

What's inside...

The new Version 10 items are in green. Version 10.5 Feature Pack in blue (additional charge).

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How the material is organized

It's one thing to compile all the data, it's quite another to find what you want when you want it. In this chapter we're going to show you the many methods for finding even the smallest smidgen of data.

PLACES, EVERYONE

You have a choice of where to place your search — in the Search part or Grid or both. Most control types can be used, providing a wide variety of styles — Radio Buttons, Drop Down Boxes — and more. Two of the lookup styles we studied in the last chapter are available, too — Edit Combo and Auto-Suggest. Query by Form syntax also smooths your quest.

A, B, C, D ...

The new “Alphabet Button search” places A - Z buttons in the grid. The user presses the “L” button — Liberty Manuals and the others who share that letter appear in front of you. The letters can also appear as hyperlinks — or in a drop down box. Flexibility is Alpha Five's middle name. As if that weren't enough, you can also configure custom search buttons.

SHOW THIS, NOT THAT

Find a group of clients and put them in order. Then use the grid to filter a report — or open another grid — with a click of a button. Action JavaScript can also link grids in a Master-Detail relationship.

LOCATION, LOCATION,
LOCATION

Need to find your customer's office? Click a button to open a Google map.

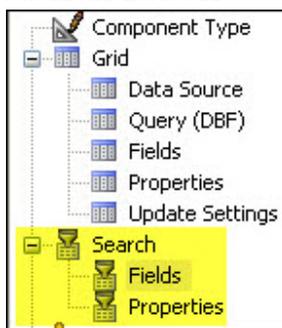
Preparation for the lesson

The exercises in this chapter should be placed in the *MyGridComponentDemo* web project that was created in Chapter 4 (see “Important note” on page 114). Copies of the completed examples should be in this project.

- The **GridComponentDemo** web project also has completed examples. File naming is discussed on page xi and Web Projects are explained on page 19.

Searching with the Search part

COMPLETED EXAMPLE



- The *SearchPartBasics* component contains the elements in this section.

Checkboxes, Radio Buttons, and DropDownBoxes are all useful in the Search part, as are Edit-Control and Auto-Suggest lists. Since you already know how to design them, we've added them to the practice component for you.*

1.  *WPCP > Web Projects: Open SearchPartBasics_Practice* at Design.
- Component type = Grid is updateable, with Search part, Data Source = DBF, Query table = Clients. Fields have been chosen for Grid and Search parts and new record rows are set to ShowOnDemand.

- Grid part fields: TextBox except RTF and HTML memos, which are Labels.
- Search part fields: Some widths have been narrowed. Control Type is TextBox, except as follows:

CONTROL TYPES

The following are in this component.

- **Checkbox:** Field: Customer.
- **Radio Button:** Field: Gender.
- **DropDownBox:** Field: State (Dynamic, based on values in Clients table).
- **Text Area:** Field: Memo. Behaves like a TextBox.

LOOKUPS

Also in this component are both types of Search field Lookups, Edit-Combo and Auto-Suggest. They act in a similar manner if you start typing, but Edit-Combo has a drop down arrow (red circle), while Auto-Suggest does not.

ZIP_CODE	CITY	STATE
01803-5100	Burlington	MA
07760-0453	Rumson	NJ

- Field: Zip_code – Lookup = Yes; Lookup type = **Edit-Combo List**.
- Field: Company – Lookup = Yes; Lookup type = **Auto-Suggest List**.

Company
Company
Anderson & Associates

2. Save the component as *MySearchPartBasics*.

Defining the Control Types

There are five Control Types, Checkbox, DropDownBox, RadioButton, TextArea and TextBox.

Field Properties: Gender	
- Display Settings	
Control type	RadioButton
Search style	CheckBox
- Client Side Properties	
Show/hide expression	DropDownBox
Enable expression	RadioButton
Conditional style	TextArea
	TextBox

- **CheckBox:** Used for Logical fields.
- **RadioButton:** Used for very short lists.
- **DropDownBox:** Used for longer lists and table values.
 - Their lists can be Static, Dynamic or Variable. Design is the same as for the Grid.*

- **TextBox and TextArea:** Support Query by Form syntax (see below) and have many other options, as we will see in the following exercises.
- **Memo fields:** TextBoxes or TextAreas may be used to search standard, RTF and HTML memo fields.

*. References: “Setting up the Search part elements” on page 28, “Creating Checkbox, Radio Button and Drop Down Box controls” on page 225, “Creating an Edit Combo List / Lookup” on page 230, “Creating an Auto Suggest List / Lookup” on page 238.

*. See “Creating a Static list” on page 227 and “Creating a Dynamic list” on page 228.

