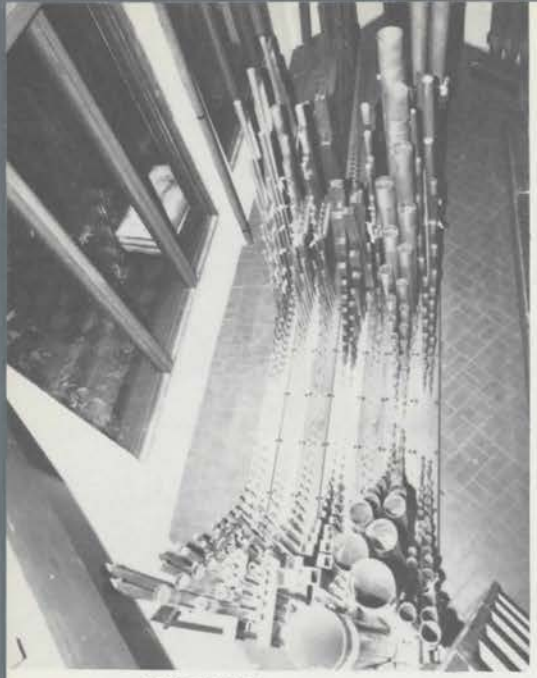
John Ledwon's Wurlitzer Rebuilt

This story begins many years ago when John was a lad of fifteen. His parents bought him the 3/11 Wurlitzer formerly installed in the Duluth Lyceum Theatre. This instrument, which was frequently heard by John's mother when she was a girl, was duly installed by Buster Rossiter in the Ledwon home at the west end of the San Fernando Valley.

John Ledwon working on chest pneumatics.

When John was in his early twenties he decided it was time to expand the instrument and relocate it in an acoustical environment which would enhance the tonal qualities of the organ and not disturb the neighbors. John, then a student at UCLA, took classes in acoustics at the university to further his knowledge of this rather inexact science. The knowledge gained from this experience plus extensive analysis of many residence theatre organs resulted in a design for the Agoura residence which departed from traditional organ installation techniques in many ways, the most obvious being the double-floor chamber where the manual chests and offnote chests are either installed in the floor or on the floor with all winding, regulators and tremolos installed below, thereby acoustically isolating these noise-producing devices from the music-producing portion of the organ. While discussing acoustical isolation, it should be noted that the organ chambers were installed in the center of the residence to isolate the organ from the outside. This cocoon-type construction, coupled with the fact that the site chosen to build upon was quite rural with a 60-foot drop-off on the western side of the property, produced an installation that could not be heard distinctly outside no matter how loudly the organ was played.

Unfortunately the site, which isolated the sound of the organ so effectively, was directly in the path of the Agoura/Malibu Fire of 1978 which raced through the area on October 23. The rural area chaparral and cliff caused a fire storm which literally blew out 90 feet of ¼" plate glass windows, thereby letting the fire into the house. The fireproof roof collapsed when the roof beams and supports gave way, causing the rear portion of the house to fall into the lower level game room. The organ was spared total destruction by a combination fire wall/acoustical isolation wall which contained the fire long enough for firefighters to beat down the flames . . . but not before the organ had suffered tremendous heat, water and fire damage. Generally, any pipe over four feet in length was damaged beyond repair. It should be



Main chamber.

Main chamber

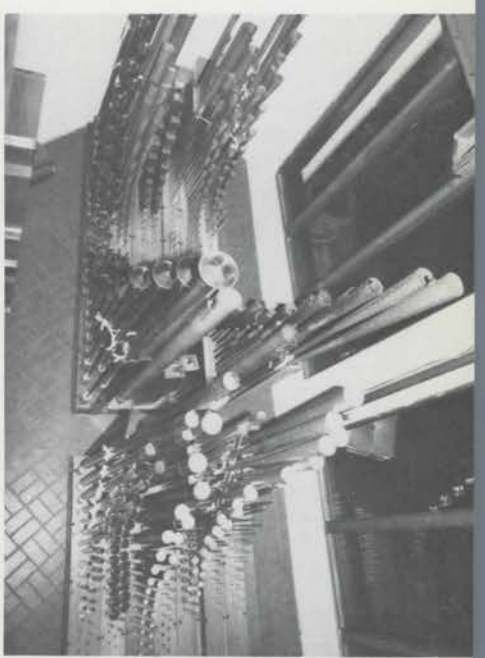
Main chamber.

