

## New Southern Region Express Electric Stock



*Photo]*

*[L. A. Mack*

**Four-car multiple-unit electric set No. 7103, recently built at Eastleigh, leading a 12-car train for Victoria through Clapham Junction**

**T**HE Southern Region has introduced some new four-car electric sets on London-Brighton and London-Littlehampton services. Four of six were delivered by June 11, when the summer timetables went into operation. They are the first electric multiple-unit trains for express services to be built to British Railways design. Hitherto fast trains between London and Hove, Worthing, and Littlehampton, as also to Brighton, Eastbourne and Hastings, have consisted mainly of 12-car trains made up of two six-car sets, each including either a Pullman or a pantry car and introduced in 1932 by the Southern Railway.

The new four-car sets (designated "4COR(EPB)") are numbered 7101-7104 and follow in general the formation adopted for the Portsmouth and mid-Sussex main-line electric stock ("4COR") brought out in 1937-38, which consists of three four-car units. Two of these comprise one corridor second, one corridor

composite and two motor brake saloon seconds; the third includes a buffet car which takes the place of the second class car in the other two units. Thus, travellers to Brighton, Worthing and Littlehampton may now enjoy buffet refreshments, a service previously available only in the stock used on the mid-Sussex line services to Bognor Regis *via* Horsham.

A 12-coach train of the new stock, although giving a better performance than the existing Brighton line express units, has four fewer traction motors and thus weighs 432 tons compared with 532. Each motor coach has two 250-h.p. axle-hung traction motors. In so far as individual weights are concerned the tare weight of each motor coach is 40 tons and that of each trailer is 31 tons compared with 59 tons and 35 tons respectively. The new stock seats 604, irrespective of buffet car, compared with the 610 of a buffet car train of 12 cars on the Bognor Regis service. The bodies are of all-steel construction and the general

arrangement of passenger accommodation closely follows the British Railways standard design for main-line gangway steam stock.

Unlike the original Brighton main-line stock also the new trains are vestibuled throughout in the same way as the Portsmouth and Bognor Regis stock; the driver's compartment of an intermediate car may be enclosed to permit access through to the rest of the train.

No external end-screen is fitted; the

provide a smooth action with the elimination of noise.

In sending the accompanying illustration of the new stock, Mr. L. A. Mack writes that, during the past summer, the three sets working (the fourth being a spare) have had a lengthy duty roster, commencing with the 6.49 a.m. Eastbourne-London Bridge; subsequent workings have been London Bridge-East Croydon-Victoria-Brighton-Victoria-Streatham Hill (layover)-London Bridge-



Saloon of the second class motor coaches at each end of the sets which contain a guard's and luggage compartment. The other two coaches comprise a corridor second (or kitchen buffet car) and a corridor composite

gangway is closed off by a large inward-opening aluminium door on which is mounted the roller-blind route indicator.

The underframes, bogies, and electrical equipment are somewhat similar to those of the new standard suburban electric stock, which was described in our June, 1955, issue. The main difference is that automatic couplers are fitted to both ends of each vehicle to suit British Railways Pullman-type gangways. The tops of these gangways are controlled by Flexitor units which ensure that the faceplates are kept in contact and

Littlehampton-West Worthing (layover)-Eastbourne (berth overnight). At weekends the stock has been used on special and excursion duties.

On a recent journey from London to Haywards Heath and back on this stock, Mr. Mack recorded maximum speeds of 70 m.p.h. on the down run (at Horley) and 74 m.p.h. in the up direction (from south of Coulsdon to Purley Oaks)—*via* Redhill in both directions. At these high speeds there was a noticeable absence of the rough riding, even in the leading motor coach, which is characteristic of the earlier types of express stock.