WSPRView software for Windows

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23rd October 2018

Ok, so you're into WSPR. Logging into WSPRNET.ORG to see your reports (etc..) a pain yet ??

This software might be at least a partial answer to your needs. Click it up from an icon on your desktop and it will update with the WSPR spots at a rate selected by you.

WSPRView software

I started writing this software because Leigh VK2KRR has been asking for a few changes for search options of the people at WSPRNET and not getting very far. My thoughts were that if I was able to retrieve (basically) the same bulk data from their web site, maybe a little local processing/filtering might achieve what Leigh wanted. The difference is that the extracted data can be manipulated locally so there is a better chance of obtaining the desired outcomes.. That also means that development will be ongoing for a little while so you will need to check for version updates yourself (at least for now).

This software is written in Delphi, along with all of my other FREE utilities, and will run on Win32 and Win64 systems over Win7 to Win10. The basic EXE file is only 700-800KB and the ZIP just over 350KB. It doesn't require installation as such and needs to be placed in (preferably) an empty folder (eg C:\WSPRView) and then executed. Use the "Send to Desktop" option in Windows (right click on the EXE) to create your icon from the executeable file in your selected folder.

Note: Copy any updated EXE versions over the earlier versions in the same folder (ie overwrite / replace). The distribution ZIP and EXE files will always be the same name, just the internal software versions will undergo revision.

The software is available via the link below and does allow you to do filtering of AND and OR spotter and spottee.

A few things to note:

At this stage, no testing is conducted to confirm that you actually have web access.
*** From V1.0.0.4, this is included and presents your external IP address up near the top RHS as a result.

There is minimal bug-checking included - for now.

Most bugs have been found during development and trapping has been put in place but users periodically do unexpected things. Advise if you strike a bug, screen grabs and explanatory text make it easier to solve them.

Use the email address available from the Contact Me (/~vk4adc/web/index.php/contact-me) info (on the Menu at LHS to initiate contact).

There are no help files available. It is seat-of-the-pants experimenter stuff.

A number of new features were added in V1.0.0.5 including the new ALL bands presentation but more importantly to some users, the ability to run multiple instances with separate settings for screen position and size, distances and selected options. A small box near the --> CSV button indicates which instance number is running. The first instance shows as #1, next as #2 etc and when the software exits, those instance's settings are saved into the windows registry. The next time it is started it will reclaim those settings BUT you will want to start them in the same order as you did the previous time. Now read the next bit, this is where it makes multiple instances interesting:

You can now use a command line option to preselect the band on startup. Eg WSPRView.exe /2 in the properties of a shortcut will make it start up on 2 metres, WSPRView.exe /432 in the properties of a different shortcut will make it start up on 70 CM, ditto WSPRView.exe /40 for 40M. The available list is /2190 /160 /80 /60 /40 /30 /20 /17 /15 /12 /10 /6 /4 /2 /220 /432 and /u (for GHz).

If you create a few shortcuts on the desktop to WSPRView.exe, name the first one "WSPRView 2" and put WSPRView.exe /2 in the properties, the next "WSPRView 432" with WSPRView.exe /432 in the properties **AND start them in the same order** then the individual settings for 2M and 70CM will be preserved.

V1.0.0.6 introduces an inbuilt email alert client as an alternative to the 'runcode.bat' method. If Alerts is ticked, an email address box is then available BUT if left empty then the runcode system works.

Sending emails can get tricky because some ISPs reject unauthenticated SMTP messages but there are two options here. (1) The default settings use my SMTP server at VK4ADC.COM and should work initially but (2) you can (**and should**) set up the values for your particular ISP by adding /smtp=xxxx.yyyy.zzz on the command line. Your ISP may require your password too and /pwd=??????? on the command line will allow you to set that up too. Your command line (ie shortcut properties) might then look like..

"*wsprview.exe /2 /smtp=xxxx.yyyy.zzz /pwd=???????*". Passwords can comprise upper or lower case letters, numbers and the common punctuation marks EXCEPT SPACE and be accepted by this software. If you change the SMTP address value, you MUST change the password detail too. The SMTP code always runs on port 25, unauthenticated mode.

Your email messages will be sent from and to the same email address as entered above so that it is not necessary to add any entries to your email client's safe sender list or deal with them going into a SPAM folder. The subject always starts as 'WSPRView Alert' followed by the alert cause, with the alert cause repeated in the body. A short - simple - plain-text only - email.

Note that multiple alert emails can be sent immediately after program startup (if alert lines exist) but then should only alert on new spots that exceed SNR and are within distance parameters.

The sending of email alerts is 'silent' - i.e. there is no visual display that they are being sent or have been sent.

The status message 'HTTP/1.1 429 Too many requests' that occured when running multiple instances in previous versions has been resolved by offsetting the query times to avoid concurrent requests to WSPRNET. Instance #1 does its query at 00 seconds, #2 at 20 seconds and #3 at 40 seconds after the minute - and after the interval setting value has been added - after the initial query is performed. Instances 4 (and upward) have an intentional delay of 6 HOURS.

Please remember that every query in every instance will be totalled in your internet downloads.

An additional command line option was added to assist debugging of web processes and is "/log" to provide some basic I/O details into a 'WSPRlog.txt' text file. It is only needed when web-related problems exist - or are suspected - and can be emailed to help resolve software issues.

V1.0.0.7 provides an option to reset ALL WSPRView settings eg position, size, slider values, email usernames and passwords and SMTP host details etc (basically everything stored in the Windows Registry). This reset works on ALL instance's values and not just the currently running instance. This '/reset' command is provided to act as an out-of-the-box software reset to help solve incorrectly configured values eg 2nd screen no longer available so this display not visible, wrong SMTP values... It should be run **ONLY ONCE** to achieve the reset and NO extra instances of WSPRView should be running at the time. The software reset is known to have worked when the software comes up in All mode with a narrow-ish display window on startup.

