THE WURLITZER THAT WOULD NOT DIE

PART TWO

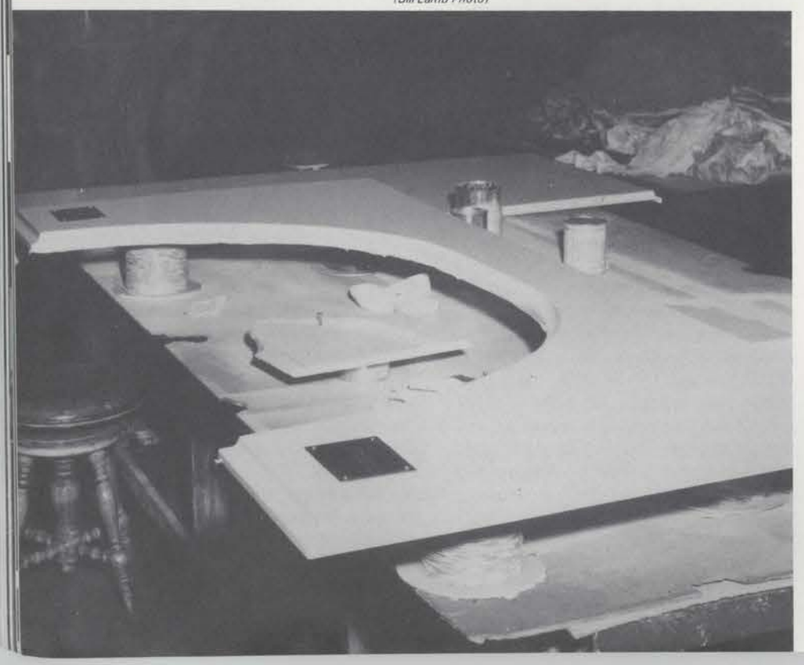
by Bill Rieger

The only thing good about the Chicago Theatre Wurlitzer console was its name. At the outset, we thought the console was only a box of keys and tabs, and we could refurbish it in short order. We couldn't have been more wrong. With the theatre opening at 9 A.M. *every day,* and closing at midnight or later, it became apparent that the console would have to come out of the pit. Everyone agreed that the wiring was worse than a case of spaghetti. And what alarmed us even more, was that the organ was completely unplayable; partly because of many, many cut wires, and that weeks would have to be spent ringing out the various sections. So, after disconnecting hundreds of wires, some associated with tablets, "suitable bass" and combination action, we removed the assemblies as follows: top, fall boards, pedal board and pedals, upper left and right panels of console, five bolsters, plus the second touch rail, three combination action chests, traps, relays, expression pedal relay and piano pedals.

With everything out of key desk, four of us picked it up and set it on stage leaving a mountain of scrambled cable wires. If I could ever use that "magic wand" it would be to straighten out and remove all unused wiring. With all parts of the console on stage, our work was cut out for us for some time to come – though we didn't know it then.

Val Escobar and Frank Pokorny concentrated on the console refinishing. We use the term "refinish" for I have lost track of the number of coats and rubbing operations. It seems as if we were all stripping paint off of one assembly or another, and for a while the 15 pieces of console woodwork looked worse and worse. But, as it is darkest before the dawn, the magic combination of the Harvey Williams portable sprayer in the hands of Val and Frank turned the tide – soon everything was bright ivory. One look at the manual, and Terry Kleven offered to rebush all of the manual keys. It was decided not to recover the keys and lose the last touch of Jesse Crawford. So George Smith and the rest of us cleaned and polished keys for another spell. The cooperation among the club enthusiasts is remarkable; no one could buy that kind of dedication.

Console top in refinishing department (one of the old scenery rooms on 4th floor). *(Bill Lamb Photo)*



The tab contact blocks, too, became quite a production. First, member Tad Doose built a wire cutting forming tool for all the contact wires. With new 26 gauge silver wires installed, the contact blocks looked almost like new. Val spent weeks at the console installing new pedal contact wires and blocks. Frank spent an almost equal amount of time straightening or replacing manual contact wires and blocks.

Tablet pneumatics were recovered assembly line fashion with some of us removing the old leather and several, including George Smith and Russ Joseph, releathering. We did not know of perflex at the start, so some are done in brown leather, some in polyken, but most in the newly accepted polymethane material, better known as perflex. A special glue is required, and is a little more difficult to handle, and requires heat to cure, but the result is a super flexible pneumatic rather impervious to moisture.

The three large combination chests which house the magnets, and primarys for each tablet pneumatic (over 450 of them in this organ) were all disassembled, cleaned and rebuilt where necessary; each chest was tested electrically with air before reassembling into the console.

