

Assembling The Omega Speedster RX

Release 1.0

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1.0 Introduction

This document provides step-by-step instructions for assembling a prototype of the Omega Speedster RX. Correct assembly of the Speedster RX will ensure a thorough evaluation of this new product's marketability.

The Speedster RX is a four-wheeled, jet-propelled vehicle with room for two passengers. Its colorful streamlined design promises a successful addition to the Omega Corporation product line. To facilitate assembly, the Speedster RX is divided into six subassembly groups.

Intended readers are Omega Corporation technicians with these qualifications:

- Associate's degree or higher,
- Good mechanical aptitude,
- Good computer skills,
- Practical understanding of Visio[®] software.

You will need approximately 60 minutes to complete the procedure in this document. Required parts are listed and described in Section <u>2.0</u>, then referenced by number within the procedural steps of Section <u>3.0</u>. Troubleshooting tips are listed in Section <u>4.0</u> on page 21.

1.1 Conventions

Terms

Section <u>3.0</u> - <u>Procedure</u> frequently refers to the Visio user interface. Several terms are used to indicate specific elements within the interface. These terms are defined in *Table 1*.

Term	Refers To
Menu	One of several labelled drop-down menus that appear in a row along the top of the Visio screen. Menu names referenced in the text correspond to the menu's label in the Visio interface.
	For example, when instructed to select an option from the File menu, scan the labels of the Visio menu for the "File" label.
Icon	One of several square pictorial buttons that appear in rows along the top of the Visio screen, or in "floating" groups within the drawing area. Each icon has an official name, which appears as a tooltip when you hover your pointer over the icon.
	Icon names referenced in the text correspond to the icon's tooltip text. For example, when instructed to click the Align Shapes icon, scan your available icons for the "Align Shapes" tooltip.
Context Menu	A list of options that "pops up" when you right-click an area of the screen. The available options change depending on where your pointer is when you click. Thus the name "context" menu.

Table 1 Interface Terms

Methods

Because of Visio's customizable interface, many of the actions described in *Section* <u>3.0</u> can be achieved with multiple methods. For example, to save a Visio file, you could:

- Select *Save* from the **File** menu,
- Click the Save icon button, or
- Use the Ctrl-s key combination on your keyboard.

Each procedural step describes only one method of achieving the desired action. While doing the procedural steps, if you prefer a different method for an action, feel free to use it.

Formatting

Throughout this document, special formatting helps you distinguish between different types of information, as shown in *Table 2*.

Type Of Information	Format	Example
Names of screen elements, such as	Bold	Click the Save button.
buttons, fields, menus, and tabs.		Type the requestor's name into the User Name field.
Field entries, menu options, and section references.	Italic	When the field is set to <i>Data</i> , the form displays additional fields.
		Select Login from the menu.
Hyperlinks.	<u>Blue</u> <u>Underlined</u>	Section <u>3.0</u> shows directory tree specifications.

Table 2Special Formatting

1.2 Recommended Usage

Hardcopy Viewing

When viewing this document on paper, set Section 2.0 - Parts List and Section 4.0 - Appendix - Troubleshooting to one side, so that you can refer to them while doing the procedural steps.

Online Viewing

When viewing this document online (using Adobe[®] Reader or another PDF-compatible browser), follow these guidelines for best efficiency:

- Use the Alt-Tab key combination to quickly switch between this document and your work area in the OMEGA kit.
- Use bookmarks to quickly jump between sections.

In Adobe Reader, click the **Bookmarks** tab to display the list of bookmarks. Click any bookmark to view the associated section.

• Use the Split feature to see your current procedure step at the same time as the parts list or the troubleshooting tips.

To activate the Split feature, select *Split* from the **Window** menu at the top of your Adobe Reader screen. Your viewing screen will divide into two viewing panes that allow you to navigate to two parts of the document at the same time.

Use the bottom Split pane to display the steps you are currently working on. Use the top Split pane to display the relevant section of the parts list (or the Troubleshooting section).

You can adjust the size of the panes by selecting the dividing line and dragging it up or down. If you wish to remove the split, select *Split* from the **Window** menu again to toggle this feature off.

2.0 Parts List

All parts listed in *Table 3* are available in the Online Modules for Engineering Geometric Assemblies (OMEGA) construction kit. You will not need to duplicate any parts.

