Designer 4.2

User Manual

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Introduction

Welcome to the exciting world of personal map creation! With this software you will be able to create new maps as well as modify existing maps for your facility. Exactly what your map will end up looking like is entirely up to your creativity. This manual will walk you through the basic functions of the Designer program and custom bitmap creation; however, learning to utilize these functions in conjunction with each other takes some time and practice.

We recommend that you make a copy of your map prior to making any adjustments. This will give you something to fall back on if you get the map jumbled while you are making changes.

We have found that the most efficient way to learn this program is to actually try out the functions as you are reading through the manual. This will give you an opportunity to see the functions in action, as well as give you a little bit of initial practice. The more you practice that you get, the more confident you will be about utilizing this program to make the necessary, or desired, changes to your facility. Let's get started…

Buttons

Let's get a general overview of the buttons you will be using to manipulate the different components of this program. The following list has a picture of what the button looks like with a description to the right of it. These descriptions will be elaborated upon later as we get into their actual use.

This is what the toolbar looks like at the top of the screen:
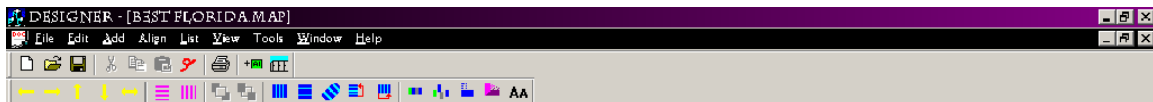
Here is a closer view of the buttons you will be using:

Quick Reference Sheet

Button   **Description**

🗋 ----------- Creates a new map file

📂 ----------- Opens an existing map file

💾 ----------- Saves the current map being modified

🖶 ----------- Prints the current map

+📲 ----------- Adds units onto the map

✂ ----------- Deletes units, bitmaps, and text items from the map

▥ ----------- Shows list of units on the map and will allow you to relocate them

← ----------- Aligns the left side of selected objects to each other

→ ----------- Aligns the right side of selected objects to each other

↑ ----------- Aligns the top of selected objects to each other

↓ ----------- Aligns the bottom of selected objects to each other

↔ ----------- Horizontally centers selected objects to each other

☰ ----------- Vertically spaces objects

⦀ ----------- Horizontally spaces objects

⦀ ----------- Horizontally stacks objects next to each other

▬ ----------- Vertically stacks objects next to each other

◈ ----------- Diagonally stacks objects next to each other

⊟ ----------- Vertically stacks objects in reverse order next to each other

⦀ ----------- Horizontally stacks objects in reverse order next to each other

▪▪ ----------- Groups selected objects together

⬚ ----------- Disassociates grouped objects

▪ ----------- Turns selected units 90°

◩ ----------- Turns selected units a specific number of degrees

AA ----------- Adjusts the size and the direction that unit numbers are displayed

Basic Functionality

DATA - The first thing to understand about the Designer program is that it operates interactively with Storage Commander. Designer reads the data path in Storage Commander to find the unit information it displays. Any changes in Storage Commander are immediately reflected in Designer.

The unit data that Designer uses is being read from the same place that Storage Commander reads the data, but the map (which holds location data) is being opened from wherever you have saved it. This does not have to be the same place as the data to be able to work on the map. You will, however, need to save the map in the same place as the data to be able to access it through Storage Commander. The map file contains the location of the top left corner of each unit, bitmap, and text object that has been added. How big each of these items is displayed has to do with information within the objects themselves.

NEW MAPS – To create a new map, open up the Designer program. Click on the New Map button ⬜. The screen will be blank white. It is ready for you to start adding units, bitmaps, and text items. It will not display any units until you add them to the map.

MODIFYING CURRENT MAPS – If you do not want to start from scratch, you can modify the map that is currently running in Storage Commander. To do this, you will need to click on the Open File button 📂. This will bring up the Open window so that you can browse for an existing map. By default, your current map is located on your C:\ drive inside the Empower\Storage Commander folder. We recommend that you save this file somewhere else before working on it for the very first time. To do this, open up your default map, then click File→Save As… and select a different folder to direct Designer to save the file into this new location. Here I am saving the file on my C:\ drive in the Current Sites\Sample folder.

SAVING MAPS – It is very important to understand where you are saving a map. If you have used the directions for modifying an existing map, then the Save button will save the map wherever you opened it at, or if you used the Save As… button, it will save wherever you told it to save at. If you used the Save As… button, it will save wherever you told it to save at. If
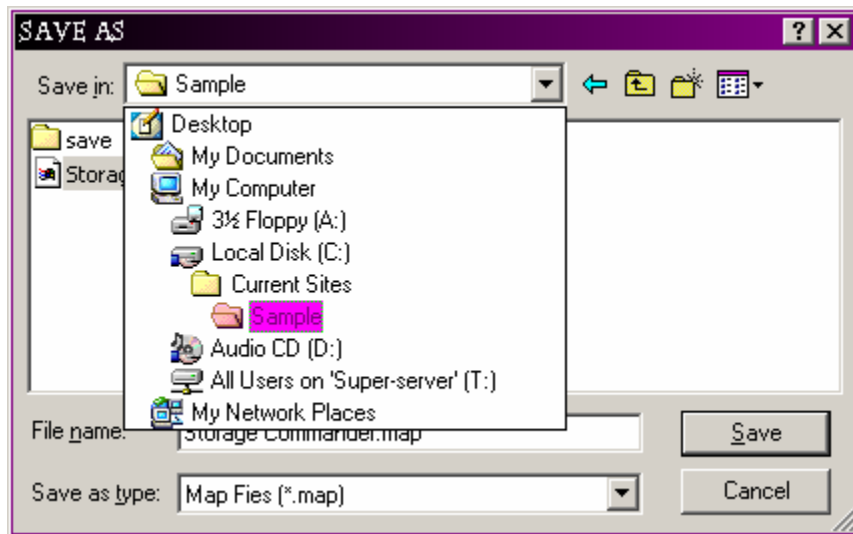
used the new map directions, then you will need to specify the location you want this map to save at the first time you click on the Save button ⊞ . After this initial save, all future saves will continue to automatically go to this same location.

You will want to save your map at various intervals as you are working on it. Every so often, if you want to keep everything you have done to it, then click on the Save button. If you do not want the changes you have made to take effect, then close the Designer program without saving. This will cause the map file to remain how it was when you last saved it.

OBJECTS

DEFINING AN OBJECT- So what is an object? It is not entirely necessary to understand the definition of an object from a programming standpoint to utilize this program. An object is a single item that the computer uses to define things. An object can be anything; in our case, it is any unit, bitmap, or text item. It can also be a group of units, bitmaps, and text items. Each of these is an object with specific properties regarding its size, color, etc. that the map file will display when it paints them on. This will become more understandable as you begin to use the program and see these properties at work.

SELECTING OBJECTS - To be able to make any changes to any of the objects, you must select it so the program knows that the changes you are making are going to be applied to that particular object or objects. When an object is selected, it will get a dark border around it with 8 tiny nodes along its edges; one at each corner and one in the middle of each side.

When working with a bitmap, these nodes will allow you to resize it by simply holding the left mouse button down on the desired node as you drag it to the appropriate position.

