Eddystone Power Connection Using a 'Marquis' Plug - Philip Leahy[1]

Introduction

Having been told that the original AC/DC polarised plug was not likely to be available for my S.840A, I decided that I wanted restore the set anyway, and that included the fitting of a serviceable power supply fitting.

Above: the author's S.840A – raring to go but in need of a power supply connection. Below: the 'business end' – the S.840A power supply chassis socket and an original plug (or rather, what's left of it!)

There were several options, including:

- fit an IEC socket[2];
- attach a lead to the set with a plug attached to the lead ('captive' lead);
- find a plug[3] which would fit the existing original socket[2] built into the back of the set.

I opted for the latter, and after a few months of checking what could be available, found that a polarised plug had been made by Marquis[4] with almost the exact spacing needed between to two pins.

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[1] Editing and layout by Gerry O'Hara

[2] Per articles by Gerry O'Hara – this can be done more easily on some Eddystone Models than others, eg. on the S.830 series, can be done with no modifications to the chassis, however, on the S.840 series, modification of the Paxolin rear panel is needed and is best avoided if you want the set to remain in original condition (see S.840A restoration article on EUG website for another solution if the old plug is present but in unsafe condition)

[3] Actually a socket as, strictly speaking, plugs are 'male' and sockets 'female', though colloquially the connector on the lead is often referred to as the plug, even if it has female connections and vice-versa

[4] Marquis made Bakelite plugs and knobs here in previous years – probable in the 1930's. The author is not sure of their history, but others might know more about them – they would be available in amateur radio 'junk boxes', fleamarkets and the like if you keep an eyes open

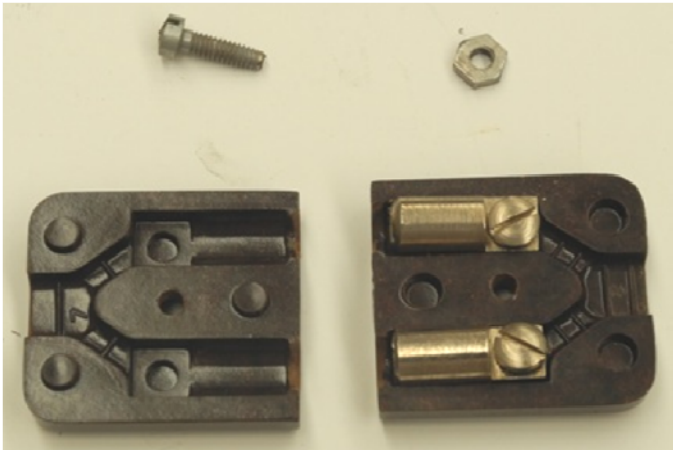
Modifying the Chassis Socket to fit the Marquis Plug

Original Eddystone mains input saddle with new pins to suit the Marquis plug oblique view

The original pins on the chassis socket were too large at 5 mm (.20") diameter, to fit the Marquis plug. I decided to turn up two new pins of the correct size to suit the plug and to fit the pins to the existing Eddystone cradle. The size of the pins needed were one at 5.6 mm diameter, and the other at 4.1 mm diameter. They were each 28 mm long overall, with 16 mm bifurcated pin, and 12 mm threaded 4BA. I turned them out of brass stock and bifurcated them with a diamond-encrusted wheel of about 3/4" diameter powered by a jeweller's flexible rotary tool.

The original Bakelite panel had a 'figure-of-eight' hole for the original plug and a metal piece protruding from the case which originally would have entered the division in the original two-legged plug. Therefore I needed to straighten up the sides of the existing hole in the Bakelite and remove the metal spike. The spike came off readily after gripping it with pliers and moving it about – rather like a dentist removing a tooth! I then straightened up the Bakelite by carefully sawing the edges with the same diamond -encrusted rotary wheel and filed it up. Very little different to the original hole and the Marquis plug fitted perfectly. No alteration to the cabinet was necessary, as would have been required with the IEC socket solution, and the Marquis plug is perfectly insulated.

The two pin Marquis plug – side view



Inside the Marquis plug showing the connections to the polarised terminals

By using the Marquis plug, I was able to retain the manufacturers intention to have the polarised connection and to keep the set in its original form.

Other Work on the Set

Marquis plug connected to the 840A

I replaced C3 and C61 with 'X' rated modern rectangular capacitors, and made a new brass retaining clip for C61. I Also made new brass retaining clips for two electrolytic capacitors C53 and C51 which showed some degradation, and tested other electrolytic capacitors which proved to be OK and would work satisfactorily with reforming. The insulation between the chassis and the case was then tested with a Megger, as proscribed in the operating manual.

Other work included the replacement of a badly vandalised vernier wheel where a previous owner had hacked off each spoke of the wheel in situ (photo, below – nice job!). To gain access to the vernier wheel I dismantled the dial and mechanism as far as was necessary. Before I did this I carefully bound up the three wheels which carry the dial cord with woven insulation tape so that the cord could not leave the wheel, and that tactic paid out when I came to reassemble the dial later. Lubrication and cleaning followed.

To bring the set up to the require voltage, I connected, first an isolation transformer, and then a Variac, so that I could then bring up the voltage to 230v over a period of twenty minutes or so, and reform the several electrolytic capacitors whilst doing so. The set was then tuned to a dozen or so stations in the broadcast band and they came in loud and clear, but it became obvious that some cleaning of the audio gain pot was needed, and I have put that task ff to another day!

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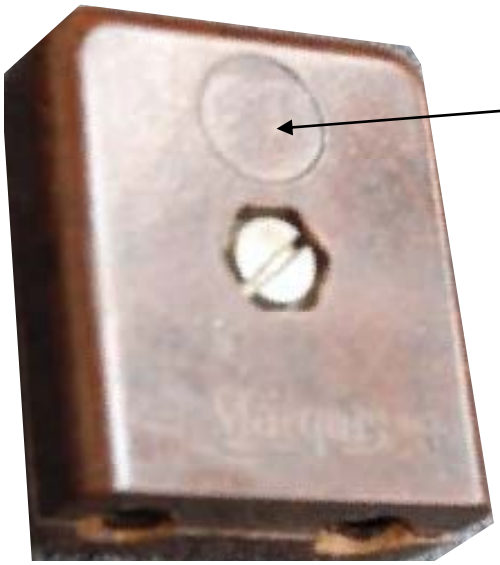
Left: original Eddystone mains input saddle with new pins to suit the Marquis plug - side view

Left: the two pin Marquis plug – end view

Left: Bakelite panel on the S.840A showing saddle with new pins and access hole straightened out

Above: back panel with new plug in position



Above: I reckon the old Eddystone logo would fit very nicely into the embossed circle above the screw hole on the Marquis plug…