

DataLinks Line Segment / Buffer Search

Tutorial #10

Last Revision: May 2009

Introduction

This tutorial was designed to introduce DataLinks users to the new Line Segment / Buffer Search tools. New users or users unfamiliar with the DataLinks system may need to refer to Tutorials #1 and #2 before using the Line Segment / Buffer searches. This document assumes the user is familiar with concepts covered in the first two tutorials. In addition, users selecting the Find Available Frequencies – Line Segment / Buffer tool, may also need to refer to Tutorial #3 for additional information on the Find Available Frequencies tools.

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Line Segment / Buffer Search Overview

Selecting A Line Segment / Buffer Search Tool

After logging in to the system, a list of database categories is displayed. To select one of the available frequency finder tools, click on the Tools and Utilities category. The system currently offers four different frequency finders:



1.) Find Available Frequencies – Line Segment / Buffer: Searches the FCC frequency database for available frequencies within the buffer area based on user criteria.

2.) Line Segment / Buffer Search: Searches FCC frequency database for all existing frequencies in the user-defined frequency range inside the buffer area.

Note: The DataLinks frequency finder tools are only available for unlimited subscription users. DataLinks users who do not have unlimited access accounts will not be able to use the frequency finders.

Search For Available Frequencies In Line Segment / Buffer

To find available frequencies within a Line Segment / Buffer, do the following:

Step 1: Enter the latitude and longitude coordinates for both end points in DDDMMSS format.

Note: The latitude must be a 6-digit value and the longitude must be a 7-digit value. Any longitudes less than 100 degrees require a leading zero.

Step 2: Enter a search distance in miles.

Step 3: Enter the low & high frequencies in MHz.

Step 4: Enter the frequency spacing in KHz.

Note: The frequency finder does not verify the spacing provided by the user. It is the user's responsibility to ensure the spacing entered is valid for the specified frequency range.

Find Available Frequency - Line Segment / Buffer

Distance & End Points

Latitude 1(Required): 420931
Longitude 1(Required): 0793106
Latitude 2(Required): 415026
Longitude 2(Required): 0794939
Distance (Required): 20

Frequency Information

Frequency - Low (Required): 46.1
Frequency - High (Required): 46.2
Spacing - KHZ - (Required): 20

OUTPUT FORMAT

ACTIVE ONLY

NO NEXTEL

STATISTICS

Detail

☐☐☐

Submit

Reset

The search criteria shown in the above screen shot is valid and can be used as test values.

Step 5: Once data has been entered into the required fields, select an output option. For additional information on the difference between output options, see the next section – **Find Available Frequencies – Line Segment / Buffer Output**.

Step 6: Modify any of the optional fields if necessary and click the Submit button. For more information on the Active Only, No Nextel and Statistics check boxes, see **Tutorial #1 – Introduction To PerCon DataLinks**.

Note: Once a search has been submitted, it cannot be stopped. If you make a mistake, DO NOT click the Stop button on your browser. Let the search finish and re-run the search with the correct criteria.

Find Available Frequencies – Line Segment / Buffer Output

Overview

There are currently three different output formats available. The results displayed from all output options are color coded to differentiate between available and occupied frequencies.

- **Blue** frequencies are available assuming the user entered valid criteria.
- **Red** frequencies are existing frequencies that are already occupied.
- **Orange** frequencies are potentially available frequencies that are within the specified frequency range, but do not match the specified spacing. The frequencies could be the result of an invalid frequency used on a valid FCC license.

All of the available output formats also include links to save the results to .KML files or Microsoft Excel .XLS files. Users can download the .KML files to view the results in Google Earth or review the .XLS file results offline using Excel.

Note: For more information on saving output files, see **Tutorial #2 – PerCon DataLinks Output Options.**

Detail Format

The Detail format outputs search results in a web page with the search criteria at the top of the page followed by a frequency summary. The summary portion is partitioned into the three groups listed above. Each group displays 9 fields of data per record including the frequency, callsign, radio service and class of station codes, owner name, city and state, the total number of units and the ERP / Power Out ?????