New upstop and downstop tablet felts were installed. This seemed like a straight forward operation, but unthinkingly, we used a soft, thick felt, resulting in a reduced tablet movement. We adjusted the contacts to compensate for this, but, to our dismay, the contacts settled out of adjustment, because the felt compressed. If there is a lesson from this experience, it is to use a firm woven felt instead of the softer pressed felt for stop tablets.

Frank, Val, George and Russ cleaned and straightened and replaced many manual contact blocks. Cleaning and straightening every contact wire in the organ ran to almost 3000 wires and contacts. The fellows still have

their sanity, and we are still friends!!!

After replacing all contact blocks, each contact wire was tweezed, aligned and formed by the timeless patience of Val Escobar. Val has some special watchmaker glasses which enlarge the tiny contact wires to look like a garden fence. It is important to be sure all contacts are positive. Those of you who have worked on multibolster Wurlitzer consoles are aware of the careful and patient approach this requires.

The main and upper bolsters, (after being refinished, and with new contact wire and connecting cables) were secured by mounting screws. Adjustment of each bolster was made by the mounting screws to insure proper tablet tension and contact action. After all bolster pneumatics and three combination chests were reinstated into console, and wired to proper tablets, pistons and console terminal panel, the air was temporarily connected to the console and all tablet functions were checked by energizing each magnet with a 12 volt battery. Final adjustments of all tablet and piston contacts were carefully made.

No one missed the coffee break. Along about 10:30 P.M. of each Tuesday work session, member Carl Tompke served the tired crew cake and coffee (specially blended by Val). Longtime stage hand Frank Carson usually joined us and tales and stories flowed freely.

Returning the console to its left platform in the orchestra pit was easier said than done. The console was removed in sections, but now was to be returned carefully, fully assembled. Thanks to CATOE Chairman Russ Joseph, who secured the loan of two store fixture jacks, we inched the console down from the stage to the pit on Easter morning, 1973, at 6:30 A.M. During the course of the operation, we received full cooperation from the theatre – the booth men turned on the big spotlight, and for a minute, we were all star performers. Congenial stage hand, Frank Carson, assisted us with more lights and delayed the opening of the theatre that Sunday morning by more than 20 minutes.

The traps relay was missing some

The finished front boards are ready for assembly (Val and George). *(Bill Lamb Photo)*

A serious moment as bolsters are lowered to position (Bill, Val, George, and Frank). *(Bill Lamb Photo)*

magnet parts, and it was decided to transistorize it, which reduced its size and eliminated the operational relay noise in the console.

With the console safely in the pit, we quickly pushed it onto its lift, and made a tent over the console of black velour, so we could continue work on the console during theatre hours, and begin the huge job of wiring. Carpet was carefully fitted around the console.

Under the black tent, the manual contact strips were given their final inspection and fitted under each of the four manuals. Contact spacings were adjusted to operate during the middle 1/3 of key travel. The first touch contact spacings on the accompaniment manual were set at 1/4 key travel and second contact key springs at 3/4 key travel. It was only through the inexhaustible patience of Val Escobar that these adjustments could be made. Adjustment of the pedal contact strip was somewhat easier because of the greater key travel.

With the manual and pedal contacts in place, George, Russ and the writer spent hours on the telephone (between the console and relay room). We played each key and pedal to check out the operation of the relay, using the very limited vocabulary of "ok," "next" and "dead." The correction for the dead terminals was usually a better solder connection at the relay room junction board. In the few cases of open magnets, they were repaired by resoldering a corroded connection at the center tap or the start or finish lead wire connections. Next, all tablets were checked out by checking operation of their respective stack switches in the relay room. After correcting several reversals, poor solder connections and dead magnets, we found several switches had been cut out years ago; so our agenda now includes rewiring these into the organ as time permits.

A large part of the expense and wiring in a console involves the combination action. In the Chicago Theatre console, there are more than 230 tablets, and in order for the combination system to function, each tablet must have an "off" pouch, primary and magnet, and an "on" pouch, primary and magnet. As you may know, the "on" and "off" pouches are located above, and below, each tablet, and activate each tablet to an "on" or "off" position.

The more than 450 primary pneumatics and magnets are located in the three large combination action chests mounted between the cheeks of the console. For each magnet, a control wire is required (more than 450 of them in all) which runs downstairs to the setter board room in the basement. Each of these wires is energized at the setter board to check out the on/off combination action for every tablet. We will go into the details of the setter board and combination action in greater detail in a later issue.

The relay room is the brains of the outfit, so extra care was taken not to damage any of the thousands of aged wired connections. As all of the operations depend on voltage (12 V DC) from the generator in the blower room, it was found that the reliability was vastly improved by cleaning all supply terminals. The next installment will cover "what we mean by cleaning up a chamber." □

A typical schematic showing parts required to control the cymbal.