# This file TRIUS, Inc. 04/26/96yesyesyesyesyesyesDRAFT Choice Helpdc2yesyes26/04/96

# **Table of Contents**

DRAFT Choice for Windows is a 2-Dimensional Computer Aided Design (CAD) program from TRIUS, Inc. In order to help you get the most out of this Help facility, the Help topics are organized in two categories, as shown below: Click on either topic, or select *Search* from the **Menu** above to find information on a specific item.





# **General**

General Information on how to move around the screen, how to use the built-in calculator, how to select objects, etc.

# **Commands**

Command reference section, explaining what each DRAFT Choice command does.

# **Commands**

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Click here to Print an Order Form using Windows Write!

# General

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Click here to Print an Order Form using Windows Write!

# **Keyboard**

Once the main menus have been invoked (either by the Alt-First Letter combination, or by moving the <u>Mouse</u> pointer into the main menu area), commands are accessed by pressing the first letter of the command, or by highlighting the command and pressing [ENTER].

The Arrow keys may be used to either select a command from the current menu, or to move the cross-hair cursor around when entering coordinates, selecting objects, etc.

# **Mouse Operation**

Normally, starting Windows already loads the appropriate mouse driver supplied with your MOUSE. If that is not the case, please, refer to your MOUSE'S operating manual for details on how to install this driver.

Menus may be accessed by simply pointing the mouse pointer to a menu selection and pressing the left mouse button.

To exit from any menu press the [ESC] key, on the <u>keyboard</u>, or move the mouse pointer outside the menu area and press the Left button mouse. The mouse & keyboard key equivalence is given below:

- Left Button = [ENTER]
- Middle Button = [ESC]
- Right Button = [ESC]

# **Function Keys**

Many of the options available through the DRAFT Choice menus may also be invoked by simply depressing the appropriate function key, as shown below:

# F1 [HELP]

Pressing F1 while in the ready mode of the program invokes the help mode. To get specific help for the command you are currently accessing, press Alt-F1.

Please, note that when a dialog box is on the screen, the help mode cannot be activated.

# F2 [COORDINATES]

Press this function key to enable or disable on-screen echo of drawing cursor position (coordinates).

#### F3 [CALCULATOR]

Invoke the formula calculator. The operators and functions available in the calculator are listed under <u>Calculator</u>

#### F4 [WINDOW/PICK]

Toggle between the WINDOW and PICK selection methods, (see SELECTION METHOD).

# F5 [ADD/SUBTRACT]

Toggles selection mode to either add objects to editing selection list or remove objects from the list.

# F6 [GRID]

On-screen grid is immediately drawn or erased depending on previous status.

# F7 [ISOMETRIC]

Permits drawing in vertical and 30-degree angles (six directions) to produce isometric drawings. This mode can be adjusted at any time while drawing an object.

#### F8 [ORTHOGONAL]

Toggles the ORTHO option ON and OFF. When turned on, all line segments are drawn either horizontal or vertical (four directions). This mode can be adjusted while drawing an object.

### F9 [SNAP]

Toggle the SNAP option ON and OFF. The snap spacing is set using the Option, Grid, Snap Horizontal and Vertical commands. When snap is active the draw cursor is forced to the nearest snap point. This mode can be adjusted while drawing an object.

#### F10 [ATTACH]

Toggles ATTACH option ON and OFF. When active and a point is indicated, DRAFT Choice will search for the nearest object within the pick window distance (8 pixels). If an object is found, DRAFT Choice will determine the closest reference point on the object (according to the attach point selected under Options, Attach), and the cursor will be repositioned at that point. This mode can be adjusted at any time while drawing an object.

#### Shift - F1 [UNDO]

Undo cancels any elements created by the last editing operation and restores any previous objects that were modified.

# **Shift - F2 [PERPENDICULAR]**

Toggles perpendicular mode ON/OFF. This mode constrains line objects to be oriented perpendicular to the last line created.

# **Shift - F3 [ARC DIRECTION]**

Changes the direction for drawing arcs, clockwise/counterclockwise. During a drawing operation the end points of the arc are also exchanged.

# Shift - F4 [PURGE]

Purges the Undo buffer. As elements are being deleted, they are not removed from memory, but rather they are tagged for deletion and placed in a special buffer, so that multiple UNDOs may be performed. PURGE clears up the RAM used by this buffer.

