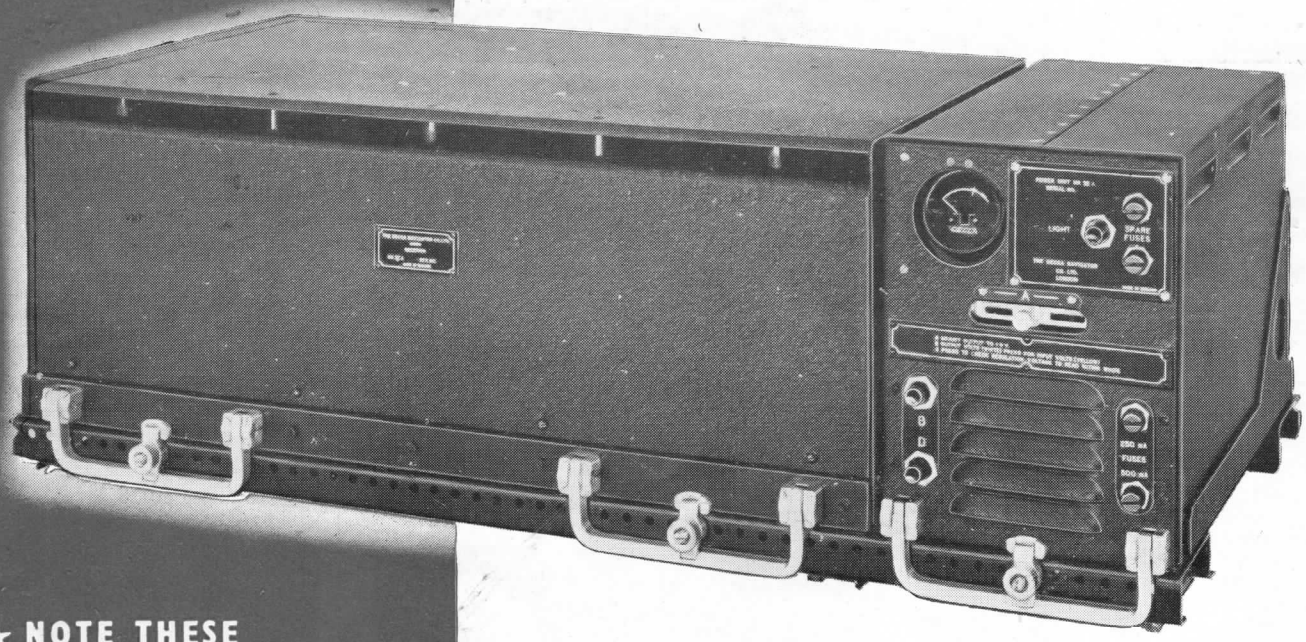


## ★ NOTE THESE SPECIAL FEATURES

- Automatic Lane Identification
- Multi-Chain working
- Fully flight-tested
- Minimum weight and size
- Designed for standard aircraft racking
- Narrow band-width crystal gate receiver ensures freedom from interference
- Compact, robust, reliable
- Conforms in all details to recommended standards for aircraft equipment
- Extreme simplicity of operation
- Decca Navigator Coverage throughout N.W. Europe

# *The Decca Navigator Mark VI Air Receiver*

All associated with air transport are aware of the great difficulty of selecting a really satisfactory radio aid to navigation. The exacting operational requirements of modern aviation, and the need to be certain that the aid adopted today will serve effectively for many years to come, make most difficult the task of those responsible for a decision.

The Decca Navigator Company, therefore, in designing a satisfactory radio navigational aid, has considered the following factors of primary importance :

★ A radio navigational aid must meet the most exacting demands of air navigation in terms of coverage, accuracy, and reliability, and should, as far as possible, meet the requirements of all classes of users.

★ It should be capable of immediate realization and provide a realistic and practical service for civil aviation today rather than a perfect service for aircraft of some indefinite future.

★ While meeting today's requirements, it should be capable of an orderly evolution towards a final integrated system covering the widest demands of air navigation and traffic control. Interim solutions which do not offer this evolution towards perfection should be avoided.

★ In the interests of economy it should serve equally the demands of air and marine users.

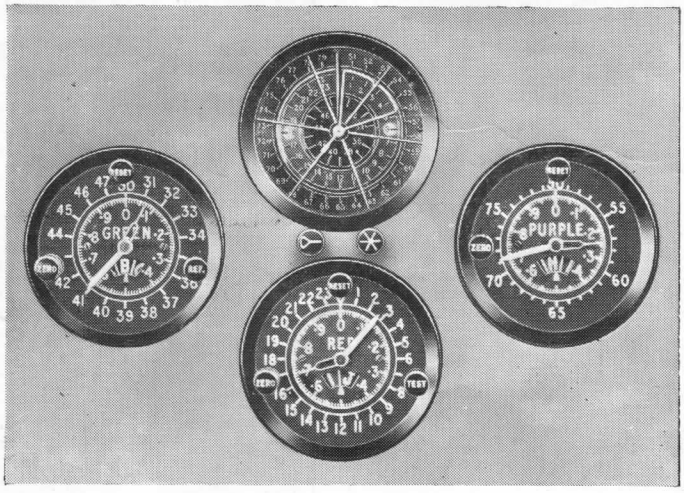
The Decca Navigator System meets these requirements. Already established, internationally approved, and in daily use by over 500 merchant ships, the same radio transmitting stations of the English and Danish Chains are available for

use by aircraft from Stockholm in the East to Shannon in the West, and from the North of Scotland to the South of France.

