



# **Dynamic POS Lookup**

## **Quick Guide**

### **LS Retail NAV 6.1**

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# 1 Introduction

## 1.1 The Purpose of this document

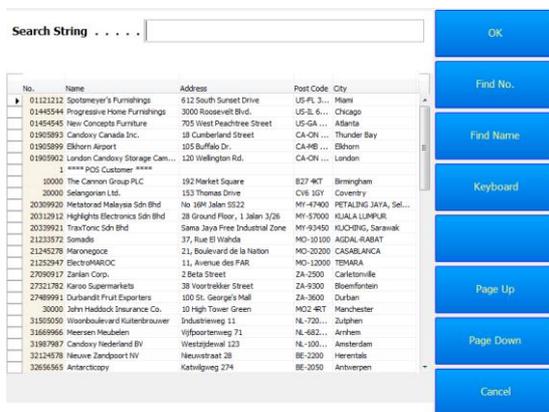
The purpose of this document is to give a quick overview of the new function, Dynamic POS Lookup. It is intended for technical users to set up and configure the function and for consultants to learn how to use it.

## 1.2 Overview

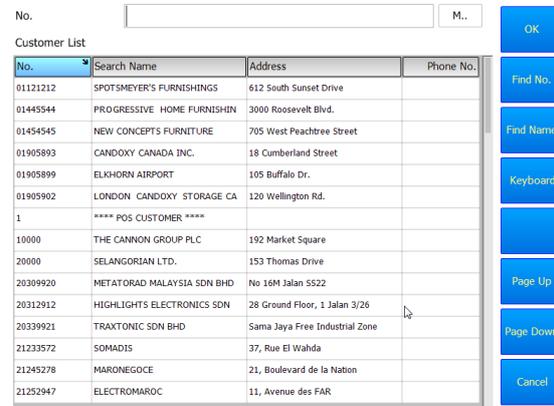
The Dynamic Lookup on POS feature in LS Retail NAV is a new Lookup form (EPOS Lookup) which contains a subform (POS Menu Grid) that is used to present tabular data to the user for any kind of selection. The new Lookup presents data with Menu Buttons instead of the standard table box control of the Dynamics NAV client. It is based on RecordRef and FieldRef variables and therefore can present data from any table. It also offers a different/new way of searching, filtering and selecting data from the table.

The pictures below show the difference in user interface.

Old Style Lookup



New Dynamic Lookup



All setup for the POS Lookup will be done from the Lookup List. (Click on **LS Retail – POS, Setup, Functionality, Lookup List.**) From the setup it is easy to modify the layout and functionality of the POS Lookup, change a field/column, remove or add a column to a table and so on. This can now be done from the Lookup List instead of (as before) having to modify objects/code.

