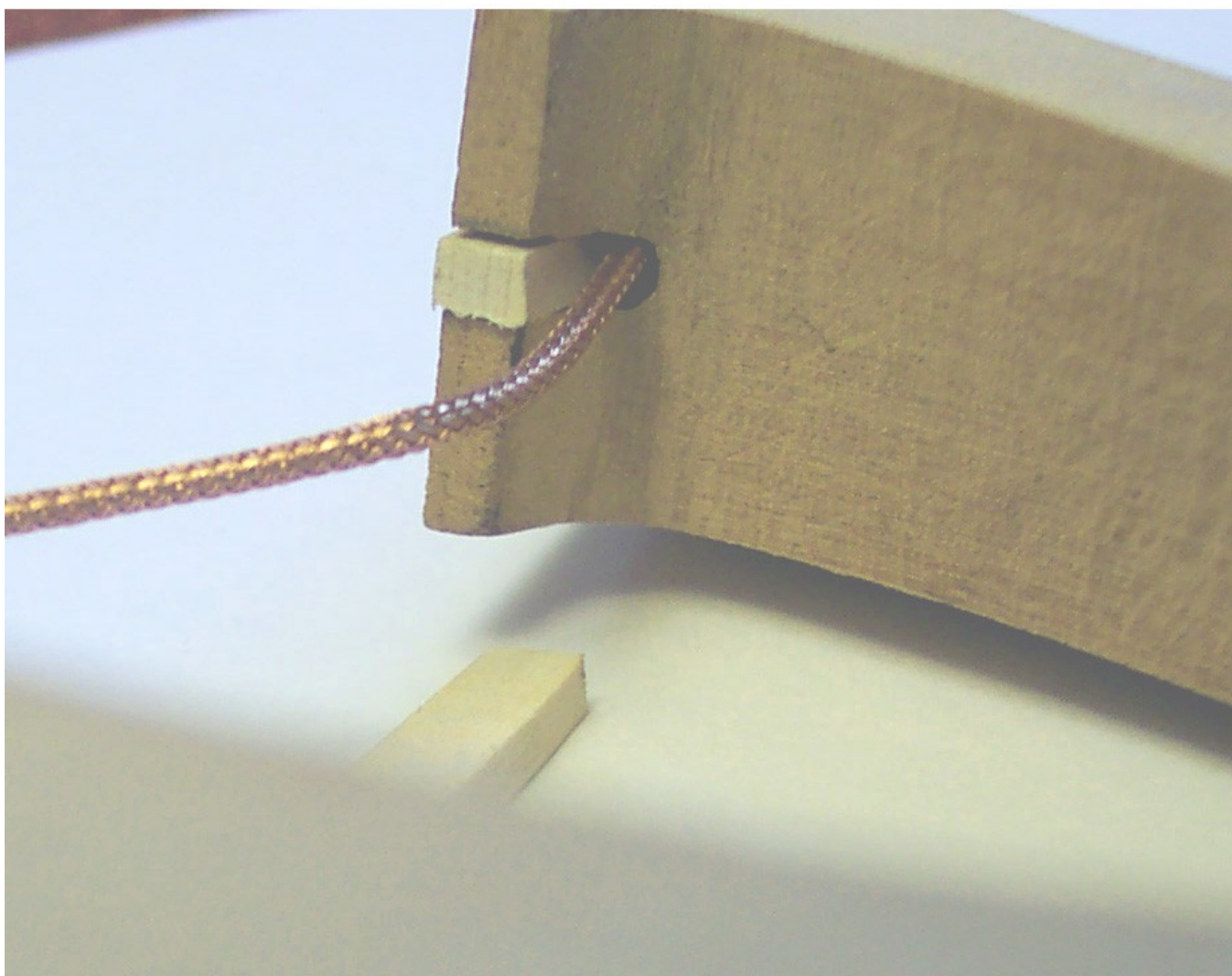
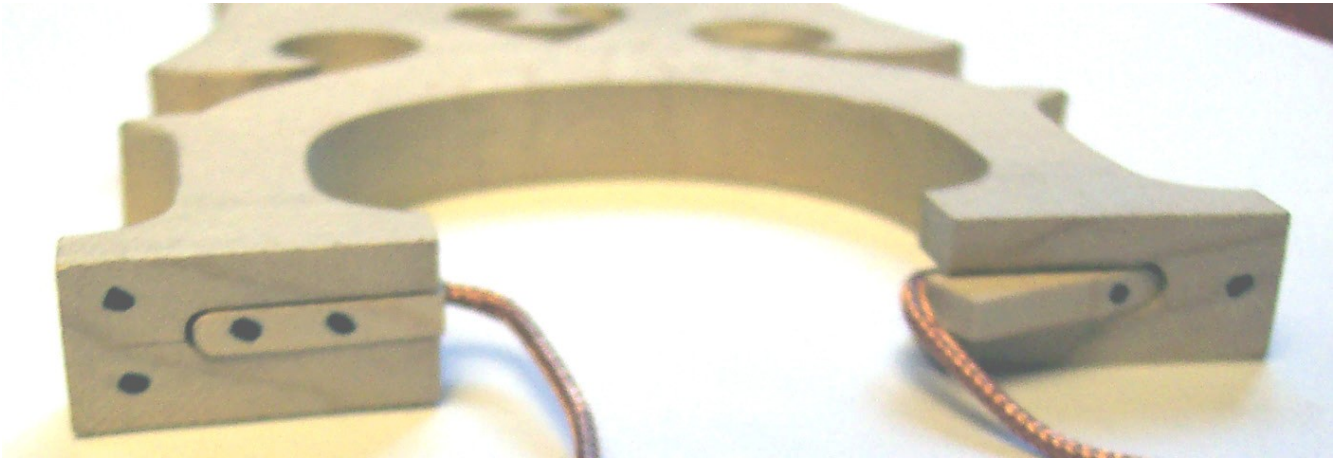