Find Available Frequency – Line Segment / Buffer DETAIL REPORT

SEARCH RESULTS 04/28/09 22:36:34

Frequency - Low :46.1
Frequency - High :46.2
Offset :20 khz
Latitude 1 :420931
Longitude 1 :0793106
Latitude 2 :415026
Longitude 2 :0794939
Distance :10

The boundaries of your search are also in the following file: [KML Boundary file](#)

The results of your search are also in the following file: [KML file](#)

The results of your search are also in the following file: [Available Frequency XLS file](#)

The results of your search are also in the following file: [Frequency Found XLS file](#)

Frequency Available : 46.12000000
Frequency Available : 46.16000000
Frequency Available : 46.18000000

Frequency Found : 46.10000000 - Count 15

| | | | | | | |
|---------|-------|-------------------------------------|---------------|----|-----------|---------------|
| KEM430 | PW FB | BEMUS POINT, VILLAGE OF | BEMUS POINT | NY | 1 Unit(s) | Watts |
| KGK588 | PW FB | CLYMER FIRE DEPARTMENT INC | CLYMER | NY | 1 Unit(s) | Watts |
| KGL572 | PW FB | MAPLE SPRINGS FIRE DEPARTMENT | MAPLE SPRINGS | NY | 1 Unit(s) | 59.000 Watts |
| KJV339 | PW FB | MAYVILLE, VILLAGE OF | MAYVILLE | NY | 1 Unit(s) | Watts |
| KL5528 | PW FB | CHAUTAUQUA VOLUNTEER FIRE DEPT | CHAUTAUQUA | NY | 1 Unit(s) | 44.000 Watts |
| KS2391 | PW FB | FINDLEY LAKE FIRE DEPT INC | FINDLEY LAKE | NY | 1 Unit(s) | Watts |
| WNZF386 | PW FB | BUSTI VOLUNTEER FIRE DEPARTMENT INC | JAMESTOWN | NY | 1 Unit(s) | 110.000 Watts |
| WPLS995 | PW FB | ASHVILLE FIRE DISTRICT | ASHVILLE | NY | 1 Unit(s) | 70.000 Watts |
| WPLS995 | PW FB | ASHVILLE FIRE DISTRICT | STOW | NY | 1 Unit(s) | 72.000 Watts |
| KEB909 | PW FB | CHAUTAUQUA, COUNTY OF | MAYVILLE | NY | 1 Unit(s) | 177.000 Watts |
| KEB909 | PW FB | CHAUTAUQUA, COUNTY OF | MINA | NY | 1 Unit(s) | 50.000 Watts |
| WPMB783 | PW FB | HARTFIELD VOLUNTEER FIRE CO INC | MAYVILLE | NY | 1 Unit(s) | 43.000 Watts |
| WPN2526 | PW FB | STANLEY HOSE COMPANY INC | SHERMAN | NY | 1 Unit(s) | 70.000 Watts |
| WQEU524 | PW FB | PANAMA, VILLAGE OF-FIRE DEPARTMENT | PANAMA | NY | 1 Unit(s) | 100.000 Watts |
| WQEU524 | PW FB | PANAMA, VILLAGE OF-FIRE DEPARTMENT | ASHVILLE | NY | 1 Unit(s) | 100.000 Watts |

Frequency Found : 46.14000000 - Count 16

| | | | | | | |
|---------|-------|-------------------------------------|---------------|----|-----------|---------------|
| KEM430 | PW FB | BEMUS POINT, VILLAGE OF | BEMUS POINT | NY | 1 Unit(s) | Watts |
| KGK588 | PW FB | CLYMER FIRE DEPARTMENT INC | CLYMER | NY | 1 Unit(s) | Watts |
| KGL572 | PW FB | MAPLE SPRINGS FIRE DEPARTMENT | MAPLE SPRINGS | NY | 1 Unit(s) | 59.000 Watts |
| KJV339 | PW FB | MAYVILLE, VILLAGE OF | MAYVILLE | NY | 1 Unit(s) | Watts |
| KL5528 | PW FB | CHAUTAUQUA VOLUNTEER FIRE DEPT | CHAUTAUQUA | NY | 1 Unit(s) | 44.000 Watts |
| KS2391 | PW FB | FINDLEY LAKE FIRE DEPT INC | FINDLEY LAKE | NY | 1 Unit(s) | Watts |
| WNZF386 | PW FB | BUSTI VOLUNTEER FIRE DEPARTMENT INC | JAMESTOWN | NY | 1 Unit(s) | 110.000 Watts |
| WPLS995 | PW FB | ASHVILLE FIRE DISTRICT | ASHVILLE | NY | 1 Unit(s) | 70.000 Watts |
| WPLS995 | PW FB | ASHVILLE FIRE DISTRICT | STOW | NY | 1 Unit(s) | 72.000 Watts |

