

Customizing BtoCAD

You can customize BtoCAD in a number of ways. For example, you can change the appearance of many aspects of the program and modify the existing menus and toolbars or create new ones. This section explains how to:

- Set the program's preferences.
- Customize menus and toolbars.
- Customize the keyboard.
- Create aliases for frequently used commands.
- Customize entities.
- Create and use scripts.
- Use add-on programs with BtoCAD.
- Use a digitizer tablet for menu selection and calibrated drawing.

Topics in this chapter

<i>Setting and changing options</i>	<i>359</i>
<i>Customizing menus</i>	<i>373</i>
<i>Customizing toolbars.....</i>	<i>379</i>
<i>Creating and replaying scripts.....</i>	<i>397</i>

Setting and changing options

You can change many of the options that control the program's behavior and appearance, such as setting the experience level, specifying file paths and default files, and configuring display features. You can input "Options" or "Config" in the command line to open the dialog.

Changing the options on the General tab

In the Options dialog box, the General tab contains settings for experience level and save options. You can also set VBA security.

Setting the experience level You can control which menus and tools are available by setting the experience level. You can choose from the following experience levels:

- **Beginner** Menus and toolbars display only basic commands.
- **Intermediate** Menus and toolbars display most two-dimensional entity creation and modification commands.
- **Advanced** Menus and toolbars display all available commands.

Saving your drawings automatically To avoid losing data in the event of a power failure or other system error, save your drawing files often. You can configure the program to periodically save your drawings automatically. The Minutes setting determines the interval between automatic saves. The program restarts this interval timer whenever you save the drawing file.

When AutoSave is enabled, the program creates a copy of your drawing. The file is saved in the folder specified in Options > Paths/Files for Temporary Files, with the file extension specified in the AutoSave Drawing Extension box (by default, .SV\$).

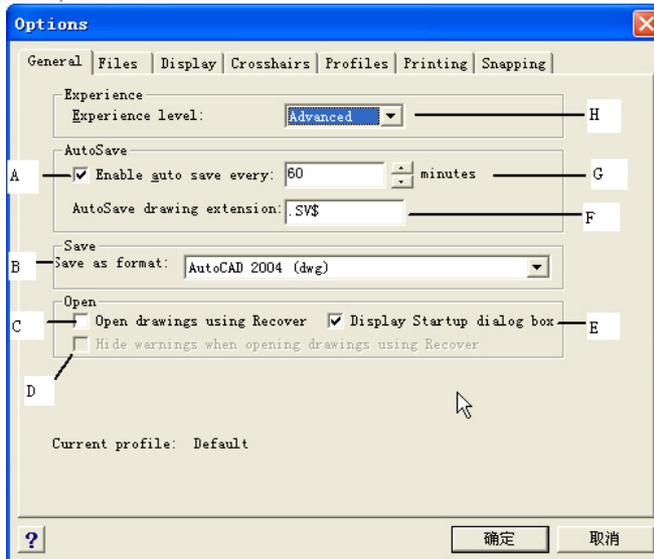
Setting the default Save As format You can control the default file format that you want to display in the Save Drawing As dialog box. For example, if you use the Save As command to save most of your drawings in a legacy file format, you can select that file format as the default so you don't have to select it each time you save a drawing using the Save As command. This setting has no effect on saving existing or new drawings using commands other than Save As —BtoCAD always saves existing drawings in their current file format and saves new drawings with the most current file format.

Setting how drawings are opened If you regularly open drawings that contain errors or damaged data, for example, if you are a new BtoCAD user and your original drawings were created using different CAD software, you can enable Open Drawings using Recover. This option automatically checks all drawings for errors when using the Open command, and attempts recovery, as needed. Viewing warning messages when opening drawings allows you to know which files are being fixed by BtoCAD and what errors have occurred; however, you can also choose to hide the warnings.

Disabling VBA Common Project macros Each time you start BtoCAD, macros are automatically loaded for the Visual Basic Application (VBA) Common Project. If you do not plan to use VBA, disabling the macros may improve performance. In addition, disabling the macros can enhance security if you are running BtoCAD at a low security level.

To change the options on the General tab

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
 - 2 Click the General tab.
 - 3 Under Experience level, select Beginner, Intermediate, or Advanced.
 - 4 Under AutoSave, select the check box to enable the AutoSave feature, and select the frequency. If you want to change the default extension assigned to your AutoSave files, type the new extension in AutoSave Drawing Extension.
 - 5 Under Save As, select the default drawing format that displays when using the Save As command. You can always specify a different format in the Save Drawing As dialog box.
 - 6 If you want to use the Recover command automatically each time you use the Open command, mark the check box for Open Drawings using Recover.
- If you want to hide warnings when errors are found in a drawing, mark the check box for Hide Warnings when Opening Drawings using Recover. Errors will still be logged in an ASCII file with an .adt extension.
- 7 If you do not want the Common Project macros to be loaded when you start BtoCAD, under VBA Security, click the check box for Disable VBA Common Project Macros On Startup.
 - 8 When you have finished, click OK.



- A Click to enable AutoSave feature.
- B Select the default file format that displays when saving drawings using the Save As dialog box.
- C Select to check all drawings for errors when using the Open command, and attempt recovery, as needed.

- D Select to hide warning messages when opening drawings, if the check box Open Drawings using Recover is marked.
- E Click to disable VBA Common Project macros on startup. (Available if supported by your version of BtoCAD.)
- F Type the file extension for AutoSaved files.
- G Enter frequency of AutoSave in minutes.
- H Select the experience level.

Changing the options on the Paths/Files tab

You can specify locations for various file types such as those used for drawings, fonts, and menus in the Options dialog box on the Paths/Files tab. You can even specify multiple paths for the same file type. In addition, you can change the names of the default system files that are used for functions such as font mapping and error logging.

Specifying the user paths

You can enter paths to your BtoCAD directories by typing them into a Location field in the Options dialog box. This feature includes directories for drawings, fonts, help, external references, menus, hatch patterns, blocks, print style tables, print output files, temporary files, templates, and color books. BtoCAD searches directories for support files in the following order:

- The BtoCAD program directory.
- The current drawing directory.
- The Windows search path.
- The search path specified in the Options dialog box.

You can enter multiple paths for each item. If, for example, the Drawings item has more than one directory associated with it, you can specify multiple paths by separating them with a semicolon. BtoCAD searches the directories in the order in which they are listed.

To specify a user path

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Paths/Files tab.
- 3 Under Location, click the item in the User Paths list whose path you want to specify, and type the path. If you do not know the path or directory name, click Browse, and then browse to the location of the directory you want.
- 4 When you have finished, click OK.

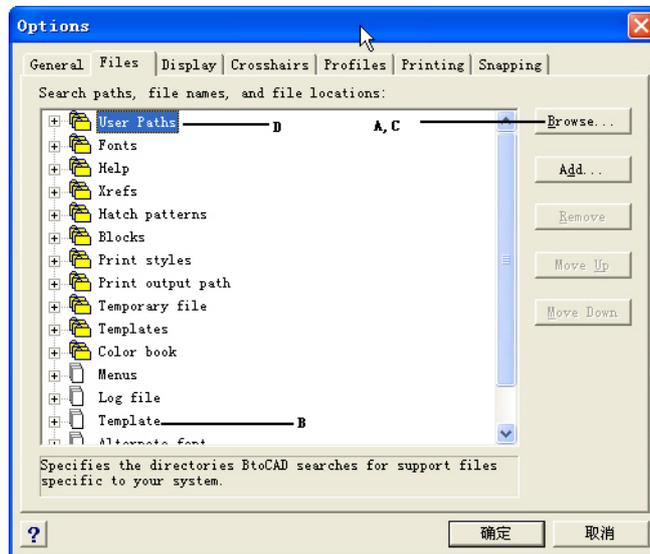
Changing the default system files

You can change the default system files, including the log file, default template, alternate font, and font mapping file.

To change a default system file

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Paths/Files tab.
- 3 In the lower half of the dialog box, under File, click the file name for the default system file you want to change, and type in a new file name. If you don't know the file name, click Browse, and then browse to the location of the file you want.
- 4 Type a new name.
- 5 When you have finished, click OK.

The following figure shows the Options dialog box with the User Paths and System Files sections identified.



- A** Click to select a new default file. **B** Select the default file to change.
C Click to select new default folder **D** Directory path specified by user

Changing the options on the Display tab

In the Options dialog box, the Display tab contains settings for displaying the command bar, BtoCAD window, menus, and real-time view rotation.

