

THE PISA PROGRAMME

by DESMOND LAVERS

with photographs by GRAHAM REID

IT WAS a return to familiar ground when I went out to Pisa with Graham Reid at the end of March this year, to continue work on the big Italian television contract won by this Company in 1953. Between August 1953 and February 1954 Bob Franks, assisted by David Jarvis and myself, installed the stations of Monte Serra at Pisa, and Monte Mario, Rome. Each consisted of a Band Three $2\frac{1}{2}$ kW vision transmitter and $2\frac{1}{2}$ kW F.M. sound transmitter with associated feeders, combining unit and

monitoring gear. This was our contribution to Phase I of Radio Audizione Italiana's plan for the television coverage of all Italy.

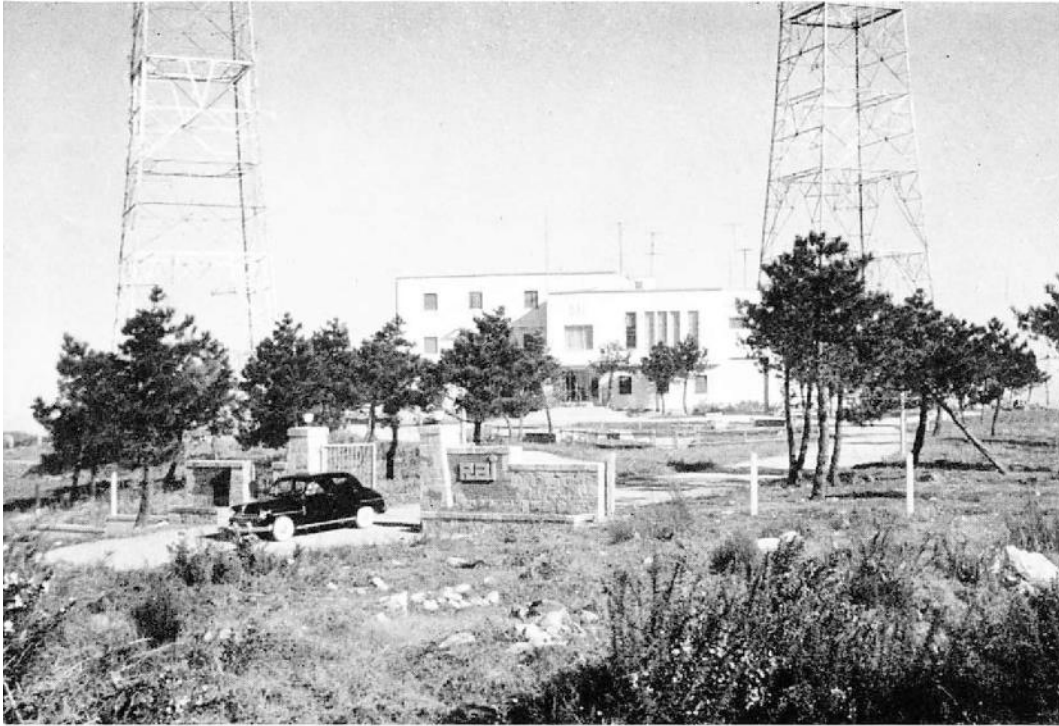
Now, in Phase II of the plan, we were to supply two $7\frac{1}{2}$ kW vision amplifiers to Rome and Pisa, and also, through our associate company Marconi Italiana, tender and eventually receive the contract for three low band 5kW vision transmitters and their associated F.M. sound transmitters, and two Band Three $2\frac{1}{2}$ kW vision transmitters with their associated sound transmitters. These latter will be built and installed by Marconi Italiana.

To start the ball rolling on this second stage, Graham and I arrived in Pisa to install and set to work the amplifier which would increase the power of the vision transmitter to $7\frac{1}{2}$ kW. It was the first of its type ever built by M.W.T. and we expected a few teething troubles.

Pisa is purely a transmitter station and is fed with its programmes by 200 M/cs link equipment from Rome, Turin and Milan, via low power repeater stations dotted all over central and northern Italy. It is on the top of Monte Serra, three thousand feet above sea level, overlooking all Tuscany and the Arno River as it winds its way through Pisa on the last few miles to the sea. The journey up is somewhat hazardous and would only be attempted in a jeep or a car you cared



One of the most famous building groups in the world: the Romanesque cathedral, baptistry and leaning bell tower of Pisa. Graham Reid took this through an archway in the ancient town wall



Mountain station. The sun is up and the Marconi engineers are going down to Pisa after their night's installation work on the amplifier at the transmitter station 3000 feet up on Monte Serra. The work had all to be done at night to avoid interrupting transmission

little about. Monte Serra rises steeply from the plains and the rough road, only about six feet wide, twists and turns round hairpin bends which would make any excursion off it the last you'd be likely to take. It is about three-quarters of an hour's drive from Pisa, and once you start the ascent it's bottom gear all the way with an occasional break into second if you're lucky. With us the old Fiat creaked and groaned as it laboured up, collecting dust like a vacuum cleaner and jolting so much that Graham was always afraid my head would fall off as I dozed off to try and shorten the journey.

Both the Rome and Pisa stations have been on the air for more than a year. This meant that we had to do all our installation and testing of the new amplifier between the hours of 11 p.m. and

8 a.m. so as not to interrupt programme transmission.

Co-axial switches were needed so as to be able to change the driving transmitter in the shortest possible time from the aerial to the amplifier for the night's installation and testing work, and back to the aerial again in the morning for the day's programmes. The teething troubles we had expected did not disappoint us, and technical problems have a way of appearing much magnified at the witching hour of three o'clock in the morning, especially after a month or two of doing this sort of work at night. But our customer R.A.I. could not have been more helpful.