Right click on either KML link to save the results to a local .KML file for use with Google Earth.

Right click on either XLS file link to save the results to a Microsoft Excel file.

Detail With Links Format

The Detail With Link output format displays search results in a web page with the same data and fields as the Detail format. However it also includes searchable links for the callsign, owner name and city fields. By clicking on the links, users can retrieve all records for a callsign, owner name or a city.

| | | | | | | | |
|------------------------|-------|---|---------------------------|----|------------|--------|-------|
| Frequency Found | : | 46.10000000 | - Count | 39 | | | |
| KBS950 | PW FB | WESTFIELD, VILLAGE OF | WESTFIELD | NY | 1 Unit(s) | 68.260 | Watts |
| KBZ416 | PW FB | FLUVANNA FIRE DISTRICT | JAMESTOWN | NY | 1 Unit(s) | | Watts |
| KBZ416 | PW FB | FLUVANNA FIRE DISTRICT | ELLCOTT | NY | 1 Unit(s) | | Watts |
| KEC503 | PW FB | JAMESTOWN, CITY OF | JAMESTOWN | NY | 1 Unit(s) | | Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | JAMESTOWN | NY | 1 Unit(s) | 85.000 | Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | LAKEWOOD | NY | 1 Unit(s) | 90.000 | Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | LAKEWOOD | NY | 1 Unit(s) | 90.000 | Watts |
| KED818 | PW MO | LAKEWOOD VOLUNTEER FIRE COMPANY INC | | NY | 25 Unit(s) | | Watts |

Click on a callsign link to run a new Callsign search using that callsign.

Click on a company name link to run a new DBA Name search using that company name.

Click on a city name link to run a new Transmitters In A City search using that city.

Summary Format

The Summary output is a more condensed form of the Detail format. The search criteria along with the list of available frequencies and occupied frequencies with totals are displayed.

Find Available Frequency - Line Segment / Buffer SUMMARY REPORT

SEARCH RESULTS 04/29/09 14:49:43

Frequency - Low :46.1
Frequency - High :46.2
Offset :20 khz
Latitude 1 :420931
Longitude 1 :0793106
Latitude 2 :415026
Longitude 2 :0794939
Distance :20

Right click on either KML link to save the results to a local .KML file for use with Google Earth.

The boundaries of your search are also in the following file: [KML Boundary file](#)

The results of your search are also in the following file: [KML file](#)

The results of your search are also in the following file: [Available Frequency XLS file](#)

The results of your search are also in the following file: [Frequency Found XLS file](#)

Frequency Available : 46.12000000
Frequency Available : 46.16000000

Right click on either XLS file link to save the results to a Microsoft Excel file.

Frequency Found : 46.10000000 - Count 39
Frequency Found : 46.14000000 - Count 40
Frequency Found : 46.18000000 - Count 4

Search For Existing Frequencies In Line Segment / Buffer

To find existing frequencies within a Line Segment / Buffer, do the following:

Step 1: Enter the latitude and longitude coordinates for both end points in DDDMMSS format.

Note: The latitude must be a 6-digit value and the longitude must be a 7-digit value. Any longitudes less than 100 degrees require a leading zero.

Step 2: Enter a search distance in miles.

Step 3: Enter the low & high frequencies in MHz.

