

# HANDS ACROSS THE SEA

The Story of England's Most American Wurlitzer

by John Potter, with  
contributions from Eric Penney

All photographs, unless otherwise stated,  
by John Cooper or Eric Penney.

"A lovely organ in a magnificent hall," "You know, it will take a long time for me to come down from the clouds — what a beautiful instrument, totally sexy!" "I love this beautiful instrument very, very much," "A sound beyond imagination," "I wish all theatre organs could sound in halls like this one," "The organ is superb and one of the finest I have ever played," "The organ is even better than I remembered from 1978 and even then it was world class," "I'm honoured to have been invited to perform on this divine medium," "Fantabuloso!"

These are extracts from the Organ Visitor's Book at Manchester's Free Trade Hall. Even if in visitor's books you never offend your hosts, surely "they" can't all be wrong! Who are "they"? I will not embarrass anyone by divulging who wrote what, but if I tell you that the words came from the pens of Walt Strony, Rob Calcaterra, Lyn Larsen, Lewis Gerrard, Carlo Curley, Maria Kumagai, Dennis James, Ashley Miller and Hector Olivera, you will begin to realise why Opus 2120, born in North Tonawanda in 1930, fathered by Jesse Crawford as a Publix No. 1, has retained her American connections. If I go on to say that Jesse Crawford made a six-day personal appearance in June of 1933, that the console bears a plaque to the effect that members of the 1976 Safari to England contributed funds that paid for the restoration of the Trumpet and Saxophone ranks, and that the late Dick Simonton, in his capacity as a Vice President of The Lancastrian Theatre Organ Trust, attended the re-opening concert in 1977, you will, I hope, understand why we feel that we have a special affinity with our many friends in the States.

So what's so special about this Wurlitzer?

For Americans, 20-rank-plus jobs were not uncommon, but we only received three in England — the Trocadero, Elephant and Castle, London (4/21); the Empire, Leicester Square, London (4/20); and the Paramount in Manchester (4/20). The Paramounts in Leeds and Newcastle came close with 3/19s, but overall our "mighties" were not so mighty and most of us thrilled to 16 ranks or less, much less in some cases! The sound of a big Wurlitzer in a big theatre is the most magic sound in the theatre organ world, and the Paramount Manchester was always reckoned to be one of the best installations in this respect outside the States. That we have been able to not only retain, but enhance this sound in making a transplant, and to have transplanted the instrument into an auditorium as big as the original theatre is an achievement that cannot be said of any other transplants in England. This is one of the reasons Opus 2120 is special.

Let's start at the beginning! At 7:00 p.m. on October 6, 1930, the 3000 seats in the new Paramount in Manchester were filling with an audience that was doubtless trying to forget that on the same day the gigantic R101 airship had crashed in France. Their thoughts would, temporarily at least, be diverted at 7:45 p.m. by the spectacle of Mr. C. Drewett Smart at the Paramount organ, the Paramount Orchestra directed by Mr. Lionel Falkman, and the original Plaza Tiller Girls with dancers Gaston and Andre, all of whom preceded Maurice Chevalier and Jeanette MacDonald in the film *The Love Parade*. The following day the press noted that Mr. Smart "performed some amazing feats of wizardry on the great organ said to be the largest in Europe."

From then on, the Wurlitzer remained in constant use for 43 years, up to the day that the blower was turned off prior to removal. There have been 14 resident organists, one of whom, Henry Croudson, made 21 recordings (78 rpm) released between 1936 and 1938. The organ has been broadcast by 24 organists and it has been featured solo on television three times. For 21 years until the theatre closed for re-development, Ronnie Wood was house organist.

During these 43 years in the theatre, the organ was cleaned and overhauled on only one occasion, in 1947, when the then resident organist, Charles Saxby, altered the specification by removing the Solo Vox Humana and replacing it with an English-made Post Horn, at the same time re-engraving all the stop tabs. No other work, apart from regular (and latterly irregular) tuning, was carried out until The Lancastrian Theatre Organ Trust came into being in 1968.

