

Electric Forest Led Frame:

These plans are for a led frame that is 5 times brighter than an equivalent led frame made from Apple iPhone screens on full brightness!

Changes from large frame:

- Battery powered, runs for an average of 30 minutes. A completely dead frame can be fully recharged in about 7.5 hours.
- Infrared remote control operation, able to switch between 512 programs, brightness adjustment/power on & off.
- Switched to LEDshowTW2013 software.

A total cost of \$765.07 including shipping on everything, this will be the final cost after everything is said and done.

Item list:

Quant ity:	Item:	Price Per unit(\$)/Sh ipping(\$):	Total Price(\$):
32	192*96mm 32*16 pixels Indoor 1/8 Scan 3in1 SMD RGB full color P6 LED module for indoor P6 led display screen(http://www.aliexpress.com/item/P6-Indoor-1-8-Scan-3in1-RGB-Full-color-LED-display-screen-module-192-96mm-32/1617591152.html)	Unit: 8.41 / Shipping: 115.18	384.30
1	ONBON BX-5Q1 LED asynchronous fullcolor controller(http://www.led-card.com/product_info.php?cPath=20&products_id=230)	Unit: 65.00 / Shipping: 10.00	75.00
1	Combo: 20pcs Tenergy Premium D 10000mAh NiMH RechargeableBatteries(http://www.all-battery.com/20pcsofdPremiumsize10000mahhighcapacityhighratenimhrechargeablebatteries904.aspx)	144.99 / Shipping: 18.61	163.58
5	Tenergy T9688 Universal NiMH/NiCd LCD Battery Charger(http://www.all-battery.com/tenergyT9688universalcharger-01127.aspx)	24.99 / ---	124.95
5	Car Plug Adaptor for BC1HU, TN190, T-9688, Tenergy RCR123A Chargers(http://www.all-battery.com/carplugadaptorforbc1hucharger.aspx)	3.27 / -----	16.35
1	Handheld IR Remote and IR receiver(http://www.dx.com/p/ir-receiver-module-wireless-remote-control-kit-for-arduino-1-x-cr2025-135520#.VOJ7Bfmsh8E)	2.89 Shipping: Free	2.89
		Total:	765.07

Power consumption:

P6:

About 17watts MAX per 192*96mm 32*16 pixels Indoor 1/8 Scan 3in1 SMD RGB full color P6 LED module for indoor P6 led display

$$17\text{watts} * 28\text{panels} = 476\text{watts}$$

Tenergy Premium D 10AH NIMH Batteries:

