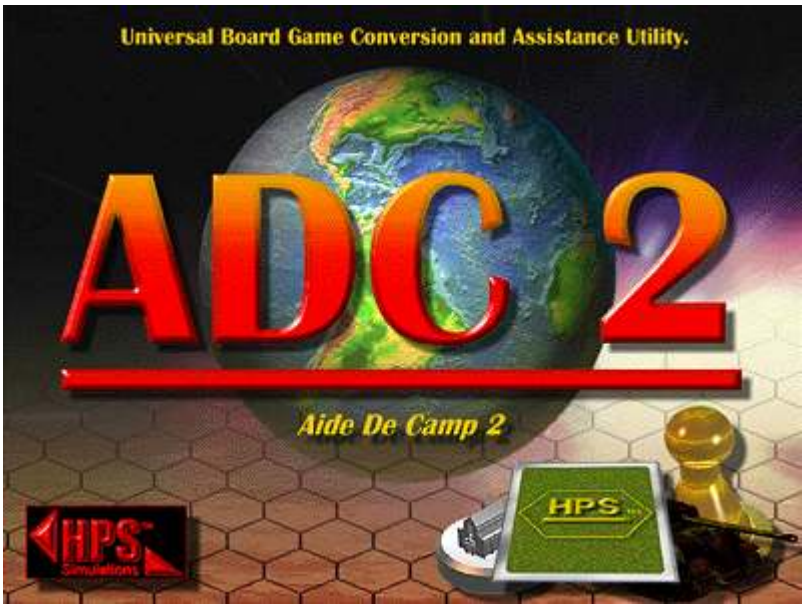
NOTE: This is an updated version. Check the file README.TXT for changes.

Aide De Camp 2.09
User Manual



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SECTION 1: INTRODUCTION

Aide De Camp Version 2.0 (ADC2) is a computer game aid designed to let players draw, set up, play, and store any board, map, or card game. Game designers can also use ADC2 as an "electronic easel" for the development games from scratch. Essentially, with ADC2, the user is creating an electronic version of his or her favorite board and card games.

ADC2 includes built-in routines for common game functions, such as movement and combat. It has a dice-rolling function (any-sided) and the ability to utilize hidden pieces. However, it does NOT contain any rules, maps, or other information for specific games. Therefore, you must own a copy of a board game in order to be able to use ADC2 to play that game.

Because of ADC2's enormous flexibility, it can handle a wide variety of games. The screen graphics, map

layout, complexity, and overall look and feel of the gameset created is determined by the user (the term gameset refers to the ADC2 version of the board game). In general terms, a "functional" gameset can usually be created fairly quickly. Making gamesets that are "gorgeous", however, can take some work. So, the final result just depends on how much effort you want to put into it.

After installing ADC2, select the **First Time Help** button from the **Control Panel** screen. This slide show will walk through the steps necessary to use ADC2, and is always available.

Once you're off and running, the on-line help is always available to assist you.

Enhancements to ADC1
With many enhancements and the switch to Windows 95, ADC2 represents a major step forward from ADC1. Owners of ADC1 will find many similar procedures, but will also be delighted by the new additions such as the full 16 million color palette, scanned map import capability, hidden pieces, and much more. The key question for ADC1 owners is "Are my old gamesets still usable?" Fortunately, the answer is "Yes!" ADC2 contains a conversion utility that will convert ADC1 games for use with ADC2. For more information, click the **ADC1 Upgrade** button from the ADC2 **Control Panel**.

Copyrights
HPS Simulations makes no representations concerning the copyrights and other interests held by the board game publishers. It is not an infringement of the publisher's right if an owner of a board game places the game on ADC2 for his or her personal use to play the game. Nor is it an infringement if the owner of the board game uses ADC2 to play that game with another individual or individuals. But, at least one person playing the game must own a copy of the board game. When play is completed, the ADC2 copies of the board game in the possession of persons who do not own the board game should be erased or returned. Further, board games or portions thereof entered on ADC2 must not be distributed or sold without the permission of the game's publisher and **HPS Simulations**.

To avoid copyright violations, just think of how games are played without ADC2. A copy of the board game is set up in one location, and then any number of people can participate, even if they themselves do not own the game. But when the game ends, only the owner should return home with the board game. At the start of the game there was one copy of the game, and at the end there is one copy. It should be the same if you use ADC2.

As for the ADC2 program, it is licensed to the original purchaser only, for use on a single computer. The original purchaser may make back-up and archive copies of ADC2, but may not sell or give away the ADC2 program to others. If more than one person will be playing a game with ADC2, all players must own ADC2, or all use the same copy of ADC2 located on the original purchaser's computer.

Additional copyright information and terms are detailed under **Help | About**.

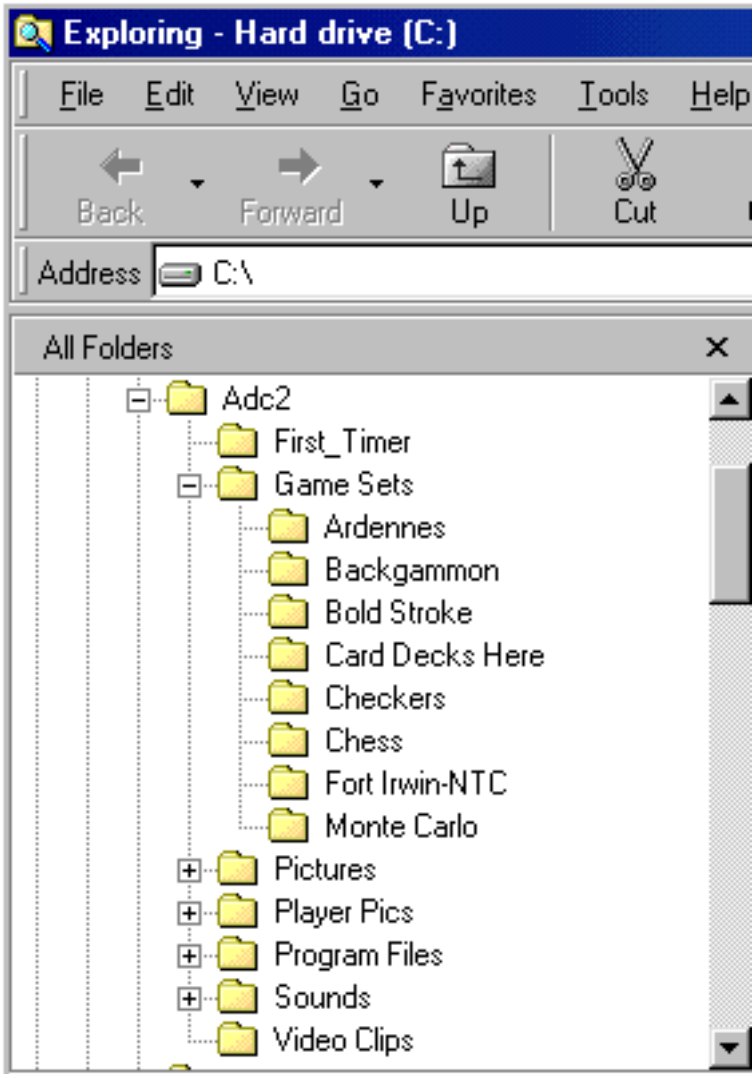
SECTION 2: COMPUTER REQUIREMENTS and INSTALLATION

ADC2 requires Windows 95/98 or better as the operating system. A minimum of a 486/66 processor is recommended. Additionally, ADC2 requires the 16bit High Color screen resolution mode (this is set by clicking the Start button from the taskbar, followed by Settings | Control Panel | Display | Settings). Minimum RAM is 8 megabytes, with 16 recommended.

To install ADC2, place the CD-ROM into your hard drive. On some systems, the installation will automatically begin. Otherwise, run "INSTALL" from your CD-ROM drive. Follow the install program's instructions.

Subdirectories
ADC2 will create a directory (folder) called ADC2 in whatever hard drive (C: for example) you specify. In addition to the main ADC2 directory, it will create several subdirectories (folders). They are:

ADC2/Pictures (.bmp files used in replays)
ADC2/Sounds (.wav files used in replays)
ADC2/Game Sets(gameset and Play Game (.ops) files)
ADC2/Player Pics (player .bmp files, or custom .bmps)
ADC2/Video Clips (.avi video files used in replays)
ADC2/Program Files (program files)
ADC2/First Timer (slide show)



If you change these subdirectory (folder) names, verify that the main program will find and recognize them.

SECTION 3: DEFINITIONS

Cards: Cards in ADC2 function as they do in actual games and exist in a deck, hand, or on the mapboard. Card graphics are made as "piece symbols" in the Symbol Editor Module, for the card back and the faces of the individual cards. Once a deck's symbol set has been completed, it is turned into a deck of cards in the in the Play Game Module.

Classes: Classes are notional objects that are the basis for all playing pieces. Their only purpose is to be used as the building blocks for pieces. They do not exist on the game mapboard or in pools, i.e.,

you never move a class on the mapboard. The class consists of the piece symbol, a class name (of up to 25 characters), the player (or nationality) of the class, the type of facing used (if any) and the Hidden Unit symbol used for this class (if any), and up to 8 **Class Values** (see below). In typical boardgaming terms, a class is a group of playing pieces which share the same values and characteristics. For example, you might have a boardgame with a dozen infantry brigade counters with identical combat and movement factors, let's say 4-6. The **concept** of a "4-6 Infantry Brigade" is a **Class** in ADC2 terminology. The 12 physical cardboard counters are **members** of the class, and are called **Pieces** in ADC2 terminology (see below). Classes are created in the Play Game Module by combining a unit symbol with a specific class name. See **Appendix B** for further explanation.

Class Values: Each defined Class (see above) can have up to 8 specific attributes or values assigned to it. These values are edited in the Play Game Module, and may be changed at any time during a game, but doing so changes the values for all pieces that use that class. Therefore it is unlikely that Class Values will be changed once a game begins. Examples of typical Class Values are things like the Attack Factor, Defense Strength, Movement Factor/Rate, Range, FLAK factor, etc. Class Values are definable as text (up to 4 characters per value), numbers (0-9999), or yes/no. Each of the eight Class Values can be given a unique name of up to 15 characters, however the names are shared among all the defined Classes. Separate Classes must be defined for both the front and back side of a game piece which can be "flipped."

Click: Pressing the left mouse button.

Combat Flag: The combat flag indicates whether or not a piece has engaged in combat in the current turn (or, since the flags were last cleared). These flags appear at various places in the Play Game Module, including the Piece Information Window at the bottom left of the main screen, and in the Select Pieces for Action window. An "A" flag indicates the piece participated as an attacker, a "D" indicates it defended (was the object of an attack). In some cases, a "C" is used to indicate it was either an attacker or defender (or both). You can clear/reset, the flags from the main menu: **Game | Advance/Set Turn**.

Force Pool: Pools are off-map holding areas for pieces. Think of them as a storage tray that you have organized to hold your boardgame counters. Pools can also serve as the "boxes" around the main playing area of mapboard sometimes used in actual boardgames to place counters.

Gameset: The complete group of ADC files that represent a specific game. A gameset normally includes the symbol set (map and piece graphics), the map, and an initial "setup" turn.

Hex: A grid shape used to regulate piece placement and movement in many board games. In ADC2, it is a general term that applies to a single, indivisible, Mapboard location into which graphics and pieces can be placed.

Hex Grain: The grain describes the orientation of the hex grid on the mapboard. To tell which grain is appropriate for a game, position the actual (paper) mapboard as you would like to view the playing area in ADC2. If the flat sides of the hexes are on top (the hexes are in columns), it is a vertical hex grain. If the apexes (angles) are on top (the hexes are in rows), it is a horizontal hex grain. Hex grain is only used for maps with a hex or offset square grid.

HexLine: Hexlines are linear features which radiate out from the center of a hex. They are placed in the Mapboard Editor Module to graphically represent things such as roads, railroad lines, in-hex rivers, etc.

HexSide: Hexsides are linear features located at the interface between two hexes. They are placed in the Mapboard Editor Module to graphically represent features such as rivers and borders.

Map Style: The style defines whether an the Mapboard will use hexes or a grid, i.e., hexes like a typical wargame or squares like a chess board.

Mapboard: The complete playing surface of an ADC2 game is called the Mapboard. It may be composed of adjoining hexes or rectangles (see above), each of which represents an indivisible location for placing graphics and pieces. Each of these locations is generally referred to as a "hex" (NOTE: ADC1 has a 30,000 hex limit. With ADC2, the limit is 60,000). Each map hex or square always has a primary Mapboard symbol type (the default is the first symbol entered). Additionally, hexes may have any number of secondary symbol characteristics. For example, a hex may have a primary symbol of woods, and secondary symbol of a port and a factory. On the screen, this might look like a black anchor symbol and a factory symbol on a green background. Finally, a hex may have features such as roads, rivers, etc., which are noted by hexlines and hexsides.

Mapboards are created in the Mapboard Editor Module.

Mapboard Symbols: These are symbols created using the Symbol Editor Module which are then used to create the Mapboard. ADC2 allows for hexagonal based maps, square grid maps, and/or geomorphic variations of these. "Area" type maps are built by either using a different "color" of primary symbol in each area's component hexes, or by enclosing each area with hexsides or hexlines.

Mapsheet: Many board games use multiple mapsheets to produce the total playing area, each of which normally has its own name and numbering system. The mapsheet capability of ADC merely matches this situation, where each ADC mapsheet corresponds to one paper mapsheet. This allows users to insure that hex numbering in their ADC game matches the paper game. ADC games always contain at least one mapsheet, even if they are pure card games. If the user doesn't enter any mapsheets of his own, ADC2 assigns the game one with a default numbering scheme.

Menu Bar: The items at the top of the screen

Movement Flag: The movement flag indicates whether or not a piece has moved in the current turn (or, since the flags were last cleared). This flag appears as the letter "M" at various places in the Play Game Module, including the Piece Information Window at the bottom left of the main screen, and in the Select Pieces for Action window. You can clear/reset, the flags from the main menu: **Game | Advance/Set Turn**.

***.Ops File:** The "OPS" file is created by the Play Game Module when a game is saved. It stores all of the current game and turn data, including classes, pieces, pools, players, the replay, and other information. It is usually named after the game or a specific scenario of a game (i.e., "War of the Worlds Turn 1.OPS"). The OPS file is what is sent to the other players at the end of each turn when playing a game via PBEM.

Pieces: Pieces are unique individual objects that represent the actual playing pieces ("units" or "counters" in wargaming parlance) , and can exist either in Pools or on the mapboard. Pieces must belong to a Class (see above), which, among other things, determines the symbol which will appear on the mapboard. Pieces may also have a name (of up to 25 characters in length) and up to eight **Piece Values** (see below) assigned to them. Pieces are created from the existing classes when they are initially placed into the game in the Play Game Module. See **Appendix B** for further explanation.

Piece Status: The piece status indicators show whether or not a piece has moved or engaged in combat in the current turn (or, since the flags were last cleared). These flags appear at various places in the Play Game Module, including the Piece Information Window at the bottom left of the main screen, and in the Select Pieces for Action window. An "M" flag indicates the piece has moved. An "A" flag indicates the piece participated as an attacker, a "D" indicates it defended (was the object of an attack). In some cases, a "C" is used to indicate it was either an attacker or defender (or both). You can clear/reset, the flags from the main menu: **Game | Advance/Set Turn**.

Piece Values: These values are set in the Play Game Module, and each piece can have up to 8 specific attributes or values assigned. Piece Values may be changed as the game progresses, and in contract to Class Values (see above), often are. Examples of typical piece values are Supply Level, Piece Strength Points, Morale Level, Entrenchment Level, etc. As with Class Values, Piece Values are definable as text (up to 4 characters per value), numbers (0-9999), or yes/no. Each of the eight Piece Values can have a unique name of up to 15 characters. It is important to understand that all pieces in the gameset will share these Piece Value Names, although the actual value for each piece can be different.

Pixels: Pixels are the small single colored dots displayed on your screen. These dots are used to draw the symbols from the Symbol Editor Module.

PlaceName: A specific name or text string assigned to a Mapboard grid cell. Placenames are initially added to the mapboard, as well as edited in the Mapboard Editor Module.

RAM: Random Access Memory.

Replay: In the Play Game Module, the replay stores, and allows the user to view, all of the game actions since the replay was last cleared. You can see what happened for the previous turn, or for the entire game, depending on the settings you choose. You can clear the replay in several ways: after viewing it you have to option to clear it, or from the main menu: **Game | Replay | Clear All** or **Game | Advance/Set Turn**.

RMB: Right Mouse Button.

Stack: A group of pieces located in the same hex, or undergoing the same action. Stacks of pieces may be

represented by a special stack symbol.

Symbol Sets: A group of graphic files (*.BMP) which that contain both Mapboard and Piece Symbols. The symbol set file is used by the Mapboard Editor Module to create the Mapboard and by the Play Game Module to create classes. For games with cards, the Play Game Module uses the card symbol file to automatically form a deck.

TEC: Terrain Effects Chart. It is used in most wargames to define the effects of various terrain types on movement and combat. The TEC can not be incorporated into ADC2 in such as way as to "tell" the computer what to do. In other words, the computer can not automatically count movement points, or account for combat modifiers, and things like that. However, the TEC can be included for reference as an **InfoSheet** in the Play Game Module.

Piece (or Unit) Symbols: Piece (or unit) symbols are graphic representations of the actual board game pieces or cards. Each symbol must be individually drawn (with the Symbol Editor Module) or scanned. In order for a unit symbol to appear and be used in an ADC2 gameset, the symbol must be assigned to a class. In the case of cards, the symbol must be assigned to a specific deck. The same symbol may be used by more than one class or deck of cards. See **Appendix B** for further explanation.

X-Image: In the Symbol Editor Module, the X-Image option creates an image with transparent (or "see-through") areas. This is a very useful feature, in that it allows symbols to be of any shape, not just rectangles. For example, if you want to make something that looks like a tree, everything outside the trunk and canopy would be transparent. That way, when the tree is placed on the mapboard, let's say on a hex already containing a symbol for grass, the existing grass will appear around the tree - in the "see through" areas. The small box to the right of the "X-Image" text identifies the color (on the large image) which represents transparent pixels. This color may be set from the main menu: **Preferences | Set Transparent Color**, in case you want to actually use the currently selected transparent color in the symbol.

Zoom Levels: The zoom level represents how "big" the mapboard and pieces appear on the screen. There are three levels, each of which must have its mapboard and piece symbols drawn separately. Zoom level 1 should the smallest size hexes (and therefore will display the greatest amount of map area at once) while Zoom level 3 should have the largest hexes (and thus will provide the greatest resolution and detail).

SECTION 4: CREATING A NEW GAME

The following steps outline the major steps involved in creating a new board or card game. Click the **First Time Help** button from the **Control Panel** for additional information. Remember that ADC2 is actually composed of three modules, one of which makes the graphics (Symbol Editor Module), one which creates the mapboard (Mapboard Editor Module), and one which is used to actually play the game (Play Game Module). With Windows 95/98, you can run any or all of these modules at the same time (multi-task). However, **every time you make a change in one module, you will have to reload the gameset in the others to see the changes**. For example, if you change a piece symbol in the Symbol Editor Module, that change will not appear in the Play Game Module until you reload the gameset (.OPS) file. Luckily, this is easy enough to do by just clicking **File** from the main menu. The name of the current game will appear at the bottom of the pop-up menu (you should save the current game first, though).

We suggest that users read the entire manual though once before trying to memorize the following steps, or even trying to comprehend them in detail. Because ADC is designed on a set of interrelated components, once you understand how these components relate to each other, the details will be much easier to follow. Otherwise, new users in particular might find themselves at a loss, since they don't know how these steps "make sense" in view of the overall ADC system.

This section is intended to provide only a general overview of the creation process. Additional (and very specific) step-by-step instructions for common operations are found in **Section Eight.**

Board Game

Step 1: Preparation and Testing:

- Using Windows Explorer, create a new folder in the **ADC2 | Gamesets** folder and give it an easy to identify label, like the name of the game.
- Refer to the physical game and determine if it uses hexes or a square grid. If it uses hexes, determine the orientation ("flat" side up or "point" side up).
- Decide if you are going to use an existing symbol set, or create a new one from scratch. In almost cases, unless you are an experienced user we recommend creating a new one, since if you want to make changes later you won't have to worry about affecting other games that use the symbol set. Besides, if you want to use all or part of an existing set, you are given that option as one of the steps in the creation procedure. The next few steps are based upon creating a new set from scratch.
- Open the Symbol Editor Module, and create a new symbol set (**File | Create New Symbol Set**). A box will pop up asking to if you would like to copy an existing set. If you choose to copy, the new set will begin as an exact duplicate of the selected set, and the rest of the steps in this and the next section are omitted. Otherwise, from the next window select the appropriate map style (hexes or squares) and orientation (vertical = flat side up or hex columns; horizontal = point side up or hex rows). or vertical hex orientation if you are making a hexgrid map. If your board game does not have hexes or squares (an "area" game, for example), then you can use either.
- Determine the size of the hexes for each of the three zoom levels. Remember, the smaller the hex or square size, the more mapboard area will be seen on the screen, but the less detail. If you make the hexes/squares too large, only a few of them will be visible on the screen which makes it difficult to see enough of the playing area to make decisions. On the other hand, if you make the hexes/squares too small, the playing pieces may not be large enough to include important graphic information. The "best" size is impossible to quantify exactly - it depends on the game as well as individual tastes. So, you're going to need to experiment!