Understanding the search types

There are three types of searches: *Search style*, *Query by Form syntax* and *Combine search criteria*.

SEARCH STYLE

Search style defines the type of match and can be set for individual fields or all fields in the Search part. While the option appears for all Control Types, it is only applicable to TextBox and TextArea because the others present specific lists from which the selection are made.

- The settings are in two locations, Search > Fields > Field Properties and Search > Properties. Defaults are in green font.

SEARCH > FIELDS >
FIELD PROPERTIES

Search style can be set individually for each field. The default is to use the setting defined in Search > Properties (see below).

Display Settings	
Control type	TextBox
Search style	0
Range search	<input type="checkbox"/>
Keyword search	<input type="checkbox"/>

- **0 = Use default setting in Properties.** (Default)
- 1 = Exact match, but not case sensitive.
- 2 = Is contained in.
- 3 = Starts with.
- 4 = User must enter one of these wild cards: * or?

SEARCH > PROPERTIES

This setting (green band below) is global and affects all fields unless otherwise indicated for a specific field as above.

Search Options	
Show title	<input type="checkbox"/>
Title when hidden	Click here to search...
Initial state	Open
Search button label	Search
Orientation	Vertical
Has 'Clear Search' link	<input checked="" type="checkbox"/>
'Clear Search' label	Clear Search Criteria
Search style	2
Show single 'Keyword' search field	<input type="checkbox"/>
Allow 'Query By Form' syntax	<input checked="" type="checkbox"/>
Combine search criteria using	1
Toolbar position	Below

There are three options:

- 1 = Exact match, but not case sensitive.
- **2 = Is contained in.** (Default).
- 3 = Starts with.
- 4 = User must enter one of these wild cards: * or?
- Query by Form syntax (see below) may or may not be applicable, depending on how the Search Styles are set. For example, if Company > Field Properties > Search style is set to **1**, exact match, entering **b.f** would find the records from B to F.

But. Entering **and** would not find records for Anderson.

QUERY BY FORM SYNTAX

Query by Form syntax is a standard Alpha Five search language. The setting for grids is located at Search > Properties > Search Options > Allow Query by Form syntax (blue band in the above screen shot).

- **Default = Yes.**

Here are some examples of entries. The full list is on page 460. To take full advantage of QBF, Search style above should be set to *Is contained in*.

- **<** = before as in **<7, <B, <Fr**.
- **>** = after as in **>7, >B, >Fr**
- ***** = starts with or ends as in ***fr** or **fr***
- **\$** = word is contained in the field, such as **\$fireplace**.

- **..** = between as in **a..m** or **1/1/2010..12/31/2010**.
 - See also “Searching between two dates” on page 269.
- **,** (comma) = logical or as in **harold, tom** = harold or tom.
- **is blank** = field is not filled in.
- **is not blank** = field is filled in.

COMBINE SEARCH CRITERIA

You can search multiple fields at the same time. They can be combined with **AND** (default) or **OR**. Setting is at Search > Properties > Search Options > Combine search criteria. An example is as follows:

- **First_name:** Pamela
- **Last_name:** Anderson
 - **AND** finds only entries that match both criteria.
 - **OR** finds all Pamelas and all Andersons.*

Defining a Cascading Drop Down search

In addition to standard drop down boxes, you can also define cascading drop downs where the value chosen in the first drop down governs the values presented in the second.

- In this case, we will define the initial drop down on the **Hobby_type** field and the second on **Hobby**. If the user chooses **Individual** in the first, only those hobbies will appear in the second.



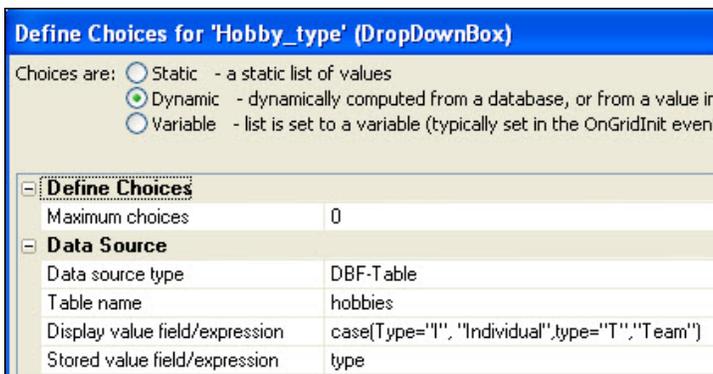
HINT!

May also be used for fields in the Grid and Detail View sections.

3. Search > Fields > Hobby_type > Field Properties:

DISPLAY SETTINGS
DROP DOWN BOX
PROPERTIES

- **Control type:** DropDownBox.
- **Choices:** Click the button.



