PREFACE

Being of a totally different conception, *RADIO-TUBES* does not supersede such publications as the *LEXIQUE OFFICIEL DES LAMPES*, or the *CARACTERISTIQUES OFFICIELLES DES LAMPES*, but rather is it complementary to these works.

RADIO-TUBES is a collection of practical circuit diagrams for use with all modern valves. These diagrams are classified in *alphabetical order* according to the designation of the valve, so as to make reference as easy and as foolproof as possible : *letters take precedence over numbers*. Each diagram gives the type of base, pin connections, essential circuit values for its application, as well as the static characteristics of the valve (slope, internal resistance, bias voltage, anode and screen grid current etc). A rapid glance at one of these little diagrams and one knows immediately all the practical details for the particular use of a valve.

In *RADIO-TUBES*, special conventional symbols have been entirely eliminated. Anyone ought to be able to understand the information given in this booklet, and that without having read the present introduction... or after having forgotten it! Notwithstanding, and for one's peace of mind, the authors prefer to set out the principles of notation used :

★ Valve *bases* are as seen from *underneath*.

★ For ease in reading the diagrams, *arrows* indicate the input and output points of signals.

★ The *name* of the valve is shown in the top left hand corner of each diagram. In some cases it is followed, after the sign =, by the name of another valve; this signifies that the two valves are very similar in their characteristics and differ only, for example, in their filament voltages. Underneath the name of a valve will be found its function according to the following symbols :

O = Oscillator.
R = Rectifier.
H F = High frequency or intermediate frequency.
C = Frequency changer.
B F = Low frequency voltage amplifier (preamplifier).
P = Power amplifier (output stage).
D = Detector.
I = Visual indicator.
Ph = Phase converter.
T = Television valve.

When the letter denoting a valve's function is followed by a letter V in brackets, the valve has variable mu characteristics. One will also find in some cases the letters OTC, which signifies that the valve is specially constructed for ultra short wave applications.

★ In the top right hand corner of each diagram will be found essential valve constants as follows :

S = Slope in milliamps per volt.

Sc = Conversion conductance in the case of frequency changers.

ϱ = Internal resistance in ohms.

V = Grid bias; for variable mu valves the two numbers indicate maximum and minimum values.

I = Anode current in the absence of an anode resistor.

★ Several diagrams can be found on one valve if it serves different purposes or is operating under different conditions of voltage etc.

★ In the absence of information to the contrary, resistance is in *ohms* and capacitance in *micromicrofarads* (picofarads).

★ Numbers enclosed in *circles* show the *voltages* which exist between the two points indicated. If the circle is only joined to one point, then the voltage is between this point and the chassis (and its sign is shown as + or —).

★ *Current* values are shown in *squares* let into the circuit as if they were actually measuring meters. These values are in milliamps with the exception of filament current which is in amps.

★ Numbers in *triangles* indicate the *maximum alternating voltage allowable*.

★ Numbers found next to the loudspeaker show its *impedance* value; the number inside the loudspeaker gives the A.C. *power* in watts.

★ All values shown in *RADIO-TUBES* are the mean values given in manufacturers leaflets. Characteristics vary slightly from one manufacturer to another.

PREFACIO

Partiendo de una concepción enteramente distinta, *RADIO-TUBOS* no suplanta otras obras, tales como el *LEXIQUE OFFICIEL DES LAMPES RADIO* o la colección de *CARACTERISTIQUES OFFICIELLES DES LAMPES RADIO*, sino que las completa armonicamente.

RADIO-TUBOS es una colección de esquemas de utilización de todas las válvulas modernas. Estos esquemas están clasificados por orden alfabético, del nombre de la válvula, lo que facilita su consulta y evita toda referencia a otros datos. *Las letras tienen prioridad sobre las cifras.* Cada esquema indica el casquillo, el conexionado, el valor de los elementos esenciales de empleo, así como las características estáticas de la válvula (pendiente, resistencia interna, tensión de polarización, intensidades de ánodo o de pantalla, etc.). Una rápida ojeada sobre un sencillo esquema y se conocen inmediatamente todos los datos prácticos de empleo.

En *RADIO-TUBOS*, los signos convencionales han sido enteramente eliminados. Cualquiera puede comprender los datos contenidos en esta obra, incluso sin haber leido la presente introducción... o después de haberla olvidado. A pesar de esto, y para tranquilidad de su conciencia, los autores prefieren detallar el principio de las anotaciones utilizadas.

★ El *casquillo* de las válvulas se representa visto *por debajo.*

★ Para facilitar la lectura de los esquemas, las *flechas* indican la entrada y la salida de las señales a amplificar.

★ El *nombre* de la válvula, está indicado en el extremo superior izquierdo de cada esquema. Puede estar seguido, después del signo =, del nombre de otra válvula, lo que significa que ambas tienen características casi iguales, no diferiendo, por ejemplo, mas que por la tensión de caldeo. Debajo del nombre de la válvula se encuentra la indicación de su *funcion*, según los símbolos clásicos :

O = Osciladora.
R = Rectificadora.
H F = Alta frecuencia o mediana frecuencia.
C = Conversora de frecuencia.
B F = Amplificadora de baja frecuencia de tension (Preamplificación).
P = Amplificadora de poder (etapa final).
D = Detectora.
I = Indicadora visual.
Ph = Conversora de phasa.
T = Televisión.

Cuando la letra simbolizando la función va seguida de la letra V entre paréntesis, significa que la válvula es de pendiente variable. Eventualmente puede encontarse la anotación OTC que significa que la válvula ha sido especialmente estudiada para ondas muy cortas.

★ En el extremo superior derecho de cada esquema, se han indicado las características estáticas esenciales :

S = Pendiente de la válvula en miliamperios por voltio.
Sc = Pendiente de conversión en el caso de conversoras.
ϱ = Resistencia interna en ohmios.
V = Tension de polarización. En las válvulas a pendiente variable las dos cifras indican los valores máximo y mínimo.
I = Intensidad anódica en ausencia de resistencia de ánodo.

★ Varios esquemas pueden referirse a una misma válvula, puesto que ésta puede tener diversas funciones o actuar con tensiones distintas.

★ En ausencia de indicaciones especiales las resistencias están indicadas en *ohmios* y las capacidades en *micromicrofaradios* (picofaradios).

★ Las cifras encerradas en *círculos* indican en voltios las *tensiones* que existen entre los dos puntos que están en contacto con el círculo. Si esta circunferencia no tiene más que un sólo punto de contacto, el valor indicado es el que existe entre este punto y la masa del chasis, en cuyo caso la polaridad está marcada por el signo + o —.

★ Las *intensidades* estan en *cuadrados* que se han intercalado en los circuitos como aparatos de medida. Estas intensidades se designan en miliamperios, con excepción de las intensidades de caldeo que se designan en amperios.

★ Las cifras enserradas en *triángulos* determinan el valor de la *tension alterna maxima* admisible.

★ La cifra próxima al altavoz dá el valor de su *impedancia.* La cifra dispuesta en el interior del altavoz, designa la *potencia modulada* en watios.

VORWORT

Vollkommen verschiedenartig in seiner Darstellung von jener des *LEXIQUE OFFICIEL DES LAMPES*, oder der Sammlung *CARACTERISTIQUES OFFICIELLES DES LAMPES*, will *RADIO-TUBES* (oder das Buch « Radio-Röhren ») letztere nicht verdrängen, sondern ergänzt sie vielmehr in harmonischer Weise.

RADIO-TUBES ist eine Folge von Schaltungs-Schemata für alle modernen Radioröhren. Diese Schemata sind nach der Röhrenbenennung *alphabetisch geordnet*, ein Umstand, der das Nachschlagen erleichtert und jedweden Rückhinweis vermeidet. *Die Buchstaben sind den Ziffern vorangesetzt.* In jedem Schema sind die Art des Sockels, der Anschlüsse, die Werte der wichtigsten Schaltungselemente, ebenso wie die statischen Charakteristiken der Lampe (Steilheit, innerer Widerstand, Gittervorspannung, Anoden und Schirmgitter-Strom usf.) angegeben. Ein kurzer Blick auf das kleine Schema genügt, um sofort alle praktischen Angaben für die Verwendung der Röhre in Händen zu haben.

In *RADIO-TUBES* wurden die speziellen konventionellen Zeichen vollkommen ausgeschaltet. Jedermann muss die in der Broschüre enthaltenen Anleitungen verstehen können, und dies, ohne die vorliegende Einführung gelesen zu haben... oder nachdem man diese vergessen hätte.

Trotzdem — und mit Rücksicht auf ihr ruhiges Gewissen — ziehen es die Verfasser vor, das Prinzip der verwendeten Bezeichnungen kurz anzuführen.

★ Die *Lampensockel* sind *von unten gesehen* dargestellt.

★ Um das Lesen der Schemata zu vereinfachen, deuten *Pfeile* den Ein- und Austritt der zu verstärkenden Signale an.

★ Die *Röhrenbezeichnung* ist im linken oberen Eck des Schemas angeführt. Auf diese Röhrenbezeichnung kann nach einem « = » der Name einer anderen Röhre folgen; dies bedeutet dass die beiden Lampen sehr ähnliche Charakteristiken besitzen und sich beispielsweise nur durch verschiedenartige Heizspannungen unterscheiden. Unterhalb des Röhrennamens ist ihre Arbeitsweise unter Verwendung der klassischen Symbole angeführt :

O = Oszillator.
R = Gleichrichtung.
H F = Hochfrequenz oder Zwischenfrequenz.
C = Ueberlagerer.
B F = Niederfrequente Spannungsverstärkung (Vorverstärkung).
P = Kraftverstärkung (Endstufe).
D = Hochfrequenzgleichrichtung (Detektion).
I = Elektrisches Auge.
Ph = Phasenwechsler (Niederfrequenz).
T = Fernsehenrohr.

Wenn auf den, die Arbeitsweise kennzeichnenden Buchstaben, der Buchstabe « V » in Klammer folgt, dann bedeutet dies, dass die betreffende Röhre veränderliche Steilheit besitzt. Man kann allenfalls auch auf die Bezeichnung OTC treffen, wenn die Röhre für sehr kurze Wellenlängen entwickelt worden ist.

★ Im oberen rechten Eck jedes Schemas sind die wichtigsten statischen Charakteristiken der Röhre angegeben :

S = Steilheit des Rohres in mA/V.
Sc = Konvertierungssteilheit im Falle des Ueberlagerers.
ϱ = Innerer Widerstand der Röhre.
V = Gittervorspannung; bei Röhren mit veränderlicher Steilheit bedeuten die beiden Ziffern die maximalen und minimalen Werte.
I = Anodenstrom bei kurzgeschlossenen Anodenkreis.

★ Mehrere Schemata können sich auf ein und dieselbe Röhre beziehen, wenn diese verschiedenartige Verwendungsmöglichkeiten bietet oder unter verschiedenen Spannungen arbeiten kann.

★ Angegeben erscheinen nur die Werte jener Schaltungselemente, die bei Aenderung der verwendeten Röhrentype selbst eine Aenderung erfahren. Wenn nicht anders vermerkt sind alle Widerstände in *Ohm* und die Kapazitäten in *Mikro-Mikrofarad* (Pikofarad) angeführt.

★ Die *eingekreisten* Ziffern geben die *Spannungen* in Volt an, die zwischen den beiden mit dem Kreis verbundenen Punkten besteht. Ist nur einer der Punkte mit dem Kreis verbunden, dann gibt die Ziffer die Spannung zwischen diesem Punkt und der Masse des Chassis an. (Die Polarität ist in diesem Falle durch ein « + » oder ein « — » gekennzeichnet.)

★ Die *Stromstärken* sind in *Rechtecken* eingetragen die wie Messgeräte in den betreffenden Kreisen eingeschaltet erscheinen. Diese Stromstärken sind in Milliampere angegeben, mit Ausnahme der Heizströme die in Ampere angeführt erscheinen.

★ Die in *Dreiecken* eingeschlossenen Ziffern beziehen sich auf die *maximal zulässigen Wechselspannungen.*

★ Die, sich neben dem Lautsprecher befindliche Ziffer gibt dessen *Impedanz* an, während innerhalb des Lautsprecher-Symbols eine weitere Ziffer die *modulierte Leistung* in Watt anführt.

VOORWOORD

Aangezien zijn geheel verschillende opvatting, vervangt *RADIO-TUBES* andere werken over radiolampen niet, integendeel vult dit werk een leemte.

RADIO-TUBES is een verzameling van gebruikschema's voor alle moderne lampen. Deze schema's zijn in *alphabetische orde* gerangschikt volgens de naam van de lamp, wat tot een gemakkelijke raadpleging voert en onnodig doorbladen vermijdt.

De letters hebben de voorrang op de cijfers.

Elk schema begrijpt de hulsverbindingen en de waarde van al de noodzakelijke gebruikselementen (weerstanden, condensatoren, enz) en hun verbinding met de lamp. De statische karakteristieken (steilheid, inwendige weerstand, negatieve roosterspanning, anodestroom, schermroosterstroom) zijn ook vermeld.

Het schema levert dus bij eerste oogopslag al de gebruiksvoorwaarden van de lamp.

In *RADIO-TUBES* heeft men alle bijzondere symbolen of afkortingen weggelaten. Iedereen kan het boekje gebruiken na lectuur van deze inleiding en zelfs er zonder.

Niettegenstaande deze eenvoud hebben de auteurs nochtans, om hun geweten gerust te stellen, hieronder het princiep der verschillende aanduidingen herhaald.

★ De *hulsverbindingen* zijn van onder gezien.

★ Om het lezen van de schema's te verklaren is de ingang en de uitgang der te versterken signalen door *pijlen* aangeduid.

★ De *naam* van de lamp is aangeduid op de bovenste linker hoek van ieder schema. Eventueel vindt men, na een teken = de naam van een, of misschien twee, andere lampen. Dit betekent dat al deze lampen, bijna gelijke karakteristieken bezitten, uitgenomen bij voorbeeld, de gloeispanning.

Onder de naam van de lamp vindt men zijn normale functie volgens de onderstaande symbolen :

O = Oscillator.
R = Gelijkrichter.
H F = Hoogfrequent of middenfrequent versterking.
C = Frequentiewisselaar.
B F = Laagfrequent spanningsversterking.
P = Krachtversterking (eindlamp).
D = Detector.
I = Afstemindicator.

Wanneer de letter die de functie aanduidt door (V) gevolgd is, betekent dit dat de lamp een veranderlijke steilheid heeft.

Hier en daar zal men enige andere aanduidingen vinden :
OTC = lamp die speciaal bestemd is voor ultra korte golven.
T = Lamp voor televisie ontvangers.
Ph = Phase omkeer stelsel (LF versterking).

★ Op de bovenste rechterhoek van ieder schema vindt men de onmisbare statische *karakteristieken* :
S = Steilheid (mA/V).
Sc = Mengsteilheid.
ϱ = Inwendige weerstand (ohm).
V = Negatieve roosterspanning.

Indien men te doen heeft met een lamp met verander[lijke] worden de minimum en de maximum waarden gegeven
I = Anodestroom in afwezigheid van een anodeweer[stand].

★ Wanneer een lamp verschillende functies kan v[ervullen] met verschillende spanningen kan gebruikt worden, deze lamp verscheidene schema's.

★ In afwezigheid van bijzondere aanduidingen zijn [weer]anden in *ohm* en de capaciteiten in *micromicrofar[ad]* (picofarad) uitgedrukt.

★ De met een *cirkel* omgeringde cijfers duid[en] aan, die tussen de punten bestaat, die met d[ikke] dunne lijnen verbonden zijn.

Wanneer de cirkel met een enkel punt in verbinding staat, is dit getal de waarde der spanning tussen dit punt en de aarde (chassis). In dit geval is de polariteit aangeduid door het teeken + of —.

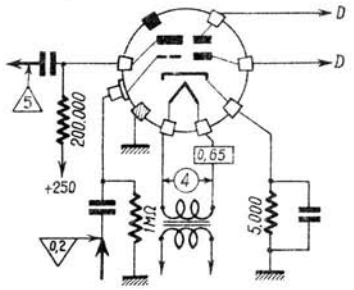
★ De *stroomsterkten* zijn in *vierkanten* ingeschreven en deze in de verbindingslijnen ingeschakeld zoals een meetinstrument. Zij zijn in milliampere uitgedrukt, uitgenomen de gloeistroomsterkten die uitgedrukt zijn in ampere.

★ De cijfers in een *driehoek* ingesloten wijzen de *maximum effectieve wisselspanning* aan, die op dit punt mag aangebracht worden.

★ Het getal dat naast de luidspreker staat, vermeldt de *aanpassingswaarde* (in ohm) en de cijfers die in de luidspreker zelf ingeschreven zijn, de *gemoduleerde kracht*.

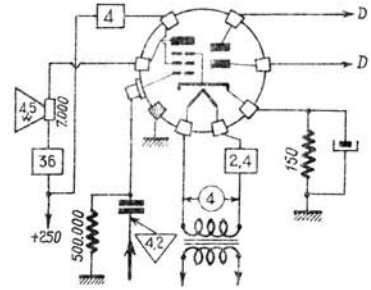
ABC1
D+BF

S = 2
ρ = 13.500
V = -8



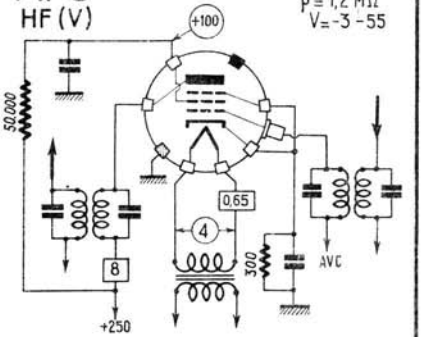
ABL1
D+P

S = 9
ρ = 50.000
V = -6



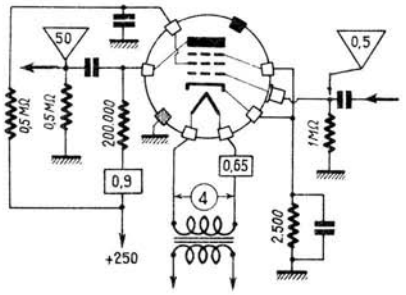
AF3
HF (V)

S = 1,8
ρ = 1,2 MΩ
V = -3 -55



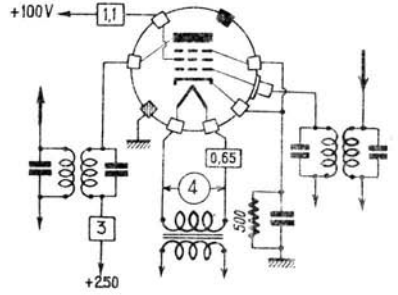
AF7
BF

S = 2,1
ρ = 2 MΩ
V = -2



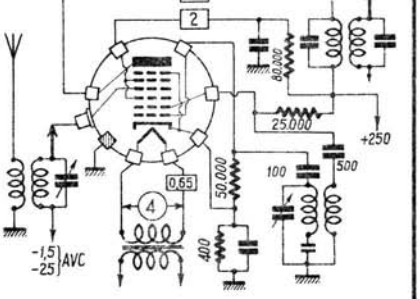
AF7
HF

S = 2,1
ρ = 2 MΩ
V = -2



AK2
C (V)

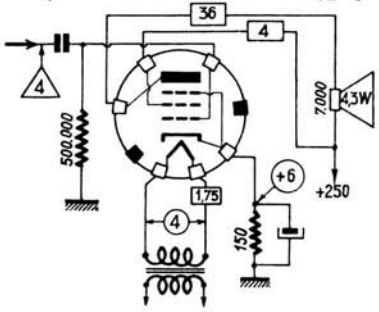
Sc = 0,6
ρ = 1,6 MΩ
V = -1,5 -25



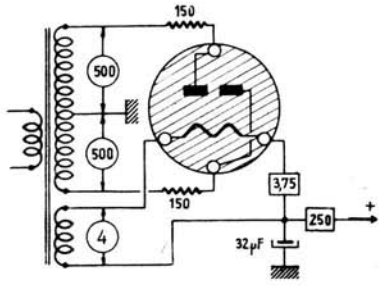
AA61 = ECC40

AL4
P

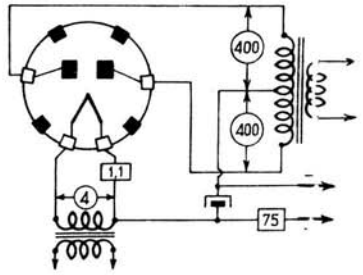
S = 9,5
ρ = 50.000
V= - 6



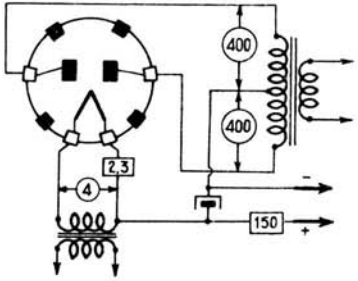
AX50
R



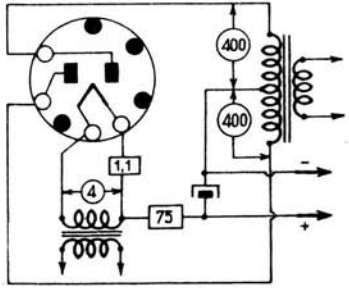
AZ1
R



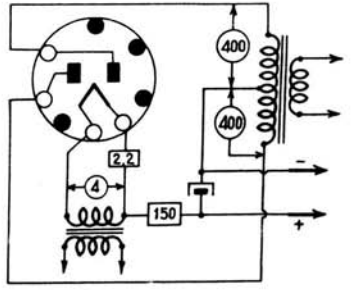
AZ4
R



AZ11
R

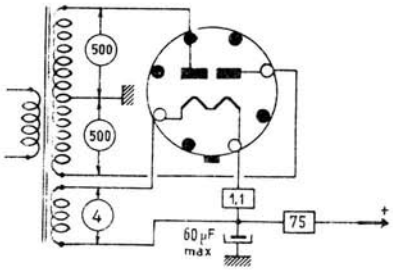


AZ12
R

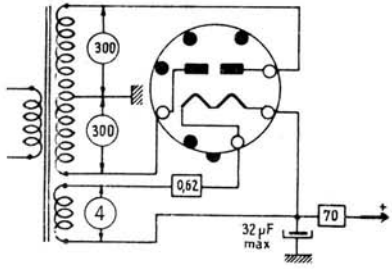


AX1 = 4652

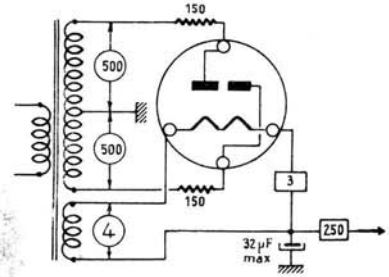
AZ31
R



AZ41
R

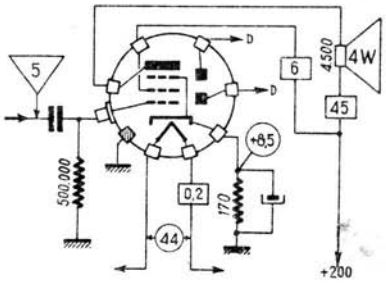


AZ50
R



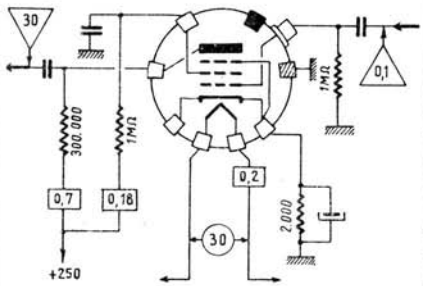
CBL1
D + P

S = 8
ρ = 35.000
V = -8,5



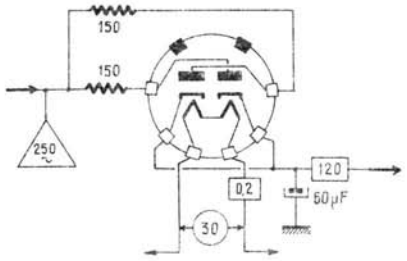
CF50
BF

S = 3,3
ρ = 2,5 MΩ
V = -2



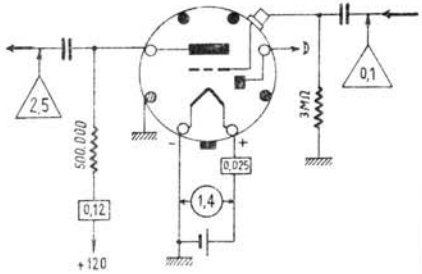
BF61 = EL41
BF62 = EL42
BF451 = UL41
CF61 = ECH41
CF141 = UCH41

CY2
R



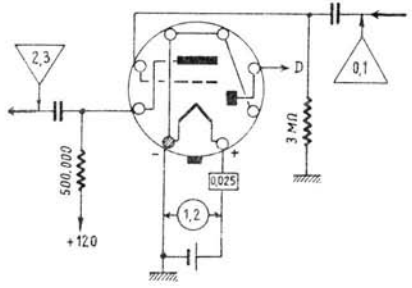
DAC21
D + BF

S = 0,4
P = 0,1 MΩ
V = 0



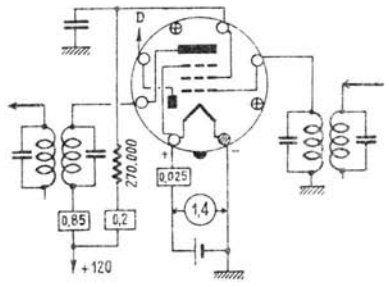
DAC25
D + BF

S = 0,35
P = 0,11 MΩ
V = 0



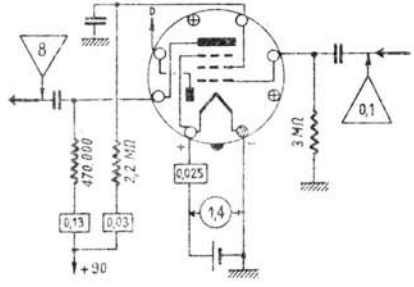
DAF40
HF + D

S = 0,7
P = 2,5 MΩ
V = 0



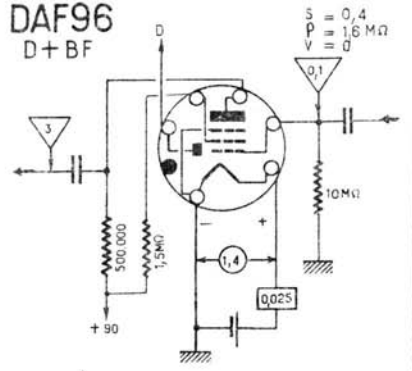
DAF41
D + BF

S = 0,8
P = 1,5 MΩ
V = 0



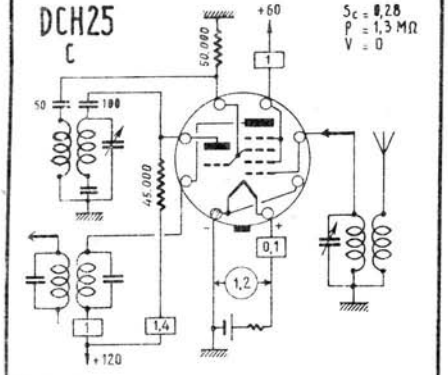
DAF96
D + BF

S = 0,4
P = 1,6 MΩ
V = 0

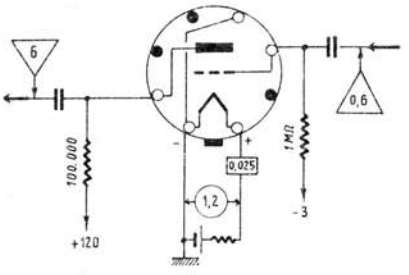


DAC32 = 1H5 — DAF91 = 1S5

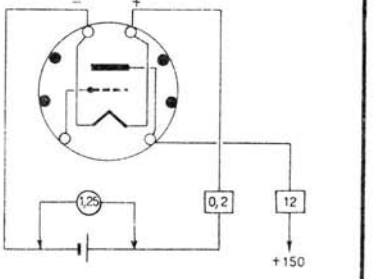
DCH25
C



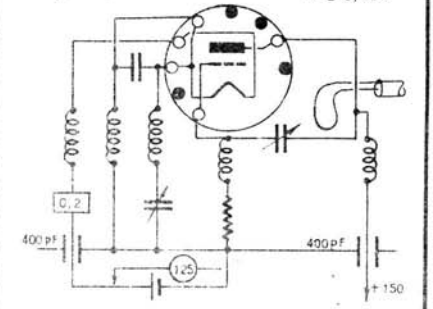
DC25
BF



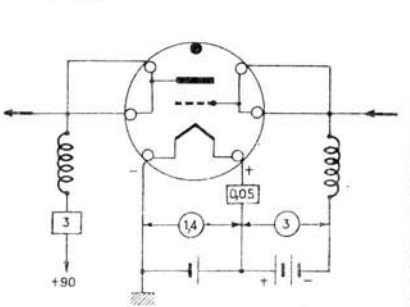
DC70
0 (500MHz)



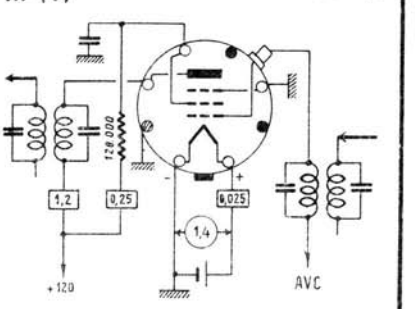
DC80
0(VHF)



DC90
H.F. (V.H.F.)

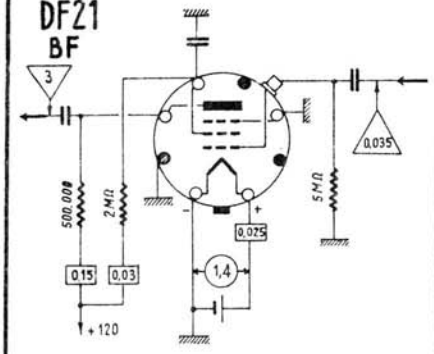


DF21
HF (V)



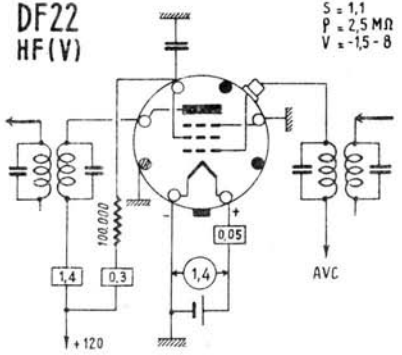
DA90 = 1A3 — DCC90 = 3A5

DF21
BF



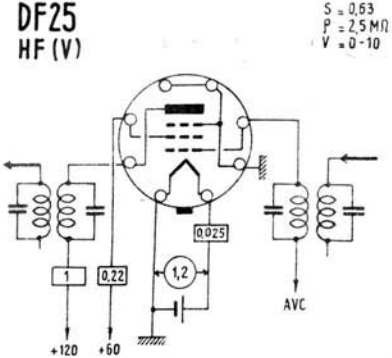
DF22
HF(V)

S = 1,1
P = 2,5 MΩ
V = -1,5 - 8



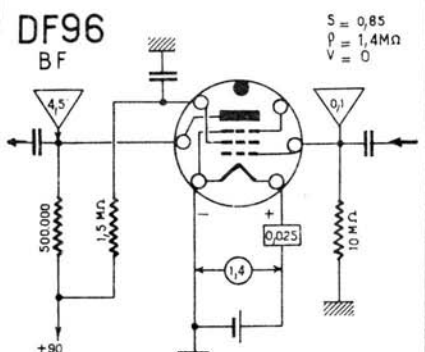
DF25
HF(V)

S = 0,63
P = 2,5 MΩ
V = 0 - 10



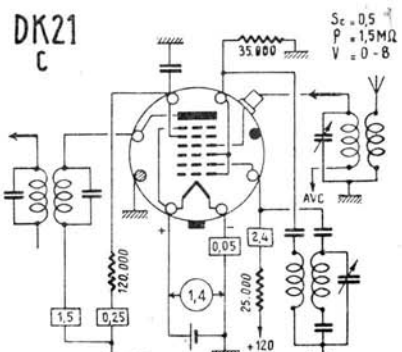
DF96
BF

S = 0,85
P = 1,4 MΩ
V = 0

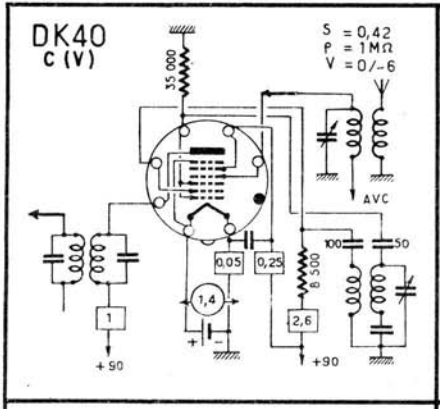


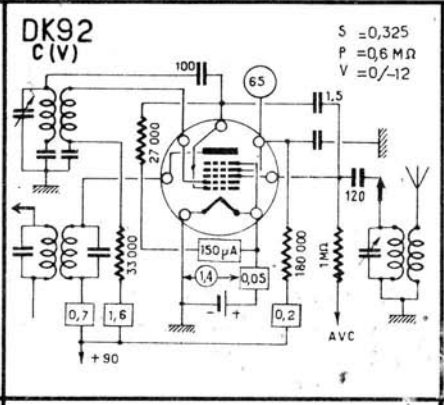
DK21
C

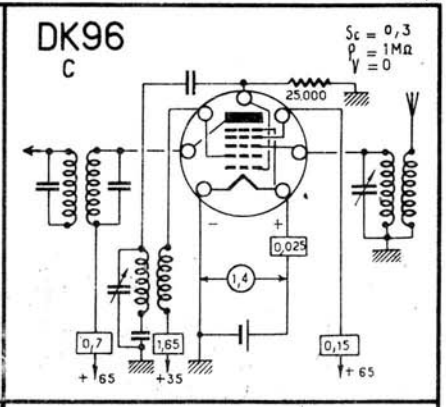
Sc = 0,5
P = 1,5 MΩ
V = 0 - 8

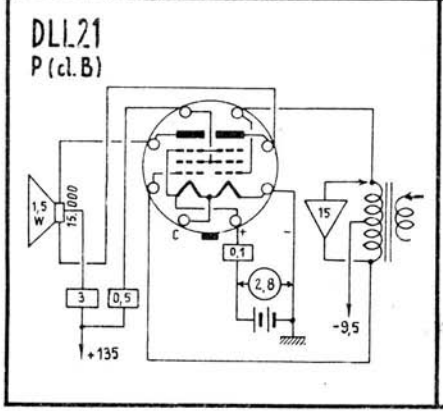


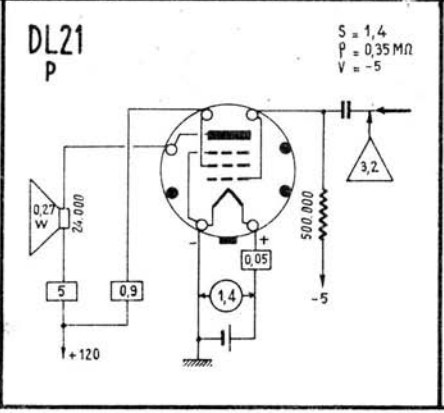
DF33 = 1N5
DF91 = 1T4
DF92 = 1L4
DK32 = 1A7
DK91 = 1R5

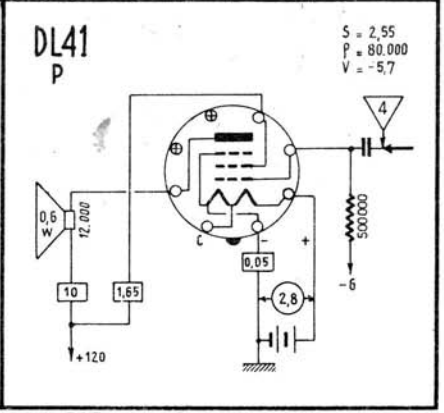






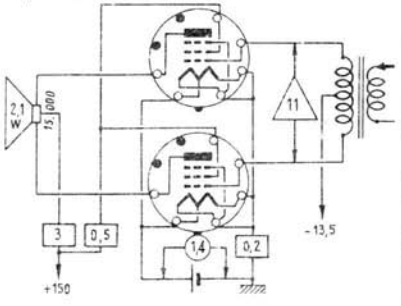






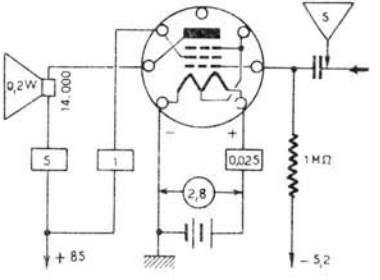
DL33= 3Q5 — DL35 =1C5

DL41
P (Cl. B)



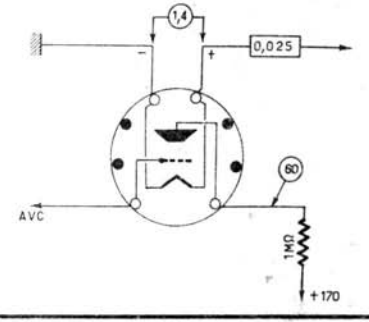
DL96
P

S = 1,4
V = - 5,2

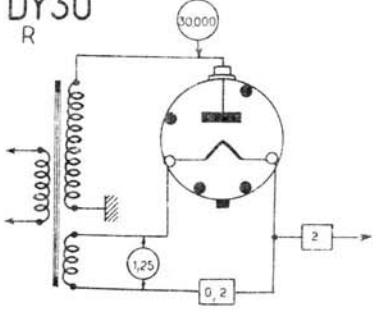


DM70/DM71
I

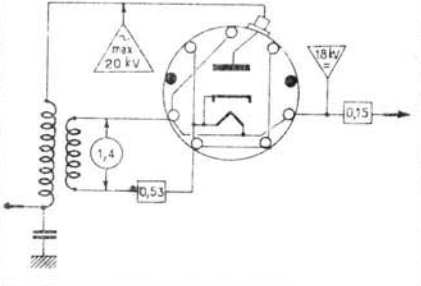
V = 0 - 10



DY30
R

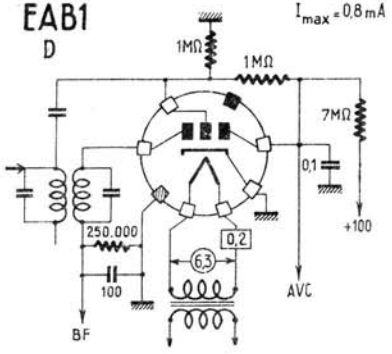


DY86
R (T)



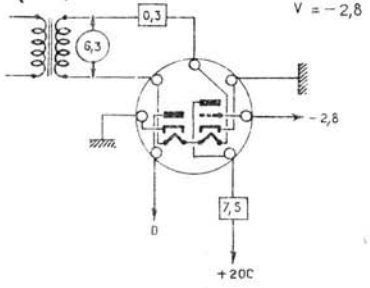
DL92	=	3S4
DL93	=	3A4
DL94	=	3V4
DL95	=	3Q4
DY80	=	1X2A
D61	=	EAF41
D121	=	UAF41
EAA91	=	6AL5
EABC80	=	6T8=6AK8

EAB1
D



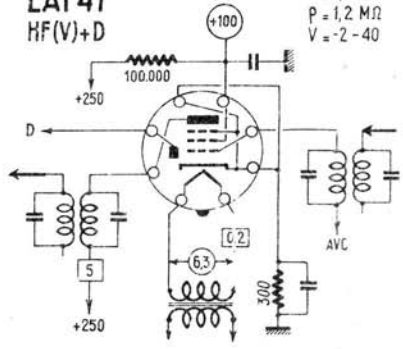
EAC91
0 (U.H.F) + D

S = 2,8
P = 12 800
V = − 2,8

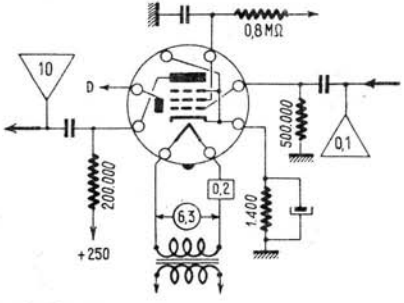


EAF41
HF(V)+D

S = 1,8
P = 1,2 MΩ
V = -2 - 40

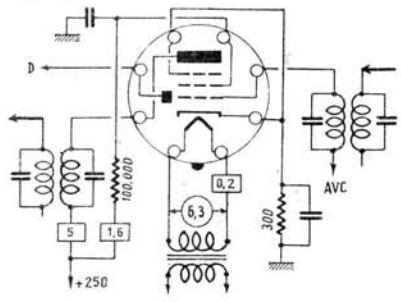


EAF41
BF + D

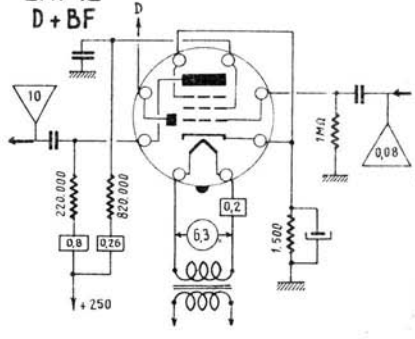


EAF42
HF + D

S = 2
P = 1,4 MΩ
V = -2 - 40

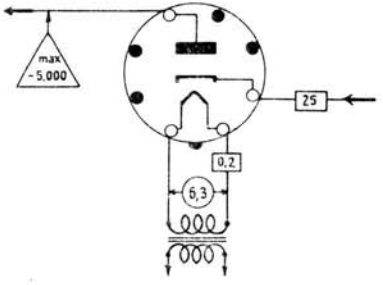


EAF42
D + BF



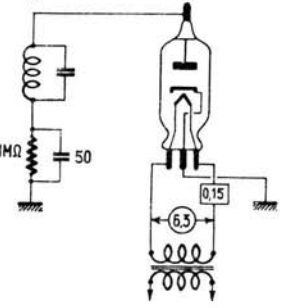
EA40
D (T)