Multiple objects can be selected by holding down the shift key as you left click on the objects. When selecting multiple objects, the order that you select them can have a bearing on what happens when you make changes. If you are stacking a bunch of units together, they will stack in the same order that you selected the units. A reverse stack will stack in the reverse order that you selected the units. When aligning multiple objects, they will align to whichever object was selected first. It is important to always know the order that you selected multiple objects. The "Master Unit" is always the first unit selected.

GROUPING / UNGROUPING OBJECTS – It is useful to know how to group and ungroup the objects you will be working with. To group objects together, select the objects, using the multiple object selection method, and click on the Group button ▭. When you have grouped multiple objects together, the program will treat them as though they were one single object. You will be able to move this group around and all the items in the group will remain in their respective positions relative to each other. This allows you to piece together your buildings anywhere on the map that you want to and then move the buildings into place later.

When you are ready to access the objects on an individual basis again, you simply highlight, or select the group and click on the Ungroup button ▭. This will remove the relational bond between the individual items of the group so that the singular items can be manipulated apart from the others.

NOTE: We recommend that you always ungroup before saving your map for use in Storage Commander. This enhances the overall performance of the system.

Adding

Units – Adding units is the most fundamental function of your Designer program. Without the units on your map, there is no interactive capability in your map. To add a unit, click on the Add Units button ▭. This will bring up the following screen:
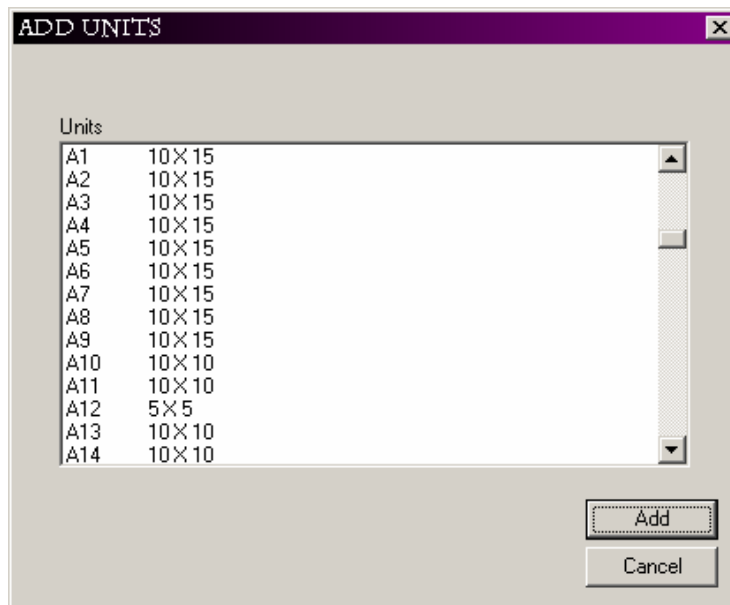
You can select individual units, consecutive groups of units, or disjunctive groups of units. To add one unit, highlight the unit you want to add using the left mouse button. Then click on the Add button in the lower right of the screen. If you want to add a consecutive group of units, highlight the first unit in the group. Then, holding the Shift key down, left click on the last unit of the group. This will highlight all the units in between your first and second click. Now, click the Add button. If you want to add multiple units that are not listed next to each other, hold the Ctrl key down while you left click on all the units that you want to add. This will highlight only the units that you click on. Then, click on the Add button.

The added units will appear in the upper left corner of the map, and will be stacked on top of each other. This section may not be visible on your screen, depending on where you are working in the map, so you may need to scroll all the way up and all the way to the left. Once they are added to the map, you can move them to whichever area you are working in.

Bitmaps – How extravagant your map shows up is entirely reliant on how much effort you put into your bitmaps. A number of standard bitmaps are included with this program and are located on your C:\ drive in the Empower\Storage Commander folder.

To add a bitmap, click on the Add menu and then click on the Bitmap item:

This will bring up the following screen:

8
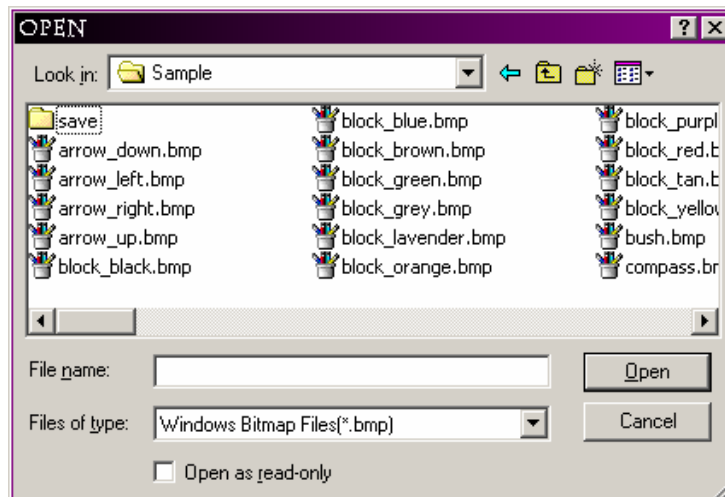
You can select the bitmap that you want to add onto the map here by highlighting it and clicking on the Open button in the lower right.

NOTE: This screen will automatically open up to the last folder you used, which should be your C:\Empower\Storage Commander folder. If not, you may need to click on the drop down menu, where it says Look in: at the top of the screen, to point it to the correct folder initially.

Once you have added the bitmap, it will appear in the top left corner of your screen, no matter where you are on the map (unlike the units which appear in the upper left of your map, not your screen). It may not be the correct size, so it will be essential to resize it according to how big you need it to be on your map. This can be accomplished using the 8 nodes along its edges. Simply hold the left mouse button down while you drag it to the appropriate size.

Text – Adding text items is useful for putting labels on your map. This is accomplished in a similar fashion as bitmaps. Click on the Add menu and select the Text Item from the menu:
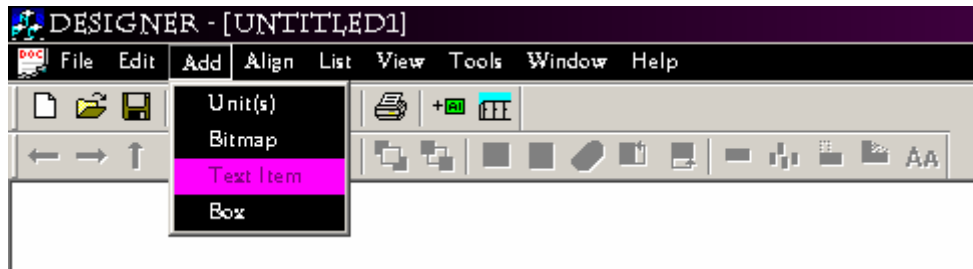
This will open the following screen:
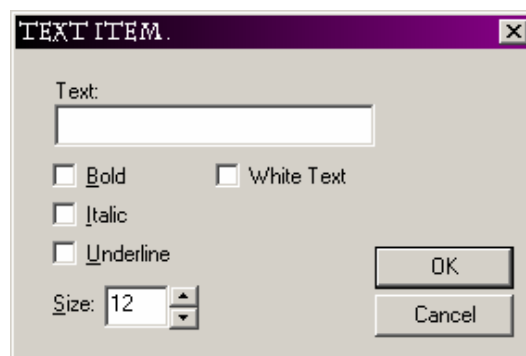
Here, you will fill in what you want the text item to say. You will also select if you want it to be bold, italicized, underlined, or white (the default is black text). Lastly, you will determine what size you want it to show up as. Any of these properties can be changed by simply double left clicking on the text item at any time. Once you click on the OK button, it will be added to the map in the upper left corner of your screen, like the bitmaps, no matter where you are on the map.

