



Guide to TeeChart help and information sources

teeMach SL

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1. Introduction

This purpose of this guide is to highlight the resources that are available to help you work with TeeChart Pro. All technical information has now moved to electronic format as feedback from teeMach customers suggests that most now prefer to use that medium. Electronic format brings obvious advantages such as word search, portability and (dare we say it) speed...and of course there remains the option of printing a section for portable reading.

There are now many sources of information for TeeChart, of which some contain duplicity or variants on the same theme and some are better than others at answering differing types of questions. To clarify it all, this is the roadmap.

We have tried to minimise the effect of obseleteness of content by putting the information in as generic form as possible, a guide to information sources. We hope it may be of use.

Thanks for using TeeChart Pro !!

2. Supported programming environments

TeeChart Pro is available in 2 formats:

Visual Component Library (VCL) for Borland's programming environments

and

Activex (AX) for other programming environments.

Although the Activex version can be used with Borland compilers we recommend the use of the VCL version as it is written in Native Delphi and thus provides more flexibility for working in those environments.

Proven environments.

TeeChart Pro VCL version supports Windows 3.xx, and Windows 95/NT.
TeeChart Pro AX version supports Windows 95/NT.

It is probable that TeeChart Pro Activex version works in many more environments than those listed below. The list below includes all tested environments. See the teeMach web for an uptodate list of all tested and supported environments. As a guideline the list includes:

Environment	Activex version	VCL version
Borland Delphi v1		✓
Borland Delphi v2		✓
Borland Delphi v3	✓	✓
Borland Delphi v4	✓	✓
Borland C++ Builder v1	✓	✓
Borland C++ Builder v3	✓	✓
Microsoft Visual C++ v5	✓	
Microsoft Visual Basic v4	✓	
Microsoft Visual Basic v5	✓	
Microsoft FoxPro v4	✓	
Microsoft FoxPro v5	✓	
Microsoft Visual J++ v1.1	✓	
Microsoft Internet Explorer v3	✓	
Microsoft Internet Explorer v4	✓	
Microsoft Office 97 (VBA)	✓	
Microsoft ActivePad v1	✓	
Microsoft IIS v4 ASP	✓	

TeeChart Installation

All versions of TeeChart Pro except those for Borland Delphi v1, v2 and C++ Builder v1 are delivered in a single executable installer file. If you received TeeChart Pro by floppy disk or CDROM then that file launches from the first disk and calls the other disks during the installation. Running the installer file starts the TeeChart Pro installation updating all relevant registry entries and copying files to disk. (For Delphi 1 and 2 and C++ Builder v1 follow the instructions in Install.txt.)

The installer creates a menu group below the Windows 95 / NT menu to access TeeChart Pro files, tutorial documents, help and examples.

Help installation

The TeeChart online helpfile is installed at TeeChart installation time. See the section 'Where to look for help:Online Help' for a guide on usage. The installer registers the helpfile with Windows and adds an icon for direct access to the TeeChart menu group. Via this standard installation you can obtain, using F1 from most programming environments, help on all TeeChart Pro's properties and methods and access to Online help's TeeChart User (quick reference) guide. You can further enhance the installation by adding TeeChart to the index for your programming environment's default Help Contents file (.CNT).

Eg. How to add TeeChart Pro Online Help to your programming environment's default Help index.

Programming environment	Contents file	Add line
Delphi	Delphix.cnt (x is version number)	(TeeChart VCL version) :Index teechart.hlp
	Delphix.cfg (x is version number)	(TeeChart VCL version) :Link TeeChart.Hlp
Visual Basic	VBx.cnt (x is version number)	(TeeChart AX version) :Index TeeChart Pro=teechartx.hlp

3. Where to look for help

There are several sources of help for TeeChart Pro. This area is important as an understanding of where to look can save a great deal of time.