 $\underline{\textit{NOTE}}$  that once the buffer is purged, the UNDO command cannot recover any elements deleted prior to the PURGE operation!

# **Calculator**

Calculator icon. Once invoked, the following operators and functions are available (It should be noted that not all of these functions are available as selectable buttons, but they may be entered The calculator in DRAFT Choice for Windows is invoked by pressing the F3 key or selecting the using the keyboard):

- + Addition
- Subtraction
- \* Multiplication
- / Division
- ^ Raise to Power

```
EXP(X) = Exponential

SIN(X) = Sine of X (X in degrees)

COS(X) = Cosine of X (X in degrees)

ABS(X) = Absolute value of X

TAN(X) = Tangent of X (X in degrees)

ACOS(X) = Arc Cosine of X (Result in degrees)

ASIN(X) = Arc Sine of X (Result in degrees)

ATAN(X) = Arc Tangent of X (Result in degrees)

INT(X) = Integer Portion of X

LOG(X) = Logarithm (base 10) of X

LN(X) = Natural logarithm of X

MOD(X,Y) = Modulo division; return the remainder of X divided by Y.

PI = Return constant value 3.14159265

SQRT(X) = Square root of X

IF(X,A,B) = Returns A if x>1, B if X=0
```

NOTE: You may enter a formula when a numeric value is requested by any dialog window or input box. The above operators and functions may be combined for complex calculations, e.g.:

SQRT(36) \* LOG(100) + 10 will result in the value of 22

# **Drawing**

The DRAW menu contains all the DRAWING commands available in DRAFT Choice. To precisely locate the start and end points of an object, just type the XY coordinate at any time, using <u>Absolute</u>, <u>Relative</u>, <u>Polar</u>, <u>Bearing</u>, <u>Traverse</u>, or <u>Close</u> coordinates.

#### LINE

Draws LINES between consecutive points until ESC is pressed

#### BOX

Draws a horizontally-aligned BOX between two points

#### CIRCLE

Draws a CIRCLE using the mode selected under Draw, Circle, Setup (Radius, Diameter, Points, Ellipse)

#### **TFXT**

Places TEXT on desired screen location with variable Size, Angle, Font... as specified under <u>Draw, Text, Setup.</u>

#### **ARC**

Draws an ARC (portion of circle). The direction of the drawn ARC is controlled by the Shift-F3 key.

### **POLYGON**

Draws a regular POLYGON with a user specified # of equal sides

#### **BF7IFR**

Draws a flexible curve between two points. The two end- points are fixed first and the curve is dynamically flexed.

# **Complex**

Allows creation of a COMPLEX line, from the types described below.

#### SPLINE

A smooth curve (N-th degree, see File, Configure, Level) is fitted through the specified vertices. Please, note that this value should normally not be set higher than 3 to 4.

#### **FREEHAND**

Pixel oriented FREEHAND drawing. Press ENTER and start drawing, until you press ESC. Note that as you are drawing freehand, the program will automatically break the created line into multiple complex segments based on the number of control points needed to uniquely identify each segment.

#### **POLYLINE**

A complex line is created (single entity) made up of a collection of straight lines.

#### **TAPE**

Double line (simulating a tape) is drawn as a single entity.

#### **MODIFY**

Allows you to modify properties of Complex Entities.

#### Double

Creates a polyline composed of parallel line segments. Like a double line.

#### **Join**

Connects lines or complex entities into a single complex object. Joining is based on the order the segments are selected and the proximity of their end points.

#### Contro

This command is used to change the location of control points of complex entities.

# **Coordinates**

A number of different coordinate systems are supported by DRAFT Choice for Windows. All coordinates are entered prefixed by a letter indicating the type of system, followed by the X and Y coordinates separated by a comma. The different systems and types of coordinates are explained below:

#### **Absolute**

Based on the Cartesian (rectangular) system. Absolute locates a point at the specified X and Y distance from 0,0 ( usually, from the lower left corner of the drawing pad).

#### Relative

Based on the Cartesian (rectangular) system. Relative locates a point at the specified X and Y distance from the last point entered.

#### Polar

Based on the polar system. Locates a point at the specified R and theta (vector and angle, entered in this order!). R is relative to the origin.