Line Segment / Buffer Search

Distance & End Points

Latitude 1(Required):

420931

Longitude 1(Required):

0793106

Latitude 2(Required):

415026

Longitude 2(Required):

0794939

Distance (Required):

20

Frequency Information

Frequency - Low (Required):

46.1

Frequency - High (Required):

46.2

OUTPUT FORMAT

ACTIVE ONLY

NO NEXTEL

STATISTICS

Detail

Submit

Reset

The search criteria shown in the above screen shot is valid and can be used as test values.

Step 4: Once data has been entered into the required fields, select an output option. For additional information on the difference between output options, see the next section – **Line Segment / Buffer Output Options**.

Step 5: Modify any of the optional fields if necessary and click the Submit button. For more information on the Active Only, No Nextel and Statistics check boxes, see **Tutorial #1 – Introduction To PerCon DataLinks**.

Note: Once a search has been submitted, it cannot be stopped. If you make a mistake, DO NOT click the Stop button on your browser. Let the search finish and re-run the search with the correct criteria.

Line Segment / Buffer Search Output

Overview

There are currently three different output formats available. All of the available output formats also include links to save the results to Google Earth .KML files or Microsoft Excel .XLS files. Users can download the .KML files to view the results in Google Earth or review the .XLS file results offline using Excel.

Note: For more information on saving output files, see **Tutorial #2 – PerCon DataLinks Output Options.**

Detail Format

The Detail format outputs search results in a web page with the search criteria at the top of the page followed by a frequency summary. The summary portion is partitioned into the three groups listed above. Each group displays 9 fields of data per record including the frequency, callsign, radio service and class of station codes, owner name, city and state, the total number of units and the ERP / Power Out ?????

Line Segment / Buffer Search DETAIL REPORT

SEARCH RESULTS 04/29/09 15:05:23

Frequency - Low :46.1
Frequency - High :46.2
Latitude 1 :420931
Longitude 1 :0793106
Latitude 2 :415026
Longitude 2 :0794939
Distance :20

Right click on either KML link to save the results to a local .KML file for use with Google Earth.

The boundaries of your search are also in the following file: [KML Boundary file](#)

The results of your search are also in the following file: [KML file](#)

The results of your search are also in the following file: [Frequency Found XLS file](#)

Right click on the XLS file link to save the results to a Microsoft Excel file.

| | | | | | | | |
|-------------------|-------------|-------------------------------------|----|---------------|----|------------|--------------|
| Frequency Found : | 46.10000000 | - Count | 39 | | | | |
| KBS950 | PW FB | WESTFIELD, VILLAGE OF | | WESTFIELD | NY | 1 Unit(s) | 68.260 Watts |
| KBZ416 | PW FB | FLUVANNA FIRE DISTRICT | | JAMESTOWN | NY | 1 Unit(s) | Watts |
| KBZ416 | PW FB | FLUVANNA FIRE DISTRICT | | ELLICOTT | NY | 1 Unit(s) | Watts |
| KEC503 | PW FB | JAMESTOWN, CITY OF | | JAMESTOWN | NY | 1 Unit(s) | Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | | JAMESTOWN | NY | 1 Unit(s) | 85.000 Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | | LAKEWOOD | NY | 1 Unit(s) | 90.000 Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | | LAKEWOOD | NY | 1 Unit(s) | 90.000 Watts |
| KED818 | PW MO | LAKEWOOD VOLUNTEER FIRE COMPANY INC | | | NY | 25 Unit(s) | Watts |
| KEE401 | PW FB | FALCONER VFD INC | | FALCONER | NY | 1 Unit(s) | Watts |
| KEM430 | PW FB | BEMUS POINT, VILLAGE OF | | BEMUS POINT | NY | 1 Unit(s) | Watts |
| KCK588 | PW FB | CLYMER FIRE DEPARTMENT INC | | CLYMER | NY | 1 Unit(s) | Watts |
| KGL572 | PW FB | MAPLE SPRINGS FIRE DEPARTMENT | | MAPLE SPRINGS | NY | 1 Unit(s) | 59.000 Watts |

Detail With Links Format

The Detail With Link output format displays search results in a web page with the same data and fields as the Detail format. However it also includes searchable links for the callsign, owner name and city fields. By clicking on the links, users can retrieve all records for a callsign, owner name or a city.