$$1.2\text{v} * 10\text{A} = 12\text{watts}$$

$$12\text{watts} * 20\text{batteries} = 240\text{watt for an hour}$$

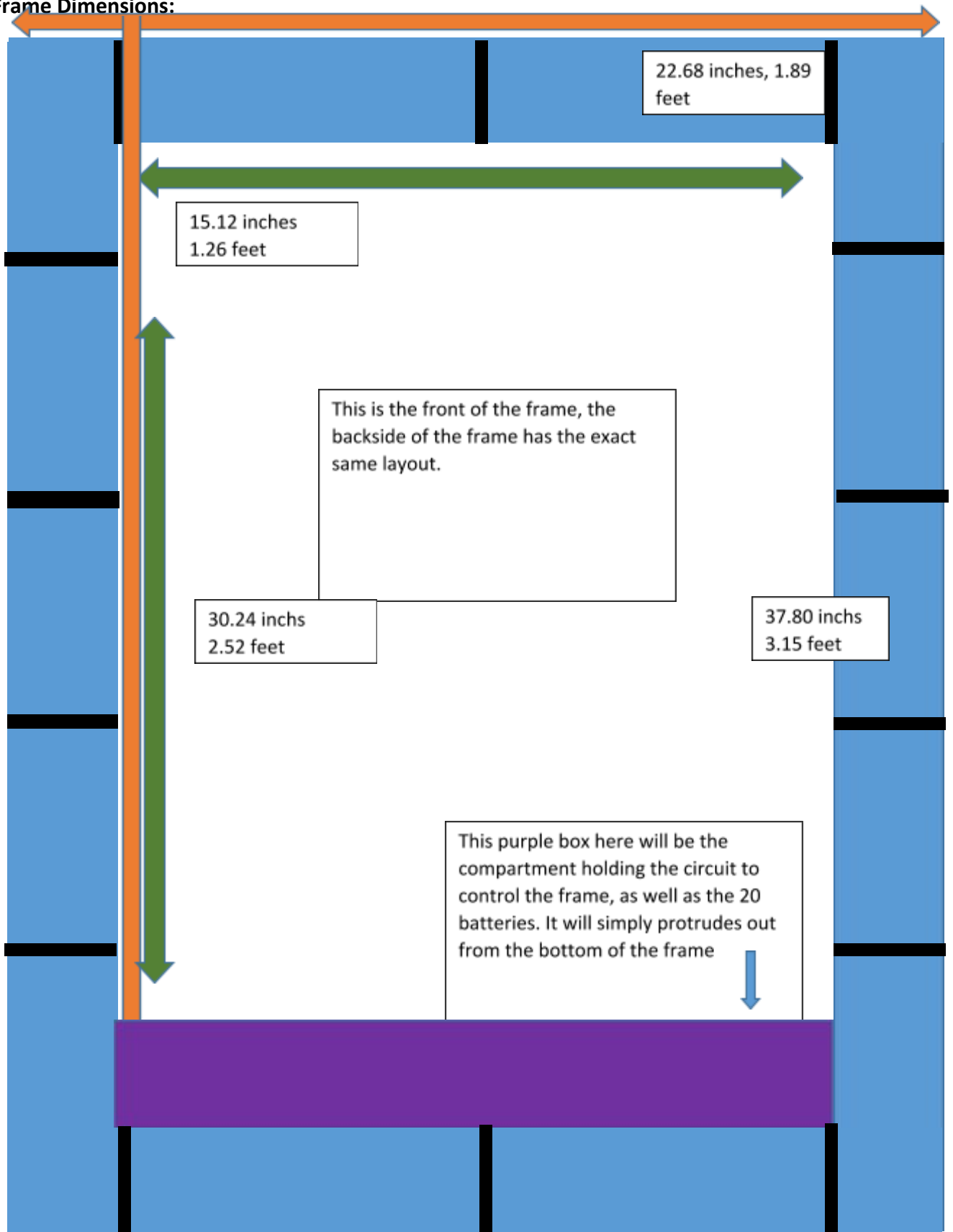
480watts for half an hour

The panels need an average total of 476 watts at any given time, the batteries can provide 480 watts for half an hour.

Charging:

Charging of the frame may be tedious, but is much quicker than attempting to charge a single unit battery. We will charge 20 batteries simultaneously for maximum time efficiency. One will have to remove and insert 20 batteries during charging. Our chargers will be able to charge 20 batteries simultaneously in about 7.5 hours.

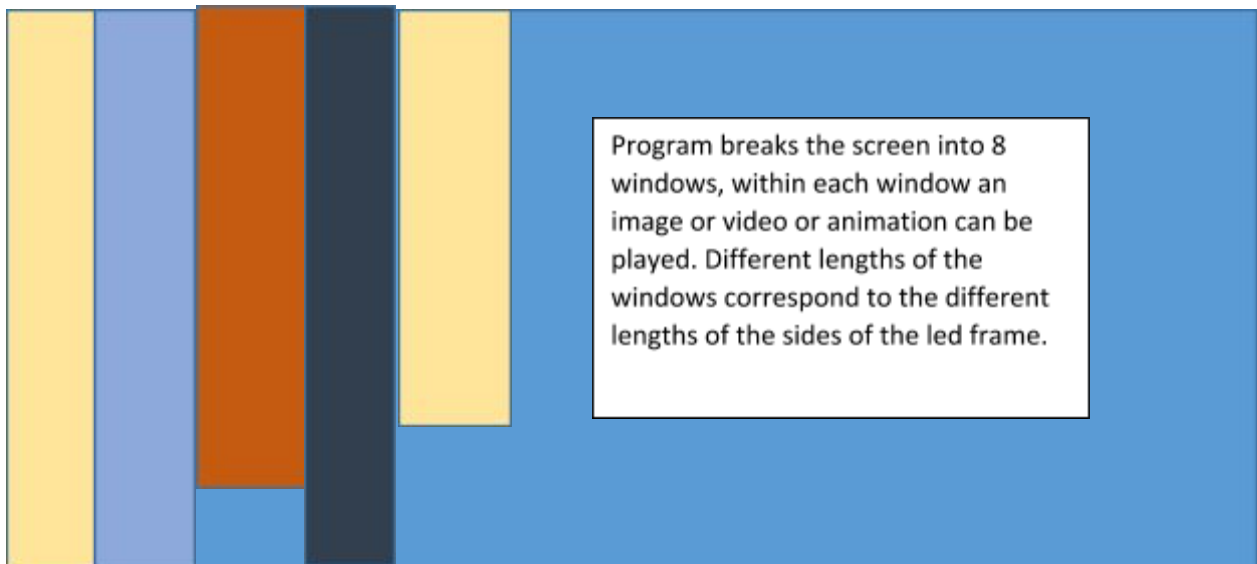
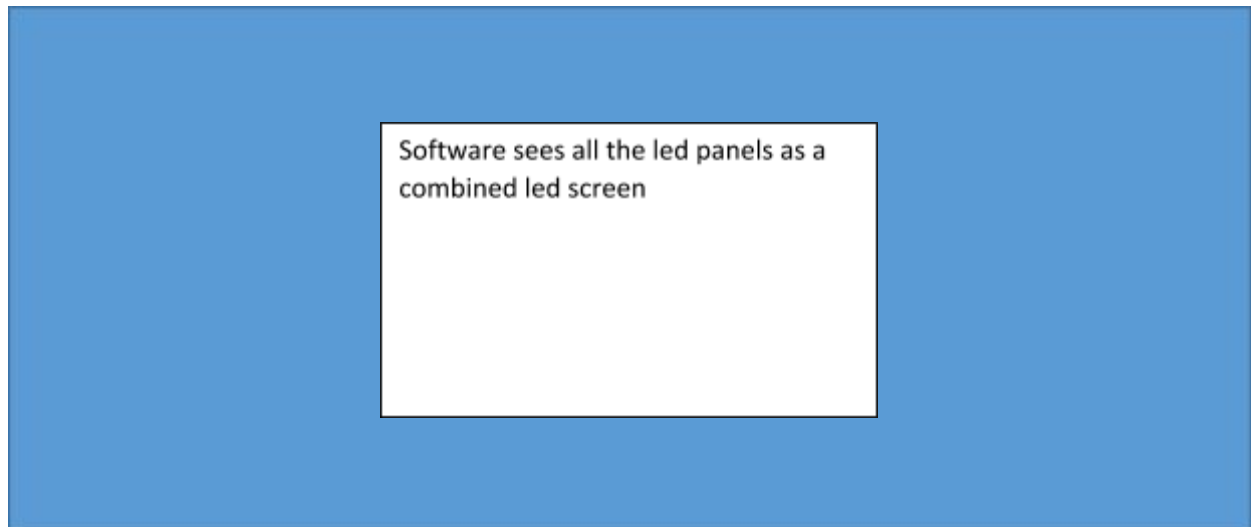
Frame Dimensions:

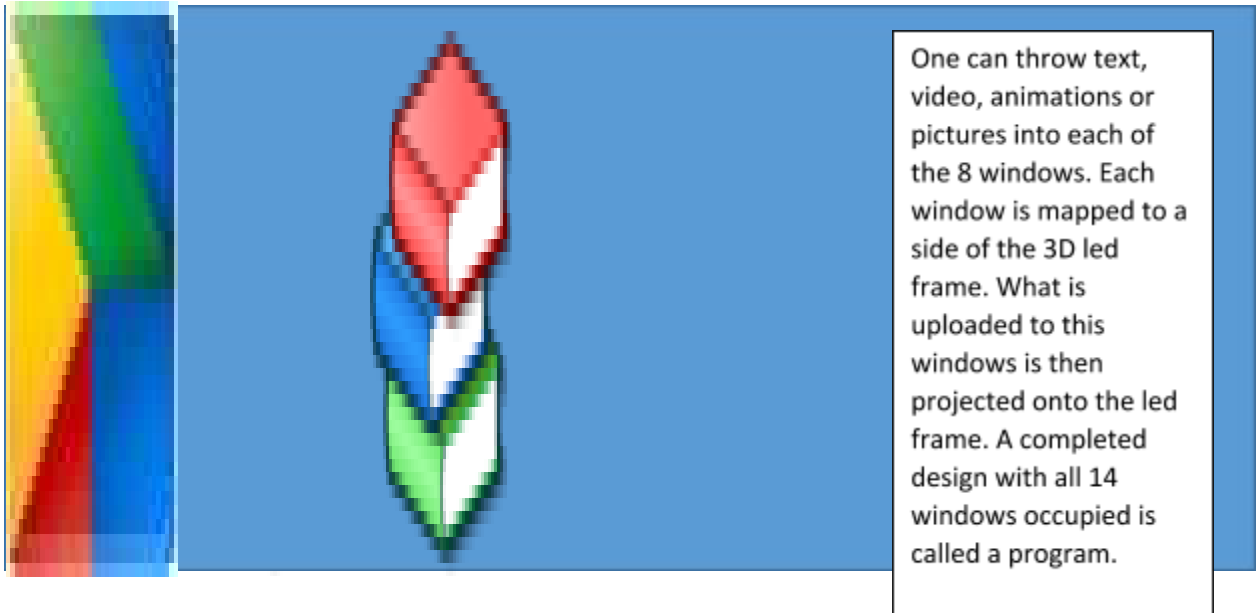


Theory of operation:

The theory of operation stays exactly the same, multiple programs are created on a computer. Programs are uploaded to a USB thumb drive. Thumb drive is then connected to the led frame. You can switch through your programs uploaded onto the thumb drive by using the remote, simply type in the program number and the frame will present that program within 2 seconds.

We will be using LEDshowTW2013 as the software to control our led frame. Within the program you can assign windows of your screen to do different things. Our led screen will be cut into 8 windows that correspond to the 8 sides of the led frame.





No host computer is not required to be connected to the led frame to continue operation. Programs are uploaded to a USB thumbdrive which are then plugged into the led frame via USB port. When a thumbdrive is connected to the led frame, autoplay of the programs within initiates. Programs are created on any computer with LEDshowTW2013. 4 simple steps: Download LEDshowTW2013, create program, upload to thumbdrive, and connect to frame.