Code completion

Presently support for code 'completion' is limited to Delphi v3 and v4 and Visual Basic v5. The native code prompter in these programming environments will show all properties and methods available for any TeeChart class. Simply type in the start of the programming line and on typing the point separator all available Class options will appear.

Online Help

The Online help is the first stop for any queries relating to syntax of code declarations. The Online help can be reached in several ways:

- By entering F1 when a TeeChart property is selected as written on your programming page. Support for F1 is limited to a few programming environments, namely Delphi, Borland C++ Builder (VCL version) and Visual Basic, Visual FoxPro and Microsoft Office (AX version).
- By entering F1 when highlighting a TeeChart placed on a Form. This is supported by the above named programming environments and Visual C++. You may then select a Contents entry or search for the property or method via the index.
- By opening the helpfile from the Windows menu. Go to the TeeChart icon group in the menu and select 'Help'. You may then select a Contents entry or search for the property or method via the index.

- By Selecting the Question mark icon from the top right corner of the Chart Editor and dragging it onto a property on the Editor page. TeeChart help will open to show the runtime equivalent of that property. The helpfile may then be searched to find any other TeeChart property or method.

TeeChart Examples

Coded examples can be accessed via the 'Examples' icon in the TeeChart Pro menu group. The icon takes you to the parent folder for all coded examples which are classified by sub-folder.

A useful way to get help from the examples is to use Windows' file finder to search through the directory tree for project files containing a word (property or method) for which you would like to seek a coded example, then to followup by opening the projects related to the found item.

Example:

Use Windows Find File and look for the method or property in this way:

1. Point the Windows' File finder to the TeeChart Examples folder structure.
2. Select the File type for the programming environment in which you are working from the table below and put the wildcard equivalent (eg. *.pas) in the file search criteria of your search.
3. In the 'Advanced' section of File Finder put the word or phrase you are searching for (eg. "GetAxisLabel").

Note - Try to limit the search criteria as much as possible to avoid mistakes as syntax will change between programming environments. For example the OnGetAxisLabel event declares as (depending on Form and Chart name):

"Private Sub TChart1_OnGetAxisLabel" in Visual Basic

"procedure TForm1.Chart1GetAxisLabel" in Delphi

"void CVCExampleDlg::OnOnGetAxisLabelTchart1" in MS VC++

4. Start search. All files returned will have an associated project file as denoted by extension in the table below. Open the project file in the same folder as the found file to open the example project. Alternatively view the found file with notepad or other text editor.

Programming language	File type containing TeeChart code	Associated Project file
Borland Delphi	*.pas	.dpr
Borland C++ Builder	*.cpp	.mak
MS Visual Basic	*.frm, *.bas	.vbp
MS Visual C++	*.cpp	.dsw (workspace)
MS VBScript	*.htm, *.asp	
MS Javascript	*.htm, *.asp	
MS Java ++	*.java	.dsw (workspace)

Tutorials

HTML Tutorials contain a guide to use for the key areas of Teechart Pro's component libraries. You can access the Tutorials via the icon in the TeeChart Pro menu group. We recommend you take a look at the Tutorials as early as possible to familiarise yourself with the information available, you will probably find some useful tips there when you come to start working with projects. We recommend that you use Internet Explorer when viewing the tutorials as some features are optimised using ActiveX.

FAQ

TeeChart Pro's Frequently Asked Questions are available on the teeMach web:

www.teemach.com/faq/TeeFAQ.htm

The FAQ includes many hints on usage of specific properties and methods and for implementing various types of application.

Support Question submission

The teeMach web includes a page for posting questions to us.

You can use this method to send us any questions for information which you cannot find in the FAQ. We prefer to receive questions sent in this way if possible, as the format allows us to more easily log, track and record trends in problems reported to us. The address of the webpage is:

<http://www.teemach.com/support/TeeQuestion.htm>

Documents

TeeChart documents are included in the root installation folder of TeeChart. These files will vary between versions but normally include several text files:

Welcome.txt - General information of interest

Release.txt - Contains release notes for your version of TeeChart

License.txt - License information

The folder will also contain Word format documents including:

User guide

The User Guide now forms part of the Online Helpfile. It includes an introductory guide to creating and working with Charts and a more indepth look at some characteristics of Chart properties and methods. To access the User Guide Open the Online Help Contents and follow the links to User Guide.

