

# ISS 45



*IQL Technical Reference*

*Version 7.7*

## ISS45 7.7 IQL (Query Language) Technical Reference

<b>Date of Issue</b>	<b>Product Identification Number</b>	<b>Part Number</b>	<b>Brief Description</b>
January 1995	45001/008	80303902	Version 7.0
November 1996	45001/008	80328028	Version 7.3
February 1999	45001/008	Electronic Library 80602986	Version 7.6
August 2000	45001/008	89000055	Version 7.7 (Unchanged)

**Copyright® International Computers Limited 1995-2000  
All rights reserved.**

This publication is protected by federal copyright law into any human or computer language in any form or by any means, electronic, mechanical, magnetic, manual. No part of this publication may be copied or distributed, stored in a retrieval system, or translated or otherwise, or disclosed to third parties without the express written permission of ICL Retail Systems.

ICL Retail Systems makes no representation or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose. ICL Retail Systems further reserves the right to revise this publication and to make changes from time to time in the contents hereof without obligation of ICL Retail Systems to notify any person or organization of such revision or changes.

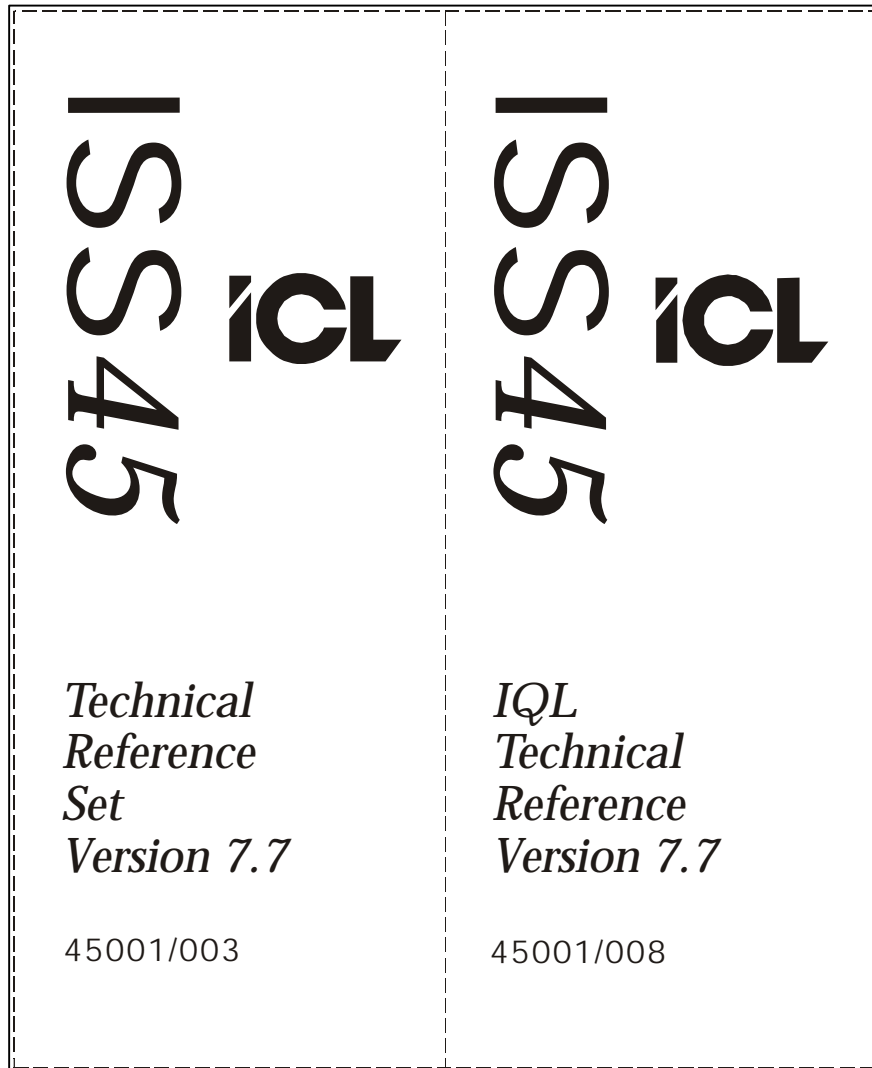
ICL Retail Systems has prepared this manual for use by users, authorized third parties and personnel of ICL Retail Systems as a guide to the proper installation, operation, customization and/or maintenance of ICL Retail Systems equipment and software. The drawings and specifications contained herein are the property of ICL Retail Systems.

Address comments and corrections to:

ICL Retail Systems  
ISS45 Program Director  
2933 Bunker Hill Lane  
Suite 101  
Santa Clara, CA 95054

This documentation is designed for placement in an ICL binder that can be ordered separately. To order the binder, contact your sales representative. Indicate PIN 45007/002 and/or part number 80192817.

This sheet contains spine cards that can be used to identify the binder for the appropriate documentation. Cut one of the cards along the dotted lines and insert it in the binder's spine pocket. Discard the remaining cards or save them for later use.