The time checking comparisons are now all done at UTC to avoid time zone issues and uses a different technique to previously. Provided your Regional and Time Zone settings in Windows is correct, the DST correction is done automatically (user option tickbox now removed) and the comparison between spot times and local computer time should function correctly regardless. The 'spots screen' is refreshed at the 00 seconds mark (ie UTC minute changeover) regardless of which instance is being used and this will make any 'out-of-time' spots disappear.

V1.0.0.8 has been the target of a significant internal rewrite of the signal processing and alert features. The user can now set the font colour and style (i.e. Normal / Bold) plus background colour for all displayed results. This version now implements TLS email support so can be configured to work directly with a user's email account at Gmail SMTP (and its ilk) for the emailing of alerts. A user-selectable audible alert option appears when alerts are set to On, there being a sequence of three same-frequency tones sounded when an alert is performed. The tone frequency is defaulted to 1200Hz but adjustable by a slider control between 400 and 2000Hz to suit the user. The email and colour setup is accessed by pressing the Emails/Colour button and can only be dismissed by the Save/Close button. Accordingly, the command line options for email setup have now been removed but the previously advised commands should still work. The brief on-screen hints have now been activated and appear as you hover your mouse over the various controls.

The software is now provided with a couple of text files included in the ZIP :
(1) a README.TXT which should be read as a matter of course as it will help solve issues before they cause annoyance;
(2) a brief guide to setting up the Gmail SMTP to accept emails from the WSPRView software. { Using GMail with WSPRView.txt } This is a must-follow when using Gmail settings as you won't get it to work otherwise. Other SMTP providers may need much the same setup info.

As provided, the email alerts are set to be sent through my account at ThunderSMTP.COM - BUT - after 100 alerts have been sent via them, you will get an annoying message on program startup advising you to set up an alternative email provider - hence the GMail instructions being provided. You will not actually be stopped from using the ThunderSMTP service but it would be appreciated by me if you did institute a change, particularly as the WSPRView software usage grows. There is nothing stopping you from establishing your own 'free' ThunderSMTP account and just changing the username and password !

The emails are all from 'WSPRView @ VK4ADC.COM' regardless of actual source and destination emails. The alerts are stored in a file named WSPR_Alerts#.txt (where the # is a 1, 2 or 3) but since this can grow to a large size file over time, a command line option '/trimalerts' was added to retain just the last 7 days in the file. Leaving it active on the command line means that the file will not grow beyond a manageable size. Alert emails are only sent at 10, 20, 30, 40, 50 seconds past each minute, not immediately.

The use of multiple instances of the software is now better supported with individual data files and registry entries being used for each allowed instance. Different colour setups, email addresses & passwords, screen positions and sizes, alert history files etc now co-exist properly. Note that passwords are now encrypted before being saved in the Windows Registry and that some are 'protected' from user view (so that they can't be used by hackers in other applications and for nefarious purposes).

An occasional 10060 web site access error (i.e. WSPRNET.ORG page not available) appears very occasionally and I haven't found a reason or permanent fix for it - as yet.

Unfortunately it has been necessary to move to the latest version of the Delphi Indy Internet suite to support the TLS email mode and that has caused the latest executable to virtually double in size to around 1.2MB, thus making the ZIP download in the 500-600KB range.

Try the Alerts History and All Spots buttons to see what they do !! Experiment ....

 As previously, please report bugs (with screenshots) so that any issues can be solved.

V1.0.0.9 has one new feature in it but is primarily a bug-fix release for the Index Out Of Bounds (-1) error (I hope).

When you change bands, it can retrieve your last settings for THAT band. For example, if you have it set to 6M then change to 2M then it will save the 6M settings before selecting 2M. If you have the tickbox 'Use Last' just above the Band selector ticked then it will re-use the last settings that were recorded for 2M. Changing back to 6M then reloads the last 6M settings etc.. but only if the 'Use Last' box is ticked. That way you can have custom timing, distances, alerts settings for each band..

It intentionally ignores which instance number is running so that if you have one WSPRView running on 6, starting a second on 2 (ie /2 on the command line) will use the 'common' 2M settings data if the 'Use Last' option has been selected previously in instance #2..

V1.0.0.10 has been released due to the sudden disappearance of ThunderSMTP.com which had been set up as the default SMTP service for email alerts in V1.0.0.8/9. In lieu, an account at "easy-smtp.com (https://www.easy-smtp.com/)" is now in use BUT has fewer available 'free' emails before billing starts in. **It is now imperative that you set up for an alternative SMTP provider as soon as possible.**

The email setup has been changed significantly so that custom email settings are possible. The options of authenticated and non-authenticated on ports 25 plus TLS on port 587 and SSL on port 465 all now work to send emails. That allows the "easy-smtp" (uses reachmail.net), Gmail and even private and ISP mail server values to be set up to use.

On the image below, there are four coloured ellipses:

(1) orange : your email address for the alerts to be sent to. Special note here if using GMail SMTP, this must be a Gmail address.

(2) purple : This is the SMTP server address. Pressing any of the TLS, SSL or GMail buttons will pre-fill this but you can also overtype this with your actual ISP's mail server name (eg mail.xxxx or smtp.xxxx), ditto another mail server.

(3) blue : This is important and has a few alternatives available.
If using port 25 unauthenticated (if your ISP permits), these can both be blank.
If using port 25 authenticated and your ISP's SMTP, these are filled in with your ISP-issued email address and account password.
If using port 465 SSL authenticated and your ISP's SMTP, these are filled in with your ISP-issued email address and account password.
If using port 587 TLS authenticated and your ISP's SMTP, these are filled in with your ISP-issued email address and account password.

If you used either the TLS or SSL buttons, these values are pre-filled for my default account. Note that the password cannot be viewed.

(4) red : This is the SMTP port number and is usually 25, 465 or 587. Other port values may have indeterminate results.

Make sure you use the Save/Close button immediately after changes.