Dialog Title: Define choices for ...

- a. **Choices are:** Dynamic.
- b. **Table name:** Hobbies.
- c. **Display value field/expression:** Enter as follows:
`case(Type="I", "Individual", type="T", "Team")`
- d. **Stored value field / expression:** Type.
- e. Click OK.

4. Hobby > Field Properties:

DISPLAY SETTINGS

- **Control type:** DropDownBox.

*. Guess who impressed me with her *Dancing with the Stars* performance!

DROP DOWN BOX
PROPERTIES

- Choices: Click the button and enter as follows:

Dialog Title: Define choices for ...

- Choices are: Dynamic.
- Table name: Hobbies.
- Display value field / expression: Hobby
- Stored value field / expression: Hobby.

Cascading choices	
Cascading choices	<input checked="" type="checkbox"/>
Parent control	Hobby_type
Display value for no choices found	
Auto-submit	<input checked="" type="checkbox"/>

CASCADING CHOICES

- Cascading choices: Yes
- Parent control: Hobby_type.
- Click OK.

SELECT MULTIPLE ITEMS

Next, we will allow the user to select multiple hobbies. To do so, we **must** enlarge the drop down box. Height must be > 1 to see the Multi-select option.

DROP DOWN BOX
PROPERTIES

- Height: 5

5. Press TAB to open the following (or click in another option):

- Multi-select allowed: Choose Multiple.

NOT IN LIST RULE*

DropDownBox Properties has an additional *Not in list rule* option for Checkbox, RadioButton and DropDownBox.† *Add to list if not Null* is the Default and means that if the field is not empty, existing values will be added to the search. We will keep the default, but you suggest you test the results when designing your application.

Defining a Tree Control search

One of the Feature Packs developed for V10.5 gives you yet another way to access data. When the user clicks on an item, the grid is filtered by the next option and then the next. For example, you could set up a tree based on Country + State/Province + City + Company. Drilling down the options filters the grid.

- See “Tree Control Navigator” on page 454.

The Feature Pack videos follow the standard Help videos. Top Menu > Help > What’s new in Version 10: “Tree Control Record Navigator.”

Searching between two dates

It is common to search for records between two dates. Display Settings > Range search opens two boxes as at left, each with a calendar display option. While you can use this for other text boxes, *Query by Form* (page 267) is more flexible because it offers range searches and other search styles at the same time.

6. Enter_date > Field Properties:

- Control type: TextBox
- Range search: Yes
- ‘From’ and ‘To’ labels: Accept the defaults, From: and To:

From:	To:
<input type="text"/>	<input type="text"/>

DISPLAY SETTINGS



GO TO FEATURE PACK
VIDEO #3

*. See “Understanding Add to List” on page 229.

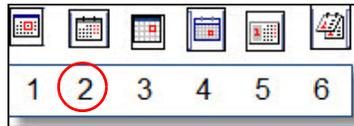
†. CheckBox does not apply because it should be used only for Logical fields. Our tests with RadioButton did not appear to add values.

TEXT BOX PROPERTIES

- Size: Default is 40 – much larger than necessary. Change to **10**.
- Resizes both ‘From’ and ‘To’ text boxes.

DATE PICKER PROPERTIES

- Date picker Icon: Change to **6**.



- There are 6 calendar icon styles, numbered from 1 - 6 as at left. Default = 2.(page 267)b
- Low year: Enter 2000.

Searching Time fields

A time part of 12:59:59 pm is automatically added for Time field searches. For example:

- Date and time are 12/30/2009 4:30 am and 1/15/2010 10:00 am.
- Search for records is: From: 12/30/2009 – To: 1/15/2010.
- Result: Both records will be found.



Go to A5 Help

For more information, see Help > What’s new in Version 10 > Grid Component – New Features: “Time Searches - Range Search.”*

Defining Keyword searches

Name:

Name:

A keyword search finds records across multiple fields. At left, the *Name* field is actually the Last_name field modified into a single text box that can look for values in three fields:

- Last_name, Middle_initial and First_name

NC	bush
FL	
IL	
MA	
MN	
NC	
NJ	

CONSTRAINED KEYWORD SEARCH

Keyword searches can also be “constrained,” meaning that the results can be modified by searching another field, such as the State field at left. The fields are not actually linked, the values are simply chosen at the same time or in succession. It doesn’t matter which is selected first.

SETTINGS

Keyword settings are found in two places and they give markedly different results.

- Search > Properties.
- Search > Fields > Field Properties.

SEARCH > PROPERTIES

The Properties setting is global and includes **all** the fields in *Selected*. In other words, if you have the First_name, Last_name, Address, City, State in *Selected*, it will use one box to search across all the fields.

