TommySoftware® CAD/DRAW 4



This text contains some very important information on TommySoftware® CAD/DRAW 4! You should take the time and read this text carefully before continuing, even if you might already be familiar with this application. It can spare you a lot of problems later on!

Update from Previous Versions

For information on how to update from previous unlocked versions of CAD/DRAW 4, please click here!



If you do not follow these instructions, it is possible that the new version will not be unlocked and you cannot use the new version of CAD/DRAW 4 and its plug-ins!

Creating and Modifying Objects

CAD/DRAW 4 lets you quickly and easily create technical illustrations and drawings that require a high degree of accuracy. To ensure this accuracy, it has a different approach to creating and modifying objects than artistically oriented graphic applications.

For more information on this subject, please <u>click here!</u>

New Functions and Modifications

For a list of changes and extensions since the initial release of CAD/DRAW 4, please click here!

Questions & Answers

For a list of frequently asked questions on CAD/DRAW 4 and their answers, please click here!

Annual Art Contest

TommySoftware® organizes an annual art contest for all registered users of CAD/DRAW 4. For further information and the entry form, please <u>click here!</u>

TommySoftware® Inhouse Training

If you want to get information about our trainings which will enable you to use this application fast and effective, please <u>click here!</u>

Upgrade from other TommySoftware® Applications

For information on how to convert files from other TommySoftware® applications like CAD/DRAW 2 and CAD/DRAW 3, please <u>click here!</u>



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TommySoftware® CAD/DRAW 4 - Edition 4.25e - Copyright 1997 TommySoftware®

Update from Previous Versions

This version of CAD/DRAW 4 contains a lot of improvements and enhancements towards previous versions. Despite all these changes that increase the power of this application significantly, we decided to offer an update to this version *for free*.

We hope that, keeping that in mind, you will understand that due to these changes, the update process is not as easy as it might be. Please read and follow the following update instructions carefully.

Instructions for all CAD/DRAW 4 users having Versions 4.20 or higher

If you have already installed an *unlocked* version 4.20 of CAD/DRAW 4, you can simply install the new version over the old version. The unlock data will be maintained so that the new version will be unlocked, too.

Instructions for all CAD/DRAW 4 users having Versions before 4.20

If you update from a prior *unlocked* version of CAD/DRAW 4, you may have to preserve the RELEASE4.SYS file. Please call the <u>Help > About CAD/DRAW 4</u> command of the old version and take a look at the unlock code or serial number displayed there. If you should already have removed the old version from your system, please re-install it into a different directory and check the unlock code or serial number of that old version.

The unlock code or serial number begins with either 04000 or 04200 (the product code) and a hyphen, followed by the version number of the program that generated the code. The version number should either be 04.01, 04.10 or 04.11.

If the version number is 04.01, you have a version that requires the file RELEASE4.SYS. This file contains your registration information and is required to unlock the new version. If you have installed the new version over the old version, the RELEASE4.SYS file should still be available, and CAD/DRAW 4 will automatically be unlocked. If you have installed the new version into a different directory, you will have to manually copy that RELEASE4.SYS file from the old version's directory into the new version's directory.

If the version number is 04.10 or 04.11, you have a version that does no longer require the file RELEASE4.SYS, even though it might still exist. In this case, please write down the user name and unlock code displayed in the $\underline{\text{Help}} > \underline{\text{About CAD/DRAW 4}}$ dialog for later reference. Please note that the user name is case-sensitive and that all punctuation and spaces must be preserved precisely! After you have installed version 4.20 or higher, call the command $\underline{\text{Help}} > \underline{\text{Order \& Unlock}}$ there and enter the previously noted user name and unlock code there to unlock the new version.

Additional Instructions for all CAD/DRAW 4 Level 2 users having Versions before 4.20

If you update from a prior *unlocked* version of CAD/DRAW 4 Level 2, you will notice that your old plugins will no longer work. This was necessary due to a change in the plug-in interface.

As a *registered* user of CAD/DRAW 4 Level 2, you will receive a new set of plug-ins and the required unlock codes for free in either of the following ways:

- If you have an e-mail address, please send an e-mail to L2update@tommysoftware.com that states your email address and both the user name and the unlock code of your CAD/DRAW 4 Level 2. You will find this information in the Help > About CAD/DRAW 4 dialog.