NOTE: Because the text items are objects, they have the 8 nodes, but these are not used for resizing. Only resize using the above properties screen.

Stacking

Horizontal – Stacking is the process of placing objects (units, bitmaps, or text items) right next to each other.
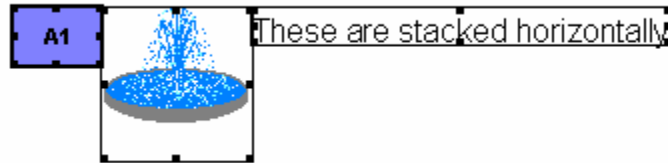
You can see that there is a unit, a bitmap, and a text item stacked next to each other here. Each is an object, so each has 8 nodes. You can stack any combination of objects.

To do this, select the left most object, hold down the Shift key, and select the rest of the objects in the order that you want them to stack next to each other. Now, click on the Horizontal Stack button ▥. The units that you selected will not change their up and down position, only their left and right position. In this example, the Align Top button ⬜ to align the top of these objects to each other. We will discuss aligning objects later. For now, just notice how the left and right sides touch each other. This is the product of stacking.

Vertical – Vertical stacking behaves the same way that horizontal stacking does, only up and down instead of left and right.
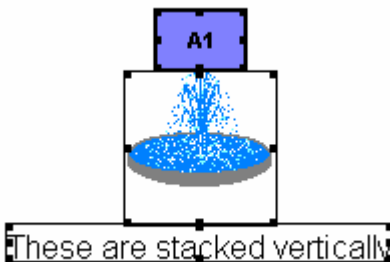
In vertical stacks, the first object selected is going to be the top one and will not move. Once you have selected the units you want to stack vertically in the order that you want them to be stacked, click on the Vertical Stack button ▤. In this example, the Align Center button ⬌ was used to provide the left and right movement. The vertical stack will simply position the objects so that their top and bottoms are next to each other.

Reverse – Reverse stacks will cause the stack, whether horizontal ▦ or vertical ▦, to stack together in the reverse order that the objects were selected. This means that the last item selected does not move while every other selected object will stack to the right or down from this object in the reverse order of their selection.

Diagonal – Diagonal stacking is very restricted in its use. If you have units that are rotated, and we will go over rotations later, this will stack the units in the direction of their slant. Also, because of how it functions, it will perform both the left align ▭ and the vertical stack ▦ at the same time. For example:

Select Units in Order: A1, A2, A3	Click On : ◈	Rotate Units: ▦; 10 degrees	Diagonal Stack: ◈

1   **2**
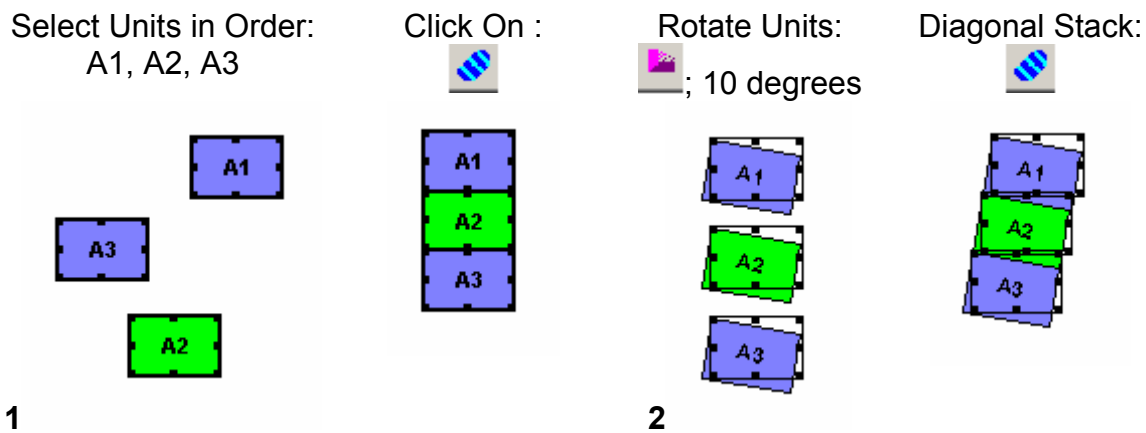
Above are two ways that the Diagonal Stack button ◈ can be used. The first instance is using the Diagonal Stack button ◈ as being equivalent to the Vertical Stack button ▦ plus the Left Align button ▭ at the same time. This is its functionality on non-rotated units. If the units are rotated, as in the second instance, then the Diagonal Stack button ◈ will stack the selected units down and aligned to the left in the direction of the rotation.

Spacing

Non-Rotated Spacing - Spacing is a tool for creating uniform distances between objects across a predetermined area. It can also be used to adjust the positions of rotated units that do not stack in the direction of their rotation. Both Horizontal Spacing ▥ and Vertical Spacing ▤ work the same, so only vertical examples will be used. They also operate off the same basic principal of the horizontal and vertical stacks, only they do not position the units right next to each other.

Begin by selecting the units you want to space out. Then hold the left mouse button down as you drag the end unit to the desired distance that you want to span. For example:

Select Units: A1, A2, A3	Desired Distance: Click and drag A3	Uniformly Spaced:
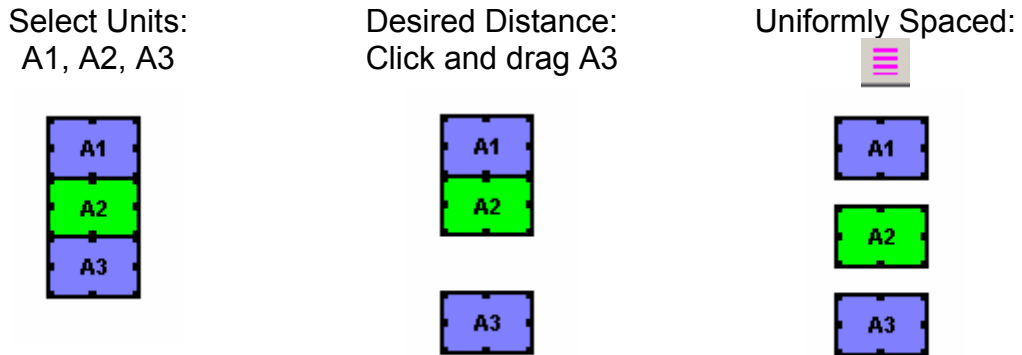
Rotated Spacing – For situations like RV parking areas, spacing can help you fine tune the rotated parking spaces to be properly positioned. For example:

Select Units: RV1, RV2, RV3	Rotate Units: ; 30 degrees	Space Units:
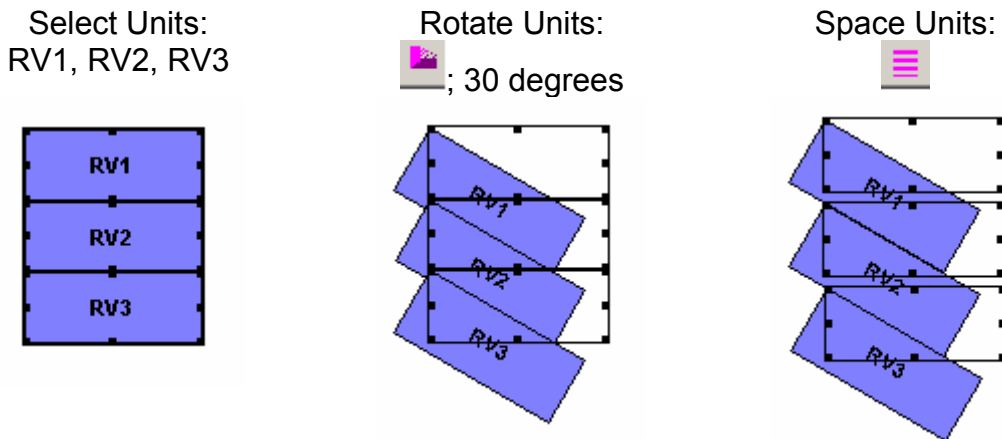
NOTE: Notice the overlap of the units in the rotated RV spaces. By using the above method for spacing, you can eliminate this overlap. The same method for spacing is used in both examples.

Alignment

Vertical Alignment – Vertical alignment is separated into two different types; there is Top Alignment and there is Bottom Alignment. The arrow on the button points in the direction that the alignment will occur. If you want to align the objects along their top edge, click on the Top Align button. If, on the other hand, you want the alignment to be across the bottom edge of the objects, click on the Bottom Align button.

For example:
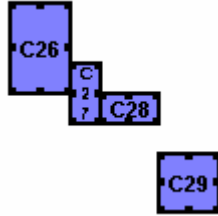
Select Units: C26, C27, C28, C29	Align Top:	Align Bottom:
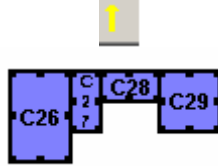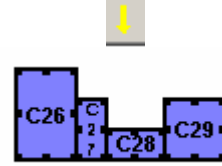
Horizontal – There are two types of horizontal alignment; there is Left Side Alignment ⬅ and there is Right Side Alignment ➡. These alignments work off the same principles of the vertical alignments.

For example:

Select Units: C26, C27, C28, C29	Left Side Alignment:	Right Side Alignment:
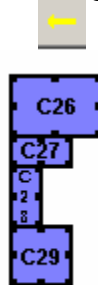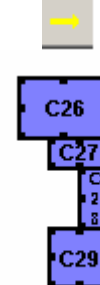
Center Alignment – One more alignment button is available. This is the Center Alignment button ⬌. The arrow here point to the left and to the right to indicate that this button will center the object to each other. As before, the first object selected will not move as the other objects center themselves on it.

For example:

Select Units: C26, C27, C28, C29	Align Center:
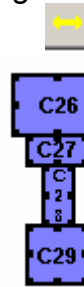
Rotation

90° Rotation – Units, and groups of units, can be flipped 90° at a time by using the Rotate 90° button . This rotation will apply to all units selected. I will use an example of multiple individual units being rotated and an example of grouped units being rotated.

Individual Units Example:
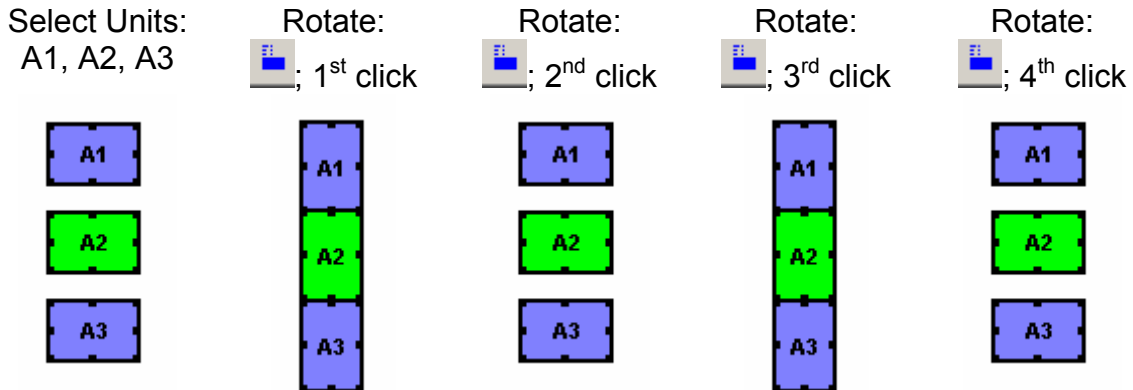
Grouped Units Example:
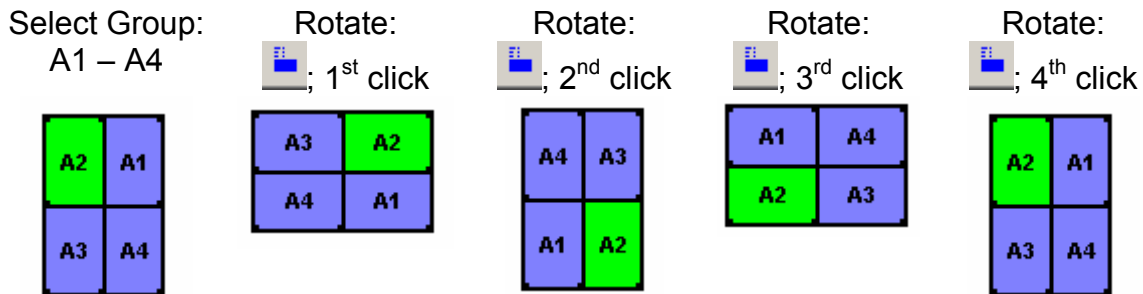
Notice that in a group rotate, the units remain in position relative to each other. The rotation is always clockwise and the upper left corner remains constant during these rotations as well. This kind of rotation can be very useful if you notice that you built a building upside down or something of that sort.

Specific Angle Rotation – Specific angles will help you to make your unit layout as realistic as possible. As seen earlier, utilizing this type of rotation can also orient your RV units correctly. To do this, you will need to select the units want to rotate, and then click on the Specific Angle Rotation button . When you click on this button, a new screen will pop up prompting you to enter the number of degrees that you want to rotate. This entry can be either positive or negative numbers. The axis for the rotation is the upper left corner of the unit.

