

PRICING 6/25/10¹

Attached are detailed price sheets for a variety of TechnoFrolics' products and services. Final costs are affected by a number of factors including:

- ◆ Whether TechnoFrolics performs custom design and/or fabrication work in conjunction with providing its stock technologies.
- ◆ Client's choice regarding an exhibit's size and cabinetry style.
- ◆ Client's choice regarding purchasing multiples of the same exhibit and/or multiple different exhibits. (TechnoFrolics gives significant discounts in these cases.)
- ◆ Client's choice to negotiate a rental or lease with the option to buy arrangement. (TechnoFrolics strives to make finances work for everyone. In select instances, TechnoFrolics will co-write a support grant application in conjunction with a client.)

In consequence of all of the above, final costs will vary depending on the details of the installation.

¹ Prices and availability subject to change without notice. Please contact TechnoFrolics at the time of your interest for a specific price quote.

EXHIBITS

- ◆ **[Dancing Trees](#)**[™] **kinetic iron dust science-artwork**
Please see detailed pricing pages below.
- ◆ **[Kinetic Doorway](#)**[™] **video explorer + [Spin Browser](#)**[™] **dial (KD+SB)**
Because of the popularity of our KD+SB system, and the resultant many ways we work with clients and video producers, we have created a special sheet exclusively for KD+SB system sales.
Please find a [link to this document](#) on the Specs and Pricing page of the relevant section of our website (aliased to by www.spinbrowser.com).
- ◆ **[Dancing Banners](#)**[™] **choreographed fabric**
Please see purchase and rental pricing pages below.
- ◆ **[Twirling Banners](#)**[™] **kinetic fabric (An economy version of the above)**
Please see purchase and rental pricing pages below.
- ◆ **[Hotplate](#)**[™] **magnetic field experimentation stations**
Please see detailed pricing pages below.
- ◆ **[Tower-of-Triangles](#)**[™] **torsional wave and chaotic dynamics science-artwork and sign**
Prices begin at \$35,000. Please contact TechnoFrolics for details and a price quote for your specific application.
- ◆ **[Aerovertica](#)**[™] **flying propeller exhibit**
Prices begin at \$20,000. Please contact TechnoFrolics for details and a price quote for your specific application.
- ◆ **[Power Distribution Exhibit](#)**
Prices begin at \$8500. Please contact TechnoFrolics for details and a price quote for your specific application.
- ◆ **[Small Kinetic Mobiles and Tassel Tornado](#)**[™]
Prices range from \$100 to \$1000. Please contact TechnoFrolics for more detail.

Note that many exhibits are available for rent or lease with the option to buy.

TechnoFrolics also works with clients and exhibit firms to design or fabricate custom exhibits conceived of by the client, exhibit firm, TechnoFrolics, or a collaborative effort. Please see the [Core Competencies](#) section of our web site for more detail.

For further information or a price quote on your particular application,
please contact [David Durlach](#) at TechnoFrolics.

