

R A D I O N I C S

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**READYKEY® K6100 Readykey for Windows™**

**Audit Trail Module Datasheet**

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## Introduction

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The Audit Trail Module (K6110-T) gives the ability to track changes made to the Readykey for Windows system performed by system Operators. The module records all changes made to the Readykey for Windows database, except for changes to graphics (Photo ID graphics and Alarm graphics), and records the changes in a series of files. These can then be interrogated to determine, for example, what changes an operator has made to Access Groups over a specified time period.

This is a feature that can be purchased and added to the Readykey for Windows system. The feature must be enabled on the dongle (security block) before it can be used.

The Audit Trail information is automatically updated every 12 hours **and** every time the application is run. When an automatic update is running the following dialog box is displayed:



Wait until the update has finished before using Audit Trail.

Audit Trail can only find changes made before it was run. To refresh the data close Audit Trail application and reopen it.

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**Note:** The Audit Trail Module does not process transactions, for example 'access authorized'. If you are interested in transactions then use the **Transaction** application **General Search** facility.

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The Audit Trail application is run by double clicking on the Audit icon on the Login Applications screen. This displays the Audit Trail window with three tabs:

1. **Search Criteria.** This is used for entering the details of the search:
  - The type of update (All, Personnel etc.)
  - The Operator (who made the changes)
  - The time and date range to be searched
2. **Search Results: List.** This displays the results of the search as a list giving:
  - The **Date** and **Time** the change was made.
  - The **Operator** who made the change.
  - The **Update Type** - what type of record was updated (Personnel, Sites etc.)
  - The **Record ID** which is the reference for the update.
3. **Search Results: Details.** This displays the details for the selected record on the List tab. It gives details for before and after the update. If any of the changes contain lists, then an 'Info' button at the bottom of this screen leads to a window displaying the changes to the lists.

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**Note:** To use the Audit Trail application the operators must have the correct privileges. If they do not, then the icon is hidden so that they cannot select it - see *Operator Privileges*.

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## Operator Privileges

If you have upgraded from another version of Readykey for Windows then the Audit privilege will not be active for any operators and the icon will be hidden.

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If you are running a new system based on Readykey for Windows then the default operator and any operators with the Supervisor privilege level will have access to Audit Trail.

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**Note:** Access to Audit Trail gives the ability to see all the operator passwords. It is therefore **strongly** recommended that the privilege is limited to system supervisors only.

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To give an Operator Audit Trail privilege:

1. Double-click on **Operators** in the **Admin Application**.
2. Select the **Privileges** button.
3. Select **AUDIT TRAIL** from the list on the left-hand side.
4. Place a check in the **View Audit Trail** check-box by clicking on it.
5. Select **OK**.
6. Select the **Change** button to accept the changes for the operator record.
7. Repeat the same process for other operators requiring the privilege.
8. Choose **Close** to leave the **Operators** application.
9. Close the **Admin Application** by using **ALT – F4**.
10. Choose **Log Off** from the Login applications menu to test the changes made to operators.

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## Using Audit Trail

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Double click on the Audit Trail icon on the main applications window to run the application. When you open the module the following window is displayed:

The screenshot shows the 'Audit Trail' application window. The 'Search Criteria' tab is selected. The 'Update type' dropdown is set to 'ALL UPDATE TYPES' and the 'Operator name' dropdown is set to 'ALL OPERATORS'. There are five buttons for time-based searches: 'Last month', 'This month', 'Yesterday', 'Today', and 'All day'. The 'START SEARCH:' section has a date of '12/08/97' and a time of '00:00'. The 'END SEARCH:' section has a date of '12/08/97' and a time of '23:59'. A 'Search' button is located at the bottom right, and a 'Close' button is at the bottom center.

To initiate a search you:

- Specify the search criteria.
- Click on the **Search** button.

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**Note:** You can close Audit Trail at any point by clicking on the **Close** button. This button is available on all three tabs.