For example:

When you click on the Specific Angle Rotation button , the following screen will pop up:
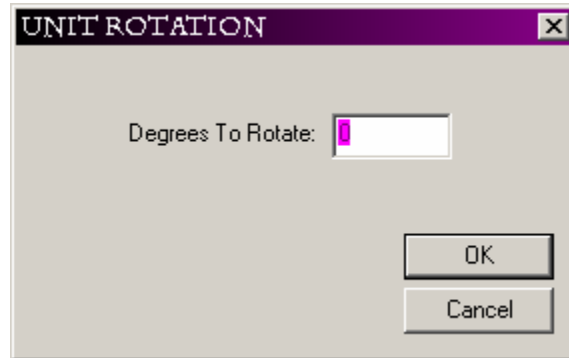
By typing in 30 to do a 30° rotation, my units go from this:
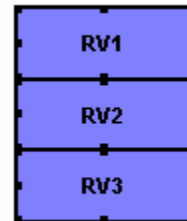
to become this:
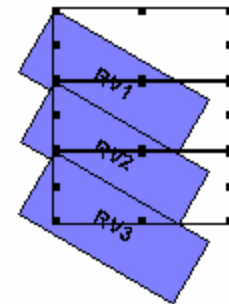
If I entered -30 to do a -30° rotation, I would end up with this:
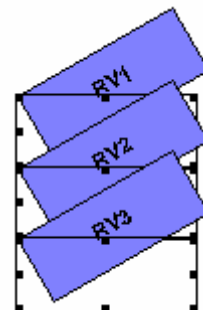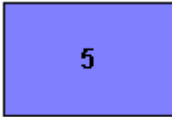
NOTE: Rotations of either type can only be used on units. Neither text nor bitmaps can be rotated.

Formatting

Size of Unit Numbers – The size of the unit numbers can be controlled by the Font Selection button AA. This brings up the following screen:
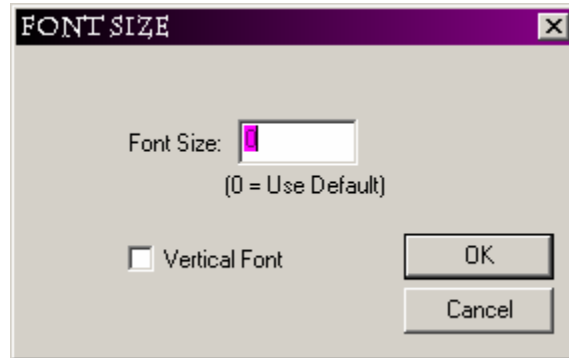
Zero is the default, which is equivalent to 8 point font if the unit is large enough. You can specify the font size you want to use by selecting the units that you want to adjust and clicking on this button. Then simply enter the size you want to use. Currently, the Designer program will try to find the largest font size that the unit will hold within its borders if the default entry is in use. Here are examples of the most common font sizes relative to each other:

Font Size: 4	Font Size: 5	Font Size: 6	Font Size: 7	Font Size: 8
4	5	6	7	8

Direction of Unit Numbers – The unit number are not restricted to simply printing across the unit. They can also be printed down the unit by selecting the Vertical Font checkbox in the Font Size screen:
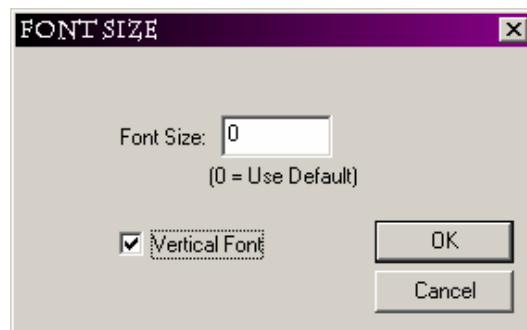
This will cause the unit number to print down the unit instead of across the unit. The following diagram demonstrates this difference:
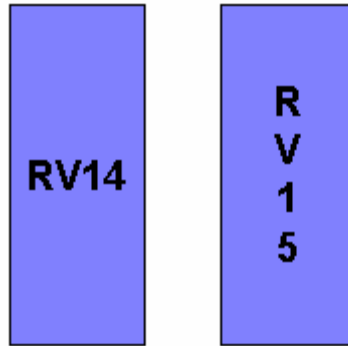
NOTE: The font size screen can only be used on units. It does not adjust the font size on text items.

Duplicating

Before getting started with any duplication, be sure to save your map as it already is so you can always close and reopen the map in case you are not pleased with the results of the duplication.

Units – Duplicating units can be a major factor in the speed of your map creation. When you are duplicating units you will need to specify what part of their unit number will change when the duplication takes place. This is to prevent from having multiple units with the same name existing on the map at the same time.

You can duplicate a single unit or grouped units at any given time. Simply select the individual unit, or grouped units, and then click the right mouse button on them. A menu will appear and you need to select the option to Duplicate. This will cause the following screen to come up:
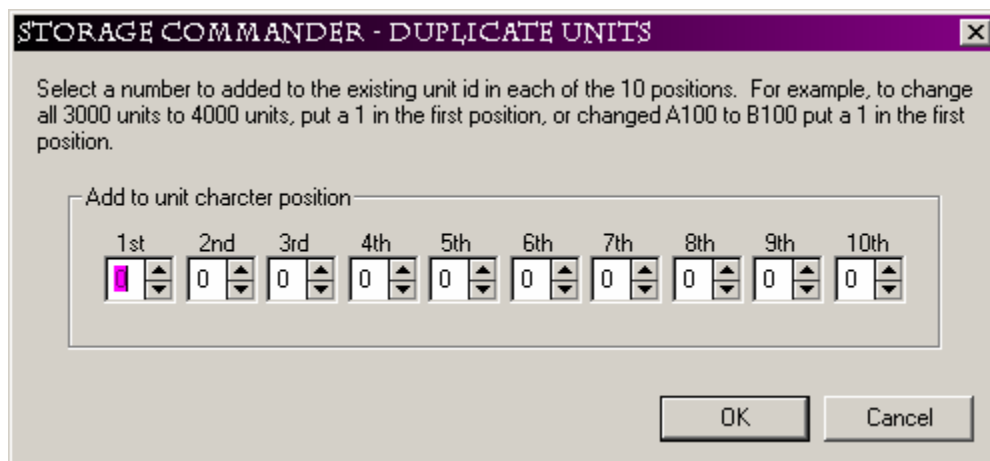
This is the screen for indicating how the unit number will change during duplication. You can make changes on up to ten digits, with 1st being the left most digit. The changes can be positive or negative adjustments. Also, the number changer will handle alpha or numeric changes. If it is an alpha digit ("B") in the desired position, then changing it by 1 will make it a "C" and changing it by -1 will make it an "A". If it is a number then it will add or subtract according to the amount that you put into that field. Here is an example:

Starting with this group:
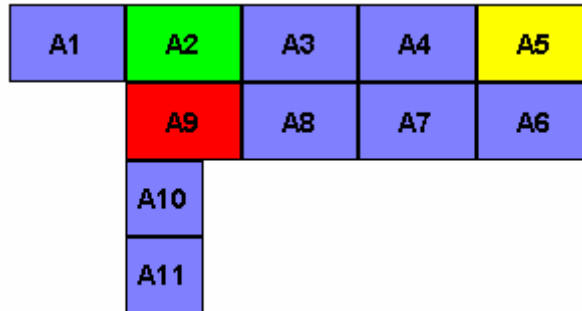
And making a change of 1 to the first digit:
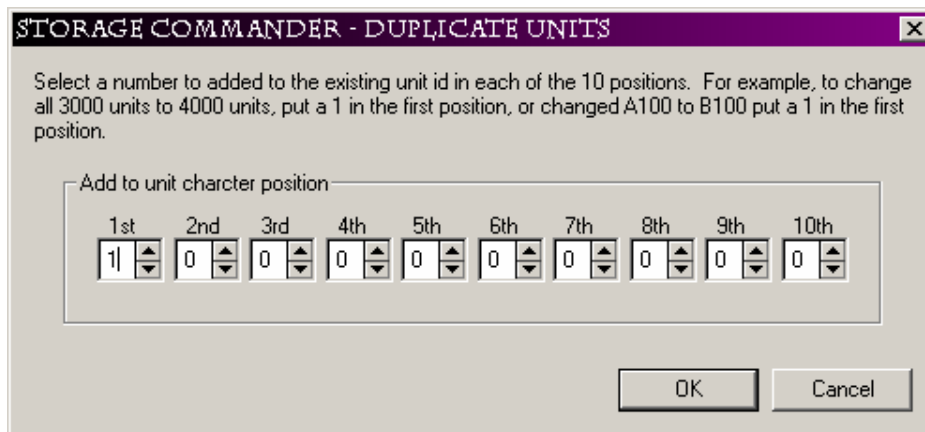
I end up with this group:

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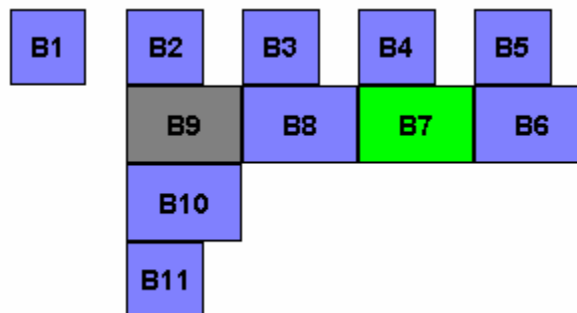
There are a couple of things to note here.

First, when the duplicated units show up, they are still trying to reference the units in the Storage Commander database, so if these units exist, they will show up in the size that they are in the database. They are not necessarily the same size as the units they were duplicated from.

Second, if the duplicated unit does not exist in the database, then the unit will show up as a white unit. If you do not need these white units, then just highlight and delete them from the map. If you do need them, then you will need to create the unit numbers in the Storage Commander database.

Bitmaps and Texts – Duplicating bitmaps and text items are the same process. To duplicate these objects, simply select the desired object and right click on it. Then select Duplicate from the menu that appears. A carbon copy of the selected object will appear overlapping the object it was created from.

Unit List Locator

Some operating systems will allow you to place units outside the boundary of the viewable map. When this happens, your map will not display correctly in Storage Commander. If you go back into the Designer, these units may have disappeared. Actually, they have been assigned negative positioning numbers.

By clicking on the Unit List button , you can adjust the horizontal and vertical positioning of the units that are not visible. This will allow you to bring those units back into the viewable area so you can reposition them. The numbers represent pixels from the left of the screen or from the top of the screen.

Unit	left	top
1	-6608	1475
2	-5933	1475
3	-5258	1475
4	-4583	1475
5	-3908	1475
6	-3233	1475
7	-2558	1475
8	-1883	1475
9	-1208	1475
16	-533	1475
17	-83	1475
18	367	1475
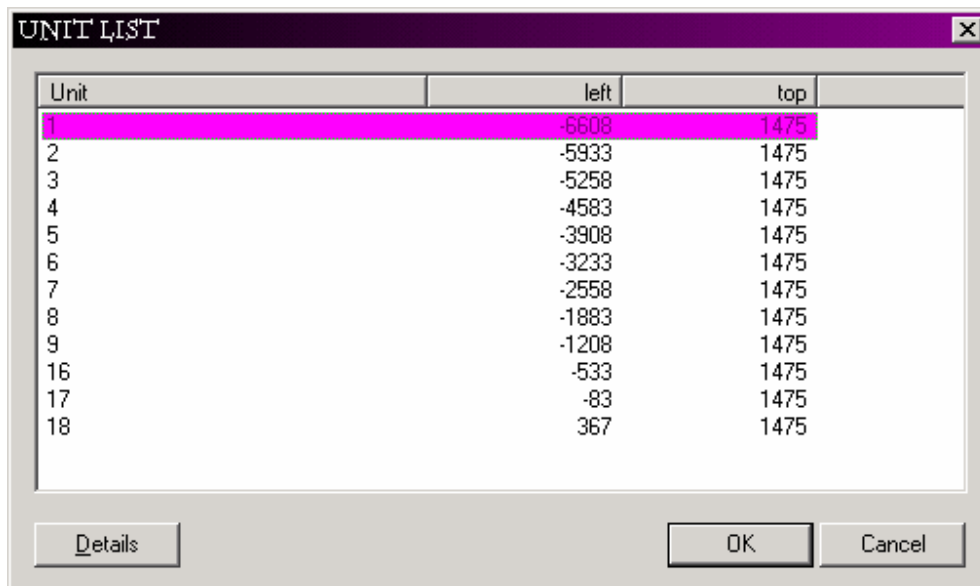
Appendix A