On 8 June, after two and a half months' work, the amplifier was brought into service, since when it has been operating very satisfactorily. That part



ABOVE: *D. Lavers, left, installation engineer, and T. Cooper of Transmitter Development, working on the modulator after the amplifier had been installed*

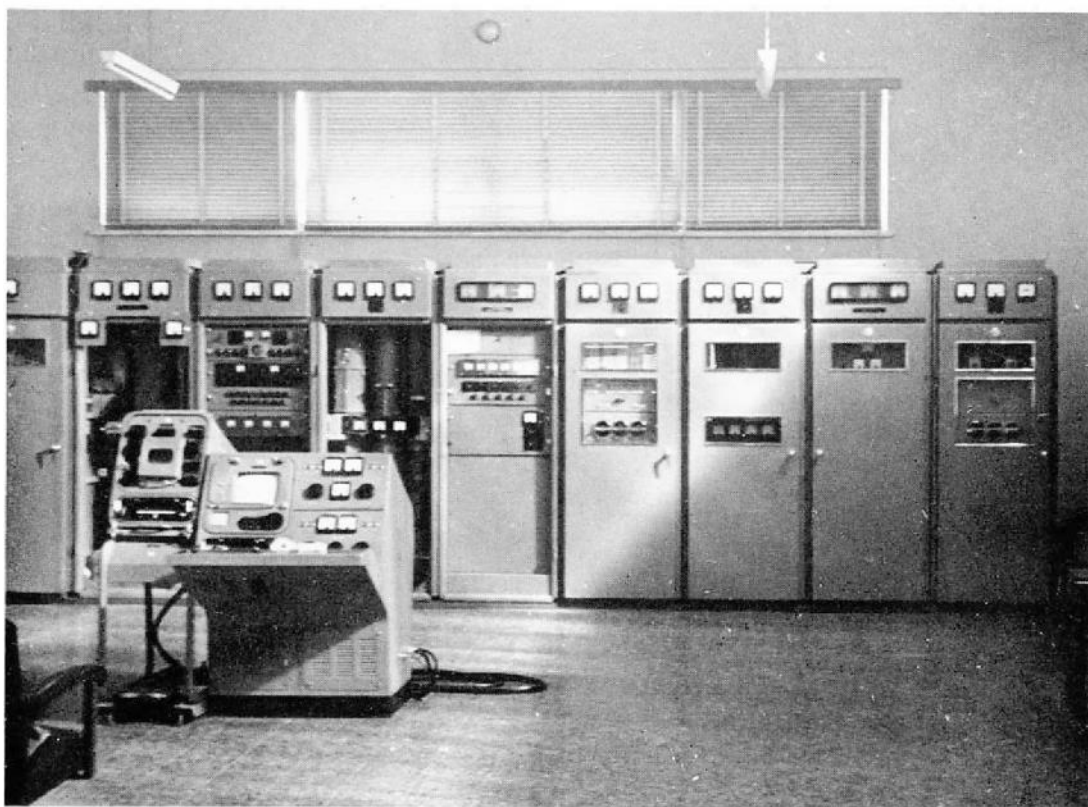
BELOW: *With the Fiat Campagnola which ground its way up and down the steep hairpin bends of Monte Serra every day are, left, Tom Cooper of Transmitter Development and Graham Reid, an installation engineer*

of the job over, we turned to meeting the overall specification. Tom Cooper of Transmitter Development came over at this stage to lend his specialist knowledge in modifying the modulators to suit the new requirements of the amplifier.

The other vision amplifier, which was destined for Rome, will not now be installed there, as R.A.I. have decided that their coverage is quite sufficient and they would rather save the amplifier and use it with one of the two Band Three vision transmitters to be installed next year in the southern half of Italy.

Including last year's visit, I have now spent six months altogether in Pisa, and I am beginning to feel quite a native, but I am ashamed to say that I still do not speak fluent Italian. It is a pleasant town, divided almost exactly in half by the smooth Arno River. It still shows its battle scars from the final German stand after the Allies had driven them up through Italy, and little has been done to clear up the rubble, but a lot of new building has been put up on the south side. The north side is old Pisa, which includes the Leaning Tower. This was





The sound and vision transmitters, when installation of the amplifier, not all visible on the left, was nearly complete. In the foreground is the control desk

originally designed as a campanile or bell tower and was built in three stages: the first architect took it to the third balcony and then due to subsidence of the soil stopped; years later it was taken to the sixth balcony by another architect and then he in turn became alarmed and stopped, and finally in later years it was completed by yet a third who added the bell tower. There are four large bells which are never rung for fear of vibration, and four smaller ones which are pealed on special occasions.

The tower stands close to the cathedral and the nearby baptistry, and together the three form one of the most famous building groups of the world. The simple classical beauty of the six tiers of open arcading on the tower is duplicated on the façade of the

marble-white cathedral and on the lower storey of the baptistry. The cathedral was begun in 1063, and the Baptistry and campanile nearly a century later, but the pure Romanesque architectural style has been maintained throughout and the three buildings are designed as one. Unfortunately the baptistry was later surmounted with Gothic additions.

Thus the Piazza dei Miracoli, where the three buildings stand, draws visitors from all over the world as the years go by. People often stop in Pisa for a night on the way south to Rome, and many Marconi people on holiday have probably done so. It's certainly worth a visit.

Now our job here is finished I am moving on to Rome, with a little leave before returning to England. Another stage in the Italian installation is complete.