Setting the command lines to track BtoCAD tracks the commands and command prompts you used most recently. You can control the number of lines that the program keeps in memory as you work. The default value is 256. You can display the commands in the Prompt History window. To display the Prompt History window, press F2. To close the window, press F2 again.

Enabling Up/Down arrows in command history By default, using the keyboard arrows pans your view of the drawing. If you prefer to scroll the command history using the up and down arrows, you can mark the Use Up/Down Arrows for Command History Navigation check box. Then when you use the up and down arrows, previous commands display and the other prompt input is skipped. This can be a convenient way to review and even repeat previous commands.

Displaying tabs and scroll bars Hiding window elements if you do not use them can help increase drawing space in the BtoCAD window.

To show or hide the Model tab and Layout tabs, select the Show Tabs check box. You may want to hide the tabs if you only work on the Model tab or if you use the command bar and status bar to switch between tabs.

To show or hide the scroll bars that display on the right side and bottom of the BtoCAD window or view port, select the Show Scroll Bars check box. You may want to hide the scroll bars if you only use the Pan command to scroll drawings.

Enabling continuous view rotation When you use the Real-Time Sphere command to rotate your view of entities, you typically move the mouse to rotate the view. If you want the rotation to continue after you release the mouse, turn on the Continuous Inertial Motion in Real Time check box. The rotation also continues when you use the Real-Time X, Real-Time Y, and Real-Time Z commands.

Changing the zoom direction of the mouse wheel By default when working in a drawing and using the mouse wheel, you spin the mouse wheel forward to zoom in and spin backward to zoom out. If you want to reverse the zoom direction relative to the zoom wheel, that is, spin the wheel forward to zoom out and spin backward to zoom in, enable the Reverse Mouse Wheel Zoom Direction check box. This can be helpful if you use the mouse with your left hand.

Setting the graphics screen color By default, drawings are displayed on a black background. You can change this color and specify the background screen color that you want.

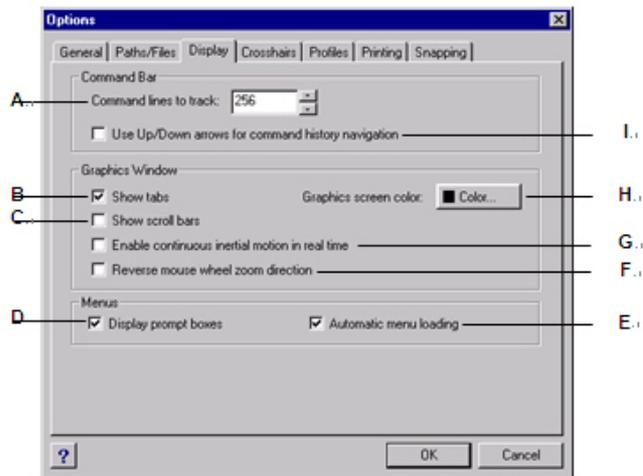
Displaying prompt boxes When a command offers several options, a prompt box is displayed with those options. If you prefer to select options by typing, you can turn off the prompt boxes by clearing the Display Prompt Boxes check box.

Setting automatic menu loading The first time you start BtoCAD, a default menu is loaded, and the Automatic Menu Loading check box in the Options dialog box is checked. The Automatic Menu Loading feature allows you to load drawings with associated menus without overwriting the default menu. You can turn off the

Automatic Menu Loading option.

To change the options on the Display tab

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Display tab.
- 3 Select the options you want.
- 4 When you have finished, click OK.



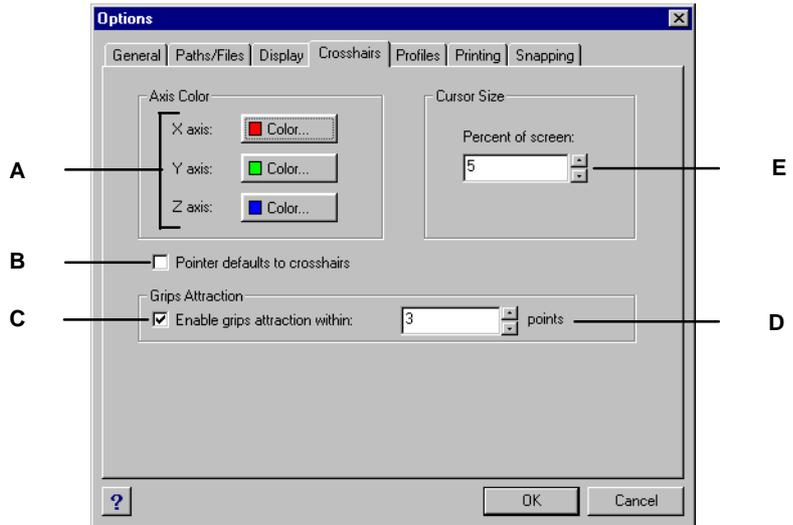
- A Type or select the maximum number of command lines to track.
- B Click to show or hide the Model and Layout tabs.
- C Click to show or hide scroll bars.
- D Click to show or hide prompt boxes.
- E Click to toggle automatic menu loading on or off.
- F Select to zoom out when spinning the mouse wheel forward and zoom in when spinning the mouse wheel backward.
- G Select to continue rotating the view when using the Real-Time Sphere, Real-Time X, Real-Time Y, and Real-Time Z commands.
- H Click to select screen color.
- I Select to use Up and Down arrows for scrolling the command history instead of panning.

Changing the options on the Crosshairs tab

In the Options dialog box, on the Crosshairs tab, you can control how the crosshairs display. To help you differentiate the x-, y-, and z-axes, a different color is assigned to each. You can change the default axes colors to any color you want. In addition, you can specify the size of the crosshairs display, enable grips attraction for the cursor, and you can elect to use crosshairs as the default pointer shape.

To change the options on the Crosshairs tab

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Crosshairs tab.
- 3 Select the options you want.
- 4 When you have finished, click OK.



- A For each axis, click Color and select an axis color from the palette.
- B Select to always display the pointer as the crosshairs (instead of the small box).
- C Select to move the crosshairs automatically to grips within a certain range.
- D Enter or scroll to a number for the grips attraction Range. Higher points increase the range of the attraction.
- E Enter or scroll to a number for the percentage of the screen to be used by the crosshairs cursor.

Changing the options on the Profiles tab

BtoCAD allows you to customize the settings that control your drawing environment, and then save and restore those settings in a profile. For example, if you prefer working with custom menus and toolbars, you can save these settings as your own profile.

Profiles can be helpful if you have multiple users with different preferences, or if you are a single user who works on various projects that require unique settings. You can even export your profile and bring it with you when you work on a different computer.

Understanding the settings saved in profiles

Profiles save many settings that control the drawing environment. Once you start using a profile, it automatically tracks and stores changes that you make to your drawing environment.

Some settings are saved immediately, but some require that you exit BtoCAD and then start BtoCAD again. This is because profiles save settings from your computer's registry and some settings are only saved to the registry when you exit BtoCAD.

Settings saved in profiles

	Location	When saved
Toolbar settings	Tools > Customize, Toolbars tab	Exit and
restart of BtoCAD Menu settings	Tools > Customize, Menus tab	immediately
Keyboard settings	Tools > Customize, Keyboard tab	immediately
Alias settings	Tools > Customize, Aliases tab	immediately

Creating profiles

Create profiles if you want to save your custom drawing environment settings. This can be helpful if you have two or more drawing environments that you use regularly.

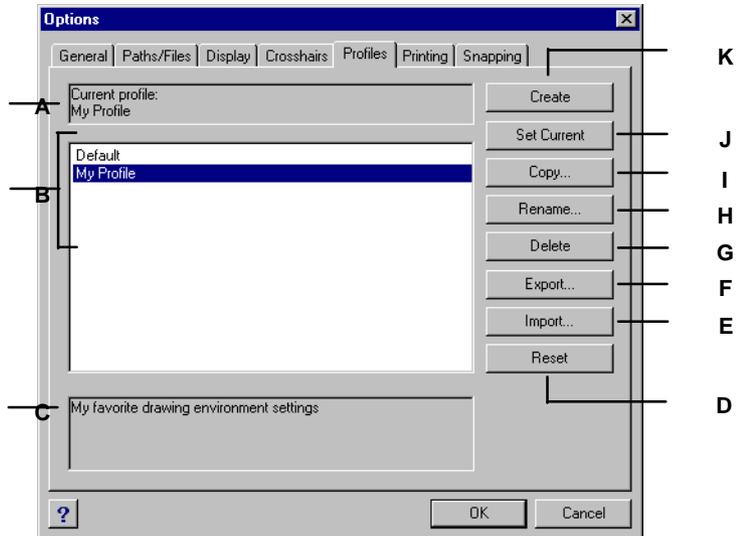
When you create a new profile, the current drawing environment settings are automatically saved with the new profile.