Main chamber. Metal pipes are rare 16' Wurlitzer Diaphone (on 15" wind); wood pipes are Morton 16' Tuba.

Lower level, Main chamber.

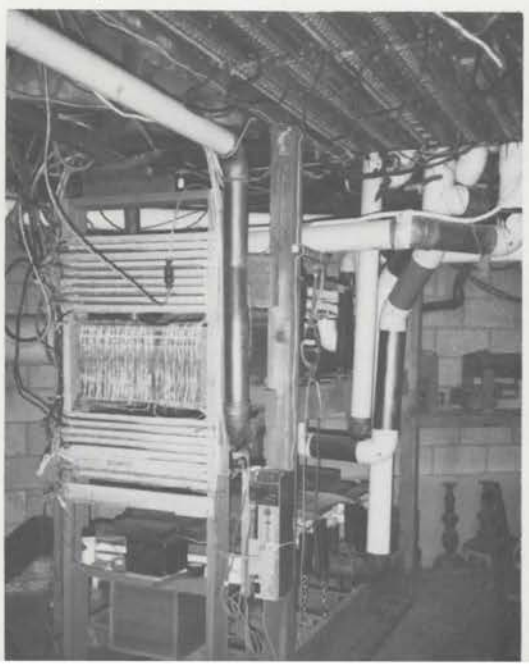
Solo chamber.

Lower level, Solo chamber.



Solo chamber.

Solo chamber and percussions. Note Kinura and Vox Humana located high up in chamber in front of 16' String.



noted that the organ manual chests were installed in the chamber floor so the pipe toes were at floor level. When the rubble had cooled sufficiently to permit entering the organ chambers the solo chamber was found to be intact, with no apparent damage. Unfortunately, about ten hours after the original fire raced through the house the still-smoldering debris ate through the fire wall and ignited the 16' Tibia Clausa pipes and chest. This second fire all but wiped out the solo chamber, even though John and a friend, Mike Ohman, were guarding the burned-out residence throughout the night. The next day an incredibly large salvage crew showed up to help salvage the remains of house and organ (see Oct./Nov. 1978 issue of THEATRE ORGAN).

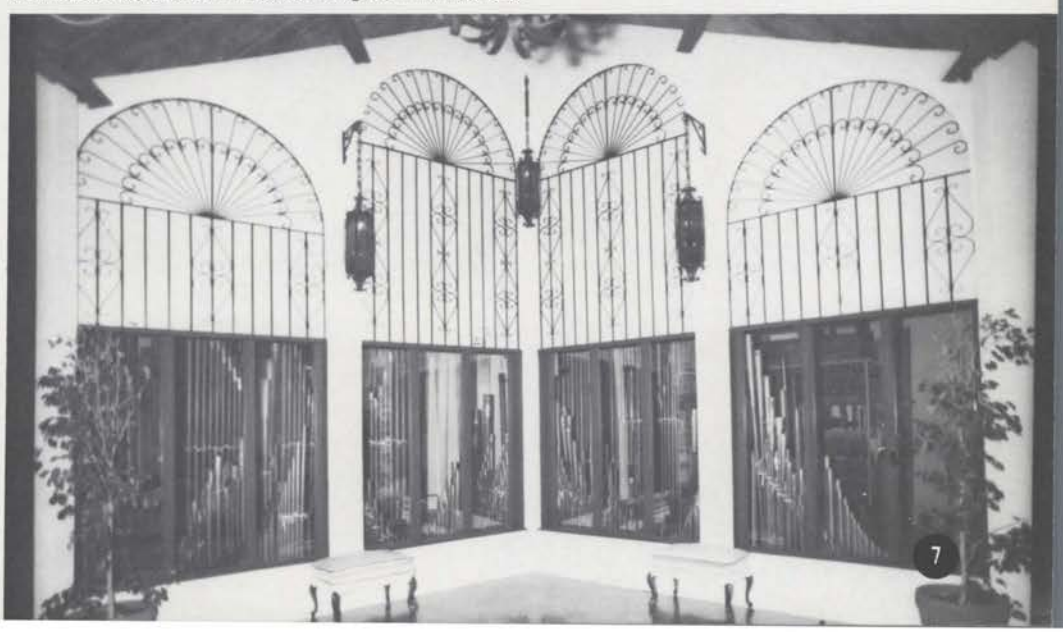
Thus begins the story of the rebuilding of the Ledwon Wurlitzer. Two weeks after the fire the water-soaked manual chests were opened and all pallet valves removed. The toe boards were then blown out with compressed air. Inspection at the time showed one warped toe board and three with lamination separations, all easily solved by weighting the warped board and glue sizing the lamination separation. Shortly after the chest inspection the console was torn down. While the console did not suffer any direct flame it was heavily damaged by smoke, heat and water. It was discovered at this time that all the silver key contacts had warped in the intense heat, rendering them useless. All exposed combination action pneumatics were brittle and in most cases stuck together. Stop keys were melted, shrunken and distorted to the point of being grotesque. The ivory manual keys were turned a golden brown which would sand white again, the only problem being hairline cracks which would not whiten. The console woodwork was miraculously undamaged except for blistering of the finish; all ornamentation was intact and solidly glued to the case.

