13. QUERYING STORED DATA

The BOSS3 application allows for accessing data via a Quick Search function (for simple searches), the Reads section (for advanced queries of all Reads records) and the Reports section (for various data).

This section will cover these areas of the application that allow searching or querying BOSS data.

13.1. WILDCARDS

Wildcards are special characters that represent any/all potential character and can be used in searches and queries. Wildcards can make finding a match easier, as they can define a portion of the match criteria to be ambiguous. Wildcards used in BOSS3 are the percent sign (%), the asterisk (*) and underscore (_). The percent sign and the asterisk match multiple characters. The underscore matches only a single character.

<table>
<thead>
<tr>
<th>Wildcard Example</th>
<th>Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>a%</td>
<td>Any values that start with the letter “a”</td>
</tr>
<tr>
<td><em>a</em></td>
<td>Any values containing “a”</td>
</tr>
<tr>
<td>%</td>
<td>Any/all values</td>
</tr>
<tr>
<td>a_</td>
<td>Any values that are exactly two characters long and start with “a”</td>
</tr>
</tbody>
</table>

13.2. QUICK SEARCH BAR

The Quick Search Bar is always visible and available on the top of the BOSS screen, regardless of category or shortcut currently selected. It allows for quick, simple searches of various BOSS data.

13.2.1. USING THE QUICK SEARCH BAR

- Type in the value to search in the Look For: field. This value can include wildcard values. Multiple values can be entered separated by a comma (e.g. ABC123, XYZ234), however, wildcard values cannot be used when searching for multiple values.
- Select a data type to search in the dropdown list. (Options include: Reads, Hotlists, Users, Groups, Group Users, Devices and Sites.)
- Click the Find link to initiate the search.
- Search results are displayed in the browse/edit area of the screen.

13.3. QUERY RESULT NAVIGATION LINKS

The links at the top right of the screen allow for moving through the data results. These controls can be very useful for larger result sets, providing an easier way to move through records without using the scroll button.

First

Moves to the very beginning of the data results (first record).

<<Prev

Moves one record back.

Next>>

Moves one record forward.
Last

Moves the very end of the data results (last record).

New Search

Use to clear the results page and return to the query parameters screen.

To clear results from a Quick Find, click the Clear link to the right of the search entry fields.

13.4. QUICK SEARCH FIELDS

When performing a query using the quick search feature, keep in mind that the search is performed on one significant field of the data type; the search is run against the significant field, not all fields. For example, when performing a quick search on Users, the text entered is compared against the user name field of all user records, but not against the display names. The following is a list of the fields used in Quick Search:

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Field used for Search</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reads</td>
<td>LPN</td>
</tr>
<tr>
<td>Users</td>
<td>Login Name</td>
</tr>
<tr>
<td>Groups</td>
<td>Group Name</td>
</tr>
<tr>
<td>Site</td>
<td>Site Name</td>
</tr>
<tr>
<td>Hotlists</td>
<td>Hotlist Name</td>
</tr>
<tr>
<td>Group Users</td>
<td>Group Name</td>
</tr>
<tr>
<td>Devices</td>
<td>Device Name</td>
</tr>
</tbody>
</table>

13.5. ADVANCED READS QUERIES

Reads can be viewed real-time using the Dispatch screen. For information regarding viewing Reads real time, see the Dispatch section of this manual.

13.5.1. QUERYING READS

Reads screen allows for searching and viewing past Read records. Reads can be searched via a quick search where the LPN/Plate number is queried. The Reads section allows for more advanced Read queries, in which data can be filtered based on additional fields such as date ranges, location, radius, near address, etc.

To perform an advanced reads query:

➢ Select the Home Category on the Shortcut bar (if not already selected.)

➢ Click the Reads shortcut icon.

➢ Enter desired query criteria. All fields do not have to be filled in. Leaving a query field blank simply defines no filtering on that field.

➢ Click the Go button to run the query.

-OR-

➢ Click the Append button to add the query results to a previous query.

Note: Depending on factors such as the size of the BOSS database, the speed of the server and the bandwidth of the connection between client and server and the parameters of the query, there may be a delay before the results are displayed. A cursor hourglass indicates that the query is in progress.
13.5.3. ENTERING ADVANCED READS QUERY CRITERIA

The query criteria fields are:

LPN

Full or partial (using wild cards) license plate number.