To create a profile

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Profiles tab.
- 3 Click Create.
- 4 Enter a name, a description (optional), and then click OK.
- 5 In the Options dialog box click OK.
- 6 Make changes to your drawing environment.

BtoCAD automatically saves the settings to the new profile.

NOTE In some cases, for example, with toolbars, you need to exit and restart BtoCAD before the settings are saved with the profile. This is because profiles save settings from your computer's registry and some settings are only saved to the registry when you exit BtoCAD.



- A Displays the name of the currently loaded profile.
- B Select a profile to load it or modify it.
- C Displays a description of the profile.
- D Click to restore the selected profile to the system default settings.
- E Click to open a profile stored in an .arg file.
- F Click to save the selected profile in an .arg file.
- G Click to delete the selected profile.
- H Click to rename the selected profile.
- I Click to make a copy of the selected profile.
- J Click to load the selected profile and make it the active profile.
- K Click to create a new profile.

Loading a profile

While you work in BtoCAD, you can load the custom settings of any profile. The current profile when you exit BtoCAD is automatically loaded when you start BtoCAD again.

To load a profile

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Profiles tab.
- 3 Select the desired profile.
- 4 Click Set Current.

Restoring the default settings

At any time you can return to the default drawing environment settings that were installed with BtoCAD.

If the Default profile is unchanged, simply load it to restore the default settings. If the Default profile is deleted or changed, reset an existing profile (one that you no longer need) to replace its contents with the default settings.

To restore default settings using an unchanged Default profile

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Profiles tab.
- 3 Select the Default profile.
- 4 Click Set Current.

To restore default settings without using the Default profile

NOTE *Resetting a profile erases all of the profile's custom settings. Do this only if you are certain you no longer need the selected profile.*

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
 - 2 Click the Profiles tab.
 - 3 Select a profile that you no longer need; all of it's custom settings will be erased.
- If necessary, create or copy a profile to use for restoring the default settings.
- 4 Click Reset.

Managing profiles

Once you start using profiles, you may need to rename, copy, or delete them. Copying a profile is a quick way to create a new profile based on an existing profile.

To rename a profile

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Profiles tab.
- 3 Select the profile you want to rename.
- 4 Click Rename.
- 5 Make any necessary changes to the name or description, and then click OK.

To copy a profile

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Profiles tab.
- 3 Select the profile you want to copy.
- 4 Click Copy.
- 5 Enter a new name, a description (optional), and then click OK.

To delete a profile

- 1 Do one of the following:
 - Choose Tools > Options.

- Type *config* and then press Enter.
- 2 Click the Profiles tab.
 - 3 Select the profile you want to delete.
 - 4 Click Delete.

Working with profiles on multiple computers

If you use multiple computers and you like to work with our own drawing environment settings, save time by bringing your profile with you.

On your computer, export your profile to an .arg file. Bring the file with you to the other computer using a disk, E-mail, network, or some other method. When you start working at another computer, simply open and load your profile instead of recreating your preferred drawing environment.

To export a profile to a file

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Profiles tab.
- 3 Select the profile to export.
- 4 Click Export.
- 5 Specify a location and name for the exported file, and then click Save.

To open a profile from a file

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Profiles tab.
- 3 Click Import.
- 4 Locate and select the profile (.arg file), and then click Open.
- 5 Make any necessary changes to the name or description, and then click OK.
- 6 (Optional) To load the imported profile, select it, and then click Set Current.

Changing the options on the Printing tab

In the Options dialog box, on the Printing tab, you can determine several printing settings, including headers, footers, and print style tables.

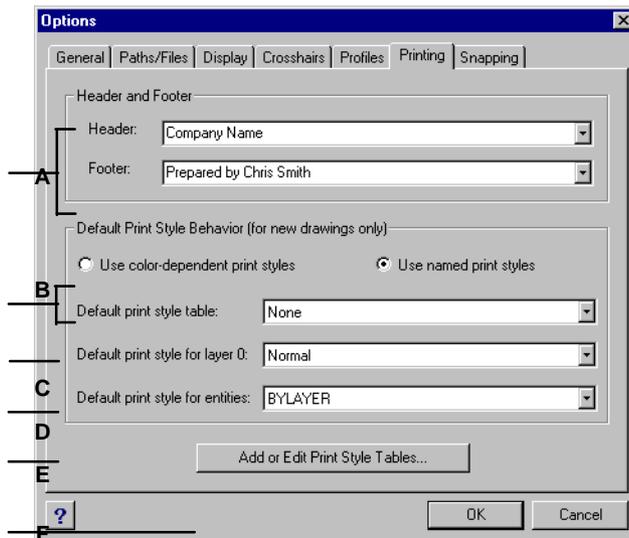
Creating headers and footers You can include header and footer information such as

a date and time stamp, your name and company name, or other information that you want to appear at the top or bottom of printed drawings. Header and footer settings are set globally for all drawings.

Specifying print style settings Print styles change the appearance of your printed drawing without modifying the actual entities in your drawing. Use the Printing tab to specify initial print style settings for new drawings created without a template and for older drawings when opened (older drawings that were created before print styles were available, for example, before AutoCAD 2000). Drawings that are already open are not affected.

To change the options on the Printing tab

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
- 2 Click the Printing tab.
- 3 Select the options you want.
- 4 When you have finished, click OK.



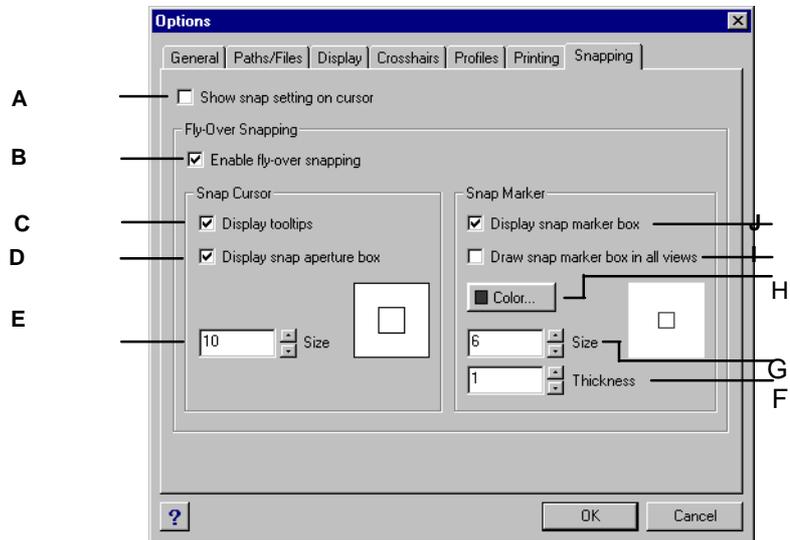
- A Type the content for the header and footer, or select it from the lists.
- B Select to use color-dependent or named print style tables for new drawings created without a template.
- C Select a print style table to use with new drawings.
- D For color-dependent tables, displays BYCOLOR (not selectable); for named tables, select the print style to assign to layer zero.
- E For color-dependent tables, displays BYCOLOR(not selectable); for named tables, select the print style to assign to new entities.
- F Click to create or change print style tables that can be selected on the Printing tab or elsewhere in BtoCAD.

Changing the options on the Snapping tab

In the Options dialog box, on the Snapping tab, you can control how entity snaps work, including fly-over snapping. Fly-over snapping is a visual aid to help you see and use entity snaps more efficiently.

To change the options on the Snapping tab

- 1 Do one of the following:
 - Choose Tools > Options.
 - Type *config* and then press Enter.
 - Choose Settings > Entity Snap > Entity Snap Settings and click Fly-Over.
- 2 Click the Snapping tab.
- 3 Select the options you want.
- 4 When you have finished, click OK.



- A** Select to display an extra image on the cursor to, show which entity snap is active. (Available even if fly-over snapping is turned off.)
- B** Select to turn on fly-over snapping.
- C** Select to turn on fly-over snap tool tips, which indicate the type of snap that was used to select the marked location.
- D** Select to turn on the fly-over snap aperture box. Entities found within the aperture box are available for selection, making it easier to find and select entity snap points.
- E** Type or scroll to the tolerance size for the fly-over snap aperture box. Higher numbers increase the distance from the cursor in which entities are found.
- F** Type or scroll to the thickness of the fly-over snap marker.
- G** Type or scroll to the size of the fly-over snap marker.