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## Search Criteria

The following search criteria can be specified:

1. **Update Type.** This is a drop-down list which allows you to specify the type of record you wish to search for changes - Access Groups, Alarm Inputs, Alarm Modules etc.

Select from the **Update List** the desired types of changes to search for. The default is **All Update Types**.

A full list of the update types which can be searched is given in Appendix A.

**Note:** Some changes may affect more than one file. This means that you may want to search more than one update type. For example, to find all changes to Personnel you must search the update types Personnel **and** Extra Access. Any linked files are indicated in Appendix A.

2. **Operator Name.** This is a drop-down list with the names of all Operators in the currently selected Division.

Select the desired operator or operators from the list. The default is **All Operators**

3. **Search Period.** This allows you to specify the time period to be searched by entering a start and end date (mm/dd/yy) and time (hh:mm). In addition, there are shortcut buttons which allow you to select **Last Month, This Month, Yesterday, Today** and **All Day**.

Once you selected the search criteria, click on the **Search** button to execute the search. The standard Windows “hourglass” indicates that the search is progressing.

**Notes:**

1. If **All Update Types** option is selected then the search results will include any “linked” records. For example, any Personnel records changed will be displayed along with their associated Extra Access records.
2. The number of updates will determine how long the search takes to retrieve the report. If there are too many updates in the time period you have selected then it may take several minutes for the search to run. If you expect this to happen then try reducing your date range or limiting the search to a particular operator or update type.

Once the search is completed the **Search Results: List** tab is automatically displayed. If no records are found which match the search criteria then the tab is still displayed but it will be empty.

## Search Results List

The **Search Results: List** tab displays a list of records that match the specified search criteria. The following information is displayed for each record:

- **Date.** This is the date the record was updated.
- **Time.** This is the time the record was updated.
- **Operator.** This is the name of the Operator who updated the record.
- **Update Type.** This is the type of record updated - Access Group, Personnel etc.
- **Record ID.** This is the unique identifier associated with the record. For example, if the Update Type was personnel it might be the person’s name; if the Update Type was Time Profiles then it might be Weekends or the name of the Time Profile given, and so on.

The following table shows the results of an ‘ALL UPDATE TYPES’ search:

Date	Time	Operator	Update Type	Record ID
12/08/98	09:57:00	TARA NOLAN	Operators	FELICITY BALSCADDON
12/08/98	13:16:00	TARA NOLAN	Personnel	ASHCROFT_G
12/09/98	14:28:00	MARION KILDARE	CNCs	DEFAULT MASTER
12/09/98	14:28:00	MARION KILDARE	Sites	SITE TWO
12/09/98	15:33:00	TARA NOLAN	Extra Access	No Data: Personnel Last Name Deleted : Area List A
12/09/98	15:33:00	TARA NOLAN	Extra Access	No Data: Personnel Last Name Deleted : Area List B
12/09/98	15:33:00	TARA NOLAN	Personnel	FITZGERALD_T
12/10/98	15:36:00	TARA NOLAN	Transaction Routing	NEW FRAME
12/10/98	16:15:00	TARA NOLAN	Divisions	DIVISION ONE
12/10/98	16:26:00	TARA NOLAN	Time Profiles	OVERTIME
12/10/98	16:27:00	TARA NOLAN	Extra Access	BORREL_R :Area List A

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**Notes:**

1. If you specified an Update Type then all records in the list would have the same (specified) Update Type.
2. If your search returns more records than will fit on the screen use the scroll-bar at the right-hand side of the dialog to view more.

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To change or refine your search, click on the **Search Criteria** tab at the top of the dialog and change the details before clicking on the search button again.

Further details for any record in the list can be displayed in the **Search Results: Details** tab as described in the following section.

## Search Results: Details

To see further details on an update:

- Click on the event of interest.
- Select the **Search Results Details** tab.