I have found that it is better to start with /noalert on the command line so Alerts are always off and it makes it easy to play with email account settings. When all is well then tick the Alerts box. Hopefully all users will now be able to successfully arrange their email alerts...

REMEMEMBER THAT YOU HAVE TO SET UP THE EMAIL ACCOUNT VALUES FOR EACH VHF OR UHF BAND. THEY DO NOT CARRY OVER AUTOMATICALLY but it means that you can have alerts sent to a different email address per band. You have been warned... and been given an even better reason to always run with /noalert on the command line.

Now for the bonus: custom setups write the basic details to WSPRsmtp.txt so that you can edit to try different values. Note that this file is only read once each time, on program startup.

V1.0.0.12 is only a minor change release. It has two new features plus a solution for the KM/Miles issue within the data at WSPRNet.org.

A very thin red line (1 pixel thick) now progresses across part of the very top of screen to show where current time is versus the timing of the standard 2 minute WSPR cycle. It resets back to the LHS every alternate minute. It is provided so that you can quickly judge when to expect your TX to operate or when WSPR signals should be heard on your receiver.
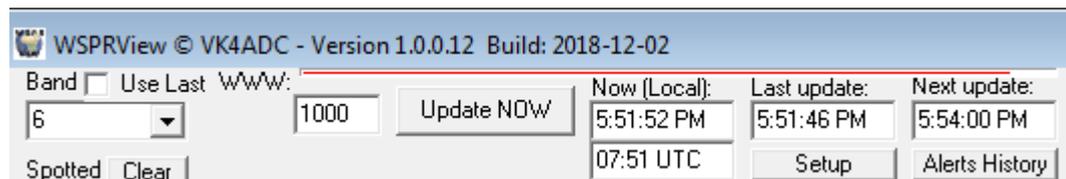
The previous 'Email/Colour' legend button has been changed to show 'Setup' (see above image) and there is now one more slider control just above the Show Registry button. This slider is a distance scaler so that a user can custom change from the default value of 50 to any value between 1 and 100. This sets the minimum and maximum distance slider action ranges. Given that these min/max sliders have an internal range of 1 to 100, once multiplied by this distance scale value - per the example of 20 - gives a minimum of 20KM coupled with a maximum of 2000KM. If set to 1, the min/max ranges are then 1 to 100 KM. The settings per instance are separate and are saved between uses.
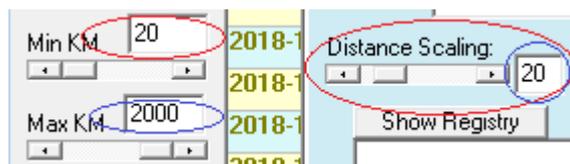
The 'fix' implemented in this version is actually for an error in the raw data retrieved from WSPRNet.org. Their values of KM are actually in error but this has been corrected mathematically within WSPRView. The post-fix values have been cross-checked against results from other 'distance between 2 grid squares' calculators.

V1.0.0.13 is a further bug-fix plus has one new feature:

The Spotted filter field will now accept up to 6 prefixes separated by commas (eg VK,ZL,FK,3D) but without any spaces. Note: The software will NOT allow a comma in BOTH the Spotter and Spotted filter boxes if you try that. { One OR the other will work though.}

eg...
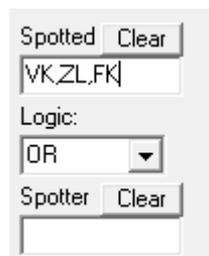
V1.0.0.14 is only a minor change release. It has a new feature plus (hopefully) a solution for the distance comparison and irregular alert issue reported for V12 and V13 by VK2KRR & VK7HH.

The new feature in V1.0.0.14 is a command line option that will need to be added permanently to the shortcut properties if the user wants to keep it active. The '/mycall=vk4adc' (but your callsign in lieu..) will create a cumulative activity log in file CALL-spots.txt of any entries which contain the specified callsign as the Reported / Spotted call - and without any sort of

filtering involved (i.e. every spot, local or DX). When active, an extra button will appear to the RHS of the CSV Export button and it can be used to open the file 'CALL-spots.txt' where CALL is the specified callsign from the command line.

This extra 'My Spots' button appears only when the /mycall=CALL command line option is used.

It can also be used to monitor spots to a give "call area over time" log e.g. putting in '/mycall=vk2' will match all VK2 callsigns (no wild card asterisk function)..., remembering that only spots recorded in real-time (ie while WSPRView is running) are logged. It will work on the All-Bands mode too and could provide a ready propagation guide of geographical sources versus time versus band for a given destination prefix from varying source prefixes. Only one prefix/callsign is matched and 'spotted' activity logged per WSPRView instance and is regardless of band selected.

This callsign is not retained in any settings hence the need for the addition to the command line for continuing logging. It is not hard-coded as it allows a user to place another callsign in lieu of their own to record (eg other's permanent) WSPR spots. The text file size will grow quickly if the prefix/callsign is spotted often and no internal file size management is provided. You need to do that file management function manually.

The CALL-spots.txt file can be deleted ONLY WHILE WSPRView IS NOT RUNNING else it will be re-created with ALL of the cumulative spots again.

 V1.0.0.15 is only a minor change release. It has a new feature in the form of a Far Distance highlight option plus some rewriting if internal filtering routines. The Far Distance option does NOT create an emailed alert, only a visual one.

UTC Date	Reported	Freq	SNR	Drift	Grid	Reporter	RGrid	KM
2018-12-15 08:40	VK6CPU	50.294548	-20	1	OF78wb	VK8ZI	PH57	2652
2018-12-15 08:40	FK1TS	50.294432	-17	0	RG37fr	3D2AG	RH91fv	1335
2018-12-15 08:40	VK4ADC	50.294456	-18	-2	QG62lg	VK7JJ	QE38lr	1602
2018-12-15 08:40	FK1TS	50.294439	-15	0	RG37fr	ZL1UJG	RF72of	1916
2018-12-15 08:40	FK1TS	50.294422	-28	0	RG37fr	VK4ALF	QG63lk	1447
2018-12-15 08:40	FK1TS	50.294426	-15	0	RG37fr	VK3WE	QF32se	2501
2018-12-15 08:38	VK4ALF	50.294483	-6	0	QG63lk	VK7JJ	QE38lr	1725

Any spots in black on green exceed the Far Distance setting - in this case 2500KM - although settings of 2000 to above 10000KM is available. The colours are preset i.e. not user configurable.