ρ = 300 Ω



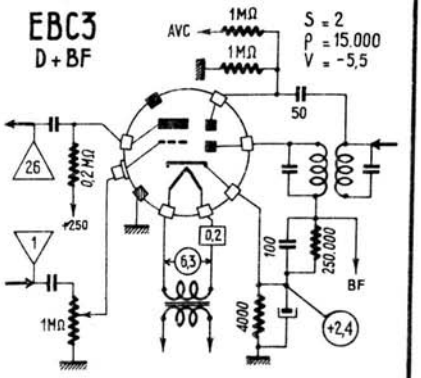
EA50
D

I_{max} = 5 mA



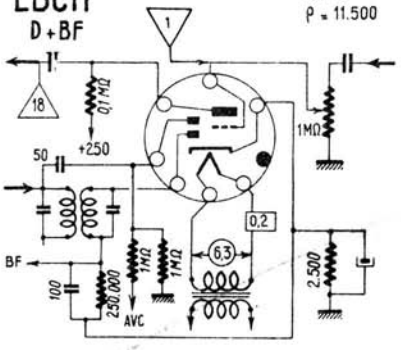
EBC3
D + BF

S = 2
ρ = 15.000
V = -5,5



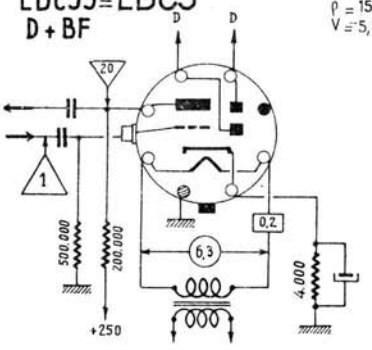
EBC11
D + BF

S = 2
ρ = 11.500



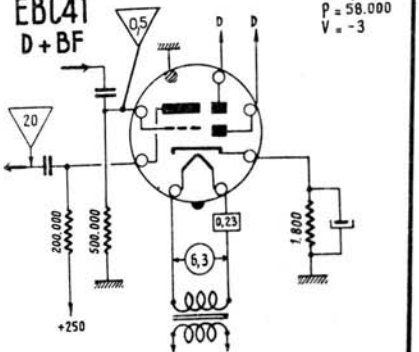
EBC33 = EBC3
D + BF

S = 2
ρ = 15.000
V = -5,5



EBC41
D + BF

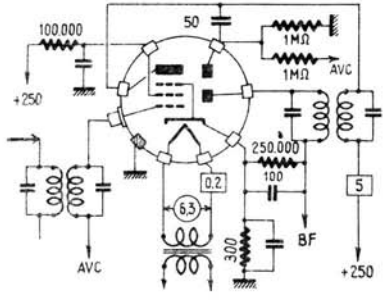
S = 1,2
ρ = 58.000
V = -3



EBC91 = 6AV6 — EBC90 = 6AT6

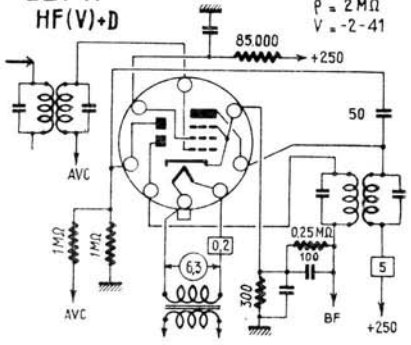
EBF2
HF(V)+D

S = 1,8
P = 1,5 MΩ
V = -2 -50



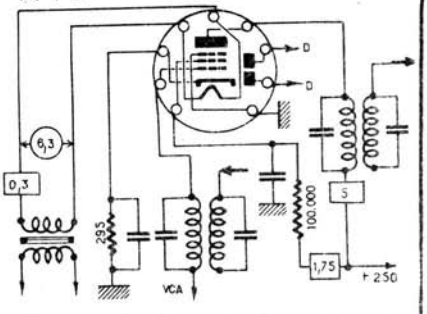
EBF11
HF(V)+D

S = 1,8
P = 2 MΩ
V = -2 -41



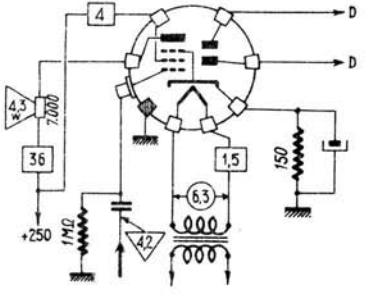
EBF80
HF+D

S = 2,2
P = 1,5MΩ
V = -2 -35



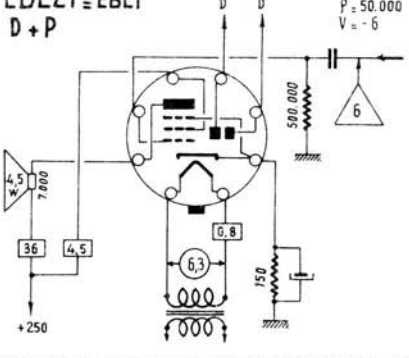
EBL1
D+P

S = 9,5
P = 50.000
V = -6



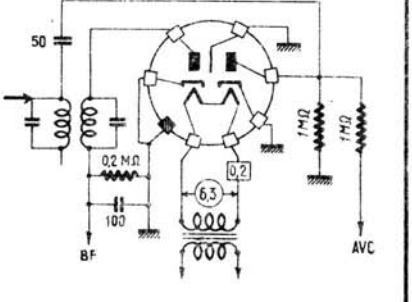
EBL21 = EBL1
D+P

S = 9
P = 50.000
V = -6

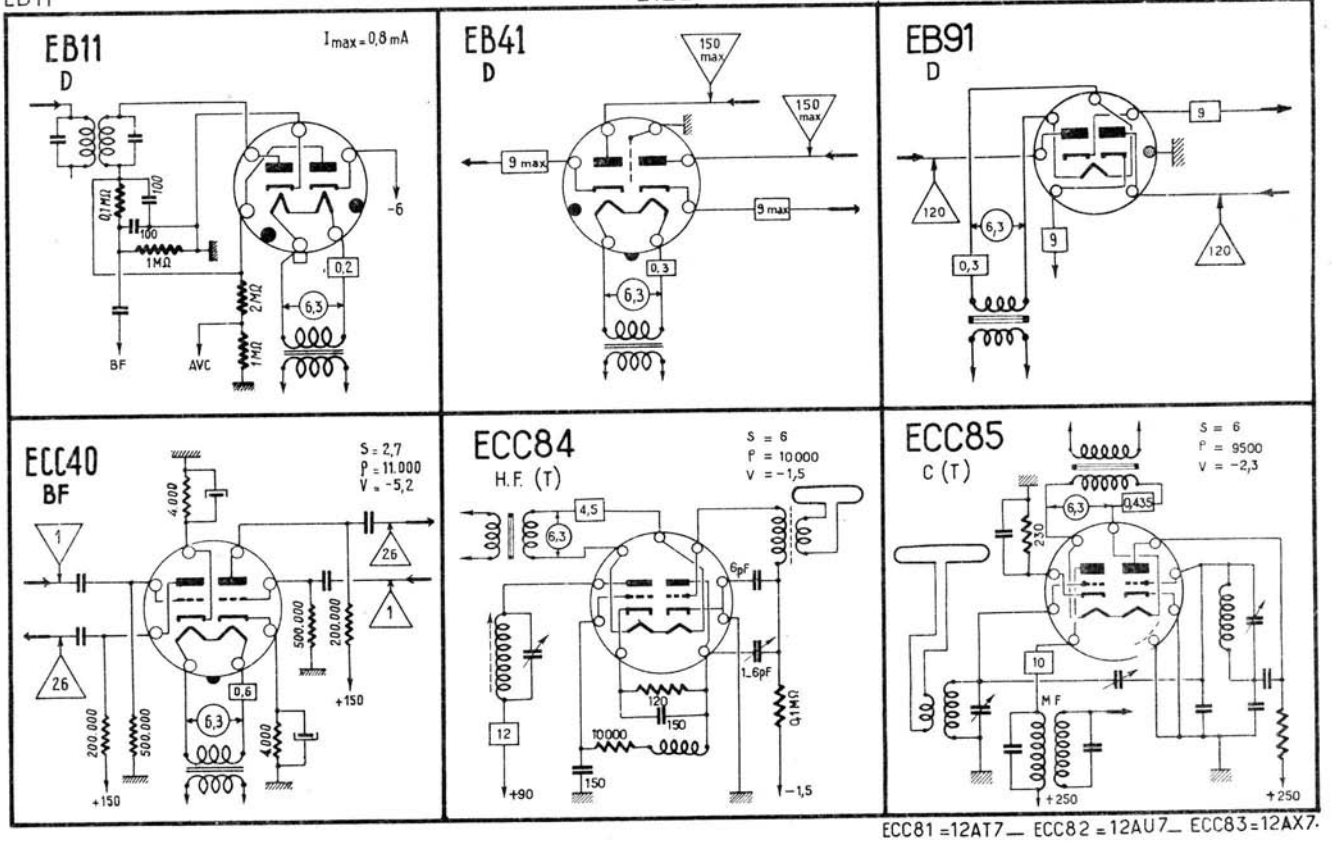


EB4
D

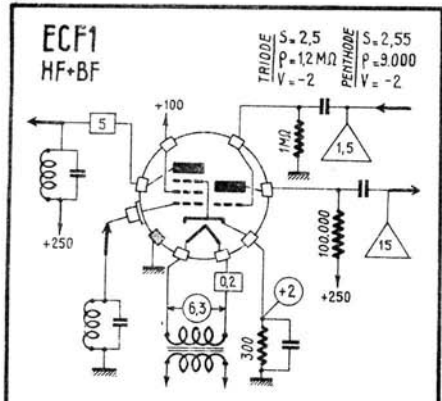
I_{max} = 0,8 mA

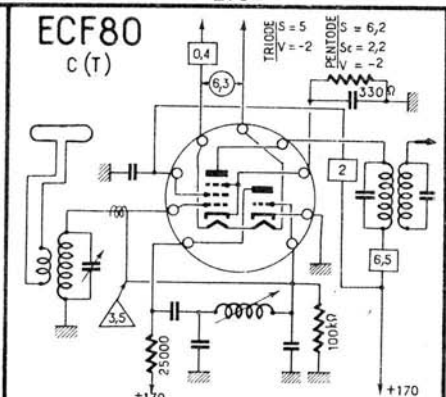


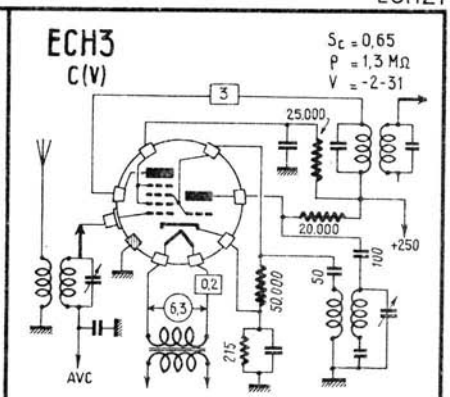
EBF32 = 6B8

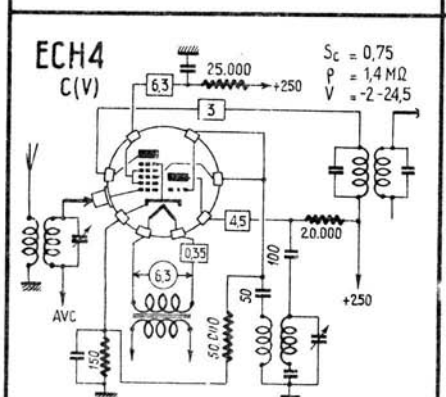


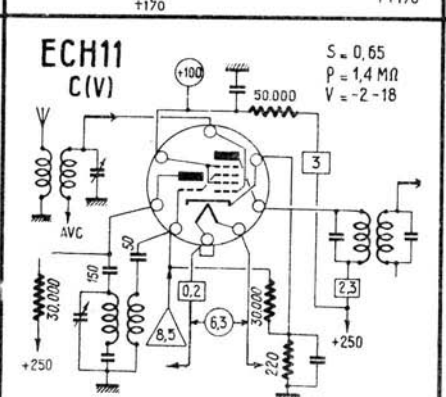
ECC81 = 12AT7 — ECC82 = 12AU7 — ECC83 = 12AX7.

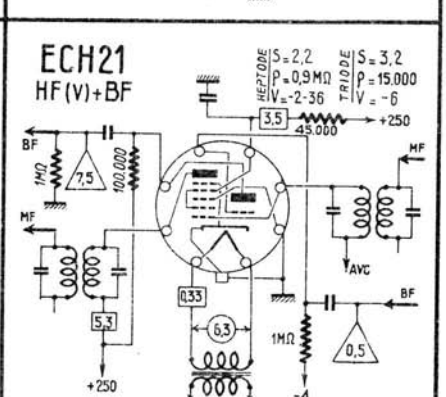






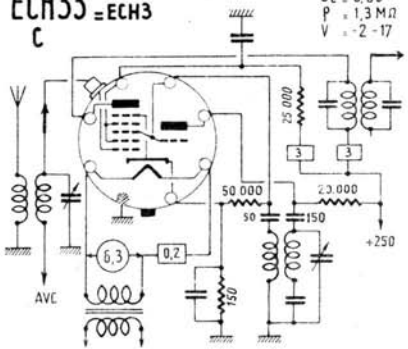




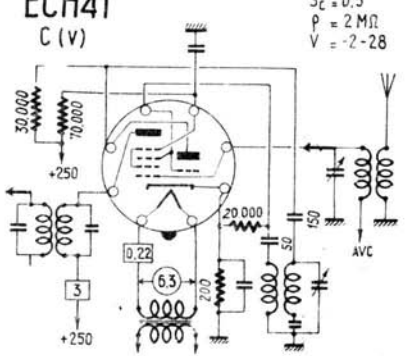


ECC91 = 6J6 — ECC180 = 6BQ7 — ECF82 = 6U8

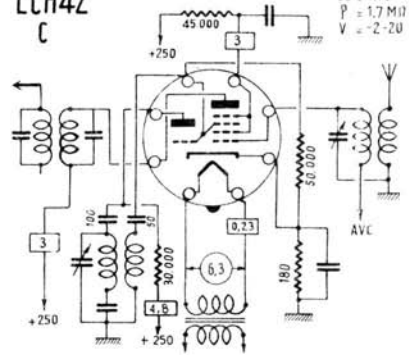
ECH33 = ECH3 C



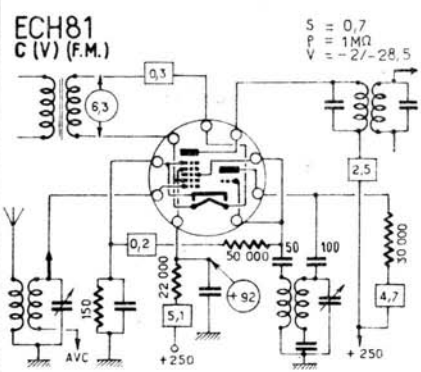
ECH41 C (V)



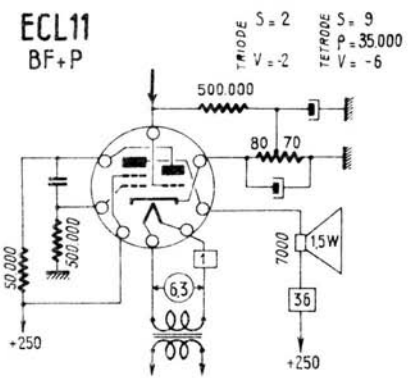
ECH42 C



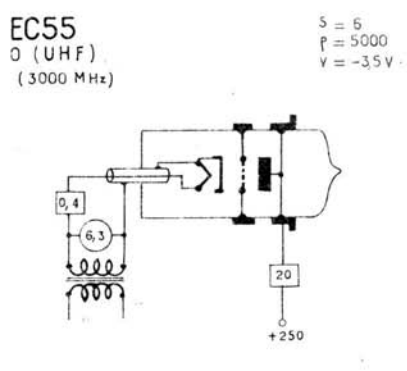
ECH81 C (V) (F.M.)



ECL11 BF+P



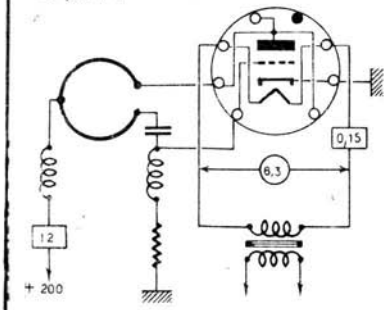
EC55 D (UHF) (3000 MHz)



ECL80 = 6AB8

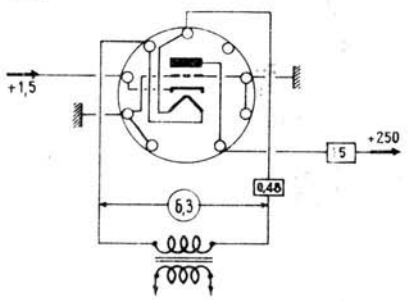
EC70
O (UHF)

S = 3,5
ρ = 4.000
V = -8



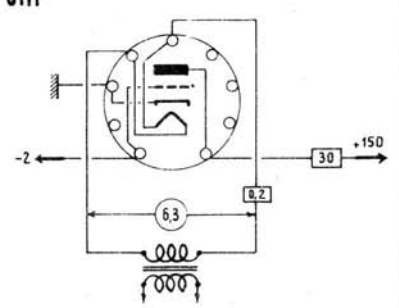
EC80
UHF

S = 12



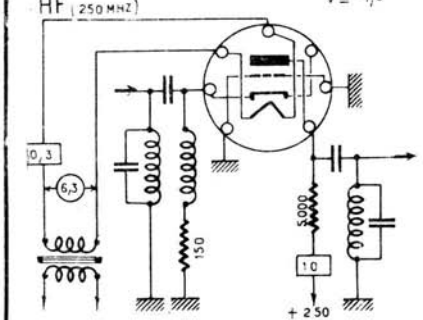
EC81
UHF

S = 5,5



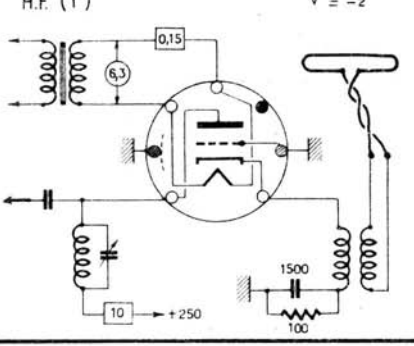
EC91
HF (250 MHz)

S = 8,5
ρ = 12.000
V = -1,5



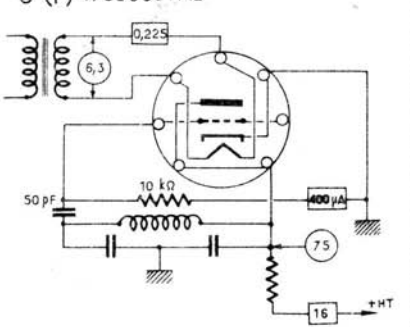
EC92
H.F. (T)

S = 5
ρ = 12.000
V = -2



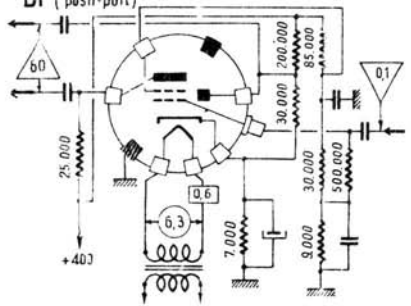
EC93
O (T) 470-890 MHz

S = 8
V = -4



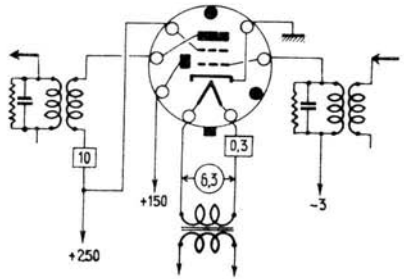
EEP1 = EE1
BF (push-pull)

S 17
P = 1,2 MΩ
V = -2,5



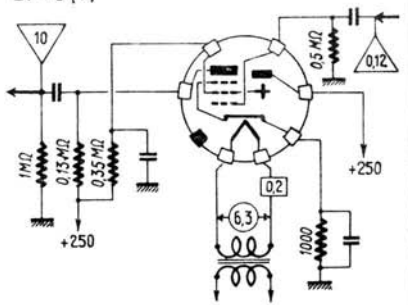
EE50
HF (T)

S = 14
P = 0,1 MΩ
V = -3



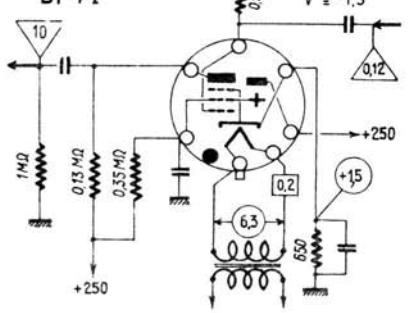
EFM1
BF + I (V)

V = -2 - 20



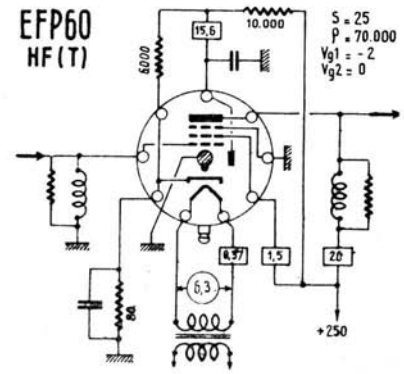
EFM11
BF + I

P = 0,7 MΩ
V = -1,5



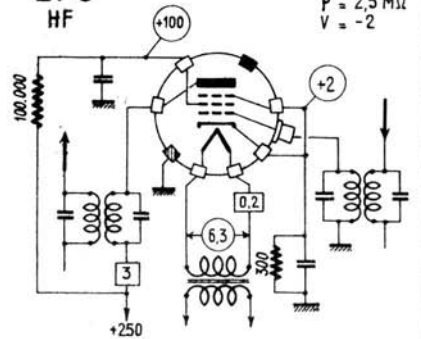
EFP60
HF (T)

S = 25
P = 70.000
Vg1 = -2
Vg2 = 0



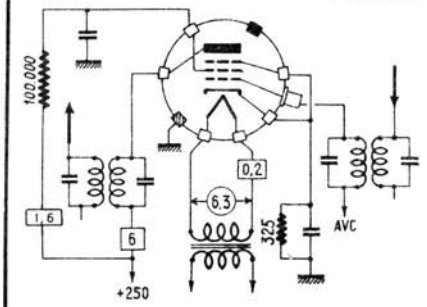
EF6
HF

S = 2
P = 2,5 MΩ
V = -2



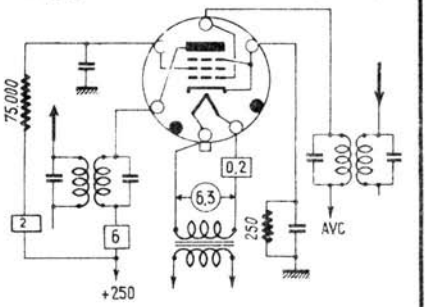
EF9
HF (V)

S = 2,2
P = 1,25 MΩ
V = -2,5-55



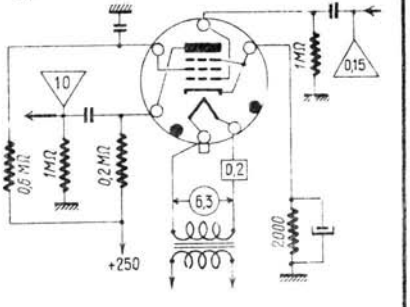
EF11
HF (V)

S = 2,2
P = 2 MΩ
V = -2-53



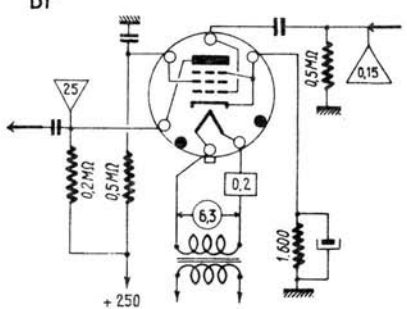
EF11
BF

S = 2,2
P = 2 MΩ



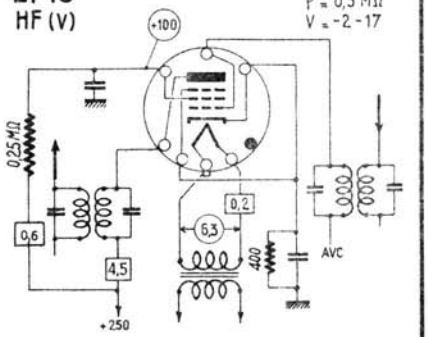
EF12
BF

S = 2,1
P = 2 MΩ
V = -2



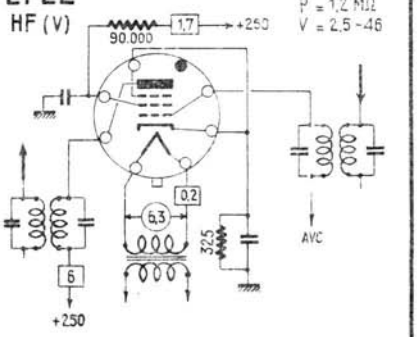
EF13
HF (V)

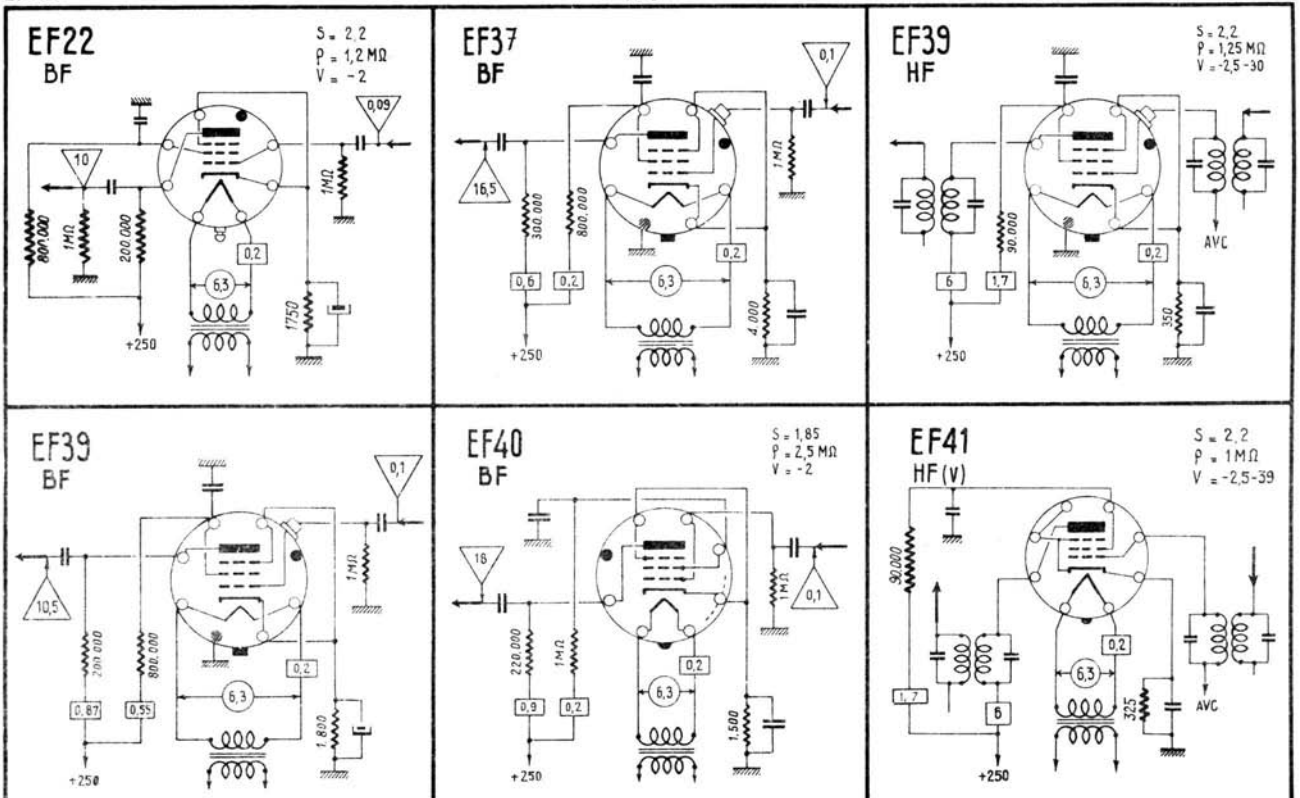
S = 2,3
P = 0,5 MΩ
V = -2-17

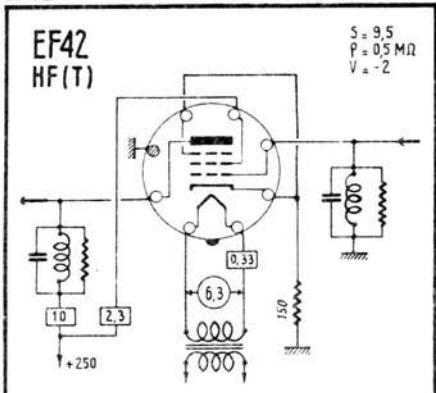


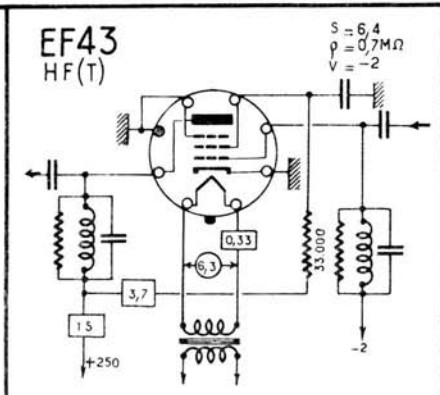
EF22
HF (V)

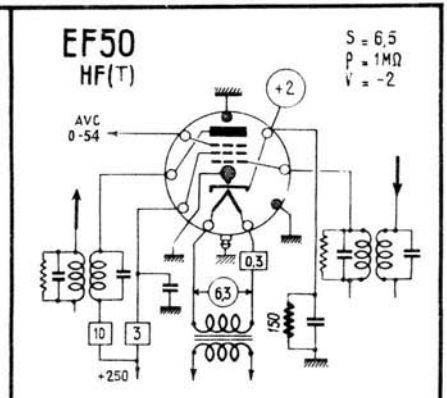
S = 2,2
P = 1,2 MΩ
V = 2,5-46

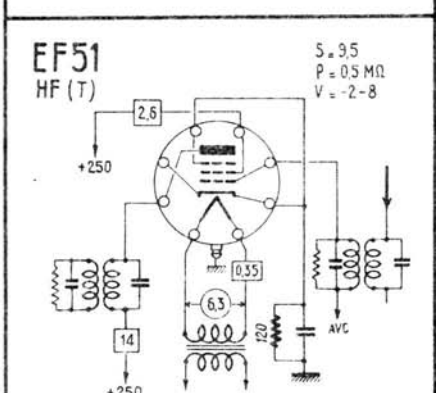


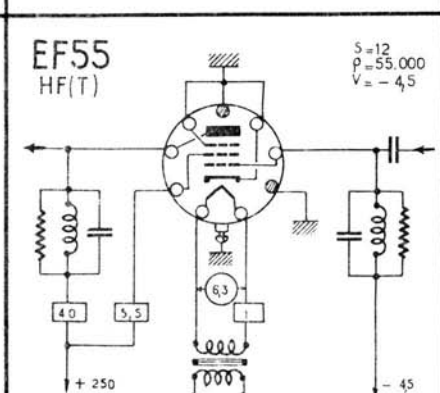

EF22
BF
S = 2,2
ρ = 1,2 MΩ
V = -2
10
0,09
1MΩ
800.000
1MΩ
200.000
0,2
6,3
1750
+250
EF37
BF
0,1
16,5
300.000
800.000
1MΩ
0,6
0,2
0,2
6,3
4.000
+250
EF39
HF
S = 2,2
ρ = 1,25 MΩ
V = -2,5 -30
AVC
90.000
6
1,7
0,2
6,3
350
+250
EF39
BF
0,1
10,5
1MΩ
200.000
800.000
0,2
0,87
0,55
6,3
1.800
+250
EF40
BF
S = 1,85
ρ = 2,5 MΩ
V = -2
16
1MΩ
0,1
220.000
1MΩ
0,2
0,9
0,2
6,3
1.500
+250
EF41
HF(V)
S = 2,2
ρ = 1MΩ
V = -2,5-39
30.000
0,2
1,7
6
6,3
325
AVC
+250

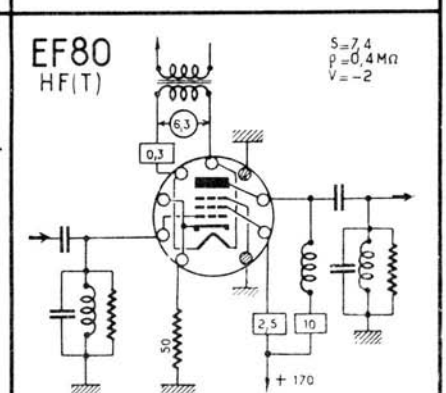

EF42
HF(T)
S = 9,5
ρ = 0,5 MΩ
V = -2
0,33
6,3
10
2,3
+250
150


EF43
HF(T)
S = 6,4
ρ = 0,7MΩ
V = -2
0,33
6,3
3,7
1,5
+250
35.000
-2

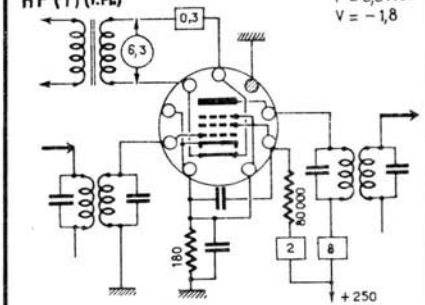

EF50
HF(T)
S = 6,5
ρ = 1MΩ
V = -2
+2
AVC
0-54
0,3
6,3
10
3
+250
150


EF51
HF(T)
S = 9,5
ρ = 0,5 MΩ
V = -2-8
2,6
+250
0,35
6,3
120
AVC
14
+250

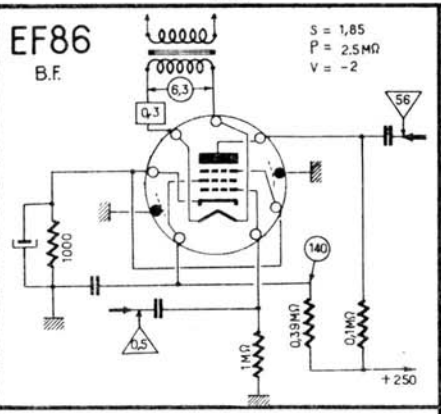

EF55
HF(T)
S = 12
ρ = 55.000
V = - 4,5
6,3
4,0
5,5
+ 250
- 45


EF80
HF(T)
S = 7,4
ρ = 0,4 MΩ
V = -2
6,3
0,3
2,5
10
50
+ 170

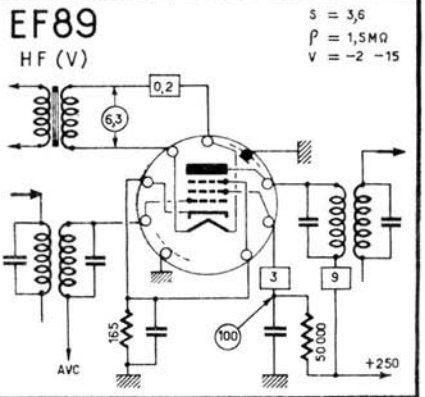
EF85
HF (T) (F.M.)



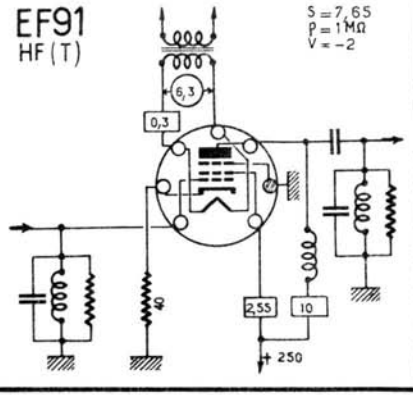
EF86
B.F.



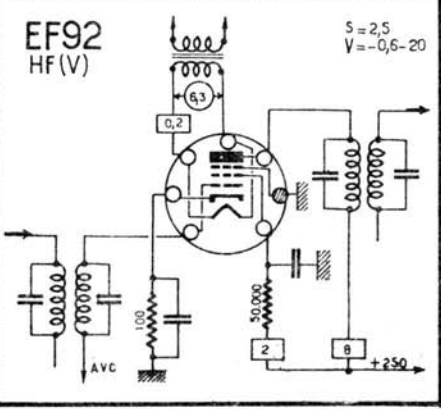
EF89
HF (V)



EF91
HF (T)



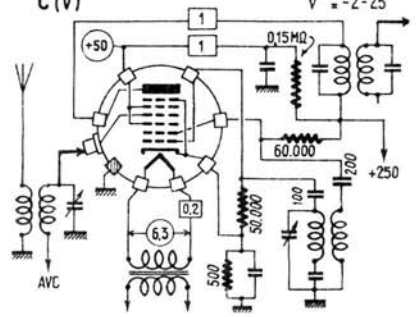
EF92
HF (V)



EF93 = 6BA6
EF94 = 6AU6
EF95 = 6AK5
EF190 = 6CB6
EK90 = 6BE6

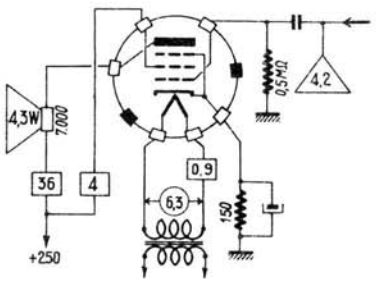
EK2
C (v)

S_c = 0,55
P = 2 MΩ
V = -2-25

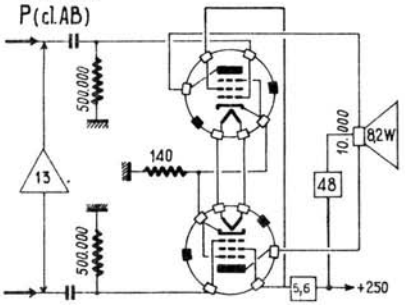


EL3N
P

S = 9,5
P = 50.000
V = -6

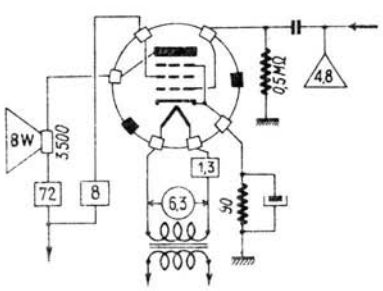


EL3N
P(cl.AB)

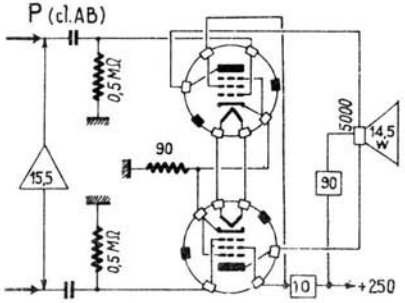


EL6
P

S = 14,5
P = 20.000
V = -7

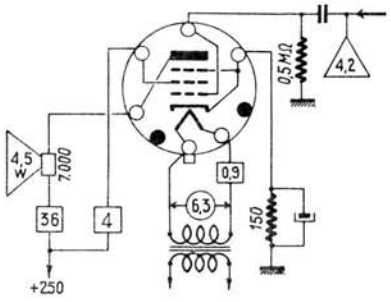


EL6
P(cl.AB)



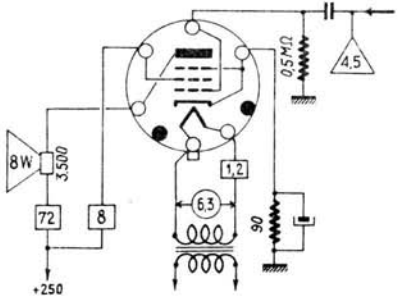
EL11
P

S = 9
P = 50.000
V = -6



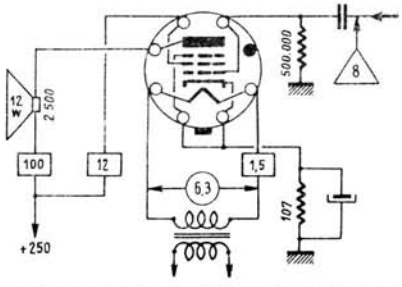
EL12
P

S = 15
P = 25.000
V = -7

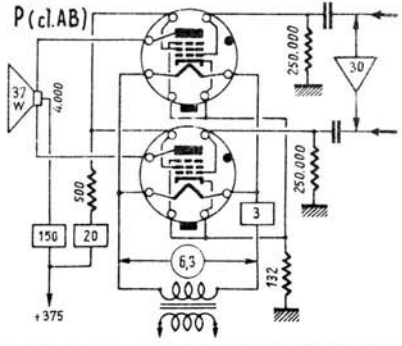


EL34
P

S = 11
P = 15.000
V = -12

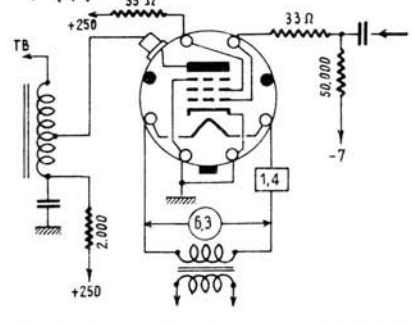


EL34
P (cl.AB)



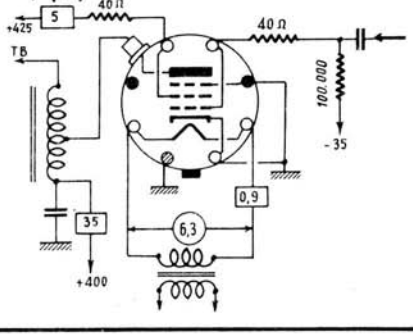
EL38
P (T)

S = 14,3
P = 21.000
V = -7



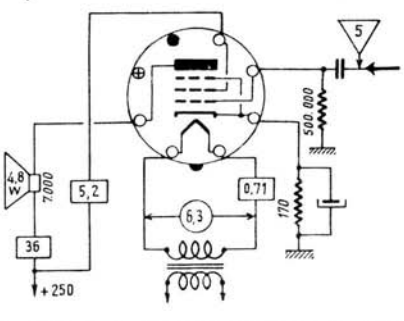
EL39
P (T)

S = 6

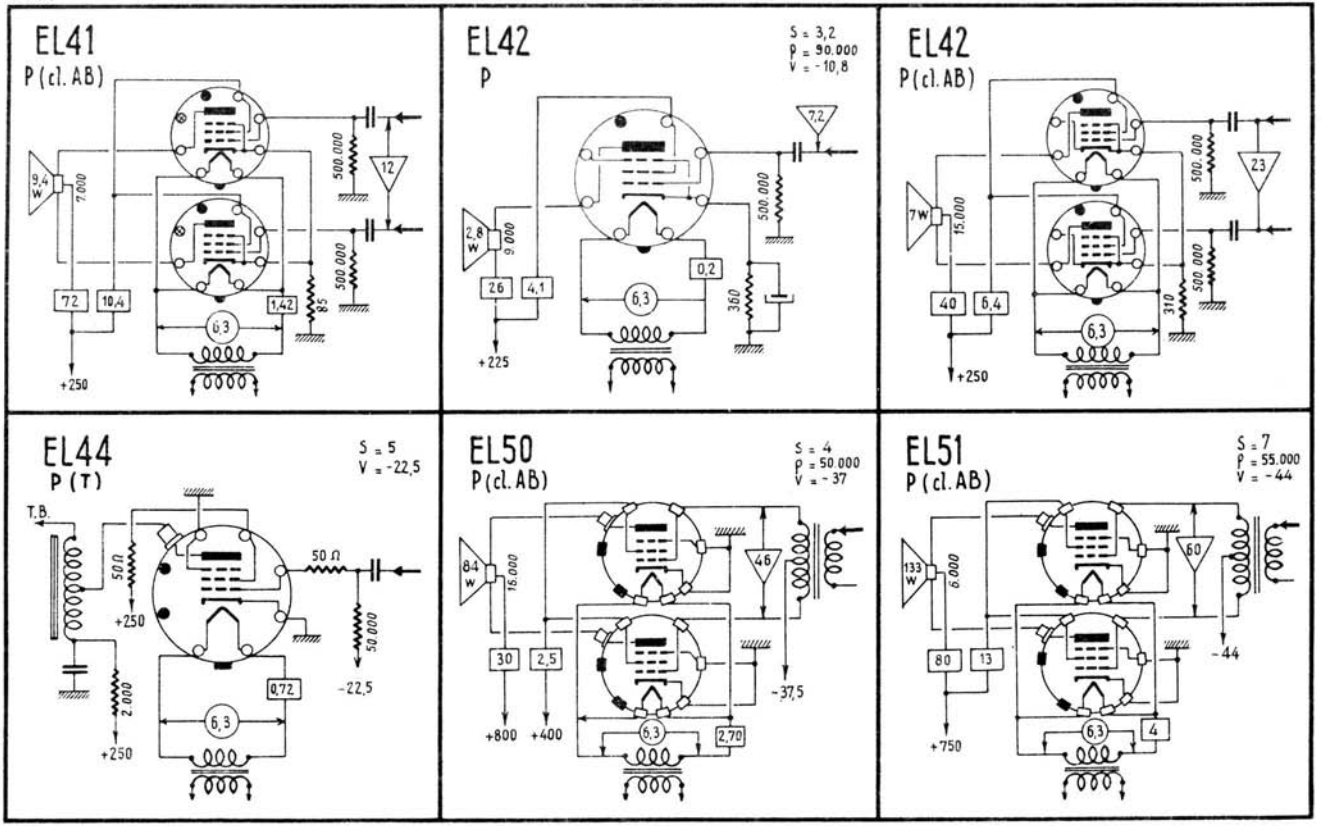


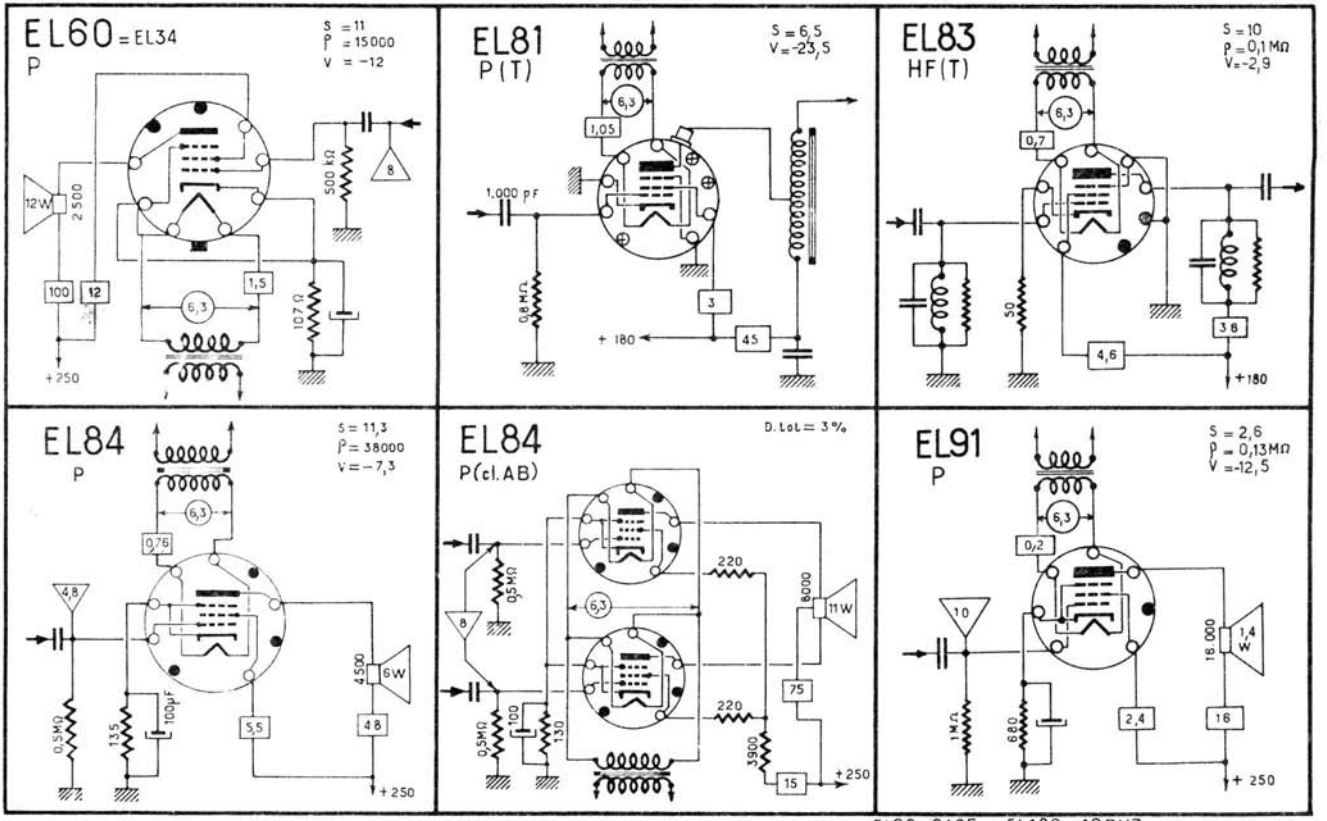
EL41
P

S = 10
P = 40.000
V = -7



EL33 = 6V6


EL41
P (cl. AB)
9,4 W
7.000
500.000
12
500.000
85
7,2
10,4
1,42
6,3
+250
EL42
P
S = 3,2
P = 90.000
V = -10,8
7,2
2,8 W
9.000
500.000
0,2
2,6
4,1
6,3
360
+225
EL42
P(cl. AB)
7W
15.000
500.000
23
500.000
310
40
6,4
6,3
+250
EL44
P (T)
S = 5
V = -22,5
T.B.
50 Ω
50 Ω
+250
50.000
2.000
0,72
6,3
-22,5
+250
EL50
P(cl. AB)
S = 4
P = 50.000
V = -37
8-4 W
15.000
46
30
2,5
6,3
2,70
-37,5
+800
+400
EL51
P(cl. AB)
S = 7
P = 55.000
V = -44
133 W
6.000
60
80
13
-44
6,3
4
+750