If this is your first experience creating an ADC2 gameset, we can't stress enough how important it is to test your sizes after creating one or two symbols before proceeding to make the complete gameset. Failure to do so can result in the loss of many hours when you later discover that the mapboard or piece symbols are too large or too small. While the Symbol Editor does include a utility to resize the mapboard and unit symbols after you have already created them, the modifications you can make using this utility are limited. And, normally the symbols require "touch-up" work after being resized. Take it from the experts: even veteran ADC2 users always test before starting to create a new gameset.

To help keep the time you spend making a test set to a minimum, we've added instructions (in bold) to the end of each of the following sections outlining exactly what needs to be done at that step to create a test set. Once you have completed the necessary work for that step, STOP and proceed to the next one. When you reach the last step, you'll have a quick set that will be suitable for deciding if your sizes a re right. If they are, you can finish the set in confidence. If not, return to step 1, and continue to make test sets until you're happy with the results.

Step 2: Draw Mapboard symbols: Use the Symbol Editor Module.

- Create the Mapboard symbols, either from scratch or by copying an existing set and then editing as needed. Remember that you'll be creating 3 symbols for each board symbol type - one for each zoom level. When creating symbols, it is important to take advantage of the power of the differing zoom levels. More detail can be included at the higher zoom levels and unneeded features of Mapboard or piece symbols can be omitted from the lower zooms.
- When you have finished editing a symbol click the Next button. If you have made changes to the symbol, you will be prompted to save it before moving on.
- When you are done making/editing mapboard symbols, there are two options. If you are done,

save and exit. Otherwise, if you'd like to switch to making/editing piece symbols select **Symbols | Game Pieces** from the main menu.

From the ADC2 Control Panel, open the Symbol Editor Module by clicking the "Create and Edit Symbols" button. From the main menu, select File | Create New Symbol Set, followed by "Create A New Set". A form showing hex orientation and sizes will appear. Select the appropriate orientation (see Step 1) , and whatever sizes you would like to try. It is a good idea to try and get as wide a range as possible, so you can more easily judge which sizes you like better (for example, you may decide the size for zoom 2 is good - even if you end up using it for zoom 3!). We suggest [5-15] for zoom 1, [25-45] for zoom 2 and [50-75] for zoom 3. Notice the symbol representations at the bottom change size to match the values entered. They show exactly how big each hex (or square) will appear on the screen. But, it can be deceiving - the sizes often "seem" different once you're looking at a lot of hexes together on a mapboard. Click OK.

On the window which pops up, click "Map/Board Symbols". A new window will pop up from which you can edit and create symbols. Leave the default "Blank" symbol as is, and click on the "Create New" button. Enter the symbol name as "Grid". The window will disappear, leaving you at the main editor. Click on the X-Image Box. Under Preferences (main menu), select Set Transparent Color. Click on one of the eight colored boxes and click OK. Your X-Image symbol "Grid" will automatically change to the color you just selected. This color will not be visible when this symbol is displayed on the mapboard - it is transparent or "see through".

If you are using hexes, click on the small hex button above the X-Image box. This will automatically add a black outline around the edge of the hex symbol. Do this for each zoom level (use the Zoom + and Zoom - buttons to move between the zoom levels). If, instead of hexes you are using squares, you will have outline the square manually. Use the line (or pencil) mode to draw a line in the outermost pixel around the edge of the symbol. Note that color of the border is the "primary" color (shown in the left color box). If you would like the border to be another color, left click the mouse over the color grid (and the color box will change). Save the symbol by clicking "Save" and proceed to Step 3.

Step 3: Draw the piece symbols: Use the Symbol Editor Module. (New Piece)

- Piece symbols are drawn just like the mapboard symbols, except each one may be of different size (up to 120 x 120 pixels), including sizes larger than the mapboard hexes/squares. Sizes for each piece symbol are set when the symbol is created. They can not be changed later (other than by using the resize utility, which has limited flexibility).

Select Symbols | Game Pieces from the main menu. Click the "Create New" button. When you create your first piece the first thing you are confronted with is determining the size of the piece. Name the first piece "Test 1", and leave the symbol sizes alone. Click OK and change the color of each zoom level symbol. To do this, left click on a color you like from the palette (the left color box will change), then click on the bucket (Fill Region Button). Move the mouse to the left (edit) window and click anywhere on the symbol, which will fill it with the color. Repeat for each zoom level, and click "Next" (Yes to Save!). Create another new symbol. This time, increase the size of each symbol by about 50% and name the symbol "Test 2". Click OK, and begin editing the symbol. Follow the same fill procedure used for "Test 1" with "Test 2", excepet make sure to fill it with a color different than you used for "Test 1". Save the symbol. At this point, if you like you can make one or two more symbols of different sizes, or add actual graphics and numbers to the symbols. Just remember not to spend too much time on it, since the goal of this process is only to confirm the sizing of the symbols. When you are satisfied, from the main menu select File | Save Symbol Set. Name the set something like "Test Set", so it won't get confused later with a "real" set. Close the Symbol Editor Module.

Step 4: Draw the board game map: Use the Mapboard Editor Module.

- The size of the mapboard (in hexes) is set when the mapboard is initially created. The size can

be adjusted later as needed (both + and -) in the Play Game Module.
- Mapboards are composed of individual hexes, each of which contains one or more symbols (created in step 2). In wargames, these hex features are usually known as "terrain". The hex symbols must be entered individually for each hex, although there are fill routines to add large areas of similar types easily.
- The Mapboard Editor Module also contains routines for adding hexlines, hexsides, placenames, mapsheets, and everything else required to create a game board or map. These features are covered in more detail below.

Open the Mapboard Editor Module (click the Create and Edit Maps/Boards button from the Control Panel). From the main menu, select File | Create New Mapboard. Click the "Select Symbol Set" button and locate your gameset folder (from Step 1). Open the symbol set you created in Steps 2 and 3. Adjust the map size as required. We suggest that you make the mapboard size 4 hexes larger in each direction than the actual mapboard to create a border. For now, don't worry about making the mapboard large enough for any off-map tracks or information - the mapsheet can easily be enlarged by using the Play Game Module "Advanced" function. Click OK and you will be presented with a Zoom Level 1 view of your map. From the main menu, immediately select File|Save Mapboard As and enter the name of the game. Then select Preferences | Select Mapboard Overlay and select the symbol named "Grid" (which you made in Step 2) and click OK. You should now see the grid on the mapboard. Save the mapboard (click the button with a picture of a floppy disk) and close the Map Editor Module.

All of the remaining steps are performed in the Play Game Module. Details on each step are provided in the section on the Play Game Module, and are not include here. Be sure to save your work frequently.

Step 5: Create a New Game

Select "File|New Game" You will be prompted to name the gameset (name it "Test") and select a Mapboard. Select the mapboard you just saved in Step 4. Read the help file which appears.

Step 6: Create Players

You can skip this when creating a test set.

Step 7: Set the Facing style if needed.

You can skip this when creating a test set.

Step 6: Create Classes (excluding playing cards-see below)

Select "New|Class." Your first Unit Symbol "Test 1" will appear under #2 Pick Symbol. The Class Name defaults to the Symbol name. Leave it and click Save. Read and accept the Help Window. In #2 Pick Symbol, use the window list to select your Symbol "Test 2" and save. Do this for all the test symbols you made. Quit when you have made classes using all the symbols you made.

Step 7: Create Pieces:

Select 'New|Pieces." You will see a list of all the classes you just created. Select one by clicking on it - it will be highlighted by a blue bar when you do. Click "Add to List," and then "Place Now." The Create New Pieces window disappears and you can see your map. You can zoom in and scroll around. When you click on the map, a piece will appear of the class you selected. Multiple clicks on the map will create more pieces. When you have placed a few pieces, click "Okay" in the toolbar and the Create New Pieces window reappears. Select another class and place a few pieces on the map. Click "Okay" each time you are done placing pieces to return to the window. When you have made and placed pieces for all the classes you made in Step 6, exit out of the window.

Check all the pieces at various zoom levels to see which best suits the terrain symbol and overall mapboard size you have created. Note which symbol looks best. You can go back into the Symbol Editor and make more test symbols of different sizes if you need to experiment more. If none fit properly in the hexes, you will need to change the size of the terrain hexes/squares. It is best just to start over at this point, but since you've only created a small test set, you have not lost much. However, if you have a good match, save the game and exit the Play Game Module. Open the Symbol Editor and delete the Unit Symbols you do not want to use, and then Optimize the symbol set. Now you can begin creating unit and terrain symbols "for real" using the symbols you have as a base. While you can immediately see how the terrain symbols will look by opening the Mapboard Editor and reloading the symbol set. In order to check out how your unit symbols look, you'll have open the Play Game Module. Reload the Test.ops file and create classes and pieces as needed to check out how your unit symbols look when in the game. You are not going to want to use the test.ops file for a real gameset module, so don't feel compelled to make classes and pieces for all symbols. When the mapboard is complete and all unit symbols are done, delete the Test.ops file and create a new gameset including players, facing, pools, class and piece data and all the other information required to make a fully playable gameset.

Step 8: Begin the game. Read Sections Seven and Eight for more information.

Card Game

Note: ADC2 comes with two standard card deck symbol files (with and without Jokers). Skip to step 3 if you would like to use these. As with boardgames, it is important to test your card symbol sizes before getting too far into the set creation.

Step 1: Preparation: Refer to the actual card game.
- Determine how many card faces you need.

Step 2: Draw the card symbols: Use the Symbol Editor Map (New Piece)
- Create a new symbol set. **Note: For Boardgames with Cards, you must create a new symbol set that is named differently than the piece/unit symbol set. Note that a gameset can have multiple card symbol sets, unlike the unit symbols. In fact, if you have a boardgame with cards in which each player has his own set of cards and *there is no card play between players*, it may be advantageous to make a symbol set for each player's cards. This will make card deck and hand creation easier.**
- Try 75 x 100 as the size for zoom level 2. ADC2 maximum card and unit symbol size is 120 x 120 pixels. You can ignore the hex/square size if you are making a card symbol set for a boardgame.
- Draw the back of the card as the first piece symbol. ADC2 automatically uses the first card symbol as the back of all cards *in that set.*
- Save the file.

Step 3: Draw the playing surface symbols: Use the Symbol Editor Module (New Board/Map Symbol)
- If you just want a green tabletop, make symbols that are all green - and a table border symbol.
- If you are adding cards to a boardgame gameset, make no mapboard symbols.
- Save the file separately from the card file.

Step 4: Draw the playing surface: Use the Mapboard Editor Module.
-Skip this if you are adding cards to a boardgame gameset.

Step 5: Begin the game: Use the Play Game Module.
-Follow the procedures for starting a new game listed above.
-If you are adding cards to a boardgame gameset, open the ops file for that gameset. You will add the cards to your gameset ops file.

Step 6: Create the Deck:
- Select **Cards | Decks | Add** a New Deck and select the card symbol set you just created.
-Select the options in the Add New Cards to the Deck form. Change the name of the Deck if you want. If you select "Custom" you will be given the opportunity to create different numbers of cards as each card symbol is displayed. Select the option to place the cards face up or face down.
-You can create multiple decks from the same card symbol set. Be sure to give each deck a

different name to avoid confusion.
- Select Done.

Step 7: Create the Hands:

-Select "Cards|Hand|Add a New Hand" from the Menu Bar.
-Name the Hand and the Player. This information is important when there are multiple hands in a game. You can create as many hands as needed.
-Select Done.

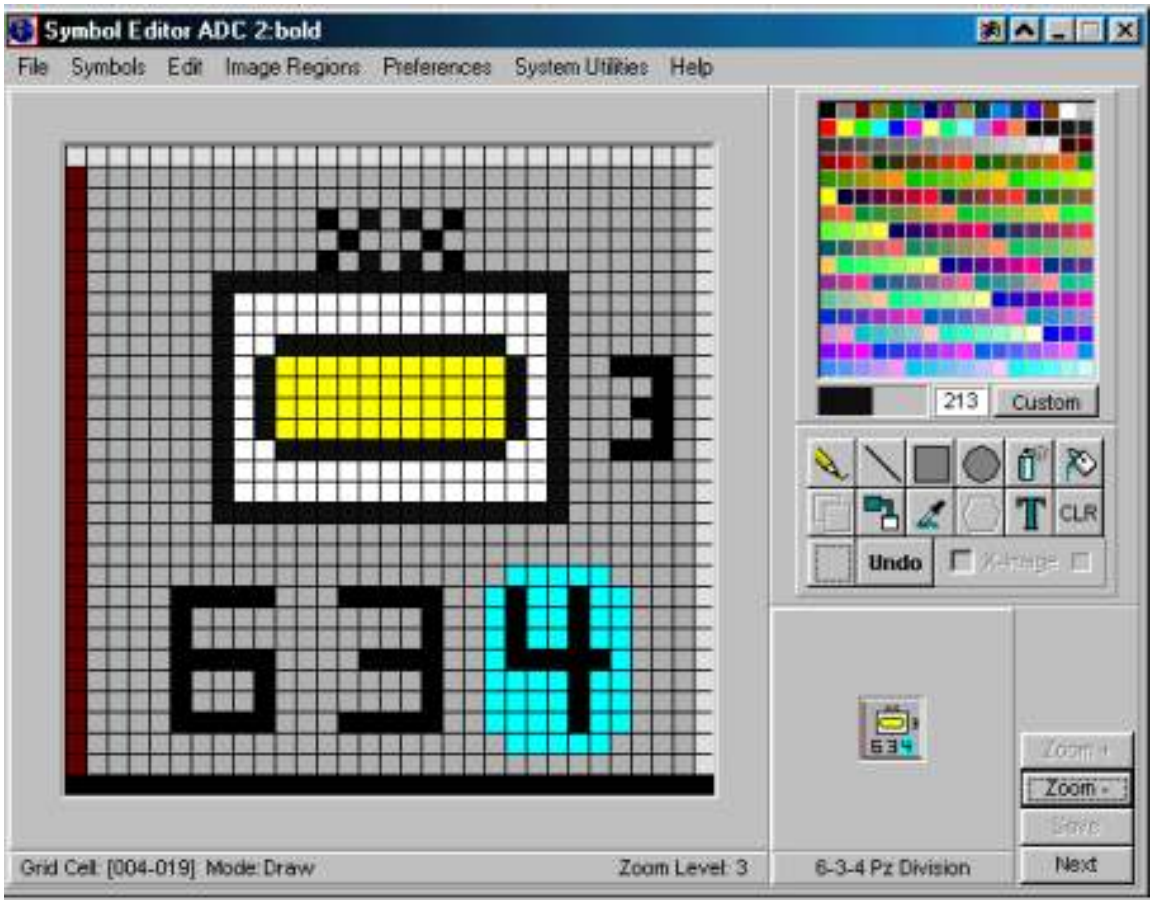
Step 8: Card Play

-Select "Cards|Decks" and double click on the deck you want to open. The Deck window which opens allows you to perform a number of different functions which are fairly self-explanatory. Click on Deal and select the hands (or hands) you want to deal cards to at the bottom of the form. Click on the **ALL** radio button and then the Deal Now button. Exit.
-Now select **Cards | Hand** and double click on the hand you want to look at. If you made the cards visible to yourself when you created the deck, you will see them listed on the left along with the various other card play functions on the right. Click on a card to highlight it and then select "Play Card." The mapboard is displayed. Click somewhere on the map and the card you selected will appear and the Hand Form will reappear - minimize or exit from it. Depending on the visibility option you selected when you created the deck, the card will either be face-up or face-down. Place the mouse cursor over the upper left-hand corner of the card and click. You will be presented with several options for now. Try flipping the card first. Click in the upper left-hand corner to perform another function like returning the card to the hand or the deck.

These topics are covered in greater detail later in the manual.

NOTE: Once cards have been added to a game set, you can no longer edit them using the Symbol Editor. If you need to make changes, you will need to remove the cards completely from the game, and recreate them from scratch once the changes have been made. Use **Cards|Remove Hands and Decks**. Then edit the original card symbol set using the Symbol Editor Module. When you have made the necessary changes, start the game fresh (in the Play Game Module) and create the new decks and hands as needed.

SECTION 5: THE SYMBOL EDITOR MODULE



The Symbol Editor Menu Bar

File Symbols Edit Image Regions Preferences System Utilities Help

File Menu

The FILE menu has the following choices:

Open Symbol Set - to open up an already-created symbol set.

Create New Symbol Set - to create a new Symbol Set, either from scratch or by coping from an existing file. The disadvantage of copying is that the zooms are already defined. The advantage is the old symbol set may possibly contain most of what you already want, so a new set can be created with very little new effort.

Create New Symbol Set first takes you to a screen where you select:

Map Style: either **Real Hexes, Grid, or Hex (ADC1 Format).** This will depend on your playing surface. For a typical wargame with hexes, the **Real Hex** option would be the best choice. There are two types of **Real Hex** Orientation, either **Vertical** or **Horizontal**. The bottom of the screen depicts the actual hex appearance, so you can evaluate your choice before saving. For the typical

boardgame, the **Grid** style would be best. Selecting **Hex (ADC1 Format)** will show hexes, but the actual shape of the grid will be off-set squares, as in ADC1.

Hex Size: The display size of a single hex (in pixels) is adjustable for each zoom level. The total hexes per screen (at 640 x 480 resolution) is displayed next to the pixel size for reference. Note that even though ADC2 uses the term "hex" to denote a single area on the Mapboard, it applies to "squares" as well.

The general rule of thumb is that at Zoom Level 1, you should be able to see the entire Mapboard. At Zoom Level 2, a typical piece's one turn movement path should be contained within the displayed hexes without having to scroll. Zoom Level 3 is usually set at double or triple Zoom Level 2 for detailed views of pieces and combats. Obviously, the larger the hexes, the less of them will fit on your screen at one time. On the other hand, the larger the hexes, the more detailed the Mapboard and pieces can be. What sizes you pick will depend on the scale of the game, the typical movement distances of pieces (in hexes) and personal taste.

Save Symbol Set - to save a set to the already-named file.
Save Symbol Set As… - to save a symbol set file to a new file name.
Remove Symbol Set - to delete a symbol set you no longer need.
Exit - to return to the ADC2 **Control Panel**.

Symbols Menu

The Symbols menu contains three entries, which are only accessible once you have opened a symbol set (or are starting a new symbol set).

Mapboard Symbol - to start editing the Mapboard symbols of a set.
Piece Symbol - to start editing the piece symbols of a set. These represent the playing pieces, or cards of the game.
Resize Utility - allows you to change the size of the symbols of a complete zoom level. For example, if you made zoom level 1 too small by accident, you can use this option to increase or decrease the size of all piece and Mapboard symbols by a multiple. One limitation is that real hex symbol sets must be resized in a multiple of five, i.e., if zoom two is currently 25 pixels across, you can't resize it by half, as that would result in a hex size of 12.5 pixels. Use of this option is recommended for advanced users.

Selecting one of the first two entries brings up the Symbol List screen. From this you select:

Create New - to create a new symbol. If it is a piece, you are allowed to adjust the size. You can use different size pieces in the same symbol set. Both pieces and Mapboard symbols must be named.

Copy - to create a new symbol by copying from an existing symbol. This is extremely useful if you need to make pieces that are identical except for their color, or are similar but need minor changes.

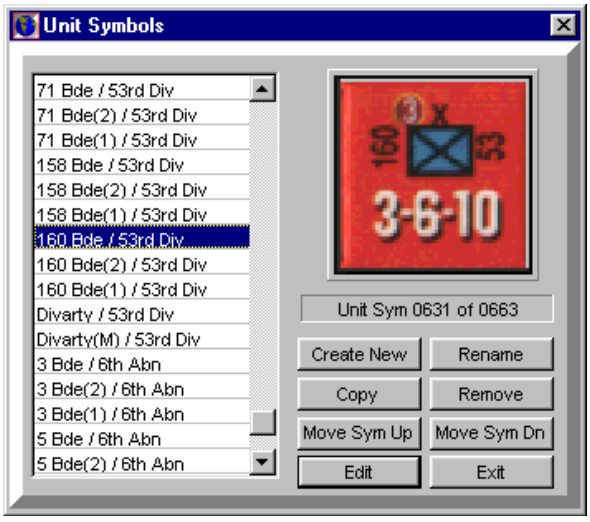
Move Symbol Up (Down) - to move symbols either up or down on the master list, allowing for a more logical grouping. This is handy if you've forgotten to make one symbol and you want it to show up next to all the other similar symbols. DO NOT MOVE SYMBOLS IF A MAPBOARD OR GAME HAS ALREADY BEEN CREATED! You may endanger those files.

Open - to edit the highlighted symbol on the list. Alternately, simply double-click on any symbol on the master list and it will open.

Rename - to rename the highlighted symbol to whatever new name you desire.

Remove - to delete a symbol from the list. Once deleted, it cannot be undone. DO NOT REMOVE A SYMBOL IF A MAP OR GAME HAS ALREADY BEEN CREATED. You may endanger the map file.

Exit - to return to the editing screen.