At this point a decision had to be made whether to reinstall the instrument or not. It was decided to rebuild what was salvageable and replace that which was destroyed or badly damaged. An inventory at the time showed the following: all 26 ranks of manual chests rebuildable; most offnote chests rebuildable (16' and 8' Tibia Clausa chests destroyed); 12 ranks of pipes usable (some 80 pipes had to be

Console end of Ledwon living room.

Living room during early stages of rebuilding.

Chambers at opposite end of Ledwon living room from console.



Console being delivered, before gold leaf was applied.

reconstructed — from entire pipes to just soldering seams); nine trems and regulators were rebuildable and the 15-hp blower was usable. The sleigh bells, chimes and toy counter were rebuildable, even though badly heat and smoke damaged. The two three-manual relays, which were located under the living room, were undamaged and eventually sold. As the console was mechanically a total loss, it was decided to go with a solid-state relay/combination action system. After some research, the multiplex system designed and built by Robert Trousdale was selected. His system incorporates such features as: a cassette tape programming system for the combination action, which allows the entire combination action memory to be changed in about 15 seconds, thereby allowing two or more artists virtually instant access to their own combinations; an excellently designed multiplexing system; superior workmanship; an interface to the Marantz Superscope Pianocorder System; and a host of "goodies" from a digital player to a unique third- or fourth-touch system. Bob also bent over backward to customize the system to John's personal needs, even making changes hours before the opening party.

Special thanks are due Gene Davis and Bob Smith who, using virtually every possible tool from toothbrushes to knives, cleaned and sanded smooth the console woodwork and ornamentation. Following this task the console and Steinway Grand (which was rebuildable, including a completely new action) were sent to Orange County for refinishing. The console remained there for Bob Trousdale's multiplex/digital player installation, while the piano came north to Chatsworth for Jack Thomas to install the Pianocorder System, which uses a cassette tape instead of paper rolls to activate the piano reproducing system; again all solid state and multiplexed. When adapted to a pipe organ, this system makes an absolutely fantastic, fully expressive organ piano while not giving up any of the tape playing features of the Pianocorder. And it only requires eight wires from the organ to the piano! Cost, probably far less than buying and rebuilding an upright player piano (of course, you must have a piano in which to install the Pianocorder).

In the summer of 1980 John and friend Todd Collins totally rebuilt 29 ranks of manual chests. There were chest parts (approximately 4000 primary valves, 2000 pallet valves, 4000 primary and secondary pneumatics, 58 bottom boards and other miscellaneous chest parts) scattered all over the 7000-square foot house. By the end of September of 1980 all manual chests were reassembled and placed in their respective floor mountings. Work progressed at a snail's pace through the winter and spring, because of John's professional commitments. In the summer of 1981 Todd and John once again went to work on the offnote chests and percussions. This work proceeded very slowly because of the heavy smoke and heat damage to the salvageable percussions. Consequently, John hired

Todd Collins polishing violin pipes.