To extend the service of these radio stations to the air user, the Mark VI Receiver has been developed and is now available. Capable of operating on up to five chains of stations, and providing Lane identification at one-minute intervals, the Decca Navigator System gives the navigator or pilot continuous and accurate fixes displayed directly on meters and cross-checked at one-minute intervals by the Lane Identification Meter. This Receiver, the outcome of several years of intensive air trials and research, meets, in its reliability, simplicity and accuracy, the most exacting demands.

The Decca Navigator System is an established facility and provides continuous navigational service today. The Mark VI Receiver is available for fitting to aircraft of all types. The basic design of the System offers outstanding possibilities for evolution and integration in a final system of air navigation and traffic control.

Adoption of the Decca Navigator System by air operators provides them not only with a navigational aid which can solve their immediate problems, but a system which will continue in the future to give an increasingly greater service as the expansion of the Chains, and the development of further facilities, progress throughout the world.




## The Set of 3 Decometers and the Lane Identification Meter

Any pair of the Red, Green and Purple Decometers enables the navigator to fix his position on the Decca latticed map. A cross-check of this position can be obtained by a reading from the third Decometer, and a further complete cross-check is provided at one-minute intervals by the Lane Identification Meter. Thus the Decca position fix is not only checked but double-checked, a safe-guard provided by no other existing navigational aid.

# ★DATA

Complete aircraft installation comprises Receiver Unit, Power Unit, Control Unit and Decometers.

The Receiver Unit is remotely controlled and can be accommodated in any convenient position in the aircraft.

Receiver and Power Units are designed for aircraft racking of the type recommended by the Society of British Aircraft Constructors, and may be mounted together or in separate racks.

Connections are by means of multi-way plugs and sockets positioned at the back of the units.

Simple Control Panel is mounted conveniently for pilot or navigator and provides push-button Chain selection.

### Power Unit

Size : 6 ins. wide by 8½ ins. high by 11 ins. deep.

Weight : 19 lbs.

Nominal input : 24 volts.

Current consumption : 12.5 amps.

Carbon pile voltage regulation with adjustment on front panel and output voltage meter.

H.T. fuses and spares fitted on front panel.

H.T. provided by Rotary Convertor with regulated input.

### Receiver Unit

Size : 21 ins. wide by 8½ ins. high by 11 ins. deep.

Weight : 24½ lbs.

All power supplies derived from Power Unit.

Crystal gate filter ircuits with narrow bandwidth of ±30 cycles approximately at 6db attenuation.

Provision for reception of up to five Decca Chains.

Required Chain selected by means of push-button selector remotely controlled from pilot or navigator position.

Crystals in circuits of Chains not being received act as rejectors, thus providing complete immunity from inter-chain interference.

Full torque provided on meters with minimum signal of 10 microvolts applied to the aerial.

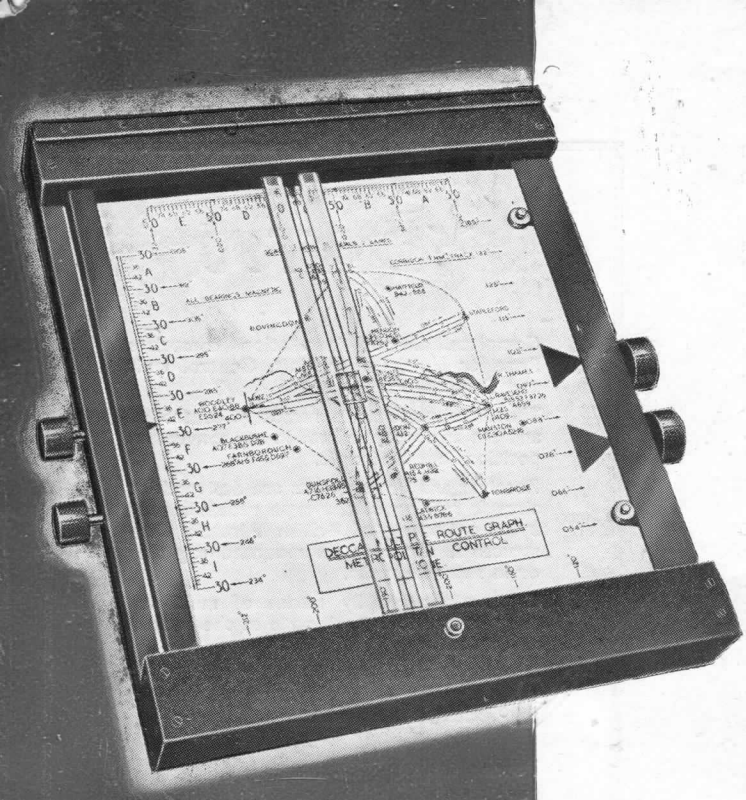
Receiver includes crystal controlled 'Reference' channel for meter zero checking purposes operated by push-button on the Decometers.