DOUBLE BASS / CELLO BRIDGE PICKUP – SUPPLEMENTARY FITTING NOTES ( USE IN CONJUNCTION WITH HE2 GENERAL INSTRUCTIONS [Click here](#)

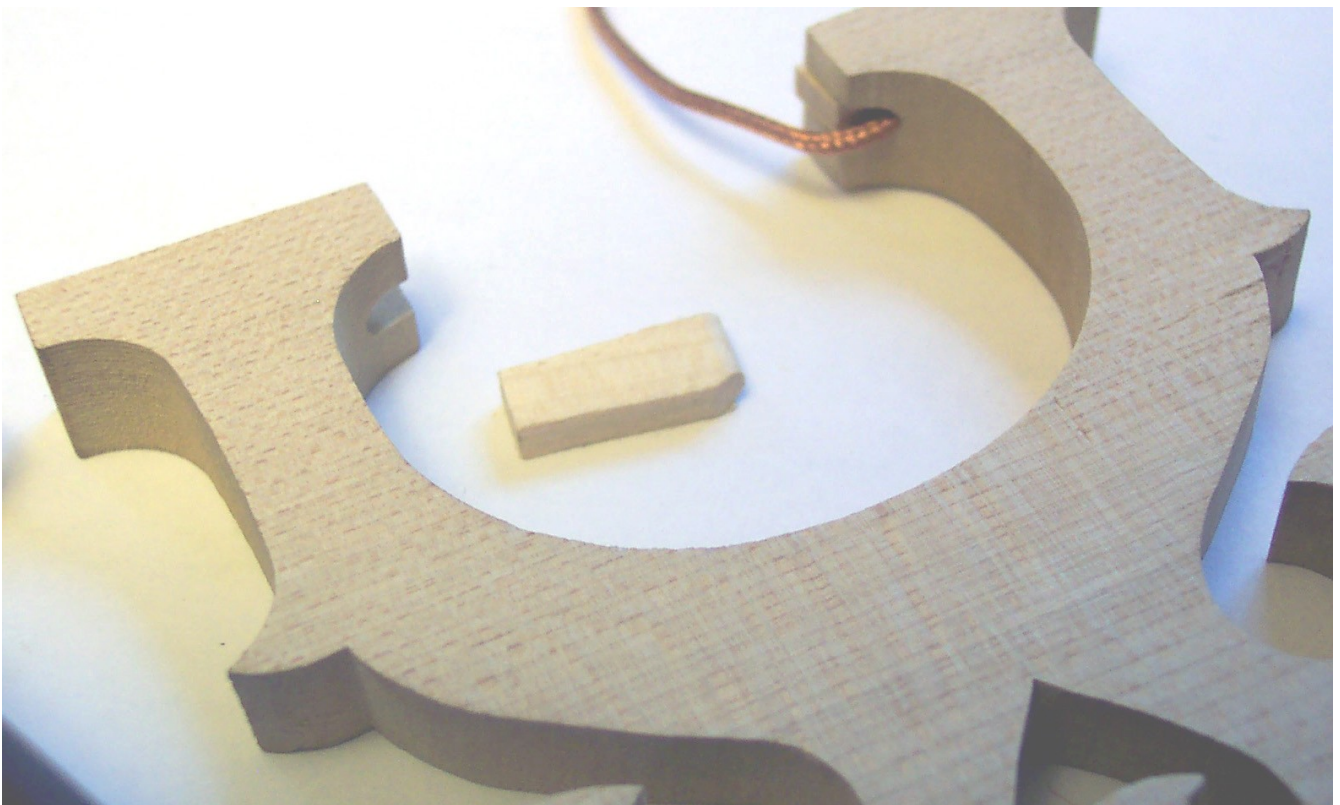
**OUTLINE:** The 2 pickups are fitted under indirect string pressure, in slots inside the bridge feet areas, close to the body, but not usually touching the top. They are normally held in place using non-glued hardwood plugs (or tongues), set snugly in **2.5mm wide slots**, which are routed in the underside of each foot, arranged to allow the Piezo cable pickups to lay in the bottom of each of the slots. The hardwood plugs are set on top of piezo cable pickups and when all are firmly in place, the plugs should protrude 0.5mm from the base of the feet.