The red on white becomes available when the /mycall= option is used on the command line such that as well as making a log file of all spots that this software uses, it make is easier to distinguish you own spots. There is a caveat though, this colour option is superseded if your signal is above the SNR threshold or is part of an alert state (eg white on black) when their normal colours apply. The red on white colours are preset i.e. not user configurable.

V1.0.0.16 is a medium change release. It has a few new features plus a few minor alterations to fix internal coding.

There is now a 'Far' tickbox near the Alerts tickbox and this causes the issuing of an email alert if spots greater than the 'Far Distance' slider value appear. There is no differentiation as to whether it is a between-distances with high SNR value or the distance exceeding the Far setting, both are handled identically. The Alerts box **MUST** also be ticked for the Far alert email to be generated.

The multi-prefix/callsign filtering on Spotter and Spotted has now been extended to the All Bands mode. A maximum of six prefixes/callsigns can be used with comma separators and without any spaces included. Eg VK,ZL,3D,FK,N,W. Only ONE box (Spotter and Spotted) can contain any prefix/callsign details.

A new 'No-Spots' facility was added and works in reverse to the multi-prefix filtering. It stops any matching spots entries from being displayed. The data entry box is up near the instance number (eg #1) at top RHS. Multiple prefixes or callsigns can be entered, separated by commas and without spaces, however the list is not limited to 6 entries. My list is typically 'DL,DK,LX,PA' so I don't see the recurring 6M European spots from those callsign areas yet every other callsign appears if the Spotter and Spotted boxes are left empty. Beware: This list is active on EVERY band (but not the ALL Bands mode) so be very careful with its use. Clearing the box is as simple as selecting and deleting anything there and then 'No-Spot filtering' is inhibited. The details are saved for subsequent program starts.

The blue WSPRNet text near the instance number (eg #1) at top RHS is a hyperlink to the WSPRNet.org web site and will take you directly to your spots listing if your callsign is available using the mycall= function on the command line.

Another new feature is an optional command line '/pcname' where the WSPRView software is run on multiple PCs and you don't want to lose each individual PC's data files if you copy them into the same folder on a USB stick as a data backup. It adds the Windows naming of the PC in front of any files it creates. For instance if the PC is named 'Dell6' then all of the files it produces will have 'Dell6#' in front of the normal file names (eg. Dell6#WSPR_Alerts.txt, Dell6#WSPRRep1.csv,...).

The timeout on querying the WSPRNet web site has been reduced to 15 seconds. If no response is received then the resulting data is none so nothing will be displayed on screen (ie no spots). This is to combat the "Not Responding" that occasionally appears in the title of the application - which, incidentally, does not appear normally ie. when the web site responds within its average of 10 seconds. That is not to say it is completely solved but the effect is minimised.

An issue came to light in the saving of the SMTP server name and password in the email settings but this has now been resolved. All alert email settings now save correctly.

++++++++++++++++++ LATEST RELEASE DETAILS ++++++++++++++++++

V1.0.0.17 is a low change release. It has a new feature plus a few minor alterations to 'fix' internal coding.

New Feature: When the command line '/mycall=' option is used then a new entry appears at the top of the Bands box: MyCall. This allows a user to show the last 1000 WSPR spots matching their call and regardless of band. What will also happen is that the MySpots data file function will be rebuilt with any previously-unknown spots added. The Historical button expands this history to 5000 spots. Two things to note: (1) the Time and Entries options are intentionally removed and (2) the Update Interval is reset to 10 minutes. The user has no alternative control over these changes and will have to manually reset them afterwards unless the 'Use Last' tickbox is active. The displayed data is not 'refreshed' every minute as is done with all other 'Bands' modes so that the user can peruse the data until the next update - after 10 minutes.

The default editor to view the text data files under Windows is Notepad.exe but it is quite a basic application. I prefer to use Notepad++ as it copes with changing data files without the need to close and re-open them. Another command line option was added in this version of WSPRView to allow the user to change the text editor detail in the shortcut properties.

If Notepad++ is installed then this is added to the properties: /texteditor="C:\Program Files\Notepad++\notepad++.exe" with the double quotes required to overcome the space character between the words Program and Files. Other text editors could be used but the total file path information and executable name is required and it is up to the individual to ensure that all details are correctly provided to suit their system.

In the absence of this command line option, the editor defaults back to Notepad.exe for the Alerts History, All Spots and My Spots functions.

There is one error which I have not been able to trace the cause. Very occasionally the software spurts out a "not a valid date/time" message box/es, which can cascade down the screen. Close each box then close and re-start the software application. The time detail shown in each case is valid data and formatted correctly but I haven't found a manual way to trigger the error to solve and re-test.

++++++++++++++++++ LATEST RELEASE DETAILS ++++++++++++++++++

The default update period is at the minimum of 1 minute. Move the slider to a more appropriate value eg 5 mins. From that point it will update every 5 (/X) minutes... There is a manual update button too but changing the band selection automatically causes an immediate update.

If selecting 6 / 4 / 2 / 220 / 432 / u (GHz), a distance slider appears and this sets whether a listing is set to bold or standard font. Experiment but try say 300KM on 2m. The maximum distance available is 1000KM as stands. Stations closer than the set distance are in a normal font, further away in bold.