- The Qty column indicates how many of each part you need.
- In the Color column, the number in parenthesis corresponds to the Fill Color number in Visio. If no number is present, the color is a custom color.
- In the Texture/Shading column, the number in parenthesis corresponds to the Fill Pattern number in Visio.
- The Group column shows which parts belong to which subassembly group.

	_				Width / Length	Height	
Part #	Qty	Shape	Color	Texture/Shading	(inches)	(inches)	Group
1	2	Circle	Blue (10)	Solid	1.2500	1.2500	
2	2	Octagon	Grey (18)	Gradient Fill (38)	1.5000	1.5000	
3	2	Circle	Grey (17)	Gradient Fill (35)	1.5000	1.5000	А
4	2	Circle	Grey (17)	Solid	0.5000	0.5000	
5	2	Circle	Cyan (07)	Solid	0.3839	0.3839	
					Width / Length	Height	
Part #	Qty	Shape	Color	Texture/Shading	(inches)	(inches)	Group
6	1	Square	Yellow (05)	Crosshatch (03)	1.6250	1.6250	
7	1	Stick Figure	Blue (04)	Solid	0.7356	2.0000	В
8	1	Stick Figure	Red (02)	Solid	0.7356	2.0000	
Part #	Qty	Shape	Color	Texture/Shading	Width / Length (inches)	Height (inches)	Group
9	2	Rectangle	Red (02)	Solid	6.0000	0.5000	
10	1	Arrow, Right-to-Left	Red (02)	Solid	4.2500	1.5000	С
11	1	Arrow, Left-to-Right	Red (02)	Solid	4.0000	1.3849	

Table 3Parts List

Part #	Qty	Shape	Color	Texture/Shading	Width / Length (inches)	Height (inches)	Group
12	1	Hexagon (6 sides)	Grey (17) Red (02)	Striped (13)	1.5000	1.5000	D
13	1	Triangle	Red (02)	Solid	1.5000	1.0000	
Part #	Qty	Shape	Color	Texture/Shading	Width / Length (inches)	Height (inches)	Group
14	2	Hexagon (6 sides)	Red (02)	Solid	1.5000	1.5000	
15	1	Heptagon (7 sides)	Yellow (05)	Crosshatch (04)	1.5000	1.5000	Е
16	2	Cross	Yellow (05)	Crosshatch (04)	1.5000	1.5000	
17	2	Circle	Orange	Solid	0.5000	0.5000	
Part #	Qty	Shape	Color	Texture/Shading	Width / Length (inches)	Height (inches)	Group
18	1	Arrow, Right-to-Left	Blue (04)	Solid	1.1811	0.0000	
19	2	Triangle	Blue (04)	Solid	1.5000	1.0000	F
20	1	Rectangle	Grey (14)	Diagonals (05)	3.0000	0.5000	
21	1	Rectangle	Grey (17)	Diagonals (02)	3.0000	0.5000	

3.0 Procedure

To assemble the Speedster RX, you will first set up your working environment and acquire all needed parts. Then, you will assemble each subassembly group. Finally, you will combine the groups into the final product.

The assembly procedure consists of these major tasks:

- <u>Set Up Visio Environment</u> (Section <u>3.1</u>)
- <u>Select Parts</u> (Section <u>3.2 on page 9</u>)
- Assemble Group A (Section 3.3 on page 10)
- Assemble Group B (Section 3.4 on page 12)
- Assemble Group C (Section 3.5 on page 13)
- Assemble Group D (Section 3.6 on page 14)
- <u>Assemble Group E</u> (Section <u>3.7 on page 15)</u>
- <u>Assemble Group F</u> (Section <u>3.8 on page 17</u>)
- <u>Assemble Groups Into Final Product</u> (Section <u>3.9 on page 19</u>).

3.1 Set Up Visio Environment

Do these steps

- 1. Click the **Design Pad Modeling** tab at the bottom of the screen to display the Design Pad Modeling page.
- 2. Look for a small window in the lower left corner of the screen labelled "Size & Position."
- 3. If the Size & Position window is not visible, select *Size & Position Window* from the **View** menu at the top of the screen.

The Size & Position window appears in the lower left corner of the screen.