We will then send you the plug-ins themselves and a list of unlock codes for these plug-ins via e-mail. Please note that for this service, you have to be able to decode e-mails in MIME format! This service usually takes only one or two days.

- If you do not have an email-address, please send us a fax to either ++1 415 566 6589 (USA) or +49 30 621 4064 (Germany), or a letter to one of our adresses. In any case, state your complete mail address and both the user name and the unlock code of your CAD/DRAW 4 Level 2. You will find this information in the Help > About CAD/DRAW 4 dialog.

We will then send you a disk containing the plug ins and list of unlock codes for these plug ins via

We will then send you a disk containing the plug-ins and list of unlock codes for these plug-ins via mail. The mail delivery may take up to four weeks!

Please note that this service is only available for registered users of CAD/DRAW 4 Level 2!

Creating and Modifying Objects

Most manipulations in CAD/DRAW are based on exact numerical parameters. However, the command Shape > Modify Objects offers a direct method to modify objects using the mouse. In cooperation with the Property Window, this command also allows the direct editing of object properties like color and line type.

Another difference involves the way you select objects. When you use an artistically oriented graphic application to illustrate something that does not require precision, you usually *first* select the objects, choose the command, and then execute the command to modify the objects. With TommySoftware® CAD/DRAW 4, however, you select the command first and *then* the objects to be modified before the command is executed.

This different approach to creating and modifying objects in CAD/DRAW has several advantages. One is that you can use a single command selection to manipulate several objects after another without having to repeat the command selection sequence. For example, by selecting **Move Objects** you could move several objects or object groups without having to select another command, such as **Select Objects**, or the same command repeatedly until you have moved all objects. This can save time when you are making several changes.

Another advantage is that selecting the objects *after* the command makes it possible for the application to know at any time what command to apply to the selected objects. It can therefore inform you immediately when you cannot perform that command on the object.

If you have ever worked with computer-aided design (CAD) software, you will be familiar with this approach and you will be able to start work immediately. If you have never used a CAD application, this approach will be unfamiliar, but as long as you remember to select the command *first* and then the objects to be modified, you will soon see how easy it is to work quickly and still produce precise technical illustrations and graphics.

To select an object, click on it with the mouse. You can select multiple objects by keeping the CTRL key pressed while clicking on several objects, or you can select whole object areas by keeping the SHIFT key pressed and entering the corner points of the area. After once selecting a group of objects, you can select the objects again to further modify them by pressing the F11 key.

For further information on selecting objects, see the description of any command that requires an object selection. At any time, you can display the currently active command's description by pressing the F1 key. More information about basic methods of TommySoftware® CAD/DRAW 4 can be found in the electronic tutorial that is part of each full version of TommySoftware® CAD/DRAW 4.

New Functions and Modifications

This text lists all major modifications that have been done since the initial release of TommySoftware® CAD/DRAW 4. Small bug fixes or performance increases happen all the time and will not explicitly be noted.

These modifications have mostly not been applied to the tutorial and tour, so some methods described in the tutorial and tour might be out-of-date as a faster or easier way exists now. Anyway, they will still be possible.

Version 4.25 (Release July 1997)

- Using the command <u>Draw > Line > Equidistant</u>, Bézier curves are now always resolved into polylines to achieve a higher accuracy.

Version 4.24 (Release June 1997)

- When creating a block that was named equal to a block in another library, the old block was no longer accessible until restart. Same applied when renaming a complete library by editing its title.
- The user-dependent local settings have not been saved correctly in the registry on most Windows 95 systems.
- The dialog windows for text creation and editing have been enlarged to minimize the need for scrolling.
- The calculation of intersection points, especially during snap, has been modified to increase performance.
- When trying to snap intersection points of a curve or surface with itself, some points were not found if the curve was rather complex.
- The calculation of the surrounding rectangle of curves and surfaces was incorrect and did normally include the page center into the surrounding rectangle.
- The command <u>Draw > Line > Equidistant</u> has been recoded, it now works more reliable. If the equidistant calculation locates a problem, a message appears, but the equidistant curve is created anyway.
- It has not been possible to active the option "Encrypt with password" at <u>Configuration > Optionen > File Options</u> on Windows 95 systems.

