Radio Yesterday

Can you imagine living in a place and time in which the nearest 'emporium' was hundreds of miles away and the power was supplied from 200V D.C. mains; where high tension batteries were built from stacks of 1.5V 'inert cells', the only available portable voltage supply was 6V 120Ah 'accumulators' and 'black boxes' were forty years in the future?

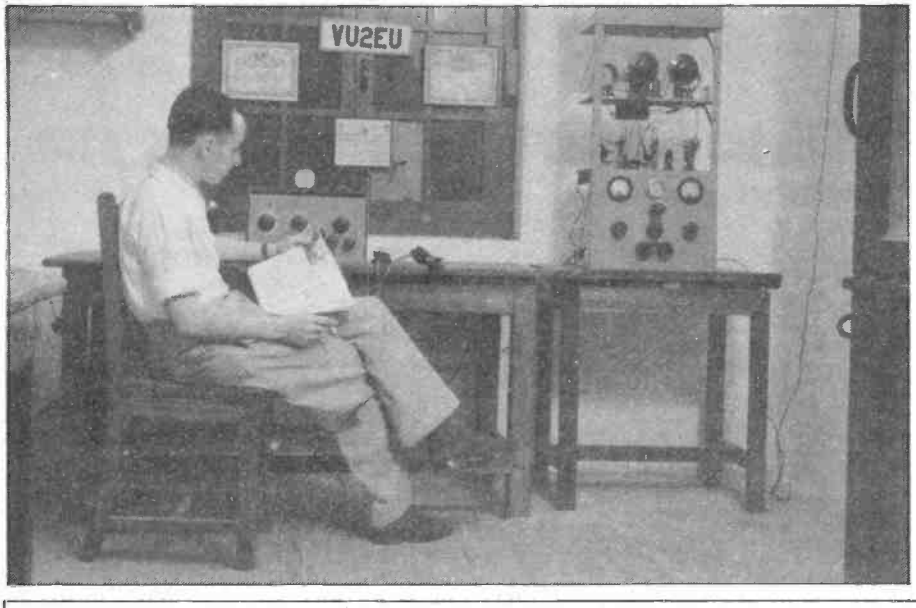
Radio in India before World War 2. By George Metcalf, G6VS, ex- VU2EU.

Such was Meerut in the Central Provinces of India, scene of the outbreak of the mutiny in the early nineteenth century ('just in case' of further outbreaks, even in the mid 1930's, troops were fully armed when attending church parade!) and the operational 'birthplace' of VU2EU nearly four years before the outbreak of the second world war.

The Station

Equipment was not easily obtainable as the nearest supplier was located in Calcutta, about thirty six hour's train journey from Meerut. Radio Supply Stores, Dalhousie Square, Calcutta was owned by Dr. Sen who was very helpful and would attempt to meet even small orders for items not in his immediate stock. They were also main Eddystone agents and stocked a large range of valves, mainly USA types. There was also another shop in Bombay (again hundreds of miles away), but who were not very helpful or co-operative unless the order was of large value.

With a little foresight a 7172 variable frequency crystal together with some variable condensers were obtained in the UK prior to departure, and being attached to the workshops of 3rd Indian Divisional Signals it was not long before sufficient bits and pieces had been assembled to build a 1-v-1 receiver (1-v-1 indicated that the line-up was RF-detector-output), a very popular combination in those days. The RF stage was a variable-mu RF pentode, the regenerative detector a triode and the output stage an LF pentode. All valves were of the 2 volt filament type requiring 150 volts of high tension (This is where the 1.5 volt inert cells came into their own!).



The transmitter presented slightly more of a problem as it had to operate from the DC mains and the only suitable valves available were AC/DC LF pentodes and tetrodes of the Type 43 and 25L6. The type 43 was used for the crystal oscillator, one 25L6 as a frequency doubler to 14 MHz, and a pair of 25L6's in push-pull as the power amplifier on 14 MHz. For 28 MHz operation these were connected in parallel and operated as a power doubler. With 200 volts to the anodes of these valves (makers recommended 125V max!) this system worked very well for a couple of years with an average life for the valves of about four months. Replacements from The Radio Supply Stores cost approximately twenty rupees which was about £1.50 at the rate of exchange in those days.

The antenna was a windom, simple to construct and very popular in the 1930's. Approximately 32'6" long, it was fed with a single wire feeder tapped approximately one third from one end and connected to a simple ATU. Matching was done by tapping the feeder down the ATU coil and tuning for maximum RF in the feeder.

The photographs show the station layout of VU2EU and were taken either late 1936 or early 1937, and following the fashion of those days the transmitter was constructed on the rack and panel system with the DC mains smoothing chokes and condensers in the base, the transmitter proper occupying the next two shelves with the ATU on the top.