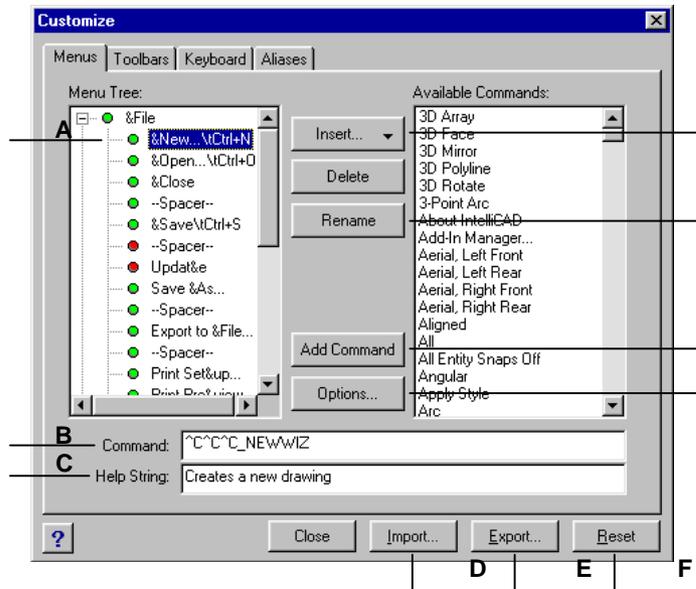
- H Click to choose the color of the fly-over snap marker.
- I Select to turn on the display of fly-over snap markers in all views when you are using more than one viewport.
- J Select to turn on fly-over snap markers, which mark snap points on entities.

Customizing menus

You can customize a current menu and save your changes as an BtoCAD menu file. You can also load both existing BtoCAD (*.icm) and AutoCAD (*.mnu, *.mns) menu files. You customize menus using the Customize dialog box.

To display the Customize dialog box

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Menus tab.



- A To make a menu item current, choose it from the list.
- B Contains the command string assigned to the current menu item.
- C Contains the text displayed in the status bar for the current menu item.
- D Click to import an existing menu file from another source.
- E Click to save the current menu to a different location.
- F Click to reset the current menu, rejecting any changes you have made.
- G Click to display the Options dialog box for further customization options.
- H Click to add the selected command to the current menu item.
- I Click to rename the current menu item.
- J Click to insert a Menu Item, a Menu Sub-Item, a Spacer, or Context Menu Item, or a Context Menu Sub tem.

Understanding menu compatibility

MNU files are menu files created by all AutoCAD releases, and MNS files are included in AutoCAD Releases 13, 14, and 2000. BtoCAD reads both file formats, even when menu macros include AutoLISP code. This feature allows you to continue using your existing AutoCAD menus.

BtoCAD support of specific sections in AutoCAD MNU and MNS files

Menu section	Definition	BtoCAD support
***POPO	Cursor menu	Supported
***POP n	Pull-down menus	Supported
***AUX n	Auxiliary menus	Not supported
***BUTTON n	Button menus	Not supported
***ICON	Icon menus	Not supported
***SCREEN	Screen menus	Not supported
***TABLET n	Tablet menus	Not supported

To see how BtoCAD reads AutoCAD menu source files

- 1 Type *menu* and then press Enter.
- 2 Under Files Of Type, select AutoCAD Menu File (mnu).
- 3 In the Open Menu dialog box, go to the AutoCAD Support folder and select the Acad.mnu file (or Acad.mns for Releases 13, 14, and 2000).
- 4 To load the AutoCAD menu file into BtoCAD, click Open.

The BtoCAD menu bar now looks identical to the AutoCAD menu bar.

- 5 To see how it works, choose a few commands from the menu bar, such as File > Open or Draw > Line.
- 6 To restore BtoCAD to its default menu, choose Tools > Customize, and then click the Menus tab and click Reset.

7 To restore the BtoCAD default toolbars, choose Tools > Customize, and then click the Toolbars tab and click Reset.

Creating new menus and commands

You can create a new menu by inserting a menu item at the top level of the Menu Tree. Then you can add commands to the new menu item. You can also add sub- menus and modify existing menu names and commands by adding, deleting, and rearranging them.

NOTE A green bullet in front of a menu item or command indicates that the menu item or command is available for you to use at the experience level you have set. A red bullet in front of a menu item or command indicates that the menu item or command is not available for you to use at the experience level you have set. To change your experience level, choose Tools > Options.

To create a new menu

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Menus tab.
- 3 In the Menu Tree, select the menu name above which you want to add a new menu.
- 4 Choose Insert > Menu Item.
- 5 Type a name for the new pull-down menu, and then press Enter.
- 6 Click Close.

To see the new menu, you must perform the following steps for adding a command to the menu.

To add a command to a menu

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Menus tab.
- 3 In the Menu Tree, select the menu to which you want to add the new command.
- 4 Choose Insert > Menu Sub-Item.
- 5 Type a name for the new command, and then press Enter.
- 6 Assign a command string to the command you added by doing one of the following:

- In the Available Commands list, choose the command, and then click Add Command.
 - In the Command box, type the command string, and then click Add Command.
- 7 In the Help String box, type the text to be displayed in the status bar when the cursor is positioned over the new command.
 - 8 To add another command, repeat steps 3 through 7.
 - 9 When you have finished, click Close.

TIP *When you type a name for a new command, you can specify an access key by including an ampersand (&) immediately preceding the letter you want to use as the access key. Be sure not to assign the same access key to more than one menu or command within a menu. For example, if you add a command named *Quick Line* to the *Insert* menu, including an ampersand immediately preceding the letter *Q* causes that letter to appear underlined in the menu. You can then select that command by displaying the menu and pressing the *Q* key.*

To rename a menu item

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customizes* and then presses Enter.
- 2 Click the Menus tab.
- 3 In the Menu Tree, select the menu item you want to rename.
- 4 Click Rename.
- 5 Type a new name for the menu item by typing over the highlighted name, and then press Enter.
- 6 Click Close.

To delete a menu item

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Menus tab.
- 3 In the Menu Tree, select the menu item you want to delete.
- 4 Click Delete.
- 5 In the Confirmation dialog box, click Yes to delete the menu item.
- 6 Click Close.

NOTE *Deleting a menu item that has sub-items below it in the Menu Tree also deletes all those sub-items.*

Setting the experience levels for menus

You can set the experience levels for menu items you create, and you can change the experience levels for existing commands.

To set the experience levels for a command

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Menus tab.
- 3 In the Menu Tree, select the command.
- 4 Click Options.
- 5 In the Menu Customization Options dialog box, under Experience Level, select the experience levels that you want for the command.
- 6 Click OK.
- 7 Click Close.

NOTE *Select all the experience levels above the lowest level you want to use. Commands appear in the menu only at the experience levels you specify. If you select Intermediate without also selecting Advanced, the commands will appear only when you set the experience level to Intermediate.*

Saving menu files

BtoCAD automatically saves any changes you make to the current menu. You can also create and save your custom menus. The program automatically saves all menu files with the *.icm file extension.

To save the current menu to a file

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Menus tab.
- 3 Click Export.
- 4 In the Select Menu File dialog box, specify the directory and file name you want to use to save the menu file.

- 5 Click Save.
- 6 Click Close.

NOTE *Saving a menu does not save any toolbars that you created or modified.*

Loading menu files

You can replace the current menu file with other custom menus. The program loads both AutoCAD (*.mnu, *.mns) and BtoCAD (*.icm) menu files.

To load a menu file

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Menus tab.
- 3 Click Import.
- 4 From the Files Of Type list, choose either *.icm, *.mnu, or *.mns.
- 5 Select the menu to load.
- 6 Click Open.
- 7 Click Close.

NOTE *Loading a new menu replaces only the menu. It does not replace any custom toolbars you may have defined.*

To use the custom shortcut menu

- 1 Open BtoCAD.
- 2 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and press Enter.
- 3 Click the Menus tab.
- 4 Click Import.
- 5 Select the custom shortcut menu file.
- 6 Select the Append To Current Menu check box, and then click Open.

If you don't select this box, the custom shortcut menu deletes all current menus.

- 7 Click Close.
- 8 Select an entity in your drawing, and then hold down Shift and click the right mouse button.