A Sample Mapboard Symbol List

Edit Menu

For both Mapboard and Piece symbols, there are two selections:
Flip Image Left to Right
Flip Image Top to Bottom
Only the symbol shown on the screen will be flipped. You must repeat the flip for each zoom level.
Scale Copy Zoom 3 to 2
Scale Copy Zoom 2 to 1
These make it possible to "auto-size" higher zoom level symbols to the lower zoom levels. This feature can really speed up creating a symbol set by eliminating the need to recreate each zoom level symbol from scratch. Create your Zoom 3 symbol first and then , select "Edit | Scale Copy Zoom 3 to 2" from the main menu. The zoom level 2 symbol will be created automatically from the existing zoom 3 symbol. Then select "Edit | Scale Copy Zoom 2 to 1" from the main menu. This will create the zoom level 1 symbol. Note that it works best for mapboard terrain symbols. The new symbols may often still need some minor editing. Using this function for Unit Symbol creation may or may not have the desired effect dependent on the symbol you are making.

Image Regions Menu

The Image Regions command is a powerful feature of ADC2 which allows you select an image region (.bmp file) and paste it into your symbol.

The menu choices are:
Import Image Region - to open a .bmp file for use in the current Mapboard or piece symbol. After you select the .bmp file, it is saved to the clipboard and you can place the cursor (normally in the upper left corner) onto the Mapboard or piece symbol. Click and the image will be placed onto the symbol.
Export Image Region As… - to save a selected area to a new filename.

Note: ADC2 defaults to a “standard” 256 colors to save space and time. However, ADC2 can actually use 16 million colors. We have included a file called hps.pal which is our “standard” 256 color palette. Use of the “standard” palette keeps the file sizes very small. When creating a gameset, you can scan in the pieces and then convert them to the standard HPS palette in order to save memory and file size (or, even better, set your scanner to use the hps.pal palette and scan them in using the standard palette). However, if you are not concerned with file size (especially if it’s a small game) then feel free to directly import .bmp graphics without converting them. The only disadvantage to this is an increase in the size of the .bmp files representing the pieces. They do compress quite nicely, but a big game will be several megabytes in size.

Preferences Menu

This menu controls the overall functioning of the symbol editor.

Turn Grid ON/OFF - to toggle which turns the square grid on or off. The grid is there in order to assist you, but is not visible when actually playing with ADC2. The grid is defaulted to ON.

Airbrush Settings - to adjust the size of the airbrush, and how much "paint" is sprayed, by adjusting the size and the flow control respectively. The maximum value is 10, the default is 5.

Turn Auto Expand ON/OFF - to automatically expand zoom level 1's image to the next two zoom levels. You must completely draw the symbol in Zoom 1, then it will automatically be expanded to the other two zooms. If you edit in zoom 1 after the expansion, the edits will not appear in the other levels. The auto-expand applies only to piece symbols, it has no effect when drawing Mapboard symbols.

Set Transparent Color - to change your transparent (background) color to a different color. This new color is saved in the file gamename.XET. You must still select X-Image to implement the transparent color.

System Utilities Menu

Resize Symbols – This command allows you to completely resize all of the symbols.

Optimize Symbol Set - to reduce the file size of symbol sets and eliminate dead space caused by deleting symbols. It is **essential** to Optimize your symbol sets after deleting symbols or creating over 200 symbols. Failure to so may cause serious problems in creating additional symbols or playing the game.

Rebuild Transparent Symbols – Sometimes transparent symbols will get out of order and you will notice problems with your transparent symbols having large areas of black on them or parts of other symbols on them. They may also no longer be transparent when viewed. If you have a symbol set that has a large number of transparent symbols (X-Image) it highly recommended that you perform this function frequently. First back up your gameset in case there are problems in the process. The rebuild function is a resource intensive process and requires ample free memory. If your system has other programs running and the symbol set is large, the rebuild program may halt. After backing up the gameset, **Optimize** it and then proceed with the rebuild.

Reset Symbol Order - During the course of symbol editing, you are allowed to move symbols up and down on the master list in order to more logically group them. This menu item merely resets all symbols to their original order.

Remove Terrain Symbols – If you wish to use a gameset as the base for a new game, wanting to keep the unit symbols but you don't want the terrain, this command will delete all the terrain symbols at once. **DO NOT** remove terrain symbols after you have started making a map.

Remove Game Pieces - If you wish to use a gameset as the base for a new game, wanting to keep the terrain symbols but you don't want the old game pieces, this command will delete all the game piece symbols at once. **DO NOT** remove game piece symbols after you have started making an .ops file in the Play Game Module.

Help Menu

The Help menu has three choices:

Help Index - This brings you to the help menu based on topics. The Help menu is a hypertext-driven system that is standard to Windows applications.

Complete Manual - Brings up this manual for printing or reading on screen.

About Symbol Editor - This gives you the current version number of the editor and other general information.

Symbol Editor Buttons and Screen

The symbol editor has a series of buttons which control the current editing procedure. Once a symbol set

is loaded, and a symbol has been opened for editing, you will see it displayed in the large box on the left of the screen.

The right half of the screen contains the palette at the top, below which are:

Active Primary and Secondary colors - located below the palette colors. To change them, move the mouse anywhere on the palette, and left-click to change the primary, right-click to change the secondary. Alternately, use the **Grab Color** function listed below.

Color Number Box: Next to the primary and secondary colors is the color number box. When you have loaded a color that is NOT one of the standard 256 colors, the box will show "---."

Custom button. ADC2 has the ability to go beyond the standard 256 color palette. Such custom colored symbols require a larger file, and therefore create larger gamesets. You can create and store up to 16 custom colors at a time via the Custom Color screen. However, you can access and use in your drawing any number (or even ALL!) of the 16.7 million colors available in the Windows palette.

The edit command buttons are on the right - center of the screen.

Set Draw Mode - to place individual pixels. Click on the symbol location to change that pixel to the current primary color.

Set Line Draw Mode - to draw a line. Position the cursor, click and drag the endpoint to the desired location and release.

Filled Rectangle - to draw a rectangle. Position the cursor, left click and drag the opposite corner. The rectangle will outline in the primary color, and fill with the secondary color. For best results, always create your rectangle from left to right.

Filled Ellipse - to draw an ellipse. Position the cursor, left click and drag the opposite corner. The ellipse will outline in the primary color, and fill with the secondary color. For best results, always create your ellipse from left to right.

AirBrush - to "spray paint" the symbol area with the current primary color. The size and flow are controlled via the **Preferences** menu, with defaults set at 5 and 5. This feature is useful for creating woods and rough Mapboard, etc.

Fill Region - This fills an enclosed region with the current primary color. The area must be fully enclosed by pixels of the selected color, or the entire screen will get filled instead.

Paste Image - to paste an area captured by **Select Region**. The last region selected will be pasted.

Switch Color - to switch any color on the symbol with the current primary color. This is a very useful feature you will use often. For example, when making a chess game, you only need to draw the pieces once. To make the pieces for the other side, you'll just copy the originals and change their color. For example, you'd copy the white pawn symbol to use as the base of the black pawn, make the primary color black, then click on Switch Color. Next, click on any white pixel on the symbol. All of the white pixels will change to black, and your black pawn is finished!

Grab Color - to select the primary color from a symbol, instead of from the palette. For example, say you want to be sure that Zoom 3 pale green is the same as Zoom 2 pale green. You can select the primary color by clicking on Grab Color, then by clicking on Zoom 2 pale green. The primary color will now be the exact same pale green.

Draw Mapboard Outline - to place an hex outline around your Mapboard symbols (as is the case with most maps) with the current primary color. Hint: In ADC2 only one symbol in the set should be given a outline (unlike in ADC1). This symbol can then later be designated as the grid overlay symbol for the map - enabling it to be toggled on and off. If you outline each symbol, the grid will be drawn whenever the symbol is drawn and thus can not be toggled. To make a grid overlay symbol, create a new symbol and simply click this **outline** button with the **X-Image** turned on. If you like, you can also add other features (tick marks, center dots, etc.) that will become part of the grid display.

Add Text - to add text to the symbol. Please note that at lower zoom levels, there may not be enough pixels to properly display text. You have the option to change the font, color, and characteristics of the text.

Clear to Secondary Color - to fill the displayed symbol with the current secondary color. This feature is useful for restarting your current effort from scratch.

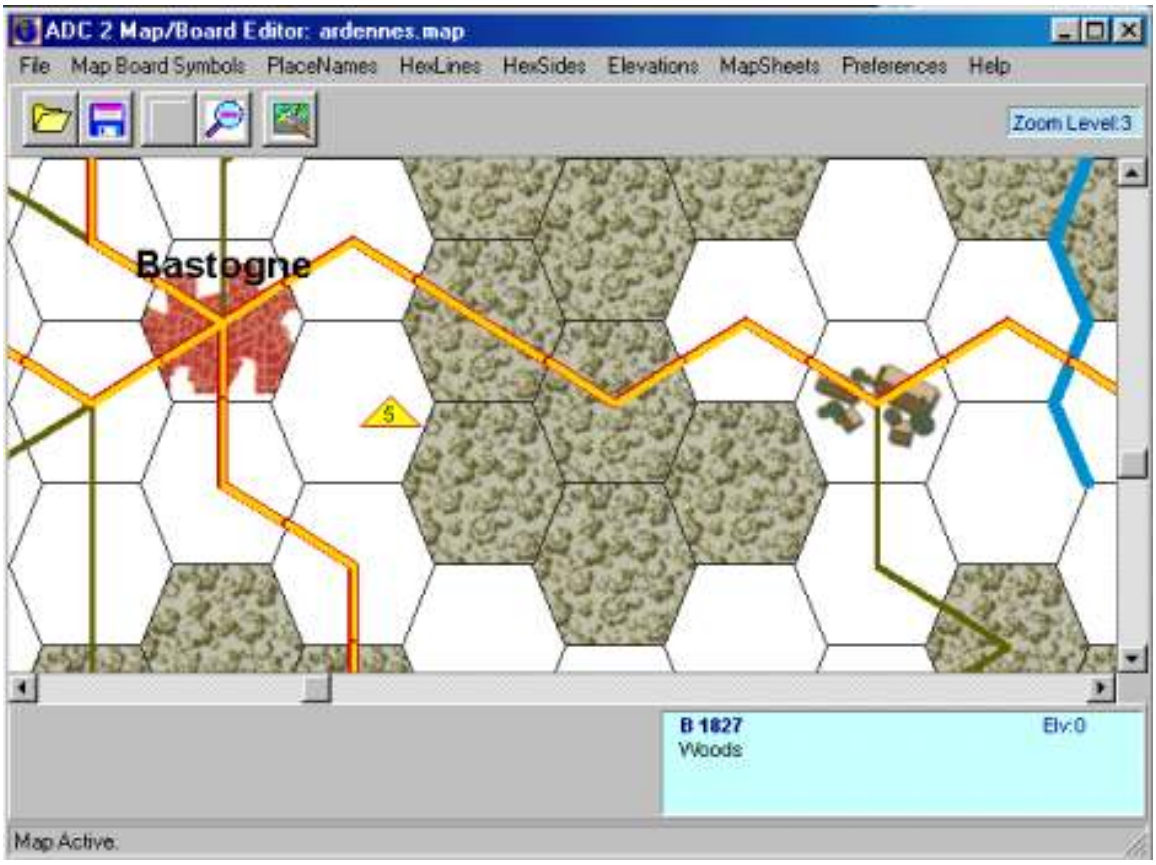
Select Region - to select a rectangular region from the symbol edit screen and duplicate it. Drag and click the area you want to copy, then move the mouse to the upper left corner of the desired region to be changed. This can be used to copy an area between zoom levels. You can also select a region and open a new symbol set, enabling you to copy parts of or entire symbols between sets.

Undo Last Action - to delete your last editing action. It only undoes the LAST action you took.

X-Image (Transparent Image) - to select that designated color will represent "transparent" areas of the symbol. When selected, pixels of this color become "see-through". The color that represents transparent areas can be changed selected from the **Set Transparent Color** under **Preferences** Menu. In ADC1, transparent symbols were used for "secondary terrain", and they still serve that function well. For example, you could make a national capital by drawing a red star on a gray background, and selecting gray as the X-Image color. The result would be that only the red star would appear on the map - the gray will be transparent. Both Mapboard and piece symbols can be transparent. The included chess set shows some good examples of using transparent piece symbols.

Below the edit buttons is a view of the image at the size it will appear on the map. At the bottom of the screen are information boxes. These tell you what grid cell you are pointed to, the Mode, or type of editing you have selected, the Zoom Level, and the symbol name. In the far right corner are the Zoom level buttons, and the Save button. The **Zoom +** and **Zoom -** buttons are used to move between zoom levels for the selected symbol. After editing the symbol, click the **Save** button.

SECTION 6: THE MAPBOARD EDITOR MODULE



The Mapboard Editor Menu Bar

File Mapboard Symbols PlaceNames HexLines HexSides Elevations MapSheets

Preferences Help

File Menu

The Mapboard Editor File Menu has five options. They are:

Open - to open an existing .map file.
Create New Map - to start a new/board map by creating a .map file. First you must chose the symbol set that the Mapboard will use. You will also be asked to establish the size of the Mapboard. If you are creating a multi-mapsheet game, make this size large enough to accommodate ALL the maps as they are assembled, plus any margins you want. In other words, if you have a game that contains 4 maps, arranged in a rectangle, and each map is 30 x 60 hexes, then your **Create New Map** size should be at least 60 x 120.

Use Scanned Map - ADC2 allows you to utilize any bitmap (.bmp) as the board for your game. Examples would be a topographic map that has been scanned in and saved to a .bmp format, or a board you've drawn in an advanced Paint program. Mapboards which are based on a bitmap or scanned in map act exactly like ordinary maps/boards in all ways - you can still create and place Mapboard symbols on them, draw hexlines and placenames on them, assign mapsheets for them, and play games on them.

One word of caution is that this option is generally practical only for small bitmaps, due to the large size of the .bmp files. Of course, much of that is dependent on the resolution of the scan (100 dpi or less is recommended as a starting point) and whether the scan is in color or not. Some trial and error will be required in order to determine the best size for the hexes as well.

When used, the program automatically "sizes" the bitmap image for all three levels; you need only create or scan the Mapboard as a .bmp file then convert it with the scanned-map program.

NOTE: There appears to be a limit on .bmp file size when running in Windows 95/98. This limit seems to be about 4 million pixels, with a maximum of 1700 pixels per side. Bitmaps larger than this may not load properly. This limit applies to all bitmap files, including terrain, pieces, and scanned in maps. To help get around this limitation, a multiple scanned-in map option was added.

Save Mapboard - to save the current .map file to the same name.
Save Mapboard As - to save the current .map file to a different name.
Exit - to return to the **Control Panel**.

Mapboard Symbols Menu

The Mapboard menu item has 3 submenus. They are:

Place Primary Mapboard - to select and place the Mapboard symbol as a Primary Symbol.
Place Secondary Mapboard - to select and place the Mapboard symbol as a Secondary Symbol. Secondary symbols are "overlaid" on top of Primary Symbols. For example, Secondary Symbols of factory, port, capital city, etc. are placed on top of Primary Symbols of clear, grassland, sand/shore, woods, etc. Secondary Symbols must created with X-Image so as to be partially transparent or all they do is hide the Primary Symbol.

After selecting the Primary or Secondary Symbol, click repeatedly on the Mapboard to place the symbol. Symbol names appear in the lower right of the screen as you move the mouse over them. You can quickly change from placing Primary and Secondary Symbols without using the pull-down menu by simply clicking the radio button on the floating form.

Fill Primary Mapboard - to fill an area with the selected symbol. First, you must enclose an area with a primary symbol. Then select **Fill** and click anywhere inside the bordered region. The area will

convert to the same Mapboard type. Examples of use are for creating the border around the mapboard, large wooded or ocean areas.

PlaceNames Menu

Click on **Place Names | Add/Modify Place Names** then click onto the desired hex location on the map. The **Add Location** Screen then pops up. You can select the Font, Orientation (placement within the to the hex), Color, Style, Symbol (Placed as Secondary), Size for each Zoom Level, and the text.

Note: If **Preferences | Fast Scroll is ON**, you will not see the Placenames on Zoom level 1.

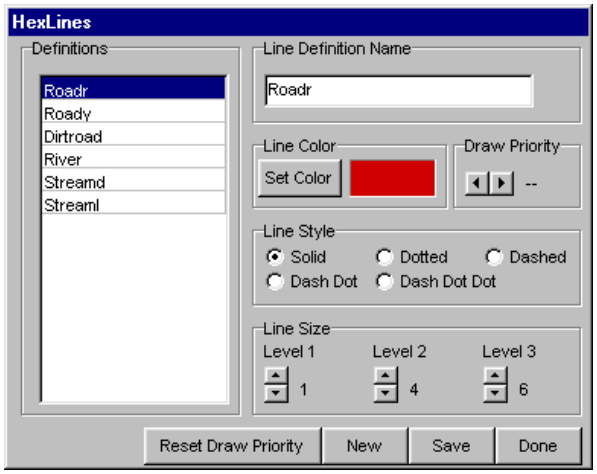
HexLines Menu

Hexlines are lines which connect the center of hexes to the center of other hexes. The most common use of hexlines are roads, railroads, and other features which normally are in the hex, and not on the edge of a hex.

Before placing HexLines, you must define and select it. Click **New** to save your Line Definition Name, Line Color, Draw Priority, Line Style, and Line Size for each Zoom Level. The new name then appears in the list below **Definitions.** Pick **Save** to save your changes. Click **Done** to return to the map, and begin placing the HexLines. Then, click on the starting hex for the line origination. You will see a small, hollow square which tells you which hex has been selected for connecting to (this is the "hot hex" indicator). Then click a neighboring hex to draw the line.

Hexlines can be drawn with a priority setting. When several lines are in the same hex, the highest priority setting (10 being the highest) hexline is drawn on top of all the others. The default hexline setting is "---" which means no priority.

Note: If line size is set to zero for any zoom level, then the hexline will not appear, but it is still there.



The Hex Lines Screen

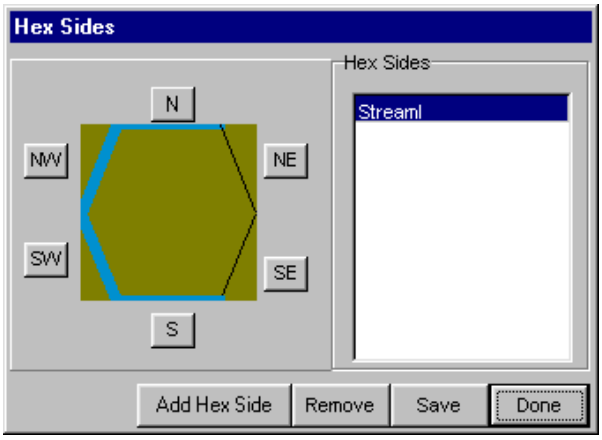
HexSides Menu

Hex sides are lines which are drawn on the edges of hexes, as opposed to in the center. The most common usage of hexlines is for rivers, streams, political boundaries, and other Mapboard features which tend to be on the edges of hexes.

There are two methods to add HexSides. The easiest allows you to click directly on the Mapboard, as long as your hexes are at least 10 pixels in size. To enable this method, go to **Preferences** from the menu bar

and check that: **Add HexSide Mode is Map** (if not, click on it). Then, select **HexSides | Add/Modify HexSides** and choose the line style to add. When using this method, you will need to put the mouse over or slightly to the right of the actual hexside - clicking in the center of a hex will have no effect.

The other method will take you to a form window, which contains the outline of the hex. To use this method, first set the HexSide mode to form by selecting **Add HexSide Mode is Form** from the **Preferences** menu. Then select **HexSides | Add/Modify HexSides** and then click on the map hex. The **HexSides** window will pop-up. You must first select **Add Hex Side** to select the line style (the same line stypes defined in the HexLines screen). Select **Done** to return to the **HexSides** window, and click on the side to draw the line (N, S, E, W, etc.). As with HexLines, multiple lines can be drawn for each side. Click **Save** for each hexside added, and **Done** to leave this window.



The HexSide Form Window

Elevation Menu

ADC2 now has hex elevation routines which are intended for use with games that require Line of Sight calculations. If the game you are making/playing does not have LOS considerations, you may ignore all of these options.

Set/Modify Hex Elevation – With a map loaded, you can set the elevation of any given hex to the desired integer. After setting the elevation, click on each hex you wish to change.
Fill Map Board Elevation – This option allows you to fill the entire map with the desired elevation. Normally, you would use this option first when assigning elevations to a map, by using the elevation that is most prevalent on your map. (IE, if 75% of the terrain on your map is elevation 10, then fill the map with elevation 10, then change the other elevations later. 75% of your work is now done). To use this option, set the elevation to the desired number, then click on any hex on the map.
Map Elevation Display is: OFF/ON – This option displays the current assigned elevation number for each hex on the map. You will need to toggle this option to ON when setting elevations to be able to see what each hex's current elevation is. Normally, this option should be toggled to OFF during play.

MapSheets Menu

MapSheets enable ADC2 to display hex numbers that correspond to the board game. If the board game does not use a numbering scheme for locations, mapsheets are not necessary.

For Single MapSheets
Adding a mapsheet is not just for games with a multiple maps. You must also use it for single map games to name the map and number the hexes. For a single map, Select **Add/Modify Mapsheets** from the **MapSheet** menu, then enter the **MapSheet Name** and the **Hex Numbering - Height and Width** (as a minimum) and **Save**. The MapSheet name will then appear at the bottom of the screen in the information

box.