With the plugs standing slightly proud from the slots, this allows the strings, via the bridge, to put indirect pressure onto each of the pickups, (with bridge back in position, on instrument and strings up to pitch). It is important that the plugs are able to fall out of the slots, when not under pressure and are not glued, or forced into place.



0.5mm of plug protrusion is sufficient to allow the in place bridge, to pressurise and slightly compress the pickup, while under string pressure and to allow tiny, critical plug movements to apply to the pickup from vibrations, when instrument is played.



**DIMENSIONS:** The depth of the routed slot should be based on depth of pickup, ( **2.1mm-2.2mm** unless bare metal braid version, at 1.8mm -1.9mm ), plus depth of plug ( minimum approx. 4.5mm / optimum approx 8mm ) . Routed slot could be half round routed ( concave), but this is not necessary and opinions vary as to whether it makes any notable difference on the Headway Pickups. Total optimum slot depth = approx. 10mm-11mm.

Ideal Router bit should be around 2.5mm diameter. Headway is able to supply these bits suitable for Black & Decker Wizzard (or Dremel Multi).

In view of the fitted, rounded bridge base, shaped to top, the edge of the bridge could be used as a guide for a router, when making a pickup slot. Alternatively, flexible pickup may be in straight slot, with flat surfaces on pickup side of plugs, plus with curved surface fitted purely on instrument top side.

Slot length is best being around 5mm millimetres short of the full width of the feet, at the outside edge, where tip of pickup will eventually reside. This would leave additional wood in place for bridge strength.

**UNDER FEET OR LEGS?:** If feet are sanded down during fitting, to the point that they are too shallow to allow for minimum depth of slot, (and while leaving sufficient foot wood to retain structural integrity of bridge), then pickup should be fitted purely under the leg of bridge and may be best set diagonally. This would avoid placing pickup under wider areas of overly thin feet.

Fitting purely under bridge leg, would greatly reduce the length of piezo cable under useful pressure, but will still produce excellent tonal and output level results, albeit levels may be fractionally lower than under full foot width.

**OPTIMUM PLUG/TONGUE MATERIALS:** These would be Maple, although a good alternative would be Sycamore. Rosewood would be a workable alternative with a slightly darker tone.

**PLUG ID MARKERS:** When plugs are in place, mark each of the plug areas, with a different number of lines, drawn from across bridge feet, in fine permanent marker pen. This identifies which way around each plug will go and which plug fits whichever slot.

**Page 2 of 2.**

**ALTERNATIVE SIMPLE BRIDGE PICKUP FITTING:** As an alternative, possibly for less expensive instruments, you may merely rout a slot deep enough for piezo cable to sit in there, approximately 1.5mm deep, with no maple plug. The piezo cable would protrude 0.5mm from slot, in order to apply some pressure, under indirect string pressure, but in contact with body top. The tone from these simple methods, with pickup further from strings, should be balanced, but softer and woodier than with maple plug, also less defined, but may be a little more prone to body noise and feedback. However, this simpler method could mark the top.

**CABLE EXIT POINT:** Piezo cable should normally exit via 2.5mm-3mm hole routed or drilled through inside edge of bridge foot or leg, where it is level with base of routed slot of bridge. Holes for access should be clear of burs, with rounded edges and should allow easy, NON-forced pickup access, or pickup damage could occur.

Unless you have an imperative reason to access the pickup differently into slot, keep the number of pickup bends to a minimum and keep the radius of the bend shallow, not steeply bent, or forced. Pickup wires are to be run neatly towards the pre-amp, jack socket and battery bag, which are mounted on tail piece

The pickup takes signal from the feet/leg of the bridge via joints to co-axial connecting cables, usually in black, to the battery powered pre-amplifier. You should not pressure, bend or pull on that pickup joint.

**ELECTRONIC PRINCIPLES:** The Piezo cables will operate at Ultra high impedance over just very short cable runs into specialist Class "A" All Discrete Component pre-amp designed to their optimise tone and performance for Bass, with high output levels, at low impedance, with extremely low noise and zero hum, plus Fixed EQ trimming of excess mid range, minimising bass feedback and body handling noise. The two pickups are wired in parallel, making them work as if as one.

If the braid, tip, or joint on the piezo cable/co-axial connecting cable, or pre-amp and it's housing, are damaged or altered at all, a hum is likely.

The Pre-amp outputs are not really cable sensitive, within reason. Quality, condition and length of cables are not highly critical. Lapped shielded is good enough and up to 12m length will normally be fine.

**EXCESS PIEZO OR CO-AXIAL CABLE LENGTHS:** Do not try to shorten (or lengthen) cables, twist, knot, or to modify the pre-amp and it's metal cover in any way. If a Piezo cable is too long for slot, it will not cause problems unless it is allowed to flap around and create amplified handling noise. If any cable is too long, tag it down, such as with adhesive Velcro.

**N.B. THESE ARE SUPPLEMENTARY FITTING NOTES - USE IN CONJUNCTION WITH HE2 GENERAL INSTRUCTIONS**

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