TMS TAdvGridFilter - TAdvDBFilter DEVELOPERS GUIDE

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Availability

TMS TAdvGridFilter & TAdvDBFilter are available as VCL component for Delphi and C++Builder.

TMS TAdvGridFilter is available for Delphi XE,XE2,XE3,XE4,XE5,XE6,XE7,XE8,10.10.1 & C++Builder XE,XE2,XE3,XE4,XE5,XE6,XE7,XE8,10,10.1.

TMS TAdvGridFilter & TAdvDBFilter have been designed for and tested with: Windows XP, Vista, Windows 7, Windows 8, Windows 10.

Online references

TMS software website:
http://www.tmssoftware.com

TMS TAdvGridFilter page:
http://www.tmssoftware.com/site/advgridfilters.asp

Description

TAdvGridFilter & TAdvDBFilter are extensions for TAdvStringGrid and TDataSet to provide step by step visual filtering capabilities to the grid.

The TMS TAdvGridFilter & TAdvDBFilter are easy to use components designed to filter different kinds of data. From financial and marketing data to monthly business sales, graphical and educative math data. The visual user interface supports column data types such as numeric, text, date and boolean. The filter can be shown in normal mode (panel on the form) or in dialog mode.
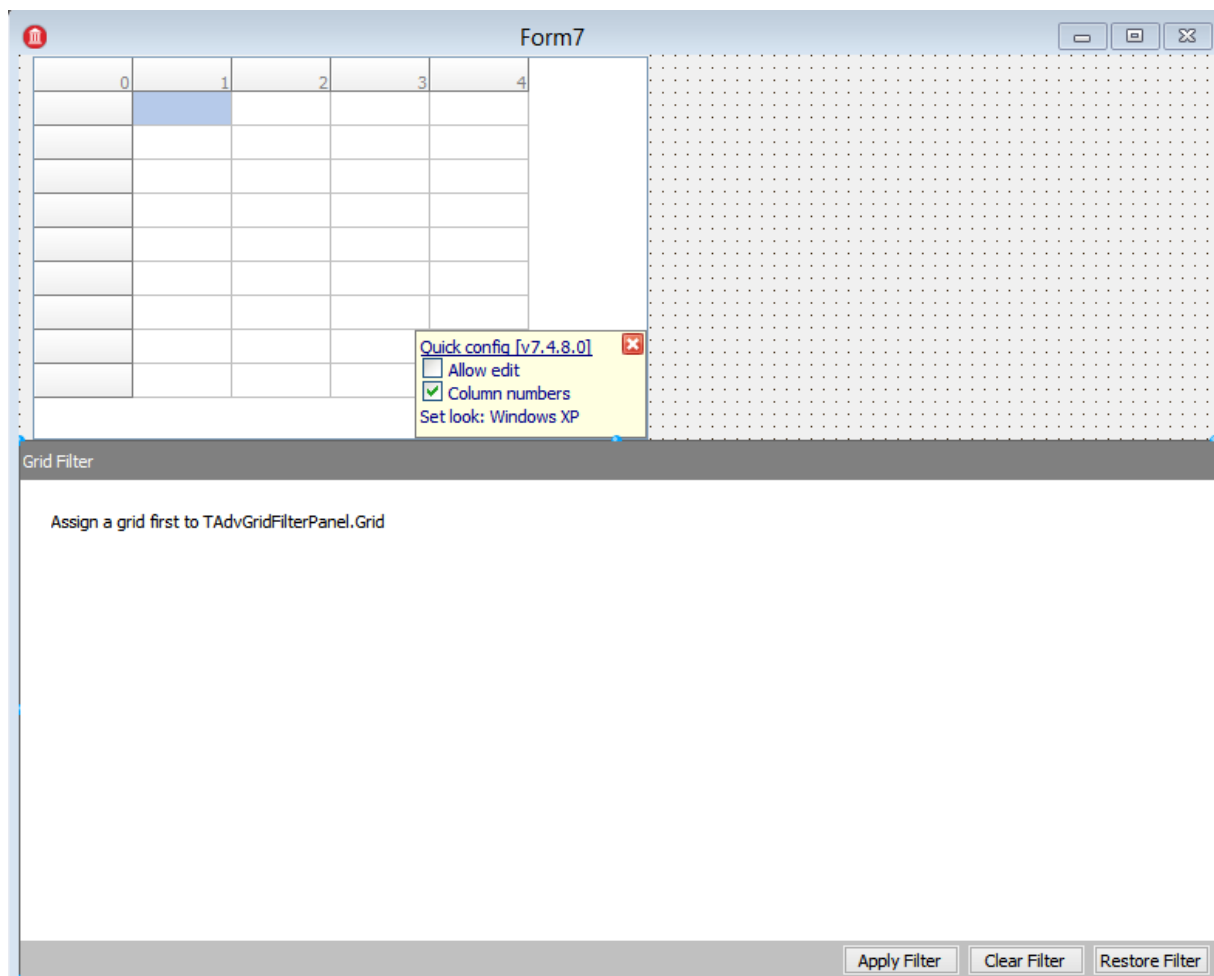
Getting Started