Creating Customized Bitmaps

Creating customized bitmaps is a fairly simple process. All you need to do is create a brand new bitmap using Microsoft Paint, which is included in all the Windows operating systems. You can get to it by clicking on the Start button and going to Programs > Accessories > Paint. This will open up the Paint program where you will create your bitmaps for use in Designer.
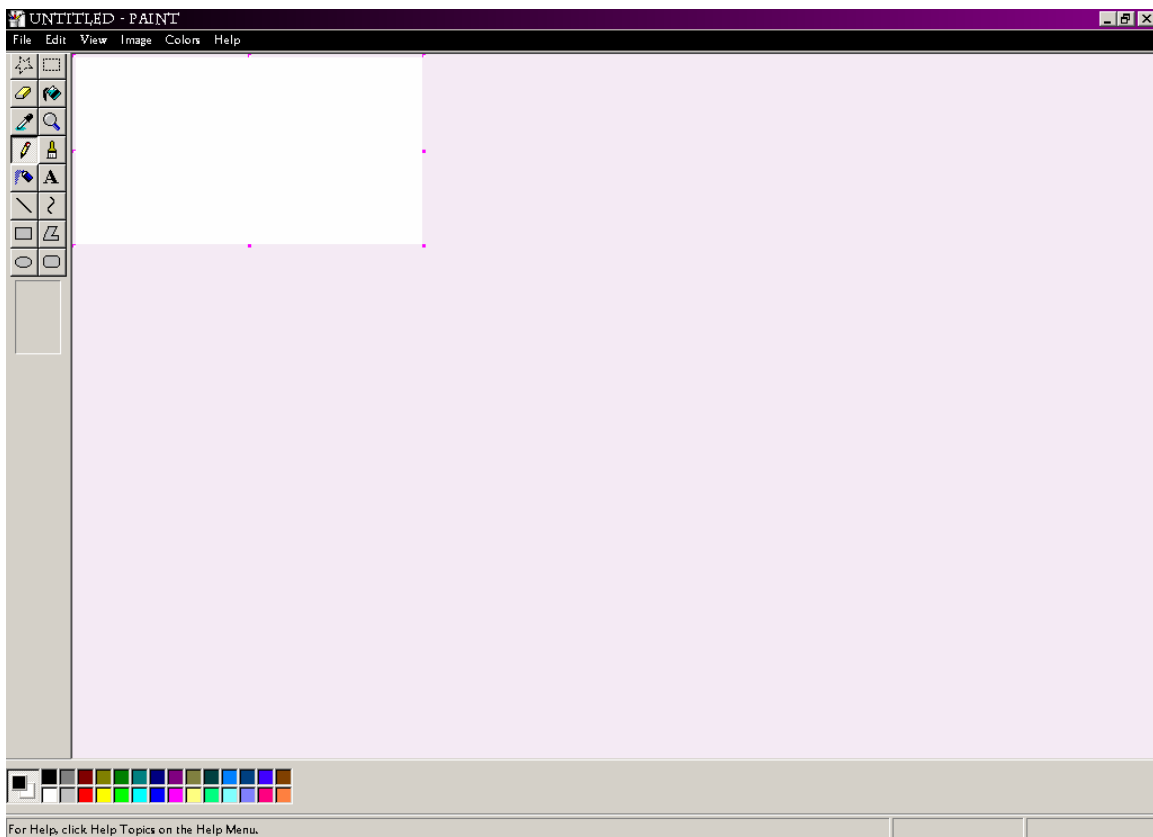
This is what the new bitmap screen looks like. The first thing to do is to save it to the folder that you are building your map in. Click on File > Save As… to open the following window:
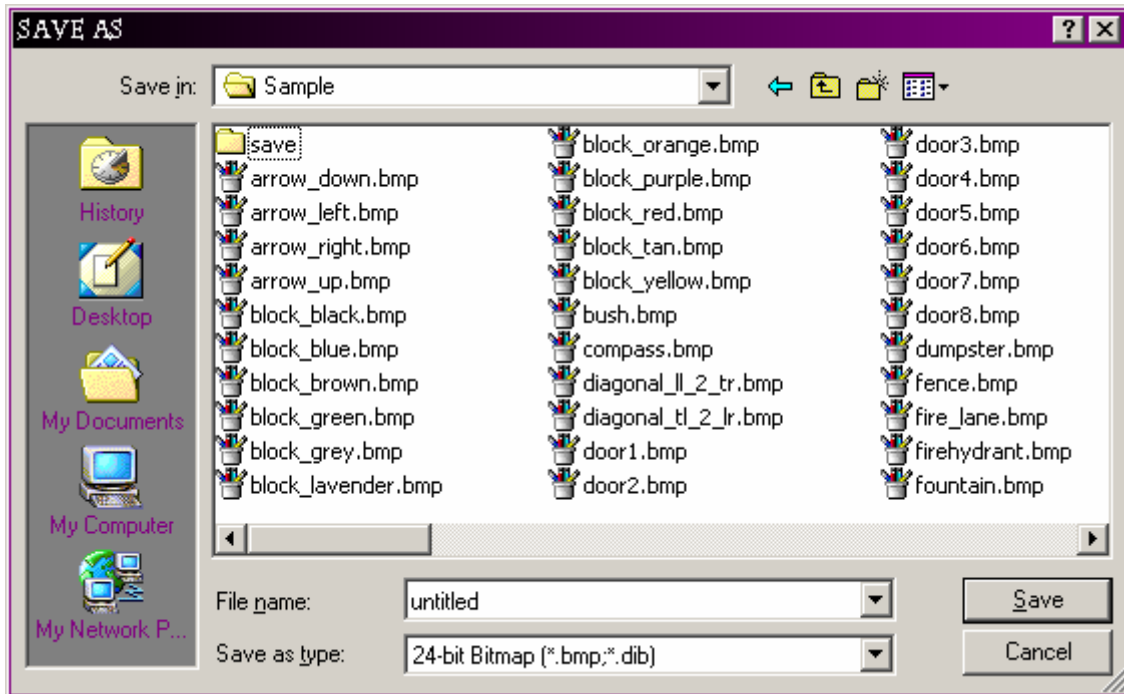
Make sure that the "Save in:" field has the name of the folder where the map is located. Then, give your bitmap a name and type it into the "File name:" field. Finally, change the "Save as type:" field to **"256 Color Bitmap (*.bmp; *.dib)"** so that it appears as follows:
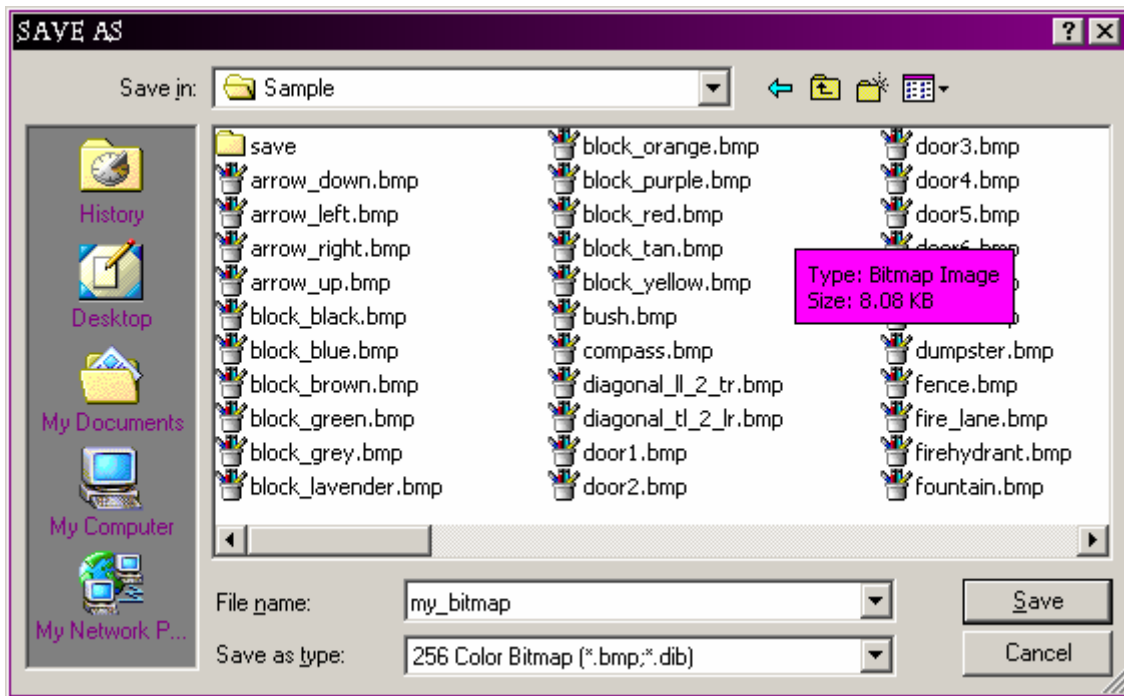
Now click on the Save button.

Now that you have a new bitmap file created, it is time to design your bitmap. Using all of the tools in this bitmap program, create whatever picture that you want to add to your map. By playing around with this, you will be able to generate any conceivable image that you want to add.

You can also pull bitmaps off the web, off a CD, or from friends. Where you get your bitmaps or how you create them is of no real importance for the map. The only thing you need to be concerned about is that the bitmap is saved as a 256 Color Bitmap and that it is saved in the same folder as the map you are working on. If both of these are taken care of, you will be able to add and use any bitmap that you choose. If the bitmap is not saved this way you will get one of two errors when you try to add the bitmap:

DESIGNER

C:\Current Sites\Sample\10_degree.bmp was not found.