- 4. From the **File** menu at the top of the screen, select *Page Setup*. The Page Setup dialog box opens.
- 5. In the dialog box, click the **Page Properties** tab.
- 6. On the Page Properties tab, ensure that the **Measurement units** field is set to *Inches*.
- Click the OK button. The dialog box closes.
- 8. Look for ruler markings along the top and left side of the screen.
- 9. If rulers are not visible, select *Rulers* from the **View** menu at the top of the screen. Ruler markings appear along the top and left side of the screen.
- 10. From the **Tools** menu, select *Ruler* & *Grid*. The Ruler & Grid dialog box opens.
- 11. In the dialog box, ensure that the Ruler zero field is set to 0 in. for both Horizontal and Vertical.
- 12. Click the **OK** button.

The 0 marking on the horizontal ruler should line up with the left side of the drawing area.

The 0 marking on the vertical ruler should line up with the bottom side of the drawing area.

13. Click the **View** menu to expand it, then place your pointer on the *Toolbars* option so that it is highlighted. After a moment, the Toolbars submenu displays.

- 14. In the Toolbars submenu, ensure that a checkmark appears next to the *Action* option. (If a checkmark does not appear, click the *Action* option to activate it.)
- 15. From the **Insert** menu at the top of the screen, select *New Page*. The Page Setup dialog box opens.
- 16. In the Name field, enter "Group A".

Note:

The dialog box should open with the Page Properties tab active. If it does not, click the **Page Properties** tab in order to access the **Name** field.

17. Click the **OK** button.

The dialog box closes, and the new page displays.

Note:

Each page in the Visio file corresponds to a tab along the bottom of the screen. Click any tab to view the associated page.

18. Repeat Steps 15 through 17 to create five additional pages.

Use these page names:

- Group B
- Group C
- Group D
- Group E
- Group F

You will use these pages to build the product's subassemblies. Once the subassemblies are built, you will combine them on the Design Pad Modeling page.

19. Continue with Section 3.2.

3.2 Select Parts

Examine the available shapes in the OMEGA Kit to find the parts described in the parts list:

- 1. Locate Parts 1 through 5, and move them to the Group A page. See *Table 3* on page 5 for the quantity and description of each part.
 - To confirm a shape's color, right-click it, then select *Format> Fill* from the context menu. In the Fill dialog box, the **Color** field indicates the shape's exact color. The number in this field corresponds to the number in parenthesis in the Color column of the parts list.
 - To confirm a shape's texture/shading, right-click it, then select *Format> Fill* from the context menu. In the Fill dialog box, the **Pattern** field indicates the shape's texture. The number in this field corresponds to the number in parenthesis in the Texture/Shading column of the parts list.
 - To confirm a shape's dimensions, select it, then check the values of the **Width** and **Height** fields in the Size & Position window (in the lower left corner of the screen).
 - To move a part, do these steps:
 - a. Click the desired part to select it.
 - b. From the **Edit** menu, select *Cut*. The selected part disappears.
 - c. Switch to the destination page by clicking the page's tab along the bottom of the window.
 - d. From the **Edit** menu, select *Paste*. The selected part reappears.

Note:

If desired, you can move multiple parts at once: Press and hold the Ctrl key on your keyboard while you click each part. A dotted marquee will appear around your selections. Then use the Cut and Paste functions as usual.

- Locate Parts 6 through 8, and move them to the Group B page.
 Use the same methods described in Step 1. See <u>Table 3</u> on page 5 for the quantity and description of each part.
- 3. Locate Parts 9 through 11, and move them to the Group C page.
- 4. Locate Parts 12 and 13, and move them to the Group D page.
- 5. Locate Parts 14 through 17, and move them to the Group E page.
- 6. Locate Parts 18 through 21, and move them to the Group F page.

Note:

Several shapes in the OMEGA kit will remain unused.

7. Continue with Section 3.3.

3.3 Assemble Group A

Set Up

- 1. Click the **Group A** tab to display the Group A page.
- 2. If needed, drag each part away from the others so that all parts are visible on the page.
- 3. Select one Part 3 (large grey circle).
- 4. Press the Ctrl key on your keyboard, then select the other Part 3 and both Part 2's (octagons).
- 5. From the **Shape** menu at the top of the screen, select *Order> Send to Back*.

Place Parts

- 6. Select one Part 2.
- 7. In the Size & Position window, change the value in the **X** field to *8*, then press the Enter key on your keyboard.

The Part 2 moves to the entered coordinate.