#### **Bearing**

Locates a point at the specified R and theta (vector and angle, entered in this order!). R is relative to the last entered point.

#### **Traverse**

Similar to the Polar and Bearing types, but the angle (theta) is measured clockwise, relative to the last direction.

#### Close

Draws a straight line to the first point selected when the Draw command was invoked. Useful in creating closed polygon shapes.

# **Edit**

The EDIT commands directly act upon objects allowing them to be erased, duplicated, translated, rotated, mirrored, or combinations thereof.

#### **COPY**

COPY element(s) to another location in the drawing

#### MOVE

MOVE elements(s) to another location in the drawing

#### ERASE

ERASE selected elements (UNDO may be used to recover them)

# **SCALE**

SCALE element(s) up or down according to user-specified X and Y factors. This will change the actual element size, unlike Image, Window which will simply change the view temporarily while the scaled object size remains constant.

#### **ROTATE**

ROTATE element(s) by a user-specified angle about selected point.

NOTE: (+) angles are rotated counter-clockwise (-) angles are rotated clockwise

#### **XTEND**

EXTENDS the length of one line to intercept with another identified line.

#### **ARRAY**

Creates an ARRAY of multiple copies (see ARRAY topic for more info).

### FLIP/MIRROR

Flip/MIRROR element(s) about vertical axis.

#### **TRIM**

Erases parts of lines extending beyond a user-specified boundary.

#### **BREAK**

BREAKS a single line into two lines at the user-specified points, deleting the segment between the points

#### **OFFSET**

Creates a parallel copy at a specified offset distance

#### **CORNER**

Modifies the intersection of two non-parallel lines using either a fillet, a chamfer or a simple corner intersection.

#### TWEEN

Transmute from a shape to another by multiple copy morphing.

#### **WARP**

Permits dynamic skewing, shearing and scaling of objects.

# **Alter**

The ALTER commands directly act upon the primary characteristics of selected objects.

#### **TEXT**

Allows editing of existing TEXT. Original text is entered using the Draw, <u>Text</u>,Place command.

### **STYLE**

Allows the type of line drawn and thickness of line to be changed

#### FILL

Allows the FILL, bit-mapped pattern of selected complex elements to be changed

#### HATCH

Allows the vector based HATCH fill pattern of selected complex elements to be changed

#### UNITS

ALTERS the UNITS of measurement used for selected object(s). Notice that the units to be used for a specific drawing are specified when the <u>File, New</u> command is invoked.

#### EXPLODE

Converts complex entities into equivalent line segments. For example, EXPLODE will convert a box to four line segments.

#### RUBBER

Stretches objects into new shapes while dynamically modifying any entities attached to them.

# **Image**

The IMAGE commands allow you to adjust the position of the viewing window with respect to the drawing and the overall size of the drawing displayed on the screen.

#### **UPDATE**

Redraws the entire screen (removes remnants of objects and places new toggling options into affect)

#### **WINDOW**

Enlarge elements in specified WINDOW to fill the entire screen. Notice that this does not change the actual size of the drawn entities, it simply changes the scale they are viewed at. The Edit, <u>Scale</u> command should be used to change the physical size of drawn elements. The same also applies for the Half and Double commands.

### **LASTVIEW**

Returns to the LAST (previous) magnification and view

#### PAN

Drags the entire drawing up, down, left, right

### **DOUBLE 2x**

Increases the viewed portion of the drawing to DOUBLE its size

#### HALF x0.5

Reduces the viewed portion of the drawing to HALF its size

#### **ALL**

Displays the entire drawing on the screen using the largest scale possible

# **Options**

The OPTIONS menu allows you to change the parameters that directly effect the entire drawing. These changes will stay in effect until the parameter is changed again or until the program is exited.

Note: Changes can be saved to the configuration file (DCWIN.INI).

#### **GRID**

Displays a user-specified X-Y GRID on the screen (aids in drawing)

# **TOGGLE**

TOGGLES certain options ON/OFF.

#### **ATTACH**

Selects the default point of ATTACHMENT to be used in conjunction with the [F10] key. If this option is active, then each point specified by the user attaches to an existing element according to the Attach options (see Options menu).