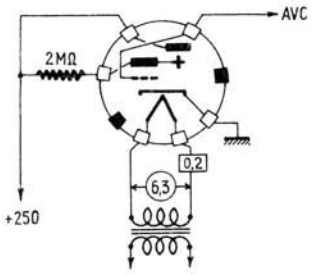


EL90 = 6AQ5 — EL180 = 12BY7

EM1/EM3

I

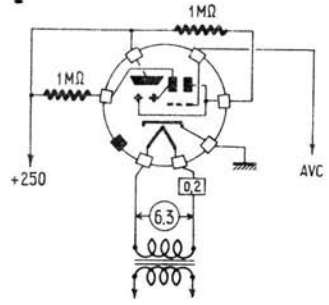
V = 0 -5



EM4

I

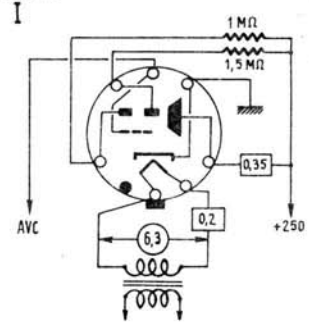
V = 0 -16



EM11

I

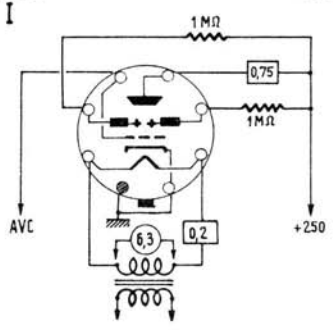
V = 0 -16
V' = 0 -5



EM34

I

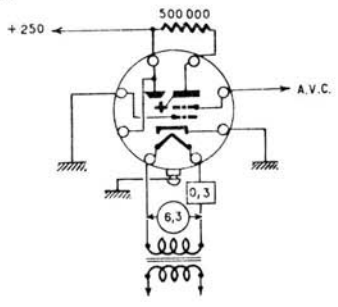
V = 0 -16
V' = 0 -5



EM71

I

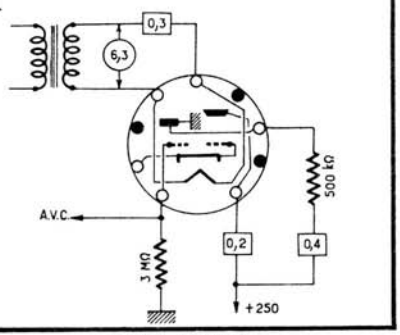
V = 0 -20



EM80

I

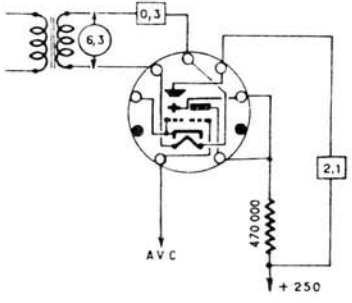
V - 1/-16



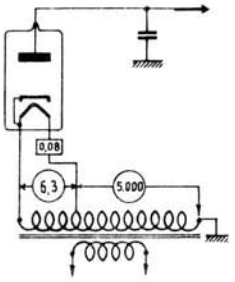
EM81 = EM80

EM85
I

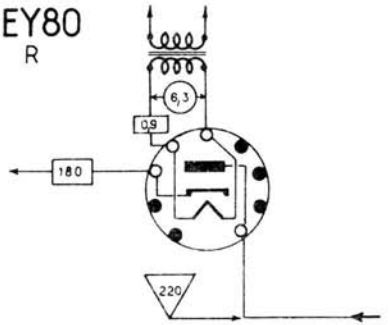
V = 0 -18



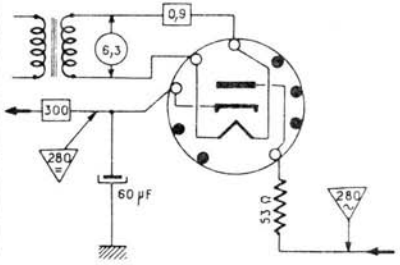
EY51 = EY1
R (T)



EY80
R

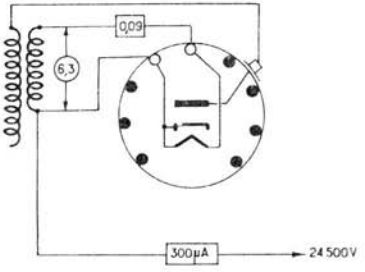


EY82
R

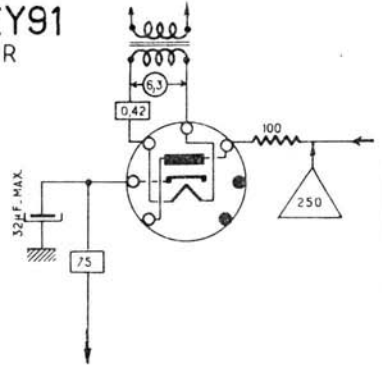


EY86
R (T)

Vinv = 27.500

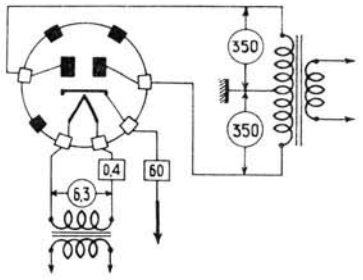


EY91
R

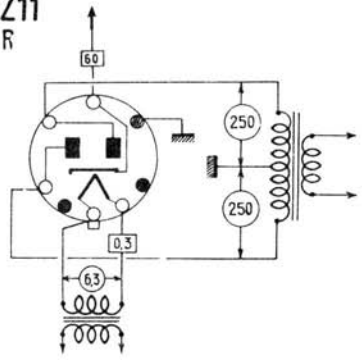


EQ80 = 6BE7

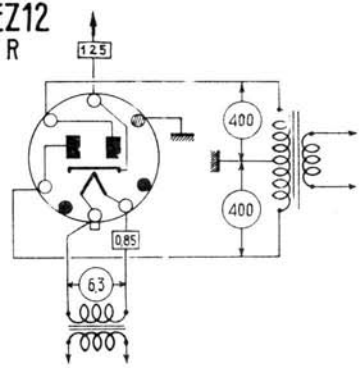
EZ2
R



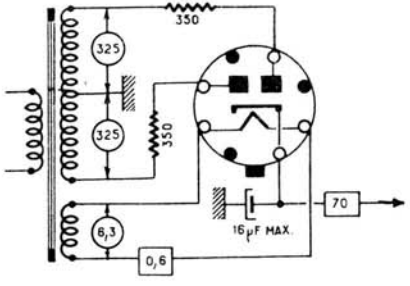
EZ11
R



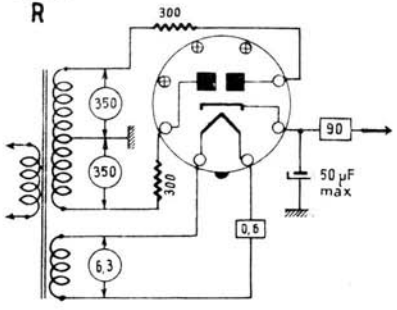
EZ12
R



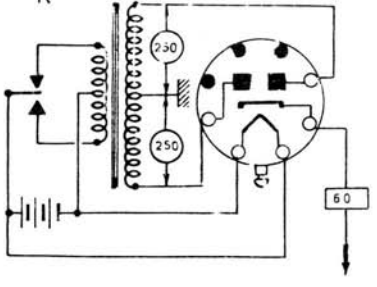
EZ35
R

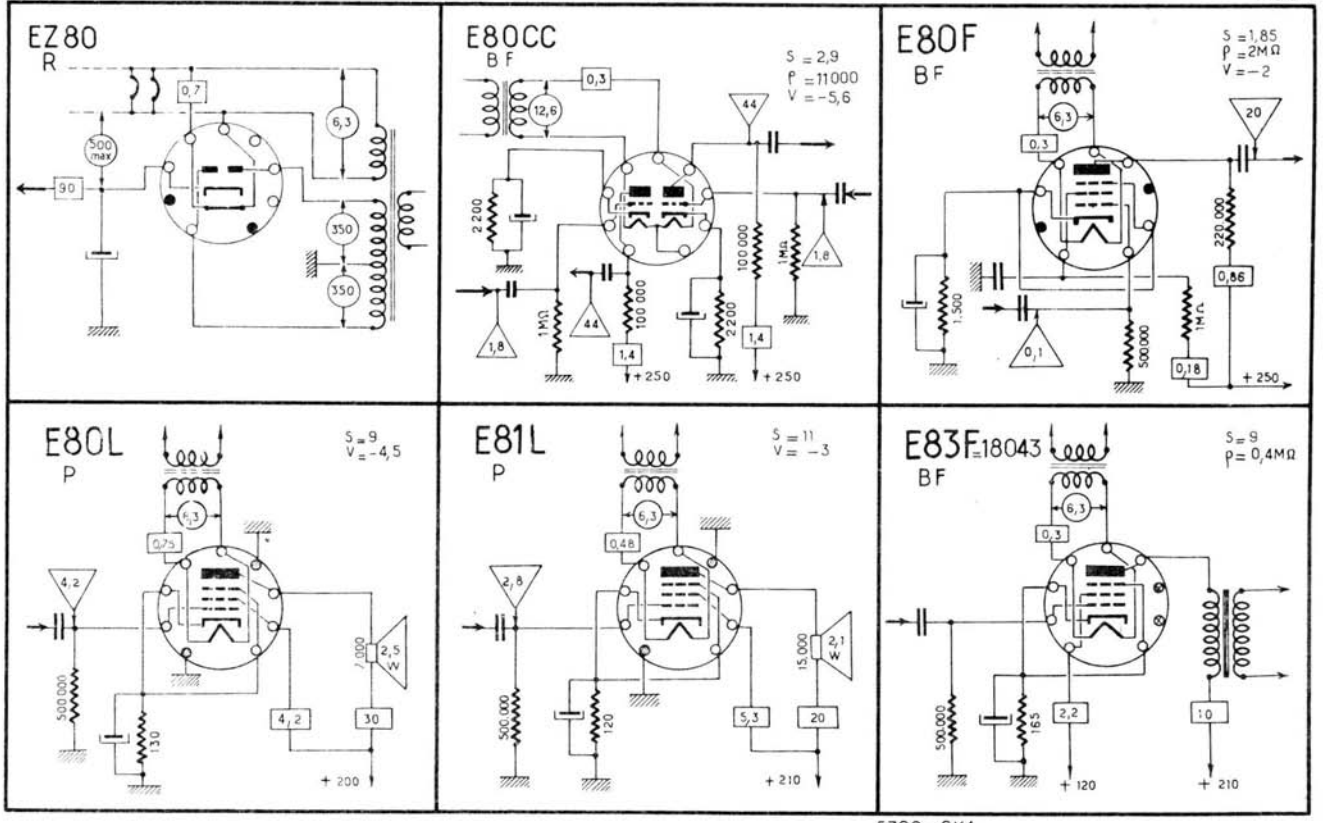


EZ40
R



EZ41
R

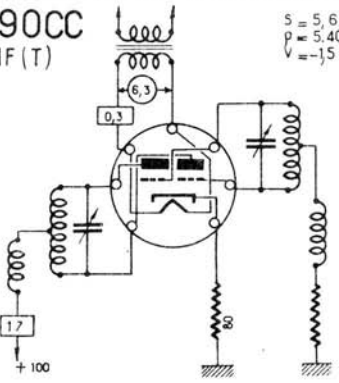



EZ80
R
0,7
6,3
500 max
90
350
350
E80CC
BF
S = 2,9
ρ = 11000
V = −5,6
0,3
12,6
44
2200
1MΩ
100 000
1,8
44
1,4
+ 250
100 000
1MΩ
1,8
2200
1,4
+ 250
E80F
BF
S = 1,85
ρ = 2MΩ
V = −2
6,3
0,3
20
220 000
0,86
1500
0,1
500 000
1MΩ
0,18
+ 250
E80L
P
S = 9
V = −4,5
6,3
0,75
4,2
500 000
130
4,2
30
1 000
2,5 W
+ 200
E81L
P
S = 11
V = −3
6,3
0,48
2,8
500 000
120
5,3
20
15 000
2,1 W
+ 210
E83F=18043
BF
S = 9
ρ = 0,4MΩ
6,3
0,3
500 000
165
2,2
+ 120
10
+ 210

EZ90 =6X4

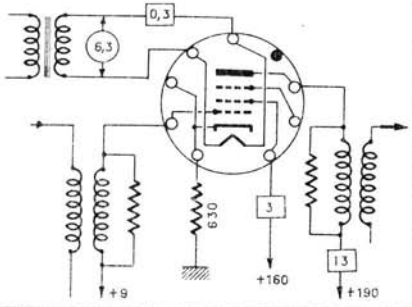
E90CC
HF (T)

S = 5,6
P = 5.400
V = −1,5

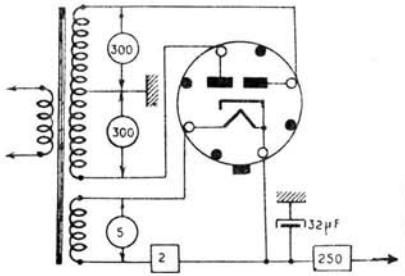


E180F
V.F. (T)

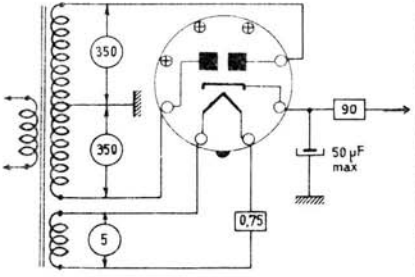
S = 16,5
P = 35 kΩ
V = −0,9



GZ32
R

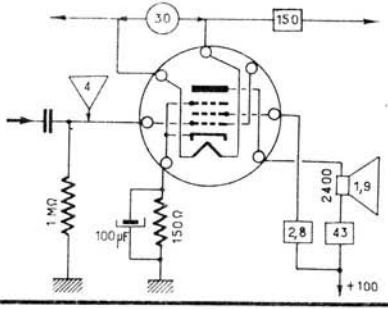


GZ40
R



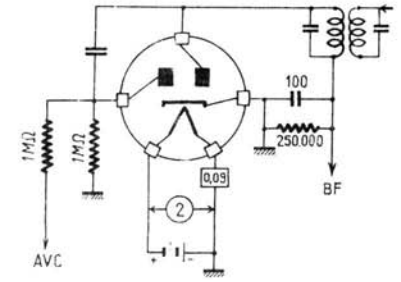
HL94
P

S = 9
P = 20 kΩ
V = −7



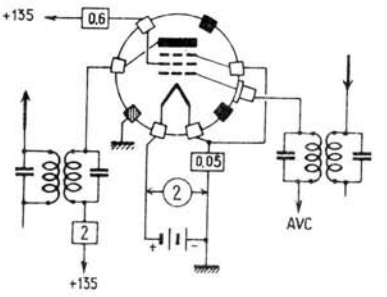
HBC90	=	12AT6
HBC91	=	12AV6
HF61	=	EF41
HF62	=	EF42
HF121	=	UF41
HF93	=	12BA6
HF94	=	12AU6
HK90	=	12BE6
HL92	=	50C5
HY90	=	35W4

KB2
D



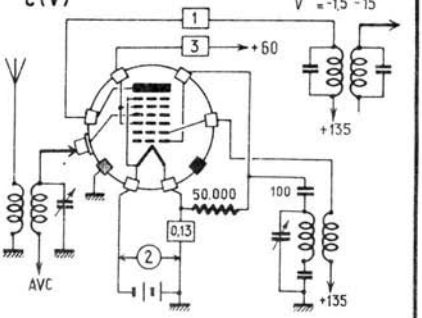
KF3
HF(V)

S = 0,65
P = 1,3MΩ
V = -0,5 -15



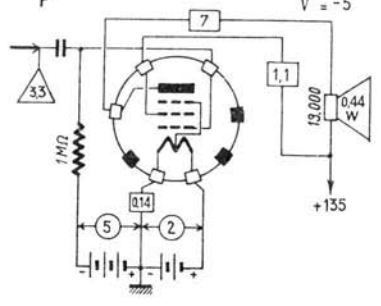
KK2
C(V)

S$_C$ = 0,3
P = 1,7MΩ
V = -1,5 -15



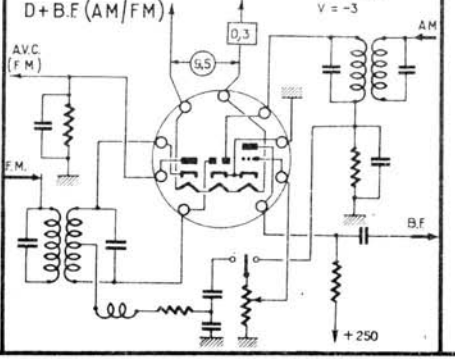
KL4
P

S = 2,1
P = 0,13MΩ
V = -5



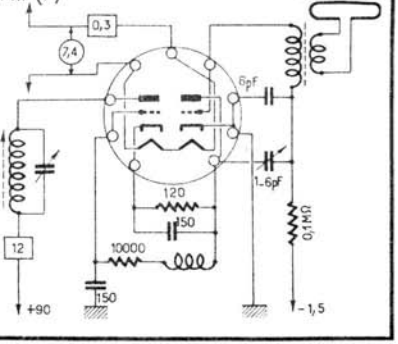
PABC80
D+B.F (AM/FM)

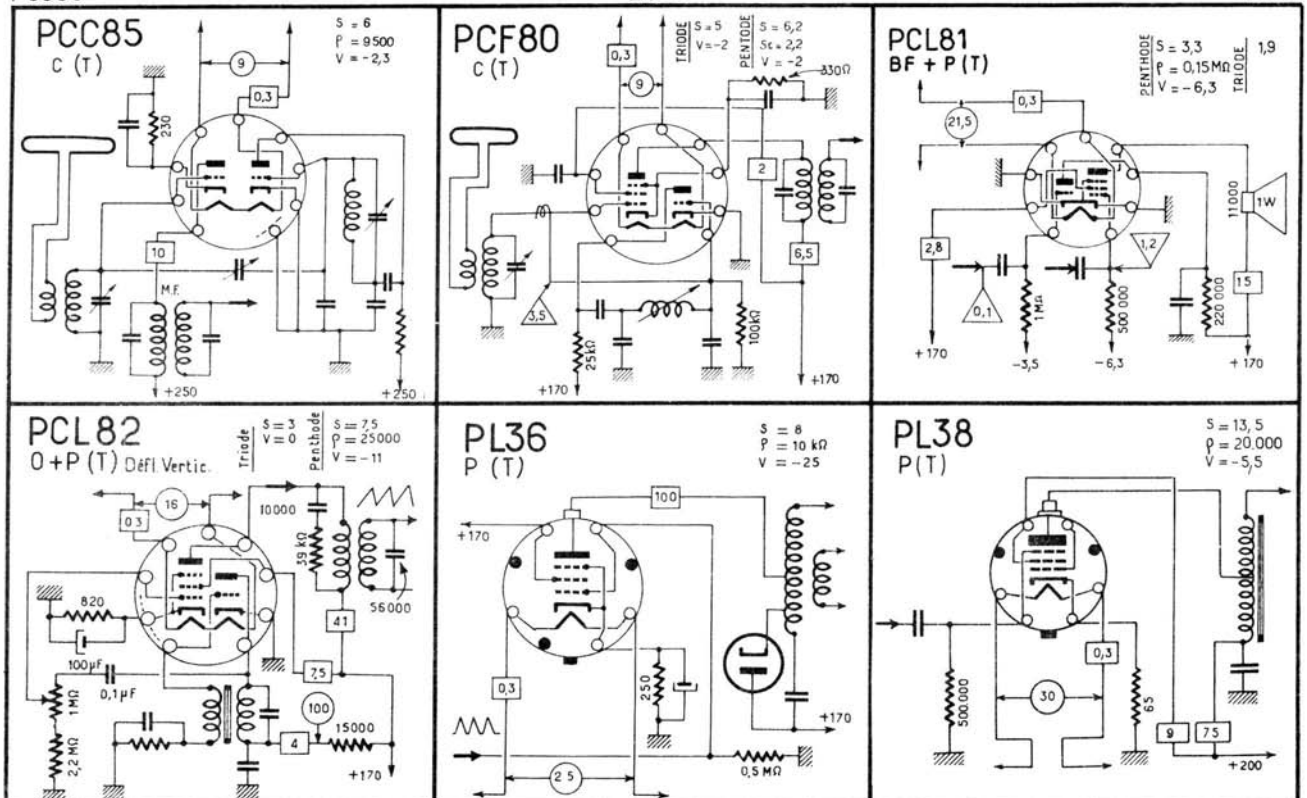
S = 1,2
P = 58000
V = -3



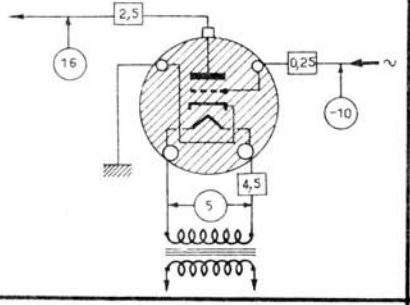
PCC84
H.F. (T)

S = 6
P = 10000
V = -1,5



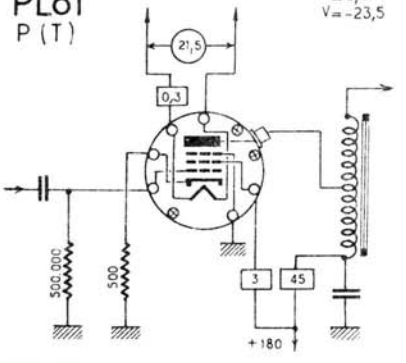

PCC85
C (T)
S = 6
ρ = 9500
V = -2,3
9
0,3
250
10
M.F.
+250
+250
PCF80
C (T)
TRIODE
S = 5
V = -2
PENTODE
S = 6,2
Sc = 2,2
V = -2
330Ω
0,3
9
2
6,5
10
3,5
25kΩ
100kΩ
+170
+170
PCL81
BF + P (T)
PENTHODE
S = 3,3
ρ = 0,15MΩ
V = -6,3
TRIODE
1,9
0,3
21,5
11000
1W
2,8
1,2
0,1
1MΩ
500 000
220 000
1,5
+170
-3,5
-6,3
+170
PCL82
0+P (T) Défl. Vertic.
Triode
S = 3
V = 0
Penthode
S = 7,5
ρ = 25000
V = -11
16
0,3
10000
39 kΩ
820
56000
41
100µF
0,1µF
7,5
1MΩ
100
2,2MΩ
4
15000
+170
PL36
P (T)
S = 6
ρ = 10 kΩ
V = -25
100
+170
0,3
250
+170
25
0,5 MΩ
PL38
P(T)
S = 13,5
ρ = 20.000
V = -5,5
500.000
0,3
30
65
9
7,5
+200

PL57
(Thyr.)



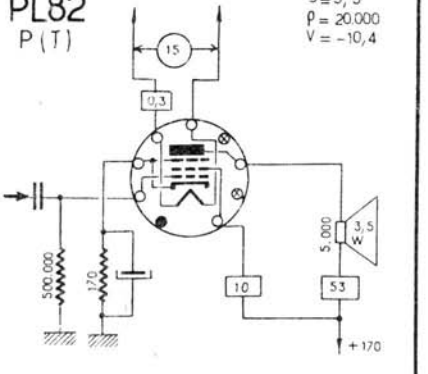
PL81
P (T)

S = 6,5
V = -23,5



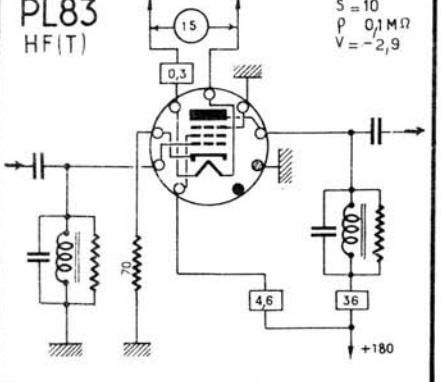
PL82
P (T)

S = 9, 5
ρ = 20.000
V = -10,4

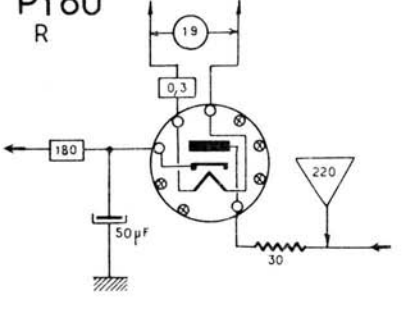


PL83
HF (T)

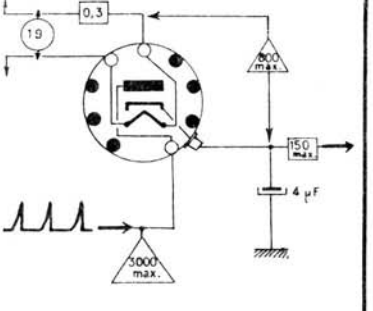
S = 10
ρ 0,1 MΩ
V = -2,9



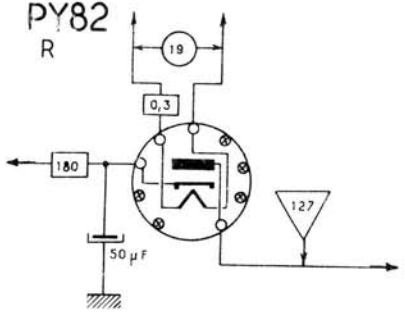
PY80
R



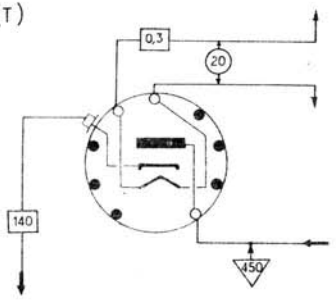
PY81
R (T) (T. H.T.)



PY82
R

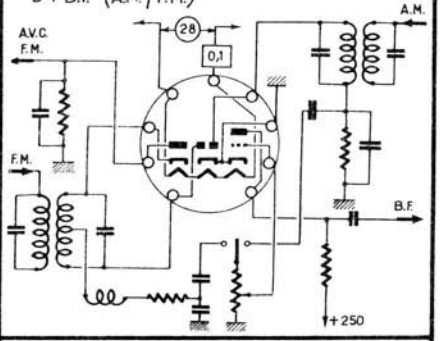


PY83
R (T)



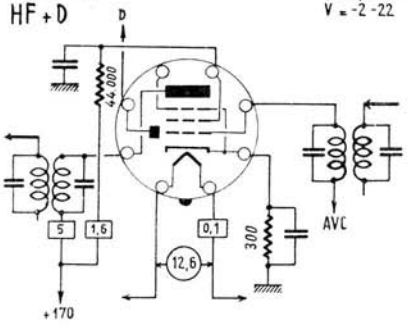
UABC80
D + B.F. (A.M./F.M.)

S = 1,2
F = 58000
V = -3



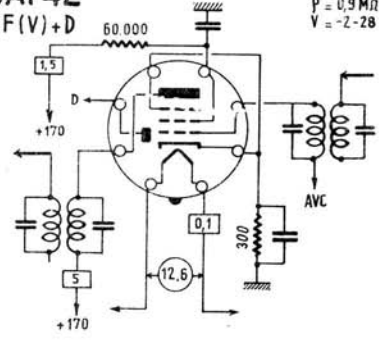
UAF41
HF + D

S = 1,8
P = 1,2 MΩ
V = -2 -22

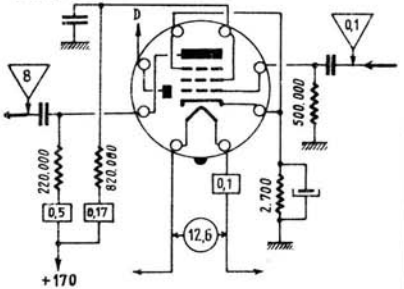


UAF42
HF(V) + D

S = 2
P = 0,9 MΩ
V = -2 -28

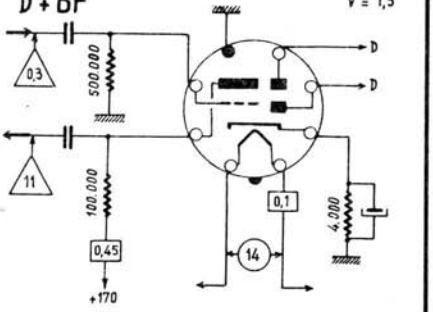


UAF42
D + BF



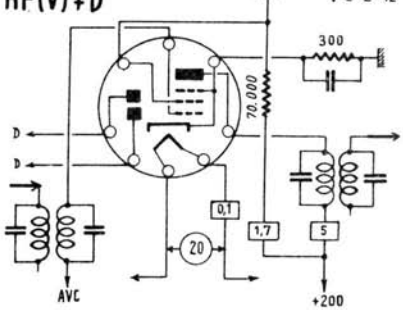
UBC41
D + BF

S = 1,65
P = 42.000
V = 1,5

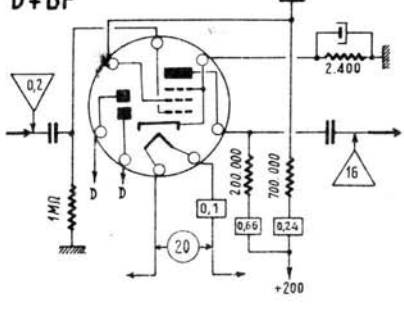


UBF11
HF(V) + D

S = 1,8
P = 1,5 MΩ
V = -2-42

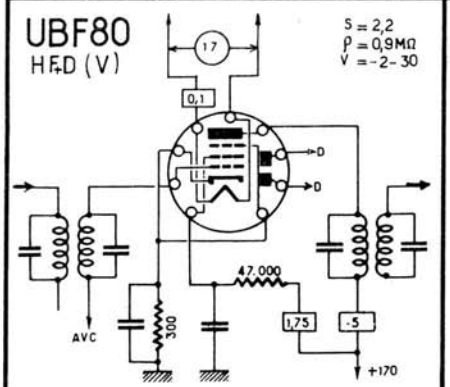


UBF11
D + BF



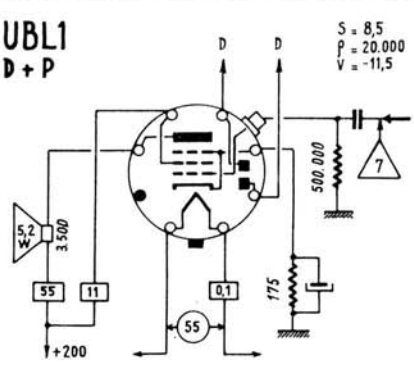
UBF80
HF D (V)

S = 2,2
P = 0,9MΩ
V = -2-30



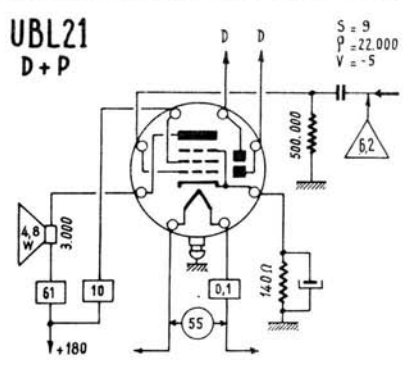
UBL1
D + P

S = 8,5
P = 20.000
V = -11,5



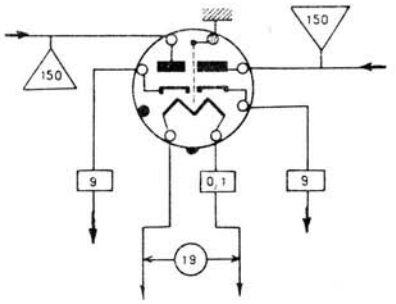
UBL21
D + P

S = 9
P = 22.000
V = -5



UB41

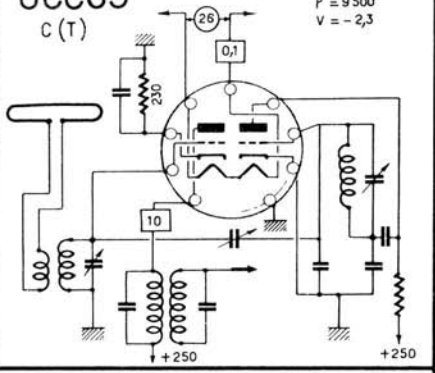
D



UCC85

C (T)

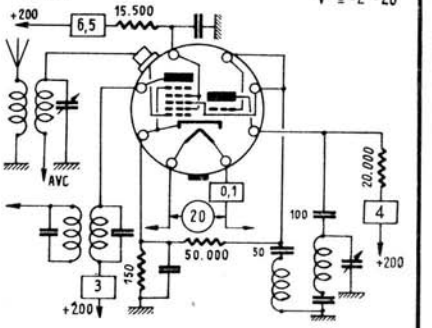
S = 6
P = 9 500
V = - 2,3



UCH4

C (V)

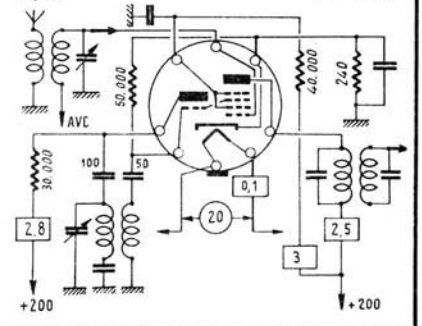
Sc = 0,75
P = 1,3 MΩ
V = -2 -26



UCH11

C (V)

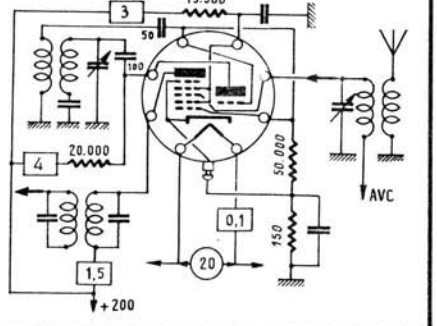
Sc = 0,75
P = 1 MΩ
V = -2 -18



UCH21

C (V)

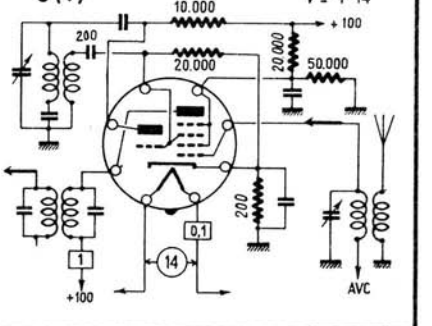
Sc = 0,58
P = 1 MΩ
V = -2 -28



UCH41

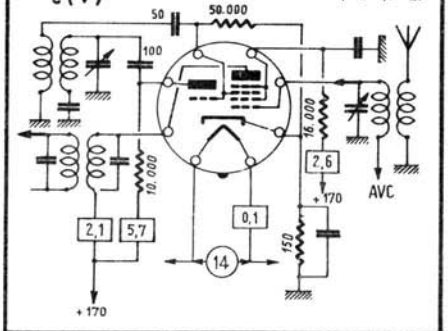
C (V)

Sc = 0,5
P = 1MΩ
V = -1 -14



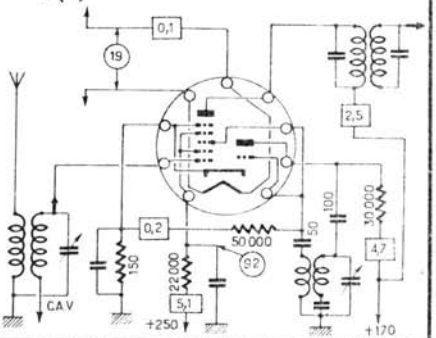
UCH42
C (V)

Sc = 0,67
ρ = 1 MΩ
V = -1,8 -25



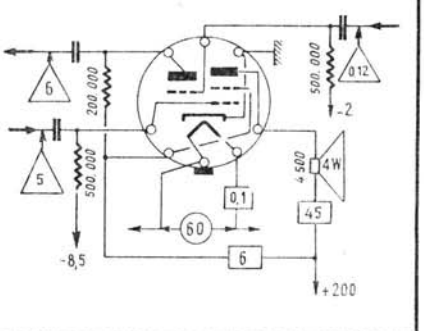
UCH81
C (V)

S = 0,7
ρ > 1MΩ
V = -2 -24



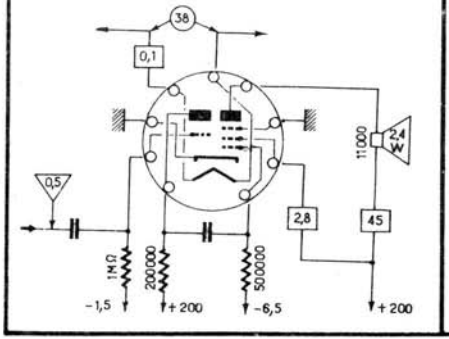
UCL11
BF + P

P { S = 9, ρ = 18.000, V = -8,5 } BF { S = 2,1, ρ = 30.000, V = -2 }



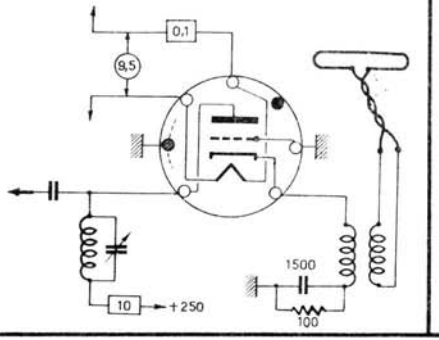
UCL81
B.F. + P

S = 8,7
ρ = 18.000
V = -6,5



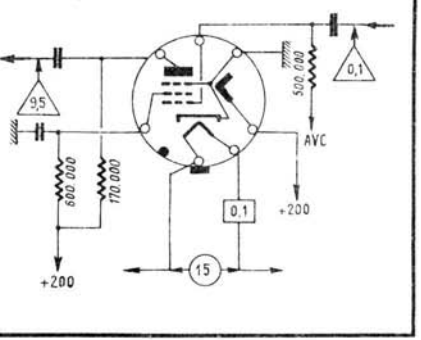
UC92
H.F. (V.H.F.)