TAdvGridFilter - TAdvGridFilterDialog

Design Time:

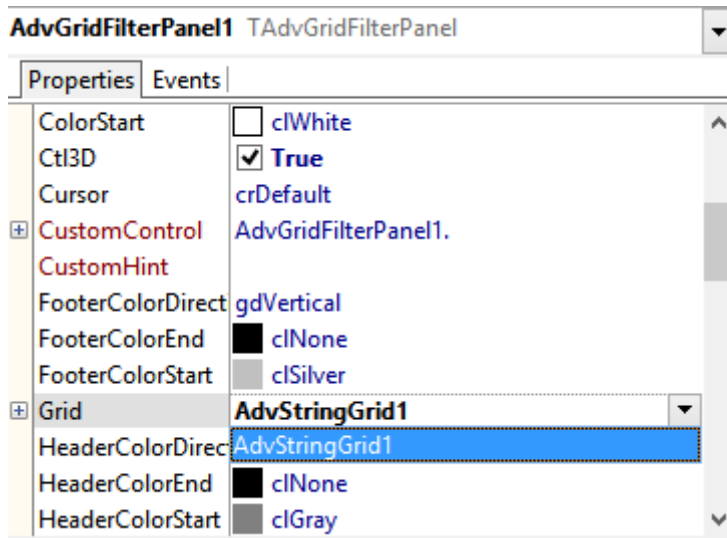As the TAdvGridFilter applies a filter to TAdvStringGrid, first drop a TAdvStringGrid on the form.
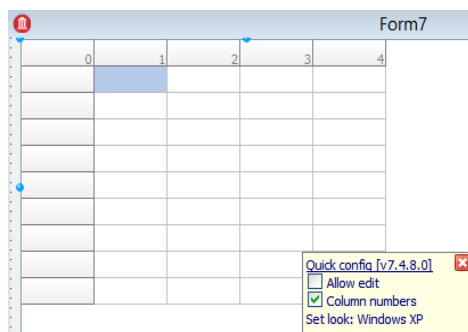
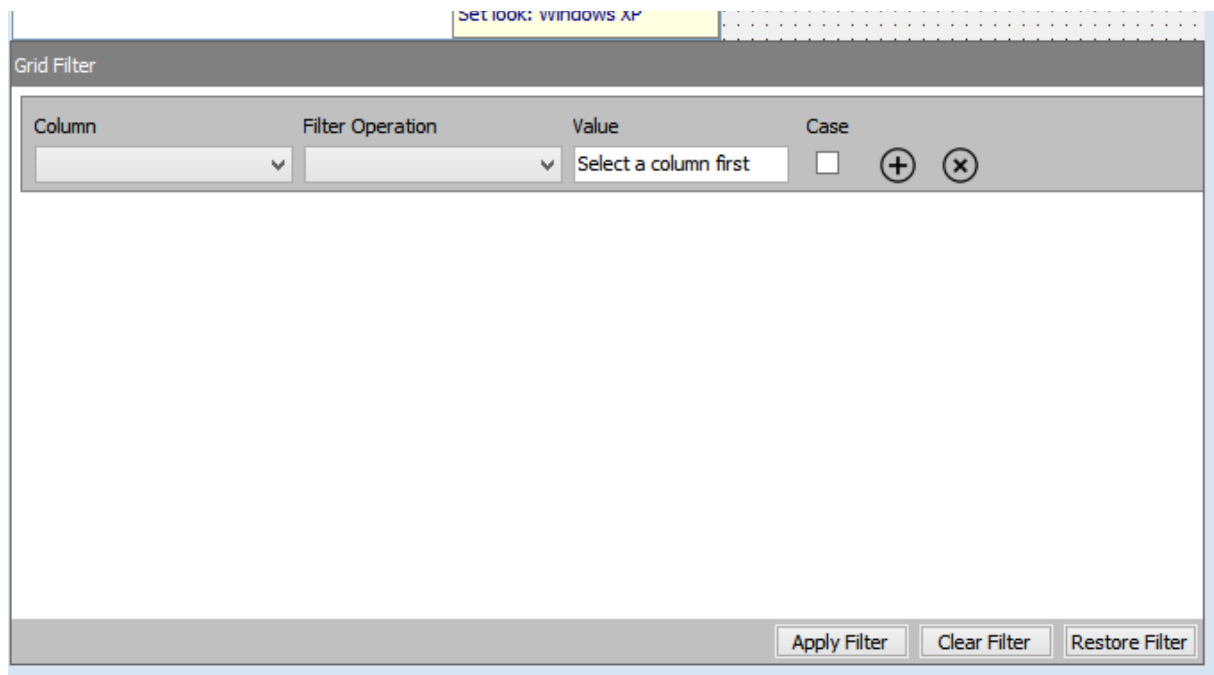Next drag the TAdvGridFilterPanel on the form.