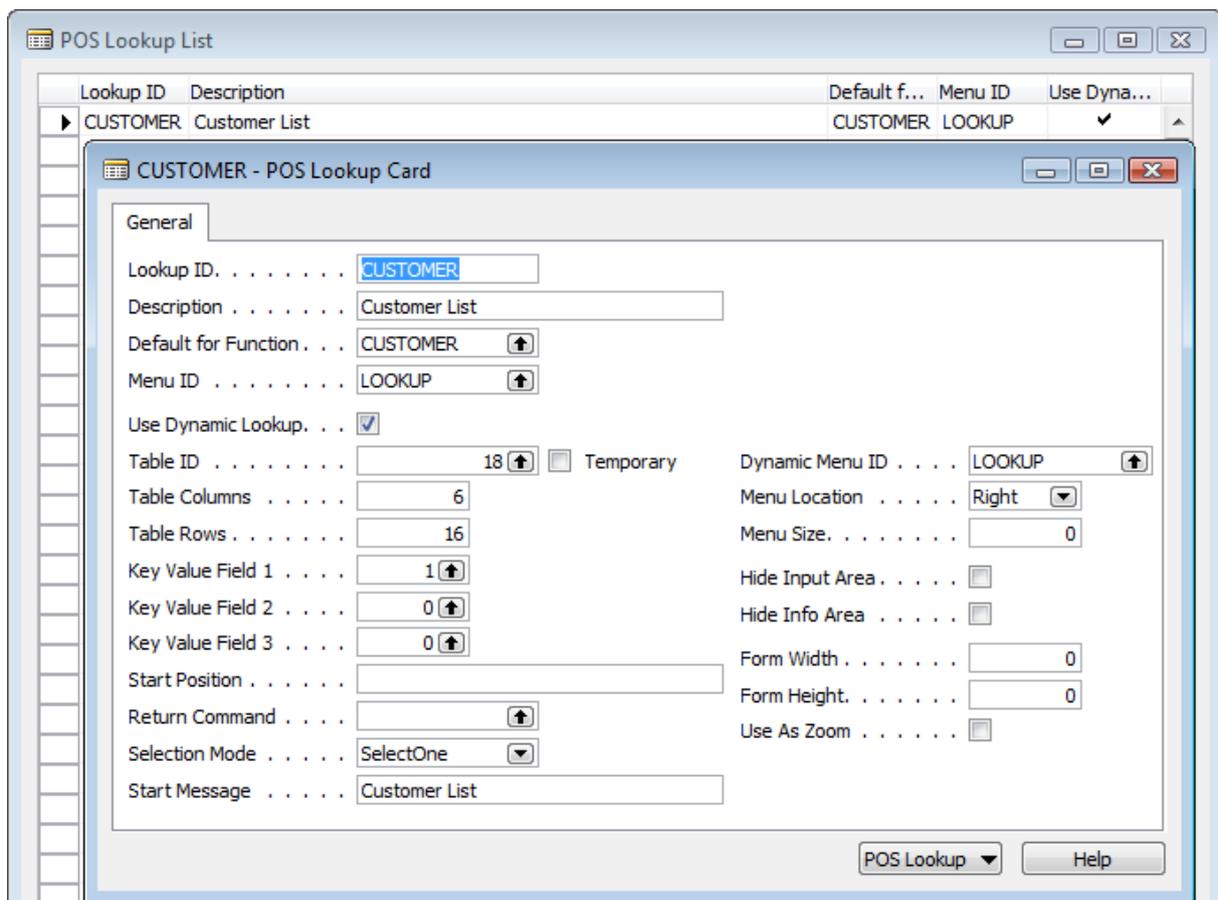
It is now also easy to create a new POS Lookup based on a table that is not in the standard POS Lookup List. So this feature could prove valuable to developers that want to extend the functionality of LS Retail.

### 1.3 Functional Overview

The new Dynamic POS Lookup will not only be dynamic and configurable from the Backoffice but will also have an improved architecture and User Interface

All setup for the POS Lookup will be done from **LS Retail – POS, Setup, Functionality, Lookup List**. The Demo Company released with LS Retail NAV 6.1 will contain the setup for the new Dynamic Lookup. There are some new features in LS Retail NAV 6.1 that use the new Dynamic Lookup and are not available in the Old Style POS Lookup. Also there are some Old Style features (mainly Variant Lookup and Tender Declaration Lookup) that are not configured to use the new Dynamic Lookup.

The setup is done in the Lookup List setup. Click on **LS Retail – POS, Setup, Functionality, Lookup List**. The new Use Dynamic Lookup field in the list indicates that the POS should use the Dynamic Lookup for this type of POS Lookup. A new Card Form can be accessed from this List. The Card form contains more specific data for the Dynamic POS Lookup.



If the Use Dynamic Lookup field is check marked, the fields below are enabled for the user to specify which table the Lookup should use, how many rows and columns the table should contain and so on. These fields are explained in detail in chapter 2.

The Table Columns fields indicate how many columns the Lookup table should have. To configure which columns to show, the POS Lookup Columns list must be used (from the POS Lookup menu button).

