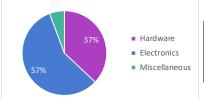
Sand Table Bill of Materials

By Ravi Dudhagra (https://github.com/rdudhagra/Sand-Table)

	Item	Link	Pric	e	Quantity	To	tal	Remarks
	1x8 pine board (8'), square edges		\$	22.22	2	\$	44.44	If you have proper woodworking tools, you could probably go
		https://www.homedepot.com/p/1-in-x-8-in-x-8-ft-Select-Pin			_	<u> </u>		away with lower-quality boards
Table Hardware	1/2" sanded plywood, 4'x8'	Mays; // www.homedepot.com/ p/ 12mm-fande-Phywcod-1-2 or Caregory-w-6-th-v-8-th Actual-0-6/2 or w-68-or-68-or-68-ols/2/2085-8255	\$	35.95		\$	35.95	
	5.0mm underlayment plywood, 4'x4'	Titps://www.homedagot.com/g/ToPct-Undedayment.Common 6-0-run + 4-0-x-3-0-20-in++0-7-3-in++0-in+68887/202127927	\$	10.48		\$	10.48	Any thin wood will work, this is a pretty economical choice
	Finishing nails	https://www.homedepot.com/p/Grip-Rite-13-x-2-in-6-Penny-Bright-Steel-Finish-Nails-1-lb-Pack-6F1/100027781	\$	4.75		\$	4.75	
	Gray spray paint primer	https://www.homedepist.com/g/flust-Clinum-Painter-Clusch-Ste 12-sz Harbli ay Piliner General Purpose-Spray Paint B 8902 () 1817 8882 ()	\$	3.98	6	\$	23.88	
	Gloss black spray paint	https://www.homedapot.com/p/Rust-Claum-Pathter-s-Touch-2X-12-oz-Gloss-Black-General-Purpose-Spray-Path-134026/307744811	\$	3.98	4	\$	15.92	These are probably not the best optionsbut choose whatever you need for the finish that you want to achieve
	Clear coat spray paint	https://www.homedepst.com/p/flust-Cleum-Painter-s-Touch-21/-12-as-Glass-Clear-General-Purposs-Spray-Paint-334029/307244797	\$	3.98	1	\$	3.98	Makes the finish slightly less glossy, but improves durability
	M8 Nuts	https://www.homedepot.com/p/Everbilt-M8-10-9-Zinc-Metric-Hex-Nut-5-per-Bag-802418/204281770	\$	2.27	1	\$	2.27	For use with the IKEA legs
	M8 Washers	https://www.homedapot.com/p/Everbit-M8-Zinc-Plated-Metric-Flat-Washer-S-Piece-Bag-802458/204604800	\$	0.97	1	\$	0.97	Or whatever you can find in your spare parts drawer that's close enough
	BRENNÅSEN bed legs (IKEA)	https://www.ikea.com/us/en/p/brennasen-leg-black-stained-00299689/	\$	30.00	1	\$	30.00	Not always in stock, but alternatives either have long shipping times or are pricey (or you could make your own legs)
	36"x36" Glass table top (1/4" thick)	Tigs, Disse water-region all and describe all policies (2004), 27 to 24 20 20 20 20 20 20 20 20 20 20 20 20 20	\$	99.95	1	\$	99.95	You should check the availability of local glass suppliers in your area for a better deal (I purchased mine for around \$60
	3D Printer Filament (PLA)	https://www.amazon.com/p44TCHBOX-30-Filament-Dimensional-Accuracy/dg/B000ECRS/Tref_=s#_sto_dp	\$	22.99	1	Ť	22.99	Whatever you have will work, but you'll need the majority of the spool for all the parts. If you can print with something stronger like PETG, that's better.