Who, and what, is The Lancastrian Theatre Organ Trust? A Trust in England is usually registered as a charity and as such, when its aims have been accepted by the government agency, is entitled to certain tax benefits. Prior to 1968, rumours had abounded about the imminent conversion of the Paramount, by now renamed the Odeon, into a modern multi-cinema complex. Equally, rumours about potential purchasers of the organ were frequent. So a band of local buffs decided the time had come for action to make certain that this famous Wurlitzer that had already entertained the Manchester public for so many years, stayed in the city. A meeting was held, a committee formed, and The Lancastrian Theatre Organ Trust was born.

It was obvious from the start that if the

project was to have any chance of success, the first essential would be money. At the instigation of Mr. Brian Bint, then General Manager of the Paramount/Odeon (and who, continuing our American connection, is now resident in Florida), the Trust commenced a six-year series of Sunday morning organ concerts presenting many well-known organists from Britain and sometimes from abroad. There were some special highlights in the series, such as in 1969 when Reginald Dixon made his first appearance for many years away from the Tower Ballroom, when the theatre was filled, and in 1971 at the age of 78, Reginald Foort's return to Manchester. This must have held many memories for him, as two blocks from the Paramount is the Palace Theatre where he gave his first public performance on his travelling Möller organ, now in the Pasadena Civic Auditorium. Silent film and stage presentations were also produced and the Wurlitzer was busier than ever!

The biggest leap forward financially was the Trust's decision to make LP recordings, as none had been produced of this organ since the Henry Croudson 78s mentioned earlier. Since then the Trust has produced and sold worldwide 20 albums recorded on either the 4/20 Wurlitzer in its original and new homes, or on the other instruments owned or cared for by the Trust.

Mention of these other instruments prompts me to digress to say that the Trust subsequently went on to buy the 4/14 Wurlitzer from the Gaumont in Manchester (still in storage awaiting a new home), the dual console 3/8 Christie from the Pyramid/Odeon in Sale now installed and in concert use in the

Blue Coat School, Oldham, Manchester, and took on the responsibility for the restoration of a unique Willis/Davies orchestral organ with grand piano attachment and Aeolian Duo-Art roll player in Tatton Park, Knutsford, a local stately home.

However, back to the Paramount organ and our search for new premises. After all, a theatre organ of this size is not something you can put in the corner of a living room! A tentative approach was made to the City Authorities in Manchester as the civic hall, known as the Free Trade Hall, was organless. Well, not quite. Before the Blitz the hall had possessed a fine four-manual concert organ, but this, with the whole interior of the hall was destroyed on the night of December 22, 1940, by a well-aimed German bomb. After the war a new auditorium was built within the facade of the old building which had survived the bomb, and space for a new pipe organ was provided in the roof of the building. But these were the days of the latest thing in organ building, the pipeless organ, and the roof space remained vacant. Instead of a new classical pipe organ, a comprehensive Compton electronic organ was installed, but although its paper specification was impressive, its sound wasn't and it never gave complete satisfaction. This was over 30 years ago when the electronic organ was in its infancy. With John Compton's reputation as an organ builder and inventor, I am quite certain that the Free Trade Hall organ would have been improved over the years, had he lived. As it was, by 1971 the City Council was faced with spending a large sum of money to put this organ right without any guarantee that it would be any

better, and the Trust's tentative enquiry as to whether there was a chance of installing the Wurlitzer in the Free Trade Hall received a positive response.

Having obtained provisional agreement, preliminary surveys were carried out in the theatre and the hall and it was found that the organ could be installed. This was fine, except that after years of rumour the Paramount/Odeon was still open! But there's rarely smoke without fire, and by 1973 we knew that our chance was coming when the redevelopment plans for the theatre were announced. What the Trust didn't expect was a most generous act by Rank Leisure Services, who ran the theatre, in arranging with the freeholders of the building, who actually owned the organ, for it to be donated to the Trust. The Trust, in turn, donated it to the City. On July 8, 1973, eight organists who had been associated with the Paramount appeared in a Farewell Concert (an LP album of this event is in preparation for release this year) and after "Auld Lang Syne" the console sank down and the blower was switched off. When the theatre finally closed its doors 19 days later, a great deal of dismantling had already taken place.