OK
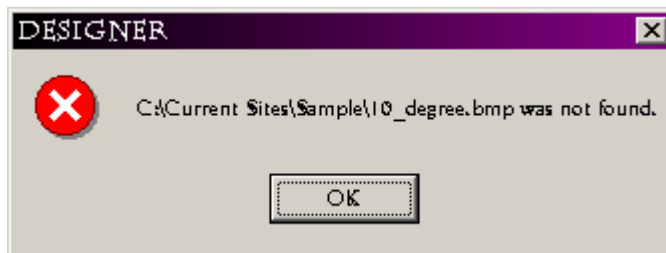
1. This error means that the bitmap is not in the same folder as the map. To correct this, simply save the bitmap into the correct folder.

DESIGNER

Failed to create palette from DIB file

OK
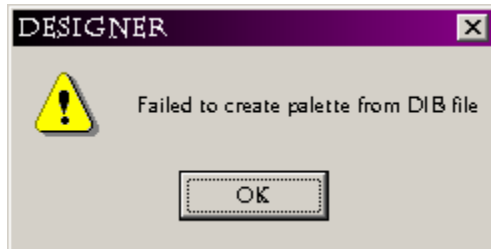
2. This error means that the bitmap was saved as the wrong type. The bitmap will still show up on your map in the Designer, but it will prevent your map from proper operation inside Storage Commander. To correct this, simply save the bitmap as a 256 Color Bitmap.
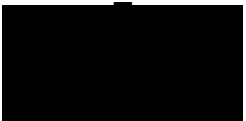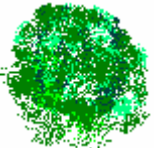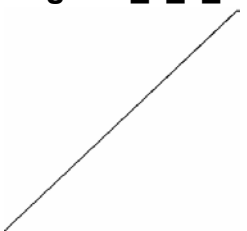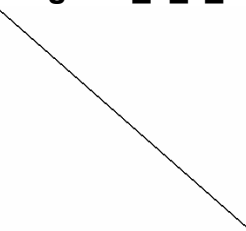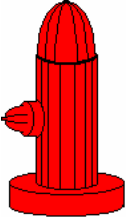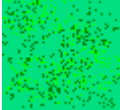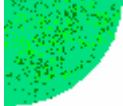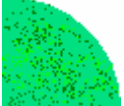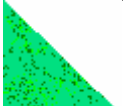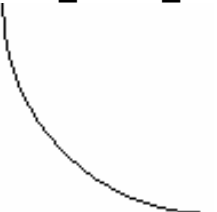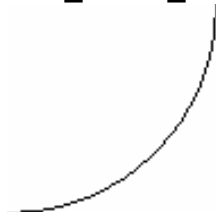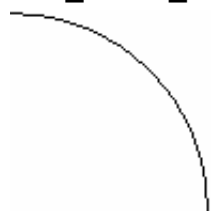
Now you know how to implement customized bitmaps into your map. Have fun creating all your new images!!
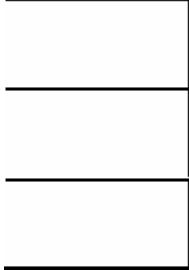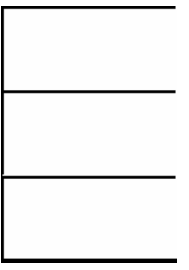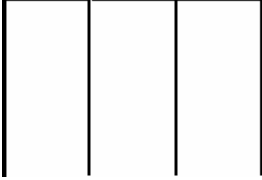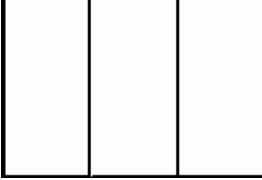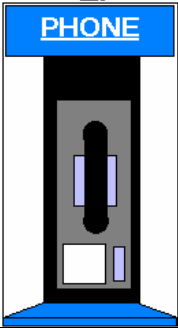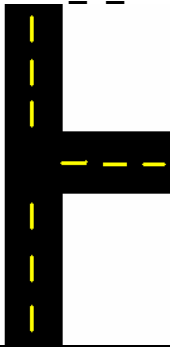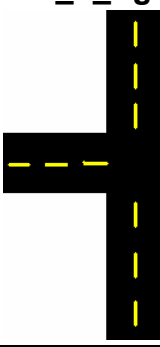
Appendix B
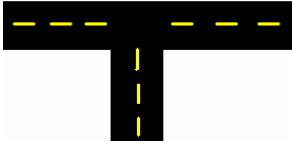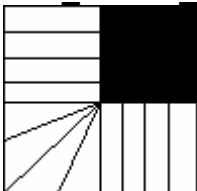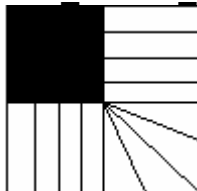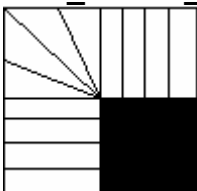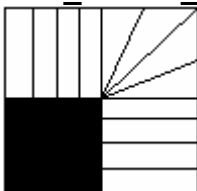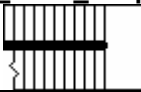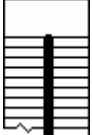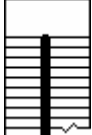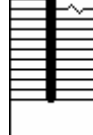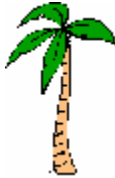
Standard Bitmaps

The following is an alphabetical list of all the bitmaps that are included with the Designer software:

arrow_bl	arrow_br	arrow_down	arrow_left
arrow_right	arrow_tl	arrow_tr	arrow_up
block_black	block_blue	block_brown	block_green
block_grey	block_lavender	block_orange	block_purple
block_red	block_tan	block_yellow	bush
compass	diagonal_ll_2_tr	diagonal_tl_2_lr	door1

door2	door3	door4	door5
door6	door7	door8	dumpster
fence	firehydrant	fountain	grass
grass_corner_bl	grass_corner_br	grass_corner_tl	grass_corner_tr
grass_tri_bl	grass_tri_br	grass_tri_tl	grass_tri_tr
handicap	hedge_horiz	hedge_vert	lift
line_curve_bl	line_curve_br	line_curve_tl	line_curve_tr
line_horiz	line_vert	lock	men

parking_horiz_l1	parking_horiz_l3	parking_horiz_r1	parking_horiz_r3

parking_vert_b1	parking_vert_b3	parking_vert_t1	parking_vert_t3

public_phone	railroad_horiz	railroad_vert	road_corner_bl
PHONE			

road_corner_bl	road_corner_tl	road_corner_tr	road_dead_end

road_horiz	road_T_bot	road_T_left	road_T_right

road_T_top	road_vert	sc_logo

stairs_corner_bl	stairs_corner_br	stairs_corner_tl	stairs_corner_tr

stairs_horiz_l	stairs_horiz_r	stairs_horiz_wrapL_bot	stairs_horiz_wrapL_top

stairs_horiz_wrapR_bot	stairs_horiz_wrapR_top	stairs_vert_bot	stairs_vert_top

stairs_vert_wrapD_L	stairs_vert_wrapD_R	stairs_vert_wrapU_L	stairs_vert_wrapU_R

tree_evergreen	tree_leafy	tree_palm	triangle_black_bl

triangle_black_br	triangle_black_tl	triangle_black_tr	women