For Multiple MapSheets
From the Mapsheets screen, you will divide the overall map into numerous mapsheets (no practical limit). You create the mapsheets, name them, then adjust the Hex Numbering and Style parameters to make the hex numbers work out right. Use the **View/Edit Position** button to confirm the location of the mapsheet on the overall map.

Preferences Menu

Select Map Overlay Symbol - to pick the grid outline symbol you created with the Symbol Editor.
Fast Scroll is On (Off) - to toggle between a fast scroll and a normal scroll speed. When Fast Scroll is On, the PlaceNames, HexSides and HexLines will not appear on Zoom Level 1.
Place Names are On (Off) - to toggle between showing place names or not. If the text on the Mapboard is distracting you or getting in the way, you can toggle the display to Off. The name will still appear at the bottom left of the screen.
Save Map Position is Off (On) - to toggle the Save Map Position Feature. When turned On, the map "remembers" where it was if you leave the map display, and will return to the last zoom level and same place as when you left it. When turned off, the Mapboard display always returns to the upperleft corner at zoom level 1.
Set Table Color - The table color is the color of the unused portion of the Mapboard display (i.e., that portion of the screen not covered with hexes or squares).
Set Hot Hex Color - When drawing HexLines and HexSides, the selected hex has a blinking square placed in the center of it, so you know which hex you are changing. This "hot hex" color is adjustable for better visibility.
Add HexSide Mode is Form/Map - to set the method of adding HexSides to either Form (to use the HexSide Form window) or Map (to add HexSides directly by clicking on the Mapboard hexes).

Help Menu

The Help menu item brings you to four submenu options:

Map Information - This item is grayed out unless a Mapboard is currently loaded into the mapbuilder. If clicked, it gives overall summary information about the Mapboard currently being edited.
Help Index - This activates the standard indexed help file, which is similar to the manual, but with indexed topics added.
Complete Manual - This pulls up the entire manual online, which can be read or printed out.
About ADC2 Map Builder - Gives the current version number and other information about the program itself.

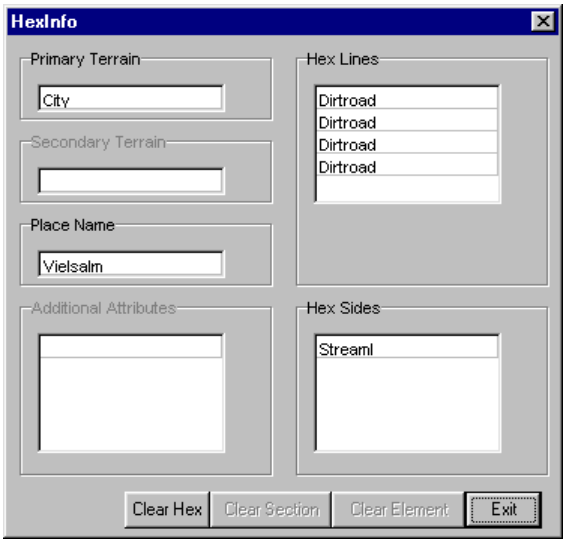
Map Editor Buttons

Below the menu bar are buttons.
Open File - to open an existing file.
Save File - to save to the current file name.
Zoom In - to go to the next higher zoom level. Click on the area you want to see at the next zoom level.
Zoom Out - to go to the next lower zoom level.
Re-Draw - to re-draw the screen.

Mapboard Editor Screen

Next to the buttons, an information box shows the current Zoom Level. Below the button bar is the Mapboard. Below and to the right of the map.board is the information box. This lists the Mapboard name and hex number, and all of the symbols in that hex. At the very bottom of the screen is the current status.

To get specific information about any hex, right click and the **Hex Info** window will appear, listing all the features of the hex.



Hex sides and hex lines can be removed from this screen. Also, notice that ADC2 displays hex features in the box in the order they are shown. So, the last or "top" feature drawn is the one at the bottom. You can clear ALL terrain features by clicking on Clear Hex, or you can clear (delete) individual hex sides, lines, or secondary terrain.

SECTION 7: THE PLAY GAME MODULE

This is the Play Game Module main screen which you will seeing while playing a gameset. The Toolbar and Buttons across the top control the various program and game functions. The Mapboard Screen displays

the map area shown as determined by the Zoom Level selected. Scroll the map by using the slider bars or using the keypad arrow keys (be sure NUM LOCK is on). Below the map is the Piece Data Box and the Terrain Data Box. Both show relevant information as the mouse cursor passes over different pieces and hexes on the mapboard. These boxes can be sized by dragging the horizontal bar on top of the data boxes and the vertical bar between the two. Below the data boxes is an information bar that shows the current player, the name of the gameset .ops file, and the turn.

Once a gameset has been created and saved, there are no specific requirements for actions to be performed in any order. You can setup and move pieces, roll the dice, flip pieces and cards or remove them from the mapboard (and many other functions) in any order as required by the rules. Play the game on the computer as you would play the actual game on the table.

Clicking on the Mapboard

There are several functions you can perform by clicking on the Mapboard.

From the **Normal Mode** (as noted at the bottom of the Play Game screen), a left click on a hex without pieces will bring the **Select Pieces for Action** window with only the **Add Pieces** button visible at the bottom. Clicking this button will take you to the **Add Pieces to the Game** screen - the same as selecting **New | Pieces** or clicking the **Construct** button and picking **Pieces**.

Clicking on a hex with pieces will bring up the **Select Pieces for Action** window with all of the pieces listed, and seven buttons at the bottom. From this window, you can edit Piece information, Move, select pieces to Attack or Defend, Add additional pieces to the hex, Remove pieces or Flip a piece. Readjust the column sizes if not all information is visible.

There are several columns for each piece row: the first column (no heading) indicates that the piece is currently selected for action. The **Facing** column (which only appears if at least one class in the game is assigned a facing style) indicates the direction of the selected facing for the piece. The **Piece ID** lists the name of the piece, the **Class Type** shows the class name for the piece, the **M/C** column will indicate if the piece has already moved "M" or been in combat "A" (Attack) "D" (Defend)or "C". The **Piece Values** column lists the actual entries for each defined Piece Value, the **Class Values** column lists the actual entries for each defined Class Value, and the **Player** column indicates the owning player. Each entry can be edited by highlighting the piece row, and double clicking on the entry.

To move the selected piece(s), click the **Move Piece** button. You will return to the Mapboard, where a [X] will indicate the current piece location. Clicking on additional hexes will show [1], [2], etc. to indicate the piece's planned movement path. During movement, you can click the **Undo** button to go back a move. When finished, click the **OK** button on the main button bar, or the **Right Mouse Button** to complete the move.

To attack or defend with the selected piece(s), click the **Attack With** or **Defend With** button. An [A1] or [D1] will be shown on the map screen at the piece's location. The number after "A" or "D" represents the number of pieces in the hex which were selected. So, for example [A3] indicates 3 pieces in that hex were selected to attack. When all of the attackers and defenders have been assigned, click **OK** from the main button bar.

To remove the selected piece(s) from the board, click the **Remove Pieces** button. The pieces can be moved to either the Force Pool, or completely from the game.

To flip the selected piece(s), click **Flip Pieces** button. If a flip definition has not been set for this class, you will be given the opportunity to do so. Flip definitions can also be set from the **Edit | Flip Definitions** menu.

To select all pieces on the list, click the **All** button.

To re-arrange the order of the pieces in this hex, click the **Sort** button in the upper left hand corner. The sort will also apply to the order in which piece symbols are drawn on the map. Click **OK** when finished.

These functions will be described in greater detail in following sections.

The Play Game Menu Bar

Once a file has been loaded, the menu bar options are:
File Edit New Facing Replay GameInfo Pages Printouts Advanced Cards Preferences Help

File Menu

New Game - to start a new game. First you must enter the filename for the new game, then you select a map to use.
Open - to open an existing file.
Save - to save the current game to the same file name.
Save As - to save the current game to a different file name.
Exit - to exit to the **Control Panel**.
Filenames - The last 5 files opened are listed here - click to load.

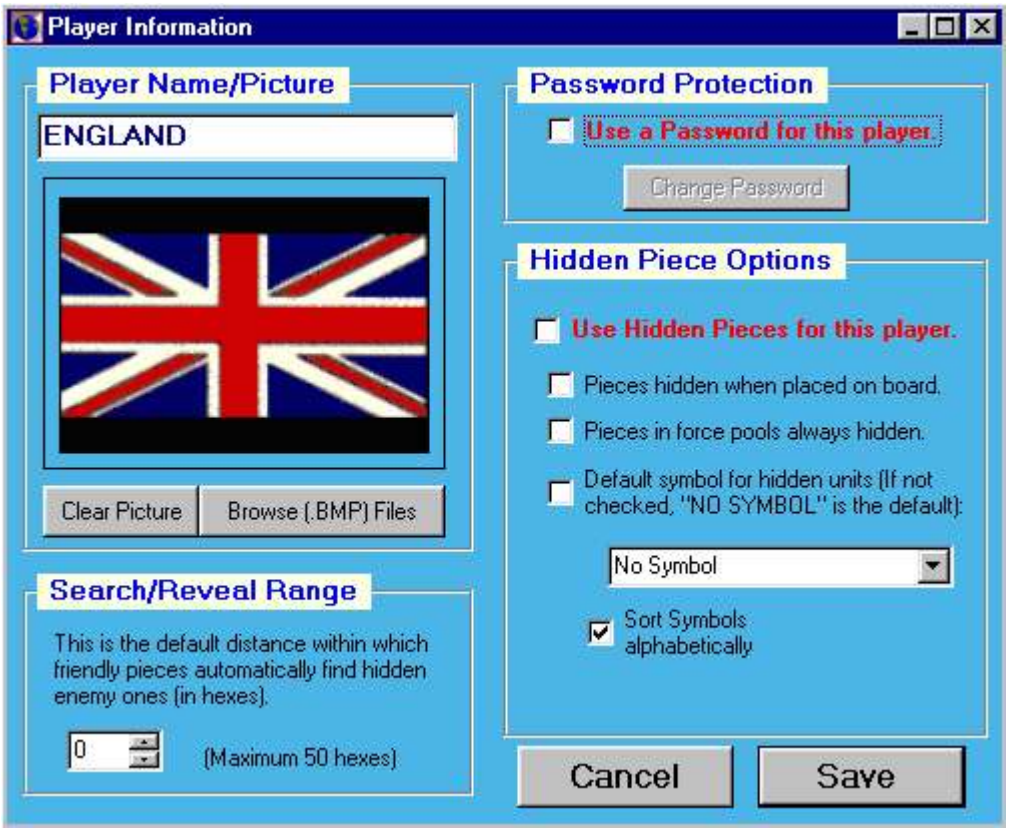
Edit Menu

Players -The various hidden piece and detection range routines depend on the Player set-ups.

This screen has four main areas:

Player Name/Picture - First, the Player's name and graphic can be edited. Each player may have a bitmap picture (.bmp) file displayed on the log-in screen. You can choose the picture from the list of files which are included with ADC2, or any valid .bmp file. The size of the bitmap is not critical, as the program will resize it to fit the screen area. If you pick a custom bitmap for a Player definition, just make sure to send it to all the other human player (in an email game).
Search/Reveal Range - This characteristic is important only if at least one enemy player is using hidden pieces. This range is the number of hexes that this player's pieces can detect hidden enemy pieces.
Password Protection - to choose a password. Passwords prevent anyone else from logging-in under your player name. Passwords are optional.
Hidden Piece Options - This part of the screen controls if and how hidden pieces will be used. If **Hidden Pieces** is checked, you will be able to check the other boxes as appropriate. If desired, a default symbol (a Piece symbol created in the Symbol Editor Module) can be set for this player. When set, this symbol will be displayed to enemy players where the hidden piece is

located. Basically, this allows for two types of hidden systems. In the first type, without a hidden piece symbol, pieces are truly hidden, and no symbol at all is drawn on the map until the piece is found (and its normal symbol drawn). The second system, using a default hidden piece symbol, creates a "partially hidden" situation. Enemy players see the "dummy" symbol on the board, but they don't know what kind of piece it actually represents.



Classes - to edit an existing Piece Class. Players can change a Class' Values, Name, Symbol, Facing, Hidden Symbol, and Owning Player. Note: Piece classes must be created for each different type of piece which will be present in the game. For example, in checkers at least two classes must be created: Red Checker and Black Checker. At that point you could also create classes for the Red King and Black King, or, otherwise set the first checker piece value as a "King" (Yes or No).

For wargames, think of a piece class as the equivalent to a unique type of cardboard counter. If a game contains both a 6-6 US Infantry piece, and a 5-6 US Infantry piece, then you would want to create two different piece classes, one for each cardboard type of counter. This is true even though they are both infantry pieces. Similarly, pieces of a different nationality need to have unique piece classes. Therefore, for example, to represent a French 6-6 Infantry, and a US 6-6 Infantry, you would need two piece classes.

Once a class has been created, it can be used to create as many pieces as desired. Thus, if a chess game has 8 white pawns, one class would be sufficient to replicate them all. The general rule of thumb is that if the game's markers or cardboard counters look significantly different, they each need a separate piece class. Identical (duplicate) counters all belong to the same piece class, and only one class is needed for any number of identical looking counters.

FOR FURTHER EXPLANATION OF PIECES and CLASSES, SEE APPENDIX B.

Class Name - The name can be up to 28 characters and/or numbers.

Display Symbol - choose the symbol (from those created with the **Symbol Editor Module**) you wish to represent this type of piece.

Facing Style - you may indicate whether or not facing is to be used in conjunction with this piece. Before this can be activated, the Facing Style type must be defined from the **Facing** menu.

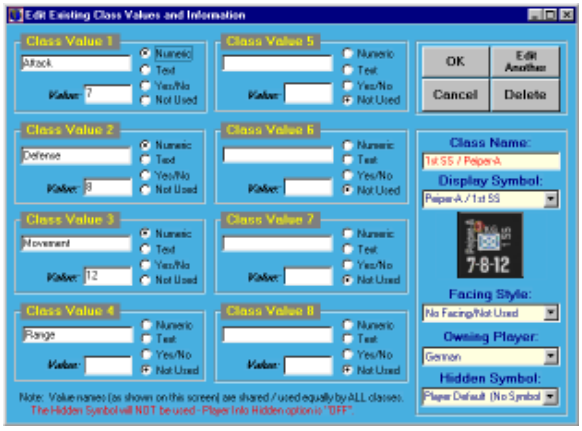
Owning Player - if a piece is associated with only one side, you can pick which player it belongs to from the list. Otherwise, you can select All Players.

Hidden Symbol - to pick a hidden piece symbol for this class. The class must have a valid Owning Player. When selected, this symbol will "override" the default player hidden symbol for pieces of this class. If the Hidden Option was not checked from the **Player Information** screen, the hidden symbol can not be selected.

Values - Each class can have up to 8 definable values associated with it. Values are not required. One thing to keep in mind is that values entered in the class definition should apply equally to all pieces created from that class. For example, the 7-8-12 class below has the first value named as "Attack" with a value of 7, the second value named "Defense" set to 8, and the third named "Movement" and set to 12.

Class values should never be set to characteristics that will vary between pieces of that type. For example, in checkers you would not want to set a class value to "King", since it would cause **all** of the checker pieces be either Kings or not. Instead the "King" value should be assigned to the pieces themselves.

All of the classes defined for a game will share the same value names and types, although the values themselves can be different. So, once value 1 is set to "Attack", it will be "Attack" for all of the game's classes. Generally, class values should not be changed during the game.



Pools - to create, edit, or use force pools. Think of Force Pools as off-board holding areas, designed to reduce screen clutter. Pools are often used for administrative things such as a "dead pile" or reinforcements.

The Force Pool Screen is divided into four columns. On the left hand side is the **Enter Name / Select Pool** column, listing of all the force pools that have been created for the game. Click on any force pool to select and highlight it.

The second column, **Select Pieces for Action**, shows all the pieces that are in the highlighted force pool. Clicking on any piece places it into the third column, and enables it to undergo various actions.

The third column, **List Selected for Action**, is the action list. These pieces can be placed on the map, deleted, or edited.

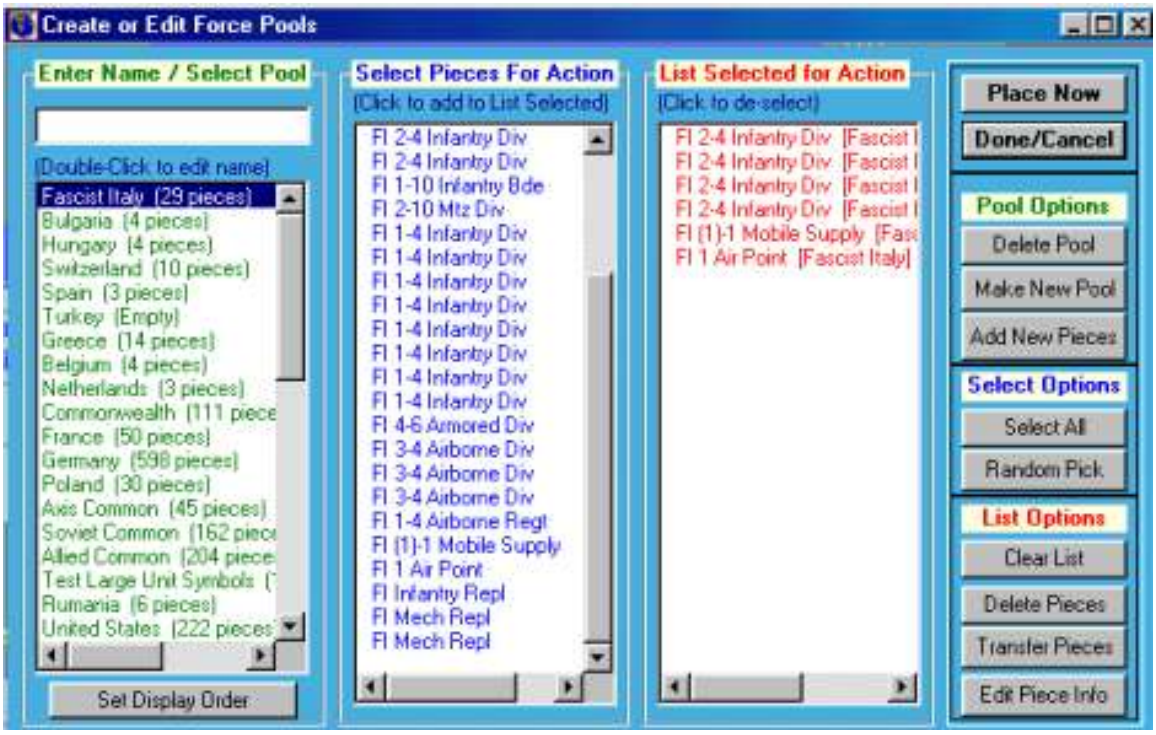
The fourth column of the screen is the Force Pool command list. These buttons are short cuts to using Force Pools.

Place Now - Places all pieces currently in the **List Selected for Action** column onto the map.
Done/Cancel - Exits the Force Pool Screen.

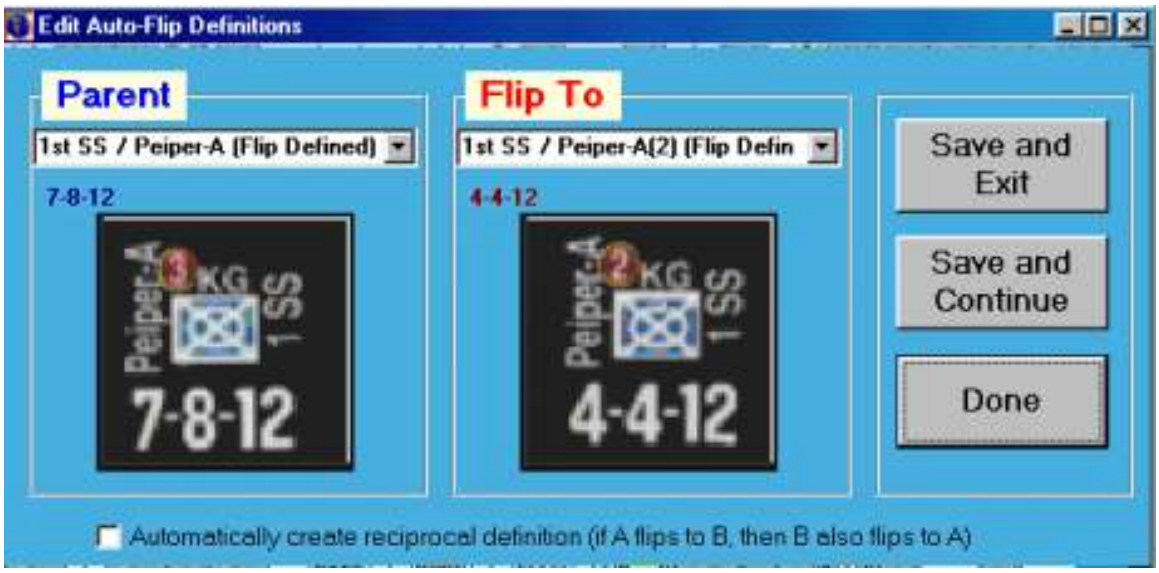
Pool Options:
Delete Pool - Deletes the highlighted force pool. Use with caution!
Make New Pool - Creates a new force pool. You will be prompted to enter a name for the pool.
Add New Pieces - This allows you to add new pieces to the currently selected force pool.

