

ganist will be able to get something good out of that much of an organ). Once again, Tom proved his excellent capability by working with the organ, instead of letting the organ work against him. He also demonstrated many capabilities of the organ, and concluded his concert by playing several numbers from the small console, which shows the beauties of the echo organ as it is played into the entrance lobby of the building, and up the main staircase.

Most unfortunately, many people who call themselves theatre organists are not true theatre organists, but only Wurlitzer organists. If it is not a Wurlitzer, they do not know how to handle it. Certainly, on an instrument the size of the Elks organ, any organist worthy of being called an organist can find something to work with. Mr. Tom Hazleton has proved that he is a virtuoso organist through his desire to perform on the Elks organ and through his capable handling of a good organ which is not a Wurlitzer.

If your club has a good organ, and it isn't a Wurlitzer (or even if it is), and you are looking for a top organist to perform for a concert, may I suggest and recommend Mr. Tom Hazleton? And thanks again, Tom, for a very enjoyable evening of listening to a wonderful organ concert.

Sincerely,
Paul Duerr
Member, Elks Organ
Maintenance Crew □



"The last mile." ATOS Vice President/Treasurer Erwin Young leaves the cockpit for the final time, July 31, 1977, after maneuvering United Flight 56 from San Diego to Dulles International Airport. Cap retired after 32 years as a pilot.

QUESTIONS AND ANSWERS ON THE TECHNICAL SIDE

by Lance Johnson

- 1. I have a 30 amp modern rectifier that I use on my 3/15 Wurlitzer and I was wondering if I am overloading it? I am afraid of having it blow out and quit during a concert.**

Ans. The rectifier you refer to is slightly underrated and should handle your requirements. If it was being overloaded, you would have known it long ago with fuses being blown on the secondary side.

- 2. I have a mostly 3/15 Wurlitzer which uses a Spencer Orgoblo, 5 hp, 1200 rpm, rated at 13 inches pressure. How much can this blower be pushed? I am trying to keep the pressures down with no pipes over 8½" wind. The tonal percussions, toys and console work on static wind. I enjoy and indeed appreciate your fine column, and more power to you!**

Ans. My question at this point would be, what pressure was your organ voiced on? If you have lowered the pressure, the pipework will not blend and the tonal character will be altered. You would be bound to have many slow reeds. If you intend to keep this pressure, your blower will suffice as long as you don't add any more pipework or raise pressures. If your organ was mostly voiced originally on 10" wind, your blower would be borderline. Normally an organ of this size, especially if it had a few ranks on 15" wind, would have a 10 hp machine shipped with it.

- 3. I have a relay which is just about full, that is, the contacts at the short bar already have wires attached. I still want to add tonal percussions. What is the easiest way to do this?**

Ans. There are two methods; One would be to add more contact blocks. Unfortunately most relays don't have space. The other method would be to build a diode circuit divider by removing one stop from the contact block and wiring it to a buss bar, which forms the basis for no more than three gang switches. Each switch will have to be loaded with diodes to prevent circuit "flyback." Wire each switch to the new stops and wire stop wires to switch action magnets. It can also be done completely with solid state and eliminate all gang switches. The chest magnets on these "new" stops should also have spark suppression diodes installed to reduce current on relay contact. Diodes are available from Resiner or Durst.

- 4. When you depress a note from the keyboard, a short bar moves in the relay causing a number of contacts to be common. This then goes to the buss bars and the rank is not playing unless the switch is energized. I can't understand why you cannot have multiple contacts (several wires on one pin) in the relay. Since the short bar goes down, all the contacts are positive anyway. No one has yet to give me a satisfactory answer.**

Ans. Let me answer your question with this illustration; Let's say you have wired the lowest pedal relay note so that one contact is wired to the Tibia 8', Tuba 8' and String 8'. Now you register the pedal so that all three of these stops are on. If you register only the Tibia 8' in the Solo manual and play the bottom C on the keyboard, you will also hear the Tuba 8' and String 8' play. How? The lowest pedal relay note was energized by the low C on the Tibia which you played on the Solo. The positive impulse traveled to the relay spreader, through the Pedal Tibia 8' gang switch all the way down to the pedal relay where you wired it

also to the Tuba 8' and String 8'. Since the three stops were on in the pedal, they will all play together on the Solo. In conclusion, when building an organ on the unit system, where notes are being played more than one pitch on more than one keyboard, it is necessary to isolate each unit note by means of an electronic or electro-mechanical relay.

