

# Rhodium Plated Uniselectors

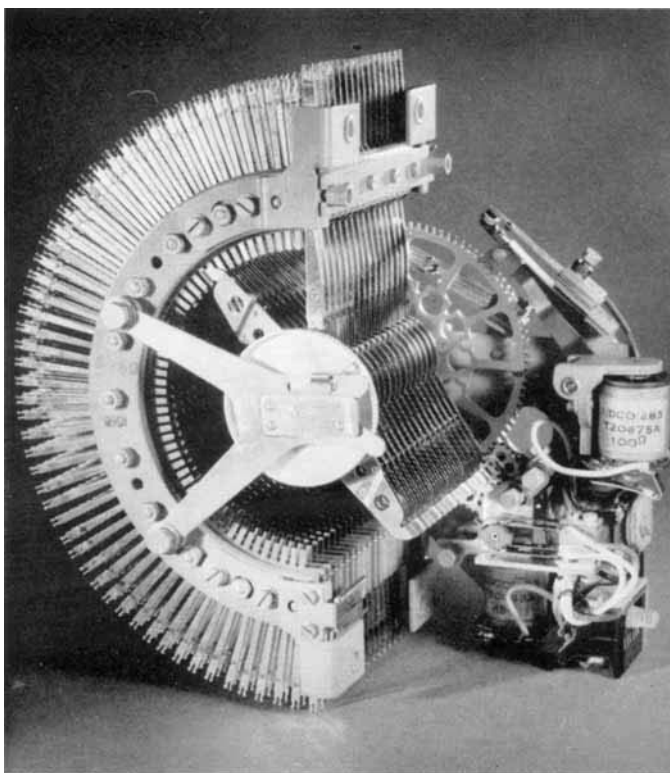
## IMPROVED CONTACT PERFORMANCE AT LOW VOLTAGES

Uniselectors are electromechanical multi-position switches which are employed almost universally in automatic telephone and telegraph exchange equipment. Among the numerous functions that they perform in such equipment are line-finding, line-selection and call storage. For this type of duty base metal contacts fulfil the requirements, and 18 per cent nickel silver has been generally adopted since it provides the best combination of low contact resistance, good spring properties and long operational life.

However, attention has more recently turned to the use of uniselectors in applications where they are called upon to handle lower voltage levels than those encountered in telephone and telegraph exchange equipment, and here the tarnish film which nickel silver readily forms may become a source of trouble due to the high and unstable values of contact resistance that it may bring about under these conditions of light electrical loading.

With a view to overcoming this problem A. E. I. Woolwich have investigated the use of electrodeposited rhodium on the unselector contacts, and uniselectors having an electrodeposit of rhodium 0.00025 inch, applied direct to the contact areas, are now in use. This deposit, which has a hardness of 800 V.P.N., gives an outstandingly long operational life coupled with a consistently low contact resistance.

Examples of the uses of uniselectors with rhodium plated contacts include the switching of programme lines for the broadcasting and television authorities as well as in telemetering—the remote scanning of thermocouple outputs, generally of a very low order.



*A high-speed motor-driven unselector by A.E.I. Woolwich, with contacts rhodium plated to a thickness of 0.00025 inch*