S = 5
ρ = 12000
V = -2



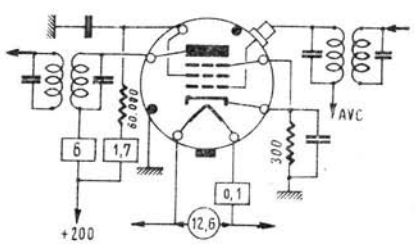
UFM11
BF + I

ρ = 0,2 MΩ
V = 0 -11

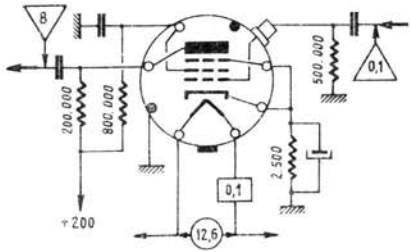


UF9
HF (V)

S = 2,2
P = 1,2 MΩ
V = -2,5 -30

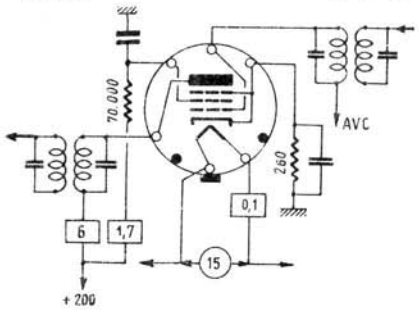


UF9
BF

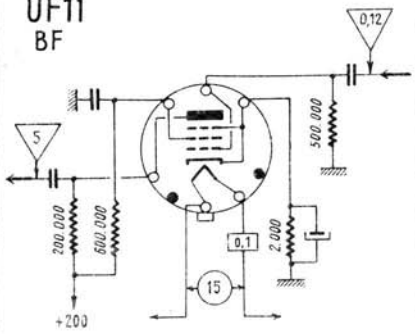


UF11
HF (V)

S = 2,2
P = 1,5 MΩ
V = -2 -42

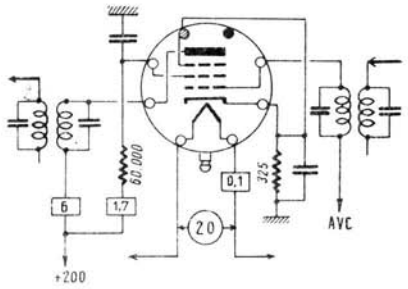


UF11
BF

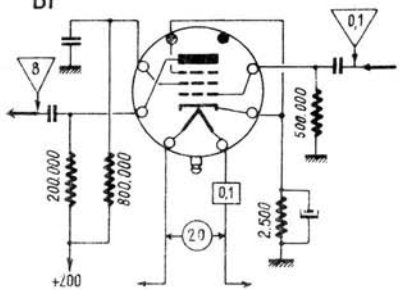


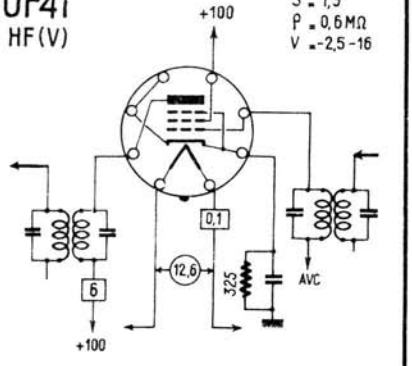
UF21
HF (V)

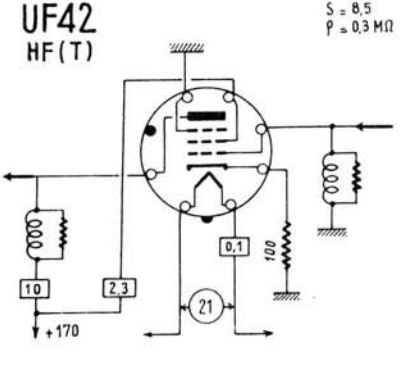
S = 2,2
P = 1 MΩ
V = -2,5 -37

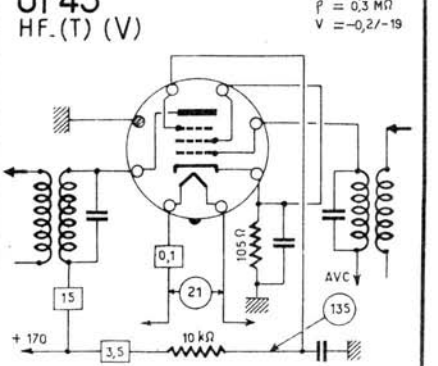


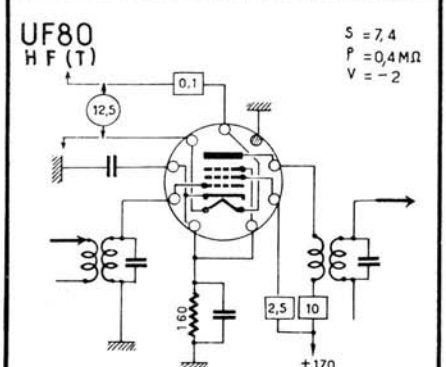
UF21
BF

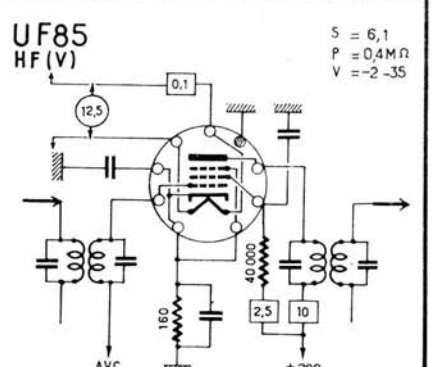


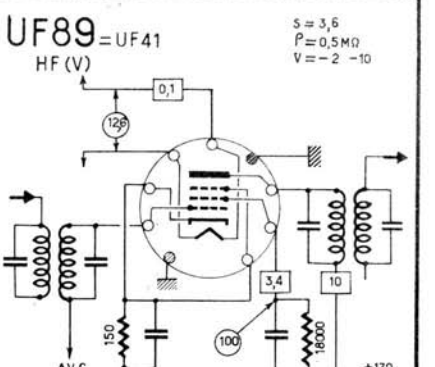

UF41
HF(V)
S = 1,9
P = 0,6 MΩ
V = -2,5 -16
+100
0,1
12,6
325
AVC
6
+100


UF42
HF(T)
S = 8,5
P = 0,3 MΩ
0,1
100
10
2,3
21
+170

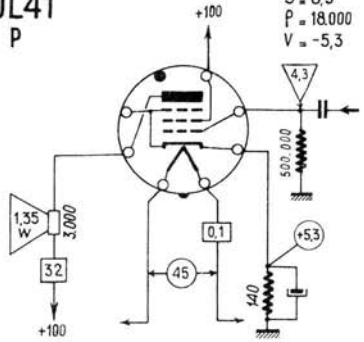

UF43
HF (T) (V)
S = 6,3
P = 0,3 MΩ
V = -0,2/-19
0,1
105 Ω
AVC
15
21
135
+ 170
3,5
10 kΩ


UF80
HF (T)
S = 7,4
P = 0,4 MΩ
V = -2
0,1
12,5
160
2,5
10
+170

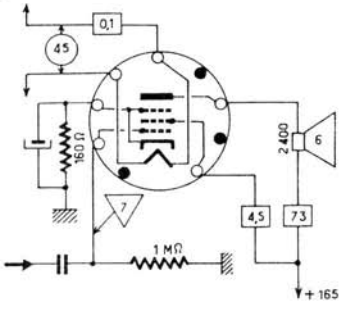

UF85
HF (V)
S = 6,1
P = 0,4 MΩ
V = -2 -35
0,1
12,5
40 000
160
2,5
10
AVC
+200


UF89 = UF41
HF (V)
S = 3,6
P = 0,5 MΩ
V = -2 -10
0,1
12,5
3,4
10
150
100
1600
AVC
+170

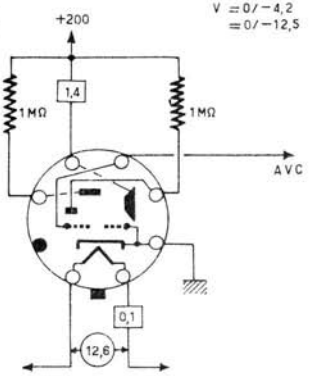
UL41
P



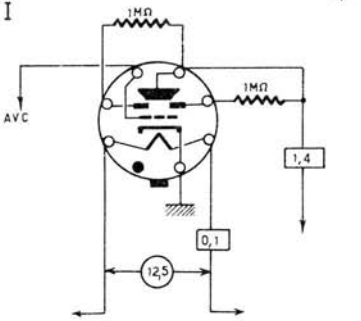
UL84
P



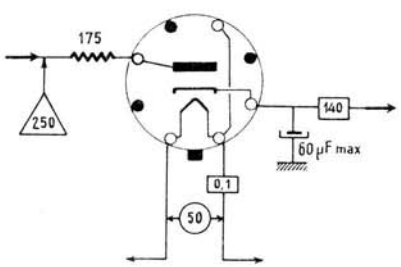
UM4
T



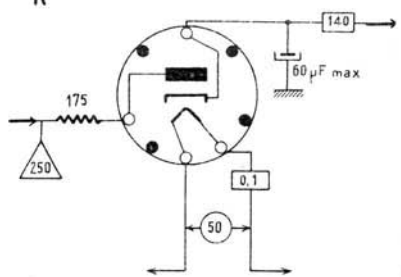
UM34
I



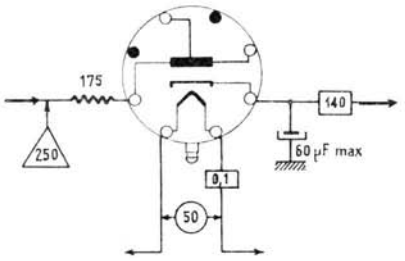
UY1 (N)
R



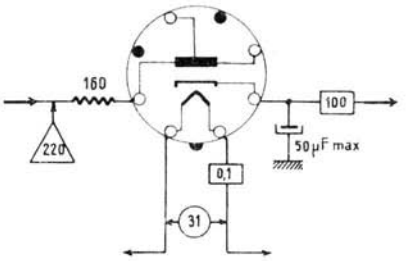
UY11
R



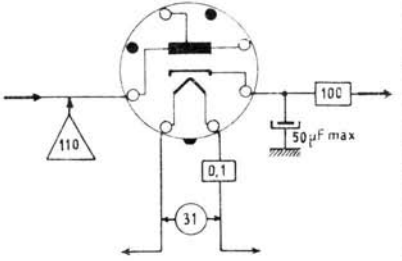
UY21
R



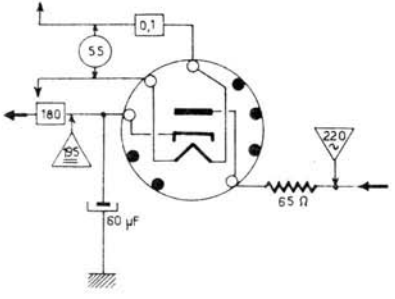
UY41
R



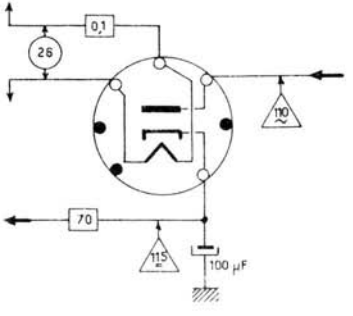
UY42
R



UY82
R

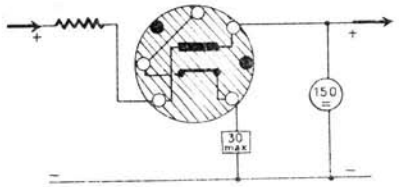


UY92
R



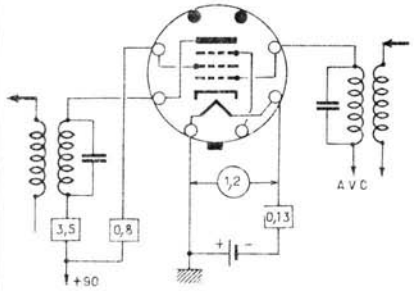
V41 = AZ41
V51 = GZ40
V61 = EZ40
V311 = UY41
V312 = UY42

0A2
REG.



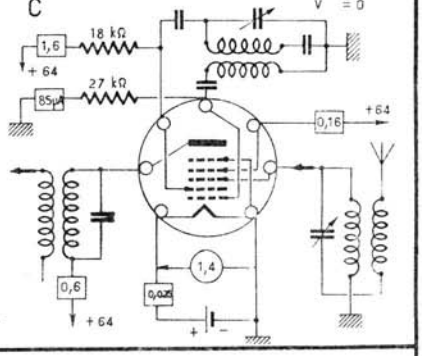
1AB5
H.F. (V)

S = 11
P = 275 kΩ
V = −1,5/−12



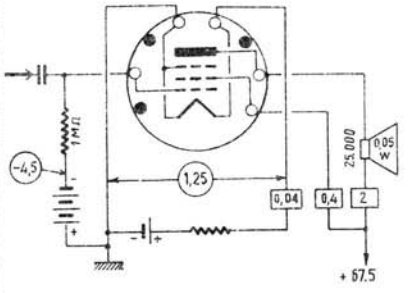
1AB6
C

Sc = 0,275
P = 0,9 MΩ
V = 0



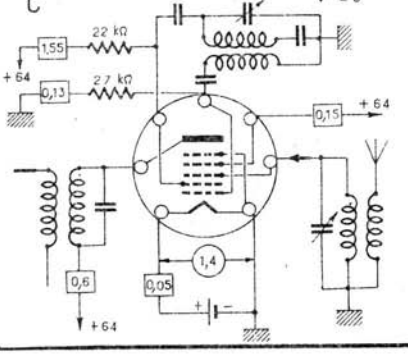
1AC5
P

S = 0,75
P = 0,15 MΩ
V = −4,5



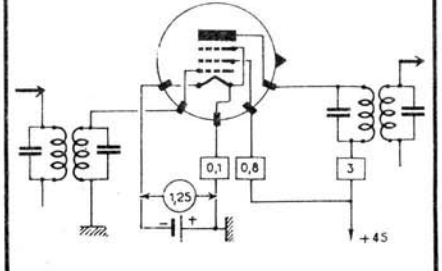
1AC6
C

S = 0,3
P = 0,9 MΩ
V = 0



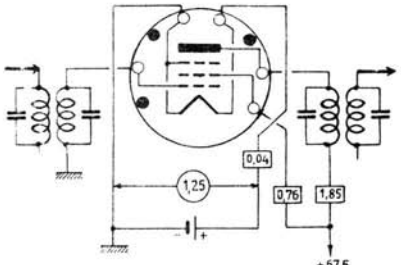
1AD4
HF

S = 2
P = 0,15MΩ
V = 0



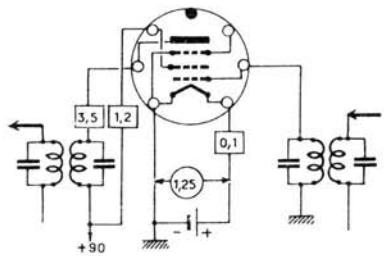
1AD5
HF

S = 1,735
P = 0,7MΩ
V = 0



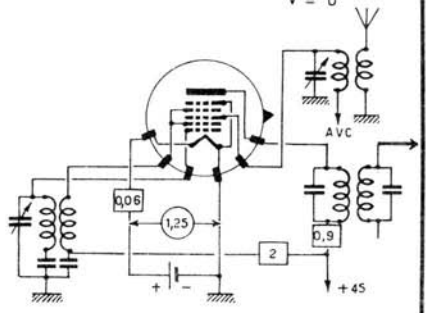
1AE4
HF

S = 1,55
P = 0,5 MΩ
V = 0



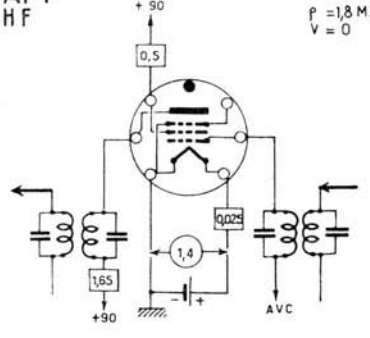
1AE5
C

S = 0,2
P = 0,2MΩ
V = 0



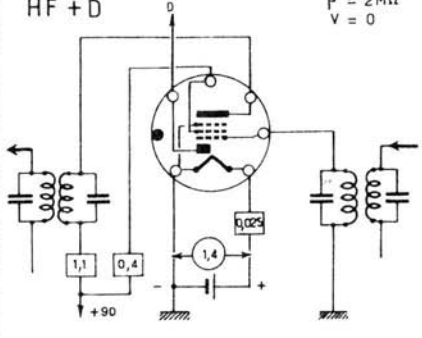
1AF4
HF

S = 0,95
P = 1,8 MΩ
V = 0



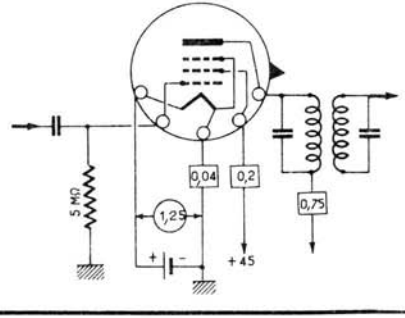
1AF5
HF + D

S = 0,6
P = 2MΩ
V = 0

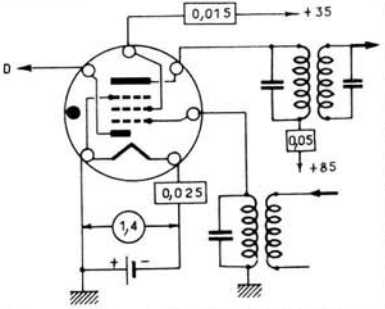


1AH4
H.F.

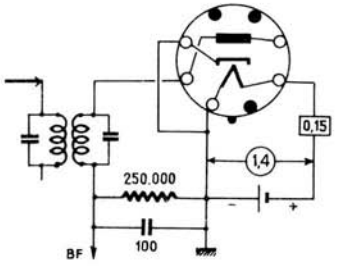
S = 0,75
P = 1,5 MΩ
V = 0



1AH5
H.F. + D

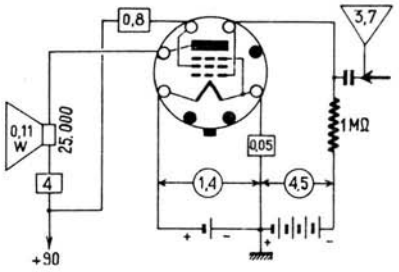


1A3
D



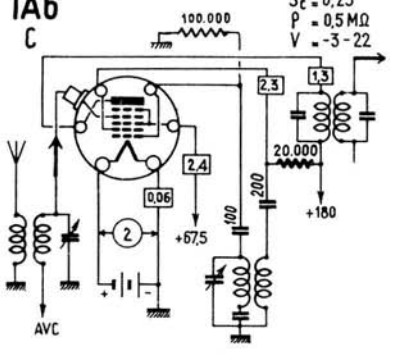
1A5
P

S = 0,85
P = 0,3 MΩ
V = -4,5



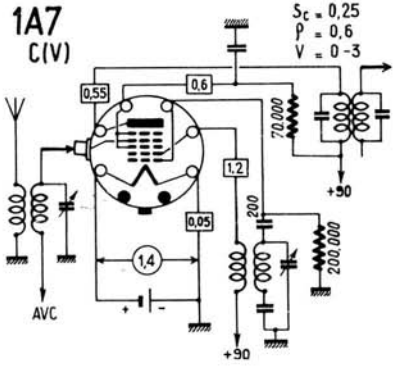
1A6
C

Sc = 0,25
P = 0,5 MΩ
V = -3 - 22

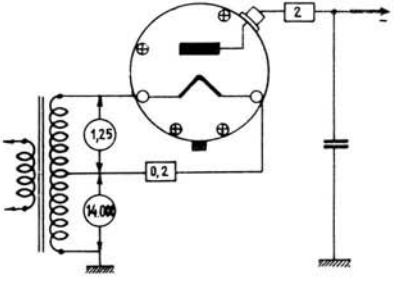


1A7
C(V)

Sc = 0,25
P = 0,6
V = 0-3



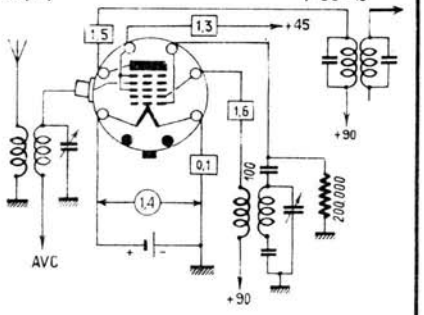
1B3
R(T)



1AJ4 = DF96

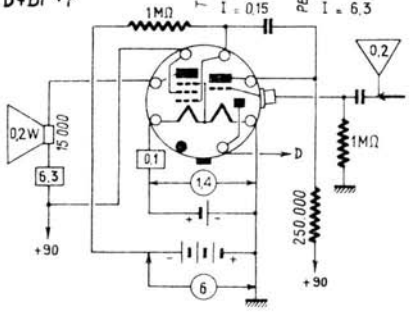
1B7
C (V)

$S_C = 0,35$
$P = 0,35\ M\Omega$
$V = 0 - 15$



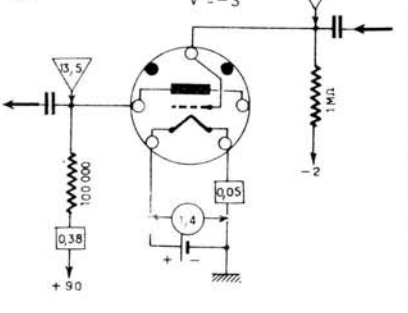
1B8
D+BF+P

TRIODE: $S = 0,3$, $P = 14.000$, $V = 0$, $I = 0,15$
PENTHODE: $S = 1,15$, $P = 0,25\ M\Omega$, $V = -6$, $I = 6,3$



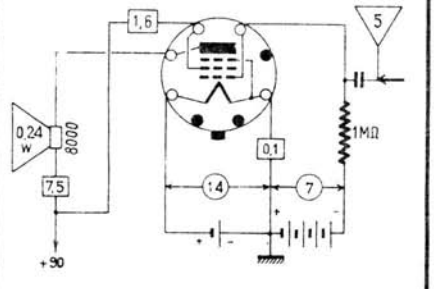
1C3
BF

$S = 0,76$
$P = 19.000$
$V = -3$



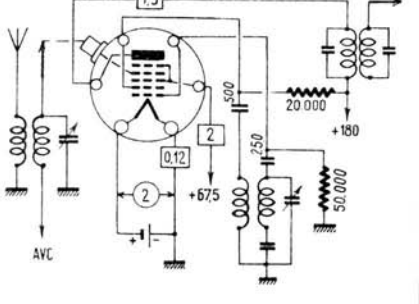
1C5
P

$S = 1,5$
$P = 0,11\ M\Omega$
$V = -7,5$



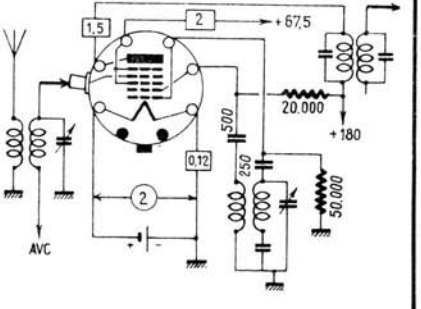
1C6
C (V)

$S_C = 0,325$
$P = 0,7\ M\Omega$
$V = -3 - 14$

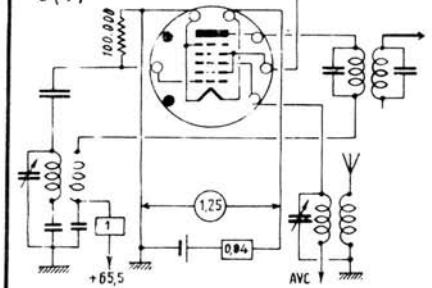


1C7
C (V)

$S_C = 0,325$
$P = 0,7\ M\Omega$
$V = -3 - 14$

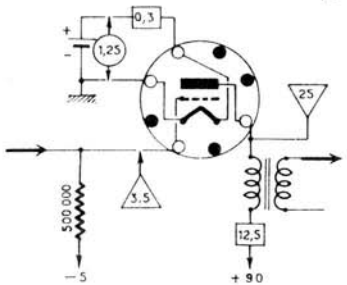


1C8 = 1E8
C (V)



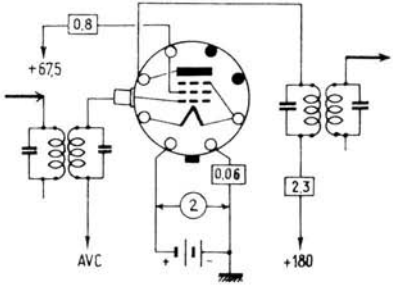
1D3
BF

S = 3,4
P = 2560
V = −5



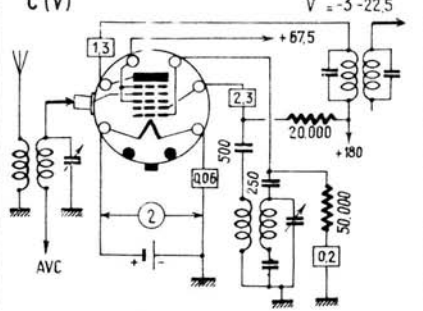
1D5
HF (V)

S = 0,75
P = 1 MΩ
V = -3 -15



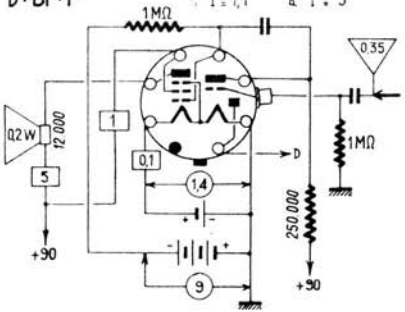
1D7
C (V)

S_c = 0,3
P = 0,5 MΩ
V = -3 -22,5



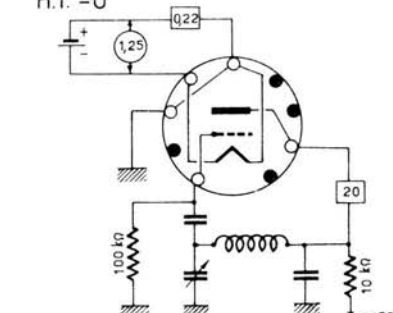
1D8
D+BF+P

TRIODE: S = 0,57 P = 50000 V = 0 I = 1,1
PENTHODE: S = 0,92 P = 0,2 MΩ V = -9 I = 5



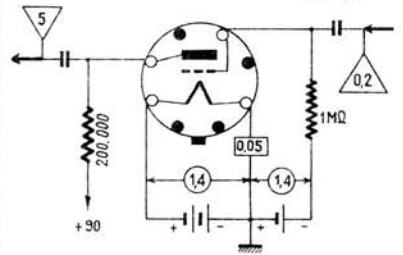
1E3
H.F. -O

S = 3,5
V = -3,5



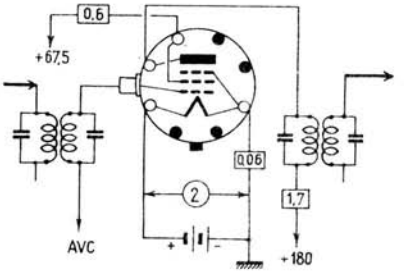
1E4
BF

S = 0,8
P = 17.000
V = -3
I = 1,5



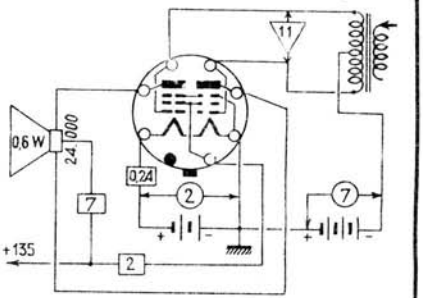
1E5
HF(V)

S = 0,65
P = 1,5 MΩ
V = -3 - 8



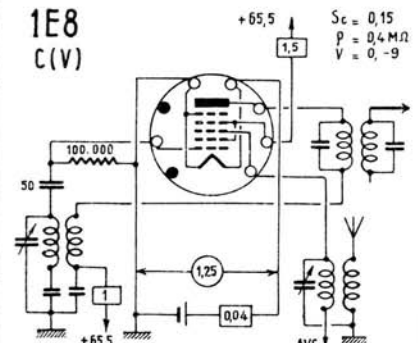
1E7
P

S = 1,4
P = 0,26 MΩ
V = -7



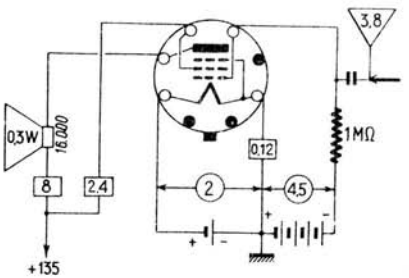
1E8
C(V)

Sc = 0,15
P = 0,4 MΩ
V = 0, -9

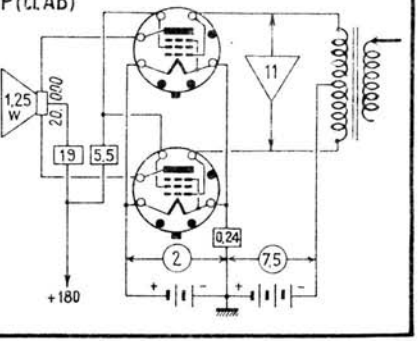


1F5
P

S = 1,7
P = 0,2 MΩ
V = -4,5

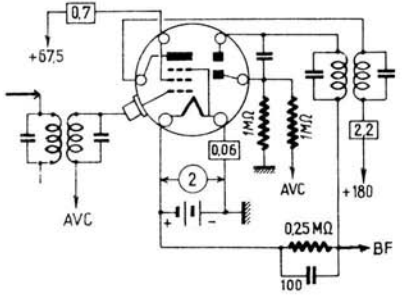


1F5
P(cl.AB)



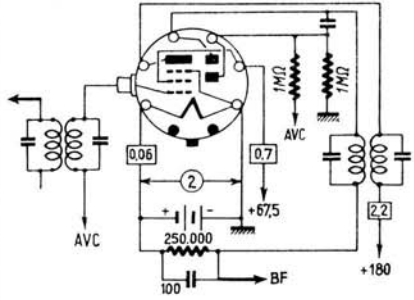
1F6
HF(V)+D

S = 0,65
ρ = 1 MΩ
V = -1,5 -12



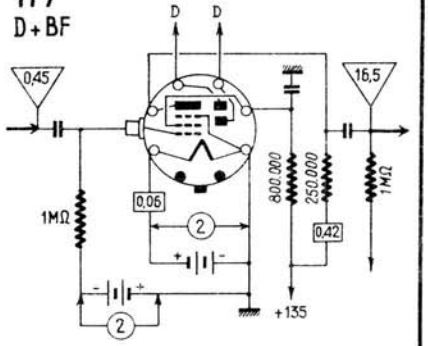
1F7
HF(V)+D

S = 0,65
ρ = 1 MΩ
V = -1,5 -12



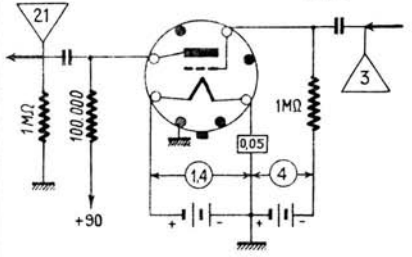
1F7
D+BF

V = -2



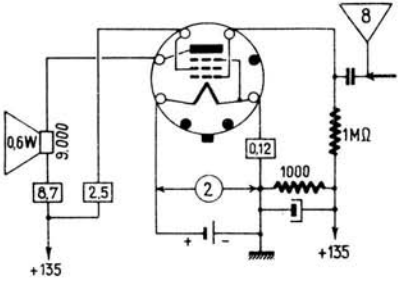
1G4
BF

S = 0,825
ρ = 10.700
V = -6
I = 3



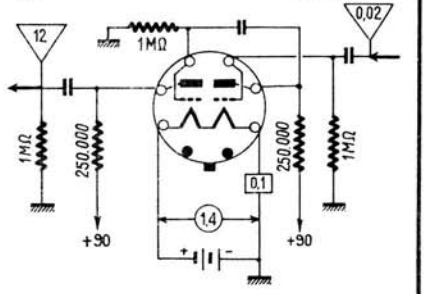
1G5
P

S = 1,55
ρ = 0,16 MΩ
V = -13,5



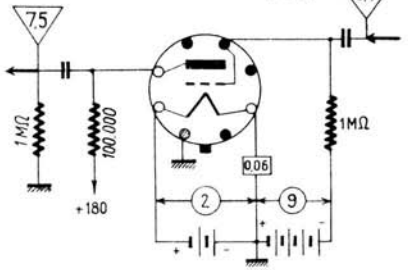
1G6
BF

S = 0,67
ρ = 45.000
V = 0
I = 1 mA

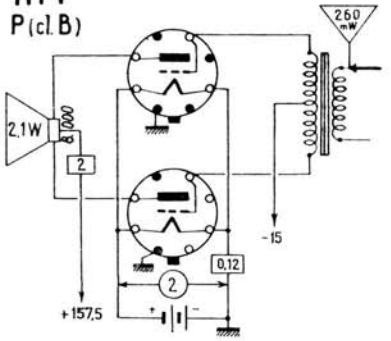


1H4
BF

S = 0,9
P = 10.300
V = -13,5
I = 3,1

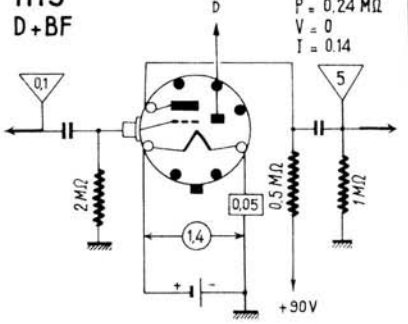


1H4
P (cl. B)



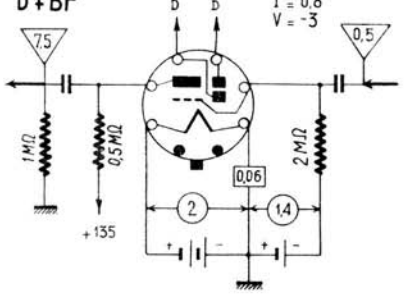
1H5
D+BF

S = 0,275
P = 0,24 MΩ
V = 0
I = 0.14



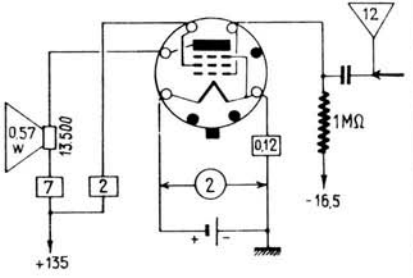
1H6
D+BF

S = 0,575
P = 35.000
I = 0,8
V = -3

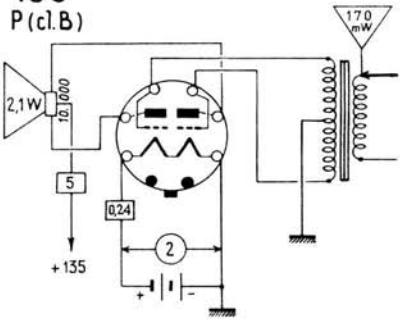


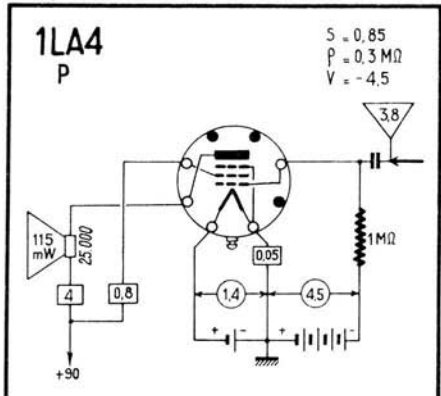
1J5
P

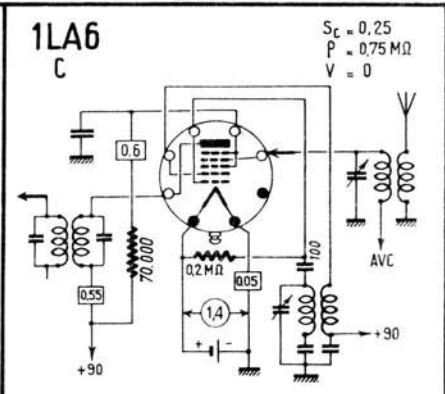
S = 0,95
P = 0,1 MΩ
V = -16,5

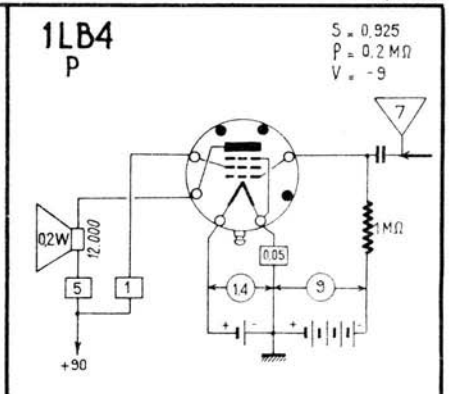


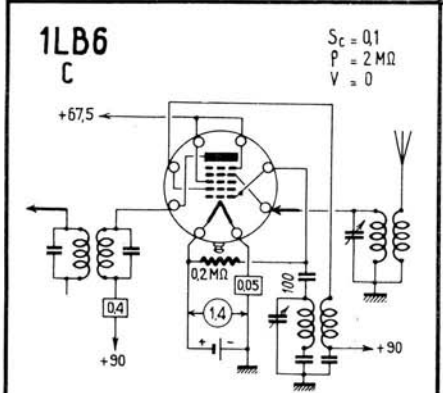
1J6
P (cl. B)

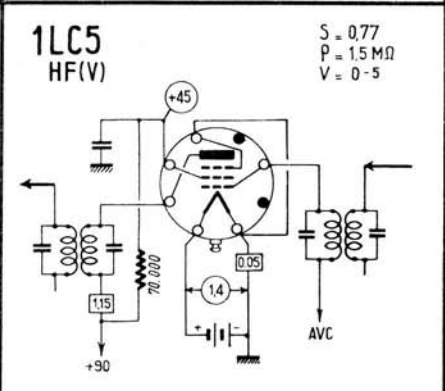


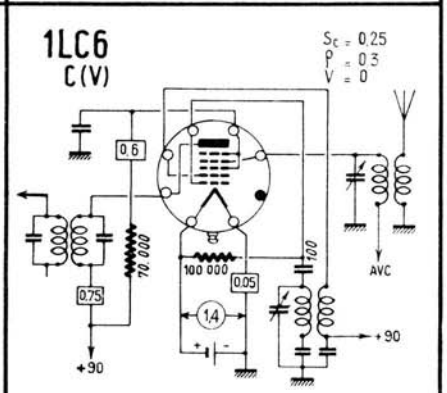

1LA4
P
S = 0,85
P = 0,3 MΩ
V = -4,5
3,8
115 mW
25 000
4
0,8
0,05
1,4
4,5
1MΩ
+90


1LA6
C
Sc = 0,25
P = 0,75 MΩ
V = 0
0,6
70 000
0,55
0,2 MΩ
0,05
100
AVC
1,4
+90


1LB4
P
S = 0,925
P = 0,2 MΩ
V = -9
7
0,2W
12 000
5
1
0,05
1MΩ
1,4
9
+90

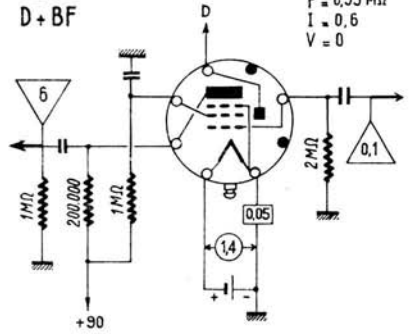

1LB6
C
Sc = 0,1
P = 2 MΩ
V = 0
+67,5
0,2 MΩ
0,05
100
0,4
1,4
+90


1LC5
HF(V)
S = 0,77
P = 1,5 MΩ
V = 0-5
+45
70 000
0,05
1,15
1,4
AVC
+90


1LC6
C(V)
Sc = 0,25
P = 0,3
V = 0
0,6
70 000
100 000
0,05
100
0,75
1,4
AVC
+90

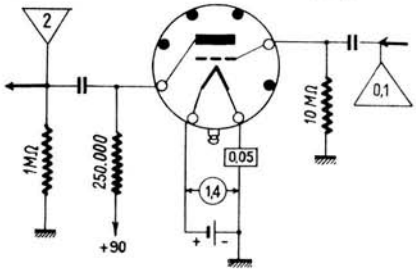
1LD5
D + BF

S = 0,6
P = 0,95 MΩ
I = 0,6
V = 0



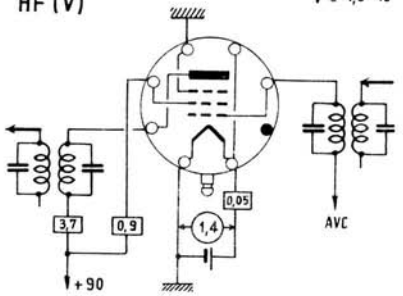
1LE3
BF

S = 1,3
P = 11.200
V = -3
I = 4,5



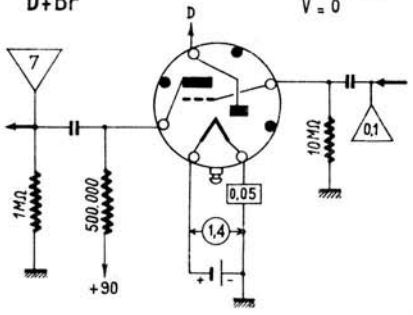
1LG5
HF (V)

S = 1,15
P = 0,5 MΩ
V = -1,5 -19



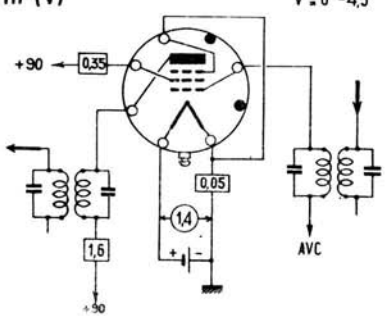
1LH4
D + BF

S = 0,27
P = 0,24 MΩ
V = 0



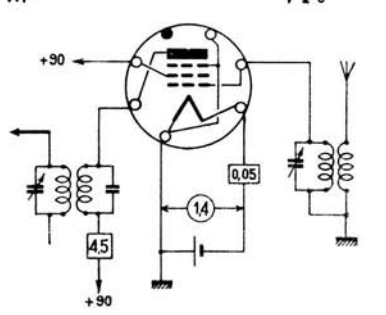
1LN5
HF (V)

S = 0,8
P = 1,1 MΩ
V = 0 -4,5



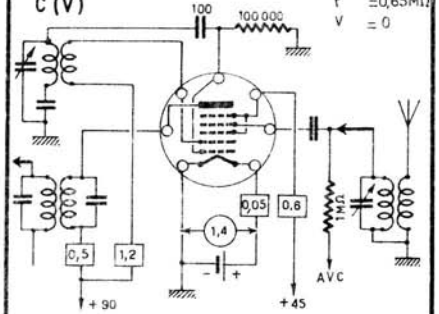
1L4
HF

S = 1
P = 0,3 MΩ
V = 0



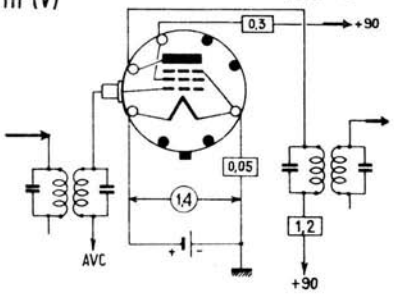
1L6
C (V)

S = 0,3
P = 0,65 MΩ
V = 0



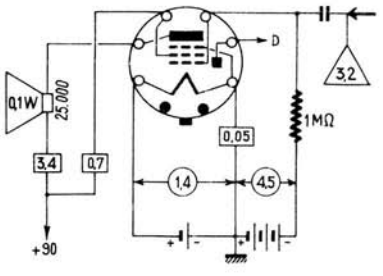
1N5
HF (V)

S = 0,75
P = 1,5 MΩ
V = 0 - 4



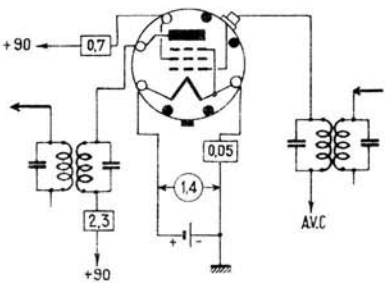
1N6
D + P

S = 0,8
P = 0,3 MΩ
V = -4,5



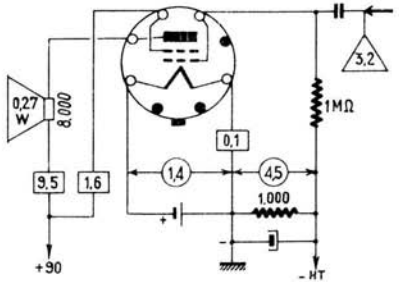
1P5
HF (V)

S = 0,75
P = 0,8 MΩ
V = 0 - 12



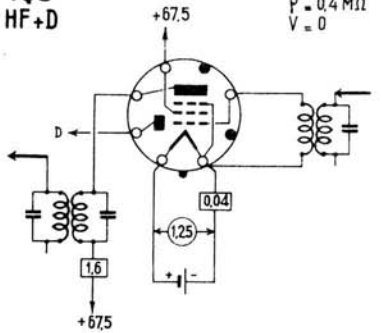
1Q5
P

S = 0,21
V = -4,5



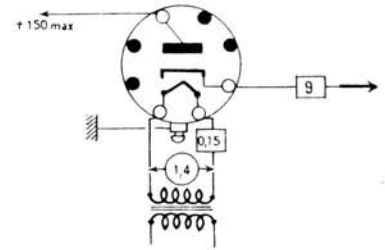
1Q6
HF + D

S = 0,6
P = 0,4 MΩ
V = 0



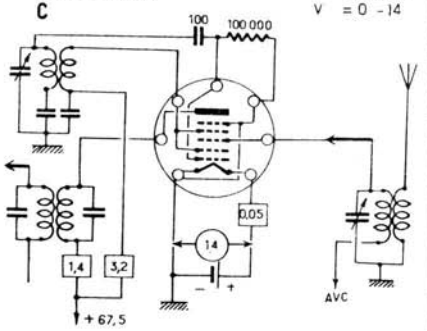
1M3 = DM70 / DM71

1R4
D(T) (VHF)



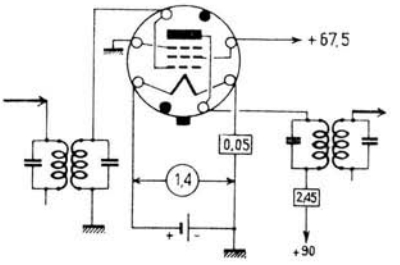
1R5 = DK91
C

S = 0,3
P = 0,5 MΩ
V = 0 -14



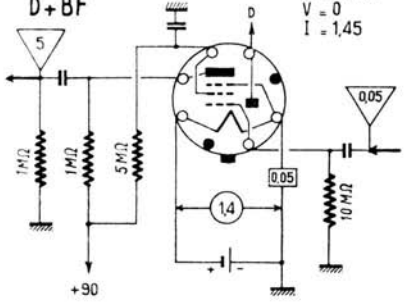
1SA6
HF

S = 0,97
P = 0,8 MΩ
V = 0



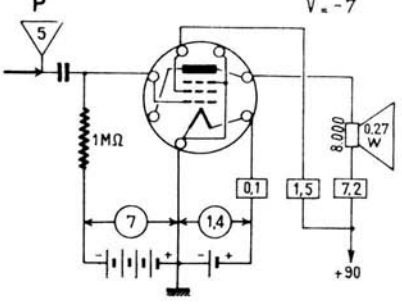
1SB6
D+BF

S = 0,65
P = 0,7 MΩ
V = 0
I = 1,45



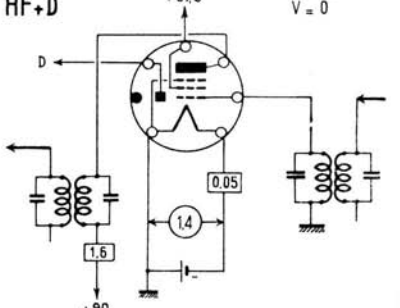
1S4
P

S = 1,55
P = 0,1 MΩ
V = -7

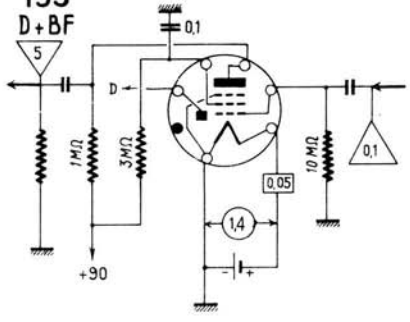


1S5
HF+D

S = 0,62
P = 0,6 MΩ
V = 0

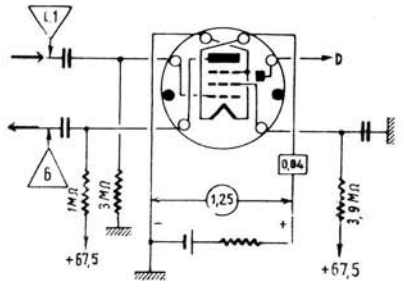


1S5
D + BF

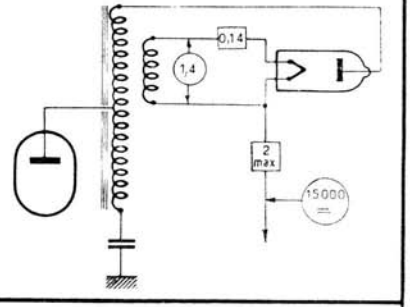


1S6
D + BF

S = 0,9
P = 0,4 MΩ
V = 0

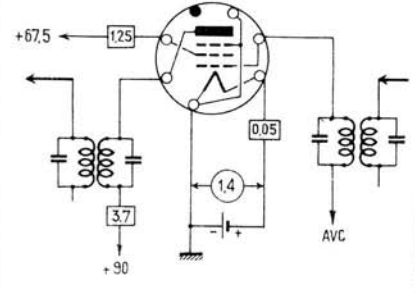


1T2
R(T/T.H.T.)