You can enter your full callsign in the spottee box and leave the spotter empty, vice-versa or alternatively both empty. The Logical AND/OR seems to work too. Note that the calls can be VK* or just VK as the callsign matching starts at the

beginning of the spotter/spottee callsigns

I have no plans at all to include mapping or graphing in the application.
It will 'remember' your last settings from one startup/exit to the next in the Windows Registry when the software is exited...
{ key : HKCU/Software/VK4ADC }

Try to avoid the default 'All' in the band selection as you may not get the results you are looking for. It will download lots of generic spots **across all bands** that are then filtered out by the callsign matching routine, and given the rate at which spots are accumulated by WSPRNET, it would be easy to miss a specific report.
The various sliders provide a style of 'filtering' of the spots. Operating tip: use the slider buttons for coarse adjustment then the arrows on each end for the fine adjustment to your desired value.

Entries: The maximum number of spots that can be listed on screen.

The **Time** slider sets the interval to the previous number of minutes from the current time and can reduce the number of spots actually seen. (Note: The Sort by KM and the Time slider function are mutually inclusive: if you want to sort by distance then the Time filter is set to off.)

Operating note: if you are not seeing the correct spots and your region is currently using Daylight Saving Time (DST) then you will need to tick the DST box near top RHS. This all has to do with UTC Offset given that the WSPR times are all in UTC and your computer clock isn't.

The **Min KM** slider sets a threshold distance before a spot is highlighted. Increments are 50KM.

The **Max KM** slider sets a threshold distance before a spot is not highlighted. Increments are 50KM. This is primarily a VHF Distance mode setting. If in doubt, set to zero.

The **SNR** slider sets a threshold level in dB before a spot is highlighted.
This alert slider provides a range of –30 to +30dB as the signal threshold.
If unticked, it becomes non-operational and the slider and setting disappears from screen.

The **Hide TX/Mi** tickbox simply removes the Tx dBm and Watts columns plus the Miles from the display to make the overall screen real estate smaller. Adjust the program's display width and height to suit your slelection.

The **Historical** tickbox causes the software to download the last matching 5000 spots and should only be used for historical research. The default otherwise is 1000 spots.

The **Alerts** tickbox provides a method of running an external batch / script file when both the distance and SNR limits are met. It will execute "runcode.bat" in the current folder and pass it the very basic values that caused the alert. The spot details are along the lines of
"2018-10-22 08:24,W8DGN,-17,EM79xp,N2NOM,FN22bg,745" (ie "Date Time,Call,SNR,Grid,Reporter,RGrid,KM") but subject to change in future releases. This was anticipated as being used with "blat" or other command line software to send emails or SMS messages.

The **VHF Dist(ance) Mode** tickbox provides a display arrangement where only spots with distances (in KM) are between the minimum and maximum slider preset values are displayed. This is only available from bands from 6 metres (/ 50MHz) upwards and is easy to note due to the min and max distances boxes changing to a light aqua background. The screen grab below was taken within seconds of the one at the top but shows fewer listings due to the distance parameters. If Alerts were set active, the spot at 2152 / VK2KRR / VK3JTM would have caused an alert. Note that Sort by KM mode is not compatible with VHF Dist Mode.

WSPRView software VHF Dist mode

The HF modes are different again, especially the ALL bands mode. Each band's activity shows the callsigns spotted and separated into band columns. Because of the nature of the ALL mode and the large number of WSPR reports submitted each minute, the total time is likely to be only a minute or two and this is the reason for the "Spots between" info boxes on the LHS in this mode. Clicking on say the 40M column takes you to the 40M band mode, the software will download only 40M data so you get more detail.

You can also use the Spotted and Spotter option boxes to do some final filtering as to what is displayed. Eg Placing just a V in the spotted box means that only VK, VE, VO, VU (etc) callsigns will be listed even in the ALL bands mode. Make it VK and only VK callsigns will appear against each band. Try a few different single letters or double letters in either or both boxes. The tip for this one is press the Enter key after the letter(s) to get an immediate update.

The Lines box simply tells you how many line entries there are in ALL mode ie the length of the longest column.

Adjust the screen width until all columns are displayed by using the double-ended arrow option at RHS with your mouse and left button held down.

WSPRView © VK4ADC - Version 1.0.0.5 Build: 2018-10-26

Band: All
WWW: 1000   Update NOW
Now (Local): 7:25:00 AM   09:25 UTC
Last update: 7:24:52 AM
Next update: 7:26:52 AM
☐ DST offset
Update
-> CSV   #1   IP: 112.141.83.178

Spotted Clear
Logic: AND
Spotter Clear
Update Interval: 2 Mins
Spots between: 09:22 UTC / 09:22 UTC
Lines: 35

2190/60(160	80	60	40	30	20	17	15	12	10	6	4	2
WA9CGZ	F4BDG	DL2FX	DL2WB	UA3DJR	DM3FML	N7GCR	W5OLF			G4OQV	LX9BSC		VK2KY
EA7HPM	OK1DST	G3SXH	DL1FX	DK8JP	HB4FV	K9AVT	W8MV						
DL1HWK	OZ7IT	OZ2JBR	DJ8AW	SP6OJE	LA3JJ	AH6CY	KN8DMK						
DK6NI	DK2CH	G3JKF		9A1CJT	KD2LZI	N5ONZ	VE3NFK						
N1VF		PA0O/P		9A7AOF	VE7BPB	KI7VDO							
M0FMT		IK1HGI		N5CEY	VE3XIX	K9YWO							
DK6DV		G4HDS		WA4KFZ	AI8W	WD8RMG							
JH1OFX		SM3ESX		IU1GLI	VE3EFF	N2NPR							
LA1BCN		DF4WV		DD1IR	VE1INN	AI4FU							
G3XBM				OK2SAM	W2GRK	N8GWW							
				9A5PH	ND8I	KG5UWB/							
				M0MVA	M0BSI	PA1OSF							
				G8THE	G4SFS	W9RAN							
				G0BKR	OH8GKP	KA3JIJ							
				F5VNE	HB9LU	KM4SQK							
				W1VR	OE2WNL	KB5ZUR							
				M0KKA	IQ8SO	K5LVB							
				G0ACQ	WW6CC	KD2EPA							
				HB0QRP		DL6HBQ							
				DL6YCU		NT7K							
				DL1DUZ		N8PMR							
				GM1MSS		WB3ANQ							

Colours:

From V1.0.0.8, these colours are user settable and these descriptions may be inaccurate:

The font is **bold blue** when the signal is beyond the desired distance and the signal is above the SNR dB threshold. This is the state that can cause an alert to be issued.

