



Type F.T./C.



Type M.A.5



Type F/U/TC



Type G.W.12

The Williamson Amplifiers

DETAILS of Williamson Amplifiers built to the design by D. T. N. Williamson and published in a series of articles and reprints by the Wireless World. The design is too well known to need enlarging upon and amplifiers using this circuit have now become the accepted standard for quality reproduction in all parts of the world.

We have been building Williamson Amplifiers since 1947 and can justly claim to be in the forefront of the many manufacturers producing this unit. Each one is individually assembled from the finest available components and given stringent tests to ensure the highest standard of reproduction. Only components known to be trouble-free are used and particular care is taken of the output transformer and feedback components to maintain the greatest possible margin against instability. In this connection the reader is referred to the article published in Audio Engineering (August 1952) called "The Williamson Type Amplifier brought up to Date", which contains much useful information on the importance of correct choice of components.

GENERAL SPECIFICATION

We manufacture two sizes of Williamson Amplifiers both with built in separate power supplies for feeding auxiliary equipment. They are :—

1. Type GW18 giving 15 watts output and is according to the published design.
2. Type GW12 giving 10-12 watts output using a slightly lower H.T. voltage, but complying in all other respects to the original design.

The former has a triple section 8 mfd. paper condenser on the H.T. line whilst the latter with its lower voltage achieves the same standard of reliability with high grade electrolytic condensers. Both are available with top covers and bases *i.e.* Type GW18/C. An alternative type of output transformer using the new "C" type core is available, as an extra, when covers are fitted. All models are tropicalised and suitable for use in any climate.

Transformers Finest mechanical construction and assembly using best quality laminations, copper wire and insulation materials. Mains transformers and chokes are adequately rated and the output transformer is a fine grade product in which every care is taken to attain the designer's figures.

Condensers

Those fitted to the H.T. circuit have been mentioned earlier to show the difference between the GW18 and GW12 amplifiers. Metal cased impregnated grid coupling condensers ensure noise free operation and long life.

Resistors

Finest grade carbon and wirewound resistors, matched or close tolerance where required, selected for low noise and trouble free operation. Clarostat variable wirewound resistances for bias and balance.

Chassis

Heavy gauge steel chassis, flanged to prevent whip, gas welded seams, acid treated, primed and stove enamelled in polychromatic grey.

Valves

KT66 output valves with 6SN7 (Osram type B65) driver and pre-amplifier stages. Rectifiers, 5V4 and 6X5 or B.V.A. equivalent.

PERFORMANCE DETAILS

<i>Frequency Response :</i>	20 - 50,000 cycles + or - 1 dB 10 - 100,000 cycles + or - 2 dB
<i>Harmonic Distortion :</i>	less than 0.1 per cent. at 12 watts.
<i>Intermodulation Distortion :</i>	less than 0.5 per cent. at 10 watts ; frequencies, 40 and 12,000 : ratio 4/1
<i>Input Voltage :</i>	1.5 volts. rms.
<i>Input Impedance :</i>	1 meg.
<i>Output Impedance :</i>	0.5 ohm internal impedance at 15 ohms output
<i>Damping Factor :</i>	20-30.
<i>Power Consumption :</i>	Approximately 65 watts.
<i>Overall Dimensions :</i>	GW18 - 17in. x 11½in. x 8½in. GW12 - 14in. x 10in. x 8in.
<i>Weight :</i>	GW18 - 45 lbs. GW12 - 40 lbs.

Available for A.C. mains only, 200 - 250 or 110 volt 50 cycles or 25 cycles to special order.

Please state : (1) Output impedance and (2) mains voltage.

Connection Details :	Octal socket for power supplies and signal connection to tone control. Power available 275 volts (smoothed) at 50 mils. 6.3 volts at 2-3 amps. Loudspeaker connection—2 way Grelco block Mains input: Bulgin mains plug, double Belling fuse holder and voltage selector panel.
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