

Building the Header

The header of the CSV file tells Prospect how to render your data. A standard CSV file already includes a one line header, usually used to give a terse description of the column below. In a properly built Prospect Header, this becomes the second row.

Insert a new row above the top row of your table:

The first row consists of four specific values:

A1: prospectHeader

Prospect will only read files with this in the first cell (case-sensitive)

B1: the row where the standard data begins

An integer value, in this case 9

C1: A title for the data

Anything you like but NO COMMAS

D1: The initial palette, either **Wall Street**, **Sunset**, or **Depth Chart** (case-sensitive)

	A	B	C	D	E	F	G	H	I	J	K
1	prospectHeader	9	Today's Stocks	Wall Street							
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8		1	1	1	15	100	0.00001	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technolog	More About AAPL	https://www.

Row 3

This row tells Prospect more about your data. We will insert all of the main header rows and work on row 3.

All columns in row three must be one of the values **text**, **float**, or **integer** (case-sensitive)

Insert six new rows after line 2:

Row three tells Prospect what kind of information appears in each column.

If the column contains letters or words, write **text**

If it contains numbers with decimal points, write **float**

If it contains numbers without decimal points, write **integer**

This is a great time to go through your entire table and make sure that there are no *COMMAS* anywhere in the cells!

	A	B	C	D	E	F	G	H	I	J	K
1	prospectHeader 9 Today's Stocks Wall Street										
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technolog	More About AAPL	https://www.

Row 4

In row 3 we defined the type of information in each column. In row 4, we tell Prospect what to do with that information.

All columns in row four must be one of the values **label**, **description**, **gradient**, **initialGradient**, **subset**, **link**, or **url** (case-sensitive)

Prospect uses the **label** column to identify each data entity with a label. Only one label column is allowed.

Label columns **description** when they contain further text information. This will not be used for sorting and will appear only in the information window when the data item is chosen.

Your numerical data should be labeled **gradient** in most cases. This tells Prospect to use this column to sort and depict the data.

You can specify that one of the gradients is active when the file is first loaded by Prospect. Use **initialGradient** only once in a file.

	A	B	C	D	E	F	G	H	I	J	K	
1	prospectHeader 9 Today's Stocks Wall Street											
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL	
3	text	text	float	float	float	integer	integer	float	text	text	text	
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url	
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none	
6				absolute		sqrt						
7				divide	multiply	multiply						
8		1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.	
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.	
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.	
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.	
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.	
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223			AAPL	https://www.	

This is a great time to go through your entire table and make sure that there are no *COMMAS* anywhere in the cells!

Row 4 ... continued

Special designations in Row 4 let you define subsets, and provide for outward links for the data instances.

All columns in row four must be one of the values **label**, **description**, **gradient**, **initialGradient**, **subset**, **link**, or **url** (case-sensitive)

One column can be named **subset** allowing the data to be sliced into smaller pieces. In the stocks example, these are the sector definitions used by S&P Dow Jones to define stocks. Don't use subsets that divide the data into more than 12 categories.

Use a **link** designation for the column that specifies the link text for each data instance. If the data in a **link** column is blank, Prospect will jump directly to the link when the object's beacon is picked.

In a **url** column, all items after the header must be valid urls including https:// prefix.

	A	B	C	D	E	F	G	H	I	J	K
1	prospectHeader 9 Today's Stocks Wall Street										
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technolog	More About AAPL	https://www.

See more about links at the end of this document.

Row 5 – Building the Towers

You can use some of the data gradients to specify the heights and areas of the tower components as well as the color of the tower.

All columns in row five must be one of the values **none**, **baseArea**, **baseHeight**, **bodyArea**, **bodyHeight**, **crownArea**, **crownHeight**, or **colorCode** (case-sensitive). Do not use any of these more than once in the header.

When you specify **none** for a column, it will not affect the size, shape, or color of the tower. Write none in all the cells of row 5 that are not actively used for drawing the tower.

In the stock market example, the daily net change of the stock determines the height of the crown (uppermost portion of the tower).

The % of change in the daily price of the stock determines the color of each tower.

The Market Capitalization of the stock determines the height of the tower base.

	A	B	C	D	E	F	G	H	I	J	K	
1	prospectHeader 9 Today's Stocks Wall Street											
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL	
3	text	text	float	float	float	integer	integer	float	text	text	text	
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url	
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none	
6				absolute		sqrt						
7				divide	multiply	multiply						
8	1	1	1	15	100	0.00001	1	1	1	1	1	
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.	
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.	
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.	
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.	
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.	
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technology	More About AAPL	https://www.	

Row 6 – Adjusting the numbers

Once you have chosen a gradient, you can perform some math transformations to make the numbers fit the suggested ranges.

All columns in row six must be one of the values **absolute**, **inverse**, **unity**, or **sqrt** (all case-sensitive). These cells can also be left blank, which is equivalent to unity.

We don't want the height of the crown to be negative, so we first transform the data with an **absolute** value function.

Leaving this cell blank will pass the value to the next row.

The square root (**sqrt**) function reduces wide variations in the gradient.

	A	B	C	D	E	F	G	H	I	J	K
1	prospectHeader 9 Today's Stocks Wall Street										
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technolog	More About AAPL	https://www.

Row 7 – More Math functions

Continuing the math transformations.

All columns in row seven must be one of the values **multiply, divide, add, or subtract** (all case-sensitive). These cells can also be left blank, which is equivalent to unity.

Continuing to specify the function for determining the height of the crown of the tower, we take the absolute value and divide it by the factor below.

The color code variable is multiplied by the factor below.

After the square root function, we multiply the Market Cap numbers by a very small factor in order to determine the height of the tower's base.