- 8. Select the other Part 2.
- 9. In the Size & Position window, change the **X** field to *9.5625*, then press your Enter key. The other Part 2 moves to the entered coordinate.
- 10. Select one Part 3 again.
- 11. In the Size & Position window, change the **X** field to *4.5*, then press your Enter key. The Part 3 moves to the entered coordinate.
- 12. Select the other Part 3.
- 13. In the Size & Position window, change the **X** field to *6.0625*, then press your Enter key. The other Part 3 moves to the entered coordinate.

Align Parts

- 14. Select one Part 3 again.
- 15. Press and hold the Ctrl key on your keyboard, then select the other Part 3 and both Part 2's. All four shapes are surrounded by a marquee.
- 16. Locate the Align Shapes icon in the toolbars along the top of the screen.To identify an icon, place your pointer on it until a tooltip appears with the icon's name.
- 17. Click the downward arrow immediately next to the Align Shapes icon. The icon expands to reveal six related icons:
 - Align Left
 Align Center
- Align Right

Align Bottom

- Align Top
 Align Middle
 Align Middle
 Align Widdle
 Align Widdle
 Align Middle
 Alig
- 18. Pull down the Align Shapes icon (as described in Step 17), then select *Align Middle*. The four parts become vertically-aligned.
- 19. Select one Part 2 again.
- 20. Press and hold the Ctrl key on your keyboard, then select one Part 4 (small grey circle). Both parts are surrounded by a marquee.

- 21. Pull down the Align Shapes icon, then select *Align Middle*. The two parts become vertically-aligned.
- 22. With both parts still selected, pull down the Align Shapes icon, then select *Align Center*. The two parts become horizontally-aligned. The grey circle should appear in front of the octagon.
- 23. Click any blank space on the page to deselect the parts.
- 24. Repeat Steps 19 through 23 for the other Part 2 and Part 4.
- 25. Select one Part 3 again.
- 26. Press and hold the Ctrl key on your keyboard, then select one Part 1, and one Part 5 (cyan circle). All three parts are surrounded by a marquee.
- 27. Pull down the Align Shapes icon, then select *Align Middle*. The three parts become vertically-aligned.
- 28. With the three parts still selected, pull down the Align Shapes icon, then select Align Center. The three parts become horizontally-aligned. The cyan circle should appear in front of the blue circle, and the blue circle should appear in front of the grey circle.
- 29. Click any blank space on the page to deselect the parts.
- 30. Repeat Steps 25 through 29 for the other Part 3, Part 1, and Part 5.

- 31. From the Edit menu, select Select All.
- 32. From the Shape menu, select Grouping> Group.The three parts become grouped as a single object. This object is Group A.
- 33. Continue with Section 3.4.

3.4 Assemble Group B

Set Up

- 1. Click the **Group B** tab to display the Group B page.
- 2. If needed, drag each part away from the others so that all parts are visible on the page.
- 3. Select Part 6 (square).
- 4. From the Shape menu, select Order> Send to Back.

Place & Align Parts

- 5. Select Part 6 again.
- Press and hold your Ctrl key, then select Part 7 (blue stick figure). Both parts are surrounded by a marquee.
- Pull down the Align Shapes icon, then select *Align Top*. The two parts become vertically-aligned.
- 8. With both parts still selected, pull down the Align Shapes icon, then select *Align Right*. The two parts become horizontally-aligned. The stick figure should appear in front of the square.
- 9. Click any blank space on the page to deselect the parts.
- 10. Select Part 6 again.
- Press and hold your Ctrl key, then select Part 8 (red stick figure). Both parts are surrounded by a marquee.
- 12. Pull down the Align Shapes icon, then select *Align Top*. The two parts become vertically-aligned.
- 13. With both parts still selected, pull down the Align Shapes icon, then select *Align Left*. The two parts become horizontally-aligned. The stick figure should appear in front of the square.

- 14. From the **Edit** menu, select *Select All*.
- From the Shape menu, select *Grouping> Group*.
 The three parts become grouped as a single object. This object is Group B.
- 16. Continue with Section 3.5.

3.5 Assemble Group C

Set Up

- 1. Click the **Group C** tab to display the Group C page.
- 2. If needed, drag each part away from the others so that all parts are visible on the page.
- 3. Right-click Part 11 (short arrow), then select Shape> Flip Horizontal from the context menu.
- 4. Select one Part 9 (rectangle).
- Press the Ctrl key on your keyboard, then select the other Part 9. Both parts are surrounded by a marquee.
- 6. From the **Shape** menu, select Order> Bring to Front.