Frequency Found : 46.10000000 - Count 39

| | | | | | | |
|------------------------|-------|---|-------------------------------|----|------------|--------------|
| KBS950 | PW FB | WESTFIELD, VILLAGE OF | WESTFIELD | NY | 1 Unit(s) | 68.260 Watts |
| KBZ416 | PW FB | FLUVANNA FIRE DISTRICT | JAMESTOWN | NY | 1 Unit(s) | Watts |
| KBZ416 | PW FB | FLUVANNA FIRE DISTRICT | ELLICOTT | NY | 1 Unit(s) | Watts |
| KEC503 | PW FB | JAMESTOWN, CITY OF | JAMESTOWN | NY | 1 Unit(s) | Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | JAMESTOWN | NY | 1 Unit(s) | 85.000 Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | LAKEWOOD | NY | 1 Unit(s) | 90.000 Watts |
| KED818 | PW FB | LAKEWOOD VOLUNTEER FIRE COMPANY INC | LAKEWOOD | NY | 1 Unit(s) | 90.000 Watts |
| KED818 | PW MO | LAKEWOOD VOLUNTEER FIRE COMPANY INC | | NY | 25 Unit(s) | Watts |
| KEE401 | PW FB | FALCONER VFD INC | FALCONER | NY | 1 Unit(s) | Watts |
| KEM430 | PW FB | BEMUS POINT, VILLAGE OF | BEMUS POINT | NY | 1 Unit(s) | Watts |
| KKG588 | PW FB | CLYMER FIRE DEPARTMENT INC | CLYMER | NY | 1 Unit(s) | Watts |
| KGL572 | PW FB | MAPLE SPRINGS FIRE DEPARTMENT | MAPLE SPRINGS | NY | 1 Unit(s) | 59.000 Watts |

Click on a callsign link to run a new Callsign search using that callsign.

Click on a company name link to run a new DBA Name search using that company name.

Click on a city name link to run a new Transmitters In A City search using that city.

Summary Format

The Summary output is a more condensed form of the Detail format. The search criteria along with the list of available frequencies and occupied frequencies with totals are displayed.

Line Segment / Buffer Search SUMMARY REPORT

SEARCH RESULTS 04/29/09 15:20:27

Frequency - Low :46.1
Frequency - High :46.2
Latitude 1 :420931
Longitude 1 :0793106
Latitude 2 :415026
Longitude 2 :0794939
Distance :20

Right click on either KML link to save the results to a local .KML file for use with Google Earth.

The boundaries of your search are also in the following file: [KML Boundary file](#)

The results of your search are also in the following file: [KML file](#)

The results of your search are also in the following file: [Frequency Found XLS file](#)

Right click on the XLS file link to save the results to a Microsoft Excel file.

Frequency Found : 46.10000000 - Count 39
Frequency Found : 46.14000000 - Count 40
Frequency Found : 46.18000000 - Count 4

Google Earth .KML Output Files

Both Line Segment / Buffer searches automatically create two Google Earth .KML files along with the search results. The .KML file will show _____

To use a .KML file, do the following:

Step 1: Save the .KML file(s) from the results page.

Step 2: Double-click on the .KML file to load it into Google Earth.

Note: For more information on using the Google Earth – KML output option, please see **Tutorial #6 – Google Earth .KML Output Option**.

The screen shot below shows a 20 mile line segment / buffer and the transmitters found within the search area between 46.1 and 46.2 MHz



Company Information

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- Initial publication.

DataLinks Tutorials

Tutorial #1:
Introduction To PerCon DataLinks

Tutorial #2:
PerCon DataLinks Output Options

Tutorial #3:
DataLinks Frequency Finder

Tutorial #4:
PerCon DataLinks Co-Channel /
Adjacent Channel Analysis

Tutorial #5:
DataLinks Wildcard Searches

Tutorial #6:
Google Earth .KML Output Option

Tutorial #7:
SQL Query Builder & Editor

Tutorial #8:
Dynamic Database Browsing

Tutorial #9:
Worldwide Bandplan Database

Tutorial #10:
DataLinks Line Segment / Buffer Search