---

# ***Table of Contents***

<b>About this Manual</b> .....	<b>4</b>
<b>Typographic Conventions</b> .....	<b>4</b>
<b>Navigating</b> .....	<b>5</b>
<b>Starting IQL</b> .....	<b>6</b>
<b>Building a Line Query</b> .....	<b>8</b>
Query Types .....	9
Select Fields for Query .....	12
Copy (fields).....	12
Delete (fields).....	13
Customize a Query .....	13
Update Field .....	13
Total Type.....	16
Locate.....	17
Header.....	17
Query General .....	18
Fields .....	21
Other DD .....	21
Save the Query .....	21
<b>Building a Full Page Query</b> .....	<b>22</b>
<b>Emulating a Query (viewing and testing)</b> .....	<b>22</b>
Print a Query .....	25
<b>Modifying a Query</b> .....	<b>27</b>

<b>Deleting a Query .....</b>	<b>29</b>
<b>Copying a Query .....</b>	<b>29</b>
<b>Executing Queries - from Menus or DOS.....</b>	<b>30</b>
Syntax.....	31

# Introduction

## What is IQL, and who uses it?

**IQL** (IPM Query Language), is a query-building tool based on IPM. It allows you to build queries without the need to write code. IQL is a graphical menu-driven application. As long as IQL has access to the *Data Dictionary* (QDX) files, you can create queries. People with minimal or even no knowledge of programming, can quickly and easily build customized queries.

## What is a query?

A query is a question, designed to extract specific information from the chosen database. By building your own queries, you have the flexibility to choose which data to include or exclude, and how to present it. For example, you may want to see only a selected range of items from a PLU file, or cashier shortages for the year.

## Why use a query?

Queries give a specific view of your data. You needn't print a full report when you only want to see a small section of data. Reports do not always have the combination of data that you would like to see - with IQL, you have the power to select the type of data you want, and how to display it.

## About this Manual

The IQL User's Guide / Reference provides all the information you need to build and maintain a useful collection of queries.

This manual is written with the assumption that:

- You have little or no programming knowledge
- You understand basic DOS concepts
- You are familiar with GUI terms such as select, highlight, window, dialog box, confirmation box, drop-down list, item selection, and check box.

The manual is divided into sections showing you how to build, modify and print your queries, with descriptions of all the options.

## Typographic Conventions

The following typographic conventions are used to help you distinguish between the different types of information:

➤ (Arrow head)	Indicates the start of a procedure.
Initial Caps	Denotes options and field names.
<b>Bold type</b>	Indicates characters you should type exactly as printed.
<i>Italic type</i>	Indicates specialized terms.
<i>Keycap</i>	Marks function and keyboard keys you should press, and on-screen function buttons you should select.
Courier	Represents a message issued by the system.

### Note

Notes give additional information on the subject at hand, such as exceptions to a general rule, and point out helpful tips and suggestions.

## Navigating

How to move around the screen between windows, push buttons, options, etc.

### With the keyboard

To	Press
Move between options, push buttons	<i>Tab / Back Tab</i>
Scroll left or right, and up or down	<i>← or → and ↑ or ↓</i>
Go to top (first line)	<i>Home or Page Up</i>
Go to bottom (last line)	<i>End or Page Down</i>
Toggle overwrite/insert	<i>Insert</i>
Select an option	<i>Enter</i>
Cancel / Exit	<i>Esc</i>

### Short-cut keys

All push buttons have a short-cut letter defined. To activate a push button, hold down the *Alt* key and press the letter highlighted on the button.

For example: *Alt+D* to Delete.

### Using the mouse

Most choices and actions can be performed with the mouse. Use the mouse to choose items and make selections, click on push buttons, and move between windows.

## Starting IQL

IPM should be running before you can start IQL. If not, load IPM and then follow the procedures below.

➤ **To start IQL**

- 1 Use the mouse to select IPM Query utility from the Tools menu in IPM, or press Q.



The IPM Query Manager initial screen displays.



- 2 Use one of the following commands:

- Alt+Q and then Enter, OR;
- F1

- Click on the upper left corner of the screen, then select *Queries*.

**Note**

When you receive a new version of PCMMENU, select *Tools* to load data from the system file to the userfile.

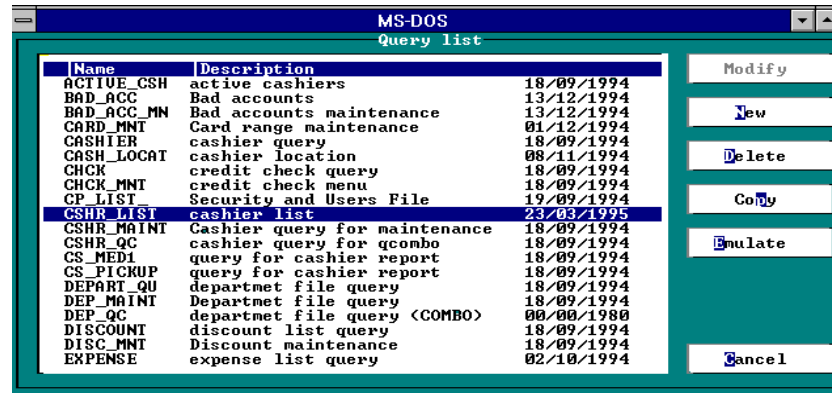
**➤ To exit IQL**

- 1 Select the *Exit* option from the menu, OR
- 2 Press *Alt+X*.

The Query List screen displays. See below.

## Building a Line Query

Existing queries are listed in alphabetical order. Note the push buttons on the right side of the list. Use them to perform the required functions.



Functions available here:

Select	To
Modify	Modify an existing query.
New	Build a new query.
Delete	Delete an existing query.
Copy	Copy an existing query.
Emulate	Run the selected query.
Cancel	Return to the initial Query Manager screen.