Place & Align Parts

- 7. Select Part 10 (long arrow).
- 8. In the Size & Position window, set the coordinates to these values:

Tip:

If you are viewing this document online, you can copy the coordinate values and paste them into the applicable fields in Visio.

- Begin X = 8.25
- Begin Y = 2.5
- End X = 4
- End Y = 2.5

(Overwrite the existing values in the fields.)

- Click any blank space on the page.
 Part 10 moves to the entered coordinates.
- 10. Select Part 11.
- 11. In the Size & Position window, set the coordinates to these values:
 - Begin X = 8.4375
 - Begin Y = 3.25
 - End X = 4.4375
 - End Y = 3.25

(Overwrite the existing values in the fields.)

12. Click any blank space on the page.

Part 11 moves to the entered coordinates.

- 13. Select one Part 9.
- 14. In the Size & Position window, set the coordinates to these values:
 - X = 7.4375
 - Y = 2.5

(Overwrite the existing values in the fields.)

15. Click any blank space on the page.

The Part 9 moves to the entered coordinates.

- 16. Select the other Part 9.
- 17. In the Size & Position window, set the coordinates to these values:
 - X = 7.4375
 - Y = 3

(Overwrite the existing values in the fields.)

Click any blank space on the page.
 The other Part 9 moves to the entered coordinates.

Create Group

- 19. From the Edit menu, select Select All.
- From the Shape menu, select Grouping> Group.
 All parts become grouped as a single object. This object is Group C.
- 21. Continue with Section 3.6.

3.6 Assemble Group D

Set Up

- 1. Click the **Group D** tab to display the Group D page.
- 2. If needed, drag each part away from the others so that all parts are visible on the page.

Place & Align Parts

- 3. Select Part 12 (hexagon).
- 4. In the Size & Position window, change the **X** field to *7.4375*, then press your Enter key. Part 12 moves to the entered coordinate.
- 5. Select Part 12 again.
- Press and hold your Ctrl key, then select Part 13 (triangle).
 Both parts are surrounded by a marquee.
- 7. Pull down the Align Shapes icon, then select *Align Top*. The two parts become vertically-aligned.
- 8. Click any blank space on the page to deselect the parts.
- 9. Select Part 13.
- 10. In the Size & Position window, change the **X** field to *6.25*, then press your Enter key. Part 12 moves to the entered coordinate.

- 11. From the **Edit** menu, select Select All.
- From the Shape menu, select *Grouping> Group*.
 The two parts become grouped as a single object. This object is Group D.
- 13. Continue with Section 3.7.

3.7 Assemble Group E

Set Up

- 1. Click the **Group E** tab to display the Group E page.
- 2. If needed, drag each part away from the others so that all parts are visible on the page.
- 3. Select one Part 14 (hexagon).
- 4. Press the Ctrl key on your keyboard, then select the other Part 14. Both parts are surrounded by a marquee.
- 5. From the **Shape** menu, select *Order>* Send to Back.
- 6. Click any blank space on the page to deselect the parts.
- 7. Select Part 15 (heptagon).
- 8. From the **Shape** menu, select Order> Send to Back.

Note: Part 15 is selected separately because it needs to be behind the Part 14's.

Place Parts 14 & 16

- 9. Select one Part 14 again.
- 10. In the Size & Position window, change the **X** field to *6.25*, then press your Enter key. The Part 14 moves to the entered coordinate.
- 11. Select one Part 16 (cross).
- 12. In the Size & Position window, change the **X** field to *6.25*, then press your Enter key. The Part 16 moves to the entered coordinate.
- 13. Select the other Part 14.
- 14. In the Size & Position window, change the **X** field to *7.6354*, then press your Enter key. The other Part 14 moves to the entered coordinate.
- 15. Select the other Part 16.
- 16. In the Size & Position window, change the **X** field to *7.6875*, then press your Enter key. The other Part 16 moves to the entered coordinate.