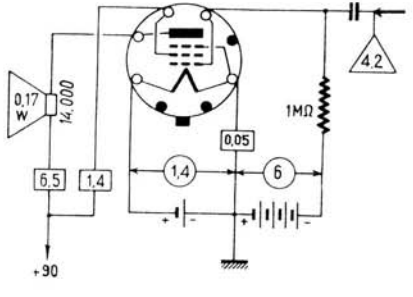
1T4
HF(V)

S = 0,9
P = 0,5 MΩ
V = 0 -18



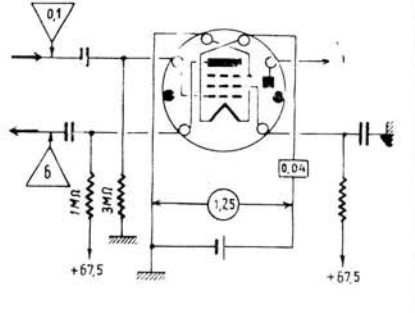
1T5
P

S = 1,15
V = -6



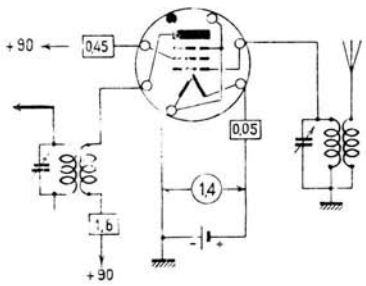
1T6
D + BF

S = 0,5
P = 0,1 MΩ
V = 0



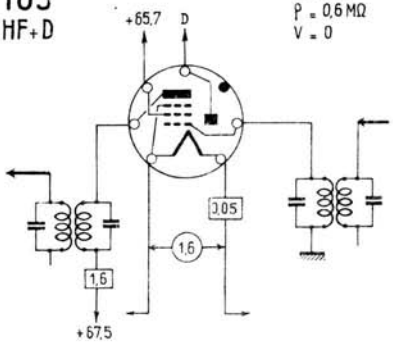
1U4
HF

S = 0,9
P = 1,5 MΩ
V = 0

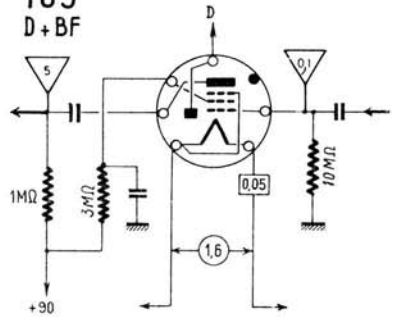


1U5
HF+D

S = 0,62
P = 0,6 MΩ
V = 0

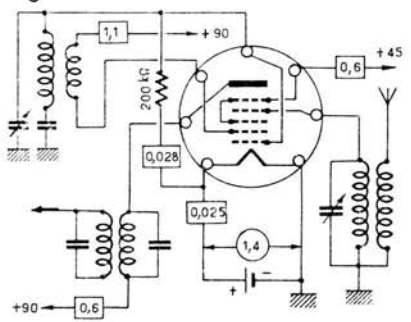


1U5
D+BF

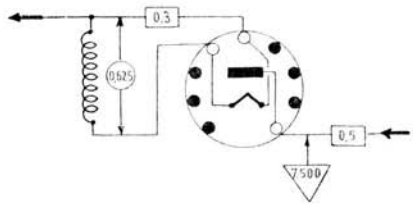


1U6
C

S = 0,3
P = 500 kΩ
V = 0

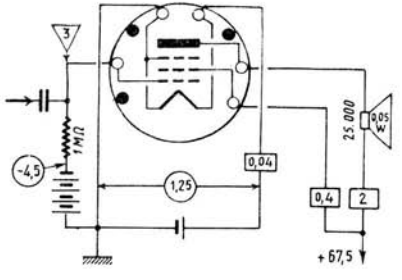


1V2
R(T)(VHT)

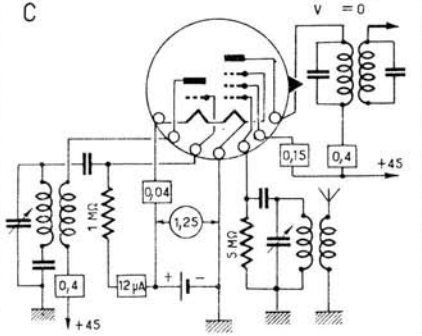


1V5
P

S = 0,75
P = 0,15 MΩ
V = -4,5

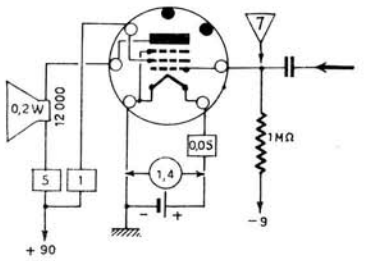


1V6
C



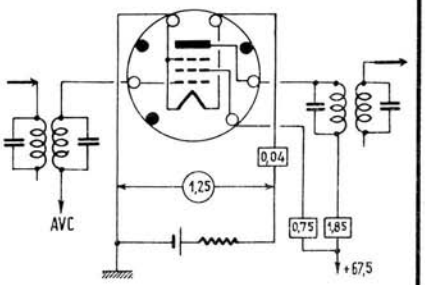
1W4
P

S = 0,925
ρ = 0,25 MΩ
V = −9 .

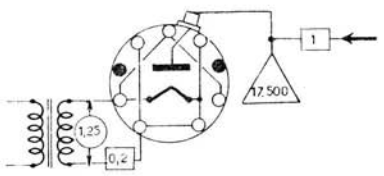


1W5 = 1AD5
HF

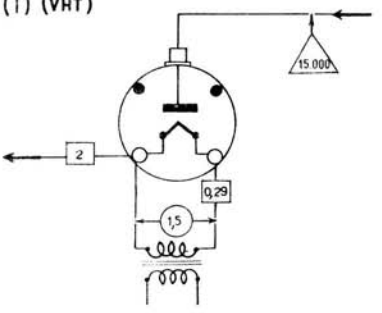
S = 0,735
ρ = 0,7 MΩ
V = 0-6



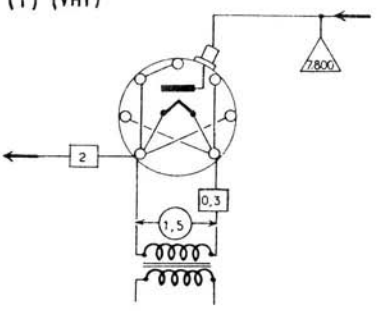
1X2A
R(T) VHT



1Y2
R (T) (VHT)

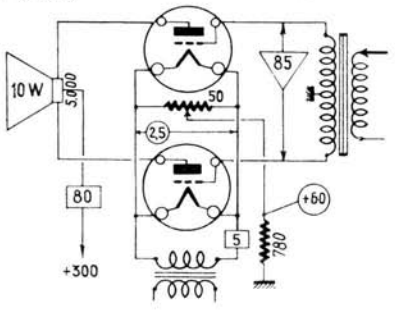


1Z2
R (T) (VHT)



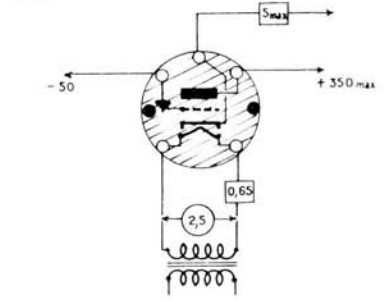
2A3
P (cl.A)

S = 5,25
P = 800
S_V = -45



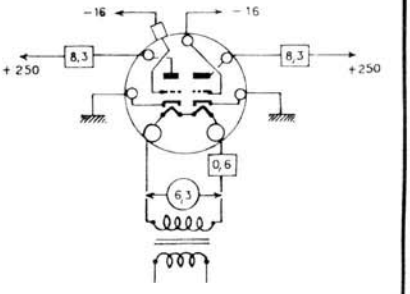
2C4
THYR.

V – 50



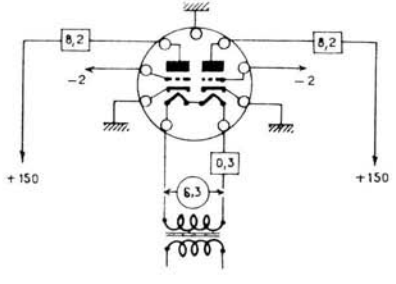
2C21
B.F.

S = 1375
P = 7600
V = – 16



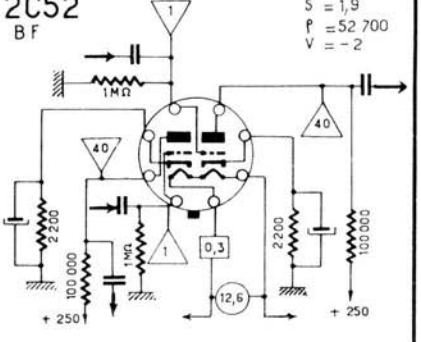
2C51
VF (T)

S = 5,5
P = 6300
V = – 2

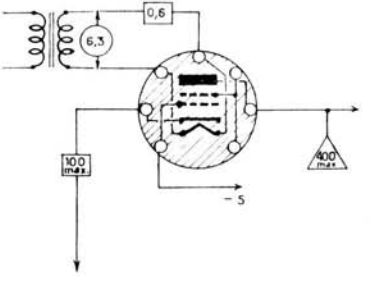


2C52
BF

S = 1,9
P = 52 700
V = – 2

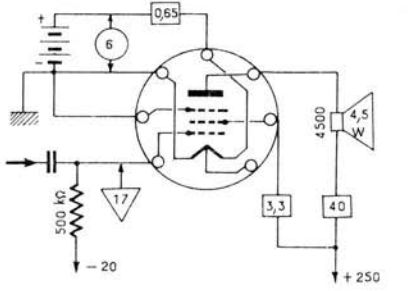


2D21
THYR.



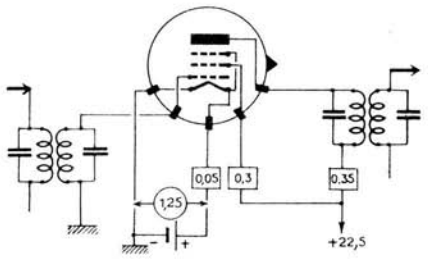
2E30
P

S = 3,7
P = 63 kΩ
V = −20



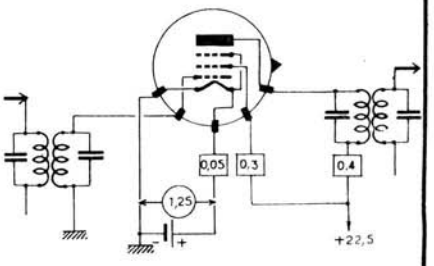
2E31
HF

S = 0,5
P = 350 000
V = 0



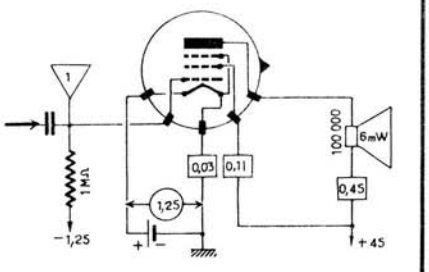
2E32
HF (V)

S = 0,45
P = 350000
V = 0/−3



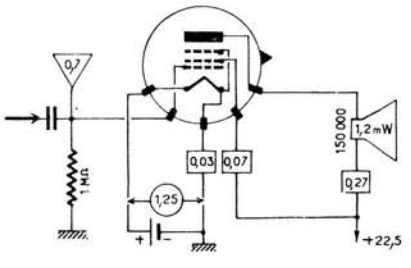
2E35
P

S = 0,5
P = 0,25 MΩ
V = −1,25



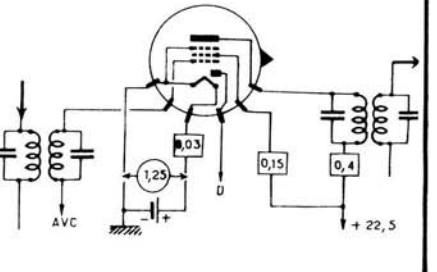
2E36
P

S = 0,385
P = 0,22 MΩ
V = 0



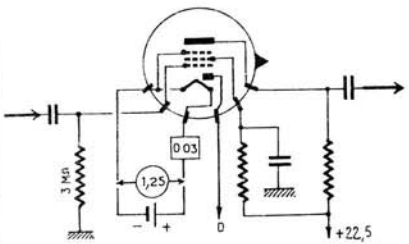
2E41
HF-D

S = 0,4
P = 0,25
V = 0/−3



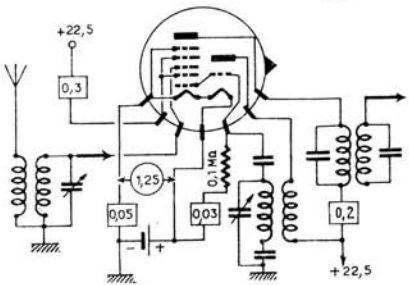
2E42
D - BF

S = 0,4
P = 0,25
V = 0

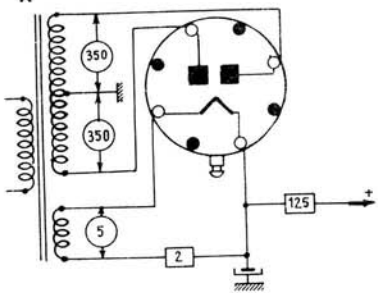


2G21 (2G22)
C

S = 0,06
P = 0,5 MΩ
V = 0

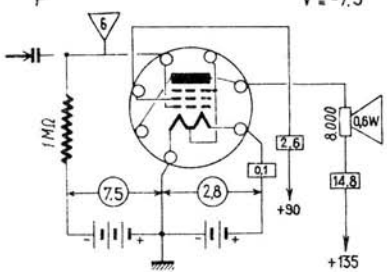


3AZ4
R



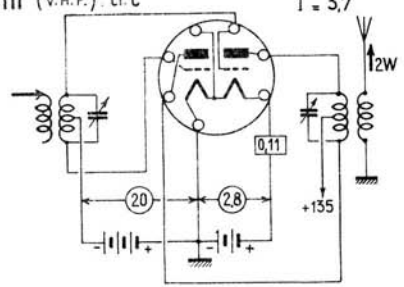
3A4
P

S = 1,9
P = 90.000
V = -7,5



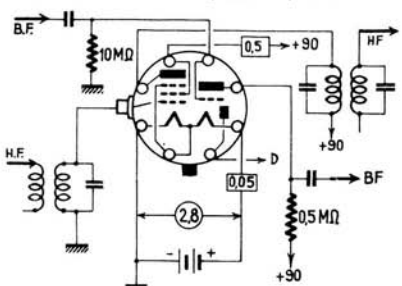
3A5
HF (V.H.F.) Cl. C

S = 1,8
P = 8300
V = -2,5
I = 3,7



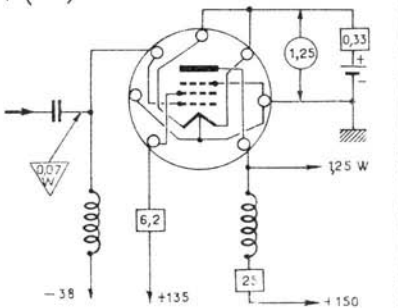
3A8
D-HF-BF

PENTHODE S = 0,75 P = 0,8 MΩ V = 0
TRIODE - S = 0,325 P = 0,2 MΩ V = 0



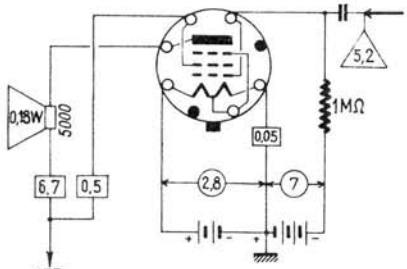
3B4
P (c.l.C)

V = −38



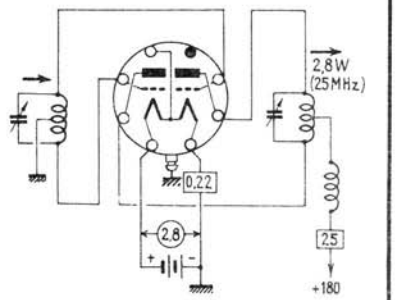
3B5
P

S = 1,5
P = 100.000



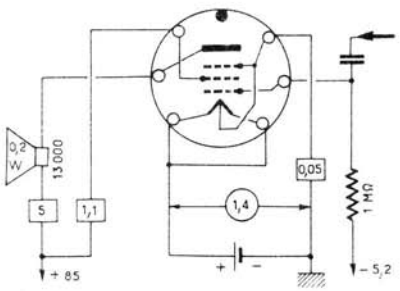
3B7
HF (V.H.F.)

S = 1,9
P = 11.300
I = 5,2



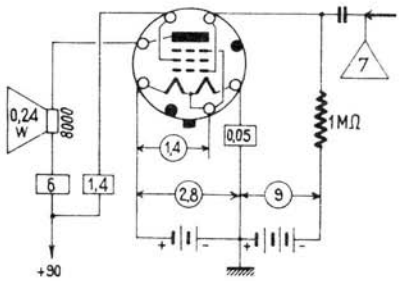
3C4
P

S = 1,35
P = 125 kΩ
V = −5,2



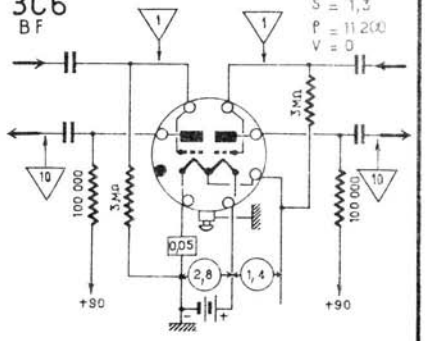
3C5
P

S = 1,55
V = −9



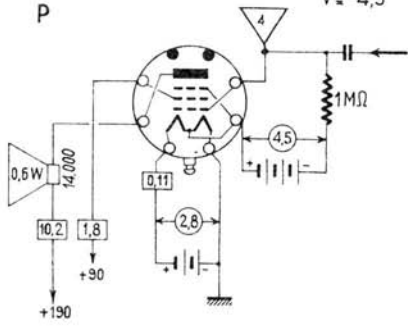
3C6
BF

S = 1,3
P = 11.200
V = 0



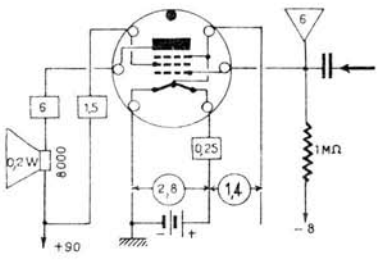
3D6
P

S = 2,4
V = -4,5



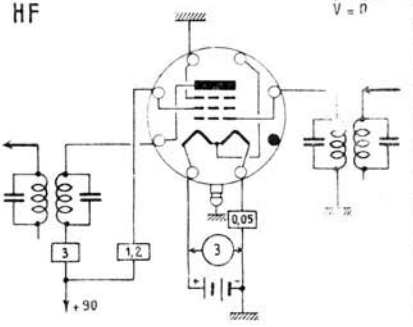
3E5
P

S = 1,2
P = 0,12 MΩ
V = -8



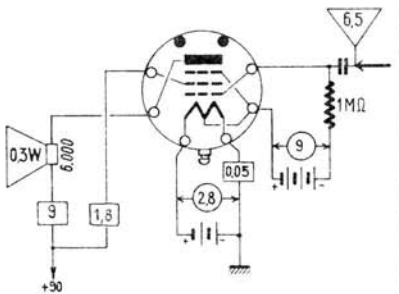
3E6
HF

S = 1,7
P = 0,3 MΩ
V = 0



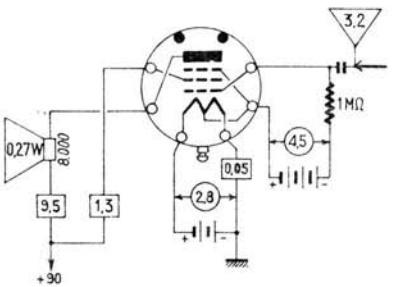
3LE4
P

S = 1,6
P = 0,1 MΩ
V = -9



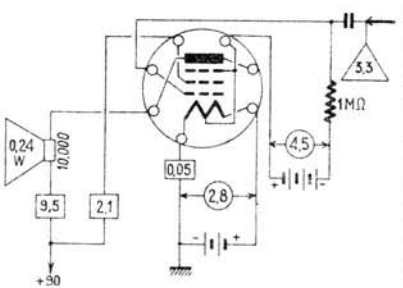
3LF4
P

S = 2,2
P = 75.000
V = -4,5



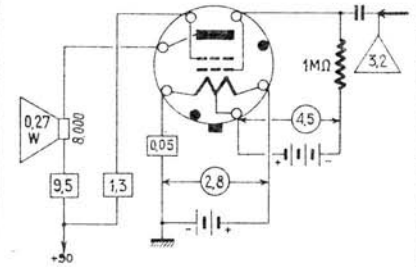
3Q4
P

S = 2,15
P = 0,1 MΩ
V = -4,5



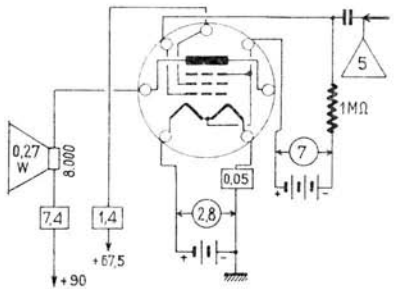
3Q5
P

S = 2,2
P = 80.000
V = -4,5



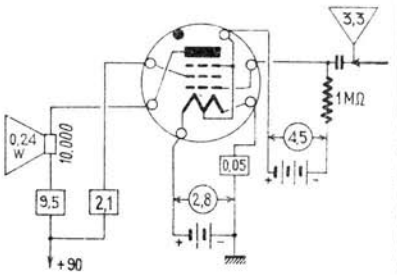
3S4
P

S = 1,6
P = 0,1 MΩ
V = -7



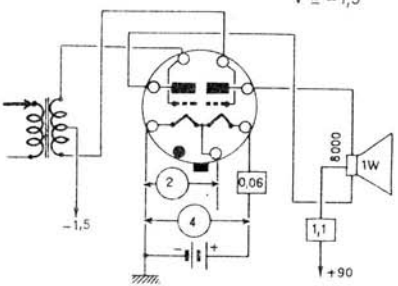
3V4
P

S = 2,15
P = 0,1MΩ
V = -4,5

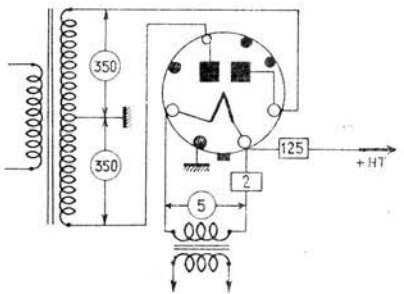


4A6
P (cl. B)

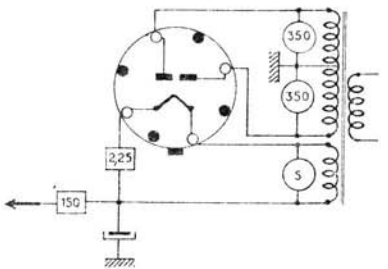
S = 0,75
P = 26 000
V = -1,5



5AZ4
R

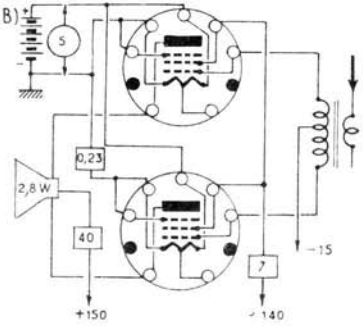


5AX4
R



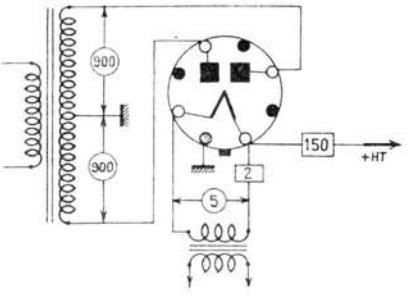
5A6

P(CL B)



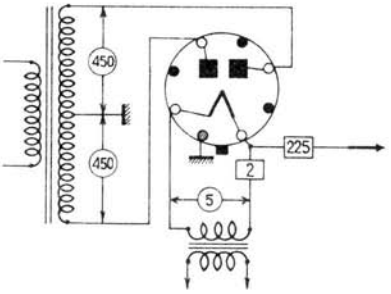
5R4

R



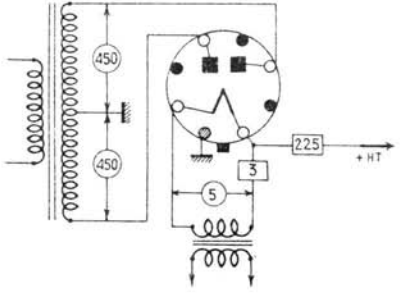
5T4

R



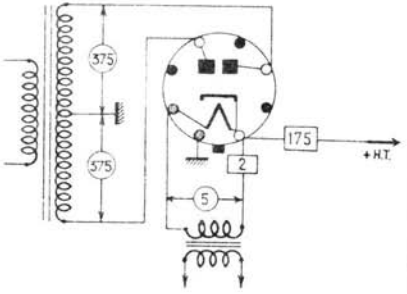
5U4

R



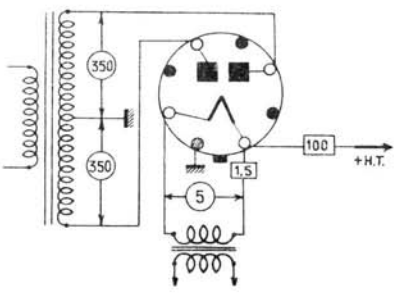
5V4

R

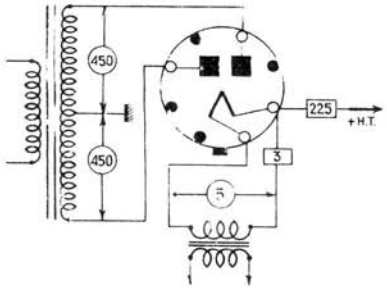


5W4

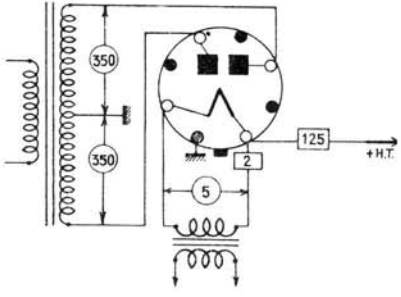
R



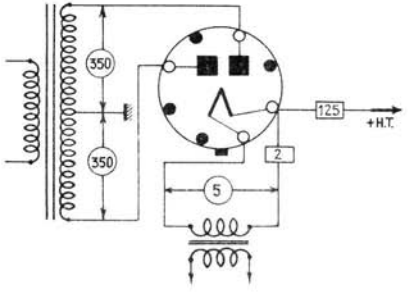
5X4
R



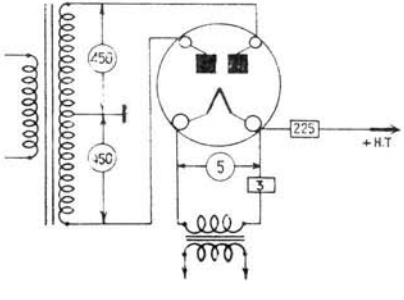
5Y3
R



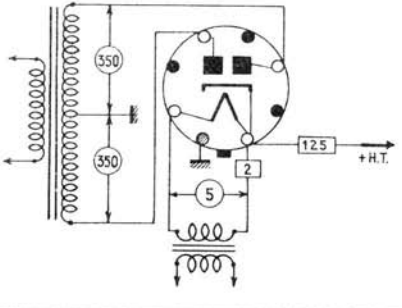
5Y4
R



5Z3
R

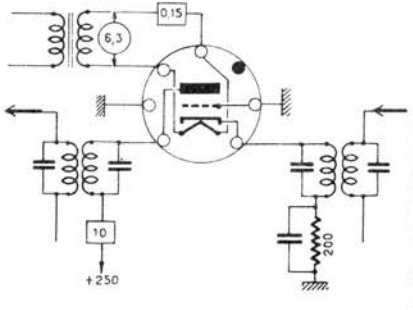


5Z4
R



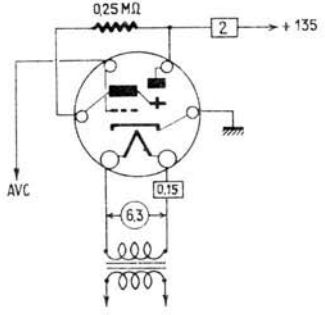
6AB4
HF(T)

S = 5,5
V = -2



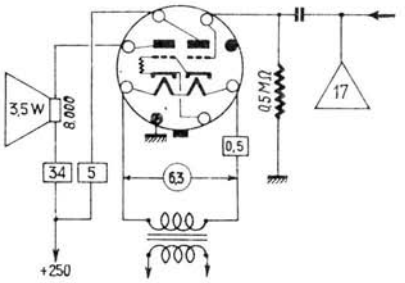
6AB5
I

V = 0 -10



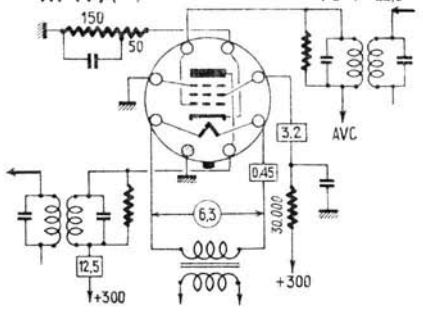
6AB6
P

S = 1,8
P = 40.000
V = 0



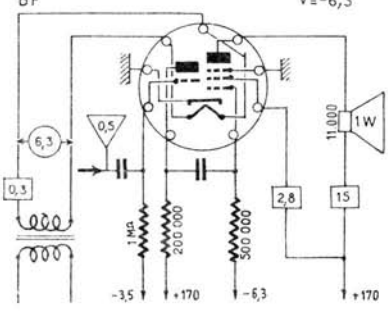
6AB7
HF(V)(T)

S = 5
P = 0,7
V = -3 -22,5



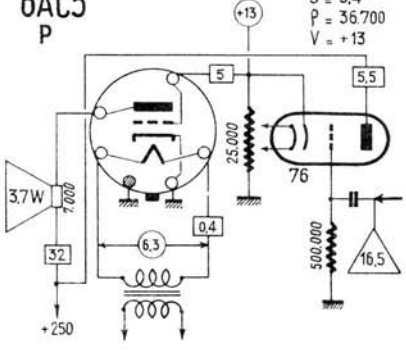
6AB8 = ECL80
BF

S = 3,3
P = 0,15 MΩ
V = -6,3



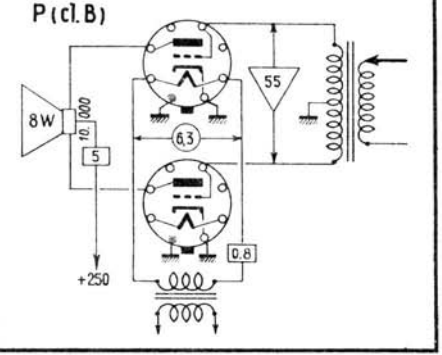
6AC5
P

S = 3,4
P = 36.700
V = +13



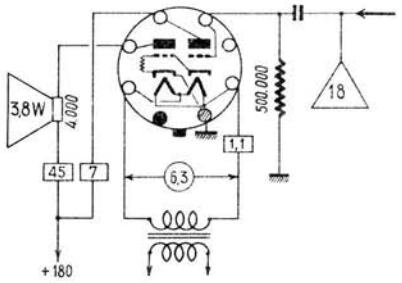
6AC5
P (cl. B)

V = 0



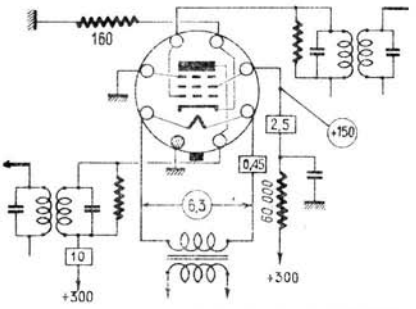
6AC6
P

S = 2
P = 20.000
V = 0



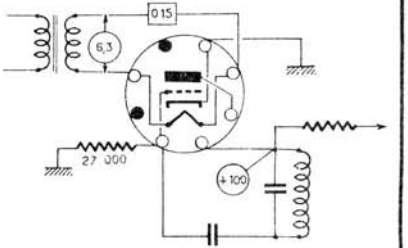
6AC7
HF(T)

S = 9
P = 0,75 MΩ
V = -2



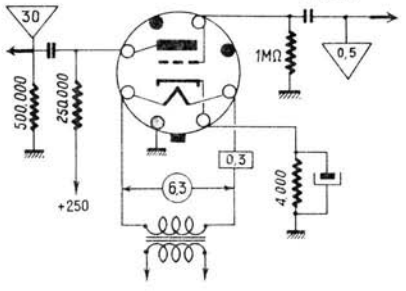
6AD4 (N)
0 (T) (F.M.)

S = 2
P = 35.000
V = -1



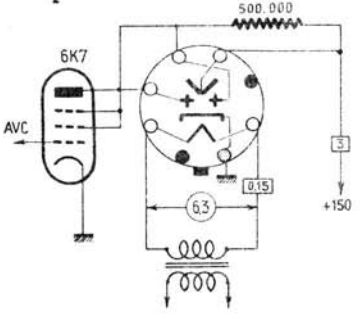
6AD5
BF

S = 1,5
P = 66.000
V = -2
I = 0,9



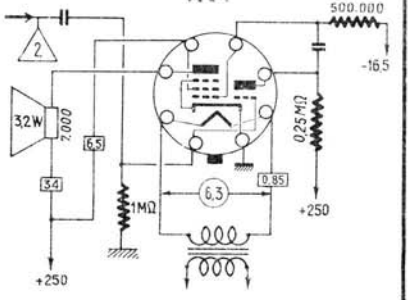
6AD6
I

V = 0 -50



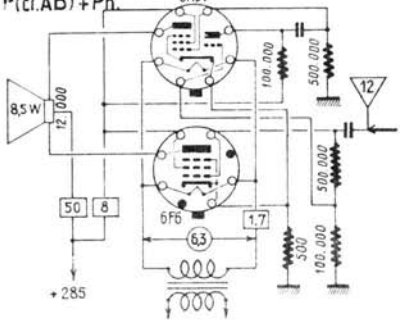
6AD7
BF+P

TRIODE: S = 0,3 P = 19.000 V = -0,25 I = 4
PENTHODE: S = 2,5 P = 80.000 V = -16,5



6AD7+6F6

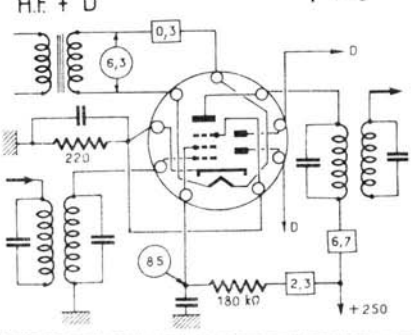
P(cl.AB)+Ph.



6AD8

H.F. + D

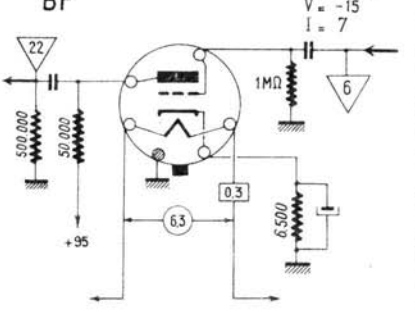
S = 1,1
P = 1 MΩ
V = −2



6AE5

BF

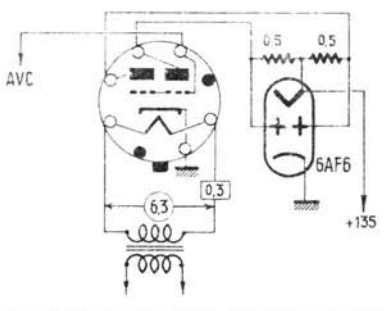
S = 1,2
P = 3.500
V = -15
I = 7



6AE6

I

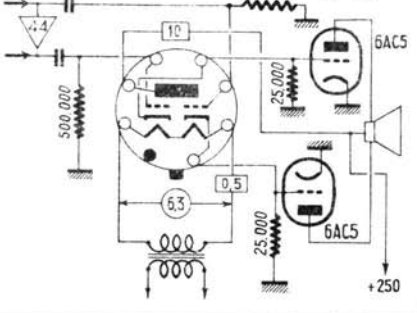
S = 1
P = 35.000
V = -1,5 -35



6AE7

BF(cl.B)

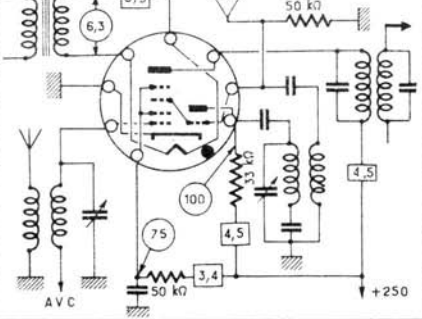
S = 3
P = 4650
V = -13,5



6AE8

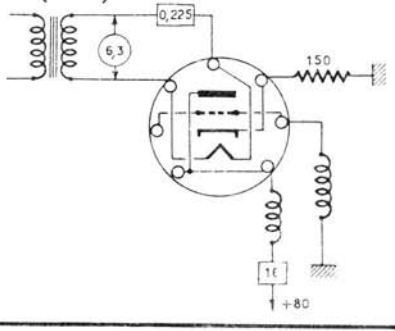
C

S c = 0,78
P = 700 kΩ
V = 0



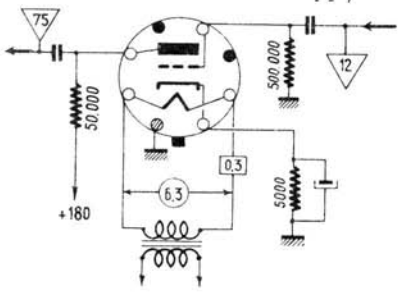
6AF4
O (V.H.F.)

