cyan - +/-200 counts

Green - +/-2,000 counts

Yellow - +/-20,000 counts

Red - +/-200,000 counts

Magenta - +/-2,000,000 counts

Light Grey/White - > +/-2,000,000 counts

Medium:

Dark Grey/Black - there was no data for that period or the average really was 0.0 (not likely)

Dark blue - the average was +/-50 counts

Cyan - +/-500 counts

Green - +/-5,000 counts

Yellow - +/-50,000 counts

Red - +/-500,000 counts

Magenta - +/-5,000,000 counts

Light Grey/White - > +/-5,000,000 counts

High:

Dark Grey/Black - there was no data for that period or the average really was 0.0 (not likely)

Dark blue - the average was +/-80 counts

Cyan - +/-800 counts

Green - +/-8,000 counts

Yellow - +/-80,000 counts

Red - +/-800,000 counts

Magenta - +/-8,000,000 counts

Light Grey/White - > +/-8,000,000 counts

The ranges are selected by using the "A", "L", "M" and "H" radiobuttons on the plot window. The Chans field is the same as the Chans field on the main display. Clicking along a days line will draw a box around the point clicked on and display the counts value during the five-minute period for that point on the line. It also draws a line on the main display at the same time as the 5-minute block of time that was clicked on.

A broken dark line of boxes (a dotted line) indicates that there was no data for 1 or more days. This is done instead of plotting, possibly 100's, of lines with nothing in them. The dots in the line can be clicked on to see how many days were skipped.

----- Read/Stop Buttons -----

The Read button starts the reading of the selected source file, and the Stop button halts the reading of a source file. This may be used if it is decided that the file selected is not the correct one, or is too long to wait to be read.

----- Write .ps Button -----

This creates a PostScript file of the the contents of the main plot area. When selected a dialog box will allow the name of the output file to be selected or entered.

----- Replot Button (lower right-hand corner) -----

Use this button after changing the size of the window to command QPEEK to redraw the plots. There is too much inconsistency between installations and versions of operating systems for this to be done automatically. Some systems command QPEEK to redraw the plots after the resizing of the window is finished, and some send the command many times WHILE resizing the window. On some systems it is easy to change this behavior, and on some systems it isn't. This button makes it the responsibility of the user to click the Redraw button when they are finished resizing the window. This button is the same as the other Replot button below the files list.

MENU COMMANDS

FILE MENU

----- Delete Setups File -----

Sometimes a bad setups file can cause the program to misbehave. This can be caused by upgrading the program, but reading the setups file created by an earlier version of the program, or reading the setups file copied from a computer with a different operating system. This function will delete the current setups file (whose location can be found in the Help | About command box) and then quit the program without saving the current parameters. This will reset all parameters to their default values. When the program is restarted a dialog box should appear saying that the setups file could not be found.

----- Quit -----

Quits QPEEK.

COMMANDS MENU

----- Log Search -----

Displays a window where a string of text may be entered. The LOG messages currently in the LOG Messages form will be searched for lines containing the entered string. The search is not case-sensitive. Just the lines matching the search string will be displayed. This is different from the search field at the bottom of the LOG Messages window.

GPS Data Plotter

The LOG messages may contain GPS information. This function brings up a form that can be used to plot that information. Clicking the Read/Plot button will tell the function to read through all of the LOG messages that were read from the data source and plot the results. The plotted points can be clicked on to display the time, fix type, number of satellites used for the reading, latitude, longitude, and elevation values. The range of the latitude and longitude readings in meters are displayed at the top of the plot. These are just a simple max/min subtraction with the longitude corrected for latitude.

Some recorders will record the same GPS position repeatedly even when the GPS is off. The function filters out positions that are the same more than once in a row. This is why the display may show something like 'Plotted 4 of 1235.'

Right-clicking on a point will delete that point from the plot to allow throwing out "bad" points. If multiple data points are plotted on top of each other multiple right-clicks will be required to eliminate them, except points will the same lat/long as the point clicked on will also be removed. Re-reading the data source is required to recover the deleted points.

The Export button writes the currently read data points (all points read minus any deleted with the right-click) to a tab-delimited file. The lines have the format

```
# Comment about the source information file(s)
Time Latitude Longitude Elevation
Time Latitude Longitude Elevation
...
```

The file will be in the current data directory and will be named the same as the source information file with "gps.dat" appended to the end.

TPS Form

This opens the TPS Plot form. If a data source is read, and the TPS checkbox was not checked, this can be used to open the TPS Plot form. After setting the channels to plot (Chans field) the Plot button on the TPS Plot form can then be used to generate the plots without rereading the data source.

----- Channel Preferences -----

----- Scan For Channel IDs -----

Figuring out which channels to look for and/or plot is not entirely straightforward in QPEEK. Mostly this is because the channel naming convention used to record the different kinds of data, while being "standardized", is not set in stone, and in reality the channels can be named whatever the user wants.

Internally the program has a set list of three-character codes for channels that it knows how to deal with. This list can be seen using the Help | Known Channels menu item. If a channel is found in the data that is not in that list there will be an error message in the Error Messages form after a data source is read. Getting a channel on that list requires a change to the program. Which sub-set of the channels in the internal list that get extracted from the selected data source file is the job of the lists made on the Channel Preferences form. Up to 20 different lists/slots of channels may be created. The list that is selected with the radiobutton at the left side of each slot is the one that will be applied to the next data source file that is read. Each list/slot can be given a name to make it easier to remember what the list of channels applies to. The name of the selected list will appear in the 'Curr:' field on the main display.