	A	B	C	D	E	F	G	H	I	J	K
1	prospectHeader 9 Today's Stocks Wall Street										
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technolog	More About AAPL	https://www.

Row 8 – All the factors

Factors for Multiplication, Division, Addition and Subtraction.

All cells in row 8 must be filled with a number, either with or without a decimal point.

Here's the factor we divide by to get the final height of the tower crowns.

At the same time we multiply the % change by 100 to arrive at a range between 5 and negative 5. This range will provide all eleven colors in the palette.

The factor that produces the base height is 0.00001 (1/100,000).

Put 1 in each empty cell in row 8.

	A	B	C	D	E	F	G	H	I	J	K
1	prospectHeader 9 Today's Stocks Wall Street										
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sort					
7				divide	multiply	multiply					
8	1	1	1	15	100	0.00001	1	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.

For best results, adjust your functions and factors (rows 6, 7, and 8) so the final numbers fit in the suggested range in the table to the right. The total height of towers (baseHeight + bodyHeight + crownHeight) should not exceed 20.

	baseArea	baseHeight	bodyArea	bodyHeight	crownArea	crownHeight	colorCode
Default	4	1	2.56	2	1	1	0
Lower Bound	4	1	2	2	0.4	1	-5
Upper Bound	8	6	6	6	4	6	5

What about the Data?

Ok, the header is fine. Are there restrictions on the data?

Run through your data to make sure that integer columns are really integers, etc.

You should make sure that columns that are labeled "subset" have no more than 12 different values, no matter how many rows you include. Fill in empty cells in subset columns with a placeholder.

Use CONCATENATE in Excel to easily populate the link and url columns

This is a great time to go through your entire table and make sure that there are no *COMMAS* anywhere in the cells! I know I've mentioned this before, but it's critical. On Excel it's usually a simple search and replace.

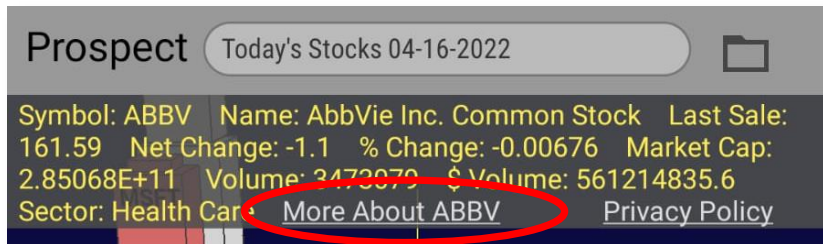
	A	B	C	D	E	F	G	H			
1	prospectHeader 9 Today's Stocks Wall Street										
2	Symbol	Name	Last Sale	Net Change	% Change	Market Cap	Volume	\$ Volume	Sector	Link Text	URL
3	text	text	float	float	float	integer	integer	float	text	text	text
4	label	description	gradient	gradient	gradient	initialGradient	gradient	gradient	subset	link	url
5	none	none	none	crownHeight	colorCode	baseHeight	none	none	none	none	none
6				absolute		sqrt					
7				divide	multiply	multiply					
8		1	1	1	15	100	0.00001	1	1	1	1
9	A	Agilent Techn	127.9	2.21	0.01758	37863588903	1553552	198699301	Industrials	More About A	https://www.
10	AA	Alcoa Corpor	40.88	1.02	0.02559	7355341358	8221708	336103423	Industrials	More About AA	https://www.
11	AAL	American Air	13.05	0.35	0.02756	8480489347	53206137	694340088	Consumer	More About AAL	https://www.
12	AAON	AAON Inc. Co	55.18	1.45	0.02699	2933291603	119559	6597266	Industrials	More About AAON	https://www.
13	AAP	Advance Auto	171.58	2.26	0.01335	10315087448	681993	117016359	Consumer	More About AAP	https://www.
14	AAPL	Apple Inc. Co	142.99	4.65	0.03361	2479066246600	113223975	16189896185	Technology	More About AAPL	https://www.

Prospect can accommodate 2000 rows of data without noticeably slowing down on sorts and redraws. Beyond that, who knows?

Links

Prospect is a browser – for data – and, as you would expect, it allows you to link to other places on the internet. The default method for this is to place link text in a column which is labeled “link” and the corresponding URL (web address) in the column labeled “url”.


When that data entity is picked by the user, the information window at the top of the screen will display a text description of the data including a link to the URL in the table.



This default behavior requires the user to press on the link provided in order to continue to the external information.

You can skip and go directly to the link by leaving the “link” column blank for a particular item.

If you link to a valid Prospect CSV anywhere on the internet, and leave the “link” column blank in that row, Prospect will jump to that CSV and render the scene it represents. In this example, it would leave the current scene, open APPLE.csv, and recenter the view.

Make sure your CSV is valid by sending it to your phone and opening it in Prospect with the Open  Button in the top row of the interface. Check before you link to the file. ;-)

Place your Link text here

The URL goes here

I	J	K
	Link Text	URL
	text	text
	link	url
	none	none
1		1
als	More About A	https://www.nasdaq.com/market-activity/stocks/A
als	More About AA	https://www.nasdaq.com/market-activity/stocks/AA
ier Disc.		https://www.nasdaq.com/market-activity/stocks/AAL
als	More About AAON	https://www.nasdaq.com/market-activity/stocks/AAON
ier Disc.	More About AAP	https://www.nasdaq.com/market-activity/stocks/AAP
ogy		https://www.prospectdatabrowser.com/files/APPLE.csv
	More About AB	https://www.nasdaq.com/market-activity/stocks/AB
	More About ABB	https://www.nasdaq.com/market-activity/stocks/ABB
are	More About ABBV	https://www.nasdaq.com/market-activity/stocks/ABBV
are	More About ABC	https://www.nasdaq.com/market-activity/stocks/ABC