The font is **bold red** when the signal SNR is above the dB threshold regardless of distance.

The font is **bold black** when the signal is beyond the desired distance and the signal is below the SNR dB threshold .

The font is normal black when the signal is less than the desired distance and the signal is below the SNR dB threshold .

The red Update link at top RHS downloads the currently-available version from this web site using the same address info as per the manual link below. It downloads via your default web browser into its download folder.

Note that the main program box height and width are adjustable....

Very much still a work-in-progress !!!!

Download link : **WSPRView.zip (/~vk4adc/web/images/UserFiles/File/WSPRView/WSPRView.zip)**
Version: 1.0.0.21
Date : 20 November 2023

From V17, the above Zip file also contains a copy of the Summary executable.

Version 1.0.0.21 and later now supports 40MHz / 8 Metre WSPR reporting.

See also the **WSPRView Summary software**, with useage details and separate download link further down this web page. **NOTE:** The version at the bottom of the page is the newest release while the one included in the main WSPRView ZIP is only updated when that package is upgraded.

V1.0.0.7 still available (/~vk4adc/web/images/UserFiles/File/WSPRView/WSPRView1007.zip) from here

Note that this software is newly developed and can contain 'bugs' yet to be discovered and resolved. What it doesn't contain is any viruses but, by all means, scan it with your antivirus software before executing it.

Please do NOT copy this download ZIP to any other web site. <u>Linking to it is fine</u> but as the software is likely to change with bug-fixes and new or altered options, this will be the only current release.

MORE:

It does create some support files hence the desire for an empty folder at the beginning.

WSPRRep.txt : generated (and overwritten) every time the WSPRNET.ORG site is queried. Often up to 1MB in size for 1000 records (default) and contains HTML. Note that this is the data download from your internet connection so totals at 30MB per hour if Update Interval rate is set to 2Mins. This changes to about 5MB for the Historical mode (5000 records) once or 150MB/hour if sampled every 2Mins { NOT RECOMMENDED and no advantage in it }..

WSPRRep.csv : generated (and overwritten) every time the WSPRRep.txt file is processed. Probably typically about 80KB - 100KB in size for 1000 records (default) and is the extracted spots data in CSV format.. eg..

Date Time, Spotted,Freq,SNR,Drift,Grid,TX dBm,TX Watts,Spotter,SGrid,KM,Miles

"
2018-10-24 22:00,VK3DXE,144.490453,+19,0,QF21nv,+43,19.953,VK3II,QF21rn,47,29,
2018-10-24 22:00,VK3DXE,144.490453,-7,0,QF21nv,+43,19.953,VK3ZTE,QF22kg,47,29,
2018-10-24 21:58,VK3DXE,144.490452,-26,0,QF21nv,+43,19.953,VK2KRR,QF34mr,358,222,

"

WSPRViewExp (DATE) (TIME).csv : generated when the ->CSV button is pushed. This contains the data visible in the grid in CSV format. The date is DDMMYYYY and the time is HHMMSS. There is no confirmation that the file has been created but it takes a second or two (at most) to complete (eg 9-10KB).

A couple of other files **might** be generated but they are in text format and can be opened with Windows Notepad.

WSPRView Summary Software

31 Dec 2018

The WSPRView_Summary software is of value only to those who are transmitting on WSPR on bands 160M to 70CM.

The data files produced by the WSPRView software for the MyCall function (ie the /mycall= on the command line) are in CSV format even though they are labelled with a .txt file extension. That makes it possible to load into a spreadsheet package like MS Excel - BUT - the numbers of spots accumulate at a very fast rate so it becomes unwieldy to use directly. In just one month, I had accumulated over 6000 spots against my callsign so manipulating that amount of data is tiresome.

V1.0.0.17 of WSPRView provided a new feature in the "Bands" list - MyCall - which queries WSPRNet for entries matching the /mycall entry. By default, it will access the last 1000 entries but the Historical tickbox allows it access to the last 5000. Only use the Historical option once before pressing the Update Now or letting it automatically update. It updates the {callsign}-spots.txt file with all history now available and regardless of band.

That led to me creating the companion **WSPRView Summary** package which does the hard work for you. It processes the data file and provides a list of unique spotter callsigns and the number of their spots on any of the bands from 160M to 70CM (/432MHz), provides matching grid square info and distance in KM.

The data file used for the screenshots had some 6588 spots entries across 5 bands that broke down into 92 unique callsigns so that, plus a couple of info lines, became the output data file length. If you want specific details for a given callsign then you can still open the {callsign}-spots.txt file directly (eg with NotePad) and use Control-F to search for the callsign (then F3 to continue searching). My 370KB data file was summarised into just 4KB !

Access to the summary software is readily available in the latest versions (>V1.0.0.16) of WSPRView for Windows because a 'Summary' button appears if the /mycall= command line option is used, and that is because the {callsign}-spots.txt file is only generated and updated in that state.

Operation is straightforward.

(1) Launch the application.

(2) Open the {callsign}-spots.txt data file.
If you are using the'/pcname' option for WSPRView then it will be named the computername#{callsign}-spots.txt in lieu. By default, it opens the same folder as is used by the WSPRView and Summary executables.

(3) Watch it progress until finished.
At this point, a mark-in-time file is created in the background as a copy of the {callsign}-spots.txt data file, naming is "Summ-DATE-TIME-{callsign}-spots.txt", where date and time values are purely numbers. It means that at any future time {unless you have manually deleted these file/s}, you can reload that data file and re-visit the values at that date.