Field Changed	Before Change	After Change
Operator Name	Empty (Record added)	TEST OPERATOR
Description	Empty (Record added)	NONE
Password	Empty (Record added)	TEST
User Name	Empty (Record added)	TEST
Operator In Controllers	Empty (Record added)	False
Operator No	Empty (Record added)	7
Logout Time	Empty (Record added)	2
Operator Type	Empty (Record added)	SUPERVISOR
Language	Empty (Record added)	US ENGLISH
Token Code	Empty (Record added)	NONE
Divisions	Empty (Record added)	Click "Info" button for more details

The text boxes at the top of the **Search Results: Details** tab are a repeat of all the information in the list view.

The arrow buttons at the bottom of the tab help you navigate between records without returning to the list view. They function as follows:

First record, previous record, next record and last record.



The following pages provide some sample search results.

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## Examples

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Rather than list every type of update and combination of search results, this section provides three examples of typical search results.

### Example 1

The following is an example only. It shows a change of operator by modification of a record. We recommend that you change operators by deleting the old operator and adding the new one. This helps the program function more smoothly.

Below is an example for the change of an operator. The list entry is as follows:

Date	Time	Operator	Update Type	Record ID
12/08/98	09:57:00	TARA NOLAN	Operators	FELICITY BALSCADDON
12/08/98	13:16:00	TARA NOLAN	Personnel	ASHCROFT_G
12/08/98	14:28:00	MARION KILDARE	CNCs	DEFAULT MASTER

This indicates that:

*'at 9:57 am on 8<sup>th</sup> December 1998, Tara Nolan modified the operator record Felicity Balscaddon.'*

Double clicking on the list entry switches to the **Search Results: Details** tab. The top section of the tab is a repeat of the information in the list view.

The screenshot shows a window titled "Audit Trail" with three tabs: "Search Criteria", "Search Results: List", and "Search Results: Details". The "Search Results: Details" tab is selected. It displays the following information:

Time:	09:57:00	Operator:	TARA NOLAN
Date:	14/08/97	Record ID:	FELICITY BALSCADDON
Type:	Operators		

Below this the following details are given:

Field Changed	Before Change	After Change
Operator Name	FELICITY BALSCADDON	TONY FROST
Password	FELB	TFROST
User Name	FELB	TFROST

This indicates that

*'the operator Felicity Balscaddon was replaced with the operator Tony Frost. This included a user name and password change from FELB to TFROST.'*

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**Note:** The example shows that access to Audit Trail gives the ability to see all the passwords. It is therefore **strongly recommended** that the privilege is limited to system supervisors.

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## Example 2

The second example shows one of the software engineers being promoted to development manager.

Date	Time	Operator	Update Type	Record ID
12/08/98	09:57:00	TARA NOLAN	Operators	FELICITY BALSCADDON
12/08/98	13:16:00	TARA NOLAN	Personnel	ASHCROFT_G
12/08/98	14:28:00	MARION KILDARE	CNCs	DEFAULT MASTER

The record of interest here is the second in the list which shows that:

*'at 1:16pm on 12/8/98, Tara Nolan updated the personnel record for ASHCROFT\_G.'*

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**Note:** At this stage we do not have an indication of what changes were made to the record.

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Double-clicking on the record will provide the following:

Field Changed	Before Change	After Change
Access Group	DEVELOPMENT ENGINEER	DEVELOPMENT MANAGER
Workgroup	SOFTWARE ENGINEERS	NONE.

Which tells us that:

*'ASHCROFT\_G's access group was changed to DEVELOPMENT MANAGER and was removed from the SOFTWARE ENGINEERS workgroup and is now not a member of any workgroups.'*

To see which areas a DEVELOPMENT MANAGER access group can access select **Access Groups**, in the **Admin Application**.

## Example 3

This is an example of a person being given Extra Access. This is a little more complicated because a single change has caused 2 entries in Audit Trail. This is a common occurrence with Extra Access changes.

The list shows the following:

Date	Time	Operator	Update Type	Record ID
12/08/98	13:23:00	TARA NOLAN	Extra Access	FLOWERS_A
12/08/98	13:23:00	TARA NOLAN	Personnel	FLOWERS_A

Notice how the two entries have the same time stamp. This can be an indication that the two records are related (although this is not necessarily the case).