Column No.	Field No.	Field Name	Column Caption	Caption...	Formatting	Key No.	Fixed Filter	Col...	De...	Default ...	Special Fi...
1	1	No.		Left	None	1		0	✓	Ascending	FindByNu...
2	3	Search Name		Left	None	2		2		Ascending	FindByNa...
4	5	Address		Left	None	14		2		Ascending	
6	9	Phone No.		Right	None	11		0		Ascending	

In this list, the user connects fields from table to columns in the grid. Caption alignment, formatting, filtering, sorting and so on is then configured for each column. If a key is selected for the column it will become sortable and searchable in the Lookup.

These new fields are explained in chapter 2.

- **FILTER** is new POS Command that is added in this version of LS Retail NAV. It can be used in the new Dynamic Lookup form and will filter the selected column with the text in the input box.
- **RESET** is another new POS Command that is added in this version. It can be used in the new Dynamic Lookup Form and will reset the form (remove filters and select the default column with default sorting and so on).

On the POS, the new Dynamic Lookup Form looks different from the Old Style lookup and behaves a little different too.

- The Input label now shows the field/column name you are working with (find, filter).
- The columns can be selected and sorted by pressing the column headers.
- The selected column header becomes highlighted and a little arrow glyph shows the sorting order.

No.	Search Name	Address	Phone No.
CP-CONS-TEMPL			
CP-CUST-TEMPL			
1	**** POS CUSTOMER ****		
44180220	AFRIFIELD CORPORATION	100 Maidstone Ave.	

At the end of the input box there is a little button that can be pressed to change the find method.

- M.. : Beginning of field
- ..M.. : Any part of field
- M : Whole field.

## 2 New and Changed Objects

### 2.1 New Objects

#### 2.1.1 Tables

##### 2.1.1.1 Table 99001565 POS Lookup Columns

This table is used to define the columns in a POS Lookup: Which fields are shown in which column, whether the field has a key associated with it and therefore is sortable and searchable. How data in the field should be formatted etc.

Field No.	Name	Description
1	Lookup ID	This field contains the Lookup ID from the POS Lookup table that this POS Lookup Column belongs to.
2	Table No.	This field contains the Table No. from the POS Lookup table that this POS Lookup Column belongs to.
3	Column No.	This field contains the number of the Column in the grid. 1 being the first column (from left) and so on.
4	Field No.	This field contains the field number from the Table that should be associated with this column.
5	Key No.	This field can contain a Key index number that associates that key with this column/field. If this field is 0 then no key is associated with the column/field and the column will not be searchable, filterable or sortable. The same key can be associated with more than one column and in that case all columns that have the same key will be selected together and sorted by that single key.
6	Column Span	A value higher than 1 in this field will make this column span over the next x number of columns depending on the value in this field.
7	Field Name	This field will show the name of the Field selected in the Field No. Field.
8	Column Caption	This field can contain a special caption for the column. If this is not set then the field name will be used as caption.
9	Caption Alignment	This field controls the alignment of text in this column. Center, Left or Right.
10	Formatting	This field controls the formatting of text/values in this column. <ul style="list-style-type: none"> <li>• <b>None:</b> No Formatting (Standard Dynamics NAV formatting)</li> <li>• <b>Amount:</b> Same Amount formatting as the POS uses.</li> <li>• <b>Price:</b> Same Price formatting as the POS uses.</li> <li>• <b>Quantity:</b> Same Quantity formatting as the POS uses.</li> </ul>
11	Fixed Filter	This field can be use to set a fixed filter on this field/column the POS Lookup table. This can be fixed value like >0 to filter this field to values greater than 0. This can also be a dynamic value from the POS Context. These dynamic values are identified with closed brackets and can be any of the following: <ul style="list-style-type: none"> <li>• <b>[STORE]:</b> Use the Store ID in use as the filter.</li> <li>• <b>[TERMINAL]:</b> Use the Terminal ID in use as the filter.</li> <li>• <b>[STAFF]:</b> Use the Staff ID in use as the filter.</li> <li>• <b>[ITEM]:</b> Use the Item No. in the current line as the filter.</li> <li>• <b>[VARIANT]:</b> Use the Variant in the current line as the filter.</li> <li>• <b>[RECEIPTNO]:</b> Use the current Receipt No. as the filter.</li> <li>• <b>[LINENO]:</b> Use the current Line No. as the filter.</li> <li>• <b>[TODAY]:</b> Use the current date as the filter</li> </ul>
12	Default Column	A check mark in this field makes the column the default column and is therefore selected (and sorted by) when the POS Lookup form opens.
13	Default SortOrder	This field can be set to <b>Ascending</b> or <b>Descending</b> which will then be the starting sort order when the POS Lookup form opens.