- Search > Properties > Search options > Show single ‘Keyword’ search field.
- Default = No.

SEARCH > FIELDS > FIELD PROPERTIES

Field Properties allows you to choose one field and use it to search across others. (Suitable for a constrained search.)

*. See also “Understanding Date and Time fields” on page 223.

ROW PROPERTIES

7. Last_name > Field Properties:

DISPLAY SETTINGS

- Control type: TextBox.
- Keyword search: Yes.
- Keyword search fields: Click the button.
 - Choose First_name, Middle_Initial, Last_name.
 - Click OK.

- Row label: Change Last name to **Name**:

Using a Watermark to add instructions

You can use a Freeform area for instructions* or you can put brief notes inside the field itself with Watermark.

STATE	CITY	ZIP_CODE
NJ	Far Hills	07735
NJ	Rumson	07760-0453
OH	Marysville	64342

It will be clearer for the end user if we indicate how to use the Auto-Suggest (Company) and Edit-Combo (Zip_code) searches.

- When the cursor enters the TextBox, the instructions disappear and criteria can be entered.



Watermarks can be used for fields in the Grid and Detail View, as well as the Search part.

8. Grid > Fields > Company > Field Properties:

TEXT BOX PROPERTIES

- Watermark: Yes.
- Watermark text: Overwrite <FieldLabel> with: *Start typing for a list of suggestions.*

9. Zip_code > Field Properties:

TEXT BOX PROPERTIES

- Watermark: Yes.
- Watermark text: *Enter Zip Code or click arrow to choose from list.*

Sorting by column title

Next, we will change the sort order for the search from field names (default) to column order (yellow highlight).



If you decide to use this feature, note that abbreviations like the one we have here for Middle_initial, could be confusing to the end user.

10. Search > Properties:

*. See "Having fun with the Freeform areas" on page 237.

SORT OPTIONS

- Use column headings in Sort listbox: Yes.

Testing the search settings

11. Save and go to Working Preview.
12. Sort by: **Company**.
 - This becomes the default sort order until it is changed.
13. Test the search settings as follows, clicking Search or pressing ENTER after each:

FIELD: NAME

- Enter **ha** to first and last names such as **Hank**, **Harold**, **Richard**, **Halton**.
 - Searches across First_name, Middle_initial, Last_name fields.

FIELD: ENTER DATE

- Enter as follows: From **9/1/01**; To **12/31/01**.
 - You can also enter **9.1.01** and **12.31.01** or pick from the **calendar**.
 - Name search is still active so result is: Geoff Halton.

14. Click *Clear Search Criteria*.

FIELD: COMPANY

- Type **and**; choose **Anderson & Associates** from the drop down list.

- Click and press ENTER to find the records.

15. Click *Clear Search Criteria*.

FIELD: CITY

- Type **lud, red**; returns **Ludlow** and **Red River** and **Redmond**.
- Test more Query by Form syntax (page 267).

16. Click *Clear Search Criteria*.

FIELD: STATE

Next, we'll test the Constrained Keyword Search (page 270).

a. **State:** Choose **NJ**.

b. **Name:** Enter **bush**.

c. Click Search or press ENTER.

- Two records are found.

17. Click *Clear Search Criteria*.

FIELD: ZIP CODE

- Type **07760** or choose from the list.

18. Click *Clear Search Criteria*.

FIELD: HOBBY TYPE

- Choose **Individual**.

FIELD: HOBBY

Because we chose DropDownBox Properties > *Multi-Select allowed* (see “Select multiple items” on page 269), you can search for several hobbies at the same time.

a. Select: **Checkers Player**.

b. CTRL+CLICK: **Databases**.

c. Click Search.

19. Click *Clear Search Criteria*.

MEMO FIELDS

Enter search values as follows. Click *Clear Search Criteria* between tests.

- Memo: Enter **bike**.
- RTF Memo: Enter **text**.
- HTML Memo: Enter **text**.
- No records are found because Combine Search Criteria (page 268) is set to AND, the default. Let's see what happens when we change it to OR.

20. Return to Design mode > Search > Properties:

SEARCH OPTIONS

- Combine Search Criteria: Change to **2**
 - The Tip window at the bottom explains that AND =1 and OR =2.

21. Return to Working Preview and re-enter the search values for the memo fields.

- All records are found.

22. Return to Design mode, save and keep the component open if you are continuing on.



Go to A5 Video #2, 18a,
20, 28

Help > What's new in Version 10 > Web videos: "Searching," "Cascading Drop-down Boxes in Search part" (Video #1), "Keyword searches" and "Watermark Fields."