

Science of Effective & Intelligent Wiring

- 🌿 **Prep your tree** – “*clear a path*”-prune vertical/downward growth*, clear first 1/8” – 1/4” on each branch, crotches, identify alternating branch structure ...
- 🌿 **Plan your wiring (“*wire mapping*”)** - study the tree, bending directions, structural v. secondary, connecting branches, wiring v. guy wire ...
- 🌿 *** Wire Bottom to Top / trunk outward to end of branch**
- 🌿 **Wire entire tree before styling /setting pads** (*less refined trees*)
- 🌿 *** “Under and Over the Shoulder”** (outside in) v. “**Armpit**” (inside out)
“*consider bending function*”
- 🌿 *** 2 Branch Rule** - paring combination / similar thickness and vicinity
- 🌿 *** Opposing wire wrap** (clockwise/counterclockwise) 2 branches)
- 🌿 **Wire ahead** (provides leverage and helps maintain wiring angle and branch contact)
- 🌿 *** Wire thickness – 1/3 width of branch (Aluminum) / 1/4 width copper** sufficient to move branch without wire bending. “*when in doubt, go bigger*”
- 🌿 **Single thicker wire is stronger than 2 smaller wires** (heavier bends)
- 🌿 *** “U” Anchor Point**
- 🌿 *** “Short” Anchor – 3 wraps** (when not wiring to branch tip)
- 🌿 **Add minimum 1/3 length of wire to branches length**
- 🌿 **No more than 3 wires in any location**
- 🌿 **Protect /support branch collar** (secondary / tertiary branches)
- 🌿 **Avoid wiring over foliage**
- 🌿 **Protect bark**
- 🌿 **Health** (development) v. **Styling** (aesthetics)
- 🌿 **Be conscious of arm/body contact so as not to damage branches/foliage**
- 🌿 *** Structural** (trunk & primary branch) - wire parallel to branch
- 🌿 *** Secondary & Tertiary** (pad design) – wire towards you
- 🌿 *** Always tie into existing structural wire for secondary and tertiary wiring**
- 🌿 **12-3-6-9 (clock) / “*push-pull*”** (thicker wire)
- 🌿 **Supporting hand v. Wiring hand** (dominant hand)
- 🌿 **3 Point Contact** (supporting hand)
- 🌿 **Full Contact** – No gaps between the branch and wire
- 🌿 *** 45°-60° Angle Wrap**
- 🌿 *** Even Spacing** – use thumb and finger to help with spacing
- 🌿 **Twist/roll the wire** (using thumb/finger of wiring hand)
- 🌿 *** “Follow the leader”** (double wiring)
- 🌿 **Close end of wire “under and up” to control and support the branch tip/foliage**

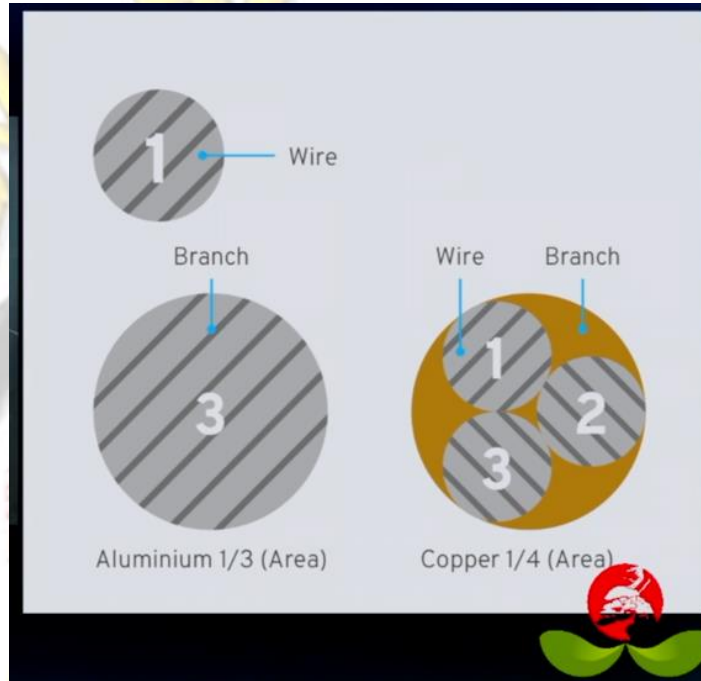
Items notated with a red asterisk * are detailed on the accompanying diagrams