## Query Types

There are two types of query:

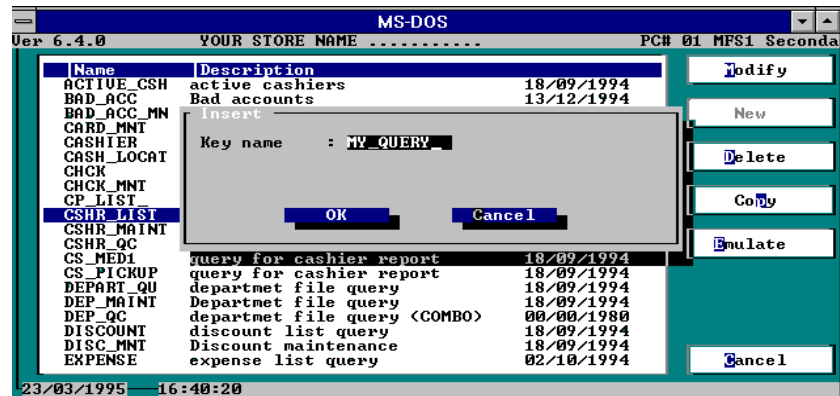
- **Line Query** This type lets you build a 'report' style query, with title, column headings and field totals. You can display many lines (records) on a page.
- **Full Page Query** Using this type, you build a query that allows you to see each record's data on a separate screen, with headers in the left margin. There is one field displayed per line, (up to 20). You are able to page through the results of the query, seeing one record's data at a time.

Both query types are built in the same way. The only difference is in their presentation format.

### ➤ **To build a Line Query**

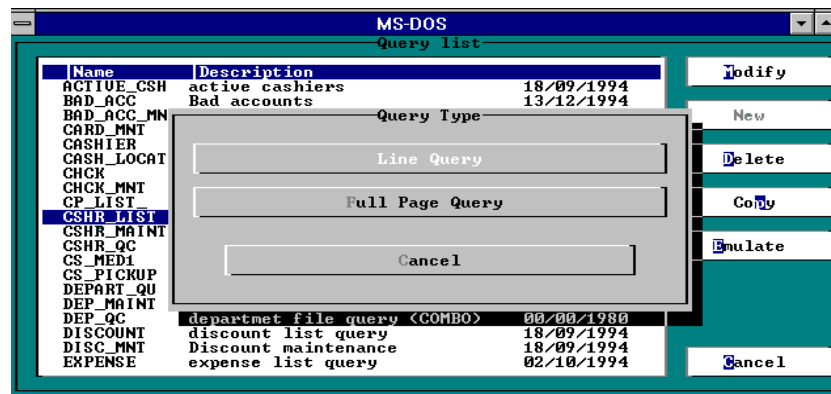
- 1 Decide on the type of query you want to build. For details on building Full Page Queries, see 'Building a Full Page Query' further on in this reference.
- 2 Select New (*Alt+N*).

The following window displays, with a prompt asking for the query (key) name.

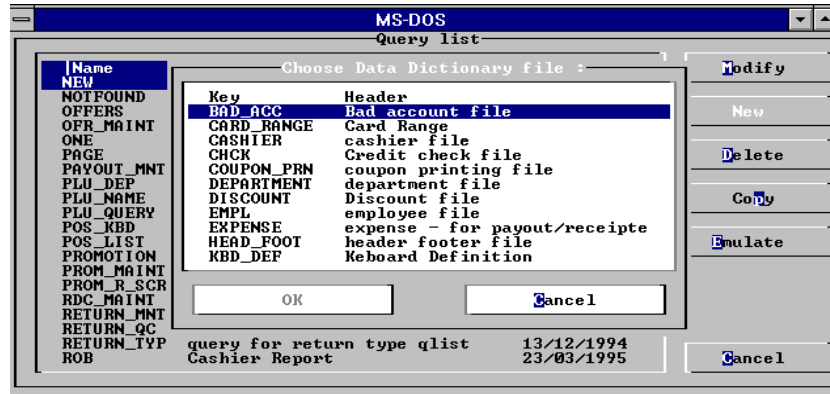


- 3 Type in the new query name, for example: **MY\_QUERY**, and select **OK**.

The Query Type screen displays.



- 4 Select *Line Query*. The system prompts you to choose a Data Dictionary file.
- 5 Select the file from which you want to query.

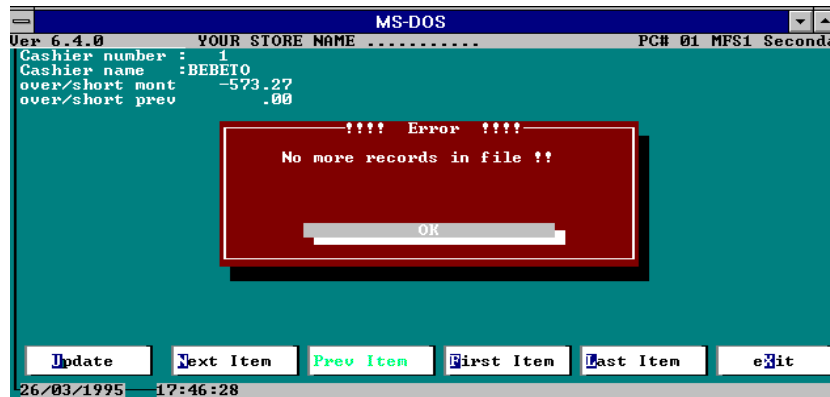


- 6 Scroll up or down the list, choose the required Data Dictionary file and select **OK**.