Lane Identification of Red, Green and Purple pattern provided automatically once a minute and presented directly to pilot or navigator on simple meter indicator. Each identification remains set for five seconds controlled by relays in the Receiver operated by keying impulses transmitted from the Master Station.

### Decometers and Lane Identification Meter

Remotely connected to Receiver Unit and adaptable for mounting as required for pilot or navigator positions.

Receiver capable of operating two sets of Decometers if required.




# THE DECCA FLIGHT PLOTTER

To simplify the problem of navigating all types of aircraft, a special study has been made of methods of combining the great flexibility of the Decca Navigator System with a simple and direct form of presentation suitable for pilot navigation. As a result the Decca Flight Plotter has been designed and fully meets the requirement in a simple and remarkable manner. It is equally suitable for private flying, charter work and air line operation.

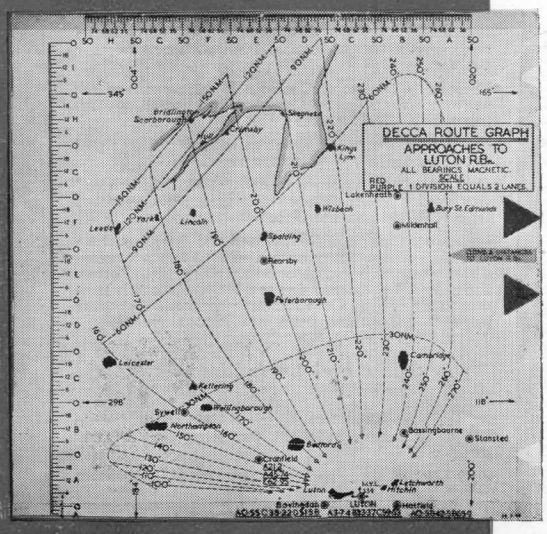
Simple Route Graphs prepared by the Decca Navigator Company, for all European routes are inserted in the Flight Plotter, and the pilot only needs to turn the knobs of the Flight Plotter to bring the perspex cursor to correspond to the Decometer readings at any point on his flight, to obtain, without further effort, not only a position fix, but also range and bearing from destination. The pilot is entirely free to make any deviation from route that circumstances necessitate and is able to use this simple and efficient method of navigation throughout his flight.

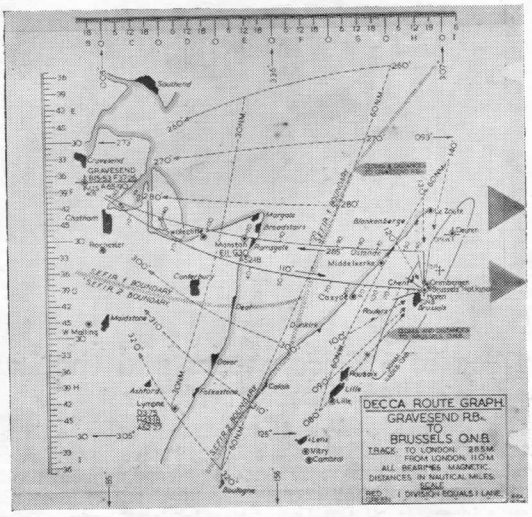
The complete Flight Plotter illustrated here contains the Route Graph for the Metropolitan Control Zone, which enables the pilot, continuously and accurately, to plot his approaches along the corridors to the principal Metropolitan airfields. The weight of the Flight Plotter is 4½ lbs. and its dimensions are 12 ins. wide by 14 ins. high by 2 ins. deep.

The full advantages of the Decca Flight Plotter in the operation of all types of aircraft can be proved by flying experience. This device, in conjunction with the Decca Navigator Mark VI Receiver and the existing Chains of Decca Stations, provides a realistic and practical aid to navigation in Europe today and at the same time gives a full degree of flexibility and evolutionary possibilities essential to meet the demands of future aviation.

## TWO TYPICAL DECCA ROUTE GRAPHS

The two Route Graphs shown below and the one included in the photograph of the Decca Flight Plotter above, are three examples from the complete series of Decca Route Graphs which have been produced to cover all European air routes.




Here are two typical examples from the complete European series of Route Graphs now available. On the left above, the Route Graph for the area north of London enables range and bearing from Luton Control Point to be obtained at any time during the flight. This Route Graph is used for general flying in this area and for all routes running into the London Control Zone from the North East area. The Route Graph shown on the right above is for a typical European air route, Brussels/London.

*Printed in England*