To load data to the grid: Rightclick on the grid and point the "*load CSV*" option.

The component gives the hint to assign a TAdvStringGrid instance to the panel:

The component will automatically retrieve column information after assignment of the grid:

The TAdvGridFilterDialog gives access to the same filter panel but this in a dialog box, as such, it comes as a non-visual component.
To use the dialog, drag the TAdvGridFilterDialog on the form and perform the same steps as with the TAdvGridFilterPanel.

Drag a TButton on the form and apply following code to the onclick event:
AdvGridFilterDialog1.Execute;
Runtime

The filter starts with an empty row. All used grid columns are available in the column combobox.
Note that when the grid's fixed row has a name, this name will be used in the combobox, otherwise naming will be by column number only.
When a column has been chosen, the filter operation can be selected.
The value and case field will change, depending on the selected column field data type.

Example:
- The column field contains text: the value field became a TEdit type

- The column field contains a numeric value: the value field became a TSpinBox

The result so far:

The grid filter was applied after clicking the "*Apply Filter*" button.

The capability is available to restore an applied filter, for example when a filter was already programmatically set for the grid, it can be visualized by clicking "Restore filter".

Moving on with the sample, we open the dialog by clicking the "*Show Filter Dialog*" button.

A new dialog window will show with an empty filter.

If the filter for the grid was already set as in this example, pressing "*Restore Filter*" in the dialog restablishes the existing filter for the grid also in the dialog's filter panel:
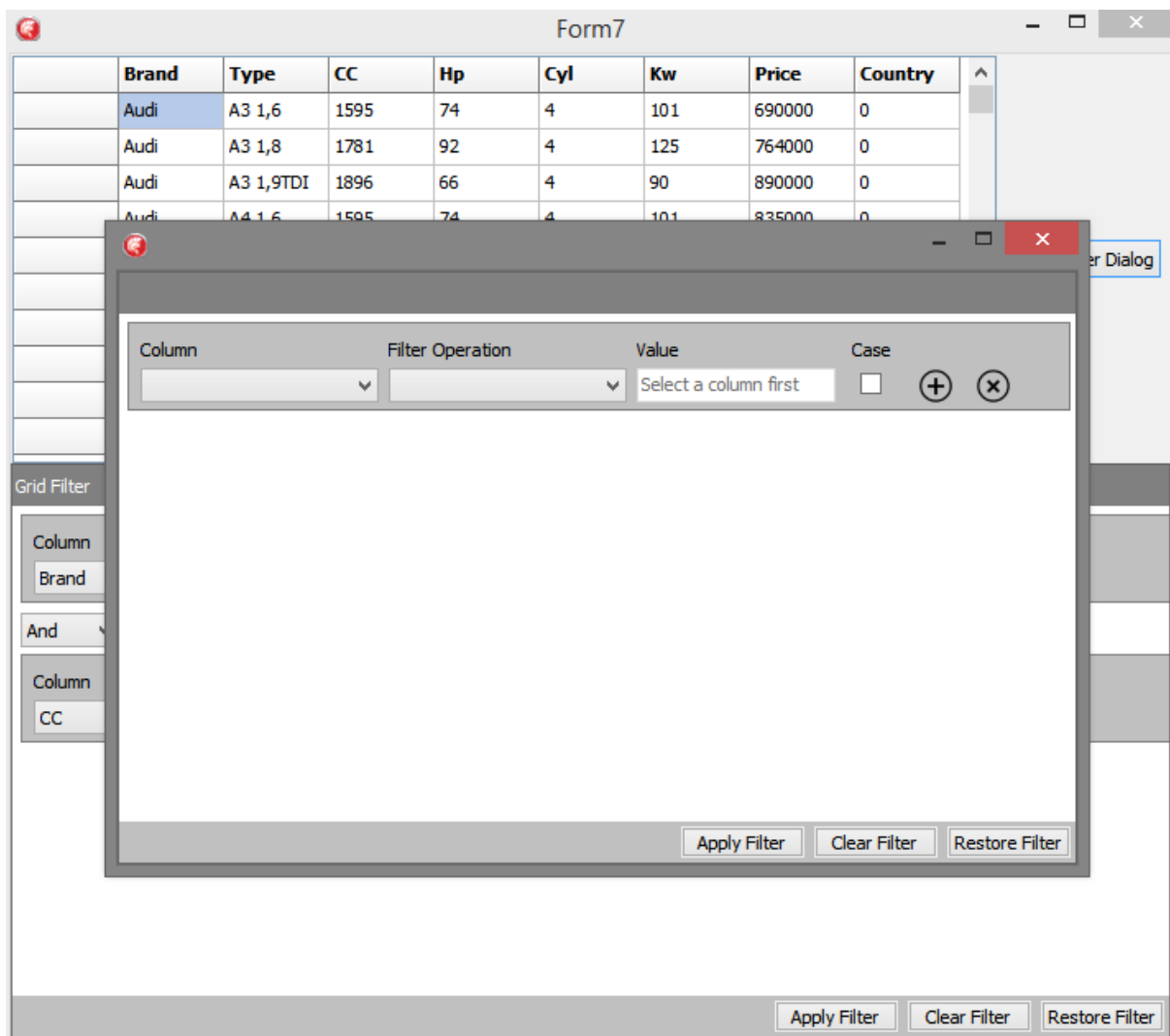
TAdvDBFilterPanel – TAdvDBFilterDialog