Up to this date the Technical Crew of the Trust had been hard at work while the theatre was still open, tagging all cable runs to chests, looms, switch stacks, etc. All terminations of the main cable to the relays were marked and all trunking defined with white paint codes. A detailed plan of the layout of each chamber, a schematic drawing of the wiring in the Relay Room, and a detailed photographic survey of all parts of the chambers were made by

Aerial view of Manchester City Centre, taken in 1986. This shows how close the organ has remained to its old home.

(Airviews [M/er] Ltd. photo)

- GAUMONT —————  
(4/14 Wurlitzer, removed)
- PARAMOUNT —————
- TOWN HALL —————  
(5 manual Cavallé-Coll, 77 stops)
- THEATRE ROYAL —————  
(3/10 Compton, removed)
- FREE TRADE HALL —————
- The new G-MEX EXHIBITION HALL, —————  
opened in 1986, converted from  
the old Manchester Central Station.





Exterior of the Paramount, Manchester, circa 1932.

(Photo courtesy of Manchester Public Libraries)



The Odeon (Paramount) as it appeared just prior to closure.

(Mack of Manchester Ltd. photo)

draughtsmen and electrical members of the crew. This work, in fact, had been completed some time before the closure, and while negotiations over the organ went on it seemed to the Technical Crew that things were standing still. But, of course, the many problems which would arise (and there *were* many!) were discussed over and over again, possible solutions being suggested, accepted and discarded, *ad infinitum!*

What were these problems? The 20 ranks were situated in two chambers on either side of the proscenium arch, the Main on the left and the Solo on the right. Above the Main chamber were the Relay Room and an open chamber containing the master xylophone and piano. The latter rooms were reached through the Main chamber by a small trap-door and a cat ladder, and the floor of the Relay Room was no less than 60 feet up from the stalls. It was obvious that the piano, master xylophone, key-relays and switch stacks would have to be brought out and down through the front grille, as would the windchests, reservoirs and resonators from the Main chamber below. On the Solo side matters were a little easier, as access to the chamber was by a normal concrete staircase by the dressing rooms.

As soon as the theatre closed a start was made on disconnecting the main cable at the relay union board, for it was felt that the sooner the console could be removed the better, before the dreaded pneumatic drills came through the front door. The cable was 140 feet in length and weighed 420 pounds. While engaged in cutting out bricks to enlarge the hole through which the cable passed, we felt something cylindrical embedded beneath the protecting box-shaped metal conduit and we eventually disinterred a half-empty bottle of whisky. Was the closure of the hole the last act in the installation of the organ 43 years before and did the men responsible celebrate with a "drop"? We like to think so!

Meanwhile, the orchestra rail in front of the console was demolished and the console eased off onto a trolley, and skated up the stalls area which had already been cleared of seats, out into the lobby and the street. Here its arrival in a busy mid-afternoon caused considerable interest among passers-by who

included a representative of the law. The whole operation of getting the weighty console onto an open truck was carried out with frequent, gratuitous advice from a score of passing "experts." The temptation to reply in a forthright manner when the going got difficult was only just overcome, resisted because the law was insisting that we not block the sidewalk any longer! With the console gone, it was now possible to attack the reinforced plaster grilles, starting with the one in front of the Main chamber fronted by a huge canopy. The removal was done with a little science and a great deal of brute force, and great chunks of rococo plasterwork were sent thundering earthwards. We detected a certain amount of glee from our younger members as this operation took place! The piano came down first, using a block and tackle we had mounted on a specially built steel beam attached to the theatre's structure. It had been decided to add the piano to the 4/14 Wurlitzer in the Gaumont, on the opposite side of the street a few yards away, which had lost its own piano some years before. Mounting the piano on a

trolley, the party set off down the road, only to be informed by the law who had arrived again that it was possible they might be charged with driving a piano the wrong way down a one-way street!

With the grilles demolished the contents of the chambers rapidly came down, but it should be noted that, having brought them down to stage level, all parts had then to be lifted eight feet out through the stage door, as the street levels were higher at the back of the theatre. The largest and heaviest single part of the installation was the bigger of the two windchests in the Main chamber. This carried seven ranks and anyone who has had anything to do with a Wurlitzer will appreciate the problem this monster posed. One member was heard to mutter "Once this b\_\_\_\_\_ is out of the theatre we'll have to change our name to The Lancastrian Theatre Organ Truss!" By this time the drills were roaring away, the atmosphere was full of dust, and so it was with sighs of relief that the last boxes and bags of screws and the ground frame were removed from the theatre on August 14, 1973, 24 days after the closure of the doors to the public.