Select Options:
Select All - This option selects ALL the pieces in the currently highlighted force pool and places them into the **List Selected for Action** column. This is useful for placing a large amount of pieces on the map at one time.
Random Pick - Another new feature, this allows you to choose ONE piece randomly out of the currently highlighted force pool. This is extremely helpful for games that contain "unknown strength" pieces which are determined by chit draw.

List Options:
Clear List - to remove all the pieces in the **List Selected for Action** by returning them to the force pools they started from (without deleting the pieces).
Delete Pieces - to permanently delete from the game all the highlighted pieces in the **List Selected for Action** column.
Transfer Pieces - to transfer the pieces in the **List Selected For Action** to another pool. First, place the pieces you wish to transfer into **List Selected for Action** column. Click on **Transfer Pieces**. At this point, the pieces are grayed out. Then go to the **Select Pool** column and click on the destination force pool to complete the transfer.
Edit Piece Info - to edit the Piece Values. From the **Edit Piece Value** window, you can cycle through each piece listed on the **List Selected for Action** column.



Flip Definitions - to define a piece class to be the "flip" side of a different piece class. Before you can use the **Flip** option from the **Piece** screen, a flip must be defined for the piece class. ADC2 also allows you to automatically create a reciprocal flip (in other words, if your game has weakened units that are allowed to flip back to full strength. If you check the box at the bottom of the form, the flip definition will be created both ways automatically between two symbols.)



Stack Symbols - to assign a special symbol to represent a stack of pieces. The special stack symbol is created from the **Symbol Editor**. **Stack Symbols** defines the conditions for displaying the stack symbol. Players can set the number of pieces required to be "included" in a stack at each zoom level and a Required Piece.

Concerning the number of pieces setting, it is the number of "undrawn" pieces in the hex, and thus whether a stack will be drawn or not will also depend on the number of symbols drawn per hex setting. For example, if you have four pieces in a hex and the draw pieces per hex is set to 4, a stack symbol will never be drawn - since all 4 pieces will be drawn normally. However, if the number of pieces to draw is 1, and the number of pieces setting is 3 or less, the stack symbol will be drawn.

If the Required Piece is set, at least one of these type of pieces must be present in the group of pieces to be drawn as a stack. If the required piece is not set, the stack will be "generic", in that it will be drawn as a default any time none of the other stack symbols apply.

As an example (shown below), this player has created an infantry stack symbol (in the Symbol Editor Module), and has set it to be displayed whenever a infantry piece is present in a hex with at least 2 other pieces that are not individually drawn.

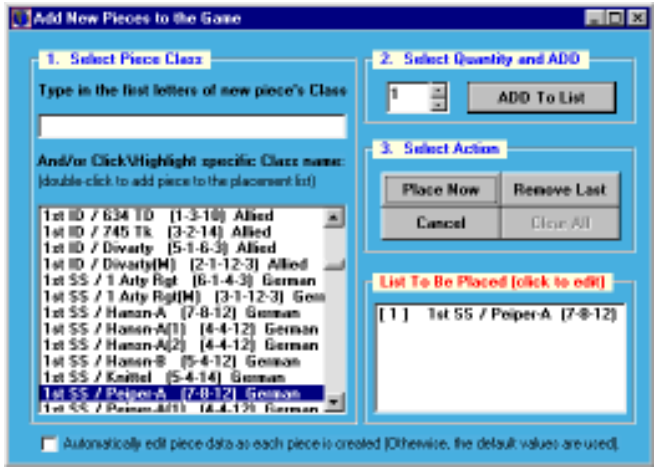
The Stack Definition Screen

New Menu

The New Menu has four sub-menu items. See Edit Menu section for additional information.

Player - to define a new player for a particular game.
Class - to create a new Class
Pieces - to place a new piece on the board using the **Add New Pieces to the Game** window. Note: Pieces must be created from existing classes. If you have not defined an appropriate class for the pieces you wish to create, you will need to go back and do that before continuing.

First, select the Class for the new piece(s). Next, select a quantity desired (default value is 1) then click on **Add to List**. In this way, you can place an entire stack of pieces or add them one at a time. Notice that ALL of the pieces in the **List to be Place** box will be placed in the same hex on the map as soon as you click on **Place Now**. You can continue to click on the Mapboard to continue placing the exact same number and type of pieces onto the map. Click the OK button when finished.



Another way to place pieces on the board is to click on the map location. The window **Select Pieces For Action** will pop-up, which has a button at the bottom to add pieces.

FOR FURTHER EXPLANATION OF PIECES and CLASSES, SEE APPENDIX B.

Pool - This brings the player to the Edit Force Pool Screen. (See above **Edit Menu**)

Facing Menu

This menu command takes you directly to the Piece Facing Options window, where you define the game's facing styles. To use facing for a piece (once you have defined an appropriate facing style), set the piece's Class facing style from the **Piece Class** window, then set the facing direction from the **Piece Information** window. Normally, you want to define facing styles before creating classes. That way you can select the facing style at the same time you set all of the other information for the new class.

Replay Menu

The Replay menu item has two sub-menu choices:

Show All - to show the recorded actions taken, such as combat, dice rolls, and comments. There are two options - the **Delay Amount** and **Start Point,** to control the speed of the replay, and the starting action of the replay.

Clear Replay - to erase the current replay. Normally, this should be done at the beginning of each turn after the second player has seen the replay. However, if desired you can continually build the replay throughout the game by never clearing it. For long games, however, the replay files can get very large and increase file transfer times.

IMPORTANT NOTE: The UNDO list is maintained in the replay file. When you clear the replay, it will no longer be possible to UNDO actions before that point.

Game Menu

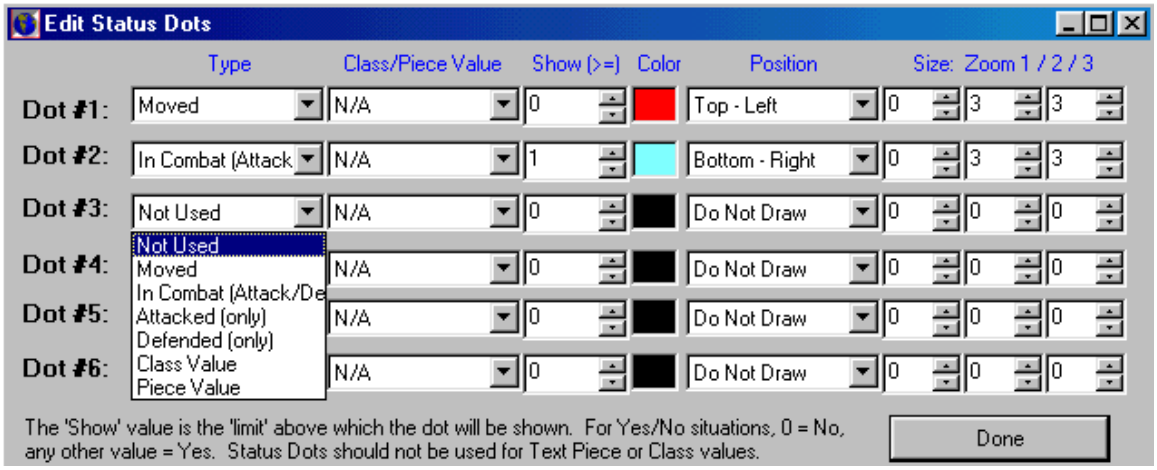
Next Turn/Set Turn - to advance or set the turn number, and name the turn (Optional). Also, you can set the options to clear the turn settings of movement flags, combat flags, and saved replay actions.

Edit Turn Names - to edit the names of turns (optional).

Mapboard Display Options:

Symbols per Hex - to display the first four pieces in a hex. Any other pieces are stacked "underneath" them and are not visible. This method works well if you make the piece symbols about ¼ of the size of the overall hex, thereby allowing all 4 symbols to be fully displayed. Notice you can set the display options differently (1 vs. 4 units) for each zoom level.
Grid Display - toggles a hex outline symbol on and off. The hex outline symbol (drawn in the Symbol Editor Module) is a transparent symbol with only the border outlined in a solid color. The grid symbol is set for the Mapboard in the Mapboard Editor Module. This option provides an easy way to toggle the grid overlay pattern on and off over the entire Mapboard.
Show Hexlines – This toggles the hexlines to on or off.
Show Hexsides – This toggles the display of hexsides on or off.
Show Placenames – This toggles the display of the names (text) on the map on or off.

Show Pieces – This toggles the actual units on or off. This is handy if the units are obscuring the terrain underneath and you need to see if a river hexside exists, etc.
Put Class on top in Hexes – This allows you to designate a certain unit class (type of unit) that you wish to be always displayed as the "top" unit in a stack in a hex.
Piece Status Dots – This option allows you to "flag" units which have (or have not) performed certain functions during a turn. For example, in really large games, you might forget who has moved, or attacked , etc. Although there is already a method to tell if a unit has moved or not (if it has moved, the M letter is no longer grayed out when you click on the unit) this is just one more visual aid to help you in playing games, especially the larger ones. Status dots can also be used to visually flag pieces which have values above or below a certain value. For example, units with less than 100 men, or no ammo, etc. Using status dots you can see these units at a glance, rather than having to go "dig" for the information.



As you can see from the above picture, the status dots can be assigned to represent a variety of functions, and you can edit their location on the unit and edit their color and size. The use of status dots is totally optional and can be ignored if desired.

Sound On - Enables sound effects.
Sound Off - Disables sound effects.
Fast Draw On - to speed up the drawing of Zoom Level 1 Mapboards by not drawing the PlaceNames, Pieces, HexSides and HexLines. Zoom Levels 2 and 3 are unaffected. Normally, this option will NOT be needed, except for very large Mapboards.
Fast Draw Off - to disable the Fast Draw option.
Auto-Save - to save the game every "X" minutes, where you determine what X is. The default setting, if enabled, is every 5 minutes.
Combat: Set Summary Values - to set the class and pieces shown in the combat summary during the replay. Normally, if a game has combat strengths, only combat strengths should be checked. If it has attack/defense strengths, then you would want both of those checked. The summary only aids players in resolving combats, it does not actually calculate odds.
Set Scroll Jump Size - to set how far the screen jumps (in hexes) during scrolling action.
Log-in as Another Player - to log-in as another player, without exiting the current game.
Right Mouse Button - to set the function of the right mouse button. If set to "normal" you have all of these options, which will appear in a pop-up menu. Otherwise, clicking the RTB will go directly to an option, saving one click. The options for the RMB are:
-Move All pieces (in the hex, as a group)
-Place pieces
-Zoom in/out
-Redraw Map
-Single LOS check

-Area LOS check

The LOS options will not be available unless you have defined elevations for the various Mapboard hex types, and have set **Advanced | Use Elevations** on.
Additionally, there is another option called "Flip All Pieces" which will show up if you have the RMB set to "normal". This option flips all the units in a hex to their flip defined side.

Info-Pages Menu

Info-Pages allow you to include text and/or pictures as part of your gameset. For example, you can scan in the combat results table from the game, or you could make a running diary of your game's progress. You can define a maximum of 10 Info-Pages. If you use a bitmap picture file (.bmp), use the mouse to "drag" the edges of the box until it fits the picture image. The program will save the size of the new box for displaying the image in the future.

Printouts Menu

This menu item has five sub-items:

This Screen - to print the map area inside the current screen. (not the menu and buttons)
Entire Game Board (complete) - to print the entire map at the current Zoom Level. Note: the success of this operation will depend on your computer's available resources. For very large printouts, your system may run out of resources - at which point Windows95/98 should abort the operation. Note that you can also direct the screen shot to be saved as a .bmp file by checking the "Print to File" box on the standard Windows "Print Job Setup" window.
Pieces - to print a complete list of pieces or a partial list of pieces based on criteria you specify.
Classes - to print a complete list of piece classes of the currently loaded gameset.
Total Pieces On-Board – Prints a complete list of all game pieces currently on the map. You can adjust the list to include only those that have numerical values (and therefore not print "informational" markers) and you can view units in pools as well. This option is very handy just for viewing, besides printing.

Advanced Menu

This menu item has thirteen submenu choices.

Import Class Data (From Database) (Advanced Users Only)- This option is for advanced users, who wish to import (from a database) class information for many piece classes all at the same time.

In order to use this advanced option, you must input the data for the piece classes into a database with either fixed field lengths (listed below) or with the use of a delimiter.
Fixed-length fields must be padded with zeros to the left if the value itself does not take up the required number of places. For example, a value of 32 exported to a fixed-length of five would be saved as "00032." When using a delimiting character (the default is a comma), padding is never required since the program knows the entire value has been read when it hits the delimiter. In the above example, the value would be saved as "32,".
A hard return must be placed at the end of each line in the file, for both fixed-filed and delimited types.
ADC2 reads in the following values, in order. You will need to insure that your database saves the fields in the same order (and to the correct fixed-field length, if not a delimited file)

Value	**Acceptable Range of Values**	**[Fixed length(if used)]**
Class Name		[25]
Symbol number	0-2999 (piece symbol numbering starts at 0)	[5]

**** Individual Class Values and Types (repeat 8 times for each of the 8 values) ****

Value Type	0=***not used***, 1=***numeric***, 2=***alpha***, 3=***Yes/No***	[1]
Value	00000 (if ***not used***) 00032 (example ***numeric***) 0ABCD (example ***alpha***) 00001 (if ***Yes***) 00000 (if ***No***)	[5]

****

Owning Player	200=All Players 201=No Players 0=first defined player 1=second player, etc.	[3]
Hidden Symbol	00000-29999 defined symbol 30000=Player default symbol 30001=No hidden symbol	[5]
Facing Style	000=None 001-249 Defined facing style, in order starting with 1.	[3]

[HARD RETURN]

This option is useful primarily for extremely large games with hundreds, if not thousands, of piece classes.

Import Class/Unit Data (from Other Game) – This allows you to import unit data from an existing ADC2 gameset for use in a new gameset. This is primarily intended for use with games that have different maps but a very similar set of units.

Resize Board / Playing Area – This option allows you to trim or add extra rows or columns to your playing map. This has been added here instead of to the Mapboard editor so that you can change the map even after a game is underway. Click on the appropriate buttons to add or trim rows or columns. The utility will automatically save your existing map by appending "(Backup)" to its file name. If the changes aren't what you wanted, you can go back to the original by just deleting the "new" map file (mapname.map) and then deleting the "(Backup)" from the backup file name. For example, if your original file name was GAME.MAP, after you change the size you will have two map files in your folder: GAME(BACKUP).MAP and GAME.MAP. The first is the original, the second is the new resized map. The game will always load the one called GAME.MAP.
One thing to be aware of is that pieces and cards on the board areas to be trimmed are simply deleted. There is no warning message, they are just removed from the game.
To maintain hex grain patterns, you can only trim or add in increments of two hexes. In addition you can only trim down to a minimum of 5x5 hexes, and cannot add hexes to exceed 60,000 hexes.

Run Range/Auto-Reveal Now - to have all on-board pieces search for hidden enemy units in their search range. Be sure to run this function after making any changes to any Hidden Unit status in **the Player Information** edit window.

Run LOS Auto-Reveal Now – this runs the autoreveal function except that the range is also limited by those units that are within the Line of Sight of the spotting unit.

Run Auto-Reveal When Moving - to have moving units automatically search for hidden enemy units each time you select a new hex for them to move to.

The Auto-Reveal routine detects hidden pieces based on the **Search/Reveal Range** set as a part of the **Player Information.** In a very large game, you may want to have **Auto-Reveal When Moving** turned off, and click **Run Auto-Reveal Now** at the end of your movement in order to save time. However, you run the risk of a moving piece "accidentally" moving onto or through a hidden enemy piece. For smaller games, the **Auto-Reveal When Moving** should remain on, and enemy pieces will be revealed as you select each hex in the movement path. Once revealed, pieces remain known until the auto-reveal is manually run by clicking **Run Auto-Revel Now**.

Auto-Reveal During Combat ON(OFF) – This new addition allows you to have units become revealed when chosen for combat. Other pieces in the same hex but not chosen for combat are NOT revealed. All pieces in a defending hex are revealed, however. Following all combats, be sure to run **Run Range/Auto-Reveal Now** rehide all units.

Use Elevations - This option can be checked as on or off. If ON, the elevation of each hex will be displayed in the lower right hand information box. The elevations for each Mapboard Symbol are defined using **LOS: Set Mapboard Values**.

LOS: Set Mapboard Values - to assign the **Base Elevation**, and **Other Terrain Properties** to a Mapboard symbol.

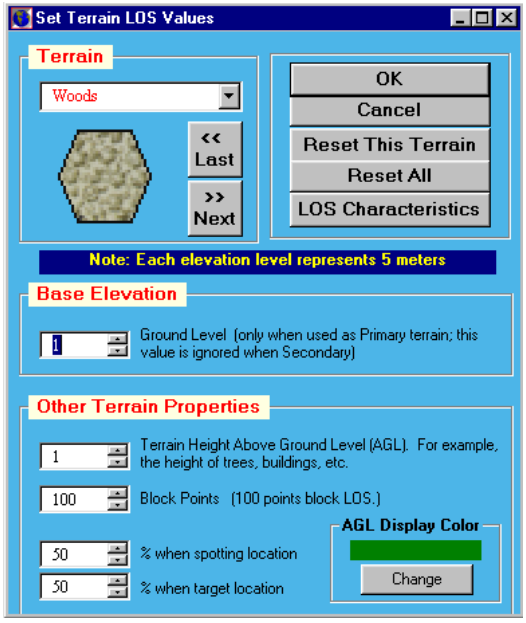
Above Ground Level (AGL) is the elevation of a feature above the ground level of a hex. The ground level of a hex is <u>always</u> equal to the **Base Elevation** of its' Primary Terrain. If there are Secondary Terrain types in the hex, they (and their Base Elevation) are ignored in determining the ground level. However, should the secondary types contain features with heights above ground level, these features will extend normally above the hex's ground level. In addition to the **Base Elevation**, the Primary Terrain may also have an **AGL** (for example, to represent trees rising above the base elevation).

AGL Display Color is the color used for the AGL terrain in the single LOS results display. That way you can graphically see the terrain and AGL features. Typically, shades of green are used for foliage (trees, woods, etc), gray or black for cities, etc. In the display, ground level is always drawn as brown.

Blocking Points are a degradation of the sighting range. The number of points required to totally block sighting is adjustable from the **LOS: Characteristics** window. Whenever an LOS is determined to pass though this terrain feature, this number of blocking points will be added to the running total.

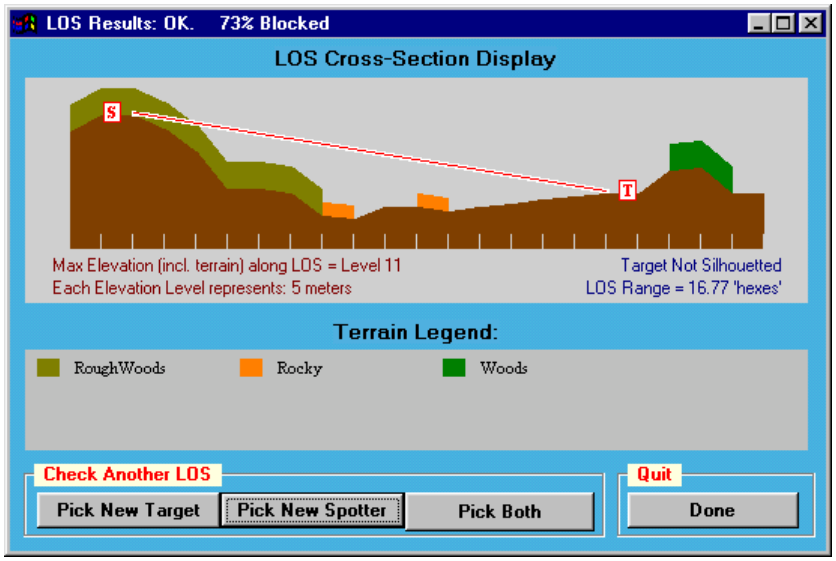
% When Spotting Location is the percentage of normal LOS blocking points that will be added to the running total if this terrain type is in the spotting hex. Normally, this will be a value close to 50%, assuming the spotter is in the center of the hex.

% When Target Location is the percentage of normal LOS blocking points that will be added to the running total if this terrain type is in the target hex. Normally this will be a value close to 50%, assuming the target is in the center of the hex.



LOS: Set Characteristics - to set the LOS general values. A new feature here allows you to add a hex size, with an integer and a unit of measure. For example, you might want to make the range measure "100" and "meters". This is used when the LOS is reported.

Check Line of Sight (LOS) - to check LOS between two points or an area.



Set Player Alliances – Alliances are now able to be set between players. This is essentially meaningless unless a game is using hidden pieces. Basically, pieces belonging to allied players are treated as one force for spotting purposes. Allied pieces always see each other. A special use of the alliance feature is to distinguish between pieces belonging to a single player, but that have different search/reveal ranges. For example, one player could be called "United States" and another player called "US Air Force". You could ally the two players, but the USAF search range might be 10

hexes and the United States search range 3 hexes. Because allied players have all their pieces known to them, you don't need to log in as both players…you only need to log in as either player and move all the US pieces in this example game.