14	Special Field Type	<p>This field is used to identify the field/column as a special type of field for LS Retail NAV.</p> <ul style="list-style-type: none"> <li>• <b>NetInventory:</b> This field type should only be used for the Inventory Lookup (INV_LU) on table 99001608 (Inventory Lookup Table) to show the net inventory.</li> <li>• <b>OnPurchaseOrder:</b> This field type should only be used for the Inventory Lookup (INV_LU) on table 99001608 (Inventory Lookup Table) to show the quantity on purchase order.</li> <li>• <b>FindByNumberField:</b> If the FINDNO POS Command is used on a button in the POS Lookup, a column with this special field type will be selected and searched in. Note that using the FIND POS Command will search in the selected column.</li> <li>• <b>FindByNameField:</b> If the FINDNAME pos command is used on a button in the POS Lookup then a column with this special field type will be selected and searched in. Note that using the FIND POS Command will search in the selected column.</li> </ul>
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### 2.1.1.1 Table 99001566 Temp Key Lookup

This table is used to look up keys in a table. The table should not contain data that is stored in the database because it is used as a temporary source table in a lookup form.

Field No.	Name	Description
1	Primary Key	This field is only used as temporary index field (counter).
2	Table No.	This field contains the number of the Table that the key belongs to.
3	Key Index.	This field contains the Index number of the table key.
4	Key Name	This field contains the name of the table key.

## 2.1.2 Forms

### 2.1.2.1 Form 10000756 POS Menu Grid

This form is used throughout the system to show tabular data in a grid using Menu Buttons (not the standard Dynamics NAV table box). It is used as a subform in forms like EPOS Lookup and POS Item Finder. It can also be used from code without a parent form as a popup form for selection. This form cannot be used on its own by running it since it has no predefined data to show.

### 2.1.2.2 Form 99008958 EPOS Lookup

This form is used from the LS Retail POS form (EPOS Main) to look up and select values from various data sources (tables, temporary data and so on). Typical use of this form is to select Items and Customer and so on. It offers a way of sorting, filtering and finding the data the user is looking for.

This form cannot be run on its own but rather needs to know which POS Lookup setup it should use with which to populate itself. The POS Lookup setup controls both the data that is shown in the form as well as the layout of that data.

### 2.1.2.3 Form 10000757 POS Lookup Card

This form is used to edit a POS Lookup setup. If the setup does not Use Dynamic Lookup then it is basically for selecting the Menu ID to use and the Default for Function. In case of Dynamic Lookup then it is used to set other more specific data like the Table number, Fields, Keys and so on that the POS Lookup should use.

### 2.1.2.4 Form 99001569 POS Lookup Columns

This form is used to connect fields to columns in the POS Lookup form. Caption alignment, formatting, filtering, sorting and so on is configured for each column. Filtering, Sorting and Searching will only be available for columns that have a Key associated with it.

## 2.2 Changed Objects

### 2.2.1 Tables

#### 2.2.1.1 Table 99008922 POS Lookup

Added fields.