Arrangements had been made for the organ, apart from the console, to be stored in the basement of Manchester's superb Victorian Town Hall where, two floors up, a five-manual Cavallé-Coll concert organ is situated. Here, the parts were destined to lie for several years while work commenced on the new site for this worthy instrument. The console was housed at a local firm of organ builders, Messrs. Jardine and Co., an equally worthy temporary resting place, for Jardines had been sub-contractors for Robert Hope-Jones' early organs and no doubt Robert himself had been inside the building where now, 80 years after his first organ at St. John's Church, Birkenhead, was completed, one of his ultimate creations awaited renovation. Here is another reason why Opus 2120 is a "special" and it should also be noted that Manchester is only 30 miles from the birthplace of Robert Hope-Jones at Hooton Grange near Chester, and The Lancastrian Theatre Organ Trust actually possesses pipe-work from the St. John's, Birkenhead, organ built in 1892.

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Theatre advertisement for June 10, 1933. Courtesy of The Manchester Evening News.



Henry Croudson at the Paramount Wurlitzer.

A relocation of the magnitude of a 4/20 Wurlitzer in a well-used public hall involves a great deal of advance planning before work actually starts, and this is mainly how we were occupied during many months to come. The Trust had to have meetings with many city officials to settle details of structural and electrical work, and to define how the many heavy parts of the organ would be lifted into the Free Trade Hall. The new chamber area spanned the width of the hall and was 32 feet wide, 16 feet deep and 20 feet high, with additional areas at either side on a higher level. The centre section had to be divided in two, which would become the Main and Solo chambers, with the master xylophone and the marimba harp (now to be unenclosed) situated on the left side raised area and the relays and a new enclosed percussion chamber on the right side raised area (facing stage). Behind the proposed chambers was an ideal room for the blower and another room that

made an excellent workshop.

The first things that catch the eye on entering the Free Trade Hall are the three massive baffles above the stage. The one at the rear is actually under the organ chamber, with the front two projecting out below the swell shutters. These baffles are very substantial and there was no difficulty in locating the Wurlitzer upright piano on a special platform on top of these.

While the building work was underway, plans were also in preparation for the removal of the roof light over the blower room in order to facilitate the lifting in by crane of the heavy sections of the organ. On Monday, March 18, 1974, a monster crane arrived which effectively blocked the street for most of the day and lead to further minor confrontations with the law. A 120-foot jib was needed to raise the items high enough. The first thing to go up was the first item out at the Paramount, the much travelled upright piano, which this time

was driven the right way up the one-way street, after we had disconnected it from the Gaumont Wurlitzer. All the other heavy bits and pieces followed, some of them occasioning much interest. One lady, seeing a 14-foot section of 16" trunking ascending, wanted to know if we were installing new central heating.

Clever readers will realise that you can spell Hall as "haul," and this part of the project came to be known as "The Tale of The 79 Steps." Financial restrictions meant that the crane was on site for the minimum length of time possible, so all the bits and pieces that could be taken to the chambers via the stairs went up that way, hence the 79 steps, this being the precise number (engraved on all our hearts) from the street level to organ chamber. Seventy-nine may not be a great number, but it most certainly SEEMS a lot when one is hauling something heavy and/or awkwardly shaped, as most organ parts seem to be!

The Free Trade Hall is the home of the world famous Hallé Orchestra and is in constant use. As all labour was voluntary and took place at weekends, progress was slow, as anything noisy could not be undertaken when rehearsals were in progress. The new chambers were not finished and decorated until mid-January 1975. However, before then, on December 27, 1974, the console arrived and the major task of getting it into the Hall and then up to its new position 16 feet up in the side circle began. Once again, Manchester's traffic was interrupted by the positioning of a monster mobile crane at the front of the hall. Three forklift trucks were required to handle the job. The smallest one was used to assist in the assembly of the two big ones and when they were ready, we began. The crane driver did a superb job in lifting the console and then, projecting the jib at sidewalk level, lifting it through the arcade that runs in front of the lobby and actually placing it just inside the lobby doors!