#### Note

To speed up your search, type in the first few letters of the file name. The selector bar either highlights the file, or displays the closest file matching your request.

The Select Fields for QUERY screen displays.



## Select Fields for Query

At this point you are ready to add fields from the All Fields list, to build your query.

Remember that you have the flexibility to change the content, look and attributes of the query at any time. You don't have to build your queries in the same sequence as described in this reference.

The use of the various functions are discussed below, and in *Customize a Query*.

The functions are:

- Copy (fields)
- Delete (fields)
- Update Field
- Total Type
- Locate
- Header
- Query General
- Fields (calculated)
- Emulate
- Other DD

### Copy (fields)

#### ➤ To copy a field

- 1 Choose one field at a time, preferably in the order you want them to appear on your query. You can change (locate), the sequence of fields later if you need to.
- 2 Select the *Copy* button to copy the chosen field to the Query Fields window. Copy the required fields to make up a query.

Notice that as you copy a field, it appears in the Header/Fields preview window, with a relevant heading.

### Delete (fields)

#### ➤ To delete a field

- 1 If you copied any fields by mistake, move to the Query Fields window, (use the mouse or *Back Tab*).
- 2 Choose a field to delete and select the *Delete* push button. You must delete headings manually, as they are purely text strings.

### Customize a Query

This section deals with the various choices you have in building your queries, and how they look. You will soon see how flexible IQL is, and how easy it is for you to produce results.

#### Update Field

You may want to change some attributes of a field. For example: display size, decimal position,

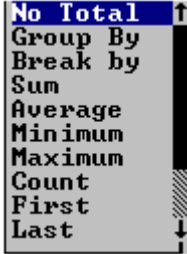
#### ➤ To update a field

- 1 Select the field to update and press *Update Field*. The Query Field update screen displays.



- 2 Select the field attribute(s) you want to edit, one at a time. Refer to the table below for details of each field attribute, or option.
- 3 Do one or more of the following:

To change any of these settings, use *Tab* or the mouse to navigate, and check or uncheck options with the *Space Bar*.

<b>To</b>	<b>Do this</b>
Specify a Criteria	Type in a range to query, such as 100-200.
Change the number of decimal places	Enter the number required.
Change the width of a field	Type in the new value. Note that the default is already displayed.
Enable different types of total for a column of data	Select Field TOTAL type. Choose from the drop-down list. 
Enable fast acquisition of a record (instead of scrolling)	The options here are the same as those accessed by the Sum type push button.
Allow a user to edit data in the original file. (Use with care!)	Check Main field. Example: This lets you type in the first one or two characters of an item to find the closest match. Uncheck No edit. The default is checked for no edit allowed. This feature is enabled only if you check Edit mode allowed [✓] in Query General. See below.
Hide a field	Check this option. The field is still processed, but not displayed.

<b>To</b>	<b>Do this</b>
Insert a divider line between fields	Check 'Add 'l' after field data' Checked is the default.
Prompt a user to insert a range (of data to display), when emulating	Check Prompt with RANGE selection on display. The range allowed is dependent on the range specified in Criteria.

4 Select *OK* when ready to accept your changes.

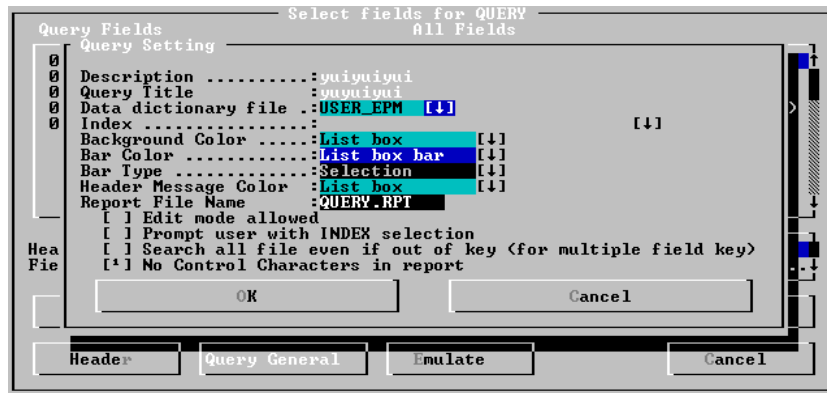
## Total Type

This option lets you add different types of totals to a report, like Sum, Average, Count, No Total and so on. You can use the 'Break by' total type, for example, to create a report showing each department's totals, followed by the total of all departments. The 'Group by' total type lets you create a report with one row per department. The options here are the same as those accessed via the *Update Field* push button.

### ➤ To select a total type

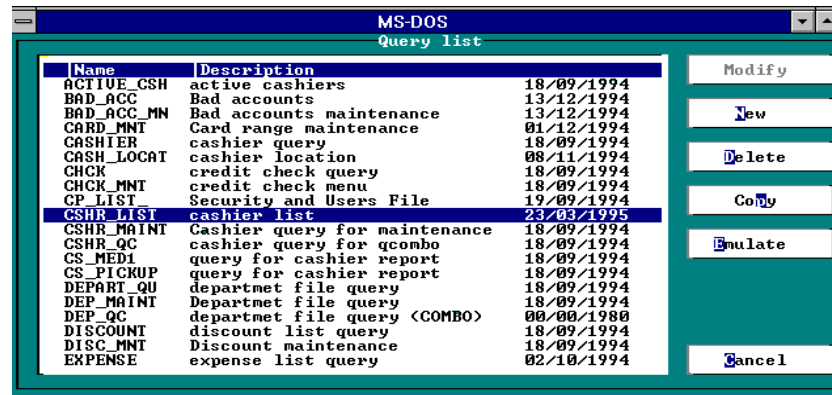
- 1 Select fields (one at a time). A drop-down list displays the choices. With numeric fields, they will be printed in reports, but won't display on the screen.