(4) Use the mouse pointer and left-click on the "labels" row of the table (eg Callsign, .., 6M, .., Grid, KM..)

The data will sort by callsign in either ascending or descending depending on how many left clicks are used, ditto the Grid column and the KM column.
The data will sort descending counts for any band column (eg 6M). No ascending count option is provided.
The selected column text and background colours will change to highlight the details.

{Try both single, single-single and also double-clicks on the top label row for Callsign, Grid and KM to change the orders. Columns with no spots data at all are not sorted.}

(5) By selecting the column first then pressing the 'Save Summary File' button, a text data file (again in CSV format) will be created in that pre-selected order and named appropriately. If the AutoOpen tickbox is left ticked, the data file will automatically be opened in Windows Notepad. **The new file will over-write any previously generated file.**

(6) Open the summary file in Excel (or in another package), print it or copy parts of it to do as you wish. If you wish to retain it for historical purposes then either (1) copy it to another folder or (2) rename it to (eg) 6M-spots-summary-Dec2018.txt or (3) do both. Remember to copy the {callsign}-spots.txt file to another folder along with it, renaming it also.

The software's window size and position is saved when the package is closed.

Builds later than 3 Jan 2019 also have a Band Summaries tickbox below the Open File button that allows the creation of individual band files to make the band-by-band information easier to assimilate. The software also now shows an 'Open Band Summary' dropdown box - which you must drop down - to review the extracted summary file in Notepad. These files are still Comma Separated Format but contain additional spaces to make it easier to compare the columns visually.

It is interesting to observe the frequency variations even from one callsign over time, signal level changes over time and what time of the day/night that propagation occurs to different areas on different bands. It also reveals how much the frequency variation for a single time spot from multiple stations appears (i.e. their frequency error).

The following images are typically from the ainitial release and may not be fully representative of the current release:
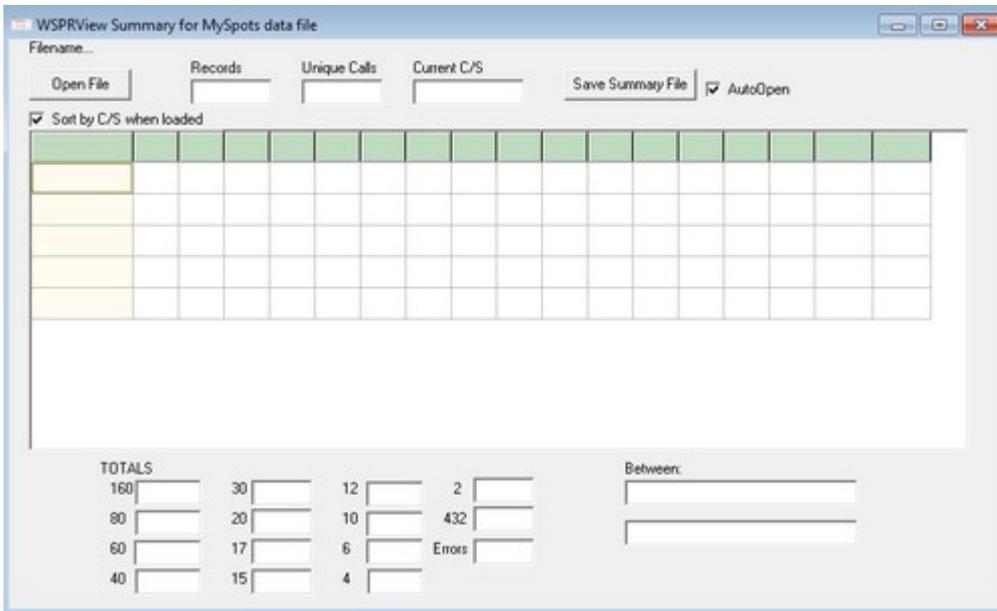
The WSPRView Summary package immediately after starting up.
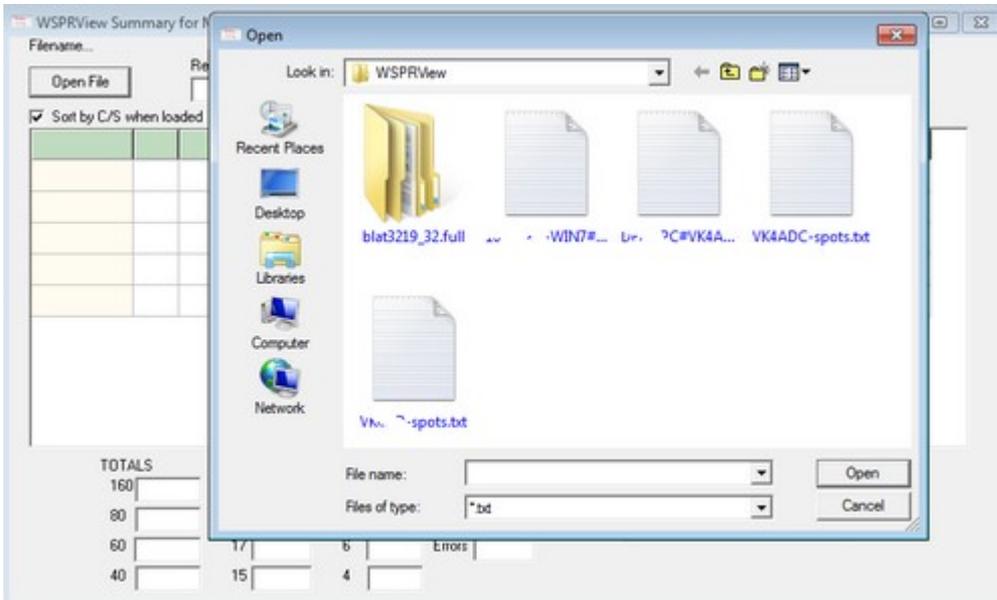
The Open File button is pressed then the data file is selected from the listed files. Press the Open on the selector dialogue box.
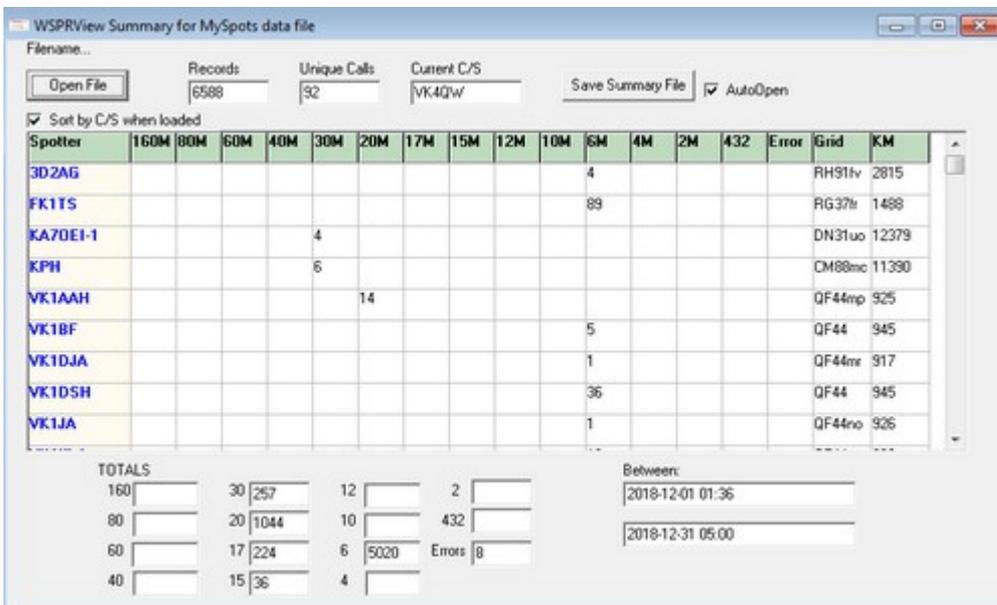
The file will start processing. The initial display in raw file order (ie time/date) but if the 'Sort by C/S (callsign) when loaded' is ticked (default), the table will quickly sort by callsign into ascending ASCII order. The data can be scrolled vertically using the button at RHS.