Meanwhile, the first forklift truck had lifted the second onto the stage. It then returned for the console and raised this six feet onto the forks of the second truck, which then undertook the hair-raising task of turning through

The console emerges into the lobby.



The console goes onto the lorry — just! An operation which brought much advice from passers-by and a minor confrontation with the Law!





Front of the Main chamber after removal completed, showing steel beam attached to the theatre structure for the necessary block and tackle.

180 degrees, moving ten feet towards the side circle, then lifting the console 17 feet so as to clear the edge of the console area. Members of the Technical Crew swear that they went grey in minutes as the console swayed from left to right when the lift was at its maximum! One member, Eric Halsall, went even greyer, as he volunteered to wriggle under the console and connect the flexible wind trunk before it was lowered onto the platform. But at last it was in place and the Crew left to resume their Christmas activities.

Anyone walking about in the passages near the 79 steps on the evening of December 23 could have been excused for thinking that Mr. S. Claus had been partaking of the Christmas spirit a little early and had arrived down the wrong chimney on the wrong night in consequence! In fact, we had roped in (excuse the pun) a member of a caving club to descend the four-foot square service shaft that runs from

Resonator of the 16' Diaphone about to be lowered into the chamber area through the roof of the Free Trade Hall. Tower of the Town Hall is in the background.



top to bottom of the hall, to secure brackets for the main cable, and five days later the same member returned to fit the cable into the brackets, it having by then been placed in position by the sheer physical effort of hauling it up the shaft to the new relay room. Although this sounds like a horrible job, it was in no way as hard as the reconnection of the cable which ran from the relay to the Solo chamber via the roof in the Paramount, for it was necessary to cut through this with a hacksaw in order to remove it. This cable, only half the size of the main cable, with just over 1000 wires, presented one of the biggest problems of the whole installation, for every wire had to be traced from obscure markings in the relay room to the actual windchests in the chamber.

It had been the intention to install the traps in an "open" chamber, but subsequent thinking on this led to a flying visit to North London to procure two complete sets of swell shutters, the only remaining parts of a 2/8 Wurlitzer left in the cinema concerned. One set of these was fitted to the new percussion chamber in the Free Trade Hall, where they were provided with a switch on the short key rail to place them either under the control of the Solo swell pedal, or hold the shutters in the open position. This arrangement has worked very successfully on the new installation.

At last, at the end of March 1975, work commenced on laying the ground frame in the Main chamber and we felt that the project had really begun.

The installation of the larger off-note chests and the bass pipes of the Diaphone and Bourdon ranks was then undertaken while there was still room for maneuvering. Wind regulators were cleaned and checked, screwed down into position and their springs fitted. Then came the task of placing the two main windchests in this chamber. Much to our relief, once these were in position and their associated wiring run back through the Solo chamber and up into the Relay Room, the cable was found to be just long enough to reach the relay stacks.

There then commenced what was perhaps the most awkward and time-consuming part of the rebuild — the trunking-up of the wind supply to the various chests and tremulants. Because these items were almost all in a different relationship to each other from that in the Paramount, the multiplicity of various diameters of metal trunking had to be cut, shortened or extended, and in some cases replaced completely. In the latter case, much use was made of high quality PVC rigid piping and bends normally used in the building trade. When much later it was the turn of the Solo chamber to be trunked-up, matters were even more difficult, as the original layout had the two main windchests set up double-decker fashion, with a four-rank chest on top of a six-rank, whereas they now had to be placed at the same level, one behind the other. Not one original piece of trunking could be re-used, and the same applied to the wooden building frame, which had to be redesigned from scratch.

All this activity was accompanied by an-

## THEATRE ORGAN



Interior demolition (August 1973) as the theatre is converted for multiple screen operation.