Align Parts 14, 16, & 17

- 17. Select one Part 16 again.
- Press and hold your Ctrl key, then select the other Part 16 and both Part 14's. All four parts are surrounded by a marquee.
- Pull down the Align Shapes icon, then select *Align Top*.
 The four parts become vertically-aligned. The crosses should appear in front of the hexagons.
- 20. Click any blank space on the page to deselect the parts.
- 21. Select one Part 16 again.
- 22. Press and hold your Ctrl key, then select one Part 17 (circle). Both parts are surrounded by a marquee.
- 23. Pull down the Align Shapes icon, then select *Align Middle*. The two parts become vertically-aligned.

- 24. With both parts still selected, pull down the Align Shapes icon, then select *Align Center*. The two parts become horizontally-aligned. They circle should appear in front of the cross.
- 25. Click any blank space on the page to deselect the parts.
- 26. Repeat Steps 21 through 25 for the other Part 16 and Part 17.

Place & Align Part 15

- 27. Select Part 15 (heptagon).
- 28. In the Size & Position window, change the **X** field to *6.9375*, then press your Enter key. Part 15 moves to the entered coordinate.
- 29. Select one Part 14 (hexagon) again.
- Press and hold your Ctrl key, then select Part 15.
 Both parts are surrounded by a marquee.
- 31. Pull down the Align Shapes icon, then select *Align Middle*.The two parts become vertically-aligned. The heptagon should appear behind the other parts.

- 32. From the Edit menu, select Select All.
- 33. From the Shape menu, select Grouping> Group.All parts become grouped as a single object. This object is Group E.
- 34. Continue with Section 3.8.

3.8 Assemble Group F

Set Up

- 1. Click the **Group F** tab to display the Group F page.
- 2. If needed, drag each part away from the others so that all parts are visible on the page.
- 3. Select one Part 19 (triangle).
- 4. Press your Ctrl key, then select the other Part 19.
- 5. From the **Shape** menu, select Order> Bring to Front.

Place Parts 18, 20, & 21

- 6. Select Part 18 (arrow).
- 7. In the Size & Position window, set the coordinates to these values:

Tip:

If you are viewing this document online, you can copy the coordinate values and paste them into the applicable fields in Visio.

- Begin X = 11.25
- Begin Y = 6.5625
- End X = 10.0689
- End Y = 6.5625

(Overwrite the existing values in the fields.)

- Click any blank space on the page.
 Part 18 moves to the entered coordinates.
- 9. Select Part 20 (rectangle with 05 pattern).
- 10. In the Size & Position window, change the **X** field to *9.4063*, then press your Enter key. Part 20 moves to the entered coordinate.
- 11. Select Part 21 (rectangle with 02 pattern).
- 12. In the Size & Position window, change the **X** field to *6.4063*, then press your Enter key. Part 21 moves to the entered coordinate.

Align Parts 18, 20, & 21

- 13. Select Part 18 again.
- Press and hold your Ctrl key, then select Part 20 and Part 21.
 All three parts are surrounded by a marquee.
- 15. Pull down the Align Shapes icon, then select *Align Middle*. The selected shapes become vertically-aligned.
- 16. Click any blank space on the page to deselect the parts.
- 17. Select Part 21 again.
- 18. Press and hold your Ctrl key, then select one Part 19.
- Pull down the Align Shapes icon, then select *Align Bottom*. The selected shapes become vertically-aligned.
- 20. Click any blank space on the page to deselect the parts.

Place & Align Part 19's

- 21. Select the same Part 19.
- 22. In the Size & Position window, change the **X** field to *4*.1563, then press your Enter key. The Part 19 moves to the entered coordinate.
- 23. Select the other Part 19.
- 24. In the Size & Position window, change the **X** field to *5.6563*, then press your Enter key. The other Part 19 moves to the entered coordinate.
- 25. Right-click the same Part 19 (the one at the 5.6563 X coordinate), then select *Shape> Flip Horizontal* from the context menu.
- 26. Right-click the same Part 19 again, then select Shape> Flip Vertical from the context menu.
- 27. Select Part 21 again.
- 28. Press and hold your Ctrl key, then select the same Part 19 (the one at the 5.6563 X coordinate).
- 29. Pull down the Align Shapes icon, then select *Align Bottom*. The selected shapes become vertically-aligned.
- 30. Click any blank space on the page to deselect the parts.

- 31. From the **Edit** menu, select *Select All*.
- From the Shape menu, select Grouping> Group.
 All parts become grouped as a single object. This object is Group F.
- 33. Continue with Section 3.9.