To open the drop-down list, press the → key. To close the list, press the ← key.



## Locate

If any of the fields you selected are not in the location you want, select the *Locate* button to move them. Don't forget that you have to also edit headers!



### ➤ To locate a field

- 1 Select *Locate* - the first field in the line blinks.
- 2 You can perform the following where necessary:

To	Do this
Move a field left or right	Use the ← or → keys.
Anchor a field	Press <i>Enter</i> .
Select another field to locate	Press <i>Tab/Back Tab</i> until the required field blinks.

- 3 Press *Esc* when you are finished locating fields.

## Header

### ➤ To edit a header

- 1 Select the *Header* function to begin editing the header titles or positions. The cursor blinks under the first character of the first header.
- 2 Begin editing, using the following controls:

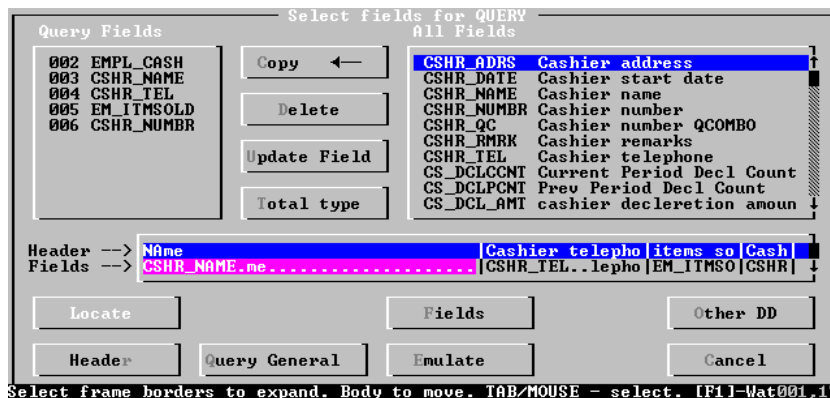
To	Do this
Scroll the cursor left or right	Use the ← or → keys.
Toggle between insert mode and overwrite mode	Use the keyboard's <i>Insert</i> key.

3 Press *Enter* or *Esc* when you have made all your changes.

### Query General

➤ To set query attributes

1 Select this function to apply or change global attributes to your query. This is where you alter the look and style of the report, add a title, etc.



2 You can do one or more of the following:

<b>To</b>	<b>Do this</b>
Add (or change) a description of your query	Type in a description at the Description entry.
Have a title display at the top of your query	Type in an appropriate title at the Query Title entry
Define an index	Open the drop-down list and select an index, (where available).
Choose a background color	Open the list and choose from the selection.
Choose a Bar color	Open the list and choose from the selection.
Choose a Selector bar type	Open the list and choose a type: <ul data-bbox="898 873 1179 1039" style="list-style-type: none"><li>• Selection (<i>highlight</i>)</li><li>• Left arrow</li><li>• Right arrow</li><li>• Double arrow</li></ul>
Define a color scheme for the headers	Open the list and choose from the selection.
Report File Name	(Optional) Specify a file name, with the extension RPT. You can access this report later, or call it from a menu.
Let a user edit data in the original files. (This can be useful as well as dangerous!)	Check the Edit mode allowed box [✓]. Unchecked is the default. This is a global setting, only enabling editing of data if individual fields have 'No edit' unchecked.
Give a user choice of index methods Search all fields even if they are not indexed	Check the box [✓]. Check 'Search all file even if out of key'.

**To**

Remove control characters from report

**Do this**

Use this option if you want to create a raw ASCII file, when you don't need to use various print attributes; for example: condensed, bold.

**Note**

To see the options available in a list box, click on its arrow. The list drops down. OR, use the **↑** and **↓** keys while on a selection. Each time the arrow keys are pressed, another option displays. To open a list box with the keyboard, press **→**, and to close the list, press **←**.

- 3 Select *OK* when ready to accept your changes.

## Fields

Select this function to create formulas between fields. You can define various expressions and conditions.

Use the given options to setup the decimal point position, leading zero and numeric format. Build expressions with standard C-type conditions.

## Other DD

Select this function to build queries from linked fields and perform queries on files and fields from two different data dictionaries. This function displays a screen where you can choose the required data dictionary files.

Name	Description	
MY_QUERY		24/03/1995
NOTFOUND	PLU not found	24/03/1995
OFFERS	offers query	18/09/1994
OFR_MAINT	OFFER maintenance	18/09/1994
ONE		23/03/1995
PAGE	testing	23/03/1995
PAYOUT_MNT	PAYOUT maintenance	02/10/1994
PLU_DEP	PLU by dept	27/11/1994
PLU_NAME	PLU by name	27/11/1994
PLU_QUERY	PLU	12/12/1994
POS_KBD	Pos Keyboard Link	19/09/1994
POS_LIST	Pos List	23/03/1995
PROMOTION	promotion file query	18/09/1994
PROM_MAINT	promotion maintenance	18/09/1994
PROM_R_SCR	PROMOTION report	10/10/1994
RDC_MAINT	reduction maintenance	18/09/1994
RETURN_MNT	Return types maintenance	18/09/1994
RETURN_QC	query for return type qlist <C	18/09/1994
RETURN_TYP	query for return type qlist	13/12/1994
ROB	Cashier Report	26/03/1995

## Save the Query

Your queries are saved automatically with the name you typed in at the start. Any changes you make to your query are saved whenever you exit the program.