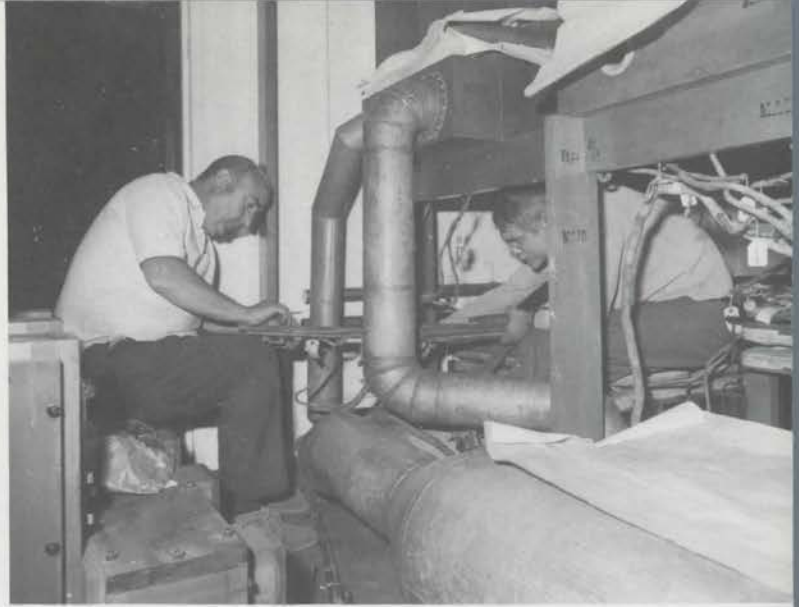
Almost there! Lifting the console to its position at circle level in the Free Trade Hall.

We made it! Console is held above its final location while the flexible wind trunk is connected.





Eric Penney releathering the six-rank chest from the Solo chamber.



Unravelling the "knitting" under the Main chamber chests!



Eric Halsall at work on the relay stacks. He completed the entire work almost single-handed.

Solo chamber completed, showing the Brass Trumpet and Saxophone ranks cleaned and restored by courtesy of many friends in the U.S.A.



The blower, a British-made "Discus" unit, is switched on for the first time, an event which was recorded.

Completed Main chamber. Note the very useful substitute wind trunking in the top right corner.



other important section of the rebuild — the reassembly and wiring of the relays. Month after month of careful, patient work was carried out almost single-handedly by Eric Halsall, who then went on to spend weeks more in tracing and identifying the 1080 wires of the Relay-to-Solo cable which had been cut during removal. Parallel with this, work was being carried out in the Blower Room, wiring up the 15-hp motor and all the associated control gear, plus the Transformer/Rectifier which supplies the DC action current.

And so, ever so slowly it seemed, the whole complex musical giant took shape. There were one or two days that remain fixed in the memory, such as the first time we started the blower and could hardly hear the few bass pipes that were playable for the banshee shrieking of all the wind leaks. And a memorable one when, with the wind leaks sealed, the first two ranks of cleaned and restored pipes were planted and suddenly we were





Exterior of the Free Trade Hall, with queues forming for the opening concert, September 11, 1977.

aware that we had an organ again.

Finally, on July 8, 1977, by a remarkable coincidence four years to the day after the Farewell Concert in the Paramount/Odeon, we heard again that glorious thrilling all-enveloping sound, as the organ was demonstrated to the City Authorities who had had the faith in us to accomplish such a difficult task. Without their support and help from time to time, we may well have given up. But all of us present on that day, as Nigel Ogden played

classical and theatre music, felt that it had been worth all the blood (we had a few casualties), sweat (gallons of it), tears (well, almost at times) and man-hours (8000 of them) just to hear those golden voices once more.

The Free Trade Hall project is, without doubt, one of the most prestigious of its kind in Europe, if not in the world, and is an installation that has proved a magnet to all who enjoy the organ as a means of entertainment. The organ is in use on an average of an hour a

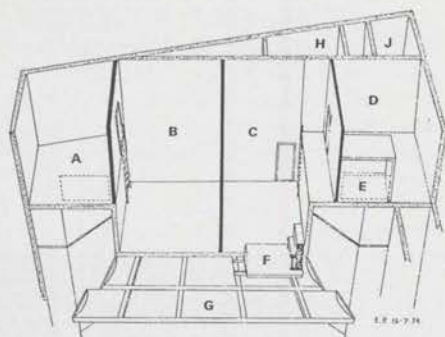
day for all kinds of purposes, and is heard regularly on the BBC as well as on recordings. Our latest LP, titled "Rawle At The Hall" and featuring the well-known artist, Len Rawle, is now available from our Treasurer, Mr. Val Drinkall at 4 High Elm Road, Hale Barns, Altrincham, Cheshire, England, priced at \$12.00 by airmail, International Money Orders or dollar notes gratefully accepted. We now have in the Solo chamber our own Hall of Fame, started when the Crew asked a visiting organist to autograph a shutter motor when it was out for repair. This is now a tradition we'd like to maintain, if circumstances allow us to remove a motor, get it signed and return it.