Where TAdvGridFilterPanel performs filtering on a grid with setting filter conditions for one or more columns in the grid, the TAdvDBFilterPanel allows to visually enter a filter for a dataset. This dataset is either a TTable or TQuery type dataset. For a TTable dataset, the TAdvDBFilterPanel will check with RTTI for the TTable Filter property and will automatically manipulate this Filter property to set the visually specified filter. When a TQuery type dataset is used, the component will look via RTTI for the SQL property and will append the WHERE condition dynamically depending on its filter specification. Note that the component can also parse a given Filter value or SQL WHERE clause (within the limitation that the filter/sql where clause is a simple boolean AND/OR construct of conditions)

Design Time:

To use the DB filter, we need a dataset. Drop a TDBGrid on the form with a datasource and dataset.
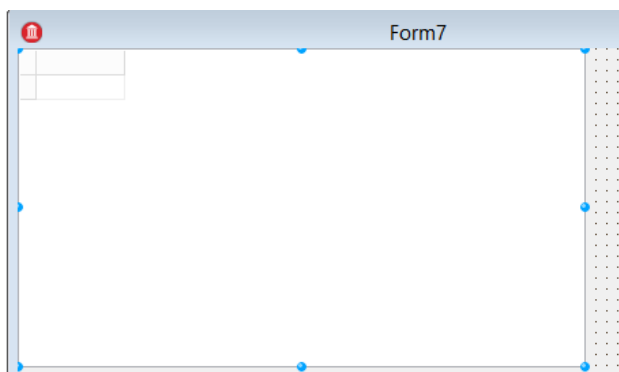
Next drag the TAdvDBFilterPanel on the form.