Field No.	Name	Description
20	Use Dynamic Lookup	A check mark in this field means that the POS will use the Dynamic Lookup (EPOS Main) form for this POS Lookup type. The Dynamic Lookup form will then use data in this table and the POS Lookup Columns table to initialize itself and control its behavior.
21	Table ID	This field contains the number of the Table that the Lookup form should use.
22	Table Columns	This field contains the number of columns that should be in the grid/table on the lookup form. This number should include hidden columns if any columns are using Row Spanning.
23	Table Rows	This field contains the number of rows that should be in the grid/table on the Lookup form.
24	Menu Location	This field controls the location of the Button Menu on the Lookup Form. The options are to have it on the right (default) and at the bottom.
25	Key Value Field 1	This field contains the first field in the return key. It should only be modified by developers/administrators since wrong settings in this field will cause errors on the POS.
26	Return Command	This field contains the Return Command that will be executed on the POS when the Lookup Form is closed.
27	Menu Size	This field contains the size (width in case menu is on the right, height if menu is on bottom) of the Button Menu on the Lookup Form.
28	Key Value Field 2	This field can contain the second field in the return key (if there is any). It should only be modified by developers/administrators as wrong settings in this field will cause errors on the POS.
29	Key Value Field 3	This field contains the third field in the return key (if there is one). It should only be modified by developers/administrators as wrong settings in this field will cause errors on the POS.
30	Dynamic Menu ID	If a Menu ID is set in this field, the Dynamic POS Lookup Form will use it, otherwise the default Menu ID.
31	Start Position	<p>By default, the Dynamic POS Lookup form will open on the first record found based on the key associated with the default column. If this field can be used to change this Start Position.</p> <p>The Start Position needs a value for every key field in the key that is associated with the default column in the table. If the key fields are more than one the values should be separated by a semicolon;. The values can be fixed, like 100. This can also be a dynamic value from the POS Context. These dynamic values are identified with closed brackets and can be any of the following:</p> <ul style="list-style-type: none"> <li>• <b>[STORE]</b>: Use the Store ID in use as the filter.</li> <li>• <b>[TERMINAL]</b>: Use the Terminal ID in use as the filter.</li> <li>• <b>[STAFF]</b>: Use the Staff ID in use as the filter.</li> <li>• <b>[ITEM]</b>: Use the Item No. in the current line as the filter.</li> <li>• <b>[VARIANT]</b>: Use the Variant in the current line as the filter.</li> <li>• <b>[RECEIPTNO]</b>: Use the current Receipt No. as the filter.</li> <li>• <b>[LINENO]</b>: Use the current Line No. as the filter.</li> <li>• <b>[TODAY]</b>: Use the current date as the filter</li> </ul>

		An example of this can be seen in LS Retail Demo Company for the REGISTER POS Lookup. The default columns key is 1 which is Store No., Terminal No., Transaction No. The Start Position is set to <b>[STORE];[TERMINAL]</b> which will use the current Store and Terminal IDs to find the start position in the Lookup Table.
32	Hide Input Area	A check mark in this field will hide the Input Box on the Lookup form.
33	Hide Info Area	A check mark in this field will hide the Information area on the Lookup form.
34	Form Width	A value greater than 0 will set the width of the Lookup form when opened. Otherwise the width will be the same as the Main POS form (from Interface Profile).
35	Form Height	A value greater than 0 will set the height of the Lookup form when opened. Otherwise the height will be the same as the Main POS form (from Interface Profile).
36	Selection Mode	This field controls the selection mode of the Lookup form. Options are to have No Select, Select One and Multi Select. Note that this field is usually preset to correct values so changing it might cause unexpected behavior on the POS.
37	TempData	This field needs to be check marked for POS Lookup configurations that work on temporary data. Note that this field is usually preset to correct a value so changing it might cause unexpected behavior on the POS.
38	Start Message	Text that is set in this field will show in the Information Area of the Lookup form when it opens.