Version 4.23 (Release April 1997)

- The print dialog now allows scaling factors from 1e-10 to 1e10. In addition, some minor problems with the print preview have been fixed.
- When importing T4G drawings with the option "Merge", errors occured when importing both objects and object-related elements like layers, pens and line types.
- The DXF import now allows to choose whether or not to convert DOS characters into ANSI characters. This option should only be used when importing DXF drawings generated by non-windows applications.
- 256 color bitmaps that had less than 256 colors in their palette were not stored correctly as "embedded" bitmaps.

Version 4.22 (Release March 1997)

- All external import and export filters now own a joint set of standard paths which can be edited with <u>Configuration > Options > Paths</u> and used inside the file selection dialog.
- The DXF import filter now import 3D-polylines, ignoring the Z coordinate.
- The screen display of "curved" elements like circles, ellipses and curves is now completely done using Bézier curves, even when zooming in extremely, improving the redraw speed and accurary significantly.
- The commands <u>Draw>Ellipse>Rotated</u> and <u>Geometry>Ellipse>Rotated</u> did not work properly.
- The calculation of intersection points with and distances to Bézier curves is now done using a new numeric approximation that provides a much higher accuracy while requiring less calculation time.
- The calculation of a tangent to two circles was inaccurate if both circles had nearly the same radius.
- The DXF import had problems with the positioning of texts that were not left-justified. In addition, the slope angle of texts was accidentially ignored.
- The WMF import now handles the META EXTTEXTOUT element in addition to META TEXTOUT.
- Using the WMF import, the object could accidentially be mirrored, resulting in inverted circle and ellipse arcs.

Version 4.21 (Release January 1997)

- The new command <u>File > Import > Embed Bitmaps</u> allows to convert bitmap objects from "external reference" to "embedded bitmap", which means that the bitmap data is stored within the drawing.
- CAD/DRAW 4 now uses the new file selection dialog of Windows 95 and Windows NT 4.0 which allows to rename files and create new directories. All our extensions to that dialog, like e.g. the favorite paths, are still available.
- Using Windows NT 4.0, copying to the clipboard and exporting to EMF did not work properly for circles, ellipses and some texts. It seems like a operation system's function works differently in Windows NT 4.0 compared to Windows NT 3.51, even though no change is documented.
- The automatic conversion of circular arcs to bezier curves during modification failed in some cases.
- The calculation of an equidistant has been optimized, an error in euqidistant calculation of curves has been removed.
- Nested external blocks that resided completely in the same library were not handled and resolved correctly.
- The export to WMF, EMF and BMP always used *all* objects, not only those the user selected.
- The export of texts in WMF files was faulty, characters were oversized by factor 20.
- When creating a new pen or layer whose name ends with a backslash (Ansi 92), the application stopped.

Version 4.20 (Release December 1996)

- The drawing frames and title blocks that were previously contained in seven drawing files titled 6771_?_?.T4G have now been moved into a new library titled FORMS.T4L which is located in the standard library directory.
- Import filters can now hook onto the <u>File > Open</u> command. As a result, it is now possible to open non-TVG drawings by draging & droping them onto CAD/DRAW 4, by calling CAD/DRAW 4 with their

file name in the command line, and of course by opening them with the standard File > Open command.

