

T1154 TRANSMITTER AND R1155 RECEIVER

Originally designed and produced to provide long range communications and navigation facilities for British bomber and coastal command aircraft during the Second World War. The equipment was also used in air sea rescue launches, ground stations and ground radio vehicles. There were many variants of both T1154 and R1155 to suit the needs of the different applications.



T1154L illustrated

In the aircraft the microphone and associated equipment only afforded limited voice quality, just that necessary for efficient communications. In this display the microphone is a modern desk mounted type capable of good quality and thus demonstrating the enhance qualities of the Marconi design to receiving stations.

Receiver type R1155 is usually used alongside the T1154. There were many variants to suit the different applications. Airborne equipments used aluminium cases while for seaborne or ground use steel was used. By modern standards the receivers were rudimentary but being of superheterodyne design were a significant improvement over most pre-war radios.



A direction finding capability was provided by the use of a directional loop aerial permitting bearings to be taken. The twin needle visual indicator could be used for homing on a transmitter. The loop was manually rotated and often installed close to the radio operator. In the Lancaster the loop was housed within the cockpit canopy.



loop aerial



visual indicator

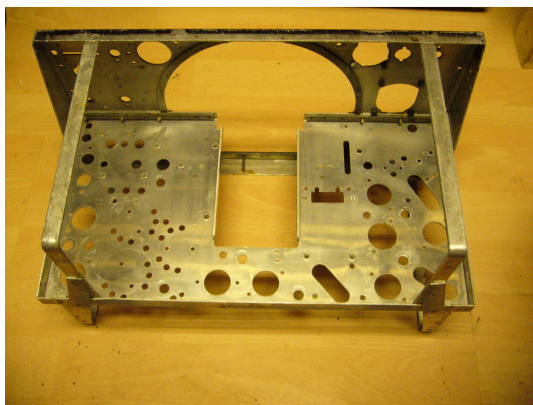
The T1154 displayed was rescued from the corner of a barn by Brian (G4LUL), it was in a very sad state and had been used by ducks as a nest box. The top covers and several pieces were missing. The picture below shows its condition prior to restoration. The components in the unit were marked 1944.



The chassis and case were corroded and the whole unit was filthy being inundated with earth, straw and dust. The unit required washing and then renovating and slowly rebuilding piece by piece. Fortunately the principle components were unbroken and with cleaning were reassembled. The case and front panel were repainted, new panels made and labels printed. New valves were purchased and a new RF ammeter found and fitted.

After cleaning most capacitors and resistors were found to be serviceable, although the rubber insulation on the wiring was perished and rewiring was needed. The Marconi pre-set tuning mechanisms were found serviceable after cleaning and lubricating.

The R1155 receiver was acquired in far better condition, however nearly all of the internal components and wiring were in an unserviceable condition. It quickly became apparent that a complete strip down would be the quickest way to renovate the equipment.



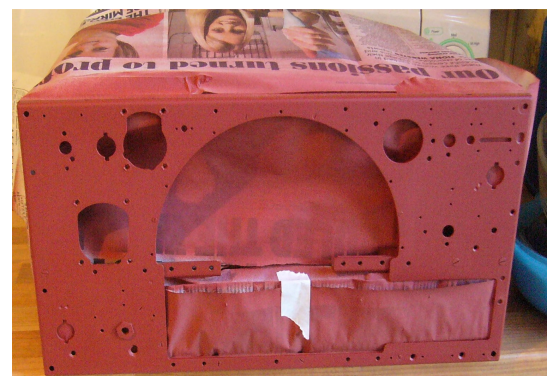
Stages in the renovation

Above left chassis stripped and cleaned

Above right, reassembled

Right, first coat of etch primer.

It took 12 months to renovate the receiver from start to finish.



THE FINISHED STATION

To operate the transmitter under present day radio regulations and operating conditions it is necessary to improve the frequency stability. To provide this a modern synthesised frequency generator is fitted separately as an external drive for the transmitter and can be seen in this photograph located in between the T1154 and R1155. The unit also incorporates the microphone pre-amplifier and station control switching.

An additional unit on the right of the R1155 provides power, loudspeaker audio and a position for the DF visual indicator.

The high voltage supply for the transmitter is hidden under the table.