STOP LIST

MAIN CHAMBER

Tuba Horn 16-4
Open Diapason 16-4
Concert Flute 16-2
Flute Celeste 8-4
Tibia Clausa 8-2
Violin 8-2
Violin Celeste 8-4
Gamba 8-4
Gamba Celeste 8-4
Dulciana 8-4
Dulciana Celeste 8-4
Clarinet 8
Orchestral Oboe 8
Vox Humana 8
Chrysoglott
Chimes

SOLO CHAMBER

English Post Horn 16-8
Brass Trumpet 8
Horn Diapason 8-4
Tibia Clausa 16-2
Solo String 8-4
Solo String Celeste 4
Viol d'Orchestra 16-2
Viol Celeste 8-4
Quintadena 8
Brass Saxophone 8
Oboe Horn 16-8
Kinura 8
Harmonic Flute 4-2
Vox Humana 8
Krumet 8
Harp
Glockenspiel
Xylophone
Sleigh Bells
Toy Counter

Steinway Grand Piano with Pianocorder

another friend, Marty Blair, to help restore the percussions. As it was almost impossible to find replacements for the damaged percussions, Todd and Marty totally restored the Wood-bar Harp bars and resonators and the Glockenspiel bars and resonators. These two percussions took days and days to restore. John was able to locate and purchase a unique Wurlitzer Wood-bar Harp action, one with outside pneumatics. This very old original Wurlitzer action has a primary/secondary pneumatic system followed by the power pneumatic, located outside the wind chest, thereby eliminating the push rods and all the extraneous noise these actions produced. The older system is obviously superior to the later-style Harp actions; one wonders why Wurlitzer changed systems — cost probably — the older is far more complex (but extremely fast). By the end of summer '81 the organ was basically rebuilt and installed, but not winded or wired. Work again slowed considerably during the fall and winter months. But by spring 1982 the piano was delivered with the Pianocorder installed, the console and chamber demultiplexers were in place and winding and wiring began in earnest. The winding (all done in PVC plastic) was completed by July and the wiring was more or less completed in mid-August. Going on concurrently with winding and wiring was pipe refinishing and cleaning, which took John, Todd and Marty the better part of six weeks to complete. All wooden pipes were stripped and refinished with either Olympic #700 stain or orange shellac, followed by a finish coat of satin urethane. Metal pipes were cleaned in an acid bath, rubbed with soap-filled scouring pads, then polished with 4/0 steel wool. This process cleans tin, Hoyt metal and zinc pipes beautifully (watch the zinc as the acid will eat the pipe if one is not extremely fast and careful).

By mid-September the organ was virtually complete. The only problem was it wouldn't play worth sour apples. As in any total rebuilding, more little problems surfaced than can be enumerated. There were some "quality control" problems in rebuilding — in one chest several pallet valves were left out, in another the primary pneumatic board was installed with the screws only finger tight, causing half a rank to be completely dead with air pouring out of energized magnets. Ciphers, though, are the main nemeses still causing problems at the time of this writing. A great deal of this probably stems from the fact that the old static wind lines feeding the original installation were reused. These wind lines were cleaned as well as possible (obviously not well enough, as some portions were inaccessible) but sand, ash and general rubble keep appearing with disgusting regularity on valve seats and magnets.

During the mad dash to the finish line there come to mind the names of several friends who went beyond the call of duty to help get the organ ready. Mike Ohman, Gene Davis, Bob Smith, Marty Blair, Todd Collins and Bob Trousdale all deserve accolades for forcing a very recalcitrant beast to behave in a civilized fashion. It is interesting to note that the organ became playable about 4:30 p.m. on October 23. Dinner was to be served at 6:00 p.m. to all those who gave of their time and energy in the salvaging and rebuilding of the organ. □