

NFR MUTE HOLDER FABRICATION INSTRUCTIONS

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GEN II MODEL (~\$50.00 of parts)



GEN I MODEL (~\$10.00 of parts)



NFR Gen II Mute Holder

Materials

Item	Link	Source	Price	Note
Pangshi 11inch Adjustable Articulating Friction Magic Arm & Large Super Clamp Compatible with DSLR Camera Rig, LED Lights, Flash Light, LCD Monitor	https://www.amazon.com/gp/product/B06VYCVVVJ/ref=ppx_yo_dt_b_asin_title_o03_s00?ie=UTF8&psc=1	Amazon	\$29.99	You can find cheaper ones on Amazon as well
J-B Weld 8265S Cold Weld Steel Reinforced Epoxy with Hardener, 2 oz	https://www.amazon.com/J-B-Weld-8265S-Reinforced-Hardener/dp/B00YNJ2XAE/ref=sr_1_5?dclid=1&keywords=jb+weld&qid=1614464123&sr=8-5	Amazon	\$8.99	The 5-minute JB Weld may be sufficient or can use another brand of epoxy
16 lb. Pull Rare Earth Magnetic Latch Kit (2-Piece per Pack)	https://www.homedepot.com/p/Master-Magnet-16-lb-Pull-Rare-Earth-Magnetic-Latch-Kit-2-Piece-per-Pack-96454/203613162	Home Depot	\$11.97	Cheaper magnets may be found on Amazon
TOTAL			\$50.95	

Assembly Instructions

- Discard unneeded parts from the arm kit



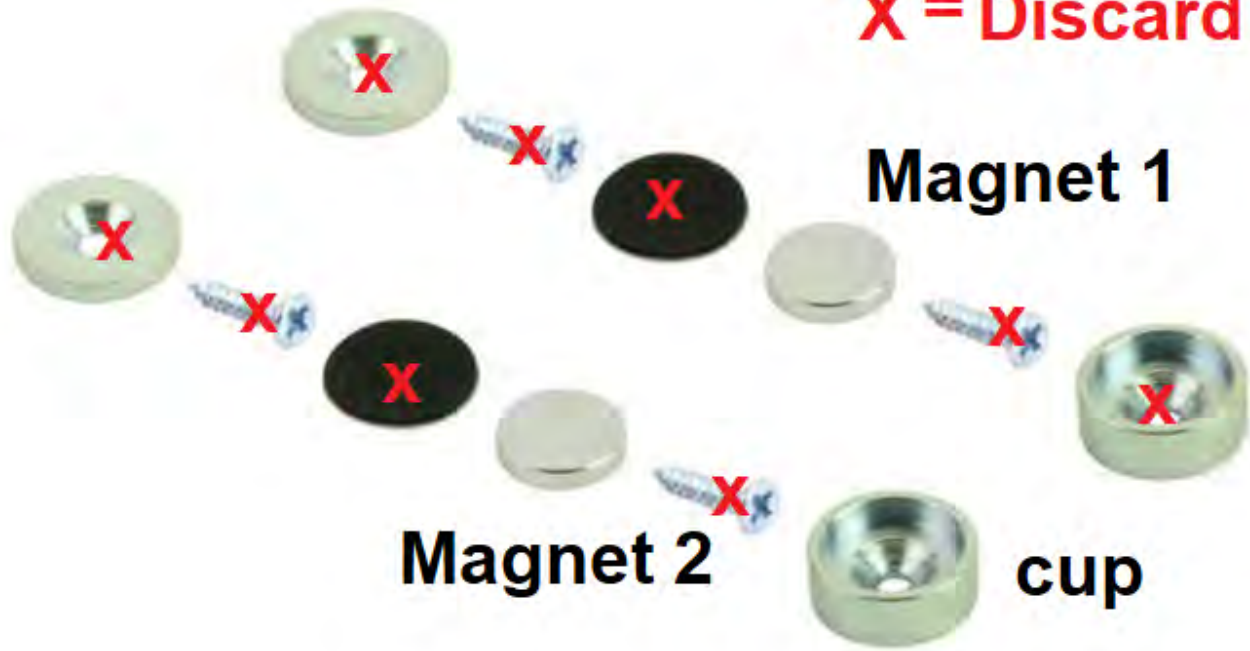
- Discard unneeded parts from the magnet kit

X = Discard

Magnet 1

Magnet 2

cup



- Unscrew the barrel from the arm. Use epoxy to secure the Cup (flat side down) onto the barrel.
- Insert Magnet 1 into the cup. This will never come out.