Introduction to TeeChart

This document. A guide to all information sources for TeeChart.

teeMach Web

The teeMach web, <http://www.teemach.com> is regularly updated with new information:

- The Technical pages at the website contains many coded examples to download in addition to technical commentary and updated FAQ
- New version information - maintenance releases for download
- Links to webs of interest to TeeCharters
- Trial versions of new and existing products

Email support

teeMach SL provides an email technical support service. This takes the form of two levels:

Standard support

- 30 days free support on purchase of a TeeChart product
- Help with installation queries
- Maintenance release notification
- Receipt of up-to-date TeeChart FAQ on submittal of a technical query

We will attempt to respond to those enquiries that highlight a new issue not covered in the FAQ and that may be of interest to other TeeCharters. We will include the reply to the update the FAQ. Please use the web Question submission form to send us questions and refer to the FAQ before submitting questions.

Pro support

This takes the form of the **Pro Support program**. Please check the teeMach web for latest information about support packages.

The Pro program includes these features:
As Standard support plus:

- 25 questions per year

- Reply within 48 hours in working days with receipt confirmation emailed the same day
- Emailed problem reports
- TeeChart version release notifications

Public Forums

Besides inhouse support for TeeChart here are some public locations where you can obtain help.

Newsgroup

A newsgroup at Inprise Borland is aimed at helping **Delphi** developers with reporting and charting issues. Questions and answers relating to the TeeChart VCL version may be posted there.

Connect your Internet News Browser to this newsgroup server:

FORUMS.INPRISE.COM

Point your Internet News browser to this newsgroup:
borland.public.delphi.reporting-charting

ListServer

Another source of help with TeeChart issues is an independant Mailing List run by Phil Scadden of the "Institute of Geological and Nuclear Sciences of New Zealand". You can subscribe to it to receive emails with questions and answers from other TeeCharters.

To subscribe to the mailing list:

Send an email with the command "**SUBSCRIBE**" in the **BODY** of the email message (**not the subject**), and sending this email to:

teechart-request@lhn.gns.cri.nz

Do not use the above email address to post questions. When subscribing you will receive another email address to talk to the mailing list.

Remember the mailing list is a PUBLIC service, so all your emails will be received by us and by all other TeeCharters.

Feature requests

Please mail feature requests to **wishlist@teemach.com** or use the TeeQuestion submission form. We will evaluate the contents of the list when defining new versions of TeeChart.

Bug reporting

Use the TeeQuestion submission form on the teeMach web for bug reporting. Access this webpage:

<http://www.teemach.com/support/TeeQuestion.htm>.

4. TeeChart Pro version information

Latest TeeChart versions

This guide accompanies all version 4 TeeChart Pro products. For specific release information you can obtain the information in these ways:

Installed VCL version.

Place a TChart on a Form in your Delphi or C++ Builder IDE. Right click on the Chart to bring up the TeeChart drop down menu. At the top of the list of menu items you will see the TeeChart release version number.

Installed Activex version

Use Window's Explorer to locate the **teechart.ocx** file. This is the file that contains the Activex TeeChart Component Library. Select the file and right mouse click to bring up a 'drop down menu'. The drop down menu shows you the option to select 'Properties' where you can find the TeeChart version number.

Have I got the latest version ?

teeMach will email you with new release information for your version of TeeChart. Unfortunately we have no way of checking that you have received the email. To confirm that you have the latest version of TeeChart you can connect to the teeMach web and check the Versions page. See the sections 'Installed VCL version' and 'Installed Activex version' for a guide as to how to check what version of TeeChart you have installed.