	Stepper motor dampers	https://www.amazon.com/gp/product/807GWN6V89/ref-ppx_yo_dt_b_asin_title_o08_o00?ie=UTF8&psc=1	\$	13.99	1	-		Not required, but greatly reduce noise
	M5 Square nuts	https://www.amazen.com/gp/product/801HSKL726/ref=ppx_yo_dt_b_asin_tible_003_s007ie=UTF8&psc=1	\$	8.09	1	Y	8.09	You won't need this many
	12V to 5V step-down, 15A max	https://www.amazon.com/gp/product/B07V7YYSX6/ref=ppx_yo_dt_b_asin_title_o05_s00?ie=UTF8&psc=1	\$	13.95	1		13.95	
	M5 40mm bolts	https://www.amazon.com/gp/product/B083F9MVWT/ref=ppx_yo_dt_b_asin_title_o07_s00?ie=UTF8&psc=1	\$	8.99		\$	8.99	
	TMC2209 Stepper drivers	https://www.amazon.com/gp/froduct/B07WSS3KVF/ref=ppx_yo_dt_b_asin_tkle_007_902?ie=UTF8&psc=1	\$	29.98		\$		You only need two, this comes with four
	1 kOhm resistors	Major // www.amazan.com/Projects: 0000P5353000 Other-Recissor Pack/og/M006F6155/nRec/9/Nothids-Sikeyworks-Six-shmmeric Solkyids-S999007938c-industrials-cn-14	\$	5.82	1	\$	5.82	You only need two, this comes with 100
	Jumper Wires		\$	6.98	1	\$	6.98	You only need three female-to-female cables that you'll hav to cut and splice, so if you have that or have the materials to crimp your own wires, this isn't necessary
	Power wire	$top_i // www.smin.o.com/?725M5 + min.o.p Grant M + forp_i - Grant M + fig/M5 + MONUT - del_i_i_j M + Monut -$	\$	15.99	1	\$	15.99	Stranded is best, but if you have solid-core wire on hand, that will work as well (that's what I did)
	NEMA17 Steppers	https://www.amazon.com/gp/product/800PNEQ/7N/prel-epox_yo_d_b_zán_t8kb_c07_d33Ye=UTF8&poc=1	\$	12.99	2	Ľ	25.98	These have long cables already soldered with female connectors. If you get steppers from somewhere else, you may have to solder connectors yourself.
	12V 10A power supply	https://www.amazon.com/gp/product/B0029X4GLW/ref=ppx_yo_dt_b_asin_title_c07_s037ie=UTF8&psc=1	\$	19.99		\$	19.99	
	F623ZZ Bearings	https://www.amazon.com/gp/product/B07MGTMZL4/ref=ppx_yo_dt_b_asin_title_007_905?ie=UTF8&psc=1	\$	8.48		\$	16.96	
	GT2 Belt - 10m	https://www.anazion.com/feet.uny-herent-timing-historick-d-T2-ferm/-dp/-bit/sittetholy-of-us_1_p2xthids-1&keywoods-15tm-gt1-betduqin-15989dd668&c-inductivi&ins-0	\$	10.99		\$	10.99	
S	Mini V-Wheels (off-brand)	https://www.amazon.com/gp/product/B07V4GHLL8/ref=ppx_yo_dt_b_asin_title_007_s067ie=UTF8&psc=1	\$	9.99	2	\$	19.98	
	16 teeth GT2 pulleys	https://www.amazon.com/gp/product/B07DBN8KFT/ref=ppx_yo_dt_b_asin_title_007_s06?ie=UTF8&psc=1	\$	7.96	1	\$	7.96	
5	RAMPS 1.6+ board	https://www.amazon.com/gp/product/B07RF576WC/ref-ppx_yo_dt_b_asin_tkle_007_s067ie=UTF8&psz=1	\$	12.99	1	\$	12.99	Any RAMPS board will work
Electronics	Arduino MEGA 2560		\$	15.99	1	\$	15.99	You could replace this and the RAMPS board with a single board such as the SKR 1.3l had the MEGA already, so the RAMPS was the best option for me.