By selecting the KM label at the top of the RHS column, the table is sorted by distance to descending values. Clicking or double-clicking will change the order to ascending.

Selecting the 6M label (or any other band label) causes the spot counts to be shown in descending order. If there is no spots count in any given column, the table will not be re-sorted.

Pressing the 'Save Summary File' button creates a relevantly-named data file to be produced. The name is shown against the "Exported as:" label. Any previous data file of the same name is overwritten with this action.
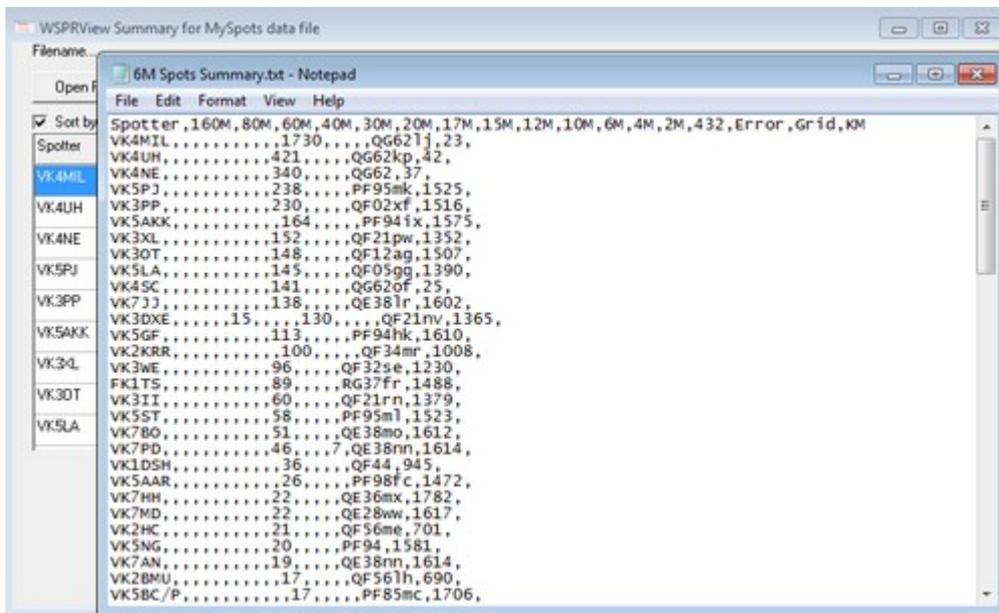
If the AutoOpen tickbox is ticked (default) then the data file is automatically opened in Windows Notepad.

To close the application, use the X button at top right.

Download link: **WSPRVIEW_SUMMARY.ZIP**
(/~vk4adc/web/images/UserFiles/File/WSPRView/WSPRView_Summary.zip)

About 250KB, expands to about 500KB.

Latest version release : 4 January 2019

 PLACE THE EXE FILE IN THE SAME FOLDER AS WSPRVIEW.EXE AND THE DATA FILES IT CREATES.

If you are using WSPRView version >= V1.0.0.17 * and *** are using the /mycall= option then a 'Summary' button appears in that application to access this Summary package.**

The Summ-DATE-TIME-{callsign}-spots.txt mark-in-time data file is only created in versions dated 2 Jan19 and later.

WSPRView Summary Notes:

..1.. There will NOT be support for the 2200 and 630M bands incorporated at any time.

..2.. Any updates to the software will be because I desire a change and user requests will not be entertained. Essentially I wrote it just for me and the fact that I choose to share it is just fortuitous for other WSPRView users.

..3.. There is no build version obvious on the software, only a buld date. The latest version will always be available from this web page. Nowhere else.