Obtaining maintenance releases

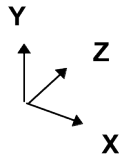
Maintenance releases, eg. v4.0 --> v4.1 (NOT new versions eg. v4 --> v5) can be obtained free of charge from the Customer download page at the teeMach web. See the section entitled 'Have I got the latest version'.

5. Glossary of TeeChart Pro key terminology

Axis

Basic Chart Axes

Axes refer to the the scales that can be placed on the Chart to orientate the data. In standard terms these Axes have either an X, Y or Z component as in the diagram below.



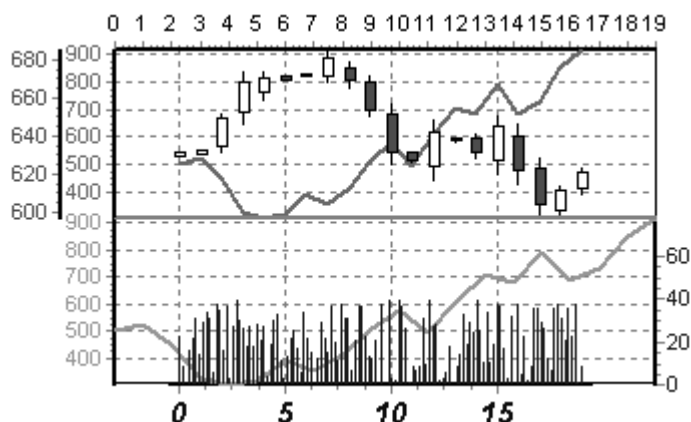
TeeChart has five principal axes, Left, Top, Right, Bottom and Depth. Different data Series can be related to different Axes permitting different Axis scales for different data Series on the same Chart.

- Left and Right Axes refer to a Y-Axis
- Top and Bottom Axes refer to an X-Axis
- The Depth Axis refers to the Z-Axis

Multiple Axes

TeeChart Pro version 4 takes Axes control one step further offering true multiple Axes at runtime. Multiple Axes permit an independantly scaled Axis to be placed anywhere on the Chart with any Start/Finish point.

See the following diagram:



Look up Axes in the online helpfile for a full list of properties and methods and an overview of functionality.

Canvas

Principal Canvases

TeeChart uses several Canvases. Principal canvases include:

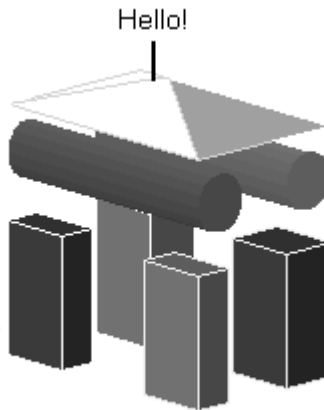
- Chart Canvas which is the visible Area enclosed by the Chart Panel boundary. All Chart Axes and data are plotted on the Chart Canvas.
- Printer Canvas. TeeChart transfers contents of the Onscreen Chart to the Printer Canvas when printing.

Custom drawing on the Chart canvas

If you require a feature that we haven't added to the standard TeeChart properties and methods then, with almost unlimited flexibility, you can add it yourself using the TeeChart Custom draw Canvas methods. Custom draw permits you to output your own objects and text to the Chart panel associating them with runtime variables and Chart conditions. These could take the form of hints on passing a mouse over

a data Series object or a message triggered by a threshold exceeded. The Custom Canvas also supports a variety of 3D objects.

Look up Canvas in the online helpfile for a full list of properties and methods and an overview of functionality.



Choosing a different Canvas for displaying the Chart.

The basic (default) TeeChart Canvas is suitable for fast 2D and 3D (orthogonal) plots. You may select the alternative Windows 3D Canvas or the OpenGL Canvas to display Charts with sophisticated visual characteristics. See the TeeChart documentation for more help on this subject.

Chart Panel

The Chart panel is the backdrop to the Chart. If TeeChart is laid bare of all contents, eg. 'Visible off' for all Charting components, it makes a perfectly serviceable 3D panel.