S = 6,6
ρ = 2270
μ = 15



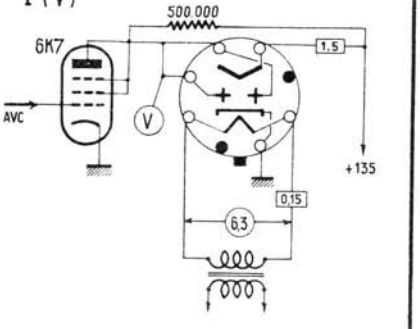
6AF5
BF

S = 1,5
ρ = 4900
V = -18
I = 7



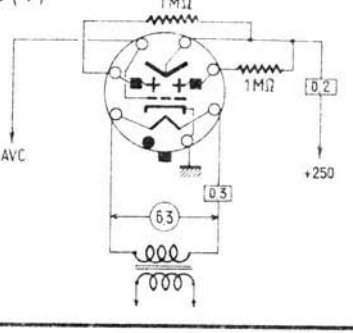
6AF6
I (V)

V = 0 +80



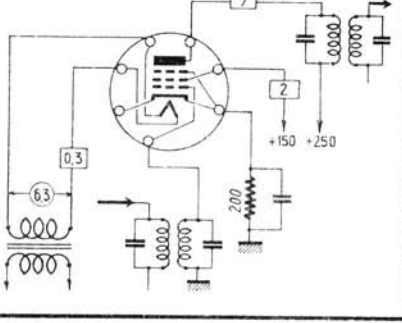
6AF7
I (V)

V = 0 -19



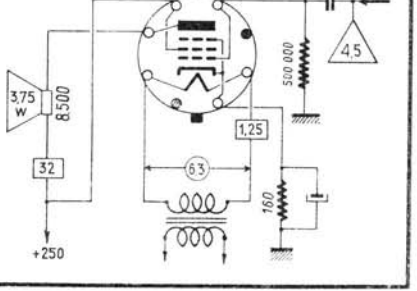
6AG5
HF (T)

S = 5
ρ = 0,8
V = -1,8



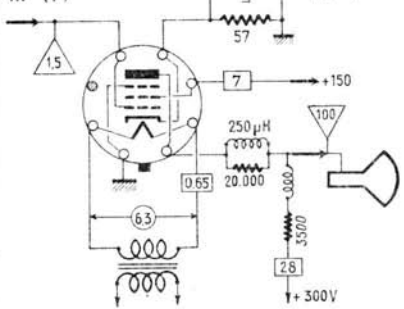
6AG6
P

S = 10
ρ = 50.000
V = -6



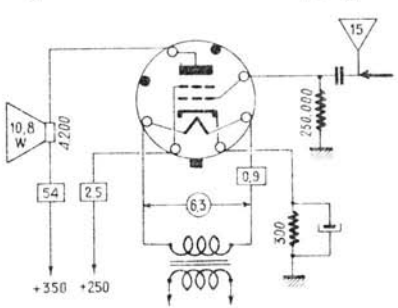
6AG7
HF (T)

S = 11
P = 130.000
V = -3



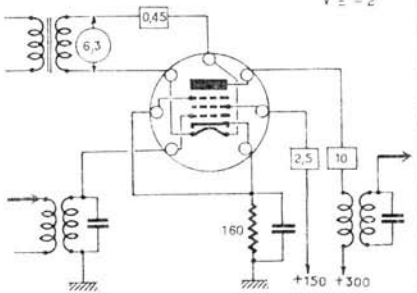
6AH5
P

S = 5,2
P = 33.000
V = -18



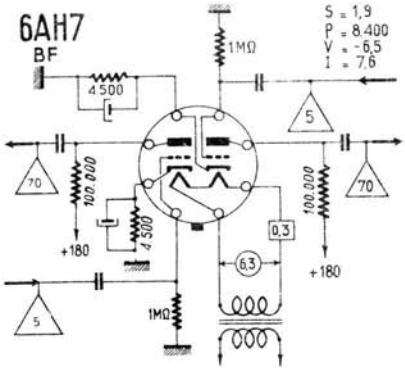
6AH6
HF (T)

S = 9
P = 0,5MΩ
V = -2



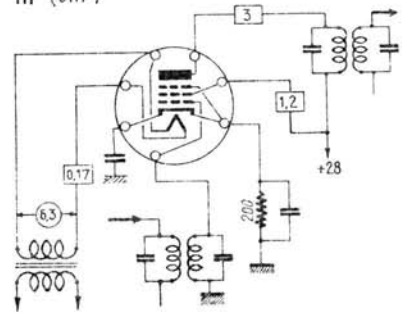
6AH7
BF

S = 1,9
P = 8.400
V = -6,5
I = 7,6



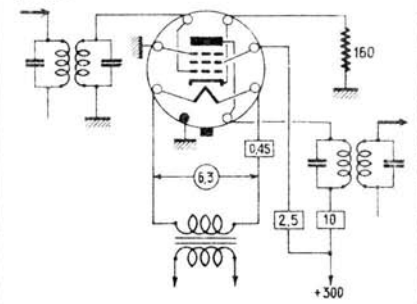
6AJ5
HF (UHF)

S = 2,75
P = 90.000



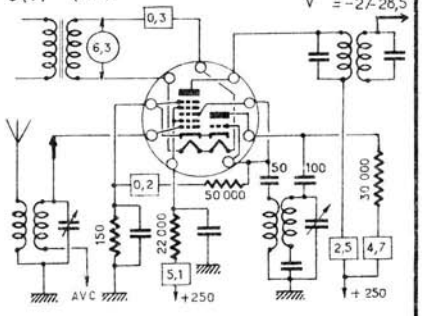
6AJ7
HF (T)

S = 9
P = 1MΩ



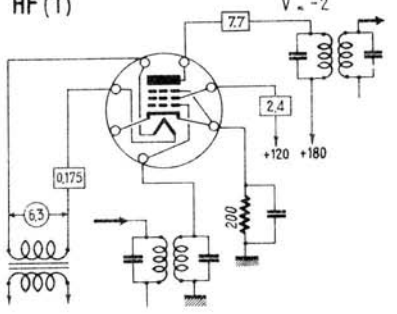
6AJ8 ECH81
C(V) (F.M.)

S = 0,7
P = 1 MΩ
V = -2/-28,5



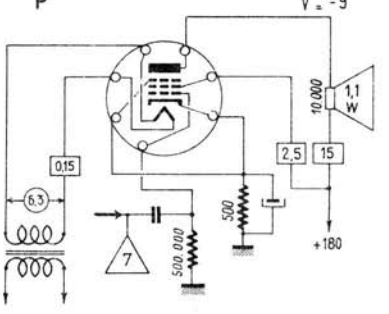
6AK5
HF (T)

S = 5,1
P = 0,69 MΩ
V = -2



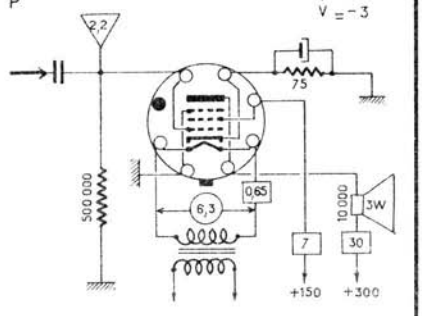
6AK6
P

S = 2,3
P = 0,2 MΩ
V = -9

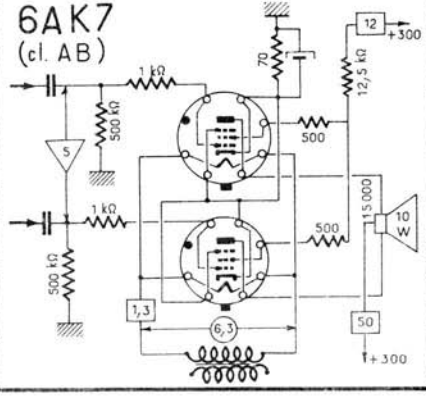


6AK7
P

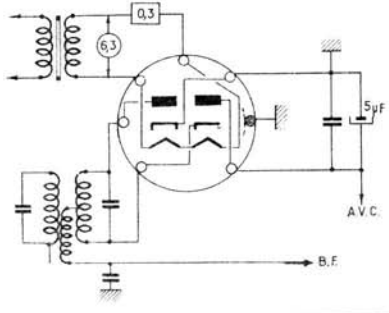
S = 11
P = 130000
V = -3



6AK7
(cl. AB)



6AL5
D (F.M.)

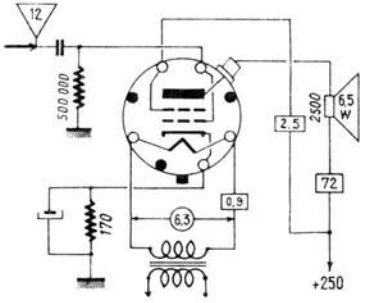


6AK8 = 6T8

6AL6 = 6L6

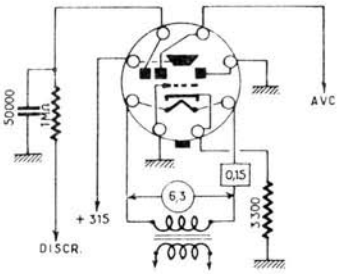
P

S = 6
ρ = 22.500
V = -14



6AL7

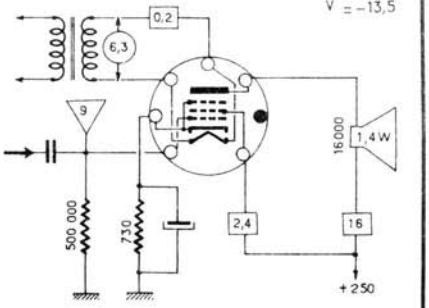
I (F.M.)



6AM5

P

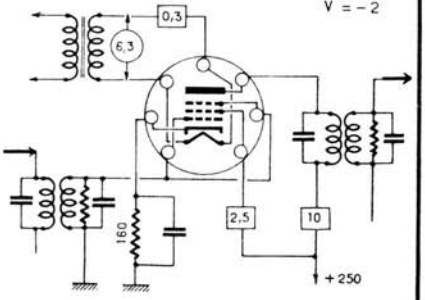
S = 2,6
ρ = 0,13 MΩ
V = -13,5



6AM6

HF (I)

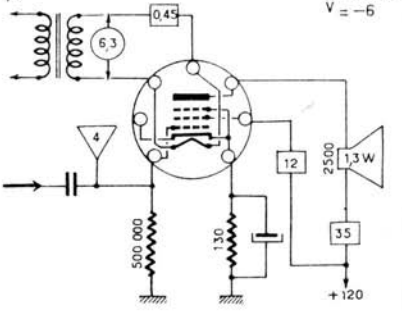
S = 7,5
ρ = 1 MΩ
V = -2



6AN5

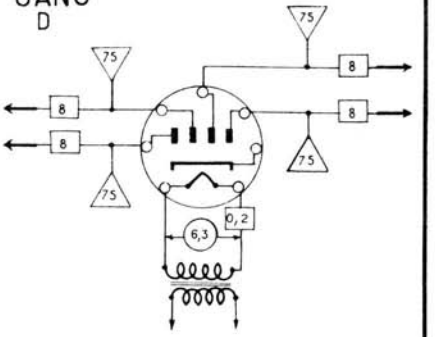
P

S = 8
ρ = 12500
V = -6



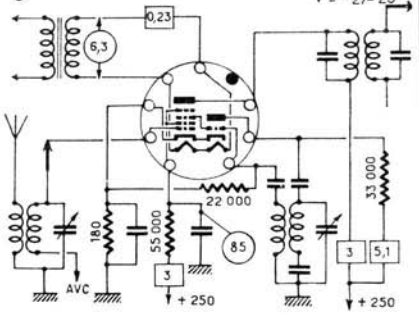
6AN6

D



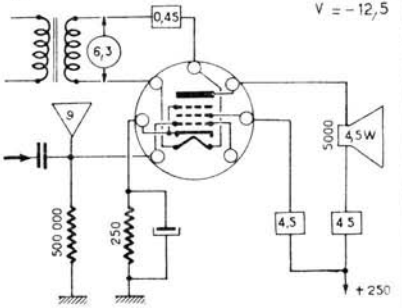
6AN7
C

S = 0,75
ρ = 0,1 MΩ
V = −2/−25



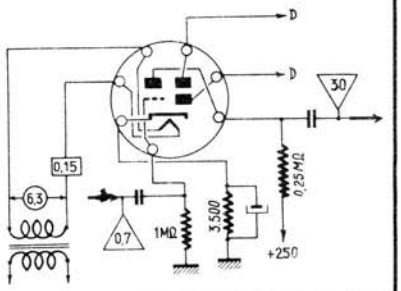
6AQ5
P

S = 4,1
ρ = 52 000
V = −12,5



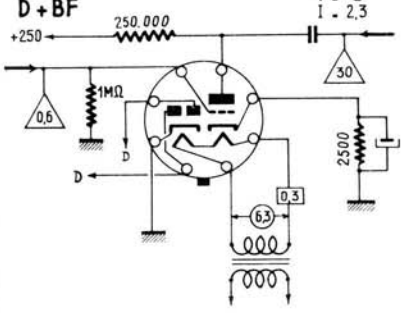
6AQ6
D + BF

S = 1,2
ρ = 58.000
V = −3
I = 1



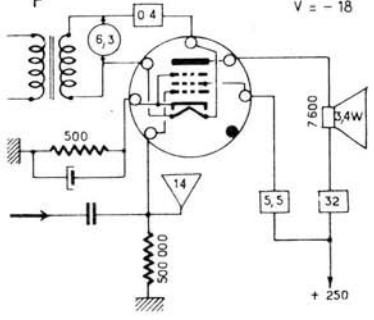
6AQ7
D + BF

S = 1,6
ρ = 44.000
V = −2
I = 2,3



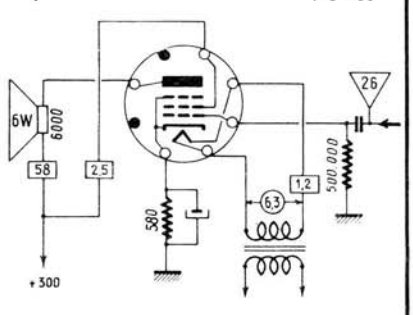
6AR5
P

S = 2,3
ρ = 68 000
V = −18



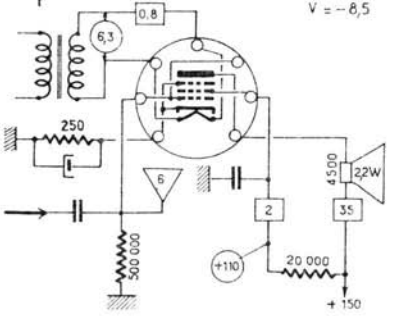
6AR6
P

S = 1,2
ρ = 22.000
V = −36



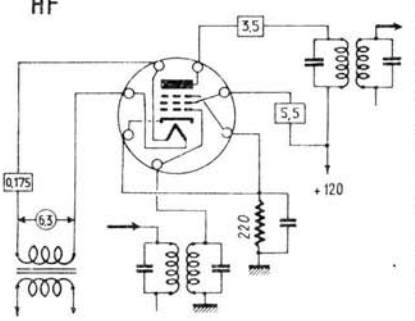
6AS5
P

S = 5,6
P = 25000
V = -8,5



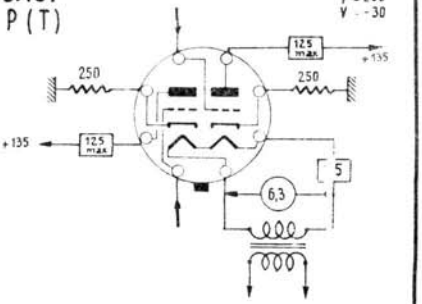
6AS6
HF

S = 3,5
V = -2



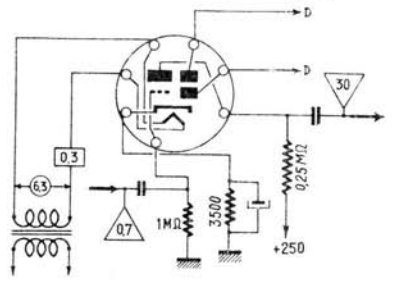
6AS7
P (T)

S = 7
P = 280
V = -30

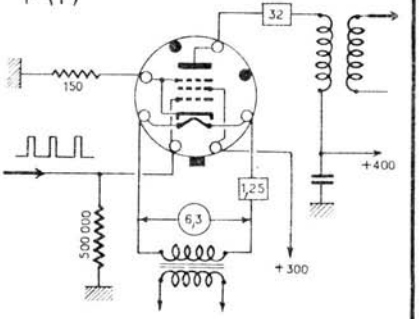


6AT6
D + BF

S = 1,2
P = 58.000 Ω
V = -3
I = 1

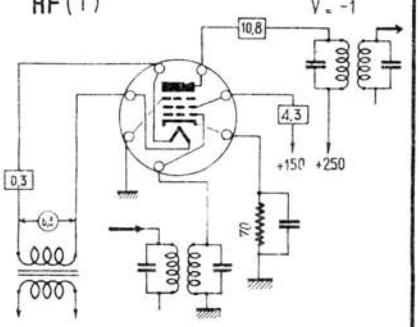


6AU5
P (T)



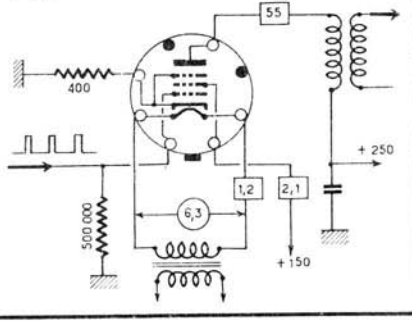
6AU6
HF (T)

S = 5,2
P = 1MΩ
V = -1



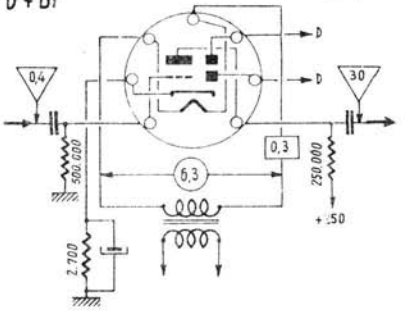
6AV5
P(T)

S = 5,8
V = - 22,5



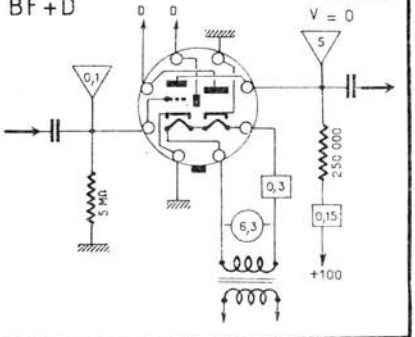
6AV6
D + BF

= 1,6
= 62.000
V = -2

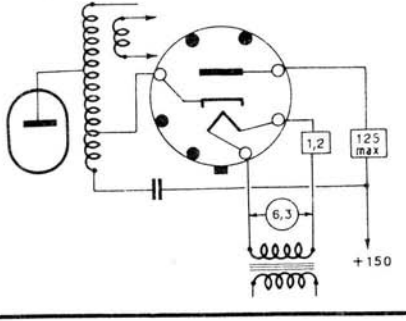


6AW7
BF + D

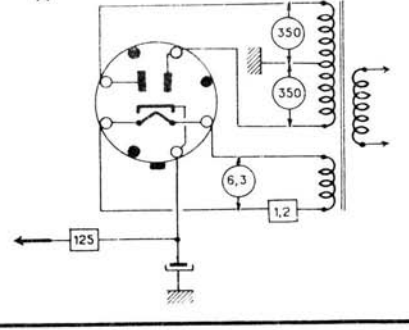
S = 1,2
P = 70000
V = 0



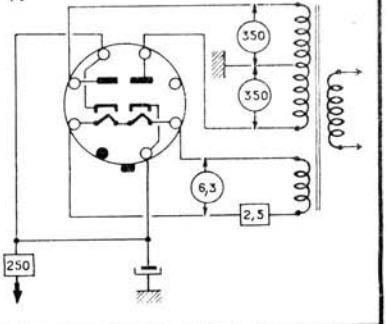
6AX4
D (T)



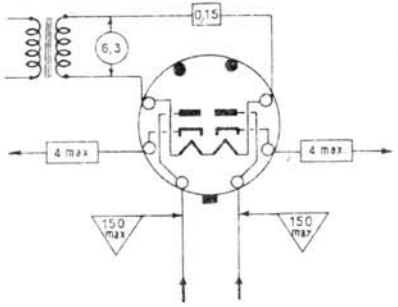
6AX5
R



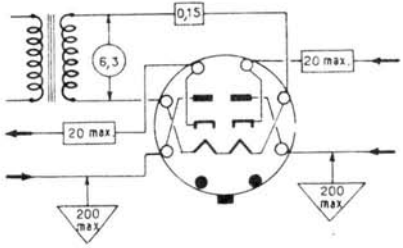
6AX6
R



6AZ5
D

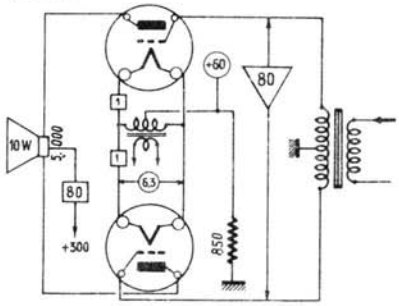


6AZ6
D



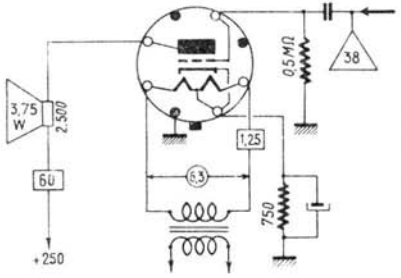
6A3
P(cl.A)

V = - 60

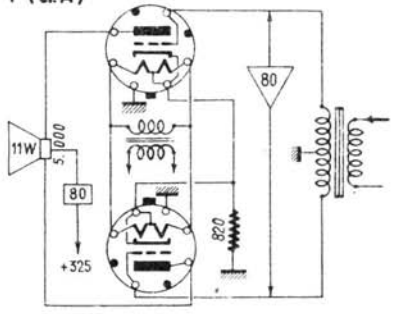


6A5 = 6A3
P

S = 5,25
P = 800
V = - 45

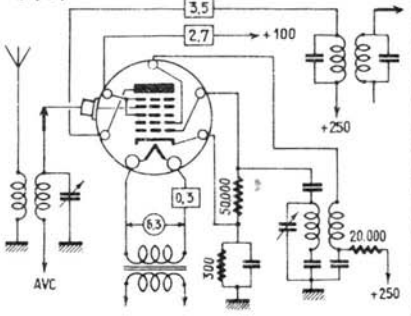


6A5 = 6A3
P(cl.A)



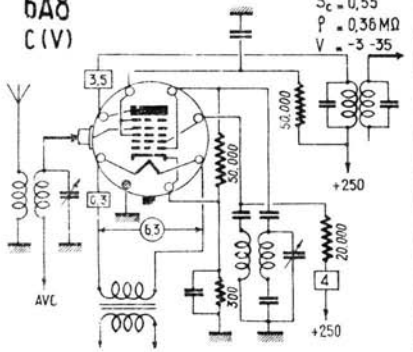
6A7 = 6A8
C (V)

S_c = 0,55
P = 0,36 MΩ
V = -3 - 35



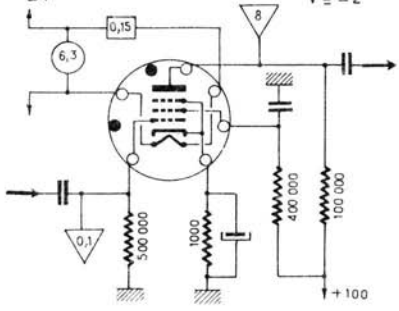
6A8
C (V)

S_c = 0,55
P = 0,36 MΩ
V = -3 -35



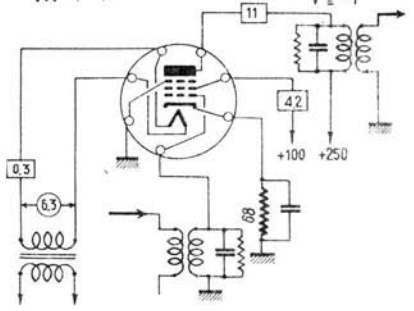
6BA5 (N)
BF

S = 2,15
P = 175 000
V = -2



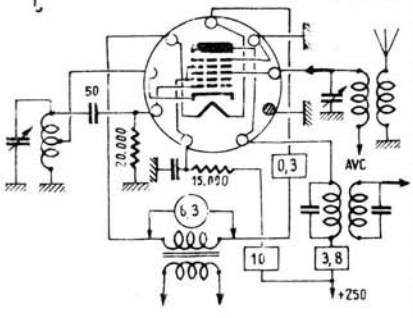
6BA6
HF (T)

S = 4,4
P = 1,5 MΩ
V = -1



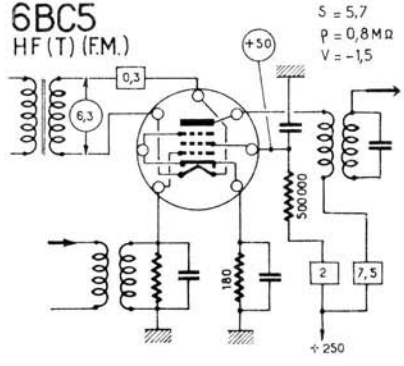
6BA7
C

S_c = 0,95
P = 1 MΩ
V = 0 -20

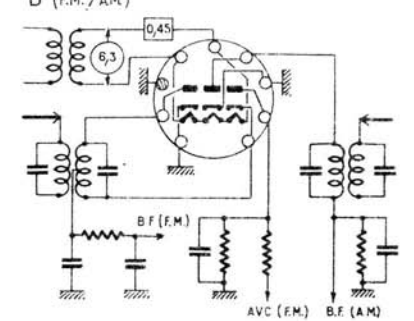


6BC5
HF (T) (F.M.)

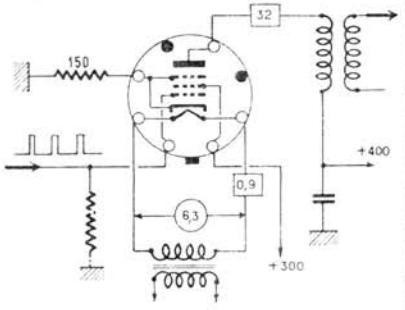
S = 5,7
P = 0,8 MΩ
V = -1,5



6BC7
D (F.M./A.M.)

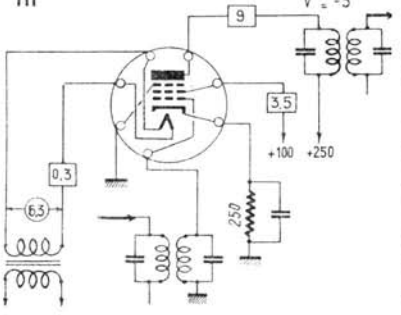


6BD5
P (T)



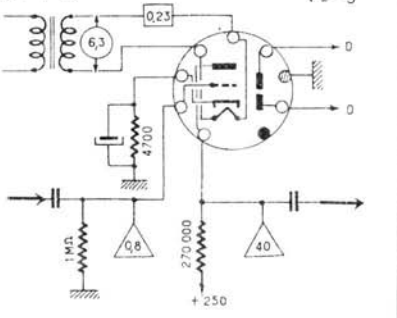
6BD6
HF

S = 2
P = 0,7 MΩ
V = -3



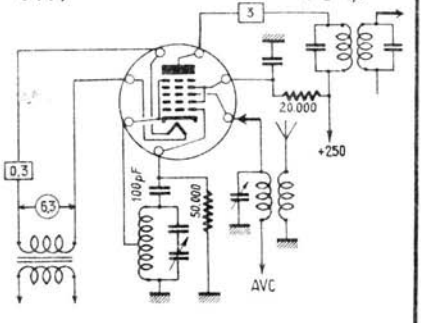
6BD7
BF + D

S = 1,2
P = 58000
V = -3



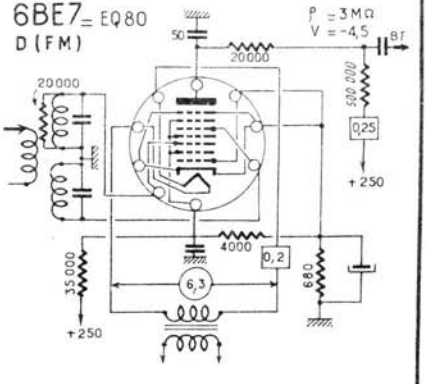
6BE6
C (V)

S_c = 0,455
P = 1 MΩ
V = -1,5



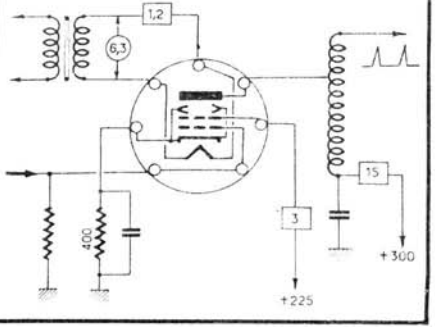
6BE7 = EQ80
D (FM)

P = 3 MΩ
V = -4,5



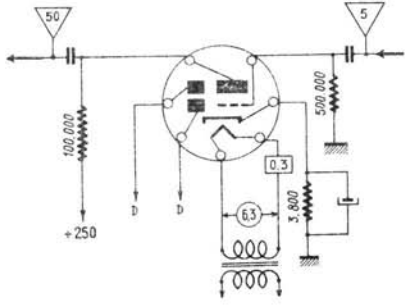
6BF5
P (T)

S = 4,2
P = 0,1MΩ
V = -6



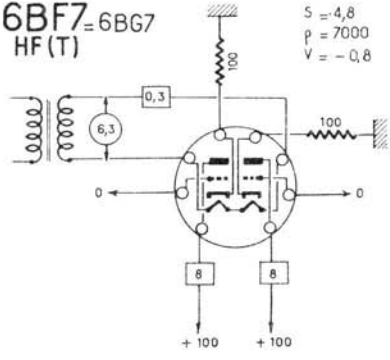
6BF6
D + BF

S = 1,9
ρ = 8.500
V = -9



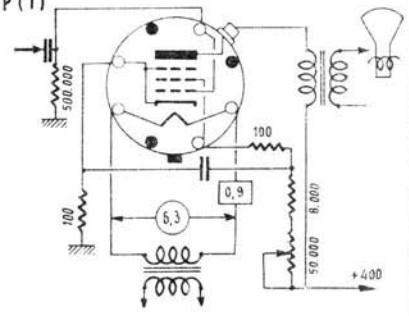
6BF7 = 6BG7
HF (T)

S = 4,8
ρ = 7000
V = -0,8



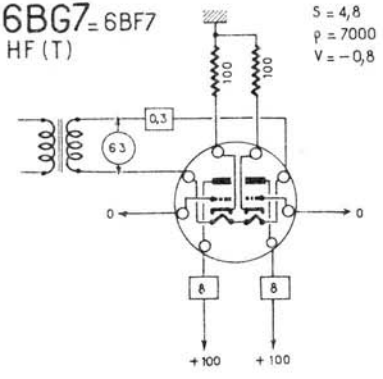
6BG6
P (T)

S = 6



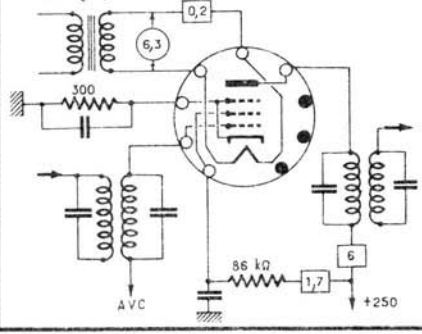
6BG7 = 6BF7
HF (T)

S = 4,8
ρ = 7000
V = -0,8



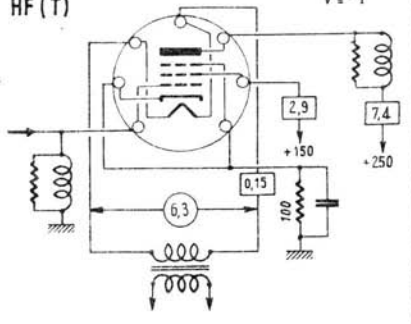
6BH5
H.F. (V)

S = 2,2
ρ = 1,1 MΩ
V = -2,5/-30



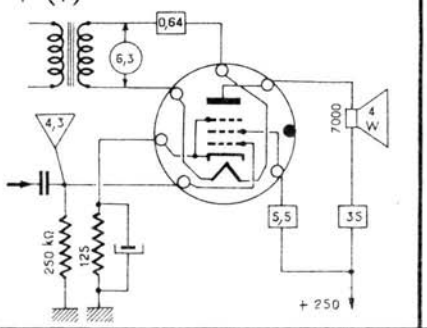
6BH6
HF (T)

S = 4,6
ρ = 1,4 MΩ
V = -1



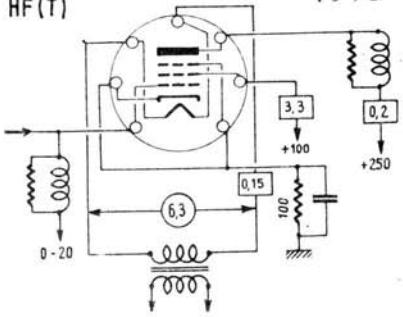
6BJ5
P (T)

S = 10,5
P = 40 kΩ
V = −5



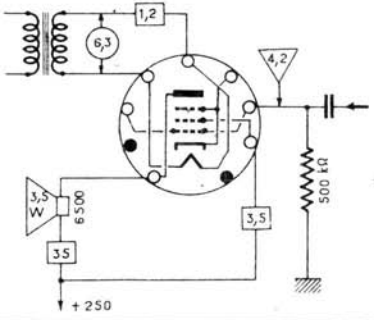
6BJ6
HF (T)

S = 3,8
P = 1,3 MΩ
V = −1 -20



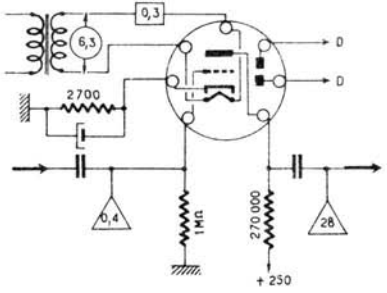
6BK5
P

S = 8,5
P = 100 kΩ
V = −5



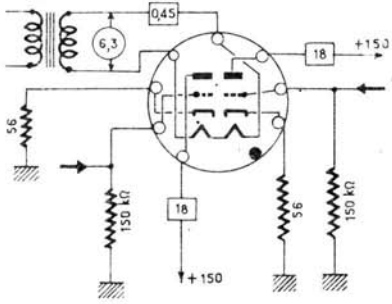
6BK6 = 6AV6
BF + D

S = 1,6
P = 62 00
V = −2



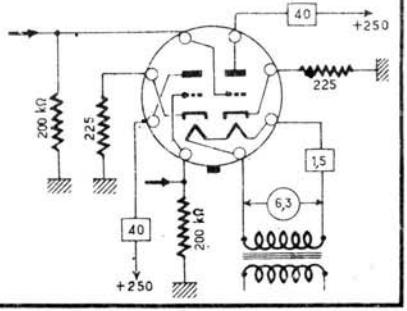
6BK7
HF (T)

S = 8,5
P = 4,7 kΩ
μ = 40

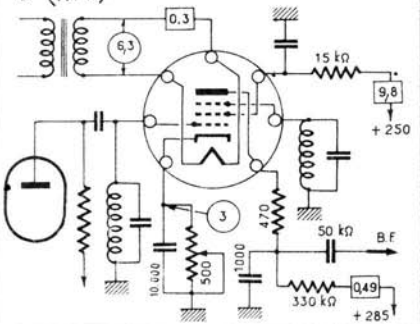


6BL7
BF VF (T)

S = 7
P = 2,15 kΩ
V = −9
μ = 15



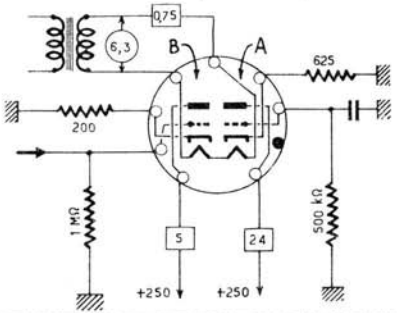
6BN6
D (F.M.)



6BN7
BF_VF(T)

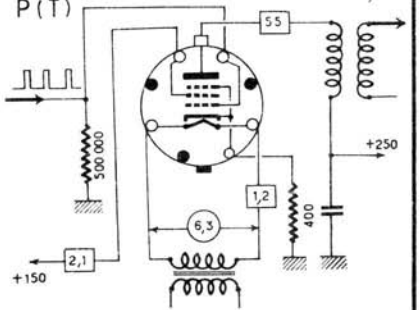
A S = 5,5 P = 2,2 kΩ V = −15 μ = 12

B S = 2 P = 14 kΩ V = −1 μ = 28



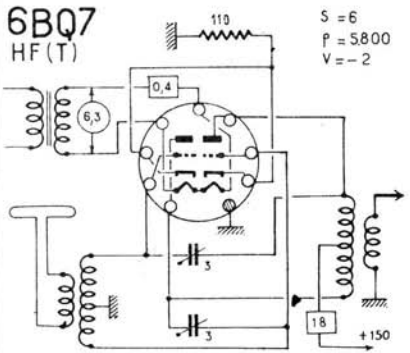
6BQ06
P(T)

S = 5,5
V = − 22,5



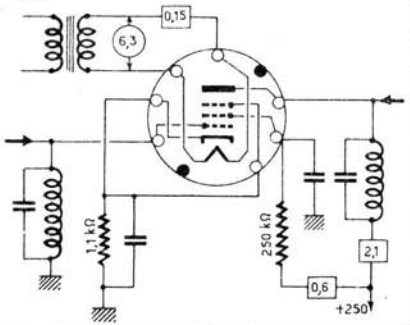
6BQ7
HF(T)

S = 6
P = 5800
V = − 2



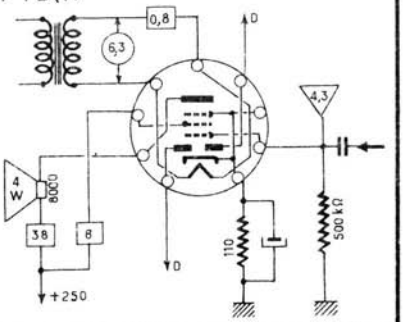
6BR7
HF

S = 1,25
P = 2,5 MΩ
V = −3



6BV7
P+D(T)

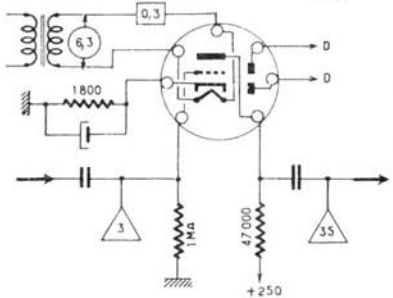
S = 10
P = 100 kΩ
V = −5



6BT6 = 6AT6

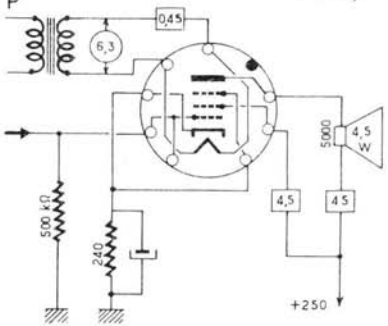
6BU6
BF + D

S = 1,9
P = 8500
V = 9



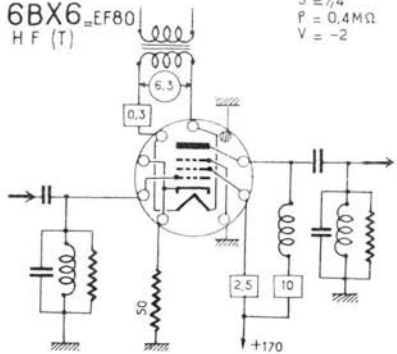
6BW6
P

S = 4,1
P = 52 kΩ
V = −12,5



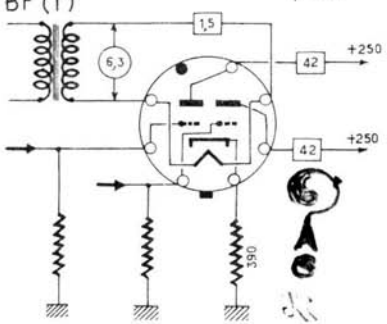
6BX6 = EF80
HF (T)

S = 7,4
P = 0,4 MΩ
V = −2

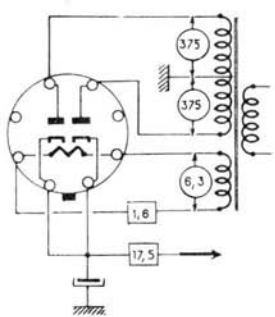


6BX7
BF (T)

S = 7,6
P = 1300
μ = 10

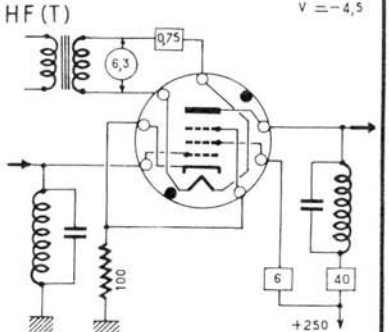


6BY5
R



6CH6
HF (T)

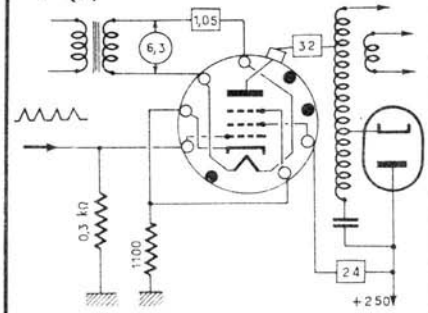
S = 11
P = 50 kΩ
V = −4,5



6 BY7 = EF85

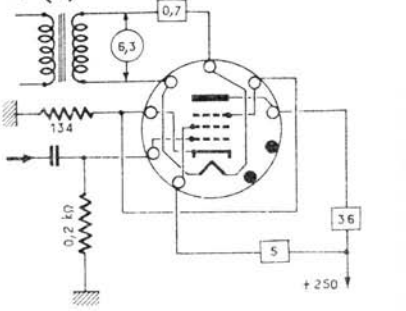
6CJ6
P (T)

S = 4,6
P = 15 kΩ
V = −38,5



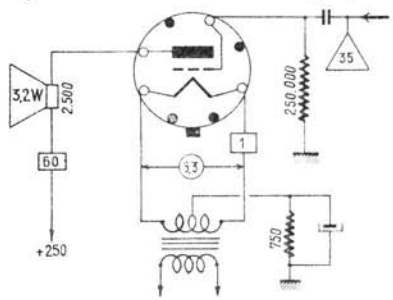
6CK6
P (T)