- 9 Click the shortcut command that you want.

To restore the shortcut menu defaults

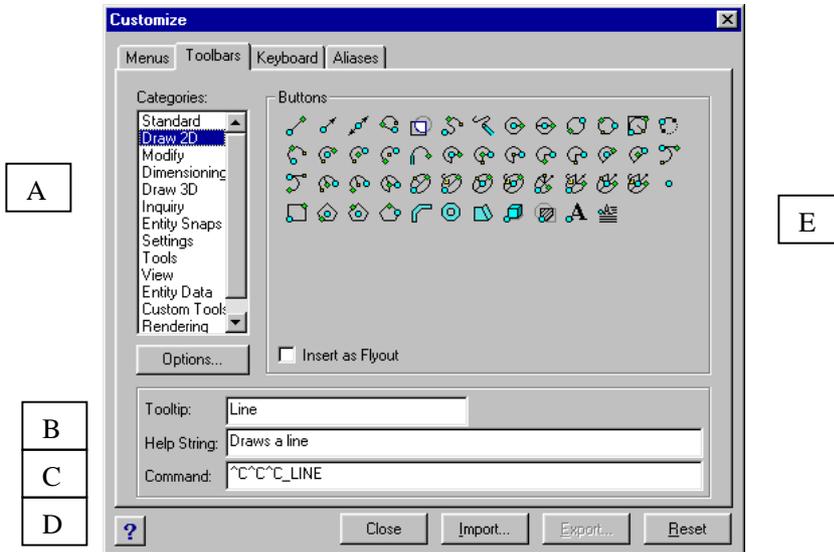
- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and press Enter.
- 2 Click Reset.

Customizing toolbars

BtoCAD provides toolbars so that you can access frequently used commands. You can customize these toolbars by adding or removing tools or by rearranging the organization of tools. You can also create custom toolbars. Toolbars are saved as integral parts of the program. Although you cannot export custom toolbars for use by others, you can load toolbars created as part of AutoCAD menus. You customize toolbars using the Customize dialog box and clicking the Toolbars tab.

To display the Customize dialog box

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Toolbars tab.
- 3 Customize the toolbars using the procedures that follow the illustration here.



- A The Categories list shows available toolbar categories.
- B Contains the string displayed as a ToolTip for the current tool.
- C Contains the text displayed in the status bar for the current tool.
- D Contains the command string assigned to the current tool.
- E Displays the available tools for the selected category.

Creating a new toolbar

You can create a new toolbar by dragging a tool from the Customize dialog box and dropping it anywhere except on another toolbar. BtoCAD immediately creates a new toolbar and assigns it a default name. Then you can add tools to the new toolbar. You can also add, delete, or modify tools on any existing toolbar.

When you create a toolbar using tools from the Buttons area of the Customize dialog box, the ToolTip, Help String, and Command fields are filled in automatically with default information. You can edit this information for each tool.

To create a new toolbar

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.

- 2 Click the Toolbars tab.
- 3 In the Categories list, choose a category to display its associated tools.
- 4 Click and drag a tool outside the Customize dialog box and onto an open area of the screen.
- 5 Modify the ToolTip, Help String, and Command fields as needed.
- 6 Click Close.

To add a tool to a toolbar

- 1 Make sure the toolbar you want to modify is visible.
- 2 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 3 Click the Toolbars tab.
- 4 In the Categories list, choose a category to display its associated tools.
- 5 Click and drag a tool onto the toolbar.
- 6 Modify the ToolTip, Help String, and Command fields as needed.
- 7 To add another tool, repeat steps 4 through 6.
- 8 Click Close.

To delete a tool from a toolbar

Make sure the toolbar you want to modify is visible.

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Toolbars tab.
- 3 Drag the tool you want to delete off of the toolbar.
- 4 Click Close.

To add space between tools on a toolbar

Make sure the toolbar you want to modify is visible.

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Toolbars tab.
- 3 On the toolbar, drag the tool away from the tool beside it. To avoid accidentally deleting a tool, do not drag a tool more than halfway past the edge of the toolbar.
- 4 Click Close.

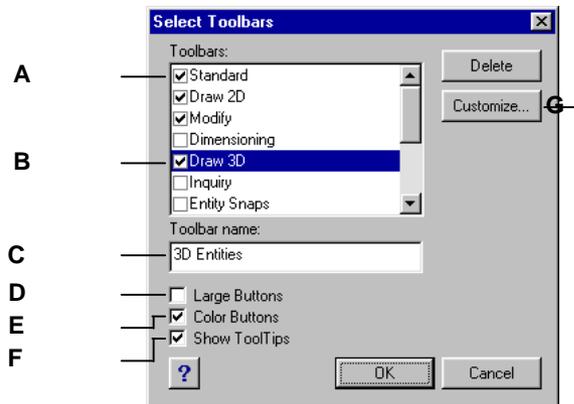
Naming toolbars

When you create a toolbar, the program assigns it an arbitrary name, such as ToolBar1, ToolBar2, and so on. The toolbar name is displayed on the title bar when the toolbar is floating. You can rename a toolbar at any time.

In the Select Toolbars dialog box, you can rename toolbars, turn the display of toolbars on and off, choose to display large or small tools, choose to display toolbar tools in color or black and white, and control the display of ToolTips.

To rename a toolbar

- 1 Do one of the following:
 - Choose View > Toolbars.
 - Type *tbconfig* and then press Enter.
- 2 From the Toolbars list, choose the toolbar that you want to rename.
- 3 In the Toolbar Name field, replace the current name with the new toolbar name.
- 4 Click OK.



- A Select to display a toolbar.
- B Choose the toolbar that you want to rename.
- C Type a new name.
- D Select to display large tools; clear to display small tools.
- E Select to display color tools; clear to display black and white tools.
- F Select to display ToolTips; clear to not display ToolTips.
- G Click to customize the toolbars.

Creating flyouts

A flyout displays a set of additional tools under a single toolbar tool. BtoCAD uses flyouts to organize related tools and to conserve space on toolbars. A flyout is indicated by a small triangle in the lower right corner of a tool. When you click a flyout tool, the other tools on the flyout extend from the original tool so you can select one of them. The flyout tool you select then become the default tool on the toolbar. You can add your own flyouts to toolbars.

To add a flyout to a toolbar

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Toolbars tab.
- 3 Select the Insert As Flyout check box.
- 4 In the Categories list, choose a toolbar name to display its associated tools in the Buttons area.
- 5 From the Buttons area, click and drag a tool onto a toolbar outside the Customize dialog box.
- 6 Modify the ToolTip, Help String, and Command fields as needed.
- 7 To add another flyout tool, repeat steps 4 through 6.
- 8 Click Close.

Setting the experience levels for tools

You can set the experience levels for toolbar tools you create, and you can change the experience levels for existing tools.

To set the experience levels for a tool

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Toolbars tab.
- 3 Go outside the Customize dialog box to a toolbar, and click a tool to select it.
- 4 Go back to the Customize dialog box, and click Options.
- 5 Under User Level, select the experience levels you want for that tool.
- 6 Click OK.
- 7 Click Close.

NOTE *Select all the experience levels above the lowest level you want to use. Tools appear in toolbars only at the experience levels you specify. If you select Intermediate without also selecting Advanced, the tool will appear only when you set the experience level to Intermediate.*

Creating custom toolbar tools

BtoCAD provides tools for most of the available BtoCAD commands. These tools appear on the Toolbars tab of the Customize dialog box. You can also create your own custom tools and incorporate them into your custom toolbars. To add a custom tool to a toolbar, you must first add one of the program's standard tools and then replace it on the toolbar with your custom tool.

You create custom tools as bitmap (*.bmp) files using any paint or illustration program capable of saving to a bitmap. Because you can configure toolbars to display either large or small tools and to display tools either in color or monochrome, create four different versions of each custom tool. Create custom tools using the following dimensions:

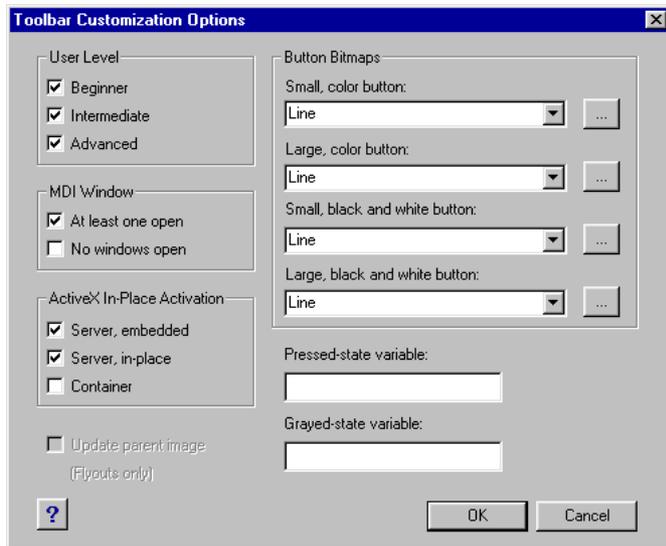
- Small tools: 16 x 15 pixels.
- Large tools: 24 x 22 pixels.