- Export filters can now hook onto the <u>File > Save As</u> command. As a result, it is now possible to save non-TVG drawings by means of the standard <u>File > Save As</u> command. Simply select the desired file type of the corresponding list.
- The DXF import filter has been enhanced, it now offers several new options that allow to specify which line patterns and layers from the DXF file shall be maintained. This helps to avoid a large increase in the number of line patterns and/or layers when importing multiple DXF files into one drawing.
- The DXF export filter has been enhanced, it now offers several new options: The "Output for NC" option results in an output consisting of single lines, circles and circular arcs instead of complex polylines. This speeds up many NC systems. The "Resolve Texts..." option allows to select whether to resolve texts into outlines or export plain text. And it is now possible to specify the number of fractional digits to be used for floating point numbers.
- The standard property set of all objects has been enhanced by the "Line End Style" and "Line Join Mode" setting. This allows to set these values indepently for each object. As a matter of fact, these new properties are also available for pens and layers.
- The display mode "Dimetric View 2, right side" was faulty, it overscaled the image by factor 2.
- Dimension parameters have been enhanced: The dimension text can now be placed inside the dimension line, which will be interrupted in that case. The distance between the extension lines and the referenced object can now be specified separately for each dimension.
- Most standard commands from the Draw and Geometry menus have been revised. They do now work "as intended" in non-standard views like the Isometric and Dimetric view. Vertical is vertical, horizontal is horizontal, perpendicular is perpendicular, rectangles are rectangular, rectangular ellipses are rectangular ellipses. Only the circle commands have not been modified, you still have to use ellipses instead of circles in non-standard views.
- The two not yet assigned function keys have now been assigned: Shift+F7 calls the hatching type list, Shift+F8 calls the line type list.
- Drawings can now be saved in compressed mode, using standard ZIP compression. This option can be toggled on and off using different file type settings in the <u>File > Save Drawing as dialog</u>. Compressed drawings can be secured using a password that is edited and activated using the <u>Configuration > Options > File Options</u> command.
- In the dialog of the <u>Configuration > Settings > Screen</u> command, the new "Object Numbers" option was added. If it is activated, a running numer will be displayed for each (partially) visible object according to the display order. For surfaces and curves, an additional index number displays the order of the subcontours.
- Massive extensions to the Toso Interface, its version number was set to 4.2.
- Bitmaps can now be embedded into the drawing. After executing the <u>File > Import > Windows Bitmap</u> (*.BMP) command, a dialog appears which offers the choice between creating a reference to the bitmap file or embedding the bitmap data into the drawing.

Version 4.11 (Release August 1996)

- In the dialog of the <u>Configuration > Settings > Screen</u> command, the new "Orientation Arrows" option was added. If it is activated, the starting point and orientation of each sensible object will be displayed by means of a small arrow.
- The new command <u>Trimming > Trim Object > Invert Orientation</u> allows to invert the orientation of an

- object. This is important when passing data to NC machines or when using the data in applications where the orientation is of importance.
- The new command <u>Trimming > Trim Surface > Set Starting Point</u> allows to set the starting point of a surface's outline to a specific location. This is important when passing data to NC machines or when using the data in applications where the display sequence is of importance.
- When printing monochrome bitmaps, colors transmitted by the bitmap object were not reproduced correctly even tough the display was correct.
- The command <u>Configuration > Layer Management > Concentrate on</u> now automatically activates the first of the layers selected for concentration.
- The command <u>Draw > Line > Equidistant</u> has been completely recoded. It now works with much more complicated outlines and avoids "loops" when creating rounded corners.
- The settings the ortho-mode have not been saved correctly. This could possibly lead to errors when editing those settings.
- The command <u>Configuration > Trim Surface > Split Into Outlines</u> now marks all created outlines as "Previous Selection".
- Using Windows NT 4.0, the title bar of the popup menu was accidentially overwritten.

Version 4.10 (Release May 1996)

- The names of American paper sizes were wrong.
- Direct modification of objects inside the view window did not work.
- When inserting a new object into a layer that is currently invisible, a dialog window allows to cancel this process.
- The command <u>Library > Block > Edit</u> offers a new button which allows the creation of a new, empty folder that can subsequently be filled with blocks.
- Support of Digitizers was added to Level 2. CAD/DRAW 4 Level 2 supports all Digitizers that work with the WINTAB driver from LCS/Telegraphics (e.g. CalComp, Wacom, etc.).
- From this version on, a comprehensive tutorial is included which shows some complete examples illustrating basic and advanced procedures for the application. In the TUTORIAL directory, you will find some files containing the resulting drawings of those examples.
- The reference was completely revised, now offering more general information than before. Also, the description of basic procedures (like selection) is no longer repeated on and on. Instead, there is a link to a chapter describing that procedure in depth.
- The display of the used memory amount in the status window now includes the memory used for all currently used bitmaps.
- Copying geometry objects only to the clipboard was only possible if the geometry output was activated at <u>Configuration > Settings > Output</u>.
- When exporting WMF files, erasing surfaces where always exported with a black filling.
- The display of erasing surfaces in Windows 95 was faulty, especially the display color could not be modified.
- The import of WMF files was sometimes cancelled without further explanation. This was due to objects that were neither framed nor filled.