Look up TChart in the online helpfile for a full list of properties and methods and an overview of functionality.

Chart Rectangle

The Charting area. This is the area contained within the principle 5 Chart axes (Left, Top, Right, Bottom and Depth). The Chart data Series and Grid are plotted inside the Chart rectangle.

Some Chart Series types do not require and do not install by default any axes. The Chart rectangle can be highlighted by enabling the Chart Frame to display.

Look up TChart in the online helpfile for a full list of properties and methods and an overview of functionality.

Datasource

The Datasource for a Chart refers to database sourced data. For the VCL version of TeeChart pro the sources include TTables and TQueries. For the Activex version the datasource refers to an ODBC accessible table or SQL query. Non Datasource sources for data are defined by the TeeChart developer via code using TeeChart's Add methods to add data programmatically to the Chart.

Functions

TeeChart offers several basic functions such as Average, Moving Average and a Curve Fit. These may be selected to add via the Chart Editor's Series gallery. The function may use another Chart Series as input for its point plot. Functions are added as Line Series type by default but may optionally be changed to a different visualisation such as a Bar Series or Point Series.

Legend

The Legend has four default positioning options, Left, Top, Right and Bottom but you may move the Legend to place it anywhere on the Chart Panel including inside the Chart rectangle.

Marks

Marks refer to the Labels associated with each data point of a Series. Marks may be displayed in several ways, as the data value, or text description of the point or as a percentage related to the value of all points taken as a whole. Marks are normally displayed alongside, above or below the Series point. An alternative and complementary data related labelling scheme are the Axis Labels which label at key scale points on the Axis.

Orthogonal 3D

Orthogonal 3D Charts use the default Chart Canvas to plot an angled, vector drawn line to represent a 3D angle (depth). This gives a basic level of 3D visual appearance whilst remaining very fast for data plots. See the TeeChart documentation for more about TeeChart Canvases and the alternative Windows 3D and OpenGL canvases.

Paging

TeeCharts may optionally be subdivided into several Chart pages. This helps visualisation of large data sets or may be useful for 'time dividing' screens of data. Pages may be browsed.

Series

Data Series are the data display method type, eg. Line Series, Bar Series, Pie, etc. You can mix different Series types in a Chart according to your requirement.

Look up Series in the online helpfile for a full list of properties and methods and an overview of functionality.

Titles

Use TeeChart's Title properties to add Header and Footer titles to the Chart, Axis titles and data Series Titles. Custom draw permits you to add additional titles anywhere on the Chart Canvas.

Walls

The Chart Walls are boundaries that can be placed at the side, bottom and back of the Chart Rectangle to accentuate the Charted area. Chart walls are a visual component not containing any data scale related information. TeeChart Pro version 4 has three Walls, Left, Bottom and Back. Each Wall may be coloured and changed dimensionally.

6. TeeChart Pro Component Library

Structural differences between versions

TeeChart Pro is written in Delphi. The Activex version is based on the same Chart code as the VCL version. Due to flexibility offered by COM Interfaces and the chance to start with 'mature' code, the Activex Class structure has been redefined to present a slightly more intuitive model.

Migrating TeeChart Pro version 3 to version 4

TeeChart VCL version

For reasons of backwards compatibility the Class structure of the TeeChart VCL version 4 makes few changes to those of version 3. Thus existing version 3 code will work with version 4 without the need for modification. See the release notes for any special commentaries.

TeeChart Activex version

There are very few changes to the Class structure between version 3 and 4 of TeeChart Activex control. The number of interfaces in version 4 has been increased. Code written for version 3 will work directly with version 4. . See the release notes for any special commentaries.

Class structure

VCL version

Key class hierarchies. See the Online helpfile for a full listing.