If you want to save a copy of your query with a different name, use the copy command from the Query List screen. See 'Copying a Query' further on in this reference.

## Building a Full Page Query

### ➤ To build a Full Page query

For this example, you are going to build a Full Page Query.

Perform the following steps:

- 1 From the Query List screen, select *New (Alt+N)*.
- 2 Type in a query name when prompted.
- 3 Select the *Full Page Query* option.

- 4 Choose a Data Dictionary file to query.
- 5 Build the Query in the same way as you do for a Line Query.
- 6 Select *Emulate* when you are ready to see the query result. (See next page.)

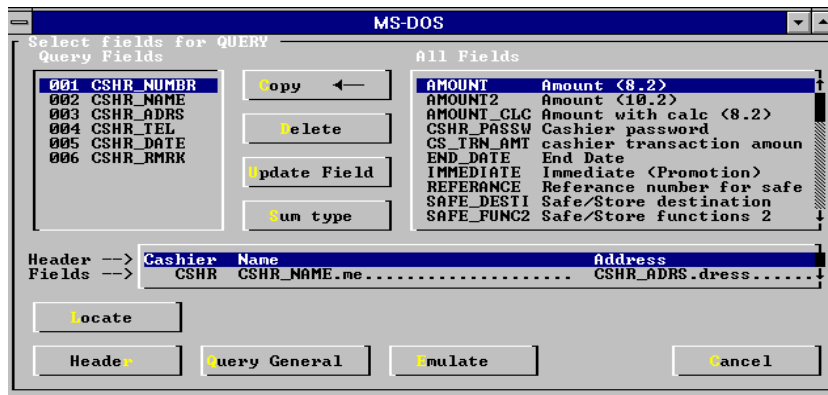
## Emulating a Query (viewing and testing)

Use the *Emulate* push button while building your query. Use it as many times as you like, until your query looks and performs the way you want it. You can also activate Emulation from the Query list screen. Printing is one of the emulation options.

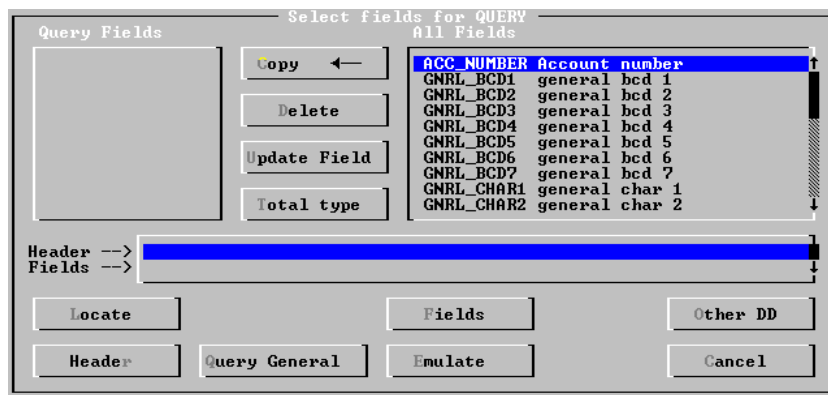
➤ **To emulate a query**

To see the results of your query do the following:

- 1 Select the *Emulate* function. The query displays with the format you have chosen.



- 2 Of course, you can modify the query content and its format as many times as you like.
  - If you checked 'Prompt with RANGE selection on display' in the Update field option, you are prompted to type in the range. For example: The range of Cashier or PLU numbers you want to view. See next page.



To navigate and view your query, use these controls:

<b>To</b>	<b>Press or select</b>
Go to the first line (record)	<i>Home</i>
Go to the last line (record)	<i>End</i>
Go to the first line (record)	<i>Page Up</i>
Go to the last line (record)	<i>Page Down</i>
Scroll to the left	←
Scroll to the right	→
Select the Print or Cancel push buttons	<i>Tab/Back Tab</i> or use the mouse.
Return to the previous screen	<i>Esc</i>
Print the query	Print push button
To the printer, OR	
To file (screen display)	
Return to the previous screen	Cancel push button

If you have built a Full Page query, the display looks similar to this:



The first record in the file is displayed. Use the push buttons at the bottom of the screen to display other records.

<b>To</b>	<b>Select</b>
Change a field's data. (Only if Edit allowed has been enabled.)	Update
Use this option with great care!	
Display the next record	Next Item
Display the previous record	Prev Item
Display the First record in the file	First Item
Display the Last item in the file	Last Item
Return to the previous screen	Exit

If you are displaying the last record (item), and select *Next Item*, an error is displayed. The same error displays if you are at the beginning of the file and select *Prev Item*.



No.	Cashier name	Start Date	Cashier remarks	Over/Short
1	BEBETO	04/01/1995	Excellent personality	-573.27
2	NILI	15/01/1992	Mornings only	.00
3	"FINGERS"	17/02/1995	Watch this one!	.00
100	ROBERTO	01/01/1995	No prior experience	.00

To clear an error, select *OK* or press either *Enter* or *Esc*.