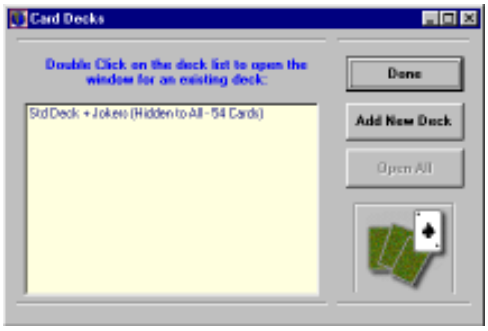
Cards Menu

Decks - To use a deck in a game, you must first add cards to it. Then you can **Open** the deck and **Shuffle, Deal, Put the Top Card on the board, Sort, Rename the Deck, Delete, Pick Up All Cards, and Add Cards.**

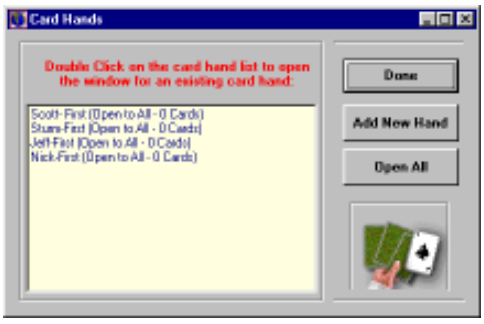
Hands - After creating the card deck, then create each card hand. Return to the **Deck** window to deal the cards, then come back to the **Hands** window to play. Clicking the **Play Card** button will place the card on the board. Cards are actually pieces displayed on a map hex. Therefore, if you place several cards on the map in the same place, they are displayed in the order they have been played.

Follow these basic steps to play cards:

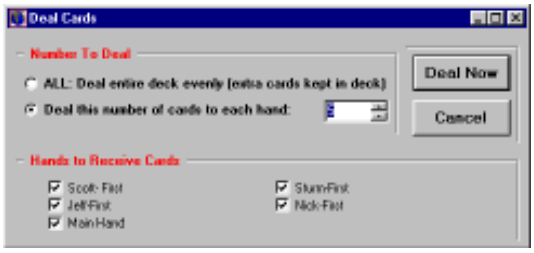
Step 1: Load the deck. From the **Card** menu, select **Decks**. From the **Card Decks** window, select **Add New Deck** and click on the deck filename. A pop-up window **Add Cards to the New Deck** will build the deck. Click **OK** when finished, and **Done** from the **Card Decks** window.



Step 2. Select **Hands** from the **Cards** menu, and click **Add New Hand**. Add a hand for each player. Click **OK** then **Done** to return to the Play Game screen.



Step 3. Begin the game. Return to the **Cards | Decks** window and double click on the deck name to open. The Deck window will pop-up. You may deal the cards from here.



Step 4. Return to the **Cards | Hands** window to play your hand.

Preferences Menu

There are ten options under Preferences:

Ask: Place From Pools - If this option is checked, you will be prompted whenever you try to place a new piece on the map and asked if you wish to place a piece from a force pool. This is useful for games will lots of reinforcements or pieces that you have chosen to place into a pool. If this option is not checked, pieces will be created from scratch when they are placed.

Ask: Remove To Pools - If this option is checked, you will be asked whenever you remove a piece from the map if you wish to place the piece into a force pool. This is useful for games where it is important to keep track of "dead" pieces, for example. If this option is not checked, removed pieces will be permanently deleted from the game.

Autoplace Pieces From Pool - If this option is checked, placing a new piece on the map automatically takes you to the Force Pool screen.

Autoremove Pieces To Pool - If this option is checked, removing a piece from the map automatically takes you to the Force Pool screen.

Sort Class Alphabetically - when lists of classes are displayed in the various ADC2 forms, they will be sorted alphanumerically. Otherwise, classes will be shown in the order in which they were created.
Combat: Roll Dice Automatically - to automatically bring up the roll dice screen after choosing the attacking and defending pieces and clicking **OK** from the Menu Bar.
Default Comment to Text – The comments box has options for a video, sound, etc. However, normally the text box is used 99% of the time. This option when toggled on automatically brings you to the text comment form instead of one of the other types.
Set Form Background Color - to set the background color of the ADC2 pop-up windows.
File Directories/Folders - to set the default paths where ADC2 will look for files. Changing these paths only alters the ADC2 default list, it does not actually rename or create subdirectories themselves.
Resizable Forms – This allows you to resize some of the forms (pop-up windows) to whatever size you find convenient. They will stay resized for the remainder of the current playing session. With some computers this may cause lockup problems; if that occurs, leave this option off. The forms that can be resized are:
Edit Force Pools
Remove From Board Options
Edit Flip Defs
Generic List Form
Get Piece Class
Get Piece from Pool
Get Pieces to Place
Combat Summary (Pieces)
LOS X-section
Select Pieces for Action

Help Menu

Help Index - to search by topic.
Complete Manual- to display the entire help manual.
About - ADC2 version information.

Play Game Buttons

Load a New Game - to open a previously created gameset from file.

Save This Game - to save the current game to a file.

Zoom In - to magnify the map to the next higher zoom level. If already at zoom level 3, this button will be grayed out (not available).

Zoom Out - to view the map to the next lower zoom level. If already at zoom level 1, this button will be grayed out (not available).

Redraw the Map - to redraw the map display. Use this when the screen does not display all hexlines, hexsides, or splits the screen irregularly after scrolling or zooming.

Roll the Dice - to roll the dice and add comments. Die rolls become part of the replay.

Add a Comment to the Replay - to add comments to the replay.

Cycle through pieces - to cycle through all or some of the on-board pieces; very handy in large games w here it's easy to lose track of who's been moved. When cycling three other buttons, **Next, Previous, Stop** will appear at the top of the screen**.**

Next/Previous/Stop - to quit or move to the next or last piece during cycling. Each click will bring you to another game piece on the map. The Stop button ends the cycling routine.

Undo - to delete your last action.

Construct - to edit or create players, classes, pieces and Force Pools.

Find - to find and scroll to a particular hex location or piece on the map.

OK - to complete an action (move or combat). When highlighted, click this to exit the action.

SECTION 8: STEP BY STEP INSTRUCTIONS

Symbol Editor

Creating Mapboard Symbols
Symbol Editor Module

1. Select **Create New Symbol Set** from the **File** menu to draw a new set.
2. Set the Map Style, and Hex Size from the pop-up window and click **OK**.
3. Select **Mapboard** from the **Edit** menu.
4. Select **Create New** from the Symbol list.
   - Recommend creating a "grid overlay" symbol as part of the Mapboard set.
   - The first symbol on the list will be used to fill new Mapboards.
5. Enter a name for the new symbol.
6. Draw all three zoom levels.
7. Save by clicking the **Save** button at the bottom right of the screen.

Editing Mapboard Symbols
Symbol Editor Module
1. Select **Open Symbol Set** from the **File** menu to edit an existing set.
2. Select a symbol set to edit.
3. Select **Mapboard** from the **Edit** menu.
4. From the symbol list, click on the symbol name.
5. Edit the symbol.
6. Save by clicking the **Save** button at the bottom right of the screen.

Creating Piece Symbols
Symbol Editor Module
1. Select **Create New Symbol Set** from the **File** menu to draw a new set.
2. Set the Map Style, and Hex Size from the pop-up window and click **OK**.
3. Select **Piece** from the **Edit** menu.
4. Select **Create New** from the Symbol list.
5. Enter a name for the new symbol.
6. Set the piece size for each zoom level.
7. Draw all three zoom levels.
8. Save by clicking the **Save** button at the bottom right of the screen.

Scanning Mapboard and Piece Symbols
Scan the piece and save it as a .BMP file.
Symbol Editor Module
1. Select **Pieces** from the **Edit** menu.
2. Select **Import Image Regions** from the **Image Regions** menu.
3. Select the BMP file.
   Or
   Multi-task leaving both the Symbol Editor and you own paint or image-editing program open. When in the paint program, select the image or area of an image and copy it to the clipboard. Switch back to the ADC2 Symbol edit and select **Image Regions|Import Clipboard.**

Editing Piece Symbols
Symbol Editor Module
1. Select **Open Symbol Set** from the **File** menu to edit an existing set.
2. Select a symbol set to edit.
3. Select **Piece** from the **Edit** menu.
4. From the symbol list, click on the symbol name.
5. Edit the symbol.
6. Save by clicking the **Save** button at the bottom right of the screen.

Creating Grid Overlays
Symbol Editor Module
1. Create a new Mapboard symbol to use as the grid overlay.
2. Check **X-Image**.
3. Set the primary drawing color to the desired grid line display color.
4. Click the **Draw Terrain Hex Side Lines** button.
5. Do not outline any of the other Mapboard symbols in the set.

Creating Card Symbols
Symbol Editor Module
1. Select **Create New Symbol Set** from the **File** menu to draw a new set.
2. The Map Style and Hex Size settings are not important, so just click **OK**.
3. Select **Piece** from the **Edit** menu. (Do not make Mapboard symbols.)

4. Select **Create New** from the Symbol list.
5. Enter a name for the new symbol.
6. Set the piece size for each zoom level.
7. Draw all three zoom levels for the back of the card symbol. This symbol must be first on the symbol list. (Consider making all zoom sizes the same, as this will reduce the amount of work required in creating the set. You can easily select the zoom 1 image and copy to zoom 2 and 3)
8. Draw all three zoom levels for the front of each card in the deck. (You can make the front and the back of the cards different sizes. It is recommended you make all the card symbol sizes the same)
9. Save by clicking the **Save** button at the bottom right of the screen.

Editing Card Symbols

Symbol Editor Module

1. Select **Open Symbol Set** from the **File** menu to edit an existing set.
2. Select the card symbol set to edit.
3. Select **Piece** from the **Edit** menu.
4. From the symbol list, click on the card name.
5. Edit the card symbol. The card back symbol must be first on the symbol list.
6. Save by clicking the **Save** button at the bottom right of the screen.

Mapboard Editor Actions

Editing Mapboards

Map Editor Module

Requirement: The symbol set file must already exist, although it may be in a draft form.

1. Select **Open** from the **File** Menu, or click the **Open** button.
2. Chose a map file (mapfilename.map).
3. Edit the map. You cannot change the map size.
4. Save the map by clicking the **Save** button, or by selecting **Save** from the **File** menu.

Creating Mapboards

Map Editor Module

1. Select **Create New Map** from the **File** Menu
2. From the **Create a New Map** Window, click **Select a Symbol Set**, and select a file containing the symbol set for your Mapboard (symbolfilename.set).
3. Select the orientation for the map grid cells (hexes).
4. Enter the Map size in grid cells (hexes). If your game has multiple map sheets, enter the overall size when assembled. It's a good idea to add a few extra rows and columns to make a border (or in case you miscalculated the total size).
5. Click **Select a Map Overlay Symbol** from the **Preferences** menu. This step is not required, however if you do not have a map overlay symbol, it may be difficult to tell which hex you are pointed to unless each Mapboard symbol includes a grid outline.
6. Click on **MapSheets.** This step is not required, however it is where the map hex numbers are assigned.
7. Click **Place Primary Mapboard symbols** from the **Mapboard Symbols** menu. Then, place the symbols on the map by clicking on the grid location.
8. Click **Place Secondary Mapboard Symbols** from the **Mapboard Symbols** menu. Then, place the secondary types over the primary symbols.
9. Add **PlaceNames, HexLines**, and **HexSides** as needed to complete the Mapboard.
10. Save the map by clicking the **Save** button, or by selecting **Save** from the **File** menu.

Scanning Maps

Scan in the map using a scanner and the software that came with it and save the image as a .BMP file. Consider scanning the map at a lower resolution (75 or 100) to decrease the file size, as the BMP size is limited (see **Note** below). You can also paint your own map using a paint program or use BMP images from digital maps available on internet or in commercial map programs.

If you scan a map using a 8.5 x 11 flatbed scanner it is recommended you scan the map in sections and assemble them into a single map bmp file. This can be challenging process, as it is difficult to get each section aligned so they match the other sections exactly. Use an image-editing program to rotate or make minor changes in size to the images as needed to fit them together, and use various paint tools which are usually included in the software which comes with the scanner to smooth the transitions between the sections.

Map Editor Module

1. Select **Create a new map** from the **File** menu.
2. Click the **Scan Map** button.
3. Click the **Change** button to select the saved .BMP file as the **Bitmap To Use For the Board**.
4. Select the zoom level for the .BMP file. At this zoom level the file will be displayed at exactly the same size as it is stored. Be warned, if you have a large base bitmap file and select it to be used at Zoom 1, ADC2 will need to create even larger files for Zoom 2 and Zoom 3 - which may exhaust your system resources and cause the operation to fail. It is recommended to use your base BMP file as the Zoom 3 image and let the scanmap program reduce it to create the zoom 1 and 2 maps.
5. Select the hex sizes (in pixels) for each zoom level. Based on your selection in step #4, ADC2 will automatically scale your saved file up or down in proportion to the selected hex sizes.
6. Select the hex style and orientation.
7. Select **Continue**. ADC2 will automatically scale the bitmaps and create a symbol set to the specifications you entered, which may be edited normally in the Symbol Editor Module.

Note: The maximum single bitmap size allowed is limited to 4,176,000 pixels and 2730 pixels in either the X or Y axis. If you have a map in which the scanned BMP file is larger than this limit, one option is to decrease the size of the BMP file using the software that came with your scanner. Another option you can use the "**Multiple Base Mapsheets**" in the scanned-in map routine. To use this, first cut the original BMP file into separate BMP files that the system can handle. Again you must use a separate image editing or paint program. Be sure to name the individual BMP files of your map with names that indicate their position in the map as a whole. The "**Multiple Base Mapsheets**" option configures the scanmap program to piece these smaller chunks of your map into one map in Map Editor and Play Game Modules.

To use this option, follow the procedure to create a normal scanned-in map. On the scanned-in map options form make sure the box next to "**Use Multiple Base Mapsheets**" is checked. This box is located under the box and button to select a single mapsheet. Make sure all of the hex size and orientation values are set properly, and click "Continue". The next form allows you to:
*Select individual BMP files to use as base mapsheets
*Add additional BMP files to the map and position them to fit the base mapsheet.
*Set the X and Y (in pixels) value for the upper left corner of each BMP.
*Set the total map size, in hexes.

You can also change the position of the map sections in the Map Editor Module using the **Mapsheets | Adjust Base Maps** option. This allows you to immediately see the result of your adjustments. Remember you changing the mapsheet upper left corner X and Y values.

Scanning Mapboard and Piece Symbols

Scan the piece and save it as a .BMP file.

Symbol Editor Module

1. Select **Pieces** from the **Edit** menu.
2. Select **Import Image Regions** from the **Image Regions** menu.
3. Select the BMP file.

Or

Multi-task leaving both the Symbol Editor and you own paint or image-editing program open. When in the paint program, select the image or area of an image and copy it to the clipboard. Switch back to the ADC2 Symbol edit and select **Image Regions|Import Clipboard.**

Adding/Removing HexSides/HexLines (Roads, Rivers, Railroads, etc.)

Map Editor Module

From the Map Editor screen with a map already opened, determine whether the road/river/railroad/etc. will connect to the center of the hexes or run around the edge of the hex.

For lines that run between hexes, select **HexLines.**

1. Select a line style from the list, or create a new line style from the Hex Line menu. For example, a thick blue solid line may represent a river, and a black thin line may represent a small road. Click **Done** when finished.
2. Click the first hex you want to connect. A highlight symbol will appear.
3. Click on an adjacent hex. The line will be drawn between the center of the two hexes.

For edge lines (HexSides):

There are two methods to draw hexsides. Pick the method from the **Preferences** menu as either **Add HexSide Mode is Map** (the recommended method) or **Add HexSide Mode is Form**.

- Add HexSide Mode is Map

1. Click on **HexSide** menu.
2. From the Hex Side window, select a style from the list, or create a new style. Click **Done** when finished.
3. Click on the hex side to apply.

- Add HexSide Mode is Form

1. Click on the **HexSide** menu.
2. Click on the hex you want to apply the HexSide. The HexSide window will pop-up.
3. Select **Add Hex Side** to select the line style.
4. From the Hex Side window, select a style from the list, or create a new style. Click **Done** when finished.
5. From the Hex Side window, click on the sides to apply the line, then click **Save.**
6. If you need to, add additional line styles.
7. Click **Done** when finished.

Adding Secondary Map Features - Buildings, Woods, Cities, etc.

Symbol Editor

1. Create a Mapboard symbol as a part of your symbol set. Use the X-Image function for transparent areas.
2. Save.

Map Editor

1. From the Map Editor screen with a map already open, select **Place Secondary Symbol** from the **Mapboard** menu.
2. Click on the location for the feature.
3. Save.

Creating Grid Overlays

Symbol Editor Module

1. Create a new Mapboard symbol to use as the grid overlay.
2. Check **X-Image**.
3. Set the primary drawing color to the desired grid line display color.
4. Click the **Draw Terrain Hex Side Lines** button.
5. Do not outline any of the other Mapboard symbols in the set.

Map Editor Module

1. Set the overlay symbol. From the **Preferences** menu, **Select Map Overlay Symbol.** Pick the symbol you created, above.
2. Toggle the Grid On/Off. From the **Preferences** menu, click **Map Overlay is On/Off**.

Removing Map Features

Map Editor

1. From the Map Editor screen with a map already open, Right click on the hex.
2. To clear all features in the hex, click **Clear Hex.**
3. To clear one feature, highlight the feature and click **Clear Element.**
4. To clear the entire category of features (for example, all secondary symbols), click **Clear Section** after highlighting one of the features in the section.
5. Click **Exit** to return to the map.

Adding PlaceNames

Map Editor

1. From the Map Editor screen with a map already open, select **PlaceNames**.
2. Click on the hex.
3. From the PlaceNames window, chose the Font, Orientation, Color, Style, Symbol (Secondary Mapboard Symbol - not required), Size for each Zoom Level, and the text.
4. Save. If **Preferences | Fast Scroll** is on, the PlaceNames may not appear on Zoom Level 1.

Play Game Module Actions

Create a New Game

You must first create the Unit and Mapboard Symbols along with the Mapboard for the game. These must all be kept in a single Folder (usually named after the game) in the ADC2 |Gamesets Folder.

Play Game Module:

1. Select **File|New Game**. You will be prompted to name the gameset and select a Mapboard. Locate the gameset folder you want, open it and select the mapboard. Read the help file that appears.
2. Select **Game | Auto-save** and set the time to 5 minutes.
3. Create the gameset .ops file. Follow this sequence of for best results. You can always edit any changes or errors at any time, but completion of all steps in this sequence will eliminate the possibility of having to edit large numbers of classes or pieces. Save your work frequently. Steps marked with * are necessary. Others may not be needed dependent on the game.

    a. Create Players
    b. Define Facing
    c. Create Classes*
    d. Create Flip Definitions
    e. Create Stack Symbol Definitions
    f. Create Pools
    g. Create Pieces* (recommend creating them in pools)
    h. Edit Turn Names
    i. Create Info-pages
    j. Set LOS Terrain Values and LOS Characteristics
    k. Set **Game | Combat Summary Values** (this is necessary to make the Combat Summary appear during play)
    l. Create Card Decks and Hands
    m. Set Preferences (select Auto-Place Pieces from Pool if pieces are in pools)
    n. Place Pieces from pools on the mapboard*

Playing an existing game:

Play Game Module: with 2 players,

1. Player 1 logs in.
   - Open the game file from the File Menu (*.ops), or click the Open file button
   - Select the appropriate Player Name from the Log-In screen (automatically pops-up)
2. Select **Next Turn/Set Turn** from the **Game** menu and set the turn counter (if appropriate).
3. Player 1 plays his turn.
   - If playing by email, Player 1 saves this file and sends it to Player 2.
4. Player 2 logs in.
   - If player 1 is still logged in (a "hot seat" game), select **Log-in as Another Player** from the **Game** Menu
5. Player 2 plays his turn.
6. Advance the Game turn counter (if appropriate) by selecting **Next Turn/Set Turn** from the **Game** menu.
7. Player 2 saves the game and sends the file to player 1 (if playing by email).

Playing by Mail/eMail (PBM/PBeM)

General:

1. One of the players makes the game symbols and creates the Mapboard for the game. He then must send these gameset files to all the other players. We recommend that when creating a new games you make a separate folder/subdirectory for it, and keep all of the files in this one location. That way you can easily make sure you don't forget to send any necessary files. If you do get confused, a list of files and file types is included below, as well as elsewhere in the manual and in the First-Timer Help presentation.

Play Game Module:

1. The first Player creates a new game, using the Mapboard file from above, making all of the necessary player definitions, facing styles, force pools, and piece classes. He then creates and places all of his pieces according the the game set-up, and saves the game. The saved game file (gamename.ops) is then sent to the next player (Player 2), along with any additional BMP or multimedia files Player 1 may have added.
2. Player 2 edits his player and class information as needed, creates and sets up his pieces, and saves the game. Normally, you want to save the game to a new name after each player's turn, so you can always easily go back to a previous turn (Example: gamename1a.ops). If Player 2 moves first, he can take his turn before saving.
3. Player 2 sends the saved game file back to Player 1 (or the next player in a 2+player game) along with any additional BMP files or multimedia files he added.
4. Player 1 views the replay, takes his turn, and saves the game. (Example: gamename1b.ops).
5. Player 1 sends the saved game file back to Player 2 (Example: gametname1b.ops), plus any additional picture or multimedia files he added.
6. Steps 4-5 are then repeated for each player, each turn.