5. Why does a magnet fail?

Ans. If you mean electrically, there are several problems; Rodents have been known to chew on magnets especially in country churches. The lead wires can break off at the terminal if acid was used as a flux. During the twenties, some firms used acid not knowing what it would eventually do to the connection. Then the cross-over wires between the two poles can break from being brittle with age or because they were not well-protected when manufactured. Wurlitzer magnets will fail because of the dipping varnish reacting with the wire and paper core causing the wire to break.

6. When playing a sustaining chord for more than a few seconds, my regulators sink down and collapse which naturally eliminates the trem and the chests that I presume are starved for air. My blower is a kinetic with a 10" outlet, reads 1000 cfm, 1165 rpm and wind at 4". It is now driven by a 3 hp motor at 1750 rpm with static pressure at 12". I believe that the cfm goes down as the wind pressure goes up. Is this correct? How do I know if the blower is large enough for my instrument? I have only one 16' stop, the Tibia Clausa. The 10" outlet reduces to 8" and feeds across the chamber. Then it T's off into 6" lines, one to each regulator. The 8" goes into a wind trunk. Off this trunk is a 3" supply to the Vox only, since the Vox has its own regulator. My organ is a 2/7 hybrid.

Ans. You are correct in assuming the volumetric capacity is reduced by speeding up the blower and increasing the pressure. The blower now would have about 1/3 its original volume capacity which is

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marginal for your application. The most glaring problem would be the size of your conductors. I would increase the blower feed from 10" to 14". Then the supplies to your regulators should be increased from 6" to 10". With three tremas going and with all that unification you are using up more air than those conductors can deliver.

7. My Wurlitzer regulator has two wires that stick up through the top and when depressed, the top elevates. My friends tell me not to push these rods down as the factory set the location of these rods. Are they correct?

Ans. Those two rods are connected to dowels just under the top and when the regulator top drops, the rods push the flappers open to admit more air. They are in three stages: The small cone valve, which is evident by the bolt and two nuts loosely on top, opens first. When more air is needed, the second valve, which is the small flapper, opens to admit more air. When larger demands are made on the regulator, the top continues to fall and pushes the large flapper open. The theory is to slow the regulator down so that it can be tremulated. Pushing them down will do them no harm. The three stage flapper system also prevents the regulator from tremulating on its own.

8. I have two reed pipes that are slow, like two to four seconds. I would appreciate some help on this.

Ans. Assuming the tongue and shallot are clean; try this: with one hand hold the pipe upside down and hold the tongue down firmly

against the face of the shallot. With your other hand free, use a nail set or scratch owl and bur-nish the tongue the full length. Do this only gently at first to avoid removing too much curve. To test, put the pipe back in the hole and peck the key. If the pipe will start, then you have corrected the problem.

9. What is the make-up of the Wurlitzer style 235 and how does it compare to the style H?

Ans. The style 235 is a 3-manual eleven rank organ as follows:

- Harmonic Tuba 8', 16' . . . 85 pipes
- Diaphonic Diapason 16' . 85 pipes
- Tibia Clausa 8' 73 pipes
- Clarinet 8' 61 pipes
- Orchestral Oboe 8' 61 pipes
- Kinura 8' 61 pipes
- Viol D'Orchestra 8' 85 pipes
- Viol Celeste 8' 73 pipes
- Salicional 8' 73 pipes
- Flute-Bourdon 16' 97 pipes
- Vox Humana 8' 61 pipes

The Style H is three manual, ten ranks with the same ranks as the 235 except without the Salicional 8'.

Note: The chamber designation for the Violin II in the last issue of Q&A, question 3 should be S, not M.

Correction: Our reader Gary Rickert pointed out that my answer to the rush of air through the magnet problem with dead notes was incorrect. The answer should have been to re-leather the primary, not the secondary (Unless there is no primary). □



Carl Norvell, Cap Young and Betty Norvell at the Holiday Inn in Corsicana, Texas, where Carl is inn-keeper. He was the fourth president of ATOS, serving from 1964-1966. Betty was national secretary during that time.