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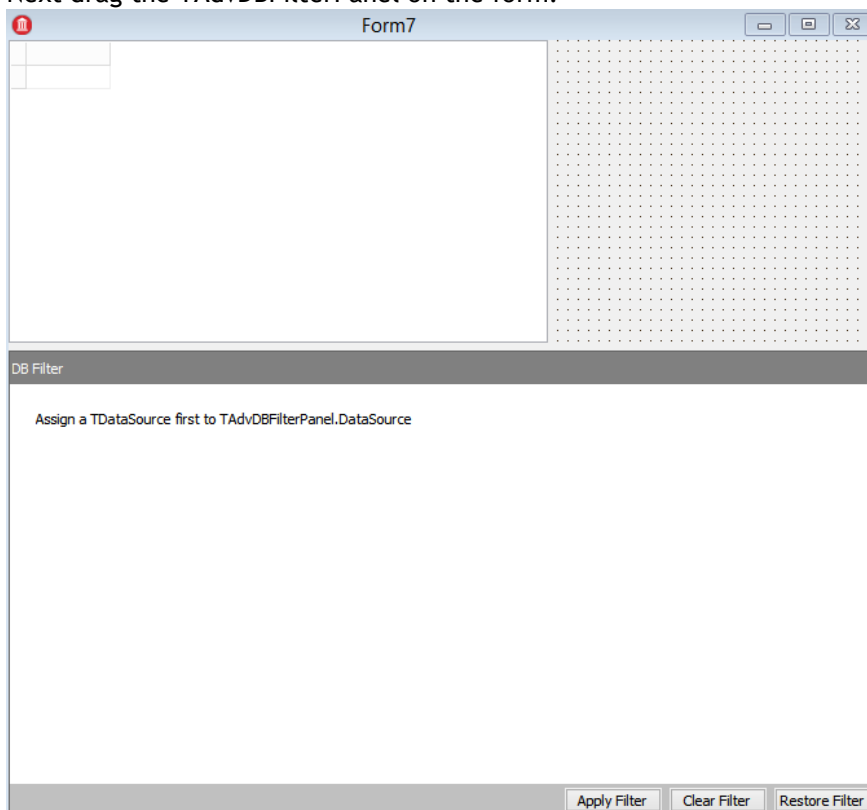
To have data available for filtering, drag any TTable or TQuery dataset on the form. In the sample, a TAdoTable is used and a sample dataset table from CARS.mdb is loaded.
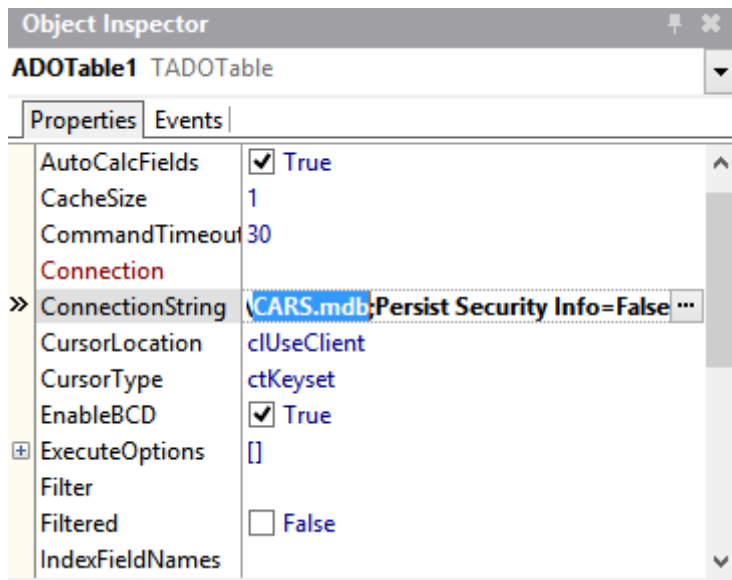
The TAdvDBFilterPanel component needs to be connected to this dataset via a datasource.

Assign the TDataSource to the Grid and the TAdvDBFilterPanel:
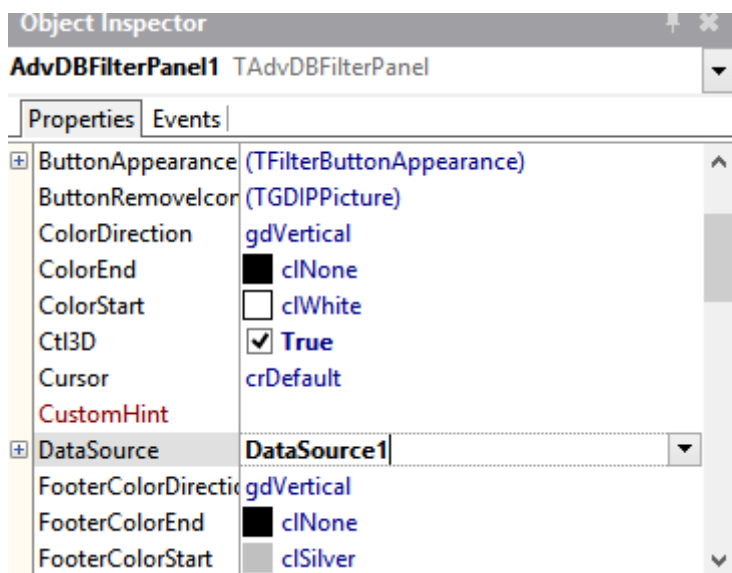
The TAdvDBFilterPanel will automatically retrieve the dataset fields after the assignment of the datasource with an active dataset.