- The <u>Configuration > Layers > Edit</u> dialog was revised, now featuring icons before each entry which show the status of the five available layer options. In addition, two new buttons offer the following functionality: "Selection" offers a selection filter, allowing to select or deselect layers based on keywords contained in their names. "Settings" offers the possibility to export and import the complete layer settings, by means of which its easily possible to work with several oftenly-used layer states.
- The <u>Library > Convert External Blocks</u> command did not work correctly with nested blocks.

Version 4.02 (Release December 1995)

- When creating blocks with the "Resolve Properties" option set, only pen properties were resolved, but not layer properties.
- The commands <u>Draw > Curve</u> and <u>Draw > Surface</u> did not work properly when using circular arcs or relative values during input.
- The commands <u>Draw > Line > Parallel</u>, <u>Draw > Line > Parallel</u>, <u>numerical</u> and <u>Draw > Line > Angle to Line</u> have been modified. They do now expect an additional point, allowing to first place the reference straight line and the entering the line's start-point.
- When creating a group out of other groups or blocks, the time require to finish that task was extremely long in some cases due to a possible internal feedback.
- The command <u>Trimming > Trim Edge</u> was extended to be able to trim any combination of line and circular arc.
- The import of very large WMF or EMF files sometimes caused an stack overflow due to incorrect parameter handling.
- Most setting and option dialogues have been combined into property sheets. This allows fast access to all settings and options without chosing several commands. The previous key codes are still valid, anyway.
- When importing WMF-files, in some rotated texts characters were rotated in the wrong direction.
- When entering the section at <u>File > Export > Bitmap</u>, <u>Section (*.BMP)</u> beginning with the lower right corner, the section was calculated wrong.

Version 4.01 (Release September 1995)

- Some Windows 95 printer drivers refused to print. This was caused by a difference in printer handling between Windows NT and Windows 95.

Version 4.00 (Release September 1995)

- Initial release.

Ouestions & Answers

When I copy some objects to the Clipboard in TommySoftware® CAD/DRAW 4, an area of about 5 millimeters around the objects remains blank. Why?

When copying to the clipboard (or when printing), the application uses the output parameters that can be edited using the command <u>Configure>Settings>Output</u>. One of those settings determines whether the output area in calculated based on the objects' surrounding frame or based on the current page size. By default, the setting "Object Frame" is active, with an additional blank frame of 5 millimeters. To remove this blank frame, set the value of "Offset" to 0 millimeters.

As you will see, the output settings can influence all output results (printer, plotter, clipboard and bitmap) in several ways.

How can I prepare TommySoftware® CAD/DRAW 4 for using either Imperial or Metric units?

The English release of TommySoftware® CAD/DRAW 4 should by default use Imperial units. Here is a description of how to setup TommySoftware® CAD/DRAW 4 for the use of Imperial or Metric units: Create a new drawing. Select the command Coordinate Systems>Edit">Coordinate Systems>Edit, select the coordinate system "Drawing & Dimensioning" and press the "Units" button. In the appearing dialog, select either "Inch" (for Imperial) or "Millimeter" (for Metric) in the "Length:" list. This sets the unit used for all scale-dependent lengths like coordinates, lengths, dimensions, etc. You may also select either "Inch" (for Imperial) or "Millimeter" (for Metric) in the "Line:" list. This sets the unit used for scale-independent measures like line widths, font sizes, etc. End this dialog by pressing "OK".

Now, press the "Numbers" button. In the appearing dialog, select an appropriate number display form in the "Length Display:" list. For Imperial units, this could by "Yard Foot Inch (Floating Point)", resulting in outputs like 1yd 2' 3.5", or "Yard Foot Inch (Fraction)", resulting in outputs like 1yd 2' 3 1/2". For Metric units, select "Standard (Floating Point)". End both dialogs by pressing "OK", then select the command Configure>Save Elements as Default to save these settings permanently.