Example:

For an example game called "**wargame**" these are the files that comprise the symbol and Mapboard sets, and need to be sent to all of the players before the game starts. Files in bold always need to be included in the game set, the others are included only when a base Mapboard ("scanned-in map") has been used.

wargame.set (Data file that links the pieces and symbols)
wargame.sdx (Symbol order file)
wargame-M1.bmp (X-Image symbols - 3 files)
wargame-M2.bmp
wargame-M3.bmp
wargame-T1.bmp (Mapboard symbols - 3 files)
wargame-T2.bmp

wargame-T3.bmp
wargame-U1.bmp (Piece symbols - 3 files)
wargame-U2.bmp
wargame-U3.bmp
wargame.map (The Mapboard file)
wargame-Z1.bmp("Scanned-in Map" - 3 files, when used)
wargame.Z2.bmp
wargame.Z3.bmp

The next series of files are created during game set-up and play in the Play Game Module. Only the .OPS file must be sent each turn - the others are sent only when (and if) they are first created.

wargame.ops (The actual game setup or saved turn file)
wargame.ipx (Info-Pages index. May or may not be present)
wargame.T# (Info-Page, text type. One per page (#), when used)
wargame.B# (Info-Page, .bmp type. One per page (#), when used)
wargame.C11.bmp (Card Decks - one set of 3 files for each deck, when used)
wargame.C12.bmp
wargame.C13.bmp

Note that some of these files may or may not be present, depending on whether you've used that particular function in your gameset. If they are not present that's fine. If they are, they should be included in the initial groups of files you send to your opponent.

Notice also that if you are including any custom .bmp files, such as a picture of yourself, you should send those as well.

Other files that might be present are those ending with .XET or .PRF. These are temporary or local files and do NOT need to be included in a gameset.

For larger games, you may need to compress the file before sending it, by using an archive program such as PKZIP or Winzip.

Adding Players
Play Game Module
1. Click on **Player** from the **New** menu
   or
   Click on **Player** from the **Edit** menu, then on **Add new player now**
   or
   Click on **Log in as New player** from the **Player Selection and Initial Log-In screen** (from either the opening game screen or **Game** menu)
   or
   Click on the **Construct** button.
2. From the **Player Information** window, enter the new player name, and player-specific options. You cannot delete Players from the list.
3. Click **Save**.

Creating/Editing Force Pools
Play Game Module
1. Click **Force Pool** from the **New or Edit** menu,
   or
   Click on the **Construct** button. 
2. If creating a new Force Pool, click **Make New Pool** under the Pool Options.
3. If editing, select a Force Pool from the list.

4. Select **Add New Pieces** to add pieces to the Force Pool. The **Add New Pieces to the Game** window will pop-up. Follow steps 1, 2 to add to the list, then click **Place Now** to add them to the Force Pool.
5. Click **Done/Cancel** to save, or **Place Now** to add the pieces listed under **List Selected for Action.**

Creating/Editing Class Values

Play Game Module

1. Select **Class** from the **New** menu or **Edit** menu,
   or
   Click on the **Construct** button, 
   or
   Double click in the Class column from the **Select Pieces for Action** window.
2. If editing an existing Class, first select the Class.
3. In the **Edit Class Values and Information** window, complete the entries - Class Name, Symbol, Facing style, Owning Player, Hidden Symbol. Not all games will use facing and hidden symbols. The facing style must first be defined using the **Facing** menu.
4. Enter up to eight Class Value Names and any default Values.
5. Either click **Save** or **Edit another Class** to remain in this window. Click **Quit** to return to the play screen.

Creating Piece and Assigning Values for New Pieces

Play Game Module

There are several methods to add pieces to the game:

1. You can create pieces in pools. This makes organizing them in terms of setup area or as reinforcements simple. Open the pool you have created and click **Add New Pieces.** Click the box for **Automatically Edit each piece data as each piece is created** if you need to assign piece values. Select a class to make pieces from, select the quantity of pieces, click **Add to List** and then **Place Now.** If you selected the **Automatically Edit each piece data as each piece is created** the **Edit Existing Piece Values and Information form** will appear. Assign values as desired and click OK when completed. The piece or pieces you have created will appear in the pool list.
   2. You can add Pieces directly to the mapboard in addition to creating units in pools.
   a. Make sure Preferences | Auto Place Pieces from Pool is *not* checked.
   b. Click on the mapboard where you want the pieces to appear and then click the **Add Pieces** button on the **Select Pieces for Action** form. You will see the **Add New Pieces to the Game** form. Click the box for **Automatically Edit each piece data as each piece is created** if you need to assign piece values. Select a class to make pieces from, select the quantity of pieces, click **Add to List** and then **Place Now.** If you selected the **Automatically Edit each piece data as each piece is created** the **Edit Existing Piece Values and Information form** will appear. Assign values as desired and click OK when completed. The piece or pieces you have created will appear.
   3. You can also use the **New | Pieces** menu or the **Construct** button **New Pieces** option to create, edit Piece Values and place pieces on the map. When using these functions the operation is the same as described in above, except selection of the location of where the pieces will appear is made after you click **Place Now**. You can still move the mouse around on the mapsheet. After you position it where you want, click the spot and the pieces will then appear.

Using Facing

Play Game Module

1. Create the facing styles for the game. Click the **Facing** menu to bring up the **Piece Facing Options** window.
2. Enter a new **Facing Set Name** and options.
3. Click **OK** when finished.
4. To apply facing styles to pieces, the piece classes must be first be set to those styles. Edit or create the desired piece class. From the **Edit Class Values and Information** screen, select the desired **Facing**

Style and save the changes. It is highly recommended that you set the facing style when creating the class as doing so will save a great deal of time.

5. Click on the piece on the Mapboard.
6. Double click on the **Facing** entry on the **Select Pieces for Action** window.
7. Click on the facing direction, then **OK**.

Using Grid Overlays

Symbol Editor Module

1. Create a new Mapboard symbol to use as the grid overlay.
2. Check **X-Image**.
3. Set the primary drawing color to the desired grid line display color.
4. Click the **Draw Terrain Hex Side Lines** button.
5. Do not outline any of the other Mapboard symbols in the set.

Map Editor Module

1. Set the overlay symbol. From the **Preferences** menu, **Select Map Overlay Symbol.** Pick the symbol you created, above.
2. Toggle the Grid On/Off. From the **Preferences** menu, click **Map Overlay is On/Off**.

Play Game Module

1. Toggle the Grid On/Off. From **Game** menu, select **Grid Display**. A check mark will appear next to this option when it is active.

Using Cycling

Play Game Module

The cycling function will move through your pieces one at a time. This will help you locate every piece, or, by selecting various options in the cycling window, locate every piece of a certain type or with particular attributes. Click the arrows on the button bar, or **Stop** to stop cycling.

Using Hidden Pieces

Play Game Module

1. Select either **Player** from the **New** menu
   or
   Player from the **Edit** menu
   or
   Click the **Construct** button and chose **Edit Player Info**.

2. Select **Use Hidden Pieces** from the **Player Information** window.
3. Assign a hidden symbol (optional), and click **Save** when finished.
4. Select **Edit Class** from the **Construct** button.
5. Select the **Hidden symbol** style, and click **OK** when finished.

For a more detailed look at some of the combinations and options available with Hidden Units, see **Appendix A: Hints on Use**.

Using Replay

Play Game Module

1. To see the saved replay and all the accompanying comments, click the **Replay** menu, **Show All.**
2. Set the Replay options on the **Replay Settings** window, then click **Begin Replay.**
3. After the replay, you can clear (delete) the saved replay, or continue to record each action. From the **Replay** menu, select **Clear Replay**, and check the box in front of **Clear Replay**. Note: Clearing the replay also clears the UNDO list.

Using text, pictures, videos, sounds

Play Game Module

1. Click the comment button.
2. Select the type of comment to add.
3. Enter the comment.
4. Comments appear during the replay. When the replay is cleared, the comments are also cleared.

* To save information for the duration entire game, or past the clearing of the replay, use the **Info-Page** menu to enter text or pictures.

Playing Cards

Symbol Editor Module

1. Draw the cards as Piece Symbols (two standard card decks are included in ADC2).
2. Save.
3. Draw the playing surface as Mapboard symbols, and save to a separate file from the cards.

Map Editor Module

1. Draw the playing surface from the Mapboard Symbols.

Play Game Module

1. Create a new game from the **File** menu. Use the playing surface file you created in the Map Editor Module.
2. Select **Deck** from the **Card** menu.
3. Pick the card symbol file you created.
4. Select the content of the deck based on the symbols in the card file.
5. Select **Hands** from the **Card** menu.
6. Add new hands to the game.
7. Return to the **Deck** menu to shuffle and deal the cards to each hand.
8. Return to the **Hands** menu to play the card hands.

Placing Pieces on the Mapboard

Play Game Module

1. Click on the Mapboard where you want to place the new piece(s) and select **Add Pieces** from the **Select Pieces For Action** window.
   or
   Select **Pieces** from the **New** menu
   or
   Click on the **Construct** button.
2. From the **Add Pieces to the Game** window, select the types of piece(s) to add, and the number of each piece to add. Your cumulative selections will appear on the bottom right list.
3. Click **Place Piece Now** button.
4. If you didn't begin the operation in the **Select Pieces For Action** window, click on the board location to add the list of pieces. Otherwise, the piece(s) are added to the original hex.
4. If you place a piece in error, click **Undo**.
5. Click **OK** when finished.

Rolling the Dice

Play Game Module

1. Click the dice button.

2. Select the number of die sides and the number of die to roll.
3. Click **Roll the Dice**.

Printing
Play Game Module
1. Board - Click **Entire Game Board** from the **Printouts** menu.
   Screen - Click **This Screen** from the **Printouts** menu.
   Pieces - Click **Pieces** from the **Printouts** menu.
   Classes - Click **Classes** from the **Printouts** menu.
2. The pop-up window has several adjustable print options.

Adding/Removing Elevations
Play Game Module
1. Select **Use Elevations** from the **Advanced** menu.
2. Set the elevation from **LOS:Set Terrain Values** on the **Advanced** menu.

Using Line of Sight (LOS)
Play Game Module
1. Set the elevation and blocking points for each terrain type from **LOS:Set Terrain Values** on the **Advanced** menu.
2. Set the general LOS defaults from **LOS:Characteristics** on the **Advanced** menu (optional).
3. Select **LOS** on the **Advanced** menu, or click the right mouse button and select **LOS**.
4. Select the LOS method: either **Area** or **Single** (between two points on the board).
5. Click on the spotting hex on the map. [S]
6. If determining a Single LOS, select the target hex on the map. [T] The cross sectional view of the map terrain will be displayed, along with the LOS results.
7. If determining an Area LOS, all blocked hexes will be marked [X]. Unblocked hexes will be marked [ ].

How to Select Units
Play Game Module
1. Place mouse cursor over the unit/stack of units
2. Left Click to open the Select Pieces for Action window
3. Left Click on the unit you wish to manipulate. Make sure your unit is the only unit with the ">>" symbol on the left. The unit is now selected.

How to Edit a unit's Piece Values while playing the game
Play Game Module
1. Select the unit.
2. Double Left Click on the unit somewhere within the limits of the dark blue band which highlights the unit in the "Piece Values" column. This opens the "Edit Existing Piece Values and Information" window.
3. Change the values or text as needed and click Okay.

Moving Pieces
Play Game Module
1. Select the piece to move from the **Select Pieces for Action** window
   or
   Right-click on the piece and chose **Move All Pieces** from the menu.
2. On the map, an [X] will appear on the starting hex of the piece(s) and each hex selected for move will be marked with a number [1], [2], etc.
3. Click **OK** from the map screen
   or
   Click the **Right Mouse Button** to complete the move.
4. A move flag will be added to the information window, and in the **Select Pieces for Action** window to indicate that these pieces moved.

Conducting Combat

Play Game Module

1. Select **Combat: Set Summary Values** from the **Game** menu, and pick the summary values for display.
2. Click on the pieces which will be involved in combat.
3. From the **Select Pieces for Action** window, select the piece by clicking on the row (">" will be displayed in the left column).
4. Click on the **Attack With** or **Defend With** buttons. A marker will be displayed on the map.
5. Continue to select all attacking and defending pieces.
6. When all pieces have been selected, click **OK** from the Play Game screen. The Combat Summary window will pop-up.
7. If the **Combat: Roll Dice Automatically** is checked, after closing the Combat Summary window, the **Roll Dice** window will pop-up.
8. The attack and defend markers will be removed from the map, and attack and defend flags will appear on the information window and in the **Select Pieces For Action** window to indicate that these pieces were involved in combat.

SECTION 9: TROUBLESHOOTING

The majority of problems stem from not using the most up-to-date patch file for ADC2. Visit www.hpssims.com to find the latest version of ADC2.

Problem - ADC1 symbols are not correct in ADC2:

99% of all gamesets import without any problems into ADC2 format. However, the exception is any set that has used any other color besides BLACK as a secondary color. Therefore, if you have used other colors besides BLACK as secondary Mapboard symbol, that set will not import into ADC2 correctly. There is nothing to be done except get rid of the secondary Mapboard before importing. Notice that ADC2 has no such limitations on color usage except as noted above.

Problem - Symbols do not show on the map:

Check: Fast Scroll. In the Mapboard Editor Module and the Play Game Module, if the selection **Fast Scroll** is active, then pieces, hexlines, hexsides, and PlaceNames are not drawn.

Solution: Check Grid Overlay: If the grid overlay was not drawn with the **X-Image** function, it will not be transparent and may be *on top of* your map. Turn the grid setting off and see if the pieces and terrain appear.

Problems:

ADC2 version symbol conversion message even though it's an ADC2 gameset
Error code-Could not open V1 terrain symbol
Error code- Loading Symbols
V1 Symbol Conversion Failed
Map is totally gray or white, but placenames and hexsides/lines are visible.

Solution: Make sure you and your opponent are both using the most up-to-date version of ADC2 (or at least the same version).

Problems:

Unable to create or copy to make new symbols
Low resource error message
ADC2 runs slower and slower during an extended session
Replay crashes
Garbled Screen graphics

Solution: Not enough available memory. This has nothing to do with your system memory (ie, you might

have 64 or 128 megs of RAM) but relates to how much is available for ADC2 for current use. Many applications do not release memory even after they are terminated. Computers also frequently have many programs running in the background. The user may not even be aware of some of these programs, which can eat into available memory. The best thing to do is to start ADC2 from a clean boot, and close down any unnecessary programs. Some users have also reported problems that appeared to be video card related…when they updated their video card driver software with the latest version from the hardware's web site, the problem went away.

Contacting HPS

We are interested in any comments, questions, or problems you have regarding this program. HPS Simulations can be contacted in the following ways:

World Wide Web at http://www.hpssims.com.

Phone: (408) 554-8381.
Fax: (408) 241-6886.

Mail:
HPS Simulations
PO Box 3245
Santa Clara, CA 95055

APPENDIX A: HINTS ON USING ADC-2

For more hints visit the ADC2 Hints and Tips Section at http://www.hpssims.com/ Support-ADC2.htm

Because of ADC2's incredible flexibility, users are offered a wide variety of choices and latitude in designing games. However, there are a few tricks that often make the creation process easier - especially for new users.

Understand that Most ADC2 features are <u>Optional</u>! – One of the most important parts about using ADC2 is the fact that you DON'T need to know how to use every detail of ADC2. Unlike a lot of software, ADC2 packs many, many features that will apply possibly to only a fractional percentage of games being played. So don't be overwhelmed by the plethora of options….if you don't need to use something in the game you are making, don't bother with learning its details. Such items include piece status dots, importing data from databases, Line of Sight options, hidden units, etc. The main things you will need to focus on are: Make the symbols, make the map, put together the game itself. What else you learn to use with ADC2 depends on what game you are trying to create.

Planning - The first, and usually most important determination, is deciding how big to make your symbols. Unfortunately, there really isn't a rule of thumb for what works best - it all depends on your game. We strongly recommend that you make 1 or 2 very basic Mapboard symbols and a unit symbol before spending a lot of time making the complete set. Then, create a "test" map and game using these symbols to see if it is what you want. If it is, you can go back to the set and complete it. If not, you can delete the original and start a new one, without having wasted a lot of time.

Size of hexes and pieces - Choosing the right zoom level size is a critical decision. For most games, the unit symbols themselves need to FIT into the hexes (or squares) that you've chosen, otherwise you end up with a real mess. True hexes add another wrinkle, since they have about a 1/3 reduction in usable space over the listed size. For example, if you choose a size 60 x 60 true hex, only a 40 x 40 unit symbol will comfortably fit within the borders. You should experiment with unit symbol sizes and terrain symbol sizes

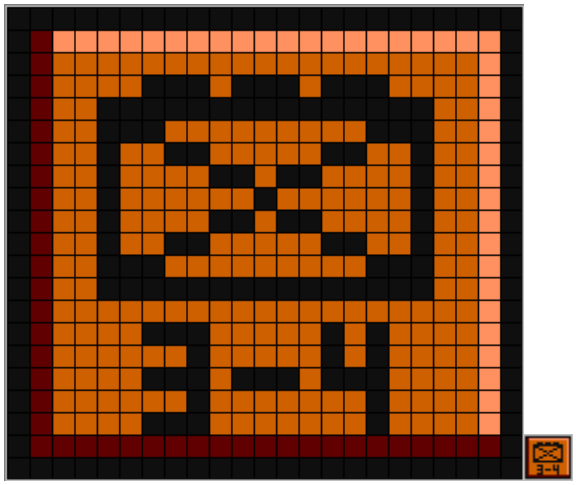
to verify what you need BEFORE committing yourself to making a hundred unit symbols.

Grab Colors whenever possible when making symbols - With 256 or more colors to choose from, it is sometimes difficult to positively identify which shades are which. By grabbing a color (the eyedropper button), you can insure it matches what you already have. You can also "store" colors in the primary and secondary colors boxes for future use. You can place the mouse in the secondary color box and "grab" it into your primary box. By right clicking, you can grab a color and place it into your secondary box. Additionally, you should notice that when you move the mouse over the color boxes, the number of the color will appear. This will help you keep track of which hue you are using. Make a note of the color number for future reference.

Colors - Make careful selections of colors when you are creating mapboard and unit symbols. Remember that users will be viewing the mapboard for long periods. It is best to avoid extremely bright, "electric" or "neon" colors as these can cause eye fatigue. They can make other colors appear to vibrate. Selecting colors that are too dark, on the other hand, can make locating pieces or important features difficult, and provide a poor background color for characters in placenames. Remember that black lettering on a light background is the easiest to read. Light colored characters on a dark background tend to blur. It is important to make the pieces easy to spot on the mapboard. This requires some contrast in both color and level of brightness. If you overdo the color and/or the brightness contrast, the result will look garish and amateur. Never use pure white as mapboard symbol color - even if the boardgame did. How the eye reacts to a computer monitor is different than how it reacts to looking at a flat mapboard on a table illuminated from above. Instead, use the Custom Color selection to select a very light yellow or green tint. The Custom Color Selector is your greatest asset in getting the colors and the gameset to look good. Consider changing the colors used in the actual game to better serve your needs. Often publishers are limited in their printing to using only certain colors. With ADC2 you can broaden the range of colors to make the gameset more attractive and easy to look at and use.

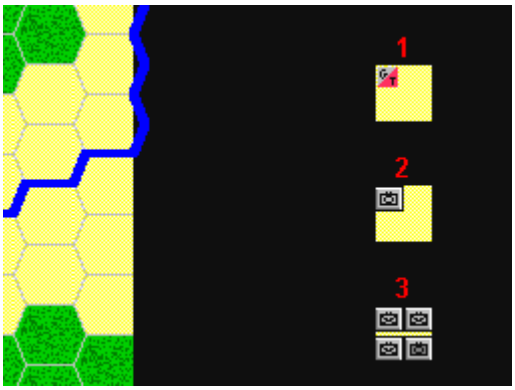
Four pieces per hex, versus One - ADC2 offers the option of drawing either one of four pieces per hex (there is actually unlimited stacking, but only a limited number of symbol can be drawn due to space limitations). Therefore, the size of the pieces will be very important in how the gameset looks. If they are too large, they will "overlap," especially when displayed four per hex. If you know in advance that you will want to show four pieces per hex - we suggest making the pieces just under ¼ of the hex area, so all four will display without overlapping. Where only a single piece will be shown, for best results you should make the piece size just less than the hex size. An advantage to displaying one piece per hex is that the unit symbol can be larger, which allows for greater detail and overall better looking pieces.

3-D Pieces - As has been noted earlier, it's easy to make a "functional" gameset quickly. However, a gorgeous set does take a bit more time. One of the easiest ways to spice up the look of your pieces is the use of "3-D" borders. This light/dark shading technique really makes your piece counters stand out. To get the "3-D" look, merely place an all-black border around your piece at Zoom 2 and/or 3 (normally, there's not enough space to 3-D shade Zoom 1). The border will make the piece stand out from the mapboard terrain it's placed on. But it will still look "flat." To correct this, place a second line inside the first, with one half a fairly dark shade, and the other half a very light shade. Use the buttons in practically any Windows 95/98 application as an example. The piece counter now appears to be 3- dimensional and will look as if they are in fact separate objects on the mapboard.