S = 10
P = 130 kΩ
V = −5,5



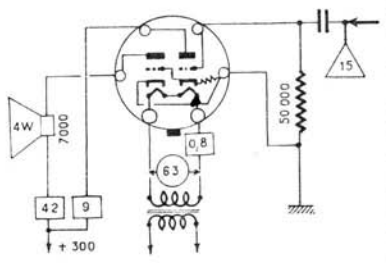
6B4 = 6A3
P

S = 5,25
P = 800
V = −45



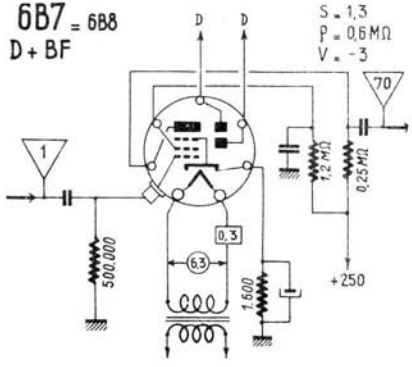
6B5
P

S = 2,4
P = 24000
V = 0



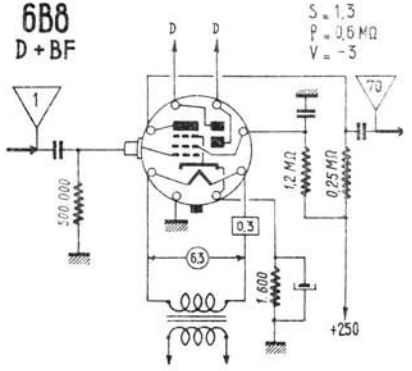
6B7 = 6B8
D + BF

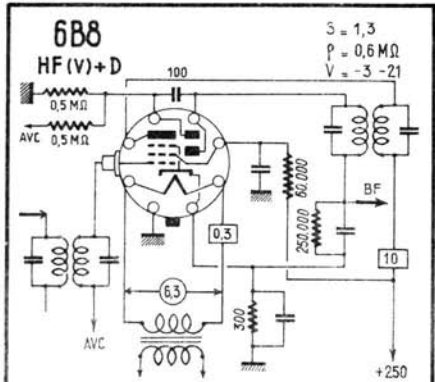
S = 1,3
P = 0,6 MΩ
V = −3

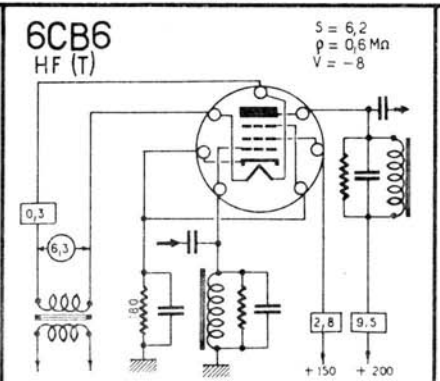


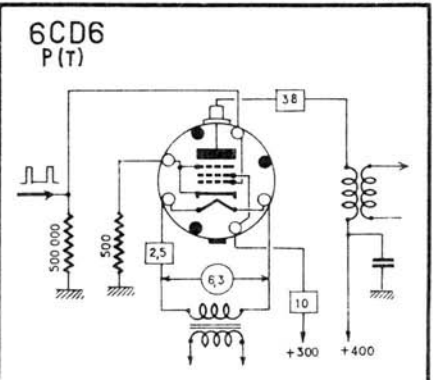
6B8
D + BF

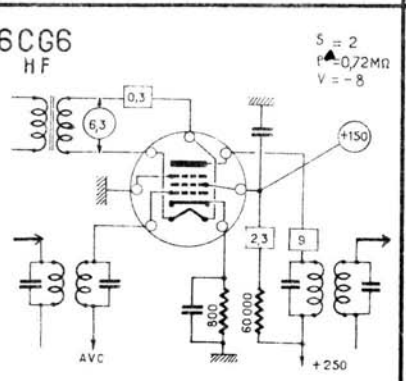
S = 1,3
P = 0,6 MΩ
V = −3

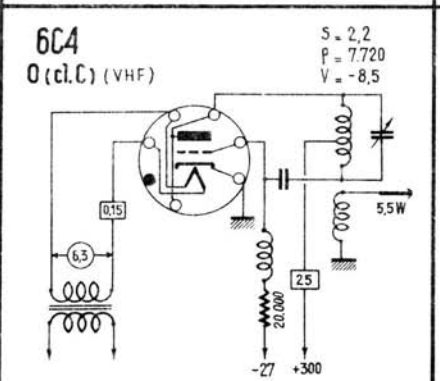


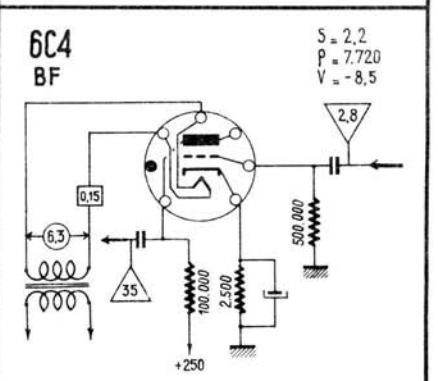




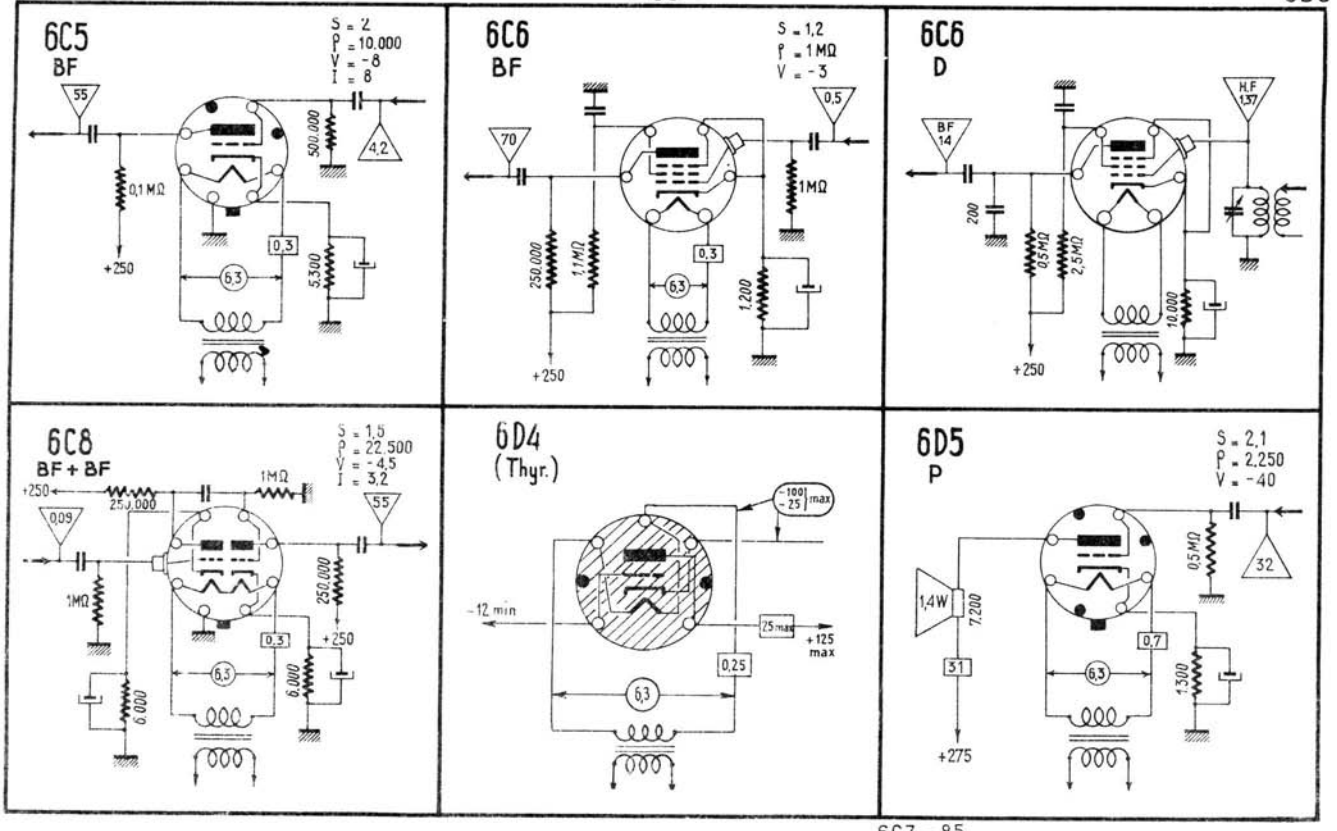






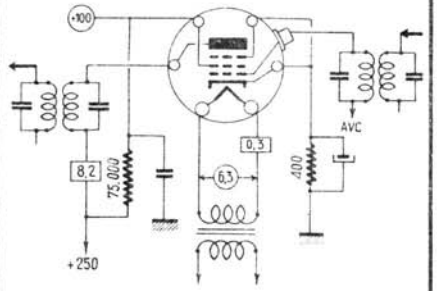


6CJ6 = EL81 - 6CQ6 = EF92 - 6CD7 = EM34
6CK6 = EL83 - 6CA7 = EL34


6C5
BF
S = 2
P = 10.000
V = -8
I = 8
55
4,2
0,1 MΩ
500.000
+250
0,3
6,3
5.300
6C6
BF
S = 1,2
P = 1 MΩ
V = -3
70
0,5
1 MΩ
250.000
1,1 MΩ
0,3
6,3
1.200
+250
6C6
D
BF
14
H.F
137
200
0,5 MΩ
2,5 MΩ
10.000
+250
6C8
BF + BF
S = 1,5
P = 22.500
V = -4,5
I = 3,2
+250
250.000
1 MΩ
55
0,09
1 MΩ
250.000
0,3
+250
6,3
6.000
6.000
6D4
(Thyr.)
-100
-25 max
-12 min
25 max
+125
max
0,25
6,3
6D5
P
S = 2,1
P = 2.250
V = -40
0,5 MΩ
32
1,4 W
7.200
31
0,7
6,3
1.300
+275

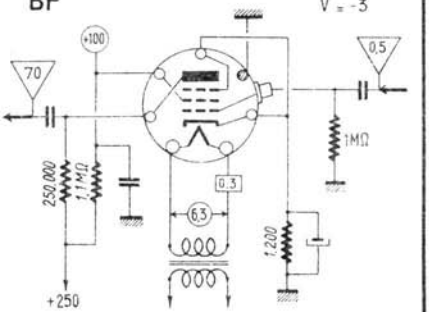
6D6
HF (V)

S = 1,6
P = 0,8 MΩ
V = -3 -50



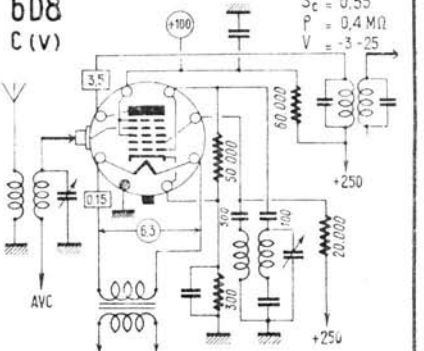
6D7 = 6C6
BF

S = 1,2
P = 1 MΩ
V = -3



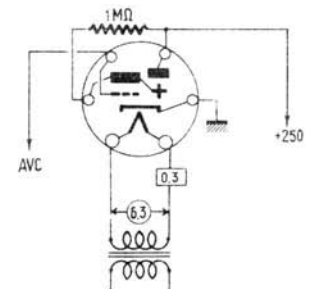
6D8
C (V)

S$_c$ = 0.55
P = 0,4 MΩ
V = -3 -25



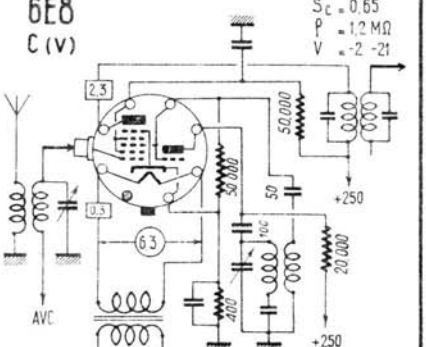
6E5
I

V = 0 -8



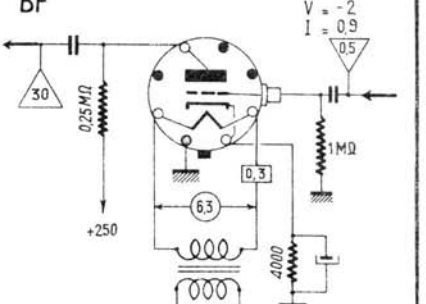
6E8
C (V)

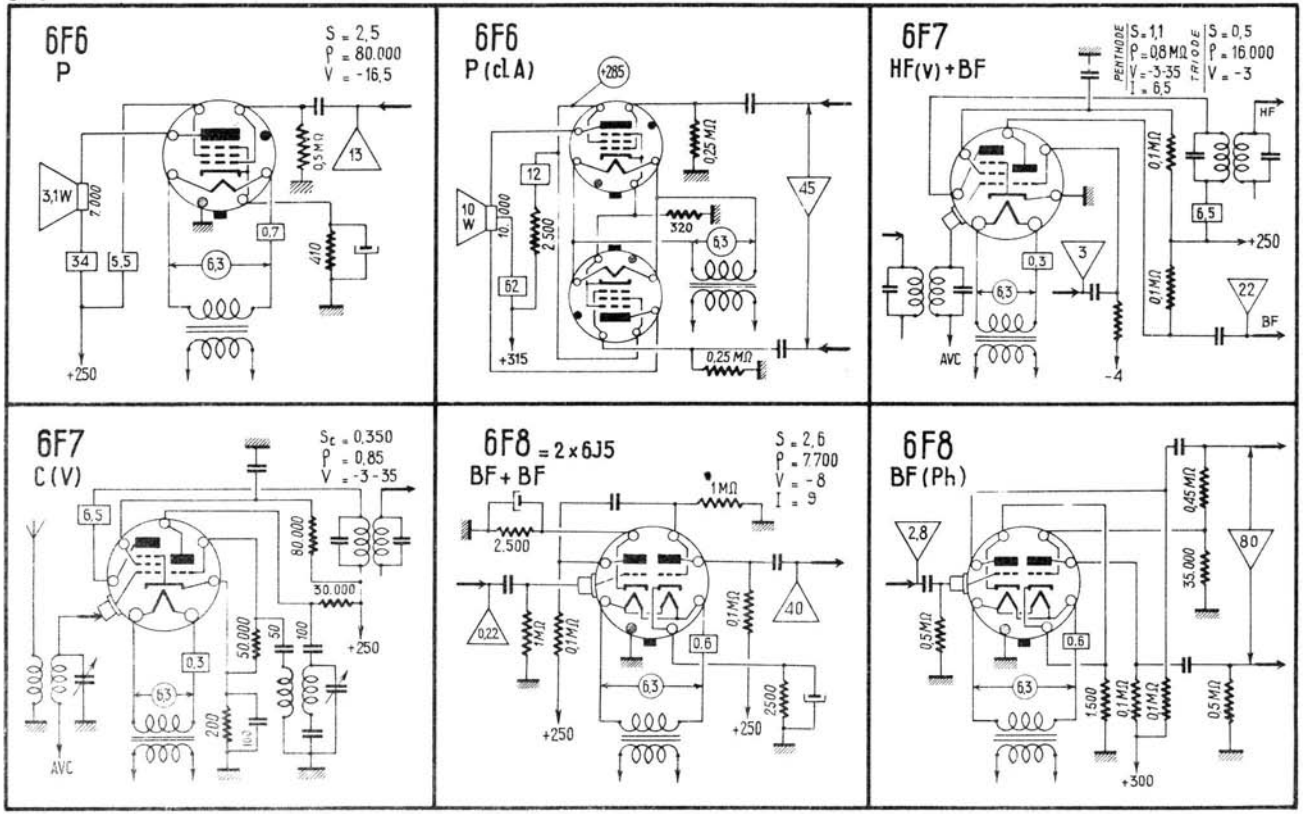
S$_c$ = 0.65
P = 1,2 MΩ
V = -2 -21



6F5
BF

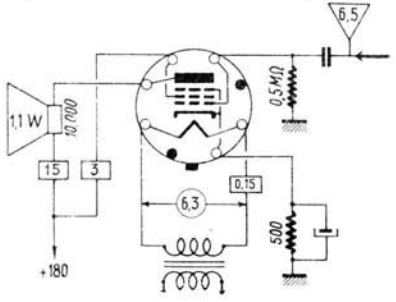
S = 1,5
P = 66.000
V = -2
I = 0,9



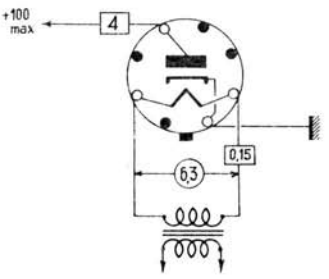

6F6
P
S = 2,5
P = 80.000
V = -16,5
3,1W
7.000
0,5 MΩ
13
0,7
410
34
5,5
6,3
+250
6F6
P (cl A)
+285
0,25 MΩ
12
10 W
10.000
2.500
320
45
6,3
62
+315
0,25 MΩ
6F7
HF(v) + BF
PENTHODE
S = 1,1
P = 0,8 MΩ
V = -3-35
I = 6,5
TRIODE
S = 0,5
P = 16.000
V = -3
0,1 MΩ
HF
6,5
+250
0,3
3
6,3
0,1 MΩ
22
BF
AVC
-4
6F7
C (V)
Sc = 0,350
P = 0,85
V = -3-35
6,5
80.000
30.000
+250
0,3
50.000
50
100
6,3
200
AVC
6F8 = 2 x 6J5
BF + BF
S = 2,6
P = 7700
V = -8
I = 9
1 MΩ
2.500
0,22
1 MΩ
0,1 MΩ
40
0,6
6,3
2500
+250
+250
6F8
BF (Ph)
2,8
0,45 MΩ
80
35.000
0,5 MΩ
0,6
6,3
1500
0,1 MΩ
0,1 MΩ
0,5 MΩ
+300

6G6
P

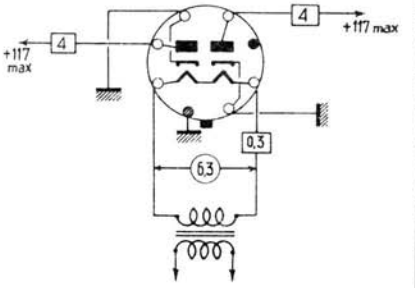
S = 2,3
P = 0,175 MΩ
V = -9



6H4
D

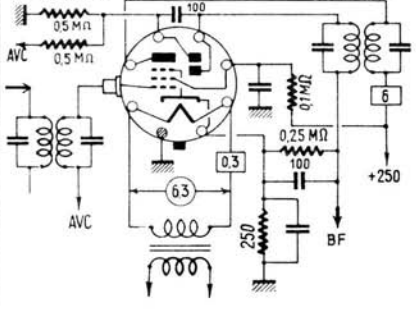


6H6 (V)
HF(V)+D

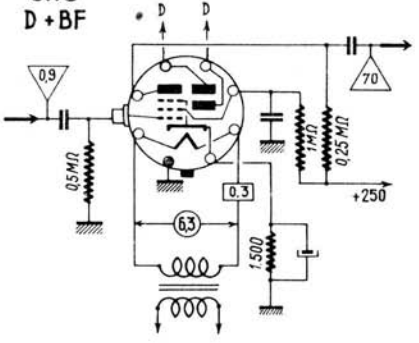


6H8
HF(V)+D

S = 1,8
P = 1,2 MΩ
V = -3-22

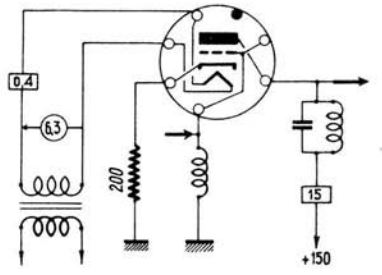


6H8
D+BF

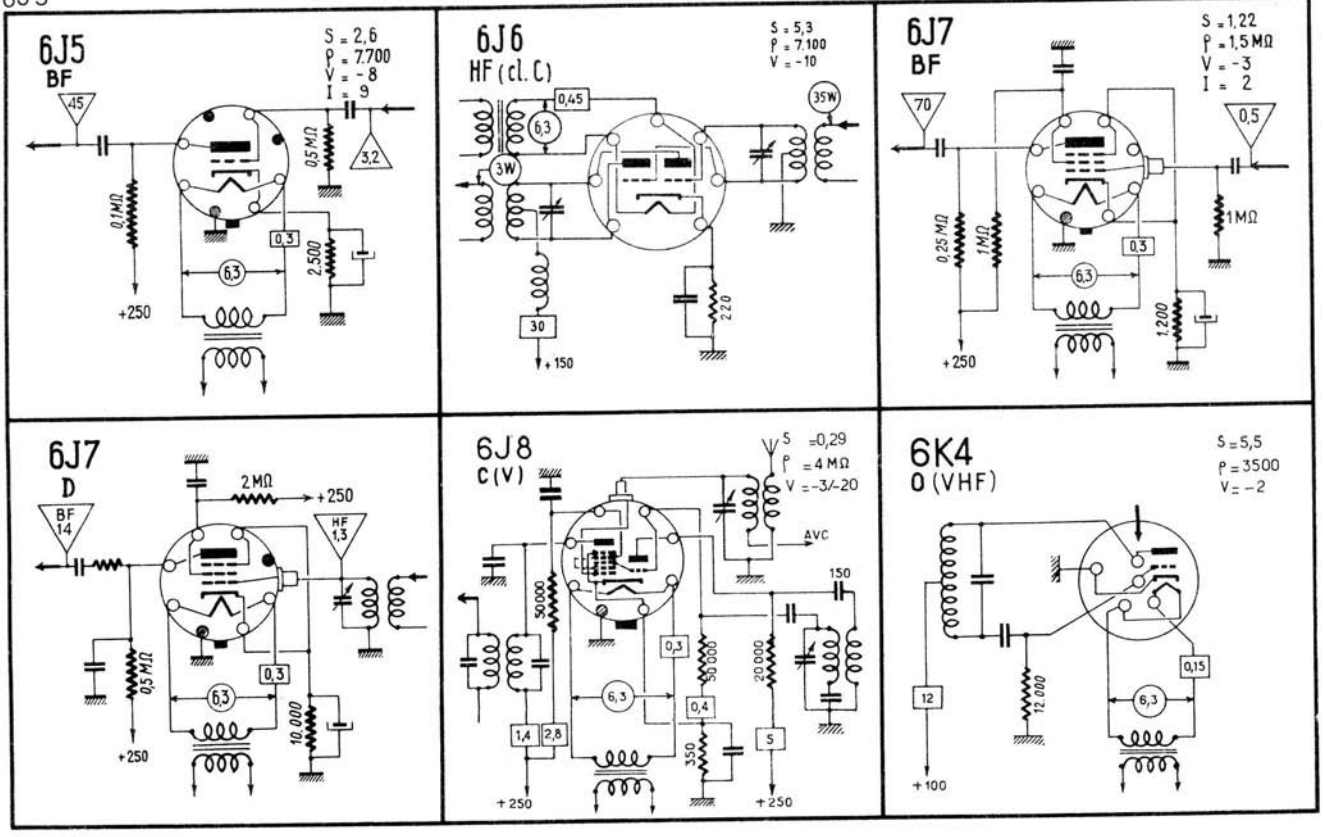


6J4
H.F. (T)

S = 12
P = 4 500
V = -3

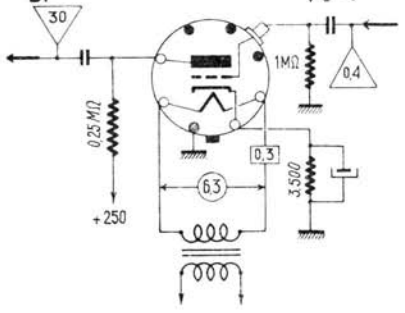


6G5 = 6H5 = 6U5


6J5
BF
S = 2,6
P = 7.700
V = -8
I = 9
45
0,1MΩ
0,5MΩ
3,2
0,3
2.500
6,3
+250
6J6
HF (cl. C)
S = 5,3
P = 7.100
V = -10
0,45
6,3
3W
35W
220
30
+150
6J7
BF
S = 1,22
P = 1,5MΩ
V = -3
I = 2
70
0,5
0,25MΩ
1MΩ
0,3
6,3
1MΩ
1.200
+250
6J7
D
BF 14
2MΩ
+250
HF 1,3
0,5MΩ
0,3
6,3
10.000
+250
6J8
C(V)
S =0,29
P = 4 MΩ
V = -3/-20
AVC
150
30000
0,3
50.000
20.000
6,3
0,4
1,4
2,8
350
5
+250
+250
6K4
O (VHF)
S = 5,5
P = 3500
V = -2
0,15
12
12.000
6,3
+100

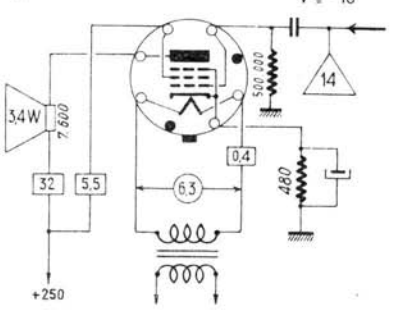
6K5
BF

S = 1,4
P = 50.000
V = -3



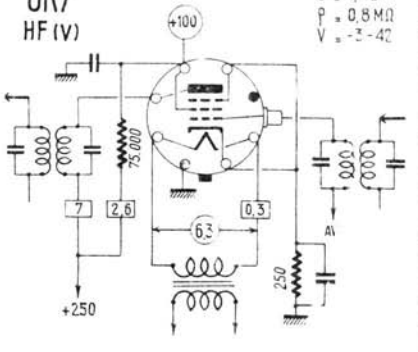
6K6
P

S = 2,3
P = 68.000
V = -18



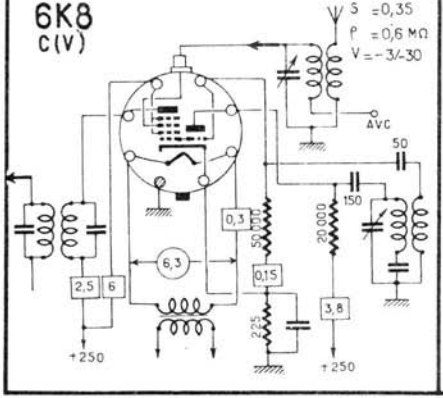
6K7
HF (V)

S = 1,45
P = 0,8 MΩ
V = -3 - 42



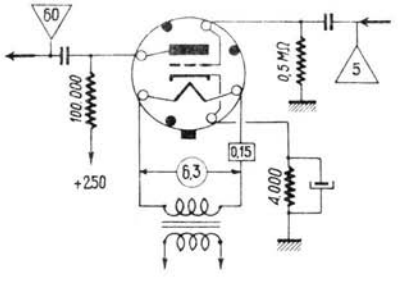
6K8
C(V)

S = 0,35
P = 0,6 MΩ
V = -3/-30



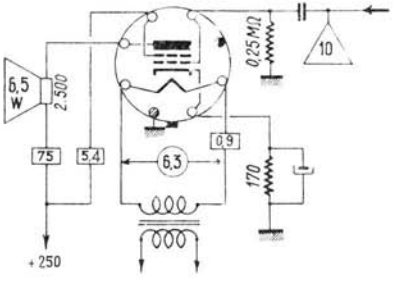
6L5
B.F

S = 1,9
P = 9.000
V = -9
I = 8

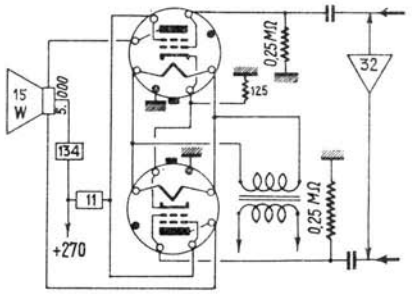


6L6
P

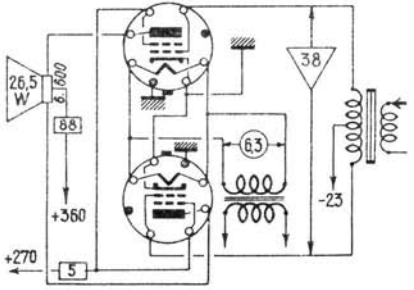
S = 6
P = 22.500
V = -14



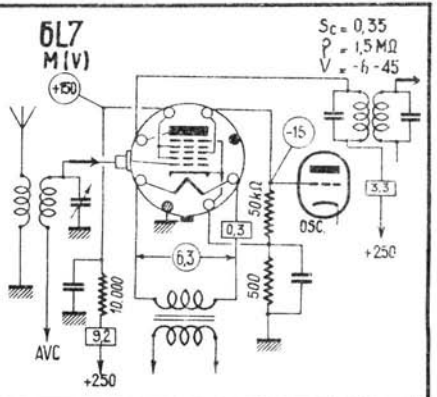
6L6
P(cl.A)



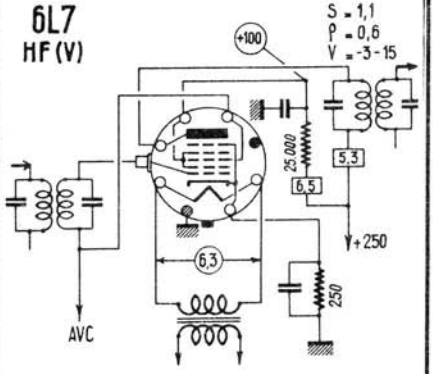
6L6
P(cl.AB)



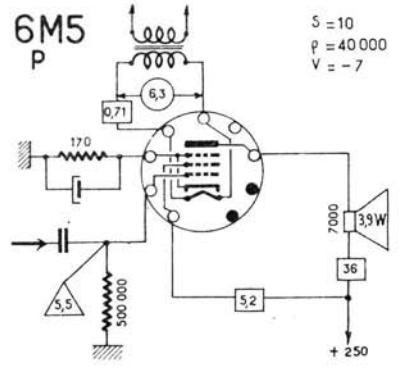
6L7
M(V)



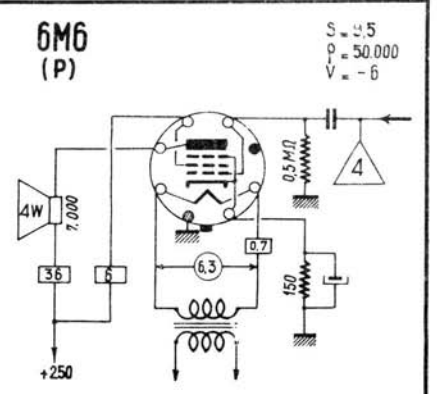
6L7
HF(V)

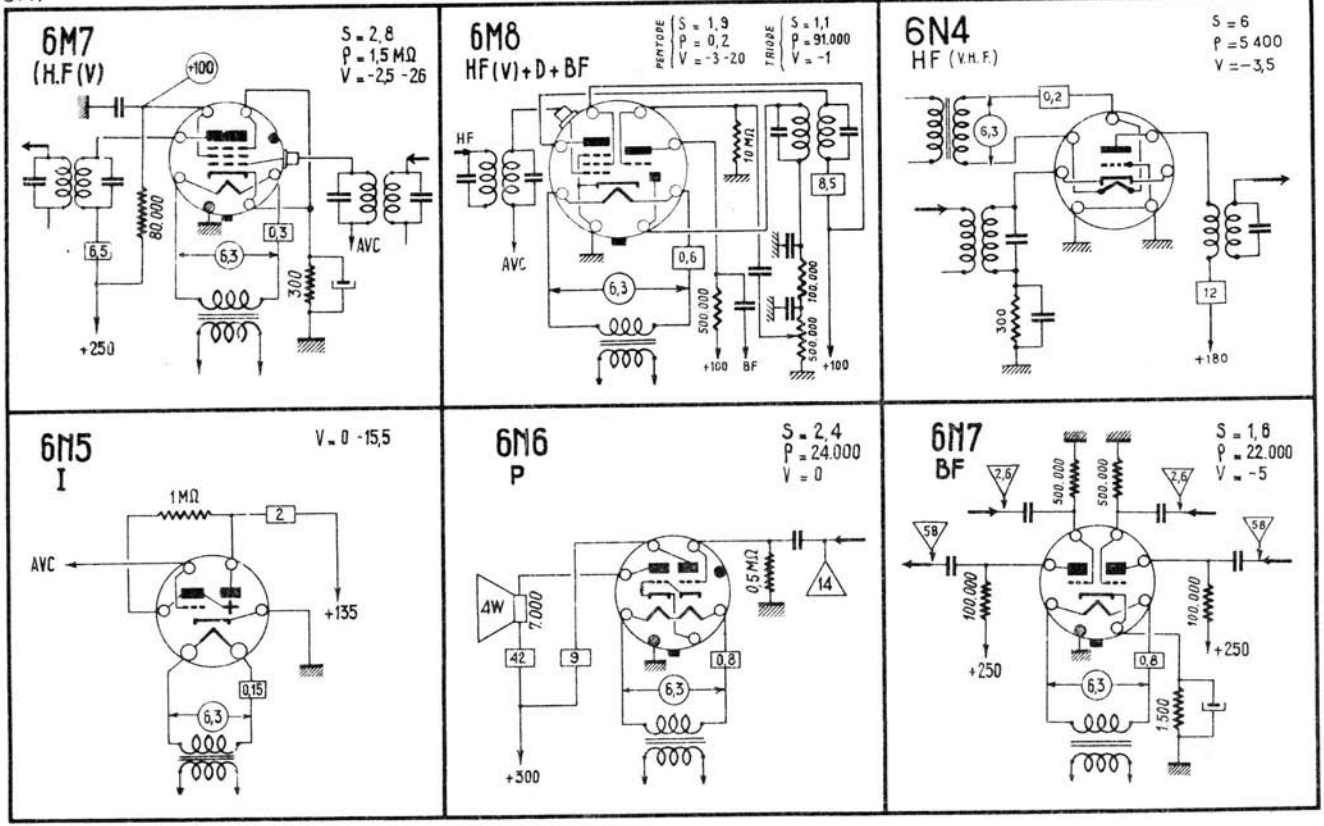


6M5
P



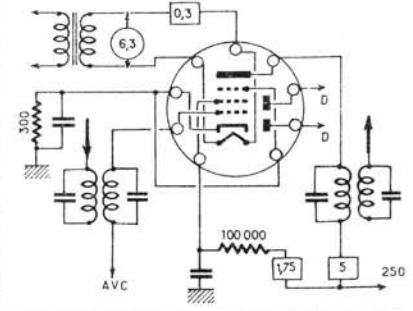
6M6
(P)




6M7
(H.F(V)
S = 2,8
P = 1,5 MΩ
V = -2,5 -26
+100
80.000
6,5
6,3
0,3
300
AVC
+250
6M8
HF(V)+D+BF
PENTODE
S = 1,9
P = 0,2
V = -3 -20
TRIODE
S = 1,1
P = 91.000
V = -1
HF
AVC
10 MΩ
8,5
0,6
6,3
500.000
100.000
500.000
+100
BF
+100
6N4
HF (V.H.F.)
S = 6
P = 5.400
V = -3,5
0,2
6,3
300
12
+180
6N5
I
V = 0 -15,5
1 MΩ
2
AVC
+135
0,15
6,3
6N6
P
S = 2,4
P = 24.000
V = 0
4W
7.000
0,5 MΩ
14
42
9
0,8
6,3
+300
6N7
BF
S = 1,6
P = 22.000
V = -5
2,6
500.000
500.000
2,6
5B
5B
100.000
100.000
+250
+250
0,8
6,3
1.500

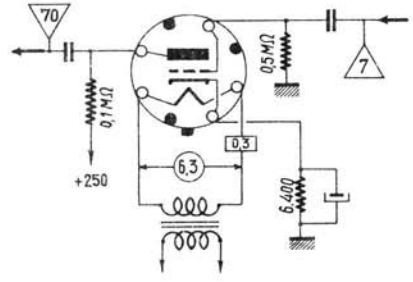
6N8
HF(V)+D

S = 2,2
P = 1,6 MΩ
V = -2/-20



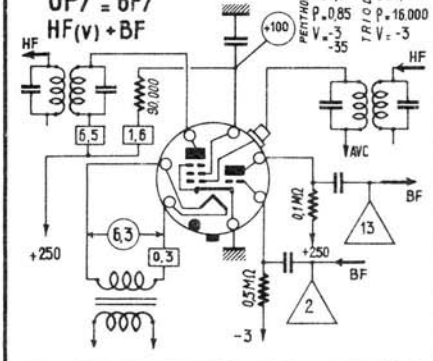
6P5
BF

S = 1.450
P = 9.500
V = -13,5
I = 5



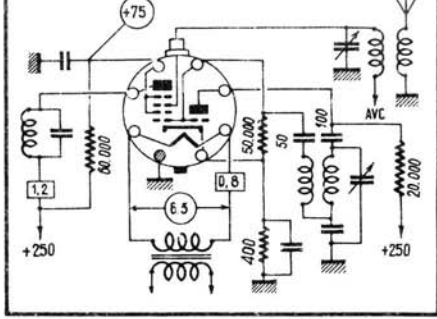
6P7 = 6F7
HF(V) + BF

PENTHODE S = 1,1 P = 0,85 V = -3 -35
TRIODE S = 0,5 P = 16.000 V = -3



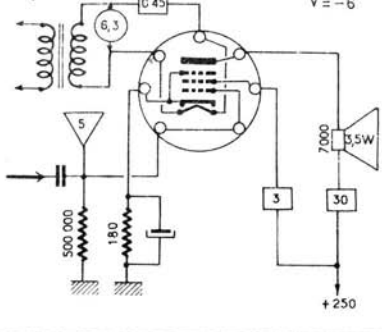
6P8
C (V)

Sc = 0,5
P = 1 MΩ
V = -3-25



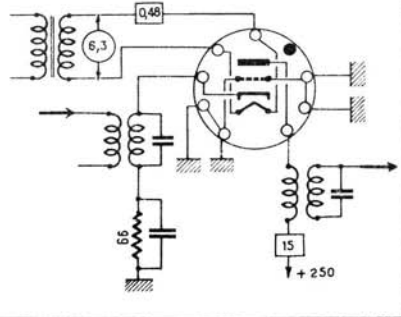
6P9
P

S = 7
P = 60000
V = -6



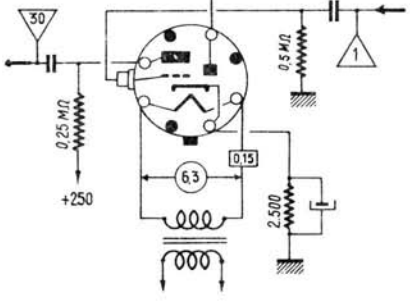
6Q4
HF (V.H.F.)

S = 12
V = -1



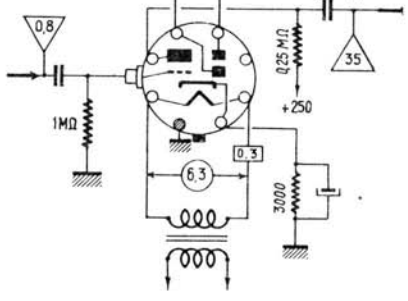
6Q6
D + BF

S = 1
P = 62.000
V = -3
I = 1,2



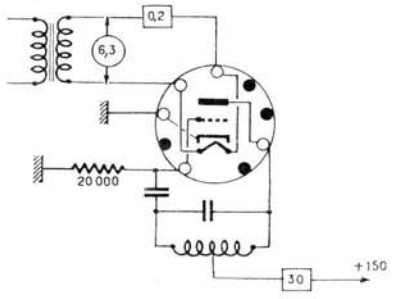
6Q7
D + BF

S = 1,2
P = 58.000
V = -3
I = 1,1



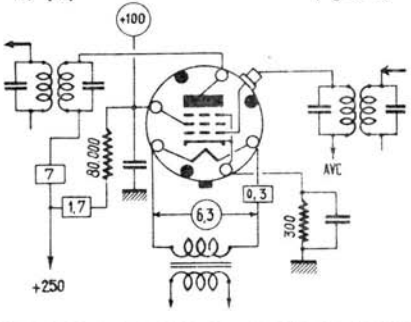
6R4
O (V.H.F)

S = 5,5
V = -2



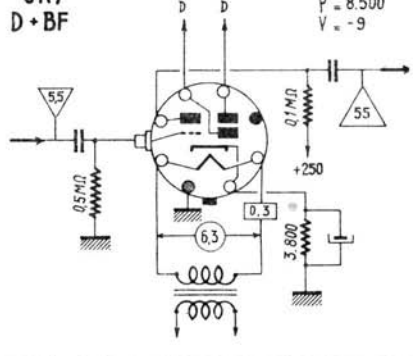
6R6
HF (V)

S = 1,4
P = 0,8 MΩ
V = -3-25



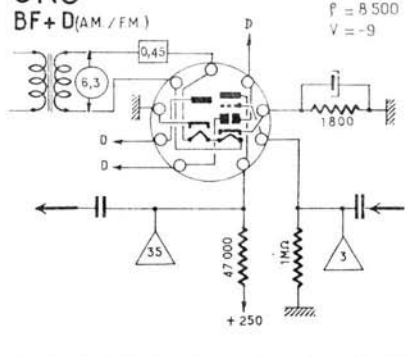
6R7
D + BF

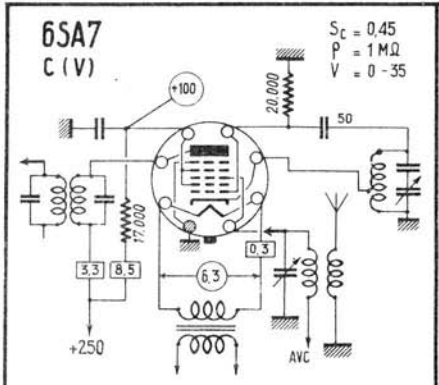
S = 1,9
P = 8.500
V = -9

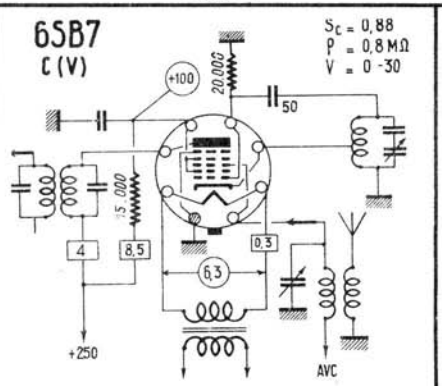


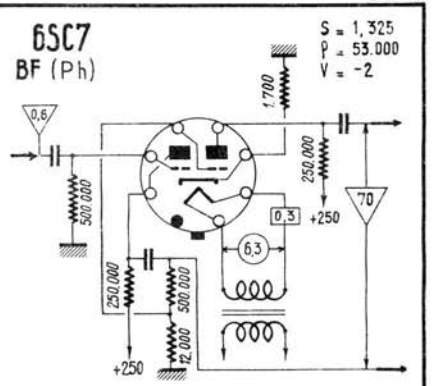
6R8
BF + D (A.M. / F.M.)