From Date

The start date and time for reads to be retrieved. Click on the ">>" button to display a calendar for quick selection, or type in the date as desired.

To Date

The end date and time for reads to be retrieved. Click on the ">>" button to display a calendar for quick selection, or type in the date as desired.

Location

The location as enter in the PAGIS application (see PAGIS User's Manual for more information).

Near Address

An address to use as the center of a radius search. The address format depends on the mapping system used but typically street name, house number, city and state are required.

Radius

When near address filter is entered, the search radius from the center point must be entered here.

Servers

Information can be queried from one or more remote BOSS servers. Click on the ">>" button to display a calendar a list of authorized BOSS servers.

There is a set of additional criteria that can be used. Click Advanced to display the additional options.
Hits Only

When checked only hits are queried.

Misreads Only

When checked only reads that are marked as misreads are queried.

Devices

A query can be narrowed down to reads originating from particular devices. Click on the ">>" button to display a list of devices, and select the desired devices.

Users

A query can be narrowed down to reads originated by particular users. Click on the ">>" button to display a list of users and select the desired users, or type in the user's login name.

Dispositions

A query can be narrowed down to reads with particular dispositions. Click on the ">>" button to display a list of dispositions and select the desired dispositions.

Annotation Contains

If text is entered in this field, only reads that where the annotation contains the text are queried.

Maximum # of Results

The maximum number of reads that are displayed. The default is 100.

Note: If there are more reads that can be retrieved, additional reads can be retrieved by clicking on the More button.

13.6. CROSS-REFERENCING EXTERNAL DATA

BOSS allows cross-referencing external data, such as DMV information. To query BOSS based on external information, take the following steps:

- Create a comma-delimited text file containing the license plate numbers to be cross-referenced. The license plate number must be in the first field.
- Open the Advanced Reads Query panel.
- Click on the >> arrows next to the LPN field.
- From the "Open" dialog, select the comma-delimited file containing the plate numbers.
- Click "Open" to import the plate numbers. A maximum of 50 plate numbers can be referenced at a time.
➢ Enter other query criteria as needed and click “Go” to run the query

13.6. WORKING WITH QUERIED READS

13.6.1. VIEWING QUERY RESULTS

The results of both Quick Search and Advanced Reads Queries are presented in the same manner:

The columns displayed are:

LPN
The plate text (characters) read in by a camera or manually entered by a user.

Timestamp
The date and time when the read occurred.

Patch
The grayscale picture of the license plate.

Overview
The color overview picture of the vehicle.

Device
The device that originated the read.

Site
The site that originated the read.

Hit
Indicator whether the read is a hit.

Misread
Indicator whether the read was marked as a misread by a user.

Manual
Indicator whether the read was entered manually.

Login
The login name of the user logged into the device that originated the read.

Latitude
The latitude coordinate of the device at the time the read was originated.

Longitude
The longitude coordinate of the device at the time the read was originated.

Hotlist
The name of the hotlist that produced the hit.

Field1 ... Field5, PCNID, Information
Information from the hotlist that produced the hit.

Annotation
Annotations entered for the read.

13.6.2. QUERY RESULTS ACTIONS

There are several button options available at the bottom of the Reads Query results screen.

New Search
Initiates a new search.

Hide Images
Use to remove the image columns (patch and overview) from the view. This will provide more room for text fields. Notice that when the Hide Images button is clicked, the button caption changes to "Show Images". The button can be clicked again to redisplay images again.

Plot on Map
Click to show any selected Read records shown on map on the screen. One or multiple records can be selected for plotting on map. To select one or more records, click the checkbox on the far left of the record so that the box is checked. To select all of the results records at once, click and check the checkbox in the headings column.

Detail Report
Click to generate a detailed report of selected reads. To select one or more records, click the checkbox on the far left of the record so that the box is checked. To select all of the results records at once, click and check the checkbox in the headings column.

Summary Report
Click to get a summary report of selected reads. To select one or more records, click the checkbox on the far left of the record so that the box is checked. To select all of the results records at once, click and check the checkbox in the headings column.