The entries indicate that:

*'at 13:23 on the 8<sup>th</sup> of December 1998, Tara Nolan made changes to the record of FLOWERS\_A to the fields of extra access and personnel records.'*

Because the extra access settings are made in the personnel screen these two entries may originate from one change to the extra access.

Selecting the personnel update first gives an answer:

Field Changed	Before Change	After Change
Extra Access 1	False	True

Where 'Extra Access 1' is the first of two extra access fields in personnel. This entry indicates:

*'The change to personnel was a change from no extra access 1 (extra access: false) to having extra access 1 (extra access: true).'*

We now know that the extra access record contains the main information.

The details of the extra access update provide:

Field Changed	Before Change	After Change
Division	Empty (Record added)	DIVISION ONE
Personnel Last Name	Empty (Record added)	FLOWERS_A
Time Profile	Empty (Record added)	GUARD HOURS
Extra Access Group No	Empty (Record added)	1
Area List	Empty (Record added)	Press "Info" button for more info

This indicates that:

*'the record was added (the 'Before Change' column is empty). The change applies to DIVISION ONE and indicates that during GUARD HOURS, FLOWERS\_A has access to the Extra Access Group No. 1. To obtain the Area List, press the "info" button'*

Pressing the **Info** button provides:

Original List	Items Added	Items Removed
	OUTSIDE	
	RECEPTION	
	STORES	

*The Items Added (Areas Added) were the OUTSIDE, RECEPTION and STORES, Areas.*

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**Notes:**

1. The two columns, Original List and Items Removed, are blank. This is because the extra access areas were added and not changed. A change would give an original list and if items were removed it would also list them.
  2. FLOWERS\_A may already have extra access in Extra Access 2. This record was not changed and so is not indicated here.
  3. Before deciding that the record is different always refer to the current record in Readykey for Windows.
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## Example Exceptions

This section is designed to illustrate and mention any exceptions to the general rules illustrated in the three examples in the previous sections.

### Exception 1 - Deleting Personnel Records With Extra Access

The extra access record is a sub-record of the personnel record.

Deleting a personnel record which had 2 extra access records attached would result in the following list of entries:

Date	Time	Operator	Update Type	Record ID
12/08/98	10:29:00	TARA NOLAN	Extra Access	No Data: Personnel Last Name Deleted : Extra Access 1
12/08/98	10:29:00	TARA NOLAN	Extra Access	No Data: Personnel Last Name Deleted : Extra Access 2
12/08/98	10:29:00	TARA NOLAN	Personnel	CHARLTON_R

To the trained eye this indicates the following:

*'The personnel record for CHARLTON\_R was deleted. It contained two extra access fields, extra access 1 and extra access 2.'*

The Extra Access records indicate 'No Data: Personnel Last Name Deleted' because the Last Name is deleted in the third entry and there is nothing to refer to.

### Exception 2 - Adding or Deleting an Operator

This exception is similar to the personnel record exception above because it is concerned with sub-records. In this case operator privilege records are sub-records of operators' records so changing an operator record produces a list of operator privilege records:

Date	Time	Operator	Update Type	Record ID
12/08/98	11:22:00	TARA NOLAN	Operators	KENNETH O'KEEFE
12/08/98	11:22:00	TARA NOLAN	Operator Privileges	No Data: Operator Deleted : ADMIN Privileges
12/08/98	11:22:00	TARA NOLAN	Operator Privileges	No Data: Operator Deleted : ALARM Privileges
12/08/9	11:22:00	TARA NOLAN	Operator Privileges	No Data: Operator Deleted : AUDIT TRAIL Privileges
12/08/98	11:22:00	TARA NOLAN	Operator Privileges	No Data: Operator Deleted : BACKUP Privileges
12/08/98	11:22:00	TARA NOLAN	Operator Privileges	No Data: Operator Deleted : INSTALLER Privileges
12/08/98	11:22:00	TARA NOLAN	Operator Privileges	No Data: Operator Deleted : LOGIN Privileges

The above indicates that:

*'the operator KENNETH O'KEEFE was deleted'*

### Exception 3 - Enabling/Disabling the System Holiday

The first time that the system holidays are enabled for a new division, 20 new holiday periods are added. These are sub-records of the system holiday record and are displayed in the list view.