3.9 Assemble Groups Into Final Product

Place Group A

- Move Group A to the Design Pad Modeling page. To move a part, do Steps a through d on page 9.
- 2. On the Design Pad Modeling page, select Group A.
- 3. In the Size & Position window, set the coordinates to these values:
 - X = 7.2187
 - Y = 3.8437

(Overwrite the existing values in the fields.)

 Click any blank space on the page. Group A moves to the entered coordinates.

Place Group B

- 5. Move Group B to the Design Pad Modeling page.
- 6. On the Design Pad Modeling page, select Group B.
- 7. In the Size & Position window, set the coordinates to these values:
 - X = 5.7188
 - Y = 5.0313

(Overwrite the existing values in the fields.)

Click any blank space on the page.
 Group B moves to the entered coordinates. Group B should appear in front of Group A.

Place Group C

- 9. Move Group C to the Design Pad Modeling page.
- 10. On the Design Pad Modeling page, select Group C.
- 11. In the Size & Position window, set the coordinates to these values:
 - X = 7.2813
 - Y = 4.9504

(Overwrite the existing values in the fields.)

12. Click any blank space on the page.

Group C moves to the entered coordinates. Group C should appear in front of Group B.

Place Group D

- 13. Move Group D to the Design Pad Modeling page.
- 14. On the Design Pad Modeling page, select Group D.
- 15. In the Size & Position window, set the coordinates to these values:
 - X = 9.0365
 - Y = 5.8229

(Overwrite the existing values in the fields.)

16. Click any blank space on the page.

Group D moves to the entered coordinates. Group D should appear in front of Group C.

Place Group E

- 17. Move Group E to the Design Pad Modeling page.
- 18. On the Design Pad Modeling page, select Group E.
- 19. In the Size & Position window, set the coordinates to these values:
 - X = 9.4063
 - Y = 5.0938

(Overwrite the existing values in the fields.)

20. Click any blank space on the page.

Group E moves to the entered coordinates. Group E should appear in front of Group D.

Place Group F

- 21. Move Group F to the Design Pad Modeling page.
- 22. On the Design Pad Modeling page, select Group F.
- 23. In the Size & Position window, set the coordinates to these values:
 - X = 6.9219
 - Y = 4.3542

(Overwrite the existing values in the fields.)

24. Click any blank space on the page.

Group F moves to the entered coordinates. Group F should appear in front of Group E.

The Speedster RX is completely assembled. Please proceed with product evaluation. Thank you.

4.0 Appendix – Troubleshooting

Table 4 lists several common issues that you may experience while assembling the Speedster RX, and explains how to resolve them.

Issue	Corrective Action
You can't match a part's color to the parts list.	Select the part, then select <i>Fill</i> from the Format menu at the top of the screen. The Fill dialog box opens.
	In the Fill dialog box, the Color field indicates the shape's exact color. The number in this field corresponds to the number in parenthesis in the Color column of the parts list.
You can't match a part's texture/shading to the parts list.	Select the part, then select <i>Fill</i> from the Format menu at the top of the screen. The Fill dialog box opens.
	In the Fill dialog box, the Pattern field indicates the shape's texture. The number in this field corresponds to the number in parenthesis in the Texture/Shading column of the parts list.
You can't match a part's dimensions to the parts list.	Select the part, then check the values of the Width and Height fields in the Size & Position window.
The Size & Position window is not visible.	From the View menu at the top of the screen, select <i>Size</i> & <i>Position Window</i> .
	The Size & Position window appears in the lower left corner of the screen.
A part does not properly appear in front of another part.	Right-click the part, then select <i>Shape> Bring to Front</i> from the context menu.
A part does not properly appear behind another part.	Right-click the part, then select <i>Shape> Send to Back</i> from the context menu.
A part does not properly appear in front of another part.	Right-click the part, then select <i>Shape> Bring to Front</i> from the context menu.
A shape doesn't appear to be in the correct location after you enter its coordinates.	Select the part, and double-check the entered coordinate in the Size & Position window.
	In particular, ensure that the value's decimal point is in the correct place.
An arrow shape becomes diagonally oriented after you enter its coordinates.	Select the part, and ensure that the Size & Position window's Begin Y and End Y fields contain the same (correct) value.
An arrow shape becomes longer or shorter after you enter its coordinates.	Select the part, and ensure that the Size & Position window's End X field contains the correct value.

Table 4	Troubleshooting Tips
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