#### 2.2.1.2 Form 99008922 POS Lookup List

**Use Dynamic Lookup** field has been added to this form. Also a Menu Button to access the POS Lookup Card.

#### 2.2.1.3 Form 99008951 EPOS Main

This form has been modified to show the new Dynamic Lookup form if the POS Lookup setup has been configured to do so.



In the Lookup form:

1. Press the **Search Description** column header to select that column for searching and filtering.
2. Type in chardonnay in the input box.
3. Press enter (or the Find button).

Search Description

Item list

No.	Item Disc. Gr.	Search Description	Vendor No.	Vendor Item No.
1924-W	FINISHED	CHAMONIX BASE STORAGE UNIT	20000	
10060	RESALE	CHEDDAR CHEESE	44030	J3321
R0005		CHEESE SALAD		
34003		CHICKEN		
R0001		CHICKEN W/BROWN SAUCE		
80202		CHIP 32 MB	50000	
32020		CLUB SANDWICH	44020	2234
40090	RESALE	COAT TIM-N TINA WEAR	44010	1C01-020
70061		COLA DRINK BIG		
30070	RESALE	COLA, OLA-S 33 CL	44020	Y3343
60050	RESALE	COMPACT STEREO UNIT	44040	KK8776
8904-W		COMPUTER - BASIC PACKAGE	50000	
8908-W		COMPUTER - HIGHLINE PACKAGE	50000	
8912-W		COMPUTER - TRENDY PACKAGE	50000	
8916-W		COMPUTER - TURBO PACKAGE	50000	

Buttons: OK, Find, Filter, ↑, ↓, Keyboard, Page Up, Page Down, Inventory, Reset, Cancel

The Lookup will find cheddar cheese because the search method is M.. (beginning of field).

Press the **Search Method** button to change it to ..M.. (anywhere in field) and press the Find button again. This will find the chardonnay white wine.

80206		WEBCAM	50000	
35030		WHITE WINE - CHARDONNAY	44020	03344
70010	RAW MAT	WOODEN DOOR	10000	10-106

Buttons: A..M, N..Z

Press **OK** to select the white wine.

Now we want to use the new FILTER command to filter all items from vendor 44030.

Press the **Lookup** button on the POS. Press the **Vendor No.** column header. Enter *44030* in the input box and press the **Filter** button.

Vendor No.

Item list

No.	Item Disc. Gr.	Search Description	Vendor No. (44030)	Vendor Item No.
10000	RESALE	MILK 1 LITER	44030	D4345
10010	RESALE	MILK 2 LITERS	44030	D4333
10020	RESALE	MILK 0.25 L	44030	W3212
10030	RESALE	SKIM MILK 1 L	44030	W5324
10040	RESALE	SKIM MILK 0.5 L	44030	J4342
10050	RESALE	GOUDA CHEESE	44030	J4536
10060	RESALE	CHEDDAR CHEESE	44030	J3321
10070	RESALE	YOGURT STRAWBERRY	44030	F3343
10080	RESALE	YOGURT LOWFAT STRAWBERRY	44030	G4332
10090	RESALE	YOGURT LOWFAT BLUEBERRY	44030	R3332
10100	RESALE	BUTTER	44030	F4321
10110	RESALE	LOW FAT BREAD SPREAD 125 G	44030	C4432
10131	RESALE	BLUE CHEESE	44030	D4433

Buttons: OK, Find, Filter, ↑, ↓, Keyboard, Page Up, Page Down, Inventory, Reset, Cancel

Now we add another filter by pressing the **Search Description** column header and typing in *cheese*. We want to filter to all records that contain the phrase cheese in it and therefore change the search method to *..M..* (any part of field).