	Assorted M3 Screws	https://www.amazon.com/gp/product/808125LTBT/ref=ppx_yo_dt_b_asin_title_o07_s077ie=UTF8&psx=1	\$	25.98	1	\$	25.98	You need 5% of the screws in this pack, but it's a good deal
	M5 Washers	https://www.amazon.com/gp/product/80090K4TZO/ref-pps_yo_dt_b_asin_tkie_c07_c087ie+UTF88psc=1	\$	3.66	1	\$	3.66	Too heed 370 of the solens in this pack, but it's a good deal
	M5 Nylock Nuts	https://www.amazon.com/gp/product/80761189F5/ref=ppx_yo_dt_b_asin_title_c07_s087ie=UTF88.psc=1	\$	5.64	1	\$	5.64	
	Raspberry Pi	https://www.adafruit.com/product/4295	\$	30.00	1	\$	30.00	A Model 3B+ (what I used) or newer will work, this is the cheapest one I could find (Pi 4 Model B 1GB).
	Micro SD Card	tops (from amous conflict de distribution into Lideratory, NET X LLC (A) obey 3, 3 to 4 EM EXCEL (AN EAR IN A Expendig monocontracting 44 5 18 10 12 (Signature) and Cap and CC (27 Table 5).	\$	6.19	1	\$	6.19	Anything of acceptable quality should be fine
	LED Strips (4m)	Transition was rediginary and the State of Transition (COSTON ASS) that is these contributed by a COSTON ASS (Asset State Coston Asset State Cost	\$	24.99	1	\$	24.99	Go for whatever you are comfortable with. These are a goo price and should work. I used something a bit more pricey since I had some on-hand (https://www.nouser.com/ProductDetail/Seeed-Studio/1040201097qs=byeeYqUih0PmErrTC2u0yQN3DM3D , Qty 4)
	Openbuilds V-Slot Linear Rail (1500mm)	http://makerstore.cc/product/v-slot-20-x-40mm/	\$	20.90	2	\$	41.80	There are many other places that sell thislook for one that's on sale (when I bought mine makerstore was 30% off
	1" Cube Neodynium Magnet	MISSEX // www.amazin.com/Chfi-thagenisss-si-ade-Neodynium-thagens/da/M00M000000000/de-cz127ds/Mis-Ekkeywodos-z-in-cube-neodynium-magens/da/M00M00000000000000000000000000000000	\$	12.98	1	\$	12.98	
			\$	12.98	1	\$	12.98	Any Arduino that can run LED strips will work (specifically
	Arduino Uno (or any other arduino)	https://www.ansacan.com/ELSG-D0-Basel-6F mega328P-ATM/EGA36/2 Compliant/Gg/MCSR D1010/afric_T_O-Athlide-Ek-rywade-astiono-cheapili-qd-158899965il-cni-4	Ş	12.50		Ш		can run the FastLED library)
SC	Arduino Uno (or any other arduino) Sand	Top: //www.anstron/six 60-based Papes (200 PMASSO) Completing (PERE 6000) (Per.), 6 Nish Salayonin address-brough at 000000000 and 4 Top: //www.anstron/six 6000 Fire Com Res (Egy 800 PMASSO) (Per.), 6 Nish Salayonin address -brough at 00000000000000000000000000000000000	\$	14.99	2	\$	29.98	I found this to work well. It's fine, but not too fine to the point where it's just a powder
Misc		Top: //www.neuron/SES 09-bited foreigning references (company of the control of t			2	\$	29.98 5.99	I found this to work well. It's fine, but not too fine to the



Electronics \$ 421.84 Miscellaneous \$ 41.94	Total	\$ 736.37
Electronics \$ 421.84	Miscellaneous	\$ 41.94
	Electronics	\$ 421.84
Hardware \$ 272.59	Hardware	\$ 272.59