- Screw barrel onto the arm

How to use on a gig

- Secure the arm to your music stand and position it as desired.
- Gently put magnet 2 inside the mute you wish to secure to the arm.
- Place the end of the mute near magnet 1 and the magnets will engage.
- Pull the mute off the arm when done.
- When not in use, magnet 2 can be conveniently stored by placing it on the side of the cup, and it will stay securely in place. You can store magnet 2 directly on top of magnet 1, but it will be quite difficult to remove.



NFR Gen I Mute Holder

1. Cut ½" plywood to 1.25 x 2.25



2. Cut the wire to 18" length with cutting pliers. Strip back white outer case 1 inch with a box cutter. Cut off white and black inner wires flush to the white casing with pliers, leaving copper ground wire protruding 1".
3. Make a loop using needle-nose pliers with a ground wire that will be placed around the nut.



4. Clamp work
 - Remove/discard 1 plastic cover from 1 handle with a razor. It is glued on and you'll need to cut and pry.
 - Mark spot to drill with a sharpie, then pierce with hammer & punch. Drill out with drill to finish. Remove any sharp edge.



- Drill $\sim\frac{1}{8}$ " hole, should be 2 holes total, one is there already)



- Insert screw through the hole furthest from the end of the clamp
- Wrap ground wire around the screw



- Put on the washer and tighten the nut



- Hammer the punch through the open hole and wire to create a place for the next screw



- Put machine screw through the hole, add washer and nut and tighten
- Cut bolts with a bolt cutter and file sharp edges



- Gorilla Tape (or shrink wrap) over the exposed bolts nuts and handle



5. Put a screw through the magnet holder (steel cup) and surface mount to wood. (Do not countersink as putting an extra magnet sideways on the side of the cup is a good way to store the loose magnet when not in use. When the magnet is directly on top of the other it is hard to pull off)



6. Put 1st magnet in the cup. Magnet 1 will stay there permanently.



7. Bend wire into S shape



8. You will need to clip extended black and white wire after the bend



9. Use a staple gun to attach the wire to the back of the wood with three staples. Hammer staples down more.



10. Drop 2nd magnet in mute

11. When done, remove the magnet from the mute and store it sideways on the cup.



ITEM	NOTE
Wood	
Staples	
Epoxy	
Wire	14-2 NM W/G 15 FT = 180" Romex SIMpull with Ground 600 volts
Clamp	Anvil 1" Metal Spring Clamp
Gorilla tape	
Nut/bolt	Crown Bolt INc. Machine Screws Stainless Steel Round Head #8-32 x ½ Round head (can go shorter) slotted machine screw and matching nut #8-32 machine screw nut
Washer	Washer lock ext tooth zinc ¼" - 18 count Everbilt ext tooth lock washers 802741 1.4" Or #8 flat washer
Black Spray Paint	
Magnet	Magnet latch kit #16 Pull 2PC/SET "Magnet Source" Neodymium Latch Magnets 16 lbs force .625 x .25 thick 16 Lbs. Pull Steel Cup .625 x .25 ZZRB13CUPZ Neo Magnet Disc, .49x.105 ND004903N Screw: #4 Phillips (2) ½" ZZFWS4X.5 Kit of above items plus noise buffer pad NMLKIT3 https://www.magnetsource.com/products/nmlkit3 On amazon there cheaper/simpler magnets with a hole in them for a screw https://www.amazon.com/s?k=Neodymium+Disc+Countersunk&i=industrial&ref=nb_sb_noss_2