#### FILL

Selects the default bit-mapped FILL pattern

#### **HATCH**

Selects the default vectorized HATCH pattern

#### STYLE

Selects the default line STYLE and Thickness

#### UNITS

Selects the default measure of UNITS

#### **Marks**

Allows the user to specify the type of reference mark to use

#### **Calculator**

Invokes the on-screen scientific calculator.

# Background

Permits the user to select the background color from an on-screen presented selection.

# **Print/Plot**

To produce a hard copy or create a file of your drawing, select the File, Plot option. The default Windows Print/Plot Driver will be used.

#### Left

Set the Left Margin (in the paper units specified when starting the program, i.e., mm, in).

#### **Right**

Set the Right Margin (in the paper units specified when starting the program, i.e., mm, in).

#### Top

Set the Top Margin (in the paper units specified when starting the program, i.e., mm, in).

#### **Bottom**

Set the Bottom Margin (in the paper units specified when starting the program, i.e., mm, in).

#### Fit (Scaling)

The complete drawing is scaled up or down to fit in the selected paper size. Normally, this option is selected if a scaled printout is desired.

# Screen (Scaling)

The visible portion of the drawing is scaled up or down to fit in the selected paper size.

The dialog window that appears on the screen, also displays the paper and image width and height as the above margins are being modified. Options like paper orientation, print quality, etc. are specified through the File, Plot, Options command. Printer Drivers and Devices are selected through the generic Windows Main Printers, Setup menu.

#### **Factor**

Allows the plotted image to be scaled up or down as the user desires.

#### **Enhance**

If this option is checked, the printout is much darker, however, printing time is increased. Applies to printers ONLY, not plotters!

# File

The FILE commands allow you to Save or Load created drawings and to Import and Export information to/from other programs.

#### **NEW**

Removes the current drawing and any existing symbols from memory, and optionally sets the drawing size and scale settings

#### Open

Load a drawing file from the disk

# **Save Drawing**

SAVE a drawing file to disk, using the current filename (it overwrites the file already on disk).

#### Save As

SAVE a drawing file to disk, using a new filename specified by the user.

#### **EXPORT**

EXTRACT portion of the current drawing in the following formats:

**DCW - DRAFT Choice for Windows format** 

SYM - DRAFT Choice symbol format, et .SYM

**DXF** - Data transfer format standardized by Autodesk

WPG - DrawPerfect file format

PLT - HPGL (Hewlett Packard Graphics Language) file, also referred to as a plot file

**DCH - DRAFT Choice for DOS and DRAFT Choice Plus format** 

#### **IMPORT**

IMPORT (retrieve) a file into the current cursor location without erasing the current drawing. The following types of files can be imported:

**DCW - DRAFT Choice for Windows format** 

**DCH - DRAFT Choice for DOS format** 

SYM - DRAFT Choice symbol format, ext .SYM

**DXF** - Data transfer format standardized by Autodesk

**WPG** - DrawPerfect file format

PLT - HPGL (Hewlett Packard Graphics Language) file, also referred to as a plot file

FNT; Primary - Primary DRAFT Choice font file

FNT;Secondary - Secondary DRAFT Choice font file

BMP - Windows Graphics file

PIC - AS-EASY-AS and Lotus 1-2-3 Graphics file

#### CONFIGURE

Set the DRAFT Choice CONFIGURATION settings to be stored in the DCWIN.INI file (If the Save Configuration Option is selected).

#### **Aspect**

(Screen Aspect Ratio)

#### Leve

The highest order polynomial used for the spline curves

#### **Primary**

The file name of the primary font to be used by the program.

#### **Secondary**

The file name of the secondary font to be used by the program.

#### **Print Size**

Default Width and Height of the printed image.

#### **Arrow**

Default arrow size in current units..

#### **Tools**

On/Off checkmarks that set the following options:

**Edit Tools** Make the Horizontal Tools bar (the one containing the buttons for Layer, Fill patterns, Clip icon, etc.) visible (if *checked*) or invisible (if *not checked*).

**Position Bar** Make the Position Tools bar (the one containing the X-Y coordinate display area, etc.) visible (if *checked*) or invisible (if *not checked*).

**Draw Tools** Make the Vertical Drawing Tools bar (the one containing the buttons Draing lines, circles, boxes, etc.) visible (if *checked*) or invisible (if *not checked*).