NOTE *If you attempt to use bitmaps that do not match these dimensions, the program will stretch or shrink (rather than crop) the bitmaps to fit the specified size. The resulting tools may not appear as originally intended.*

To add a custom tool to a toolbar

Make sure the toolbar you want to modify is visible.

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Toolbars tab.
- 3 Go outside the Customize dialog box to a toolbar, and click a tool in the toolbar to select it.
- 4 Go back to the Customize dialog box, and click Options.
- 5 In the Toolbar Customization Options dialog box, under Button Bitmaps, click the browse tool (indicated by an ellipsis) adjacent to the Small, Color Button list to display the Select Bitmap dialog box.
- 6 Select the bitmap you want to use for the small color tool.
- 7 Click Open.
- 8 Repeat steps 5 through 7 for the Large Color Button, Small Black and White Button, and Large Black and White Button versions of your custom tool.
- 9 When you have finished, click OK.
- 10 Click Close.



The Toolbar Customization Options dialog box.

Importing toolbars

Toolbars are saved as integral parts of BtoCAD. In BtoCAD, you can load toolbars created as part of AutoCAD (*.mnu, *.mns) menus. Importing an AutoCAD menu file from the Toolbars tab of the Customize dialog box loads only the toolbar section of the menu file.

To import a menu file

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Toolbars tab.
- 3 Click Import.
- 4 Select the menu you want to load.
- 5 Click Open.
- 6 Click Close.

NOTE Importing an AutoCAD menu file from the Toolbars tab of the Customize dialog box replaces any custom toolbars you may have defined. Importing the menu file in this way, however, does not affect the current menu.

To copy an existing toolbar

Make sure the toolbar you want to copy is visible.

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and press Enter.
- 2 Click the Toolbars tab.
- 3 Go outside the Customize dialog box and select a tool on the existing toolbar that you want to copy.
- 4 Copy the information from the ToolTip, Help String, and Command boxes and paste it into the corresponding lines in the text file.
- 5 Save the file to the BtoCAD folder with a *.mnu extension.

To open the toolbar file on another computer

- 1 Copy the toolbar (MNU) file and all related custom bitmap (*.bmp) files to the BtoCAD folder on the other computer.
- 2 Open BtoCAD.
- 3 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and press Enter.
- 4 Click the Toolbars tab.
- 5 Click Import.
- 6 Select the new toolbar file.
- 7 Select the Append To Current Menu check box, and then click Open.

If you don't select this box, the custom shortcut menu deletes all current menus.

- 8 Click Close.

To restore the toolbar defaults

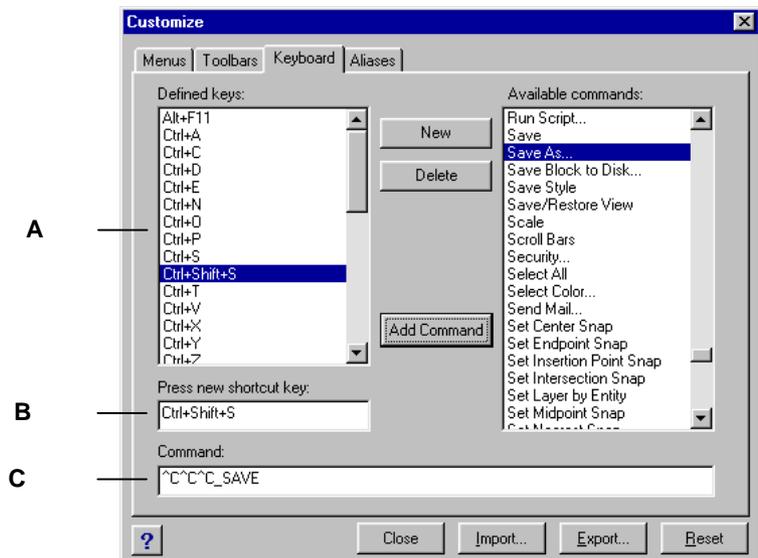
- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and press Enter.
- 2 Click Reset.

Customizing the keyboard

BtoCAD provides keyboard shortcuts so you can access frequently used commands. You can customize these shortcuts and add new shortcuts using the Customize dialog box.

To customize the keyboard

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Keyboard tab.
- 3 To define a new shortcut key, enter the shortcut in the Press New Shortcut Key box.
- 4 To define a new command string, enter the command string in the Command box.
- 5 To import an existing keyboard shortcut file, click Import.
- 6 To save a keyboard shortcut to a file, click Export.
- 7 To add a command selected in the Available Commands pane to the shortcuts, click Add Command.
- 8 To insert a new keyboard shortcut, click New.



- A Shows shortcuts already defined.
- B Displays the shortcut key combination when adding a new shortcut.
- C Contains the command string assigned to the shortcut.

Creating a keyboard shortcut

You can assign macros to special keys and certain combinations of keys to create a keyboard shortcut. A macro consists of one or more commands that are displayed on the status bar as follows:

- A single command, such as QSAVE.
- A command with options, such as ARC;\A;\.
- More than one command, such as ^C^C^CZOOM;E;QSAVE;QPRINT.

Keyboard shortcuts are more powerful than aliases. An alias lets you abbreviate a single command name; a keyboard shortcut contains one or more macros. To activate a macro, you press the shortcut key; you do not need to press Enter as you do with an alias. A shortcut consists of the following keys:

- The function and the cursor control keys, as well as alphanumeric keys pressed in combination with the Ctrl, Alt, and Shift keys. The Shift key must be used in conjunction with the Ctrl, Alt, and/or function keys.
- Alphanumeric keys are those labeled A through Z and 1 through 0.
- The cursor keys are the up, down, left, and right arrows and the Page Up, Page Down, Home, End, Insert, and Delete keys.
- The function keys are those labeled F1 through F12.

To create a keyboard shortcut

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Keyboard tab.
- 3 Click New.
- 4 In the Press New Shortcut Key field, press Alt+A. The program adds Alt+A to its list of Defined Keys.
- 5 In the Available Commands list, select Arc Center-Start-Angle.
- 6 Click Add Command.

The program adds the command to the Command field and enters the complete syntax for you:

```
^C^C^C_CARC;C;\ |A;
```

- 7 To save your changes and close the dialog box, click Close.
- 8 To activate the Arc command with the center, start, and angle options, press Alt+A.

To redefine an existing keyboard shortcut

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Keyboard tab.
- 3 In the Defined Keys list, select the shortcut you want to change.
- 4 In the Command field, change the command string assigned to the keyboard short- cut by doing one of the following:
 - Use the text cursor to delete the current command string, choose a new command in the Available Commands list, and then click Add Command.
 - Edit the command string in the Command field.
- 5 Click Close.

To delete an existing keyboard shortcut

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Keyboard tab.
- 3 In the Defined Keys list, select the shortcut you want to delete.
- 4 Click Delete.
- 5 Click Close.

Saving keyboard shortcut files

BtoCAD automatically saves any changes you make to the current keyboard short- cuts. You can also create and save your own keyboard shortcut files. The program saves keyboard shortcut files with the *.ick file extension.

To save the current keyboard shortcuts to a file

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Keyboard tab.
- 3 Click Export.
- 4 Specify the directory and file name you want to use to save the keyboard shortcut file.
- 5 Click Save.
- 6 Click Close.

Loading keyboard shortcut files

You can replace the current keyboard shortcut file with other custom keyboard shortcut files.

To load a keyboard shortcut file

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Keyboard tab.
- 3 Click Import.
- 4 Select the file to load.
- 5 Click Open.
- 6 Click Close.