The channels in the slots are listed like

```
LCQ,VCO,VEA,LHZ,LHN,LHE...
```

The order that the channels are listed will be the order that they are plotted. If the order of the channels is changed the data only need be replotted to show the change with the exception of adding channels to the list. If channels are added the data source file will need to be re-Read so the data for the added channel(s) can be extracted.

A copy of a list can be made by using the Copy button to copy the selected entry, then by selecting another slot's radiobutton and then using the Paste button.

The Scan For Channel IDs form is a helper that will read through a data source file selected in the file selection list and list all of the channels found as buttons on the form. A button may be clicked to add that channel to the

entry field on the form. Once the list of channels is created it can be copied to the Channel Preferences form using the Copy button on the Scan For Channel IDs form, and pasted into a slot using the Paste button on the Channel Preferences form.

All channel names "made up" from information in Nanometrics CSV files will begin with the letter N.

OPTIONS MENU

----- Op Mode: Normal -----

----- Op Mode: AntRT, db/YEAR/DOY/data -----

----- Op Mode: Inside Nanometrics SD Card -----

These are the operating modes of the program. The Normal mode is for reading data sources from Quanterra Q330 and Nanometrics recorders that have been copied to the computer's disk, and that have the appropriate .

The AntRT mode is for reading Antelope realtime databases with the structure

db/YEAR/DOY/dataFiles

The Inside Nanometrics SD Card setting should be selecting when trying to directly read an SC Card without copying the contents to a .nan folder. QPEEK should be set to the root directory of the card and not the directory "above" it as in most other cases. "Nano Card" will be displayed in the data source list. Select it, and/or double-click on it for scanning and reading just like a normal filename or station name in the other modes.

----- Show Seismic Data In Counts -----

Shows the max and min values for seismic data plot in counts, instead of converting them to volts.

This option is still under development.

----- MP Coloring: x.x, x.x, x.x, x.x -----

These items are used to set the voltage ranges and values for coloring mass position plots. The x.x values are in volts. The first range of settings are for "regular" broadband sensors (Guralp, Streckheisen) and the second set is for Trillium sensors.

----- Show YYYY-MM-DD Dates -----

----- Show YYYYMMMDD Dates -----

----- Show YYYY:DOY Dates -----

Selecting one of these menu items will tell QPEEK to display all of the dates in the selected format, except for the actual SOH messages. They will always be in the YYYY-DD-MM format used by the Q330 and Nanometrics recorders.

----- Calculate File Sizes -----

The sizes of the files and folders/directories listed in the file selection list can have their sizes displayed. This is off by default, because calculating the sizes of all of the files listed can take a significant amount of time. Each "file" can contain 1000's of files each depending on the type. When in the AntRT operating mode the number after the station name in the files list area will be the number of files found for each year-station.

This defaults to 'off' every time QPEEK is started.

----- Sort Data By Time After Read -----

Sometimes the data is so screwed up it can't even be viewed. This might help, especially if the file names for .bms, .sdr, .nan or .ant sources are not named such that they sort correctly. QPEEK gets a list of files in those directories, SORTS THEM, and then processes and plots them. This could cause the data to be jumbled (though

probably not in .sdr sources since they are supposed to be one channel per file and one file per channel). Using this setting will, of course, make overlaps go away, which might be a bad thing.

This defaults to 'off' every time QPEEK is started.

Whack Antelope Spikes

Antelope can be configured to insert large values into a data stream when data is missing. It's very annoying, because the spkies will show up when plotting, but everything else will be flatlined. Selecting this option will detect data points that have this large value (2^{28}) and simply ignore them which will create a gap in the data which is what you would really want to see.

This defaults to 'off' every time QPEEK is started.

----- 2x Plot Heights -----

Selecting this will double the normal heights of all of the plotted information.

----- Fonts BIGGER -----

----- Fonts smaller -----

These two items will decrease or increase the size of the program's fonts.

FORMS MENU

The currently open forms of the program will show up here. Selecting one will bring that form to the foreground.

HELP MENU

----- Known Channels -----

This lists the 3-letter SEED codes that the program knows how to extract and plot. Changing this list is not difficult (for me), but requires changes to the program's code.

----- Calendar -----

Just a built-in calendar that shows dates or DOY values for three months in a row. Of course the clock of the computer that is running QPEEK must be correct for this to show the right current date.

----- Check For Updates -----

If the computer is connected to the Internet selecting this function will contact PASSCAL's website and check the version of the program against a copy of the program that is on the website. Appropriate dialog boxes will be shown depending on the result of the check.

If the current version is old the Download button in the dialog box that will appear may be clicked to obtain the new version. The new version will be delivered in a zipped file/folder and the name of the program will be preceded by "new". A dialog box indicating the location of the downloaded file will be shown after the downloading finishes. Once it has been confirmed by the user that the "new" program file is OK, it should be renamed (remove "new") and placed in the proper location which depends on the operating system of the computer.