**Auto Window** If this option is checked then the *Window-Selection-Mode* is automatically invoked in the *Pick-Selection-Mode* is active and the user clicks in an area with no selectable entities.

**Button Hints** If this option is checked, when the mouse pointer rests on one of the icons, a short description of the icons function appears on the screen.

#### Cursor

The type of cross hair cursor to be used (Solid, Dotted, or Small)

#### **Save Settings**

Save the configuration options in the DCWIN.INI file. (See users manual for description of all settings saved in DCWIN.INI).

#### **GETINFO**

Display information about available memory, symbols, number of elements, etc.

#### PI OT

Invokes the Printing process of the program, where you can specify margins, output, etc.

#### **EXIT**

Exits the program, back to the Windows Task manager, or whatever other task manager the program was started from.

# Measure

The MEASURE menu allows you to determine and label distance, areas, and interior angles of the objects being created.

#### **DIMENSION**

Places a DIMENSION line on the screen with end point arrowheads and a text string representing the distance between 2 points. The user is also presented with a dialog that allows the placement of the dimension line at X current units offset from the item being dimensioned.

#### **COORDINATE**

Places a COORDINATE object (text indicating position)

#### RADIUS

Draws a RADIUS and AUTO dimensions between center and end points

#### DIAMETER

Similar to Radius

#### **ANGLE**

Determines the interior ANGLE between two points

#### **LEADER**

Draws an angled note LEADER line with arrowhead

### **BOUNDARY**

Auto-dimensions specified object

#### **ARROW**

Places an arrow element in the drawing.

#### **QUERY**

Accesses the QUERY sub-menu:

#### FNGTH

Determines the LENGTH between two points

#### **ANGLE**

Determines the intersecting ANGLE between two lines

#### **AREA**

Determines the total AREA enclosed by an irregular polygonal shape

#### **OBJECT**

Displays OBJECT information on selected element (Type, Style, XY Coordinates,...)

# Layer

DRAFT Choice permits you to work on up to 128 different LAYERS which can be thought of as transparent overlays. All objects drawn will be placed on the layer active at the time.

#### **USE**

When the Layer, Use command is invoked, or the Layer icon is selected, you are presented with a dialog window that permits you to change a number of options.

#### ID

The current Layer ID number is displayed and a new number may be entered (0-128)

#### Name

An alphanumeric name (up to 9 Characters) may be entered Identifying the Layer.

#### Protect (P)

If the Flag is turned ON, then the entities on the selected Layer cannot be edited.

# Visible (V)

This flag determines whether a specific Layer will be visible, or not.

### **Make All Options Global**

If Global is selected, then the current Protect/Visible status is set for all layers.

#### **COLOR**

Allows separate COLORS to be selected for each LAYER Note: "OPTION, TOGGLE, Black on White" must be disabled

### **MOVE**

Allows elements to be MOVED into a different LAYER

# **Array**

The ARRAY command combines a copy and rotation operation of user-specified objects.

#### LINEAR

Creates a LINEAR array of elements. Each element can still be rotated on its own axis by specifying the appropriate value for ANGLE.

#### **CIRCULAR**

Creates a CIRCULAR array of elements. Each copy is rotated about a center of rotation by a given angle.

#### **VOLUME**

Create a pseudo 3-D image by rotating and copying a complex line about a user-specified angle.

#### **NUMBER OF COPIES**

TOTAL number of elements to create.

#### **ANGLE**

Offsets each copy by the specified angle. Different than the angle of rotation for circular array. Each copy is rotated about its own axis by this angle.

#### **SCALE PER COPY**

Change the size of each successive copy by this SCALE factor. Allows you to generate images that seem to disappear in 3-D.

#### **TOTAL ANGLE**

Angle through which the block of elements will be rotated. NOTE: Applies to CIRCULAR type arrays only

# **Circles**

CIRCLE types can be specified through "DRAW, CIRCLE, SETUP". Selected CIRCLE type stays in effect until modified again. Radius is the default mode. The following four modes are available:

#### **RADIUS**

(Draws a circle by specifying the RADIUS) Select center of circle, press ENTER Expand circle to desired RADIUS, and press ENTER to finalize

#### DIAMETER

(Draws a circle by specifying the DIAMETER) Select first point (on desired circumference), press ENTER. Indicate second point (on desired circumference), press ENTER.

