Document Name: PATCH 366 DIY KIT - **Ver:** 1.0 - **Date:** 28.3.2014 - **Author:** Assaf Abramovich

PATCH 366 DIY KIT

Thank you for purchasing the **PATCH 366 DIY KIT**.
In this kit you will find the highest quality components for your project.
Please follow the instructions carefully to achieve the best results.

WHAT'S IN THE KIT:

1. 1.5m VAN-DAMME Pro Grade XKE Unbalanced Pro-patch cable.
2. 10 PCS 6.35mm (1/4 inch), right angle, mono guitar jack plugs (pancake).
3. 20cm of Heat shrink tubing with Glue Lining.

TOOLS YOU WILL NEED:

1. Wire cutters
2. Wire Strippers
3. Utility knife
4. Soldering iron: A good quality soldering station is preferred. If you don't have the budget, a strong soldering iron with power boost, like the *HAKKO PRESTO*, is the minimum you should use.
5. Small ruler
6. Heat gun
7. Solder: use a standard 40/60 solder wire with rosin core solder. RoHS or silver solder is not recommended for inexperienced users, and can result in bad soldering joints.
8. Phillips screwdriver – PH1 size
9. Multimeter – any cheapo multimeter will do, as long as it has continuity or resistance option.
10. Two hands and good will

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ASSEMBLY INSTRUCTIONS:

Please read the instructions carefully before starting the work, make sure you understand each and every step of the process.

1. Measure the length between two pedals you need to connect. Make sure you take into account the correct routing path you'll need for the patch. A good practice will be to add 1-2cm to your measurement as a precautionary measure.
   I recommend a 15cm cable length between to pedals placed side by side.

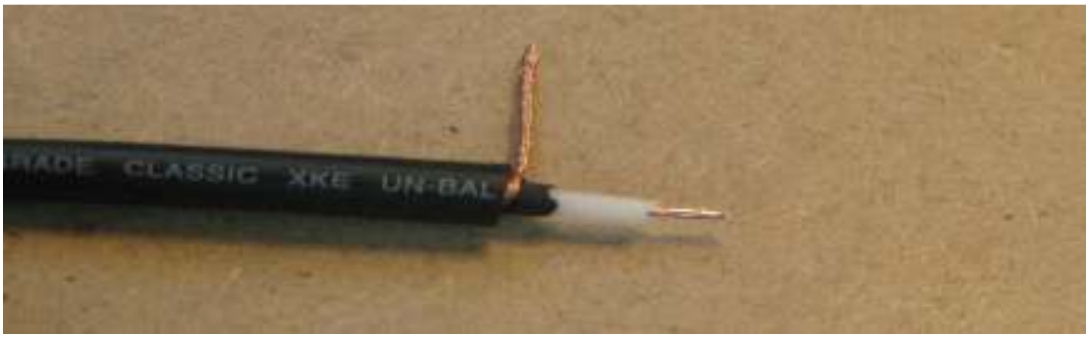
2. Recheck the length and cut the cable using cable cutters.

3. Strip about 1.5cm of the outer jacket, using a cable stripper or a utility knife. Make sure you don't cut too deep and harm the copper shielding.

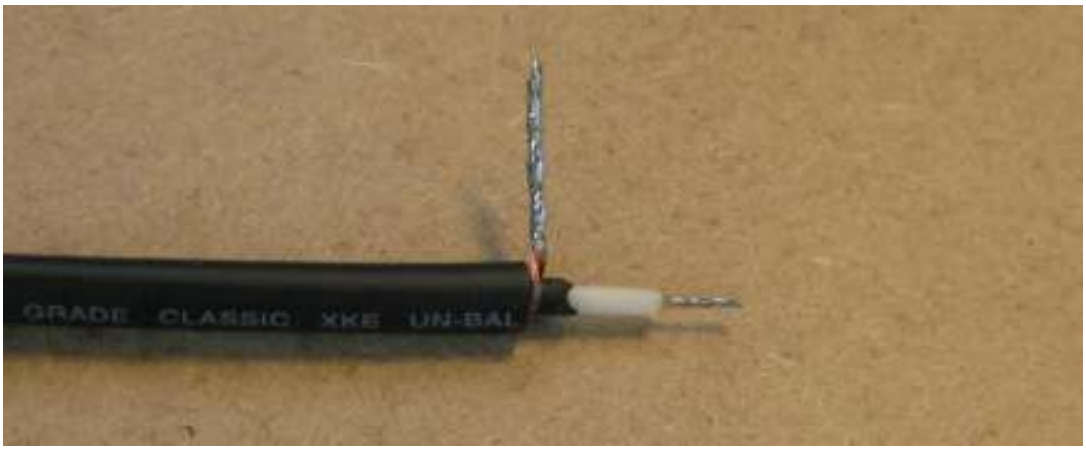
4. Twist the copper braid as shown in the picture:

5. Gently remove the black carbon jacket close to the bare copper, and leave about 1-2mm.

6. Gently remove about 3-5mm of the white insulation. Try not to harm the copper wire.



7. Tin both bare copper ends.



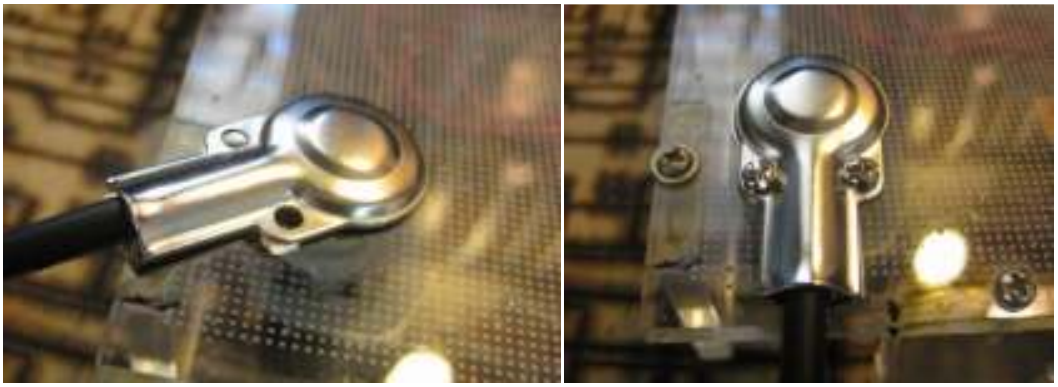
8. Open the top cover of the jack by removing the two screws, and apply solder to the TIP lug and to the bottom side of the RING – as shown in the picture. The solder points should be shiny (they should reflect the light).
   Please note: The RING part of the plug will need a fair amount of heating, apply the soldering iron for 10 seconds or more – until the solder spreads nicely.
   - If you use a soldering station, set it to 350-400 °C
   - If you use a standard soldering iron with boost, hit and hold the boost button at this point.

   Using a fixture to hold the plug in place will be a good practice. You can make it by using a ¼" jack – mounted on a box or some kind of a plate. If you don't have one, you can use a guitar pedal as a fixture.

9. Solder the internal wire of the cable to the solder lug of the TIP, and let it cool for a few seconds. Now solder the shielding to the RING. Make sure the solder joints are shiny and fairly round. Wait for the lug to cool down and check the strength of the soldering by pulling the cable, applying moderate force. Cut any excess wire that remains.

10. Place the isolation disk on top.

11. Put the top cover and close the two screws. Use moderate force.



12. Cut 2 pieces of heat shrink - 2cm each, and slide them on the wire.
13. Repeat steps 3-11 at the other side of the cable.

14. Now it's time to check your work:
    - Did you remember to put both pieces of the heat shrink on the wire?
    - Did you remember to put the isolation disk in the plugs?
    - Let's check for shorts and continuity:
        a. Set the multimeter to continuity mode:))) or resistance mode: Ω
        b. Touch the TIP of one plug with one lead, and the tip of the second plug with the other lead. If you are in))) mode - you should hear a buzz sound. If you are in Ω mode - the reading should indicate zero ohms (or something very close to zero). Repeat this test with the RING part of both plugs – you should get the same indications as above.
        c. Now repeat the same test touching the TIP and the RING of one of the plugs. You shouldn't hear any sound if you are in))) mode, and an "OL" (overload) reading should appear.

    If all goes well, you can proceed to the next step. If not, open the plugs and check your work.

15. Slide the heat shrink tubing over the plugs as shown in the picture

16. Use a heat gun to shrink the tubing. While keeping a distance of 20cm between the plug and the heat gun, rotate the plug slowly – allowing the tubing to shrink evenly on all sides. When you see the glue starting to melt, you can stop the heating.
    Put the cable aside to cool for few minutes.

17. You're done! Enjoy your self-made high quality patch cables!