Creating aliases

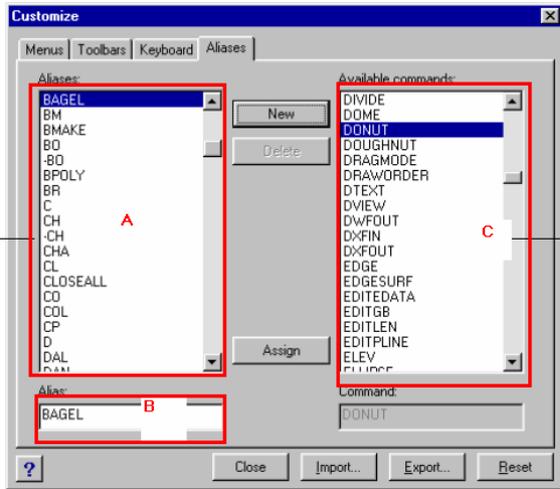
BtoCAD provides aliases for many commands. You can use aliases to issue frequently used commands by entering one or two letters rather than the entire command name.

The program also uses aliases to maintain command-name compatibility with AutoCAD. You can use the same aliases and keyboard shortcuts used by AutoCAD. In addition, BtoCAD has enhanced several AutoCAD commands. For example, BtoCAD added two useful options to the *rectangle* command: you can draw a rectangle as a square, and you can rotate a rectangle at an angle.

You can customize aliases, and you can add new aliases. You customize aliases using the Customize dialog box.

To display the Customize dialog box

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Aliases tab.



- A Shows aliases already defined.
- B Contains the current alias.
- C Displays the command assigned to the current alias.

Creating, redefining, and deleting aliases

To create a new command alias, you first define the alias and then assign it one of the available BtoCAD commands.

To create a new alias

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Aliases tab.
- 3 Click New.
- 4 In the Alias field, type the new alias.
- 5 In the Available Commands list, select the command you want to assign to the alias.
- 6 Click Assign.
- 7 Click Close.

To redefine an existing alias

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Aliases tab.
- 3 In the Aliases list, select the alias you want to change.
- 4 In the Available Commands list, select the command you want to assign to the alias.
- 5 Click Assign.
- 6 Click Close.

To delete an existing alias

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Aliases tab.
- 3 In the Aliases list, select the alias you want to delete.
- 4 Click Delete.
- 5 Click Close.

Saving alias files

BtoCAD automatically saves any changes you make to the current aliases. You can also create and save your own alias files. The program saves alias files with the *.ica file extension. You can also save alias files for use with AutoCAD by saving the files with the *.pgp file extension.

To save the current aliases to a file

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Aliases tab.
- 3 Click Export.
- 4 From the Save As Type list, choose either *.ica or *.pgp.
- 5 Specify the directory and file name you want to use to save the alias file.
- 6 Click Save.
- 7 Click Close.

Loading alias files

You can replace the current alias file with other custom alias files. The program loads both AutoCAD (*.pgp) and BtoCAD (*.ica) alias files.

To load an alias file

- 1 Do one of the following:
 - Choose Tools > Customize.
 - Type *customize* and then press Enter.
- 2 Click the Aliases tab.
- 3 Click Import.
- 4 From the Files Of Type list, choose either *.ica or *.pgp.
- 5 Select the alias file to load.
- 6 Click Open.
- 7 Click Close.

Customizing entities

BtoCAD provides ways to customize entities beyond common formats, dimensions, and layers. Further customization includes using custom audio notes and using custom shape files.

Working with audio notes

In BtoCAD you can record and attach audio notes, which are sound clips attached to entities and available for playback at any time. For example, audio notes in a factory floor plan can describe maintenance activities for specific areas of the factory and employees can play the audio notes to hear instructions.

When you include audio notes in your drawing, they are saved in the drawing file — not in a separate audio file. Note that this can increase the file size of your drawing. Audio notes created from an existing *.wav file are also saved in the drawing file and the separate *.wav file remains unchanged.

NOTE *You can play audio notes in BtoCAD only.*

Attaching audio notes

Audio notes can be created from existing *.wav files. You can also record an audio note using any microphone that works with your computer. Many computers have a built-in microphone. If you do not have a microphone and you record an audio note, the audio note will contain no sound.

An audio note icon displays on entities that have attached audio notes. The icon is for display only and cannot

be selected.

To record and attach an audio note to entities

- 1 Do one of the following:
 - Choose Tools > Audio Note.
 - On the Tools toolbar, click the Audio Note tool ().
 - Type *audionote* and then press Enter.
- 2 Select the desired entities, and then press Enter.
- 3 Choose Record.
- 4 Click Record to begin the audio note, and then speak into the microphone.
- 5 Click Stop to end the audio note.
- 6 To test the audio note, click Test, and then use Pause and Stop in the Test Audio Note area.
- 7 If necessary, you can record the audio note again. This overwrites the previous audio note for the entities you selected in Step 2.
- 8 Click Attach.

TIP To modify an audio note after you attach it to an entity, select the entity and re-record the audio note using the previous steps.

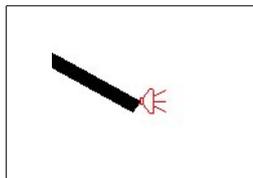
To attach an audio note to entities using a .wav file

- 1 Do one of the following:
 - Choose Tools > Audio Note.
 - On the Tools toolbar, click the Audio Note tool ().
 - Type *audionote* and then press Enter.
- 2 Select the desired entities, and then press Enter.
- 3 Choose Attach.
- 4 Select the desired *.wav file, and then click Open.

Selecting audio notes

Audio notes themselves cannot be selected. Instead, you select the entity that corresponds to the desired audio note.

An audio note icon displays on entities that have attached audio notes. The icon is for display only and cannot be selected.



An audio note icon displays on an entity, signifying that an audio note is attached to the entity.

To select audio notes

- 1 Do one of the following:
 - Choose Tools > Audio Note.
 - On the Tools toolbar, click the Audio Note tool ().
 - Type *audionote* and then press Enter.
- 2 Select the entity that is attached to the desired audio note, and then press Enter.
You cannot select the audio note icon that displays on the entity.
- 3 Choose an option to continue working with audio notes.

TIP You can change the appearance of audio note icons using the *AUDIOICON*, *AUDIOICONCOLOR*, and *AUDIOICONSCALE* system variables.

Playing audio notes

To play audio notes

- 1 Do one of the following:
 - Choose Tools > Audio Note.
 - On the Tools toolbar, click the Audio Note tool ().
 - Type *audionote* and then press Enter.
- 2 Select the entity that has the audio note you want to play, and then press Enter.
- 3 Choose Playback.
- 4 In the Playback dialog box, do the following:
 - Click Play to begin playback.
 - To pause the audio note temporarily, click Pause and then click Resume to continue.
 - Click Stop to end playback.
- 5 Click OK.

Deleting audio notes

You can remove audio notes from selected entities. In some cases, you may want to remove extra audio notes to reduce the drawing file size.

NOTE When you remove an audio note from an entity, the audio note is removed permanently and cannot be recovered. However, if the audio note was created using an existing *.wav file, that *.wav file is not removed.



To delete audio notes

- 1 Do one of the following:
 - Choose Tools > Audio Note.
 - On the Tools toolbar, click the Audio Note tool ().
 - Type *audionote* and then press Enter.
- 2 Select entities that have the audio notes you want to delete, and then press Enter.
- 3 Choose Delete.

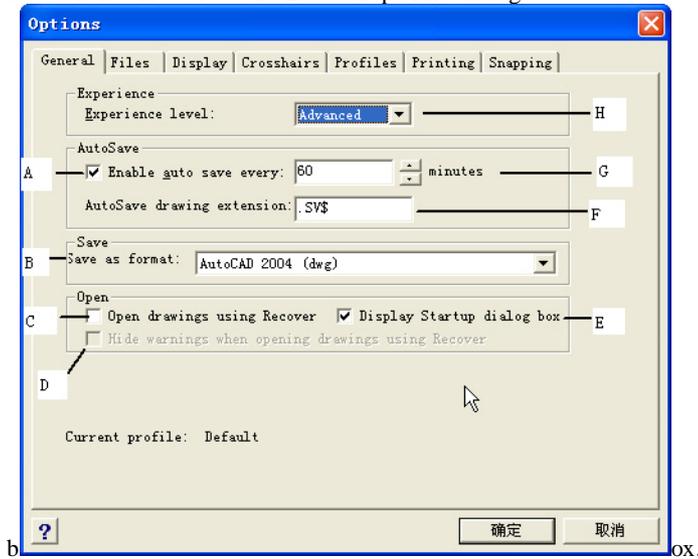
Using shape files

Shapes are entities that you define for use as drawing symbols and text fonts. You can specify the scale and rotation to use for each shape as you add it.