#### **3-POINT CIRCLE**

(Draws a circle by specifying 3 points on the circumference) Select first point on circumference, press ENTER. Specify second point on circumference, press ENTER. Select third point on circumference, press ENTER to finalize.

NOTE:Points should not be specified in a straight line. That would result in a circle with an infinite radius!

#### **ELLIPSE**

Draws an ellipse, rather than a circle. The ellipse is dynamically modified as the cross-hair cursor is moved.

### **ASPECT RATIO**

Ratio of horizontal to vertical diameter.

# Grid

The GRID option allows you to individually specify an X and Y construction GRID. The GRID is represented by a dot at each XY intersecting coordinate.

The SNAP option allows you to constrain the movement of the cursor to exact user-specified spacing of the SNAP grid. When drawing an object, the coordinates are rounded to the nearest SNAP point.

# **GRID**

Draws a horizontal (X-spacing) and vertical (Y-spacing) GRID on the screen. GRIDS can be used with SNAP to restrict drawing only on the intersections of the grid lines

### **SNAP**

Draw cursor to SNAP points like a magnet. If SNAP is turned on, then the START and END point of every line segment drawn will be moved to the closest SNAP point. If the SNAP and GRID sizes are the same, then all line segments drawn will be on the grid points.

#### **DOT SIZE**

This option allows the user to select a small or large dot to be used for the on-screen grid overlay. Large dots make the grid easier to see but might interfere with detailed work, when the user is zoomed in.

# **Symbols**

DRAFT Choice gives you the ability to create SYMBOL libraries. By defining the SYMBOL once, and then using the SYMBOL by name many times, you will save time, effort and computer memory when creating drawings.

SYMBOLS created within a drawing are saved with the drawing and can also be saved to a SYMBOL file (.SYM) by using the "FILE, EXPORT, SYM" command. SYMBOLS extracted to a .SYM file can be called up into any drawing file with the "FILE, IMPORT, SYM" command.

#### USE

USE a predefined SYMBOL composed of primitive elements. A dialog box is presented that contains icons for 12 symbols in the currently loaded symbol library. Additional symbols may be displayed by using the vertical scroll bar. Alternatively, the pick list may be used to select symbols by name.

The X and Y scale factor fields may be used to scale the symbol and the angle field may be used to rotate it prior to clicking on O.K. and attempting to place it in the drawing.

Pressing ESC will exit the symbol placement mode.

#### **MAKE**

Assigns a block of elements to a SYMBOL name. The block can then be used as an object anywhere in the drawing.

- 1.Enclose the element(s) to be part of the defined SYMBOL in the selection window
- 2. Supply the name to be used for the defined SYMBOL
- 3. Define a reference point for the SYMBOL

NOTE: The reference point identifies the SYMBOL position when it is used

#### DELETE

Deletes a SYMBOL from the current SYMBOL library

#### **EXPLODE**

Returns the selected SYMBOL to its original entities.

- 1.After MAKING and USING a SYMBOL, enclose the SYMBOL to be EXPLODED in the selection window
- 2. The SYMBOL will now return to its original entities (i.e. A SYMBOL created from a box and a circle when EXPLODED will take the original form of the box and circle)

#### **RESET**

Deletes ALL SYMBOLS from the current SYMBOL library. CAUTION: All "unexploded" symbols, already placed in the drawing, will be deleted as well.

NOTE: When a new drawing file is loaded or "FILE, NEW" is selected, all SYMBOLS will be removed from memory

# **Text**

TEXT can be placed anywhere on the screen with a user-specified height, width, angle, and spacing. You can further specify the placement of TEXT with respect to the cursor location; left, center, or right justified.

### **PLACE**

Select the point where the TEXT is to be PLACED

**NOTE**:TEXT fonts can be selected through the "File, Import, FNT;Primary and File, Import, FNT;Secondary" menus.

#### **SETUP**

SET the TEXT options described below:

#### **HEIGHT**

Set the HEIGHT for all printed TEXT

#### **WIDTH**

Set the WIDTH for each character of printed text

#### **ANGLE**

Set the ANGLE for which the printed TEXT will be displayed

#### SPACING

Set the SPACING between lines of printed TEXT

#### LEFT

Print all TEXT LEFT-justified about selected point

#### **CENTER**

Print all TEXT CENTERED about selected point

#### RIGHT

Print all TEXT RIGHT-justified about selected point

#### FIT

Scales the entered text automatically so that it fits between two user-selected points.