However, it is not possible to delete the 20 records so subsequent enabling and disabling of system holidays are indicated in Audit Trail as a single line.

## Exception 4 - Deleting an Alarm Module

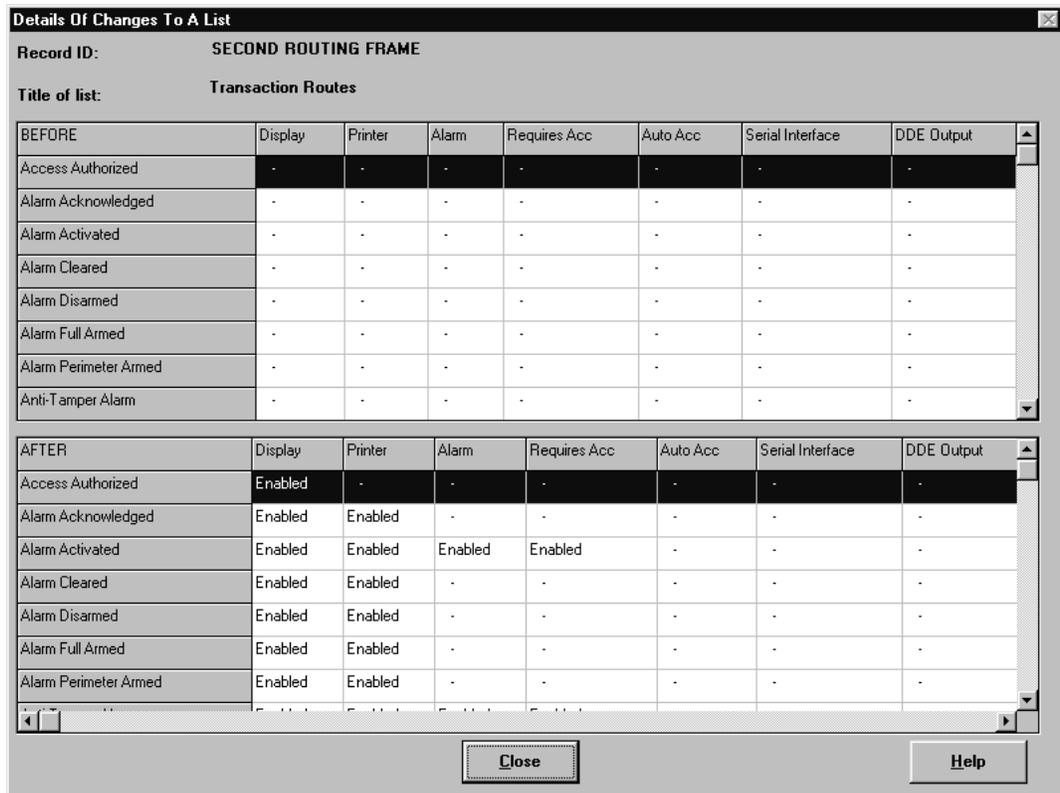
Alarm input records and Alarm output records are sub-records of Alarm Module records. Deleting an alarm module causes all the alarm input records (and alarm outputs if present) to be deleted first. These are displayed in the search results as between 8 and 16 lines of alarm inputs and outputs above the Alarm Module record.

## Exception 5 - Adding a Division

Adding a new division brings about a change to whichever operator added the division. The new division is automatically added to the list of divisions that that operator is allowed to view.

## Exception 6 - Transaction Routing Details Info

Transaction routing has an 'info' button on the details tab. Clicking on this provides a detailed list of all the transaction records before and after the change. These are displayed in a special format which gives the whole list before and after the change (see below). Use the scroll bars to view the desired section.



The screenshot shows a window titled "Details Of Changes To A List" with a record ID of "SECOND ROUTING FRAME" and a title of "Transaction Routes". It displays two tables: "BEFORE" and "AFTER".

