

T3A. "A" microphone transformer

87. Secondary:—14,000 turns of 47 s.w.g. en. copper wire.
Screen:—1 layer of 47 s.w.g. en. copper wire.
Primary:—140 turns of 28 s.w.g. en. copper wire.
One layer of oiled silk to be wound half-lap between windings and over finished winding.

Lead	Length	Colour
Inner primary	2½"	Blue
Outer primary	2½"	Black
Screen	2½"	Yellow
Inner secondary	6¾"	Red
Outer secondary	2½"	White

Large blue spot to be painted on oiled silk covering to distinguish from T4A and B.

Primary inductance at 1000 c/s with 5 volts input to be not less than 5mH.

D.C. resistance:—Primary 1.4Ω.
Secondary 4,700Ω.

Flash test:—Complete transformer to be flashed between windings and between windings and core at 500V R.M.S. 50 c/s.

Shorted turns effect not to be greater than that produced by a loop of 36 s.w.g. copper wire ¾" in dia.

T4A and B. "B" and "IC" microphone transformers

88. Each as T3A, with the following exceptions:—

Primary:—280 turns of 32 s.w.g. en. copper wire.

Primary inductance:—Not less than 20mH.

Primary D.C. resistance:—5.5Ω.

Identify with large spot of red paint on oiled silk covering.

Lead	Length	Colour
Inner primary	2½"	Blue
Outer primary	3½"	Black
Screen	3½"	Yellow
Inner secondary	3½"	Red
Outer secondary	2½"	White

T2A. "A" output transformer

89. Secondary 2:—200 turns of 34 s.w.g. en. copper wire, paper interleaved, finished off with 2 layers of oiled silk. Finish to be joined to start of secondary 1.

Secondary 1:—500 turns of 44 s.w.g. en. copper wire, paper interleaved, finished off with 2 layers of oiled silk.

Primary:—2,800 turns of 44 s.w.g. en. copper wire, paper interleaved, finished off with 2 layers of oiled silk and ½" wide unbleached cotton tape.

All end of windings to be brought out at same end of former.

Assemble "E" laminations in transformer. Assemble clamp (with tag plate rivetted in position) with "I" laminations on transformer (butt joint, no spacer). Connect leads to tag plate as shown in Tels. F 253/3, fig. 6. Impregnate with bitumen.

Primary impedance:—Not less than 2,400Ω at 50 c/s (10V A.C.) with 5mA D.C. flowing.

D.C. resistance:—Primary 840Ω.
Secondary 1 140Ω.
Secondary 2 5.8Ω.

Shorted turns:—The shorted turns effect should not exceed that produced by a loop of 32 s.w.g. copper wire, 1½" in dia.

Flash test:—The completed transformer to withstand a flash test of 1000V R.M.S. 50 c/s between windings and between windings and core.

Insulation resistance:—The finished transformer should have an insulation resistance of not less than 1000MΩ between windings and between windings and core at 500V D.C.

Note.—If transformer is not fitted with tag plate, leads must be cut long enough to reach connection points in set, and must be colour coded as shown in Tels. F 253/3, fig. 6.

**T5A. "B" output transformer } (assembled in
T6A. "IC" output transformer } one unit).**

90. T6A. Primary:—2,200 turns of 42 s.w.g. en. copper wire, paper interleaved. Two layers of .003" Clarifoil between windings.

Secondary:—160 turns of 32 s.w.g. en. copper wire, paper interleaved. Cover with two layers of .003" Clarifoil, and bind with a layer of ½" wide unbleached cotton tape.

Ends of windings to be brought out with 14/36 flex covered with 1.5 mm. sleeving, and to be securely anchored inside winding.

Assemble the "E" laminations in coil, and fit in clamp with "I" laminations and .003" Clarifoil spacer. Secure by squeezing clamp on to laminations.

T5A. Primary:—2,600 turns of 36 s.w.g. en. copper wire, paper interleaved. Two layers of .003" Clarifoil between windings.

Secondary 1:—3,240 turns of 40 s.w.g. en. copper wire, paper interleaved. Two layers of .003" Clarifoil between windings.

Secondary 2:—252 turns of 34 s.w.g. en. copper wire, paper interleaved. Cover with two layers of .003" Clarifoil, and bind with a layer of ½" wide unbleached cotton tape.

Ends of windings as for T6A.

Fit laminations, butt-jointed with .003" spacer, and assemble clamps, feet, tag plates and bracket for T6A. Fix T6A on bracket. Connect leads to tag plates as shown in Tels. F 253/3, fig. 7. Impregnate complete assembly with bitumen.

Test specification:—

T5A primary impedance not less than 2,200Ω at 50 c/s with 10V A.C. and 32mA D.C.

T6A primary impedance not less than 1,500Ω at 50 c/s with 10V A.C. and 25mA D.C.

D.C. resistance:—T5A primary 160Ω
T5A secondary 1 680Ω.
T5A secondary 2 16Ω.
T6A primary 350Ω.
T6A secondary 4.1Ω.

Flash test:—1000V R.M.S. 50 c/s between windings and between windings and core.

Insulation resistance:—Not less than 1,000 MΩ between windings and between windings and core at 500V D.C.

Shorted turns effect not to exceed that of loop of 26 s.w.g. copper wire 2" in dia. for T5A, and loop of 28 s.w.g. copper wire 1½" in dia. for T6A.