Save Query
Click to save the query criteria as a Favorite for future use. See Favorites for more information.

13.6.3. VIEWING READ DETAILS
Click a row in the query results to view details for the record.

Read Details screen displays the plate read in the title, timestamp, originating device, site and geographical coordinates. The plate patch and vehicle color overview image are shown on the right.

The vehicle color overview picture can be enlarged by clicking on the picture. Use mouse scroll wheel or cursor up and down keys to enlarge or shrink the image. Click on the enlarged image to dismiss from the screen.

If the read is a hit, details of the hit can be displayed by clicking on the “Hit Info” button at the bottom of the screen.

The map displaying the location where the read occurred can be displayed by clicking on the “View Map” button.
Use the "Edit" button to correct the plate text and/or assign a disposition to the read. Click on "Save" to save the changes. To associate annotations (notes) with the read, click on the "Annotations" button.

Annotations associated with the read can be viewed by clicking on the "Annotations" button.

A summary report can be printed by clicking on the "Print Report" button.

13.7. FAVORITES
Favorites are saved Read Query criteria. Query criteria can be saved as favorites and reused over and over again. This allows the user to quickly perform frequently needed queries without the need to define the parameters each time. Favorites are specific to each user.

### 13.7.1. CREATING A NEW FAVORITE

- Select the *Home* on the Shortcut bar to access its shortcut icons.
- Click on the *Read* shortcut icon.
- Enter desired query parameters in the browse/edit area (e.g. data range, location, radius, servers, etc.)
- Click the *Go* button to run the query.
- When the query results window appears, click the *Save Query* button.
- A dialog box will appear prompting for a name. Enter a descriptive name for the new Favorite.
- Select the *Use Relative Date Range* option if desired.
- Click *OK* to complete.

The query definition is now saved as a Favorite and can be accessed at any time.

**Use Relative Date Range Option**

Rather than using the specific dates that were entered when defining the query settings, date range will be calculated based on the current date at the time the query is run.

**Relative Date Range Example:** Consider a Query is saved as a Favorite and originally defined on 8/9/2008 to search Reads between 8/02/2008 and 8/8/2008 (the prior week). If the Relative Date Range option is selected, the query is saved to always run against the prior week rather than those actual dates. If the Favorite is invoked on 12/3/2008, it will return results from 11/26/2008 thru 12/2/2008.

### 13.7.2. ACTIVATING A FAVORITE

- Select the *Home* category in the shortcut bar (if not already selected).
- Click the *Favorites* shortcut.
- A listing of all favorites is displayed in the browse/edit area.
- Click the desired Favorite. (The selected favorite will be highlighted in yellow)
- Click the *Go* button in the bottom area of the browse/edit area.
- The query results will appear in the browse/edit area.

**Note:** Depending on factors such as the size of the BOSS database, the speed of the server and the bandwidth of the connection between client and server and the parameters of the query, there may be a delay before the results are displayed. A cursor hourglass indicates that the query is in progress.

### 13.7.3. DELETING A FAVORITE

- Select the *Home* category in the shortcut bar (if not already selected).
➤ Click the *Favorites* shortcut.

➤ A listing of all favorites is displayed in the browse/edit area.

➤ Click the desired Favorite. (The selected favorite will be highlighted in yellow)

➤ Click the *Delete* button in the bottom area of the browse/edit area.

➤ Press *Yes* to confirm deletion.
11. ALERTS

BOSS can send real-time alerts to either on-screen via the BOSS application, or through email. In order to receive alerts through the BOSS application, the logged in user must be in a group that is assigned the Dispatch permission. Email alerts can be received by any BOSS user, or email address recipient.

A real-time alert for a hit will pop up on the screen when the BOSS application is running regardless of which screen the user has active at the time. If there’s a sound associated with the hit, it will be played. Alerts will be queued until the user acknowledges them by clicking “OK”.

Real-time alerting in the BOSS application can be turned off by clicking on the “Alerts” button on the BOSS home screen.

The settings for real-time alerts can be modified through the Dispatch screen.

![Alert Screen](image-url)