Dancing Trees™ kinetic iron dust

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Item	Price	Notes
Core Electronic Components.	\$28,000	<p>Includes:</p> <ul style="list-style-type: none"> • Custom configured control computer. • Data acquisition board required to read input from the user interface. • Custom power electromagnet driver electronics. • High-current, low voltage power supply. • Electromagnet array. • Tray of permanent magnets with iron dust. • Choreography software for 4 pieces of music of approximately 1-3 minutes in duration. (It is understood that TechnoFrolics will provide 4 varying "flavors" of music from its existing pre-choreographed pool.) • User interface wiring and connectors for 4 user interface song selection buttons and associated button illumination lights. • 120/220VAC surge-suppressor. • Documentation. • 2 Year Warranty on parts and labor for TechnoFrolics-supplied materials. <p>(Does not include case, lighting, audio amp & speakers, or museum ASCAP/BMI music performance license.)</p>
<i>Optional</i> 16 channel interactive proximity sensing pad.	\$6000	<ul style="list-style-type: none"> • Allows visitors to control the movements of the dancing iron dust directly.
<i>Optional</i> HD video camera, projector, and screen.	Prices start at \$6000	<ul style="list-style-type: none"> • For showing the kinetic iron dust writ large. • Typically this item would be provided locally by an A/V firm.
Custom Logo and/or Choreography.	Prices start at \$6500	<ul style="list-style-type: none"> • Complexity of logo, physical size, and length of choreography all affect price. Please contact TechnoFrolics for further information.
Casework, including inside-case lighting, dance activation buttons, and sound system.	Prices start at \$9500	<ul style="list-style-type: none"> • Often, museums choose to build their own case in house, thus removing this line item from their outside costs.
Conformance to Particular Safety Codes.	Estimate: \$5000	<ul style="list-style-type: none"> • While all TechnoFrolics creations are built with the utmost concern for visitor safety, incorporating multiple levels of fusing, grounding, and the like, they, like most low production-volume science museum exhibits, are not UL, CSA, CE, or otherwise certified as a complete assembly². In the rare event that such certification is required, it will typically add several thousand dollars to TechnoFrolics billed cost as well as a museum site visit fee charged by the safety inspector of the relevant regulating agency.
Shipping & taxes.		<ul style="list-style-type: none"> • Cost dependent on location and whether casework supplied locally.

(For rental options, please contact TechnoFrolics.)

² They do however employ UL listed/recognized components wherever practical.

Dancing Banners™ choreographed fabric Purchase 6/25/10

As orienting background, the Dancing Banners system is comprised of:

- High performance, long life, computer controlled, brushless servo motors and associated drivers.
- Computer controlled magnetic particle brakes and associated drivers.
- Lycra/Spandex banners with specially-designed internal “backbone” lattice.
- Motion controller.
- Choreography software.
- Optional:
 - Custom printing.
 - Musical accompaniment.
 - User interface elements.

All these elements can vary depending on the installation. As reference price points:

- Cost for a 3 banner system, with 2’x16’ banners, factory dyed colors, cycling through silent motion sequences, is in the \$30,000 range.
- Cost for a 6 banner system, with custom printing, custom choreography, accompanying music, and user interface, is in the \$75,000 range.
- Shipping, mounting/installation (which may include truss), and lighting is additional.

Significant quantity discounts apply.

Dancing Banners™ choreographed fabric Rental 6/25/10

For description of what comprises a Dancing Banners system, please see Purchase page above.

Many factors affect cost, including:

- Number of banners required.
- Custom printing and/or choreography.
- Duration of event.

Rental costs for a 6 banner set, with custom printing, and modest³ custom choreography, may be expected to be in the \$35,000 range for a 4 day show, of which about 40% is the equipment rental cost and choreography, 35% custom printing and banner fabrication, and 25% setup/takedown and shipping.

Additional expenses:

- Travel and lodging for TF staff person.
- Truss and lighting. 12” Standard Box truss and lighting is typically rented at the show site from local vendors. Typical prices to expect for such rentals, along with labor to set up the truss and mount the banners, are \$2500-\$5000⁴ per six banner set.

Lead times for non-stocked items can exceed 6 months. Therefore, be sure to contact us well before your event – particularly if custom work is needed. This will both insure we are able to provide the equipment you require, and will eliminate any rush fees that might otherwise be incurred.

³ “modest” is used to distinguish from a performance tightly choreographed to, say, an entire opera.

⁴ Depending on show site local rates.

Twirling Banners™ **kinetic fabric Purchase** 6/25/10

TechnoFrolics Twirling Banners displays are designed for more modest budget projects than those appropriate for the Dancing Banners system. The Twirling Banners systems differ from the Dancing Banners ones in that they:

- Cost about half as much.
- Weigh about half as much.
- May be made as small as desired (it is recommended that the Dancing Banners elements be no less than 2ft wide x 14ft tall).
- May be installed by the technically-proficient client (unlike the Dancing Banners display which requires a trained TechnoFrolics staff member).