Axis and Legend Fonts

- TChartFontObject
 - TChartAxisTitle
 - TChartTitle
 - TCustomChartLegend
 - TChartLegend

Line Pens

- TChartPen
 - TChartArrowPen
 - TChartAxisPen
 - TChartHiddenPen
 - TDarkGrayPen
 - TDottedGrayPen

Series

- TChartSeries
 - TChartShape
 - TCircledSeries
 - TCustomPolarSeries
 - TClockSeries
 - TPolarSeries
 - TRadarSeries
 - TWindRoseSeries
 - TPieSeries
 - TCursorSeries
 - TCustom3DSeries
 - TCustom3DGridSeries
 - TContourSeries
 - TSurfaceSeries
 - TPoint3DSeries
 - TCustomBarSeries

- TBarSeries
 - TBar3DSeries
 - TCustomErrorSeries
 - TErrorBarSeries
 - TErrorSeries
 - TImageBarSeries
 - THorizBarSeries
- TCustomSeries
 - TAreaSeries
 - TBezierSeries
 - TLineSeries
 - TOHLCSeries
 - TCandleSeries
 - TBigCandleSeries
 - TPointSeries
 - TArrowSeries
 - TBubbleSeries
 - TCustomImagePointSeries
 - TDeltaPointSeries
 - TImagePointSeries
 - TGanttSeries
 - TMyPointSeries
 - TVolumeSeries
- TFastLineSeries

Axes

- TCustomChartAxis
 - TChartAxis
 - TChartDepthAxis

Chart and DBChart

- TCustomTeePanel
 - TCustomAxisPanel
 - TCustomChart
 - TChart
 - TCustomDBChart
 - TDBChart
 - TQRDBChart
- TDraw3D

Canvases

- TTeeCanvas
 - TCanvas3D
 - TGLCanvas
 - TTeeCanvas3D

Functions

- TTeeFunction
 - TAddTeeFunction
 - TAverageteeFunction
 - TBasicTeeFunction
 - TCountTeeFunction
 - TCumulative
 - TCustomFittingFunction
 - TCurveFittingFunction
 - TDivideTeeFunction
 - THighTeeFunction
 - TLowTeeFunction
 - TMovingTeeFunction
 - TExpAverageFunction
 - TMomentumFunction
 - TMovingAverageFunction
 - TRSIFunction
 - TMultiplyTeeFunction
 - TStdDeviationFunction
 - TSubtractTeeFunction
 - TTrendFunction

Activex version

The TeeChart ActiveX control implements a structure of interfaces. The class structure internally is based upon the structure described for the VCL version. The interfaces represent the final level of each Class hierarchy.

Classification	Interface
Chart	- ITChart
Line and Fill	- IPen
	- IBrush
Titles and strings	- ITitles
	- IStrings
Canvas and Custom draw	- ICanvas
3D display	- IAspect
Axes	- IAxes
	- IAxis
	- IAxisLabels
	- IAxisTitle
Legend	- ILegend
Export/Import	- IExport
	- IImport
Zoom and scroll	- IScroll
	- IZoom
	- IPage
Printing	- IPrinter
Walls	- IWall
	- IWalls
Classification	Interface
Panel	- IPanel

	- IGradient
Series	- ISeries
	- IMarks
	- IValueList
	- IPointer
	- ICustomSeries
	- IAreaSeries
	- ILineSeries
	- IPointSeries
	- IBubbleSeries-
	- IGanttSeries
	- IArrowSeries
	- ICandleSeries
	- IFastLineSeries
	- ICircledSeries
	- IPieSeries
	- IPolarSeries
	- ICustomBarSeries
	- IBarSeries
	- IErrorBarSeries
	- IHorizBarSeries
	- ISurfaceSeries
	- IVolumeSeries
Functions	- ITeeFunction
	- IAddFunction
	- ISubtractFunction
	- IMultiplyFunction
	- IDivideFunction
	- IAverageFunction
	- IHighFunction
	- ILowFunction
	- ICurveFittingFunction
	- IExpAvgFunction
	- IMovingAvgFunction
	- IChartFont
	- IMomentumFunction