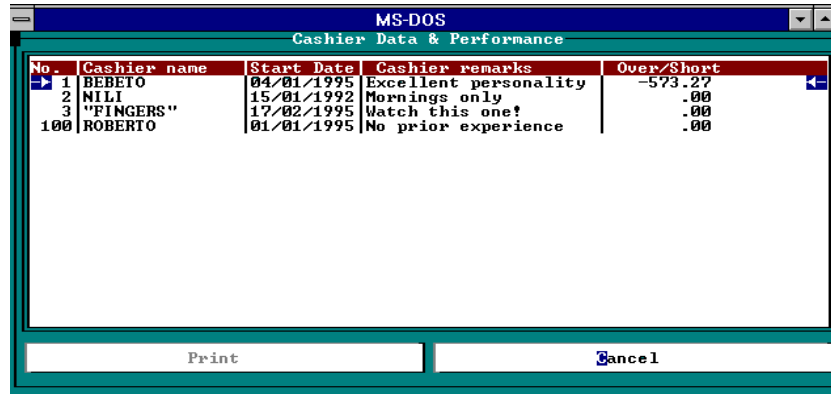
## Print a Query

There are two print options, which you see when you emulate your query. One option is to send the query to the printer, and the second is to send it to a file. The file is displayed on screen in 'report' format.

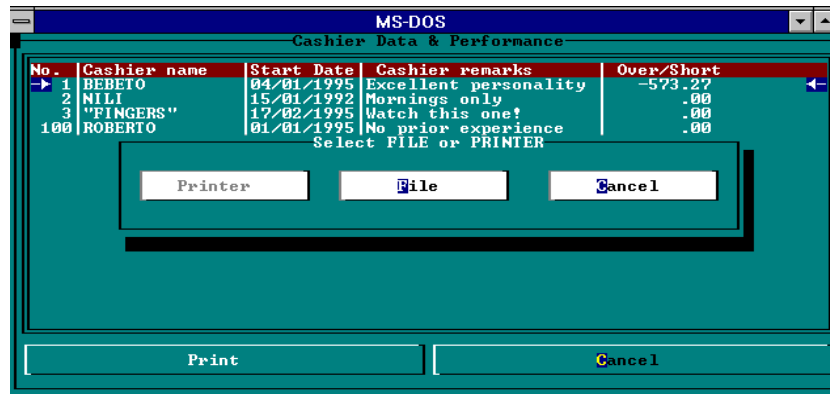
You can only print Line Queries - Full Page Queries are displayed.

### ➤ To print a query

- 1 Select *Emulate*. The display gives you the choice to Print or Cancel.



2 Select *Print*. You now have 2 printing choices: *Printer* or *File*.



3 Choose one of the following:

To	Select
Send the query to the default printer	Printer
Display a formatted query on the screen which you can scroll.	File

MS-DOS  
Ver 6.4.0 YOUR STORE NAME ..... PC# 01 MFS1 Seconda  
26/03/1995 15:22 P↑

←E Cashier Data & Performance←F

No.	Cashier name	Start Date	Cashier remarks	Over/Short
1	BEBETO	04/01/1995	Excellent personality	-573.27
2	NILI	15/01/1992	Mornings only	.00
3	"FINGERS"	17/02/1995	Watch this one!	.00
100	ROBERTO	01/01/1995	No prior experience	.00
				-573.27

OK Print

26/03/1995 15:22:41

From this screen you again have a choice to send the query to the printer, by selecting *Print*. To return to the previous screen, select *OK*.

## Modifying a Query

Modifying is the same as building a query from the beginning, except that fields have already been chosen and the report format set up.

You can add new fields, delete current fields, change field attributes (update field) and edit headers and field locations.

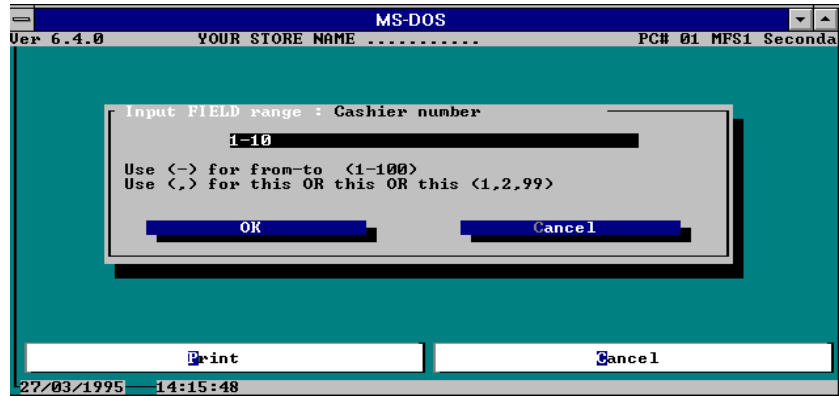
If you want to build a new (but similar) query, use the *Copy* command from the Query List screen, and then make your changes to the copy. See 'Copying a query' later in this reference.