BEFORE	Display	Printer	Alarm	Requires Acc	Auto Acc	Serial Interface	DDE Output
Access Authorized	-	-	-	-	-	-	-
Alarm Acknowledged	-	-	-	-	-	-	-
Alarm Activated	-	-	-	-	-	-	-
Alarm Cleared	-	-	-	-	-	-	-
Alarm Disarmed	-	-	-	-	-	-	-
Alarm Full Armed	-	-	-	-	-	-	-
Alarm Perimeter Armed	-	-	-	-	-	-	-
Anti-Tamper Alarm	-	-	-	-	-	-	-

AFTER	Display	Printer	Alarm	Requires Acc	Auto Acc	Serial Interface	DDE Output
Access Authorized	Enabled	-	-	-	-	-	-
Alarm Acknowledged	Enabled	Enabled	-	-	-	-	-
Alarm Activated	Enabled	Enabled	Enabled	Enabled	-	-	-
Alarm Cleared	Enabled	Enabled	-	-	-	-	-
Alarm Disarmed	Enabled	Enabled	-	-	-	-	-
Alarm Full Armed	Enabled	Enabled	-	-	-	-	-
Alarm Perimeter Armed	Enabled	Enabled	-	-	-	-	-

## Exception 7 - Update Types Which Are Omitted

Audit Trail does not track changes to graphics. You can add, change, or delete both Photo ID graphics and Alarm Graphics without the change being notified in Audit Trail.

## Exception 8 - The Alarm Input Description Field

The 'details' list of an alarm input record will contain several lines labeled Description. These are from the description field in the alarm input dialog, and should be appended to each other to give the original text entry.

## Appendix A - Update Types

A complete list of update types is shown in the table below. The second column indicates which Update Types have associated files (sub-records). The third column is a quick indication of where the update was made. For example **Admin, Global** indicates the Admin Application under the Global icon.

<b>Update Type</b>	<b>Sub-records</b>	<b>Where to find it . . .</b>
Access Groups		<b>Admin, Access Groups</b>
Alarm Inputs		<b>Installer, Alarm Modules, Inputs</b> <i>or adding/deleting an alarm module</i>
Alarm Modules	Alarm Inputs, Alarm Outputs	<b>Installer, Alarm Modules</b>
Alarm Outputs		<b>Installer, Alarm Modules, Outputs</b> <i>or adding/deleting an alarm module</i>
Areas		<b>Installer, Areas</b>
CNCs		<b>Installer, Masters and Installer Sites</b>
Departments		<b>Admin, Departments</b>
Div. Access Groups		<b>Admin, DAGs</b>
Divisions		<b>Installer, Divisions</b>
Door Controllers		<b>Installer, Controllers</b>
Doors		<b>Installer, Doors</b>
Extra Access		<b>Personnel, Show Info/Access, Extra Access,</b> <i>or deleting a person</i>
Global		<b>Installer, Global</b> <i>or Admin, Global</i>
Operator Privileges		<b>Admin, Operators, Privileges</b> <i>or adding/deleting an operator</i>
Operators	Operator Privileges	<b>Admin, Operators</b>
Personnel	Extra Access	<b>Personnel</b>
Sites		<b>Installer, Sites</b>
System Holiday Time Periods		<b>Admin, Holiday</b> (Date boxes)
System Holidays	System Holiday Time Periods	<b>Admin, Holiday</b>
Time Periods		<b>Admin, Time Profiles, Time Periods</b>
Time Profiles	Time Periods	<b>Admin, Time Profiles</b>
Transaction Routing		<b>Admin, Trans Routing</b>
Workgroups		<b>Admin, Work Groups</b>
Workstations		<b>Installer, Workstations</b>

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In the Audit Trail application, to search for a specific update type select it on the **Search Criteria** tab in the **Update Type** list box.

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**Note:** If you select anything other than **All Update Types** make sure that you also check all the sub-records to ensure that you get all the updates.

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