Search Description

No.	Item Disc. Gr.	Search Description (*CHEESE*)	Vendor No. (44030)	Vendor Item No.
10131	RESALE	BLUE CHEESE	44030	D4433
10060	RESALE	CHEDDAR CHEESE	44030	J3321
10050	RESALE	GOUDA CHEESE	44030	J4536

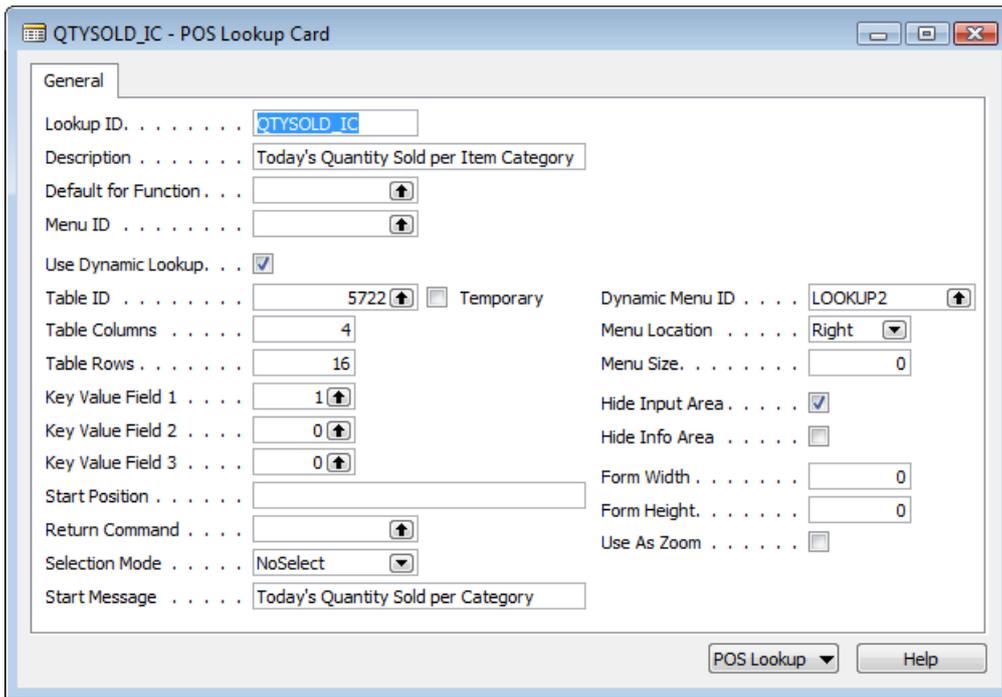
Buttons: OK, Find, Filter, ↑, ↓

### 3.2 Creating a new Lookup

In this use case we will be creating a new Informational POS Lookup. This Lookup should show quantity sold per Item Category in the current Store for the current day (Today).

Open the Lookup List (**LS Retail – POS, Setup, Functionality, Lookup List**) and add a new Lookup and give it the Lookup ID: QTYSOLD\_IC. Open the POS Lookup Card (from the menu button or with F5).

Now we mark the Use Dynamic Lookup field and select table 5722 (Item Category) as the source table for this lookup.



Set **Table Columns** to 4, **Table Rows** to 16 and select Field 1 as the **Key Value Field** (Not necessary since there will be no return in this lookup, only information).

We leave the **Selection Mode** as NoSelect and add a **Start Message** that will show up at the top of the Lookup when it opens.

Select LOOKUP2 menu as the **Dynamic Menu ID** and the **Menu Location** to the Right.

Since this is only informational lookup we place a check mark in the Hide Input Area field to make more area available for the information. If it were left visible, the user could search/filter the Item Category Codes but that will not be in this case.