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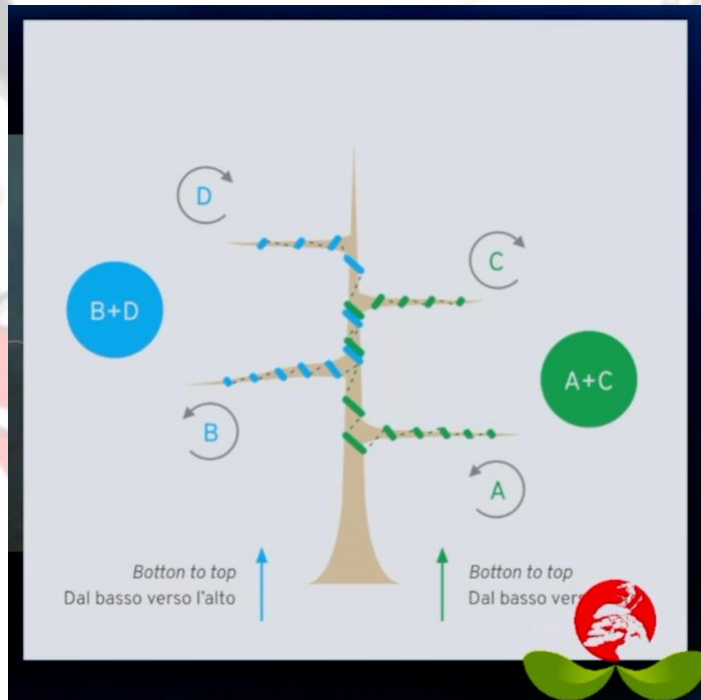
Images courtesy of Mauro Stemberger & Italian Bonsai Dream
"Intensive of Bonsai Wiring" YouTube Video



Choose the correct wire gauge based on wire type, tree species and functional need

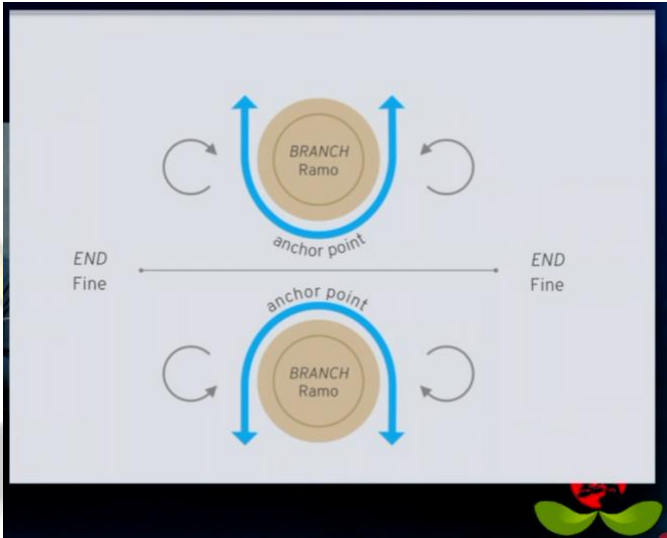


- **Wire Bottom to Top / Inside Outward**

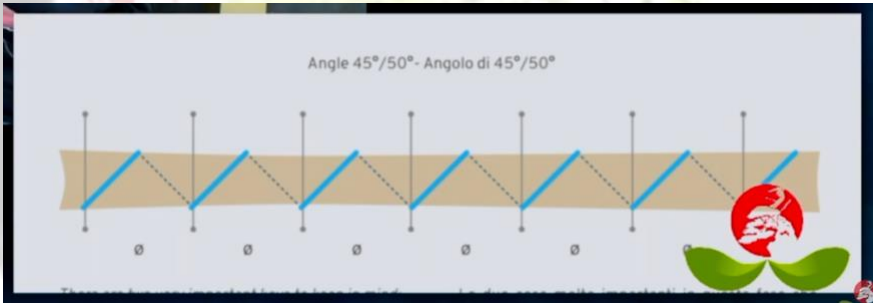


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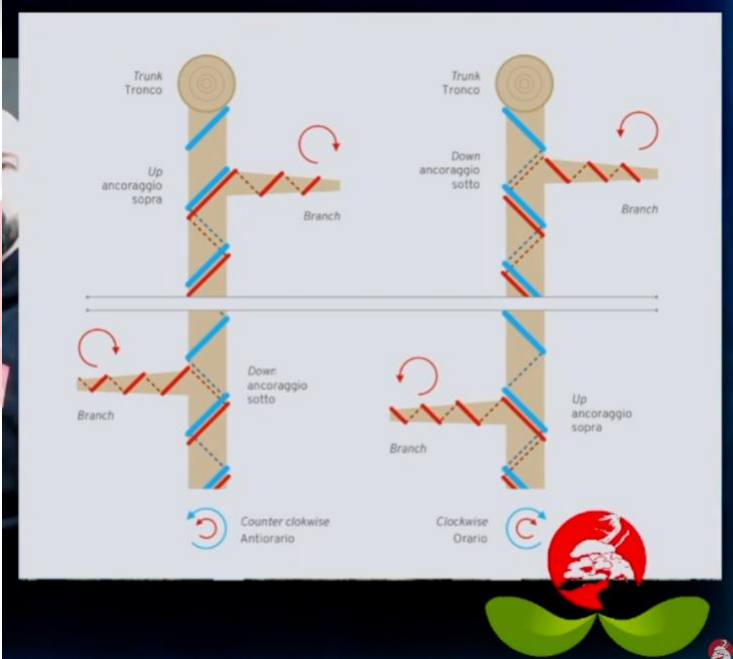
“U” Anchor



Same Wire Angle with Even Spacing



Opposing rotation (clockwise/counterclockwise)



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Wiring System:

- a. Primary
- b. Secondary
- c. Tertiary

- 2 Branch Rule
- Always tie into existing structural primary or secondary wire
- Example “3 wrap” short anchor