To use shape files, you first load the compiled shape file that defines the shape. Then you use insert shapes from the file into your drawing.

To load a shape file

- 1 Type *load* and then press Enter.
- 2 In the Load Shape File dialog box, select a shape file.
- 3 Click OK to close the Load Shape File dialog



To use a shape file

- 1 Type *shape* and then press Enter.
 - 2 Type a shape name and press Enter.
- 396

- 3 Specify an insertion point.
- 4 Specify a height.
- 5 Specify a rotation angle.

Creating and replaying scripts

BtoCAD can record anything you type on the keyboard and any points you select in a drawing. You can save all of these actions to a script file (with the *.scr extension) and then repeat them by replaying the script. You can use scripts for successively repeating commands, showing snapshots in a slide show, or batch printing. You can also load and run script files created for use with AutoCAD.

BtoCAD supports most AutoCAD customization files, including menus, script files, and LISP routines. BtoCAD uses compatible line types, hatch patterns, units translation, and command aliases, but you can also substitute your own files for these. This feature allows you to continue to work with your favorite customized drafting environment. A script is a form of text file. A script file contains one line of text or other data for each action. For example, when you type a command and press Enter, it is recorded on a line in the script file. When you select a point in a drawing, the coordinate of that point is recorded on a line in the script file. You can also create script files outside BtoCAD using a text editor (such as Microsoft® Notepad or Microsoft® WordPad) or a word-processing program (such as Microsoft® Word) that saves the file in ASCII format. The file type and extension must be .scr Script files can contain comments. Any line that begins with a semicolon is considered a comment. The program ignores these lines when replaying the script. The Undo feature reverses the last command performed by the script

BtoCAD improves on scripts, AutoLISP, and ADS by providing additional functions. For scripts, BtoCAD includes a Script Recorder that records both command line entries and screen picks you make with your mouse.

After you activate the Script Recorder, every keyboard entry you make and any points you select in a drawing are recorded until you stop the Script Recorder. You can play back your script at any time.

CAUTION *The Script Recorder does not record your use of toolbars, menus, or dialog boxes. Using these elements while recording a script causes unpredictable results.*

To record a script

- 1 Do one of the following:
 - Choose Tools > Record Script.
 - On the Tools toolbar, click the Record Script tool .
 - Type *recscript* and then press Enter.
- 2 Specify the name of the script file you want to create.
- 3 Click Save.

4 Type commands on the keyboard.

The Script Recorder records all keyboard entries and all points you select in the drawing, saving everything to the script file.

To stop recording

Do one of the following:

- Choose Tools > Stop Recording.
- On the Tools toolbar, click the Stop Recording tool ().
- Type *stopscript* and then press Enter.

To replay a script

1 Do one of the following:

- Choose Tools > Run Script.
- On the Tools toolbar, click the Run Script tool ().
- Type *script* and then press Enter.

2 In the Run Script dialog box, specify the name of the script file you want to run.

3 Click Open.

The program immediately runs the script, performing all the actions originally recorded.

To append to a script

1 Do one of the following:

- Choose Tools > Record Script.
- On the Tools toolbar, click the Record Script tool ().
- Type *rescript* and then press Enter.

2 In the Record Script dialog box, select the Append To Script check box.

3 Select the existing script file to append.

4 Click Save.

5 Click Yes to the prompt asking whether you want to replace the existing script.

6 Repeat the procedure to enter additional commands and steps.

TIP To invoke a script automatically when you load BtoCAD, in Windows Explorer, double-click a script file.

Programming BtoCAD

Another way you can customize BtoCAD is to add custom programs written in any of several programming languages that run within BtoCAD, including the following:

- LISP
- Visual Basic for Applications (VBA)
- ADS

In BtoCAD, you can run many programs originally created for use with AutoCAD. Specifically, you can use programs written entirely in AutoLISP with no modification. In addition, you can run many ADS programs originally written for use with AutoCAD after first recompiling them using the BtoCAD run-time libraries. Many AutoCAD third-party programs are compatible with BtoCAD.

NOTE For information about programming for BtoCAD, see the online Help for the BtoCAD Developer's Reference.

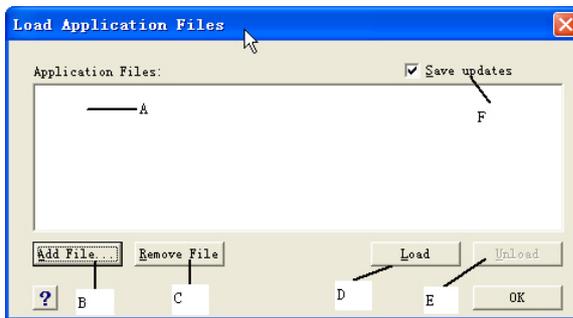
Using LISP routines

BtoCAD supports the LISP programming language and is compatible with AutoLISP, the implementation of the LISP language in AutoCAD. This means that you can load and run any AutoLISP program written for use with AutoCAD.

To load a LISP routine

Advanced experience level

- 1 Do one of the following:
 - Choose Tools > Load LISP or SDS Application.
 - Type *appload* and then press Enter.
 - Drag and drop the LISP file into BtoCAD.
- 2 In the Load Application Files dialog box, click Add File.
- 3 Select the LISP file that you want to load, and then click Open.
- 4 Click OK.



- A** Lists the names of LISP and SDS files already loaded.
B Click to add a LISP or SDS file name to the list.

- C Click to remove the highlighted file name from the list.
- D Click to load the highlighted file.
- E Click to unload the highlighted file.
- F Select to save the current list to the `icadload.dfs` file when you click Load, Unload, or Ok

TIP You can also load a LISP routine by typing (load “d:/path/routine.lsp”) in the command bar (you must include the parentheses and the quotation marks), where d:/ path is the drive and path where the LISP routine is located on your computer, and routine.lsp is the LISP routine file name.

To run a LISP routine

Advanced experience level

- 1 Do one of the following:
 - Choose Tools > Load LISP or SDS Application.
 - Type *apload* and then press Enter.
- 2 In the Load Application Files dialog box, choose the routine you want to run (make sure that it is the only one selected), and then click Load.

Some LISP routines are created in such a way that you can run them by simply typing the name of the routine, or by typing a keyword, directly in the command bar. If nothing happens when you attempt to run the LISP routine from within the Load Application Files dialog box, turn on the display of the command bar or Prompt History window by choosing View > Command Bar or View > Prompt History Window, and look for an entry that is similar to the following:

```
Loading D:\path\routine.lsp
```

```
C:KEYWORD
```

where *D:\path\routine.lsp* is the complete drive, path, and file name of the LISP routine. You may need to scroll back several lines in the command bar or Prompt History window to find the lines indicating where the LISP routine was loaded. You can run the LISP routine by typing the name of the routine or keyword appearing after the C drive designation.

For example, if you loaded a LISP routine named *drawbox.lsp* and see the designation *C:DRAWBOX* in the command bar or Prompt History window, you can run the LISP routine by typing *drawbox* in the command bar.

Using ADS applications

To write AutoCAD applications in C or C++, Autodesk® uses the ADS (AutoCAD Development System). This is an API (applications programming interface) that provides a library to access AutoCAD-specific functions and drawing data.

The equivalent in BtoCAD is called SDS™, the Solutions Development System™. SDS is a C/C++ language interface compatible with the ADS interface in AutoCAD. Like scripts and AutoLISP, you can run your existing ADS applications in BtoCAD. Simply recompile the source code using the SDS libraries provided on the BtoCAD CD-ROM, or, if you use an AutoCAD program written by a third-party vendor, contact that vendor for the BtoCAD version.

BtoCAD provides the Sds.H file, which redefines ADS function names to their SDS equivalents. SDS supports the AutoCAD dialog control language (DCL), which is used by ADS to define the look of a dialog box. You can use all DCL files unmodified within SDS.

Understanding ADS compatibility

The primary difference between ADS and SDS is that all SDS functions have an sds_ prefix, and ADS functions have a variety of prefixes, such as ads_, acad_, and acrx_. The exception is dialog-related SDS functions, which have a dlg_ prefix. BtoCAD accepts either prefix. Other differences include the additional SDS functions listed in the following table.

Using DCL with BtoCAD

BtoCAD completely supports the AutoCAD DCL (dialog control language). DCL is used by AutoLISP functions to define the look of dialog boxes. You can use all DCL files unmodified within BtoCAD.