

Marconi
Audio Frequency Morse Rectifier
TYPE Q.C.3a

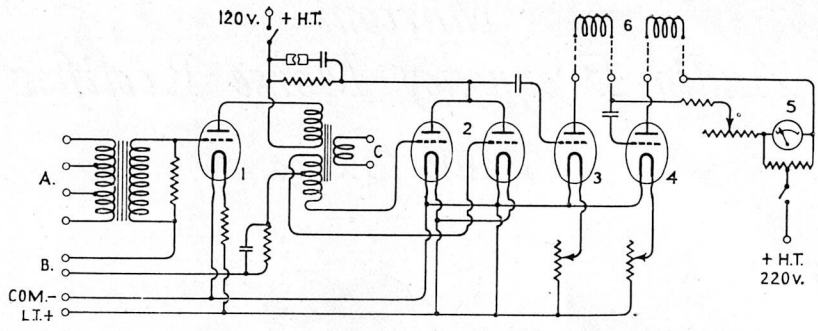


THE Marconi Audio Frequency Morse Rectifier is designed specially for converting the audio frequency signals delivered by a wireless receiver into double current D.C. signals suitable for operating the Marconi Type U.g.6a Recorder.

PERFORMANCE. The instrument delivers double D.C. current of plus or minus 30 milliamperes.

It has five valves, the first magnifies the audio frequency signals, the second and third provides for full wave rectification, the fourth provides the spacing current and the fifth the marking current.

During the spacing periods, *i.e.*, when no signal is received, the anode current of the spacing valve flows through a biasing



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|--------------------------|------------------------|
| 1. L.F. Magnifier. | 4. Marking Valve. |
| 2. Rectifiers. | 5. Galvanometer. |
| 3. Spacing Valve. | 6. Relay Signal Coils. |
| (A) To Line or Receiver. | (B) Grid Negative. |

Simplified Diagram of Connections of Type Q.C.3a Morse Rectifier.

resistance, mounted on the instrument, and through the spacing coils of the relay. The junction of the spacing coils and biasing resistance is connected through a condenser to the grid of the marking valve. The value of the biasing resistance is adjusted so that practically no anode current flows round the marking coils of the relay.

During marking periods the incoming signal causes the grid of the spacing valve to become negative, thus reducing the current through the spacing coils of the relay. This decrease of current causes the grid potential of the marking valve to increase giving rise to an increase in the current flowing through the marking coils. Thus it will be seen that an incoming signal causes the double effect of a decrease in the current flowing through the spacing coils and an increase in the current flowing through the marking coils of the relay. A galvanometer is provided for indicating the spacing and marking current through the coils, and the biasing resistance is adjusted to make these two values equal.

VALVES. The following table shows the type, number and electrical characteristics of the valves used in the rectifier :—

Type.	No.	Purpose.	Filament		Approx.
			Volts.	Amperes.	Anode Volts.
D.E.5	1	Magnifier	6.0	2.05	120
H.610	2	Rectifiers			120
L.S.5	1	Spacing			220
L.S.5	1	Marking			220

DIMENSIONS.—The approximate overall dimensions (including valves) of the rectifier are as follows :—

Width	..	..	..	1 ft. 4 $\frac{5}{8}$ ins. (42.0 cms.)
Depth	..	..	..	1 ft. 2 ins. (35.5 cms.)
Height	..	..	..	1 ft. 1 in. (33.0 cms.)

CODE WORDS. In order to facilitate making enquiries or ordering by telegraph the following code word may be used:—

Type Q.C.3a Audio Frequency Morse				
Rectifier	..	..	..	.. QUADIMOR