# **PRIMARY**

When Toggled ON, any TEXT created from that point will use the selected Primary font (FONT file selected with "FILE, IMPORT, FNT; Primary")

# **SECONDARY**

When Toggled ON, any TEXT created from that point will use the selected Secondary font (FONT file selected with "FILE, IMPORT, FNT; Secondary")

In addition to the Primary and Secondary fonts, which are fonts specifically designed for DRAFT Choice, the user may also select from the list of TrueType fonts installed in Windows.

# **Toggles**

A check mark next to a TOGGLE switch indicates it has been activated. The following is a list of TOGGLE switches available:

### COORDINATE

Display the X-Y cursor COORDINATES.

NOTE: When enabled, delta X and delta Y COORDINATES are also displayed.

#### Reference MARKS

Displays the object reference MARK type selected under the "Options, Marks" menu.

#### **TEXT VISIBLE**

Displays all TEXT in the current drawing. When TOGGLED OFF, only lines are displayed in place of text (faster screen updates)

### **BLACK ON WHITE**

Set your color monitor to Black and White mode

#### **FILL BITMAPS**

All complex objects created will contain the default FILL (paint) pattern when TOGGLED ON. Faster screen updates when toggled OFF.

#### LINE STYLE

All lines created will use the default line thickness and STYLE when TOGGLED ON, and a thickness of SLIM when TOGGLED OFF. Faster screen updates when toggled OFF.

# **Units**

The UNITS menu allows you to indicate the current dimensions to use when mapping screen coordinates. Normally, Units are specified when invoking the <u>File, New</u> command, or the <u>Alter, Units</u> command for specific entities. The available units include:

mm - Dimensions in MILLIMETERS

meter - Dimensions in METERS

km - Dimensions in KILOMETERS

inches - Dimensions in INCHES

ft-in - Dimensions in FEET and INCHES

feet - Dimensions in Decimal FEET

yards - Dimensions in YARDS

miles - Dimensions in MILES

**NONE -** Does not Display any dimension Units, just the nymerical value.

FIX - Fixes the number of decimal places to display for UNITS

**FRACTION** - This option is only effective when the inches unit type has been selected. It automatically displays any fractional inches in a dimension in terms of (fraction/2^n), where n is the integer that closest matches the fractional dimension. So, the fractional part of dimentions appears as 1/2, 1/8, 1/16 instead of 0.5, 0.25, 0.03125.

# **Selection Method**

Two methods are available for selecting an object for editing/altering the WINDOW method and the PICK method.

#### **WINDOW**

Place cursor at the upper left-hand corner of selected element, and press [ENTER]. Then move down to the lower right-hand corner of the element and insure that the reference mark (X) is enclosed within the resulting window. Note that the upper-left/lower-right corner sequence is not important. It is IMPORTANT, however, to include the reference mark of the entity of interest.

#### **PICK**

The Pick Mode allows you to select only one object for editing (useful when many reference marks are close together). A small box will appear. Place the box on top of the object and press [ENTER]. If the object was successfully selected the element will be redrawn with phantom dotted lines.

Note: SELECTION OF ELEMENTS WILL CONTINUE UNTIL ESC IS PRESSED!

There is also an intelligent way of using the pick/window selection mode in DRAFT Choice. If the autowindow flag in the File, Configuration menu of the program is set, then if you are in the pick selection mode and have just clicked in an area where there is no element under the small pick cursor, the selection mode automatically switches from pick mode to window mode.

# WIN

This set of commands is used to exchange information between DRAFT Choice and other Windows applications through the Windows Clipboard.

# **Copy Text**

Copy selected Text from the current drawing into the Windows clipboard.

# **Copy Bitmap**

Copy a selected portion from the current drawing into the Windows clipboard., as a bitmap.

#### **Paste Text**

Pastes Text from the Windows clipboard into the current drawing.

# **Paste Bitmap**

Pastes bitmapped graphics from the Windows clipboard into the current drawing.

#### Logo

Displays information in opening screen.