In a similar way as TAdvGridFilterDialog provides the filter user interface via a dialog, the TAdvDBFilterDialog does this for datasets.
To use the dialog, drag the non-visual TAdvDBFilterDialog component on the form and perform the same steps as with the TAdvDBFilterPanel.

Drag a TButton on the form and apply following code to the onclick event:
AdvDBFilterDialog1.Execute;

Runtime

The filter starts with an empty row. All assigned dataset fields are available in the column combobox.
When a field has been chosen from the first column, the filter operation can be selected according to the field data type.
The value and case field will change, depending on the selected column field type as well.

Example:

- The column field contains text: the value field becomes a TEdit

- The column field contains a numeric value: the value field becomes a TSpinBox

The result so far:

The filter was changed after clicking the "*Apply Filter*" button.

The possibility exists to restore an applied filter.

Moving on with the previous version, we open the dialog by clicking the "*Show Filter Dialog*" button.

A new dialog window will be shown with an empty filter.

Should we choose to restore the current filter, a simple click on the "*Restore Filter*" button quickly restablishes the active filter.
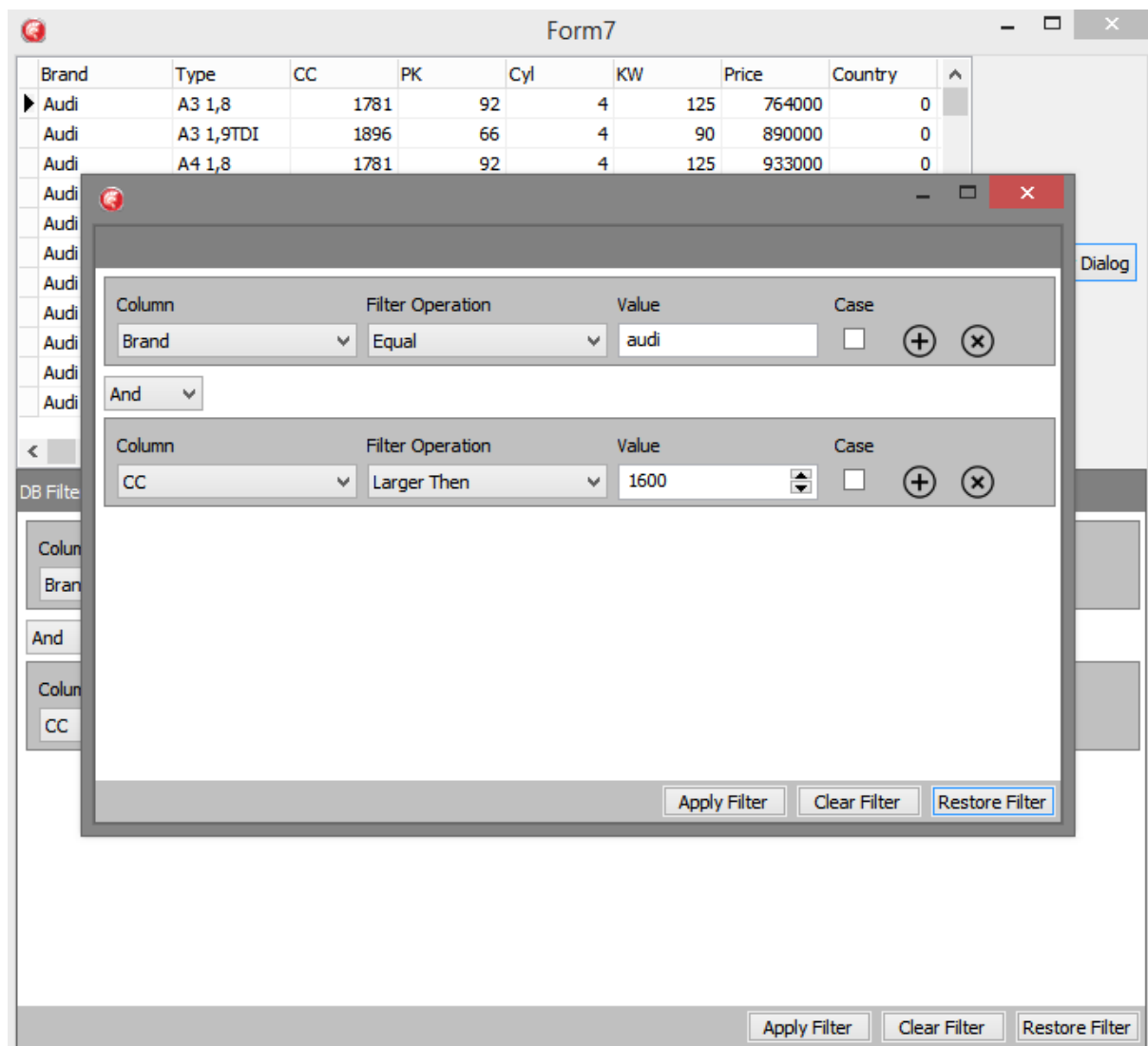
Properties & Events