To end this account, when on September 11, 1977, a full house heard the organ officially re-enter public life in the presence of The Lord Mayor of Manchester, the late Dick Simonton, Sir William Downward, the Lord Lieutenant of Greater Manchester, and the Chairman of the Council and many other VIPs, with a message from Her Majesty the Queen, we in The Lancastrian Theatre Organ Trust were, and are, proud to have been associated with the preservation of Opus 2120, England's most American Wurlitzer.

The Trust welcomes all visitors and the organ can be played by prior arrangement by writing to the Secretary, David Alldred, "Tolcarne," 13 Gibb Lane, Mellor, Stockport, Cheshire, England SK6 5LZ.

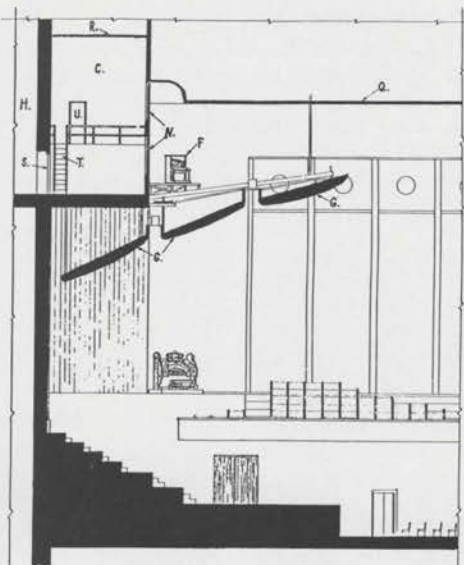
PS: Never mind who wrote what in our visitor's book. Your kind remarks and superb playing were a wonderful reward for four years unremitting work. Thank you, all of you. □

## FREE TRADE HALL



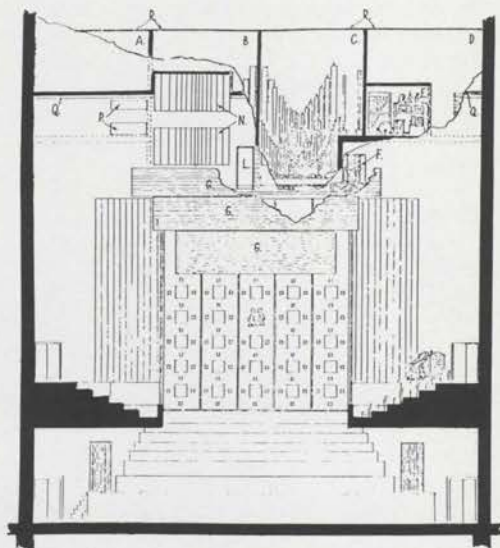
Cutaway view.

- A. Open chamber containing Marimba Harp and Master Xylophone.
- B. Main chamber containing Diaphonic Diapason, Flute, Tibia Clausa 1, Solo String 1, Viol d'Orchestre, Viol Celeste, Dulciana, Vox Humana, Clarinet and Tuba Horn.
- C. Solo chamber containing Tibia Clausa 2, Solo String 2, Quintadena, Kinura, Orchestral Oboe, Oboe Horn, Brass Trumpet, Brass Saxophone, English Horn and Tuba Mirabilis.
- D. Relay room, with
- E. Open chamber containing small Xylophone, Glockenspiel, Chimes, Sleigh Bells and all traps and effects.
- F. Organ piano, standing on platform above baffle.



Longitudinal section.

- G. Acoustic canopy over orchestra platform.
- H. Blowing plant and Transformer/Rectifier.
- J. Staircase from ground floor.
- L. Door from Main chamber onto baffles.
- N. Shutters in front of each chamber.
- P. Open grilles.



Cross section.

- Q. Roof level of auditorium.
- R. Roof level of chambers.
- S. Door from Blower Room into chambers via Solo.
- T. Iron cat ladders to raised platform either side.
- U. Door from Solo chamber into Relay Room and Percussion chamber.