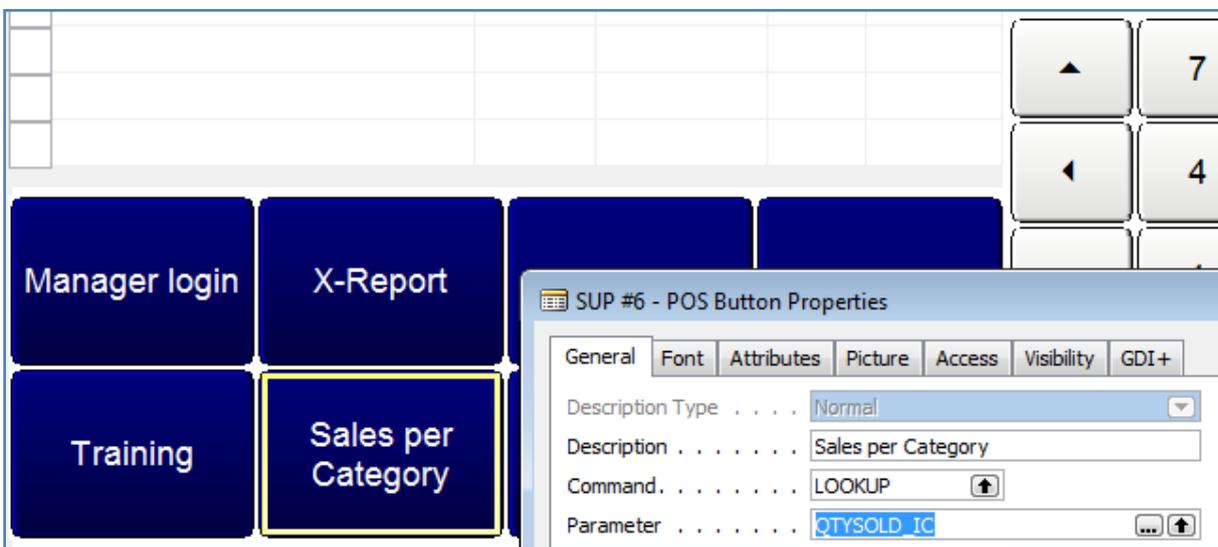
Now open the POS Lookup Columns list.

Column...	Field No.	Field Name	Column Caption	Caption...	Formatting	Key No.	Fixed Filter	Col...	De...	Default ...	Special Fi...
	1	1 Code		Left	None	1		0		Ascending	
	2	3 Description		Left	None	0		2		Ascending	
	4	10000727 Qty. Sold Retail		Right	Quantity	0		0		Ascending	
	5	10000726 Store Filter		Center	None	0	[STORE]	0		Ascending	
	6	10000700 Date Filter		Center	None	0	[TODAY]	0		Ascending	

- Column 1 will show field 1 (Code) and will be Left aligned and be linked to Key number 1 in the table.
- Column 2 will show field 2 (Description) and will be Left aligned and have Column Span set to 2.
- Column 4 will show field 10000727 (Qty. Sold Retail) and will be Right aligned with Quantity format.
- Column 5 will be used to apply the [STORE] filter to field 10000726 (Store Filter).
- Column 6 will be used to apply the [TODAY] filter to field 10000700 (Date Filter).

Note that since we only show 4 columns in the table, columns 5 and 6 will be hidden from the user and are only used for filtering purposes.

Now on the Supervisor Menu in the POS (TOUCHDEMO2) we add a button called Sales per Category and select the LOOKUP command for the button with parameter set to QTYSOLD\_IC.



Pressing this button will now give the information requested.

Today's Quantity Sold per Category

Code	Description	Qty. Sold Retail
AUDIO	Audio/HiFi	2
BEVERAGES	Beverages	0
CLOTHING	Clothing	0
DAIRY	Dairy Products	1
DRINKS	Drinks	0
FRUIT/VEG.	Fruits and Vegetables	0
FURNITURE	Office furniture	0
GIFT CARDS	Gift Cards	0
HOMEAPPL	Home Appliances	0
INGR	Ingredients	0
MEALS	Food	0
MISC	Miscellaneous	0
STATIONARY	Stationary	1

OK

Find

Filter

↑

↓

Keyboard

Page Up

Page Down

Inventory

Reset

Cancel