### ➤ To modify an existing query

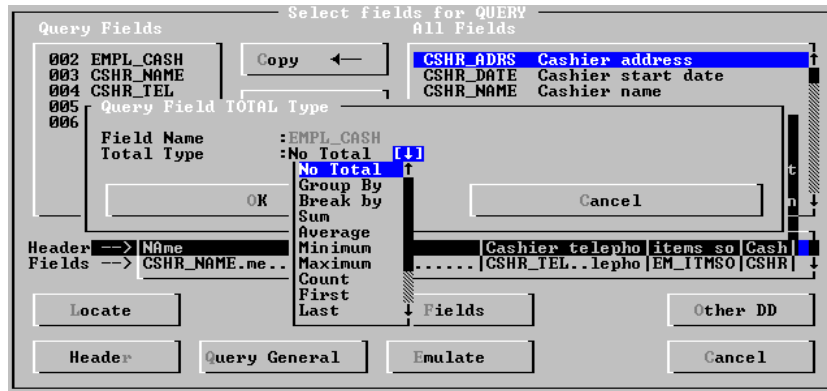
- 1 Scroll through the list until the required query is highlighted
- 2 Select *Modify*. (*Modify* is the default).

#### Note

To speed up your search, type in the first few letters of the query name. The selector bar either highlights the query, or displays the closest query matching your request.



The Select Fields for Query screen displays. Now you can modify the query using all the available options.



**Note**

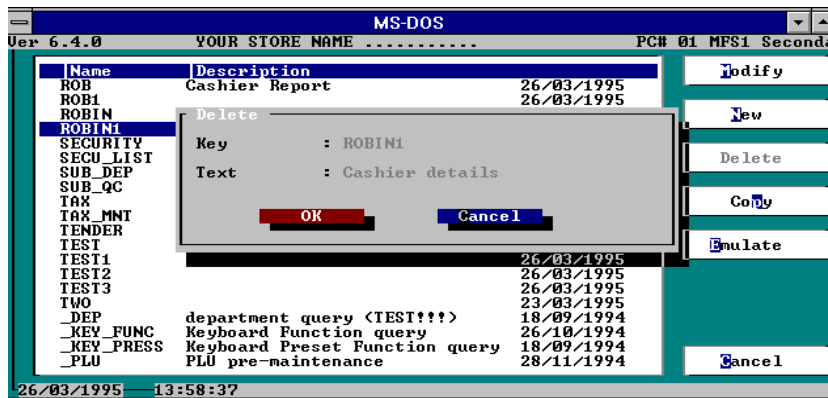
You cannot change the Data Dictionary file when modifying. If you want to query another Data Dictionary file, build a new query.

## Deleting a Query

It's a good idea to delete old (unused) queries and those that you built while familiarizing yourself with this program. Use this option only if you are sure you want to delete queries. Once deleted, they cannot be recovered.

### ➤ To delete a query

- 1 Choose the required query from the Query List screen.
- 2 Select *Delete*. A window displays, giving you a chance to confirm the deletion.

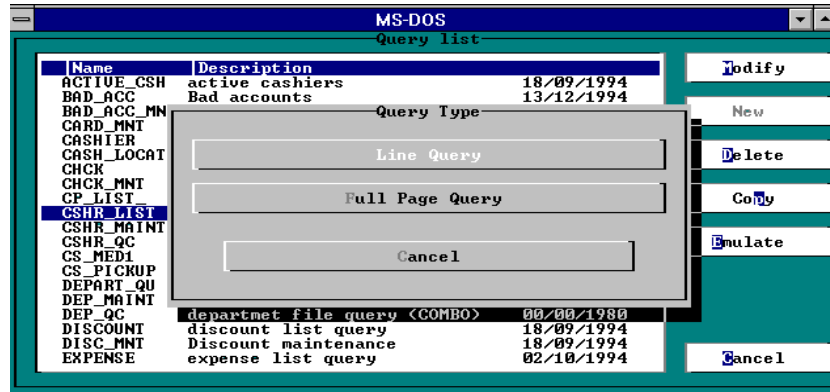


- 3 If you don't want to delete the query, select *Cancel*, or if you're sure you want to delete, select *OK*.

## Copying a Query

### ➤ To copy a query

- 1 If you want to build a new (but similar to an existing) query, use the *Copy* command from the Query List screen. A window displays, showing the Source name and the Target name (the same).
- 2 Type in another name for Target name and select *OK*.



- If you want to modify the copy, choose the newly-named query from the list and select *Modify*.

#### Note

You cannot change the Data Dictionary file when modifying. If you want to query another Data Dictionary file, build a new query.

## Executing Queries - from Menus or DOS

Once you've defined queries, you will want to run them either from a menu, or from the DOS prompt.

If you want to run queries from a menu, you must specify the query name (and optional switches) in the IPM Edit Line screen.

To see the available switches, type **PPMQUERY /?** at the DOS prompt.

Here are the main options:

<b>Switch</b>	<b>Use</b>
/p	Sends the query result to the printer.
/pf	Sends the query result to a file name specified in the query.
/m	Returns to Eurmenu.
/c	Chains to the specified program.

### **Syntax**

**PPMQUERY xxxxxxxxxxx /yyyyyy**

where:

**xxxxxxxxxx** = query name, and

**yyyyyy** = command



© **International Computers Limited 1995-2000**

ICL Retail Systems Inc. endeavors to ensure that the information in this document is correct and fairly stated but does not accept liability for any error or omission.

The development of ICL Retail Systems products and services is continuous and published information may not be up to date. It is important to check the current position with ICL Retail Systems. This document is not part of a contract or license save insofar as may be expressly agreed.

---

**ICL Retail Systems**  
**2933 Bunker Hill Lane, #101**  
**Santa Clara, CA 95054**

**P/N 89000055**  
**PIN 45001/008**