

QUESTIONS AND ANSWERS ON THE TECHNICAL SIDE

by Lance Johnson

Do you have any questions?

Send them direct to:

QUIZ MASTER
And Organ Builder

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1. **I have a 3/8 Kimball theatre organ with a tremulant problem. I want the Tibia to "throb" like Wurlitzer but cannot get near the result desired. I have a large trem with the gate completely open but the Tibia just doesn't have it. Any ideas?**

Answer: You have raised a complicated problem. Knowing the small Kimball organs you probably have too large a scale Tibia for what you want. Kimballs and Bartons were notorious for large Tibias even in small instruments. Their voicers left such a high cut-up in the mouth that the harmonic development or "quint tone" was completely eliminated. The quint tone is what you hear besides the fundamental tone when you listen to just one Tibia pipe. If you listen carefully, you will hear a tone one octave and a fifth above the note you play on a Wurlitzer Tibia. Wurlitzer voiced the basses very dull and devoid of quint tone and lowered

the cut-ups in the trebles to make the pipes brighter higher up the register. This quint tone is what makes the famous throbbing Tibia what it is. Dull pipes with little or no harmonic development are extremely difficult to tremulate.

If you cannot get a smaller scaled Wurlitzer Tibia, I would suggest two remedies; first, change the wind line to the tremulant to 4" diameter. Your tremulant will get much noisier so you may have to muffle it more or remove it from the chamber entirely. Another way would be to wind the tremulant directly to one end of the Tibia chest if it isn't already winded in this manner.

Having built a Wurlitzer Tibia, I voiced it in the manner of the 1920's Stopped Diapason from the church organ. With the quint tone present and increasing in the trebles, I was able to copy the Wurlitzer throb with perfect results.

2. **I have a Wurlitzer theatre organ with six regulators. Every one has a loose cone valve stem that wiggles when the tremulants are on. Are those supposed to be tight in the regulator top?**

Answer: No. The stem which is nothing more than a bolt with two nuts on top are meant to be loose so they will help the cone valve to center itself quickly.

3. **After having my blower (Spencer) motor overhauled with new bearings and re-assembling the blower, I find that it will only produce 8" wind instead of 13". It runs in the right direction and the motor turns up to full rpms. What could have I done wrong?**

Answer: Did you check carefully the spacing between the impellers and dividers? On most blowers, the space should be one half inch. Less than this amount will reduce the output pressure significantly.

4. **I am having trouble with my Wurlitzer switch stack. I get dead**

notes from contact wires on the switch bars bending sideways so it will not spring out when the stop is turned off. What causes this?

Answer: The contactor fatigues from age and is losing some of its spring tension. As the switch slams up against the buss bar, the switch contact wire may not always spring back exactly square with the bar. Having lost some strength, the wire bends sideways and jams in the bar slot. The only solution I could think of would be to reduce the travel of the switch bar slightly. The spring contacts then will not have to move as far and any sideways play will be less significant.

5. **I have a big re-leathering job to do on my console combinations. What do you think of using zephyr skin membrane?**

Answer: I can't get excited about using membrane leather which has only a 20-30 year life. It may be fast acting, but so is perflex. Most hobbyists have had disastrous results trying to glue zephyr skin. I have used mostly pneumatic leather on blow pneumatics. I have heard from other builders that plastic substitutes don't wear as well on blow pneumatics such as the type found on stop tablet combination actions.

6. **What kind of alloy is "Hoyt metal" and how do you repair it?**

Answer: Hoyt metal is tin coated lead, hence the shiny appearance. Repairing tears in tuning slots can be done with an ordinary Unger style soldering iron. Tin the tip well and use plenty of solder paste. Just tap the pipe metal with the soldering iron until the pipe metal begins to melt. Then flow heavy amounts of wire solder. (the type with built in flux) around the tip but keep the tip only close to the pipe but not touching it anymore than necessary. If you apply too much heat to the pipe metal, you will see the pipe disappear before your eyes! File off any rough edges where you have applied solder. □