Properties

TAdvGridFilterPanel:

BorderStyle	Sets the borderstyle of the filter panel
ButtonAppearance	Sets the appearance of the items add & remove buttons
ButtonAddIcon	Sets the icon of the items add button
ButtonRemoveIcon	Sets the icon of the items remove button
ColorStart	Sets the start color of the filter panel
ColorEnd	Sets the end color of the filter panel
ColorDirection	Sets the color direction of the filter panel
Footer	Gives access to the footer panel
FooterAddClearButton	Gives access to the footer "clear filter" button
FooterAddFilterButton	Gives access to the footer "add filter" button
FooterRestoreFilterButton	Gives access to the footer "restore filter" button
FooterColorStart	Sets the start color of the footer
FooterColorEnd	Sets the end color of the footer
FooterColorDirection	Sets the color direction of the footer
Grid	Gives access to the assigned grid
Header	Gives access to the header panel
HeaderColorStart	Sets the start color of the header
HeaderColorEnd	Sets the end color of the header
HeaderColorDirection	Sets the color direction of the header
ItemBorderColor	Sets the border color of the items
ItemStartColor	Sets the start color of the items
ItemEndColor	Sets the end color of the items
ItemColorDirection	Sets the color direction of the items
LabelFont	Sets the font of all labels
ShowApplyFilter	Sets the show Boolean for the apply filter button
ShowClearFilter	Sets the show Boolean for the clear filter button
ShowRestoreFilter	Sets the show Boolean for the restore filter button
ShowCase	Sets the show Boolean for the case label and checkbox
ShowHint	Sets the show Boolean for all applicable hints
TitleAlignment	Sets the alignment of the header title
TitleFont	Sets the font of the header title
Title	Sets the header title
UI	Type class that sets the text properties for the controls

TAdvDBFilterPanel

BorderStyle	Sets the borderstyle of the filter panel
ButtonAppearance	Sets the appearance of the items add & remove buttons
ButtonAddIcon	Sets the icon of the items add button
ButtonRemoveIcon	Sets the icon of the items remove button
ColorStart	Sets the start color of the filter panel
ColorEnd	Sets the end color of the filter panel
ColorDirection	Sets the color direction of the filter panel
DataSource	Gives access to the assigned datasource
Footer	Gives access to the footer panel
FooterAddClearButton	Gives access to the footer "clear filter" button
FooterAddFilterButton	Gives access to the footer "add filter" button
FooterRestoreFilterButton	Gives access to the footer "restore filter" button
FooterColorStart	Sets the start color of the footer
FooterColorEnd	Sets the end color of the footer
FooterColorDirection	Sets the color direction of the footer
Header	Gives access to the header panel
HeaderColorStart	Sets the start color of the header
HeaderColorEnd	Sets the end color of the header
HeaderColorDirection	Sets the color direction of the header
ItemBorderColor	Sets the border color of the items
ItemStartColor	Sets the start color of the items
ItemEndColor	Sets the end color of the items
ItemColorDirection	Sets the color direction of the items
LabelFont	Sets the font of all labels
QueryParams	Gives access to the query parameters After the filter was applied, all query parameters (Action, Column, Operation, Value and Case Sensitive) will be set in this property
QueryString	Gives access to the query string After the filter was applied, the querystring will be altered and set in this property
ShowApplyFilter	Sets the show Boolean for the apply filter button
ShowClearFilter	Sets the show Boolean for the clear filter button
ShowRestoreFilter	Sets the show Boolean for the restore filter button
ShowCase	Sets the show Boolean for the case label and checkbox
ShowHint	Sets the show Boolean for all applicable hints
TitleAlignment	Sets the alignment of the header title
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Title	Sets the header title
UI	Type class that sets the text properties for the controls

TAdvGridFilterDialog:

ButtonAddIcon	Sets the picture of the items add button
ButtonRemoveIcon	Sets the picture of the items remove button
Caption	Sets the caption of the dialog
ColorStart	Sets the start color of the dialog
ColorEnd	Sets the end color of the dialog
ColorDirection	Sets the color direction of the dialog
FooterColorStart	Sets the start color of the footer
FooterColorEnd	Sets the end color of the footer
FooterColorDirection	Sets the color direction of the footer
Grid	Gives access to the assigned grid
HeaderColorStart	Sets the start color of the header
HeaderColorEnd	Sets the end color of the header
HeaderColorDirection	Sets the color direction of the header
ItemBorderColor	Sets the border color of the items
ItemStartColor	Sets the start color of the items
ItemEndColor	Sets the end color of the items
ItemColorDirection	Sets the color direction of the items
LabelFont	Sets the font of all labels
ShowApplyFilter	Sets the show Boolean for the apply filter button
ShowClearFilter	Sets the show Boolean for the clear filter button
ShowRestoreFilter	Sets the show Boolean for the restore filter button
ShowCase	Sets the show Boolean for the case label and checkbox
ShowHint	Sets the show Boolean for all applicable hints
TitleAlignment	Sets the alignment of the header title
TitleFont	Sets the font of the header title
Title	Sets the header title
UI	Type class that sets the text properties for the controls

TAdvDBFilterDialog:

BorderStyle	Sets the borderstyle of the filter panel
ButtonAppearance	Sets the appearance of the items add & remove buttons
ButtonAddIcon	Sets the icon of the items add button
ButtonRemoveIcon	Sets the icon of the items remove button
ColorStart	Sets the start color of the filter panel
ColorEnd	Sets the end color of the filter panel
ColorDirection	Sets the color direction of the filter panel
DataSource	Gives access to the assigned datasource
FooterColorStart	Sets the start color of the footer
FooterColorEnd	Sets the end color of the footer
FooterColorDirection	Sets the color direction of the footer
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HeaderColorEnd	Sets the end color of the header
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ShowClearFilter	Sets the show Boolean for the clear filter button
ShowRestoreFilter	Sets the show Boolean for the restore filter button
ShowCase	Sets the show Boolean for the case label and checkbox
ShowHint	Sets the show Boolean for all applicable hints
TitleAlignment	Sets the alignment of the header title
TitleFont	Sets the font of the header title
Title	Sets the header title
UI	Type class that sets the text properties for the controls

UI Properties:

ApplyButton	Sets the text for the apply button
ApplyDialogText	Sets the confirmation dialog text for the apply button
ColumnLabel	Sets the text for the column label
ColumnHint	Sets the column label hint text
CaseLabel	Sets the text for the case label
CaseHint	Sets the case label hint text
ClearButton	Sets the text of the "clear filter" button
ClearDialogText	Sets the text of the "clear filter" dialog
HintApplyFilter	Sets the apply filter hint text
HintClearFilter	Sets the clear filter hint text
HintFilterAdd	Sets the add filter button hint text
HintFilterRemove	Sets the remove filter button hint text
HintRestoreFilter	Sets the restore filter button hint text
OperationLabel	Sets the text of the operation label
OperationHint	Sets the text of the operation hint
OperationEqual	Sets the text of the "equal" operation item
OperationNotEqual	Sets the text of the "not equal" operation item
OperationContains	Sets the text of the "contains" operation item
OperationBeginsWith	Sets the text of the "begins with" operation item
OperationEndsWith	Sets the text of the "ends with" operation item
OperationSmallerThen	Sets the text of the "smaller then" operation item
OperationLargerThen	Sets the text of the "larger then" operation item
OperationSmallerOrEqual	Sets the text of the "smaller or equal" operation item
OperationLargerOrEqual	Sets the text of the "larger or equal" operation item
OperationTrueFalse	Sets the text of the "true false" operation item
OperationAnd	Sets the text of the "and" action item
OperationOr	Sets the text of the "or" action item
RestoreButton	Sets the text of the "restore filter" button
RestoreDialogText	Sets the text of the "restore filter" dialog
ValueLabel	Sets the text of the value label
ValueTextHint	Sets the text of the value label hint

Events

Shared Events

(TAdvGridFilterPanel, TAdvGridFilterDialog, TAdvDBFilterPanel, TAdvDBFilterDialog)

Onchange	Triggers when changing a ui item
OnApplyFilter	Triggers when the apply button was clicked
OnRemoveFilter	Triggers when the filter is being removed
On RestoreFilter	Triggers when the filter is being restored

TAdvDBFilterPanel & TAdvDBFilterDialog only:

OnAfterFilter	Triggers when the filter was applied
OnBeforeFilter	Triggers before the filter is applied

Methods

TAdvGridFilterPanel:

Init	Initiates the grid filter

TAdvGridFilterDialog / TAdvDBFilterDialog:

Execute	Starts the dialog