Note: These settings are drawing-dependent, i.e. if you want to change the unit settings in an existing drawing, you have to load that drawing and perform the steps described above. Instead of selecting Configure>Save Elements as Default, simply save the modified drawing.

How does one create a drawing at an Imperial scale of, for example, 1/8"=1' or 1/4"= 1'? I can figure out how to change from metric to Imperial coordinates, but can only find reduction factors geared to units of 10.

You can easily enter such a scale by using the "Current Scale" edit fields at the command <u>Configure>Coordinate Systems>Edit</u>, button "View". In these fields, you can enter values that are combined with units, so you may e.g. enter (1/8) in in the first field and 1ft in the second field. This will result in the correct scale of 1=96.

When I export a drawing that has been created using CAD/DRAW 4 to the DXF file format (by means of the DXF export filter), all fillings get lost. How can I avoid that?

In the DXF file format, standard objects like circles or polygons cannot be filled. Due to this limitation, all CAD/DRAW 4 objects are converted to outlined objects.

If you want to export filled objects to other application, use the Clipboard or the WMF file format. Alternatively, you can also create a PostScript® file by using a PostScript printer driver and redirecting its output to a file.

CAD/DRAW 4 does not print TrueType fonts. What can I do?

Some printer drivers are not able to print TrueType fonts correctly in all situations. This problem is especially common with rotated text. In this case, enable the "TrueType as Surface" check box in the Configure>Settings>Output.

Most printer drivers also have a setting determining how TrueType fonts are handled. Usually, there is a "Print TrueType as Graphic" check box in the printer setup "Options..." dialog; try printing with the box enabled and disabled.

CAD/DRAW 4 sometimes displays the message "The operation is too complex or not enough system memory reserved". What's the reason for this message?

Insufficient memory causes this message to appear. The system memory is used for temporary data during complex calculations (e.g. hatching, or generating surfaces.). If this message appears you should use the command Configure>Options>General to increase the amount of internal memory.

Annual Art Contest

TommySoftware® organizes an annual international art contest for all registered users of TommySoftware® CAD/DRAW 4. In order to participate, submit your best illustrations and graphics on a floppy disk along with this entry form (printed out, filled in and signed) to:



North America, Inc. 1843 10th Avenue San Francisco, CA 94122 U. S. A. Germany Selchower Straße 32 D-12049 Berlin Germany

The illustrations and graphics must be created with TommySoftware® CAD/DRAW 4 and must be submitted as genuine T4G files. If special fonts have been used in a file, please submit that file in two versions with one version having all texts resolved (see command Lettering > Text > Resolve).

The winners will be chosen once a year and announced on May 1st. To be considered, entries must be received until March 31st of the current contest year. Awards will be paid cash, they will be: first place US\$ 200, second place US\$ 100, third place US\$ 50, fourth and fifth place US\$ 20. If we receive less than 10 entries within one year, the contest will be suspended for one year, all received entries will automatically participate in next year's contest.

The decisions of the judges are final. All entry materials (disks, paper, etc.) become the property of TommySoftware®. Of course you retain the copyright to your art work. Only registered users of TommySoftware® CAD/DRAW 4 may participate!

Name:	
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These drawings are being submitted for the Tommy Softwaren CAD/DDAW 1 Annual Art Contact I	

These drawings are being submitted for the TommySoftware® CAD/DRAW 4 Annual Art Contest. I certify that these are original works and that I am the artist. I understand that all entry materials (disks, paper, etc.) become the property of TommySoftware® and cannot be returned.

As copyright owner of the art work, if I am a winner I grant TommySoftware® the non-exclusive right to make unlimited printed or electronic copies of the submitted drawings. I also permit TommySoftware® to use my name and likeness with copies of the drawings and in any publicity related to the contest.

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Date: Si	gnature:

Comments:

TommySoftware® Inhouse Training

TommySoftware® offers training courses on all TommySoftware® CAD and graphic software, whether for beginners or advanced users. The TommySoftware® trainers that were involved in the applications' development will introduce you at your place (inhouse trainings for several employees of your company) to everything you need to know.