Sample 3-D piece with actual size piece shown to right.

Map Borders - It is almost always a good idea to add two or three hexes in both directions to create a "border" around your map. In some cases, you may wish to have displays, game turn tracks, or other game aids displayed next to the map. But, even if you don't, the border gives a more professional look to the Mapboard, and provides a cushion in case you miscalculated the size you need. Remember, you can add or subtract from the width of the border even after creating the mapboard by opening the games and using the Play Game Module **Advanced | Resize Board/Playing Area** function.



A Map Edge Showing a Sample Game Turn Track

Railroads and rivers - A quick way to display fancier hexline and hexside graphics is to have a small line displayed inside of a larger one. For example, for a railroad, you could have first line type of a narrow straight line, with a second line being dashed. When combined, they look more like the standard "zipper" map symbol normally used for a railroad. For a large river, you could have a thicker dark blue line, with a thinner light blue line laid "over" it on the map, etc. If both a road and a railroad were in the same hex, you might consider having all the roads brown and the rail black, for example. Make them different sizes and be sure to place all the larger lines first.

Fast-Draw turned on - The fast draw option will draw your Zoom Level 1screen much faster (especially for the REALLY big games), by leaving out Place Names, HexSides, and HexLines. However, be warned…it also leaves out the pieces. So if your game has invisible pieces at zoom level one, you probably have Fast Draw accidentally turned on.

The first Mapboard Symbol type - When making a new map, the map is filled with the first Mapboard Symbol type on the list of symbols available (that you have previously created using the symbol editor). It is therefore very timesaving and convenient to make the first Mapboard type the same as the type of Mapboard most prevalent on your map. If you are making a naval game, this might be a sea hex. If you are making a gameset about combat on the Russian steppes, it might be clear Mapboard. A gameset about the Battle of the Bulge, on the other hand, might be best served with having woods as the first Mapboard type listed.

Save Often! - If you turn off the Autosave you do so at your own risk. We hope this hint is self-explanatory.

Gameset Creation - When you make a gameset create a "Master.ops" or "Base.ops" file which you can use as a basis for various scenarios. Make all the players, classes, flip definitions, etc., and create all pieces in appropriately named pools. The more pools you make for specific pieces or groups of pieces the easier it will be to find the pieces you are looking for. Think of it in terms of having extra counter trays with your boardgame which enable you to sort your counters better. With up to 32,000 pools, you have a lot of options for sorting. Separate pieces by player, setup area, or reinforcement turn/area. Once you created the gameset but before you start placing units, save the "Master.ops" file (or whatever you named it), and **then File | Save As** the name of the game or scenario you want to make. If a game has multiple scenarios, use the "Master.ops" file for each and save it for each of the scenarios, using the specific scenario name for each. If Scenarios are sequential in nature, you might also consider creating the first scenario from the "Master.ops" file. Then create the second scenario from the first, and so on. Thinking and planning ahead can save a lot of time and tedious work.

Stacking and Piece Creation - There are a number of different ways to order units in a stack so that the piece you want is visible on top of the stack. You can specifically designate a piece in the **Edit Existing Piece Values and Information** to **"Draw this Piece on top of others."** You can also use the **Game | Mapboard Display Options | Put Class on Top in Hexes** option to designate an entire class to display on top. You can also click on a stack of pieces and in the **Select Pieces for Action** form use the **Sort Button**. However, if you are not going to need to constantly reorder your pieces using these methods, you can create pieces so that they always display in a specific order. Pieces are displayed in reverse order of their creation. So the first piece you create will always be displayed on top of other pieces when in a stack. The last piece you create will always be display underneath and will probably not be seen. In a hypothetical game you might want out of supply and other markers to always be on top, followed by leaders, armored units, and then infantry units. Before starting to make the pieces, create pools with the categories you need and order the pools using the **Edit | Pools | Set Display Order** function. This will make remembering the order in which you want to make your pieces simple. In the hypothetical game, you might have pools which are listed in order: Markers, Allied Leaders, Axis Leaders, Allied Armor, Axis Armor, Allied Infantry, Axis Infantry. In a complex game you might have hundreds of pools at this point, but after all pieces have been made, you can consolidate your pools by making an Allied Pool and using the **Transfer Pieces** option in the **Create or Edit Force Pools** form. After transferring the Allied Leader, Armor, and Infantry pieces to the new Allied Pool in our example, you can delete the empty pools you used initially.

Hidden Units - There are several ways to implement hidden units in ADC2:

Area Hidden
This "area-based" method reveals the unit when an opponent's piece is within "X" hexes. You can get more details in the Help index by typing "hidden".

Set up:
1) Go to the Advanced menu
2) Make sure "Auto Reveal When Moving (Range): On"
3) Go to Edit/Players
   Perform the following on each of the two players (does not work with more than 2)
   Choose a "player"

Choose "Edit Selected Player Info" (click button)
Go to "Search/Reveal Range"
Set to whatever range you want to use.
Go to "Hidden Piece Options"
Made sure the following options are checked:
"Use Hidden Pieces For this Player"
"Pieces hidden when placed on board"
"Pieces in force pools always hidden"
Click on "Save"
Click on "X" to close window

4) End of changes

Units spotted (revealed) will remain that way until the end of your turn, even if the spotting unit moves back out of range. If you want the program to run the spotting routine manually, select **Advanced |Run (Range) Auto-Reveal Now**.

Hex Hidden

This method hides the identity of all units until selected for combat. To toggle this option On/OFF, select **Advanced | Reveal Pieces During Combat.** When this option is on, it has the following effects:

a) Any piece selected to attack is immediately revealed. Other pieces that may be in the same hex, but that are not attacking, are not affected.
b) ALL pieces in a hex with at least one unit selected to defend are immediately revealed - even if the pieces are not all selected to defend..

Set up:
1) Go to the Advanced menu
2) Make sure "Auto Reveal During Combat: On" (all other options off)
3) Go to Edit/Players
Perform the following on each player
Choose a "player"
Choose "Edit Selected Player Info" (click on button)
Go to "Hidden Piece Options"
Made sure the following options are checked:
"Use Hidden Pieces For this Player"
"Pieces hidden when placed on board"
"Pieces in force pools always hidden"
Range setting is not applicable in this option
Click on "Save"
Click on "X" to close window
4) End of changes

LOS Hidden

The third method hides movement based on LOS (line of sight) from one unit to another depending on the elevation settings of the ADC2 module. It simulates playing a refereed game where a referee would control sightings. In operation, this function first "hides" ALL of the pieces on the board, then cycles through all the on-board pieces - each of which tries to sight every piece belonging to another player. If the LOS is not completely blocked, the target piece is "seen". Once a piece is seen - it is seen by all of the other players, no matter which player's piece spotted it.

Set up:
1) Go to the Advanced menu
2) Make sure all sighting options are off except "Auto-Reveal when Moving (LOS)
3) Make sure "Use Elevations" is on. You must open and set the "LOS: Set Terrain Values" and "LOS: Set Characteristics." See below for further explanation.
3) Go to Edit/Players

Perform the following on each player
Choose a "player"
Choose "Edit Selected Player Info" (click on button)
Go to "Hidden Piece Options"
Made sure the following options are checked:
"Use Hidden Pieces For this Player"
"Pieces hidden when placed on board"
"Pieces in force pools always hidden"
Range setting is not applicable in this option
Click on "Save"
Click on "X" to close window

4) End of changes

HOW TO ESTABLISH LOS PARAMETERS AND HOW THE LOS BLOCKING OF TERRAIN WORKS:

LOS - The key for using LOS in tactical games is dividing up your terrain types into Base Elevation and AGL (Above Ground Level) types. Normally, your "base elevation" types will not have any AGL terrain features, while the AGL types will not have any base elevation. For example, you would create base hexes such as 0 meters, 5 meters, 10 meters, etc. and AGL types such as woods, orchard, houses, etc. A good technique for the base elevation symbols is to use a slightly different color for each elevation level. Generally, from lower elevation to higher elevation the color gets darker.

Once you have all of your symbols completed, and the map drawn you are ready to go into the Play Game Module and "tell" it how to treat your terrain. First, set the base elevation for all of your primary types. For the above example, you could set the base elevations to 0, 5, 10, 15, 20, etc. to match the height in meters. Or, you could use an arbitrary system where a level represents some specified height (which is the situation in most board games). In this case, you might set the base elevations to 0,1,2,3,4,5, etc., where each level actually represents 5 meters.

Next, you would set the AGL heights of the secondary features - making sure to match the height per level with what you used for the base terrain. For example, let's say woods are 5 meters high. If in the preceding step you set the base elevations at 0, 5, 10, 15, etc., the height of the woods will be 5, based on 1 meter per level. However, if you set your base elevations to 0, 1, 2, 3, 4, etc. the height of the woods will be 1, since in that system each level represents 5 meters.

There are several other points worth mentioning. First, the unit of measurement is purely cosmetic, you can type in "furlongs" instead of meters, for example. Second, you need to know the LOS rules of the game in order to accurately implement them here. If the game utilizes "the plateau effect" (i.e., the map/board comes in flat increments, and LOS is blocked if the piece is in the "shadow" of the lower map/board) then you want to be sure to check the "AUTOMATIC GROUND LEVEL SMOOTHING" to “off”. On the other hand, if you want to try something a little more advanced in whatever game you are playing, check this box to "on." Automatic smoothing actually takes the different level hexes and interpolates them, making for more realistic LOS assessments. When using automatic smoothing, the Cliff elevation box allows for cliffs, given they drop X amount of map/board levels.

Finally, the setting the block point quantity individually for various features is a way to have partial LOS obstruction, if desired. If your game features "all or nothing" LOS, then set the block points to any amount (say, for example, 100) and just be sure that all blocking map/board has a value of 100 or greater. For games with partial LOS obstruction, you can set the map/board blocking values to less than the overall blocking value, and this way, get partial obstruction. Suppose you had a game where a piece could fire through one woods hex, but not two. You could set the overall blocking value to 100, and the woods map/board value to 50. It would therefore not be blocked for one woods hex, but the second hex would block LOS. This is only an example, as this feature is very flexible and can be adjusted as desired. Under range options, you can adjust the maximum range or leave it as unlimited.

This screen allows you to also give a special elevation advantage to the spotting or target hex location. For example, in some games, a sniper might be on the second story of a building, although the building hex itself is ground level. You could then give him a height advantage here per the rules of the particular game before checking the LOS.

HIDDEN MOVEMENT PROCESS:

-There are 4 choices concerning "auto-reveal" features under the **Main Menu | Advanced** selection:

a) **Run (Range) Auto-Reveal Now**: Runs the auto-reveal routine based on the detection ranges established for each player.

b) **Run (LOS) Auto-Reveal Now**: Runs the auto-revel routine based on establishing an LOS (Line Of Sight) between units. (See below)

c) **Auto-Reveal When Moving (Range) ON/OFF**. If this setting is ON, the auto-reveal (using player range values) will be run each time a hex is selected in a piece's movement path.

d) **Auto-Reveal When Moving (LOS) ON/OFF**. If this setting is ON, the auto-reveal routine (using LOS) will be run each time a hex is selected in a piece's movement path. (See below)

Pieces owned by all players (such as markers) are never hidden (they are always seen by all players), and NEVER try to sight on-board pieces of any player. If you are using turn record tracks or other holding boxes located in border areas, pieces placed here WILL try to sight on map pieces, which can lead to unexpected results/exposures of units near the edge. One solution is to make a "border" around the actual map area with a ground elevation high enough to block this type of spotting activity.

This also means that markers intended to be placed on pieces should be created separately for each player. Otherwise, enemy players will be able to see these markers all over the mapboard - even if the pieces themselves are hidden. For example, if the game uses "out of ammo" markers for pieces that can't attack, an "out of ammo" class should be created for each player, rather than a single generic one. Cards that happen to be placed on the board never try to spot enemy pieces, nor can they be spotted. This is true for either of the auto-reveal methods.

In practice, use of the LOS-based auto-reveal function will normally be Limited to medium sized games; the time required determining all of the Line Of Sight's increases exponentially with the number of pieces in the game.

MORE ON LOS:

Run Auto-Reveal Now - to have all on-board pieces search for hidden enemy units in their search range. Auto-Reveal When Moving - to have moving units automatically search for hidden enemy units each time you select a new hex for them to move to.

The Auto-Reveal routine detects hidden pieces based on the Search/Reveal Range set as a part of the Player Information. In a very large game, you may want to have Auto-Reveal When Moving turned off, and click Run Auto-Reveal Now at the end of your movement in order to save time. However, you run the risk of a moving piece "accidentally" moving onto or through a hidden enemy piece. For smaller games, the Auto-Reveal When Moving should remain on, and enemy pieces will be revealed as you select each hex in the movement path. Once revealed, pieces remain known until the auto-reveal is manually run by clicking Run Auto-Revel Now.

Use Elevations - This option can be checked as on or off. If ON, the elevation of each hex will be displayed in the lower right hand information box. The elevations for each Map/Board Symbol are defined using **LOS: Set Map/Board Values**. Use **LOS: Set Map/Board Values** - to assign the Base Elevation, and Other Terrain Properties to a Map/Board symbol.

Above Ground Level (AGL) is the elevation of a feature above the ground level of a hex. The ground level of a hex is always equal to the Base Elevation of its' Primary Terrain. If there are Secondary Terrain

types in the hex, they (and their Base Elevation) are ignored in determining the ground level. However, should the secondary types contain features with heights above ground level, these features will extend normally above the hex's ground level. In addition to the Base Elevation, the Primary Terrain may also have an AGL (for example, to represent trees rising above the base elevation).

AGL Display Color is the color used for the AGL terrain in the single LOS results display. That way you can graphically see the terrain and AGL features. Typically, shades of green are used for foliage (trees, woods, etc), gray or black for cities, etc. In the display, ground level is always drawn as brown.

Blocking Points are a degradation of the sighting range. The number of points required to totally block sighting is adjustable from the LOS: Characteristics window. Whenever an LOS is determined to pass though this terrain feature, this number of blocking points will be added to the running total.

% When Spotting Location is the percentage of normal LOS blocking points that will be added to the running total if this terrain type is in the spotting hex. Normally, this will be a value close to 50%, assuming the spotter is in the center of the hex.

% When Target Location is the percentage of normal LOS blocking points that will be added to the running total if this terrain type is in the target hex. Normally this will be a value close to 50%, assuming the target is in the center of the hex.

Adding Comments - Sequencing helps, for example, it's best to have a .wav file start first, then display the .bmp file, then the text. That way the .wav file is playing while the .bmp is being displayed. Otherwise, the .bmp file will display but the .wav file will not play until the .bmp is gone.

APPENDIX B: Special Section: Classes and Pieces

To create well-playing set, users need to know what Classes and Pieces are and how to use them to their best advantage. This relationship is one of the most critical aspects of ADC-2, and for many players, also the most confusing.

To begin with, we'll define and describe each:

Class: A Class is a set of family characteristics which will be shared among one or more pieces. These characteristics include the symbol which will be shown on the map, the player which "owns" the class, and up to eight static (unchanging) values. Classes are "intangible"; they can never be directly placed on the Mapboard or a force pool.

Piece: A Piece is a tangible marker, made "from" a Class, which is placed on the map or in a force pool. In addition to the class information, each Piece may be given its own individual values.

As you can see from these definitions, you must create the class before you can make pieces of that type. This relationship is shown below:

Make the class first....

Then, make pieces of that class - as many as you need.

CLASS

US 10-8 Armored Division

Symbol: US Armored Division
Values (8): Apply to *all* US Armored Divisions.

Example: Combat = 10, Movement = 8.

PIECE

1st Armored Division (US)

Class: US 10-8 Armored Division
Name: 1st Armored Division (US)
Values (8): Apply to this piece *only*.

Example: Morale = 50, Tanks = 80.

PIECE

2nd Armored Division (US)

Class: US 10-8 Armored Division
Name: 2nd Armored Division (US)
Values (8): Apply to this piece *only*.

Example: Morale = 65, Tanks = 90.

PIECE

4th Armored Division (US)

Class: US 10-8 Armored Division
Name: 4th Armored Division (US)
Values (8): Apply to this piece *only*.

Example: Morale = 75, Tanks = 110.

Then make the next class....

And as many pieces as you need.

CLASS

US 8-5 Infantry Division

Symbol: US Infantry Division
Values (8): Apply to *all* US Infantry Divisions.

Example: Combat = 8, Movement = 5.

PIECE

3rd Infantry Division (US)

Class: US 8-5 Infantry Division
Name: 3rd Infantry Division (US)
Values (8): Apply to this piece *only*.

Example: Morale = 60, Tanks = 0.

PIECE

28th Infantry Division (US)

Class: US 8-5 Infantry Division
Name: 28th Infantry Division (US)
Values (8): Apply to this piece *only*.

Example: Morale = 45, Tanks = 0,

And so on, until all the necessary classes and pieces have been created.

"So, why use Classes - why not just create Pieces?"
This is a common question about ADC2, and the answer is simple: using Classes makes creating a game set easier and faster. The reason is that most games use multiple pieces of the same basic type, which all act the same in game terms. For example, in chess there are 8 black pawns. They look the same, move the same, and belong to the same player. So, it just makes sense to define the black pawn type once (as a Class) rather than eight times - once for each piece. The situation is even more striking for many board games. For example, ***Monopoly*** has dozens of $100 bills, while the war game ***War In Europe*** has hundreds of German 6-5 Infantry Divisions. In these cases, creating Classes is obviously a huge saver of time and effort compared to creating each piece individually.

However, there are times when only a single piece will be created for each class. One example would be the King or Queen of each color in a chess set. Another is in a wargame where each piece is known by it's leader or commander, such as "Lee's Brigade" or "Stonewall's Brigade". In these cases, using classes provides no real benefit, since a separate class must be created for each piece.

So, how many classes do I need?
This is another common question, and the answer obviously depends on the game you are converting to ADC2, and your personal preference. However, here are a few guidelines:

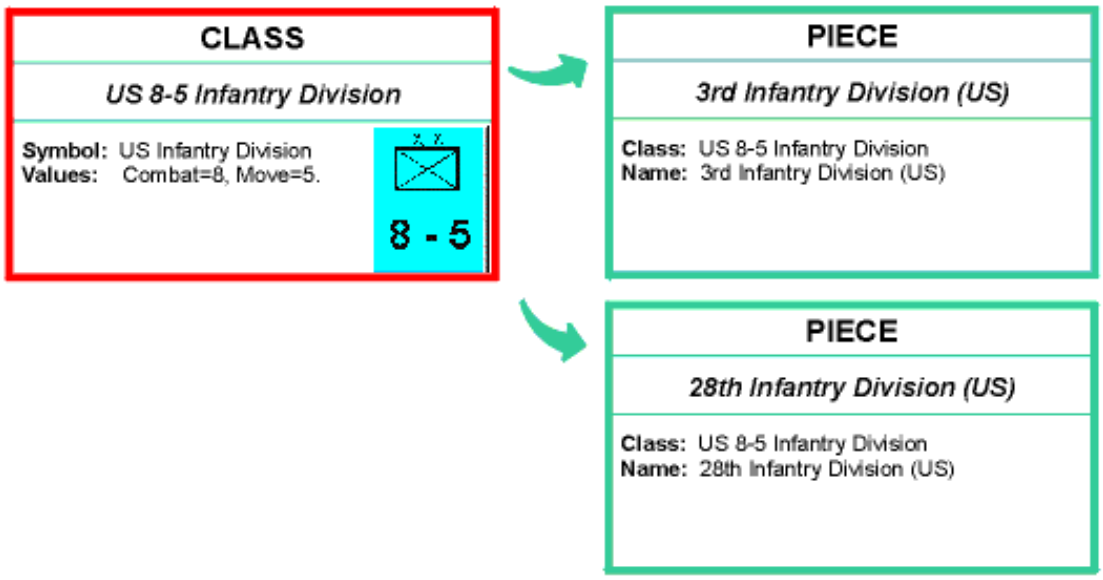
1) Count the number of different-looking pieces in the game, and create a class for each. For example, in chess there are 12 (six pieces in 2 colors): pawn, rook, knight, bishop, king and queen in black and white.

2) Count the number of "functionally equivalent" piece types, and create a class for each. In chess, this works out to the same number as above. In more complicated games it may not, though; Pieces that look the same may have different capabilities. For example, two armored divisions may both use the same symbol, but one may be much more powerful than the other. In this case, you'd need to create two classes - one for the weaker division and one for the stronger.

3) Decide if it is important to show cosmetic differences on piece symbols that are otherwise identical in type. For example, if the game has historical unit ID numbers or unit leader names printed on the standard pieces, do these HAVE to be on the symbol? Or, can these be saved as Piece Names? In most games these values do not HAVE to be on the piece, so it becomes a matter of personal preference whether to include them or not. Obviously, it's a lot more work to include them, since a separate symbol must be drawn for each piece. Otherwise, a single "standard" class can be created, and the unit ID and leader entered as Piece Names (which show up in the piece ID window, but are not part of the symbol shown on the Mapboard). The following example illustrates the two different ways of setting up classes:

The example game has two US infantry divisions, the 3rd and the 28th. Both are "8-5's", and are identical except for their unit ID. There are two ways to create these pieces:.

Method 1: Create One Class. (The pieces share the same "generic" symbol)



Method 2: Create Two Classes. (Each piece has its own symbol)