This is made possible because the Twirling Banners:

- Use lower strength motors that allow slow, graceful changes in banner motion, but are unsuited to performing high speed dynamic dances set to music.
- Are mechanized at one end only.
- Have a fixed, client-adjustable twist in each banner (rather than having the twist computer controlled, through which shimmers etc. are affected).
- Typically omit significant custom choreography, being provided instead with predefined movement sequences.
- May optionally be run without synchronization between the banners or absolute alignment (in the North-South sense).

For approximate pricing, please see Dancing Banners Purchase pricing above, and divide by 2.

Twirling Banners™ kinetic fabric Rental 6/23/10

Please see Twirling Banners Display Purchase Pricing page above for technical distinction between it and the Dancing Banners system.

At first approximation, rental costs, like purchase costs, should be estimated at 1/2 that of the Dancing Banners Rental pricing outlined above.

As with the Dancing Banners system, lead times for non-stocked items can exceed 6 months. Therefore, be sure to contact us well before your event – particularly if custom work is needed. This will both insure we are able to provide the equipment you require, and will eliminate any rush fees that might otherwise be incurred.

Hotplate™ magnetic field experimentation station pricing 6/25/10

Item	Price	Notes
Core Electronic Components and all Cabinetry for <i>Four Complete Independently Controllable Stations.</i>	\$42,000	Note that four stations are supplied standard because that is the number that a single computer can readily control. Includes: <ul style="list-style-type: none"> • Custom configured control computer. • Data acquisition board required to read input from four user interfaces. • Custom power electromagnet driver electronics. • High-current 13.8VDC power supply. • Four Hotplate Stations including user controls, electromagnets, LED display, and all casework. • 120VAC surge-suppressor. • Documentation. • 2 Year Warranty on parts and labor for TechnoFrolics-supplied materials.
<i>Four</i> sets of Visitor “Activities”.	\$5000	<ul style="list-style-type: none"> • “Activities” includes such items as a glove with magnets in the fingers, slinkies, a compass, etc. • 1 Year Warranty.
Conformance to Particular Safety Codes.	Estimate: \$4000	<ul style="list-style-type: none"> • While all TechnoFrolics creations are built with the utmost concern for visitor safety, incorporating multiple levels of fusing, grounding, and the like, they, like most low production-volume science museum exhibits, are not UL, CSA, CE, or otherwise certified. In the rare event that such certification is required, it will typically add several thousand dollars to TechnoFrolics billed cost as well as a museum site visit fee charged by the safety inspector of the relevant regulating agency.
Shipping & taxes.		<ul style="list-style-type: none"> • Cost dependent on location.
For <i>two</i> stations instead of four.	<ul style="list-style-type: none"> • Core Electronics and cabinetry, reduced to \$26,000. • Two sets of visitor activities, reduced to \$3000. 	<ul style="list-style-type: none"> • More costly per unit than the standard four stations.

Power Distribution Exhibit

6/25/10

Item	Price	Notes
Core Generator Assembly, Per Unit.	\$3500-\$7000	<ul style="list-style-type: none"> Exact pricing depends on features and number of units.
Possible Exhibit Stations (price discounts given for multiple stations)		
A huge thermometer that visitors can raise to above the boiling point of water.	\$4000	
A haunted house with a troll inside that visitors can light up.	\$4000	
A functional radio that visitors can power.	\$3000	
Dual racing trains.	\$8500	
A mirror ball suspended from a DC motor.	\$3000	
A hanging wave medium artwork suspended from a DC motor.	Prices starts at \$4000	<ul style="list-style-type: none"> Exact cost depends on size.
Custom Exhibit Stations		
TechnoFrolics can work with clients to develop custom exhibit environments and stations.	Prices start at \$4500	
Shipping, taxes (if any), casework, and lighting, additional		