To enable you to get to know a powerful CAD package like TommySoftware® CAD/DRAW 4 in the most effective and efficient way (whether you are a first time user of this package, have acquired an update or alternatively a power user familiar with it's entirety), TommySoftware® offers you in-house training in connection with experienced software tutors. We enable you to learn your TommySoftware® product in the shortest possible time and support you in gaining an in-depth knowledge of how your ideas can be easily transferred into a technical drawing with the help of our CAD system.

Our specialists with their many years of training experience come to your workplace and train you on the computers you are familiar with. As well as a general introduction of the way your TommySoftware® product works we also include dealing with your own specific daily tasks in the training. We aim to give you solutions to your challenges not just convey the basics of the package. The transition between learning and production can be achieved without downtime because the participants can employ the skills they have learnt straight away.

Our tutors work directly with the TommySoftware® development department so you will obtain the most up to date information. Your suggestions are taken directly from the training to the development department to enable us to enhance our program development for the future.

The advantages of TommySoftware® training are obvious:

- The contents of the training are personally designed and adapted to the needs of your company. The resulting level of knowledge of the participants guarantees high effectivity/productivity
- Small training groups have extensive individual support
- Loss of productivity, overtime, out of house training difficulties on new equipment, travel and expense costs are eliminated
- Your CAD system will be optimally configured and set up as part of the training
- As a result the CAD system is operational immediately to meet the objectives and goals your company wants to achieve

We offer trainings for the following TommySoftware® products:

- CAD/DRAW 2
- CAD/DRAW 3
- CAD/DRAW 4 Level 1
- CAD/DRAW 4 Level 2

Training can be from 1 to 5 days depending on your requirements. Additional days can be requested to either refresh the employees or to give specific training in solving new difficulties. These training can either be in English or German, please specify which best meets your requirements when corresponding with our tutors.

The costs for our in-house seminars are independent of the number of participants, and the type of program you have, they are costed on a per day basis. We recommend a maximum of eight participants and to be most beneficial there should be no more than 2 persons per computer.

For further information on trainings and the current prices, please call our office in San Francisco, or visit the "Support" section of our WWW site at http://www.tommysoftware.com.

Upgrade from other TommySoftware® Applications

When upgrading from other TommySoftware® applications to CAD/DRAW 4, you will want to use your old drawings and libraries. In order to use those files, you will have to convert them using a single or multiple file conversion programs. The conversion programs usually ship with CAD/DRAW 4, they all have similar names of the form XXX_YYY.EXE, where XXX is the source file type extension and YYY is the destination file type extension. T3G T4G.EXE e.g. will convert T3G files into T4G files.

If you have a large number of files to convert, copy the source files into a single empty directory and use the "Convert Directory" command in the conversion programs. The intermediate files possibly created during multiple conversion can be deleted after the conversion was been finished successfully.

If a required conversion program is not delivered with this application, you can download a complete set of conversion programs from out WWW site at http://www.tommysoftware.com or call one of our offices for a conversion program disk.

Upgrade from CAD/DRAW 1 or 2

If you have upgraded from CAD/DRAW 1 or 2, you will have drawing files with the *.MPG extension, and library files with the *.TVL extension.

For drawing files (MPG), the conversion sequence is MPG -> T2G, T2G -> T3G, T3G -> T4G.

For library files (TVL), the conversion sequence is TVL -> T2L, T2L -> T3L, T3L -> T4L.

Upgrade from CAD/DRAW Professional

If you have upgraded from CAD/DRAW Professional, you will have drawing files with the *.T2G extension and library files with the *.T2L extension.

For drawing files (T2G), the conversion sequence is T2G -> T3G, T3G -> T4G.

For library files (T2L), the conversion sequence is T2L -> T3L, T3L -> T4L.

Upgrade from CAD/DRAW 3 or Tek Illustrator

If you have upgraded from CAD/DRAW 3 or Tek Illustrator, you will have drawing files with the *.T2G extension and library files with the *.T3L extension.

For drawing files (T3G), the conversion sequence is T3G -> T4G.

For library files (T3L), the conversion sequence is T3L -> T4L.