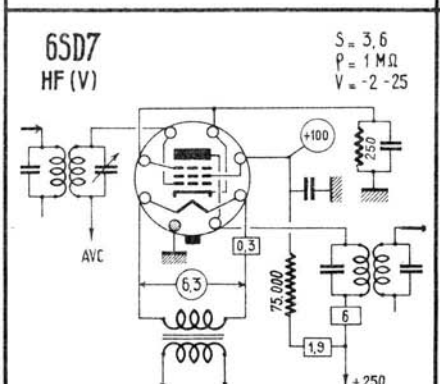
S = 1,9
P = 8.500
V = -9

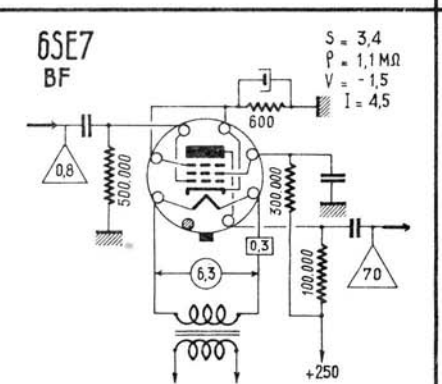


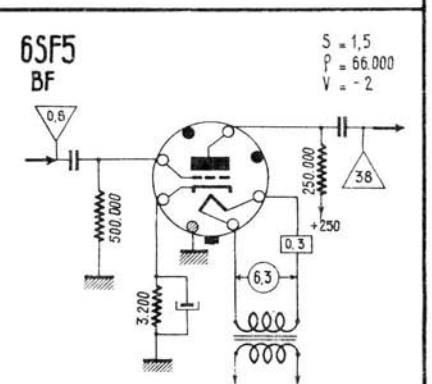

6SA7
C (V)
Sc = 0,45
P = 1 MΩ
V = 0 - 35
+100
20.000
50
17.000
3,3
8,5
0,3
6,3
+250
AVC


6SB7
C (V)
Sc = 0,88
P = 0,8 MΩ
V = 0 -30
+100
20.000
50
15.000
4
8,5
0,3
6,3
+250
AVC


6SC7
BF (Ph)
S = 1,325
P = 53.000
V = -2
1.700
0,6
500.000
250.000
0,3
+250
70
6,3
250.000
500.000
12.000
+250

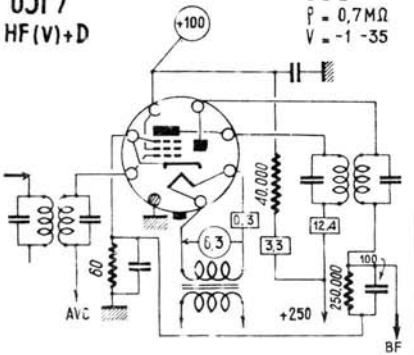

6SD7
HF (V)
S = 3,6
P = 1 MΩ
V = -2 -25
+100
250
AVC
0,3
6,3
75.000
6
1,9
+250


6SE7
BF
S = 3,4
P = 1,1 MΩ
V = -1,5
I = 4,5
1
600
0,8
500.000
300.000
0,3
6,3
70
100.000
+250


6SF5
BF
S = 1,5
P = 66.000
V = -2
0,6
500.000
250.000
38
+250
0,3
6,3
3.200

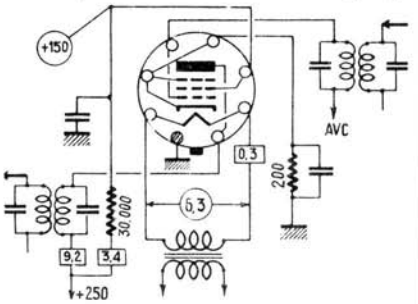
6SF7
HF(V)+D

S = 2
P = 0,7 MΩ
V = -1 -35



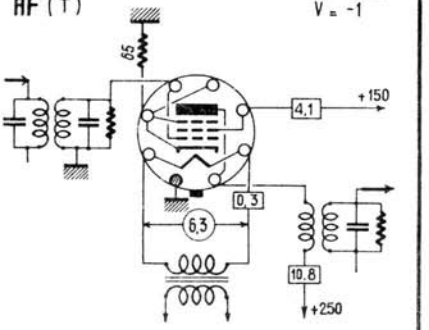
6SG7
HF(V)

S = 4
P = 1 MΩ
V = -2,5 -17,5



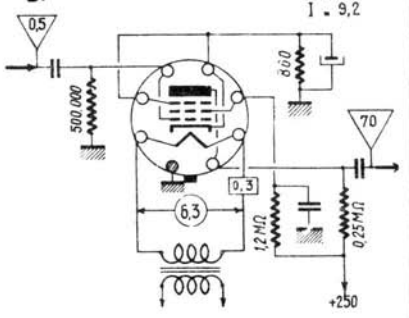
6SH7
HF (T)

S = 4,9
P = 0,9 MΩ
V = -1

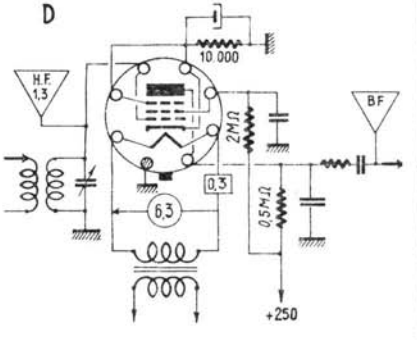


6SJ7
BF

S = 1,6
P = 1,5 MΩ
V = -3
I = 9,2

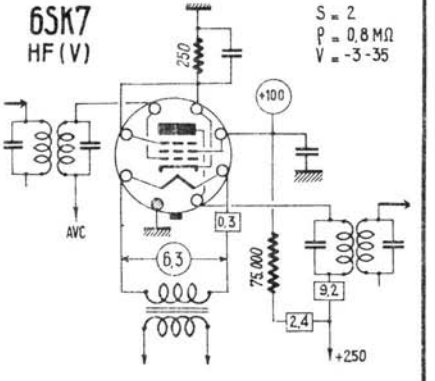


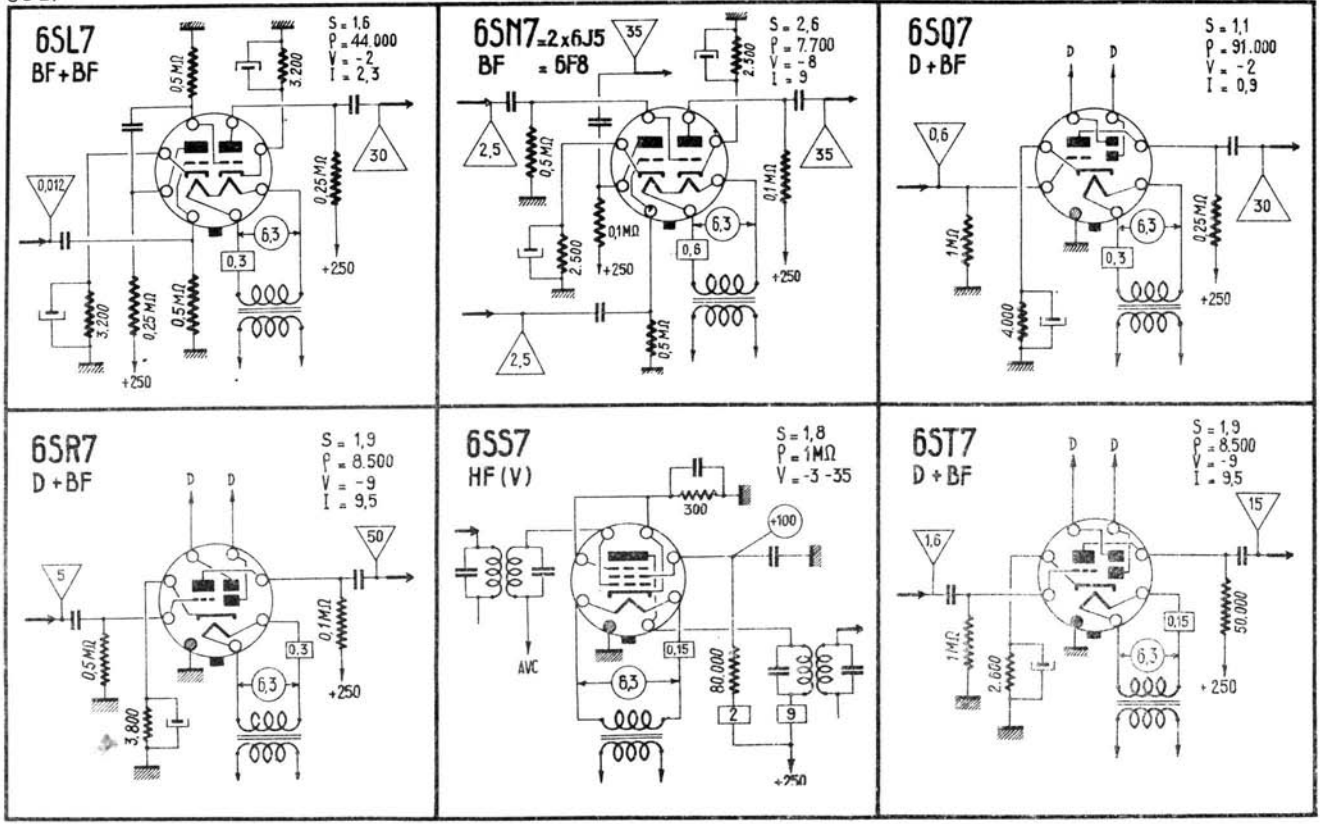
6SJ7
D



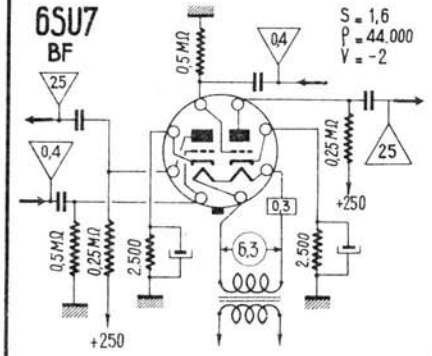
6SK7
HF (V)

S = 2
P = 0,8 MΩ
V = -3 -35

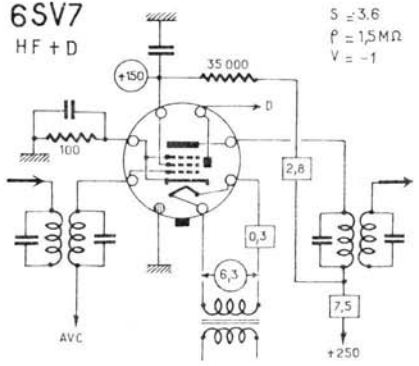



6SL7
BF+BF
S = 1,6
P = 44.000
V = -2
I = 2,3
0,5 MΩ
3.200
30
0,012
0,25 MΩ
6,3
0,3
+250
0,5 MΩ
3.200
0,25 MΩ
+250
6SN7=2x6J5
BF = 6F8
S = 2,6
P = 7.700
V = -8
I = 9
35
2.500
2,5
0,5 MΩ
0,1 MΩ
6,3
0,6
+250
35
0,1 MΩ
2,5
0,5 MΩ
6SQ7
D+BF
S = 1,1
P = 91.000
V = -2
I = 0,9
D D
0,6
1 MΩ
6,3
0,3
30
0,25 MΩ
4.000
+250
6SR7
D+BF
S = 1,9
P = 8.500
V = -9
I = 9,5
D D
50
5
0,5 MΩ
0,3
0,1 MΩ
6,3
+250
3.800
6SS7
HF (V)
S = 1,8
P = 1 MΩ
V = -3 -35
300
+100
AVC
0,15
6,3
80.000
2
9
+250
6ST7
D+BF
S = 1,9
P = 8.500
V = -9
I = 9,5
D D
15
1,6
1 MΩ
0,15
6,3
50.000
2.000
+250

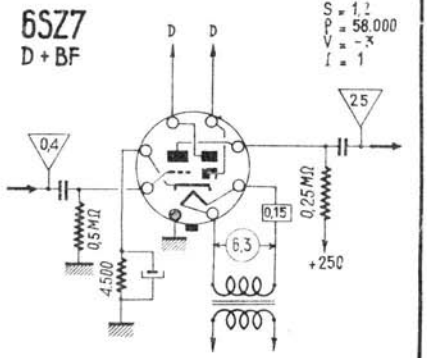
6SU7
BF



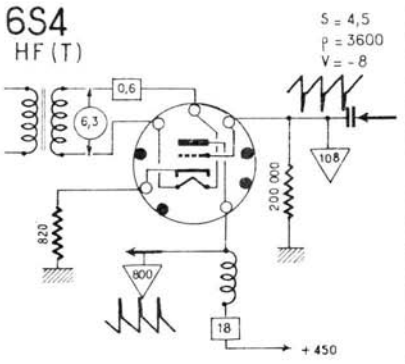
6SV7
HF + D



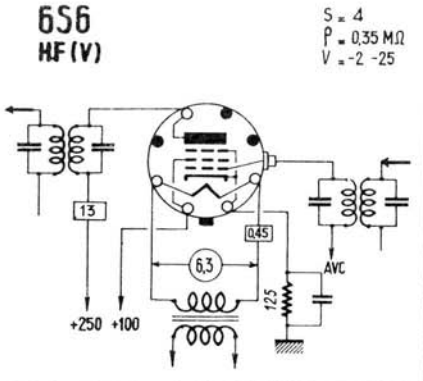
6SZ7
D + BF



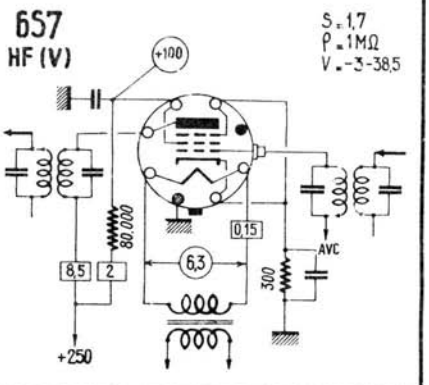
6S4
HF (T)



6S6
HF (V)

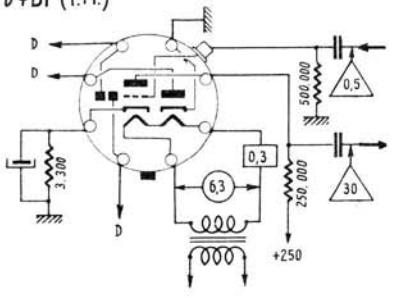


6S7
HF (V)



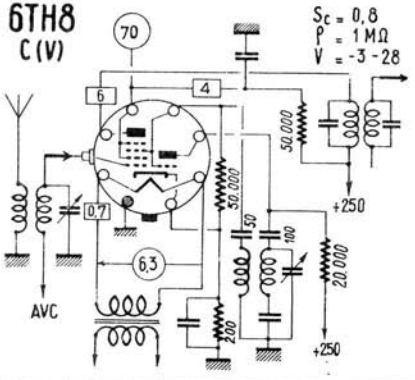
6S8
D + BF (F.M.)

S = 1,1
P = 91.000
V = -2



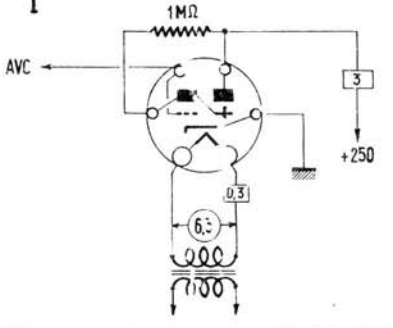
6TH8
C (V)

Sc = 0,8
P = 1 MΩ
V = -3 -28



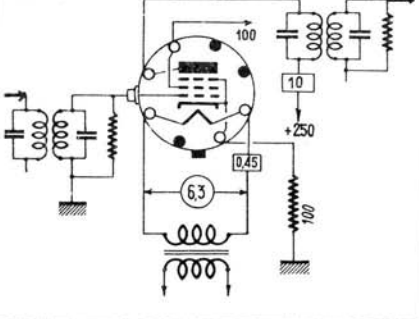
6T5
I

V = 0 - 22



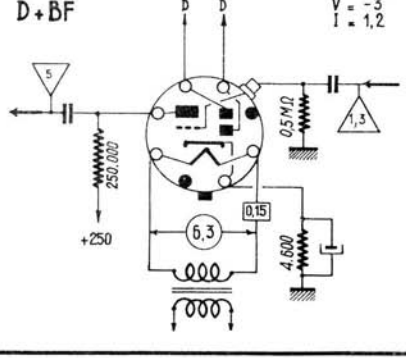
6T6
HF (T)

S = 5,5
P = 1 MΩ
V = -1



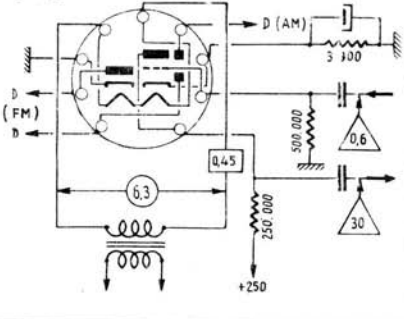
6T7
D + BF

S = 1
P = 62.000
V = -3
I = 1,2

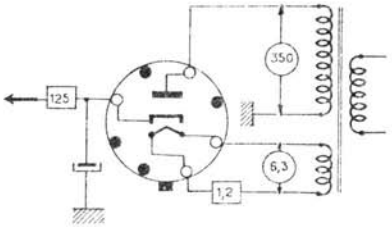


6T8 (AM/FM)
D + BF

S = 1,2
P = 3.000
V = -3

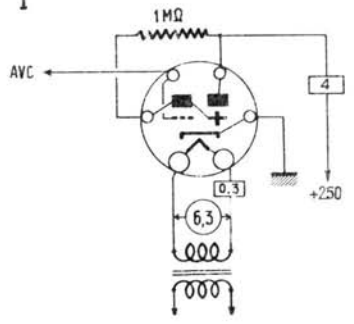


6U4
R



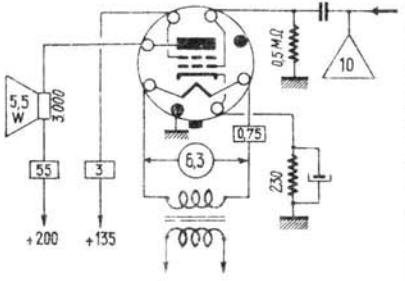
6U5 - 6G5
I

V = 0-22



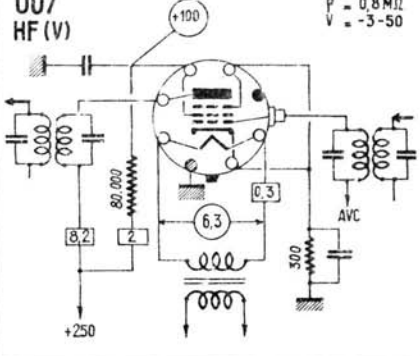
6U6
P

S = 6,2
P = 20.000
V = -14



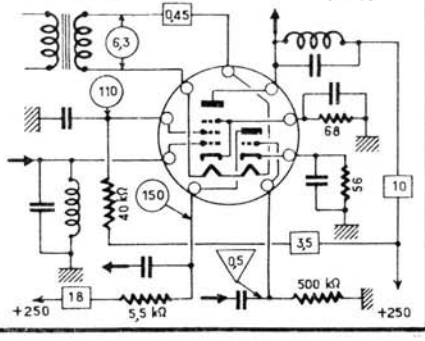
6U7
HF (V)

S = 1,6
P = 0,8 MΩ
V = -3-50

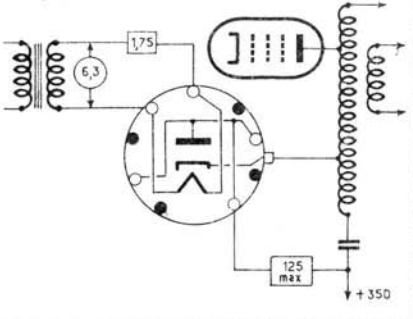


6U8
HF_BF (T)

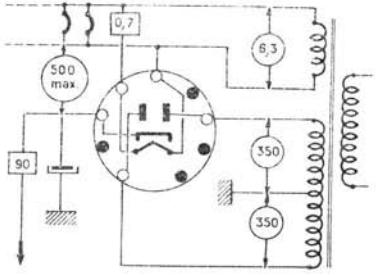
Penthode	Triode
S = 5,2	S = 8,5
P = 400 kΩ	P = 5 kΩ
	μ = 40



6V3
D (T)

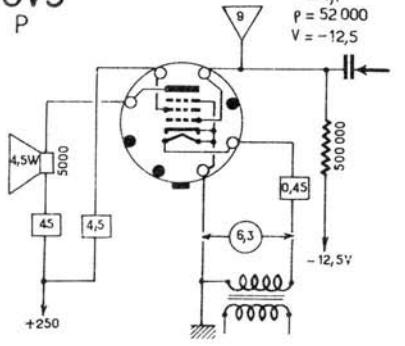


6V4 = EZ80
R



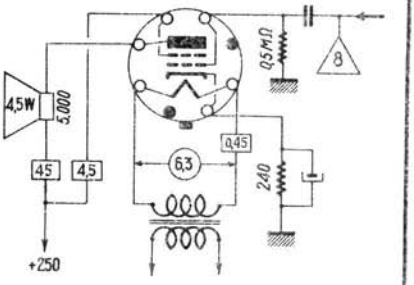
6V5
P

S = 4,1
P = 52 000
V = −12,5

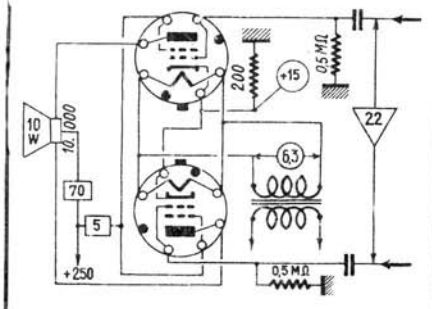


6V6
P

S = 4,1
P = 52.000
V = −12,5

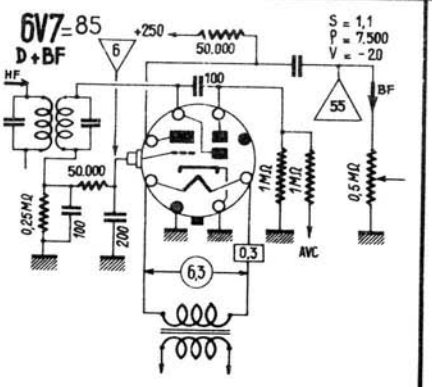


6V6
P (cl. AB)



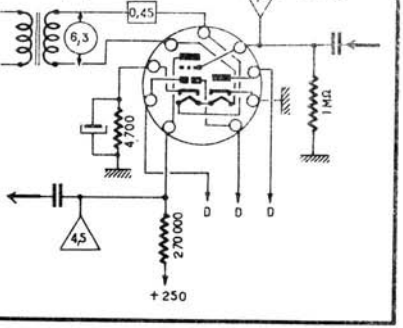
6V7 = 85
D + BF

S = 1,1
P = 7.500
V = −20

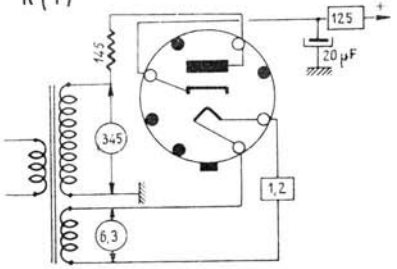


6V8
BF + D (AM/F.M.)

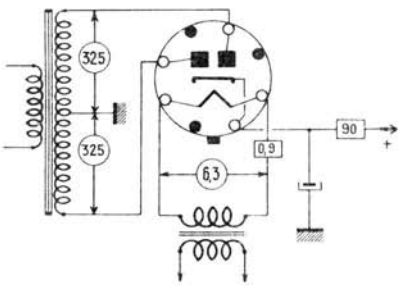
S = 12
P = 58000
V = −3



6W4
R (T)

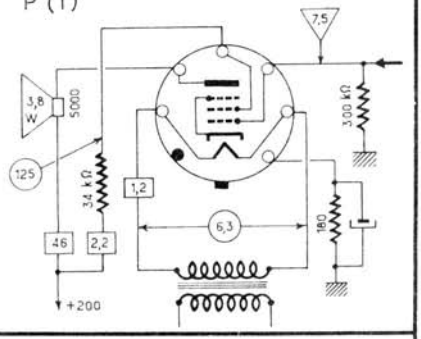


6W5
R



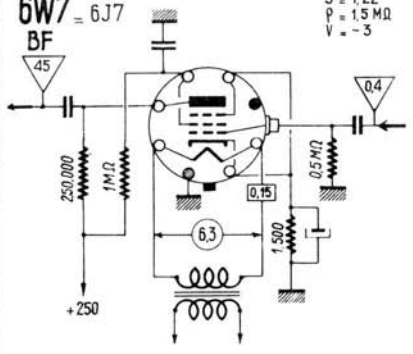
6W6
P (T)

S = 8
ρ = 28 kΩ

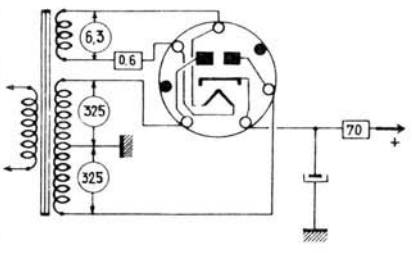


6W7 = 6J7
BF

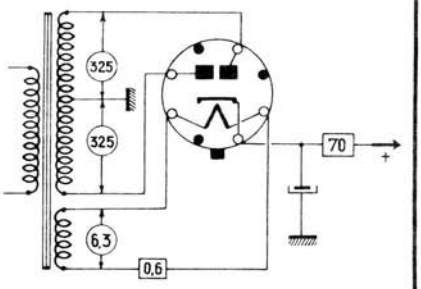
S = 1,22
ρ = 1,5 MΩ
V = −3



6X4
R



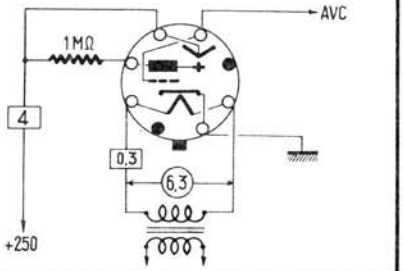
6X5
R



6X2 = EY51

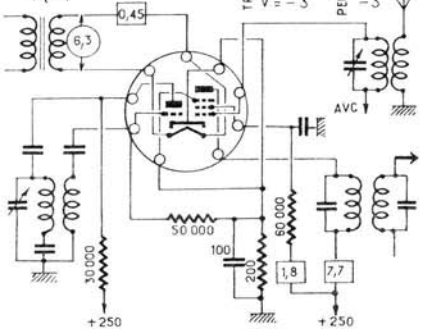
6X6 = 6E5
I

V = 0 -8

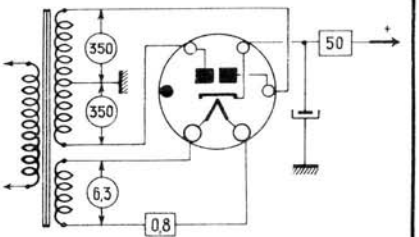


6X8
C(V)

TRIODE S = 5,8 P = 6000 V = -3
PENTHODE 4,6 0,75MΩ -3

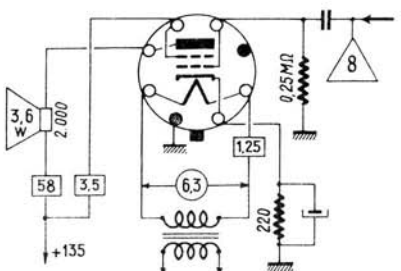


6Y5
R



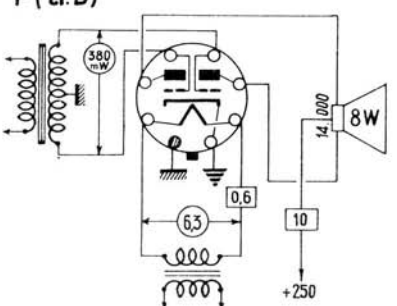
6Y6
P

S = 7
P = 9.300
V = -13,5

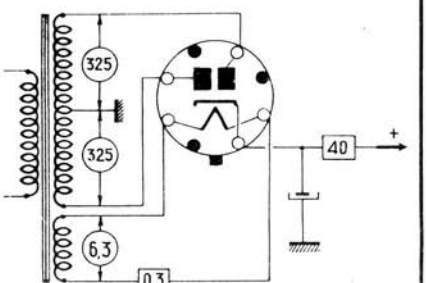


6Y7 = 79
P (cl. B)

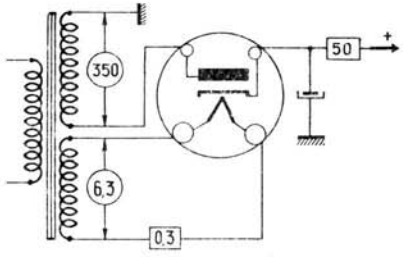
V = 0



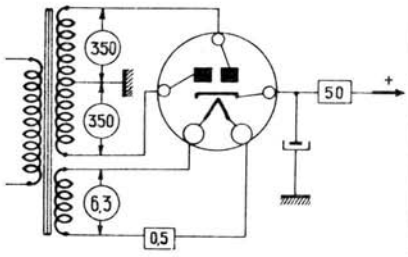
6ZY5
R



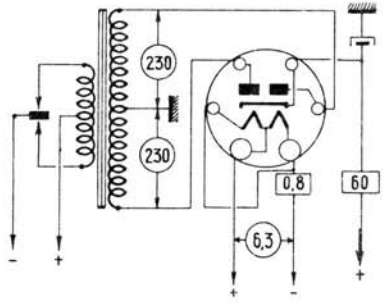
6Z3
R



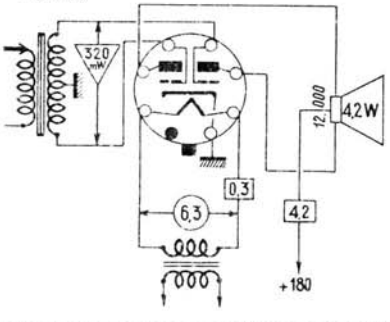
6Z4
R



6Z5
R

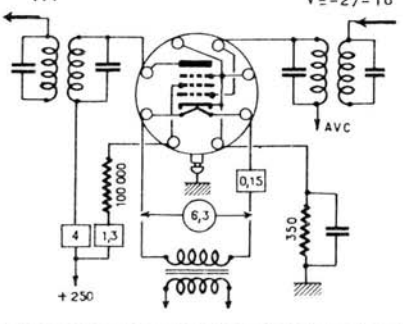


6Z7
P (cl. B)



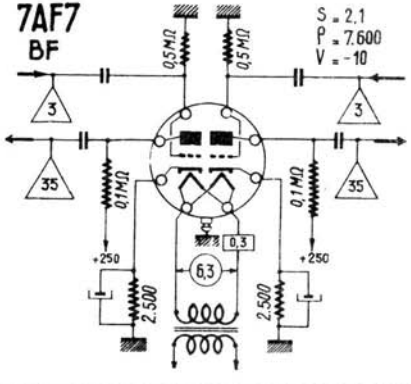
7AB7
HF

S = 1,8
ρ = 0,5 MΩ
V = -2/-18



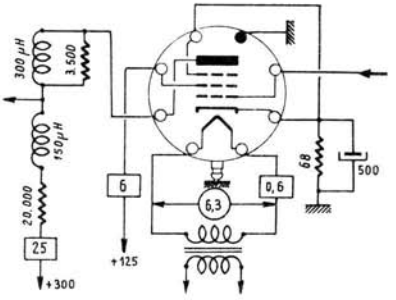
7AF7
BF

S = 2,1
ρ = 7.600
V = -10



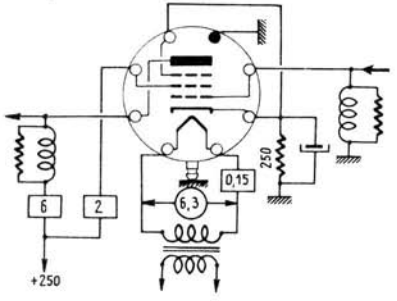
7AD7
HF (T)

S = 9,5
ρ = 0,3 MΩ
V = -3



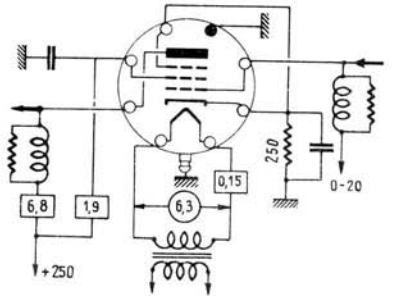
7AG7
HF (T)

S = 4,2
ρ = > 1 MΩ
V = -2



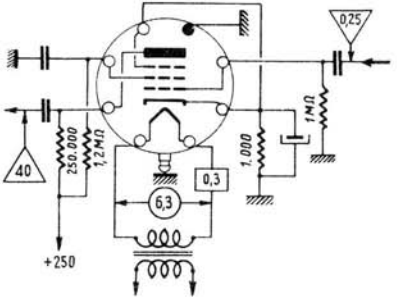
7AH7
HF (T)

S = 3,3
ρ = 1 MΩ
V = -2 -20



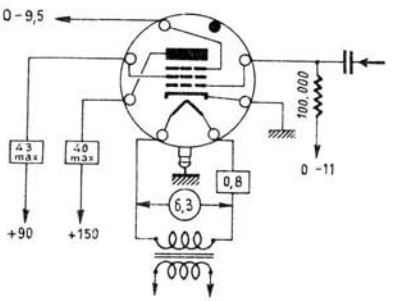
7AJ7 = 6SJ7
BF

S = 1,57
ρ = 1 MΩ
V = -3



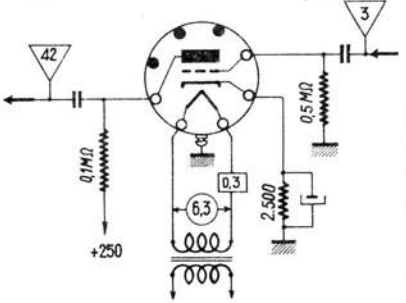
7AK7
HF (T)

S = 6,5
ρ = 11.500
V = 0 -11



7A4 = 6J5
BF

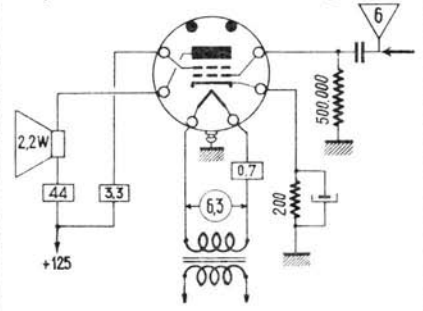
S = 2,6
ρ = 7700
V = 8
I = 9



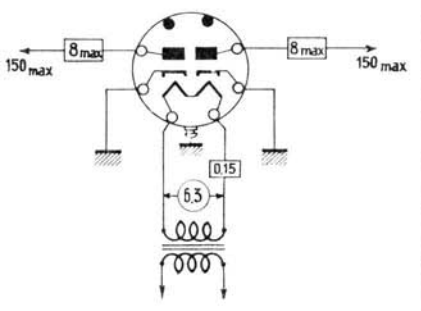
7AN7 = PCC84

7A5
P

S = 6
ρ = 17.000
V = -9

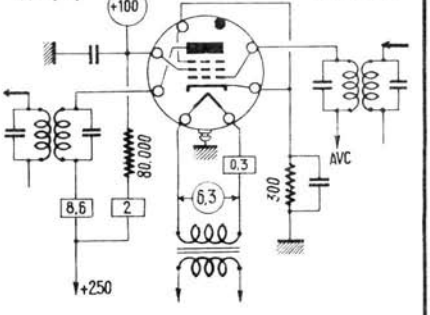


7A6 = 6H6
D



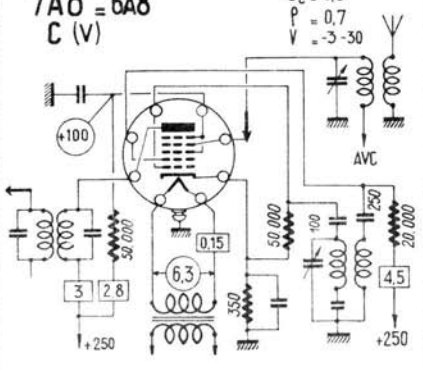
7A7 = 6SK7
HF (V)

S = 2
ρ = 0,8 MΩ
V = -3 -55



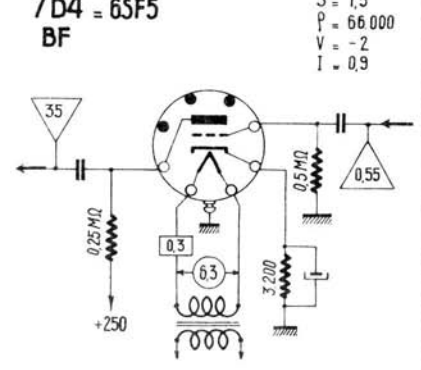
7A8 = 6A8
C (V)

S_c = 0,6
ρ = 0,7
V = -3 -30



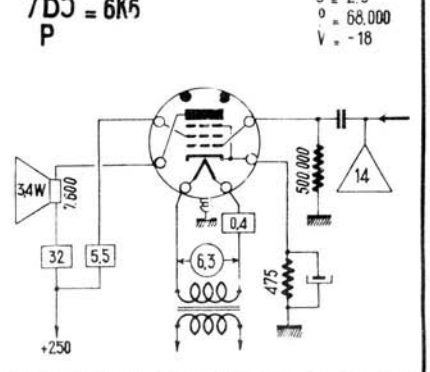
7B4 = 6SF5
BF

S = 1,5
ρ = 66.000
V = -2
I = 0,9

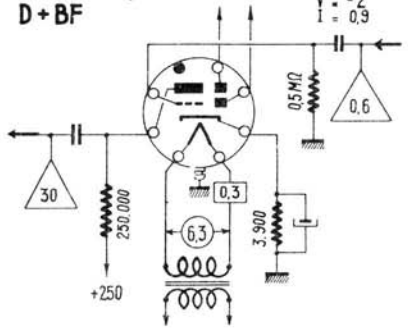


7B5 = 6K6
P

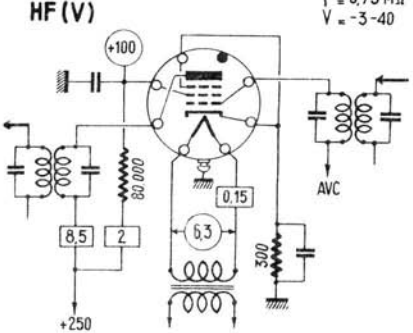
S = 2,3
ρ = 68.000
V = -18



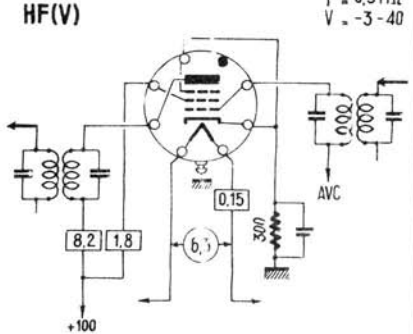
7B6 = 6SQ7
D + BF



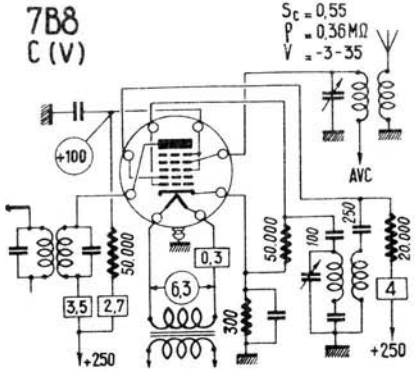
7B7
HF (V)



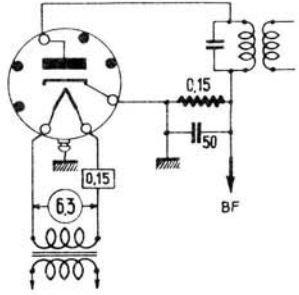
7B7
HF(V)



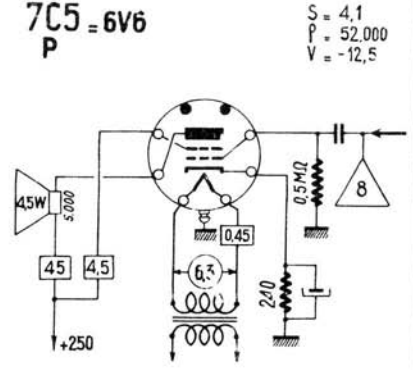
7B8
C (V)



7C4
D (отс)

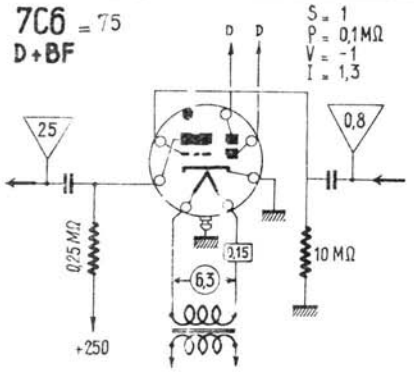


7C5 = 6V6
P



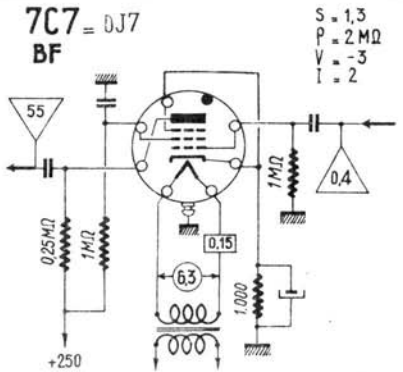
7C6 = 75
D+BF

S = 1
P = 0,1 MΩ
V = -1
I = 1,3

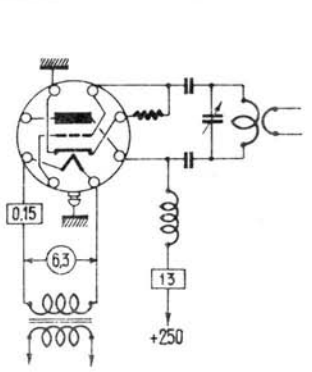


7C7 = DJ7
BF

S = 1,3
P = 2 MΩ
V = -3
I = 2

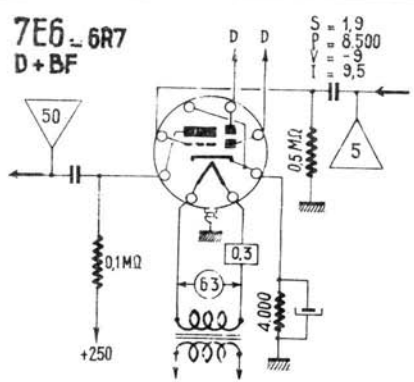


7E5
O(OTC)



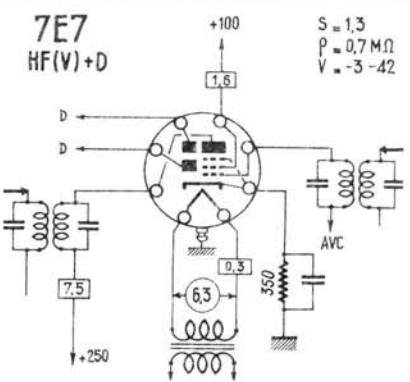
7E6 = 6R7
D+BF

S = 1,9
P = 8.500
V = -3
I = 9,5



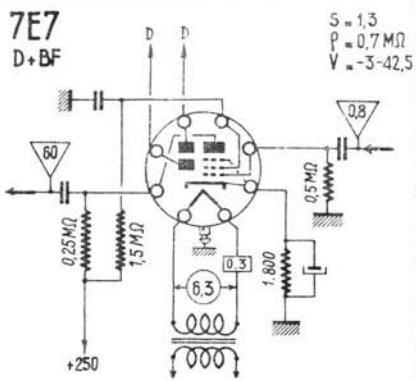
7E7
HF(V)+D

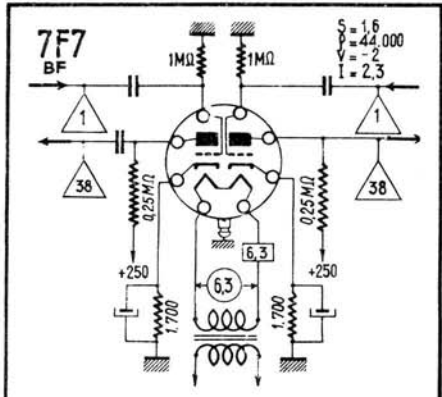
S = 1,3
P = 0,7 MΩ
V = -3 -42

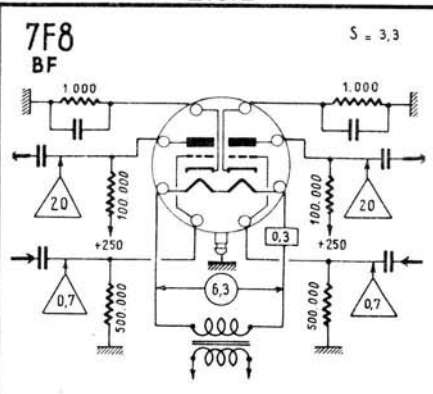


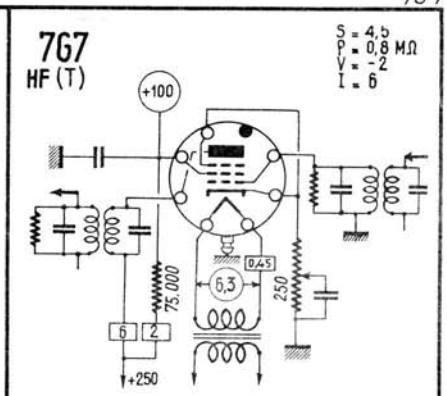
7E7
D+BF

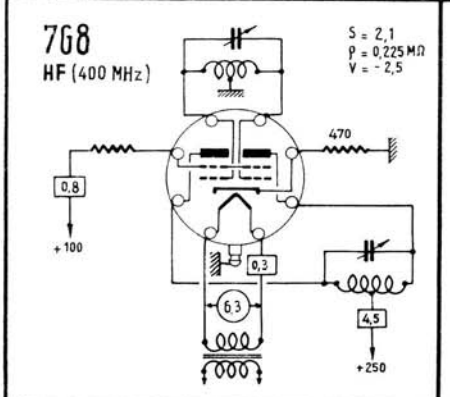
S = 1,3
P = 0,7 MΩ
V = -3 -42,5

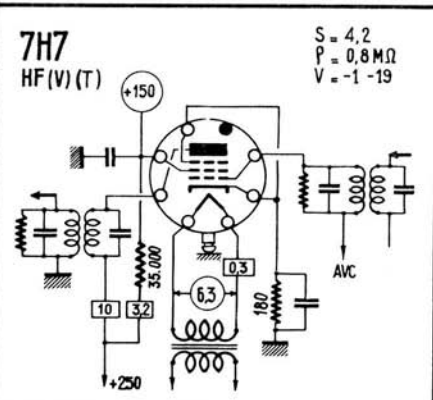


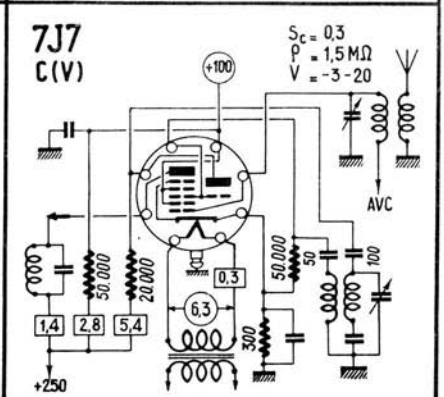

7F7
BF
S = 1,6
P = 44.000
V = -2
I = 2,3
1MΩ
1MΩ
1
1
38
38
0,25 MΩ
0,25 MΩ
+250
+250
1.700
1.700
6,3
6,3


7F8
BF
S = 3,3
1.000
1.000
2,0
2,0
100.000
100.000
+250
+250
0,3
0,7
0,7
500.000
500.000
6,3

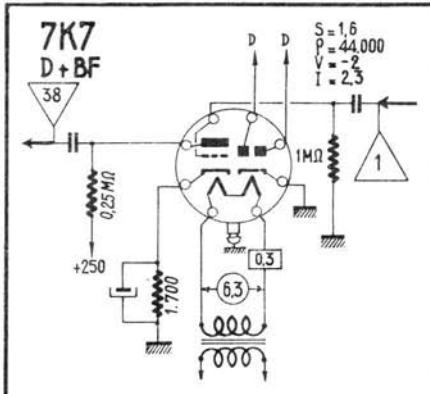

7G7
HF (T)
S = 4,5
P = 0,8 MΩ
V = -2
I = 6
+100
0,45
75.000
250
6
2
6,3
+250


7G8
HF (400 MHz)
S = 2,1
P = 0,225 MΩ
V = -2,5
470
0,8
+100
0,3
6,3
4,5
+250

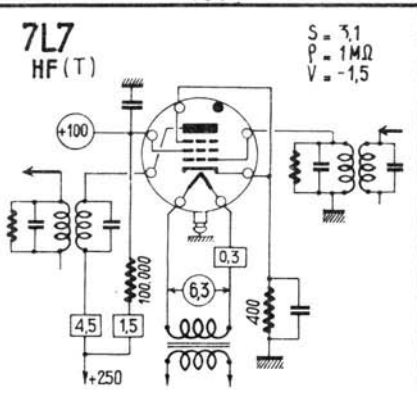

7H7
HF (V) (T)
S = 4,2
P = 0,8 MΩ
V = -1 -19
+150
35.000
0,3
AVC
10
3,2
6,3
180
+250


7J7
C (V)
Sc = 0,3
P = 1,5 MΩ
V = -3 -20
+100
AVC
50.000
50.000
20.000
0,3
50.000
50
100
1,4
2,8
5,4
6,3
300
+250

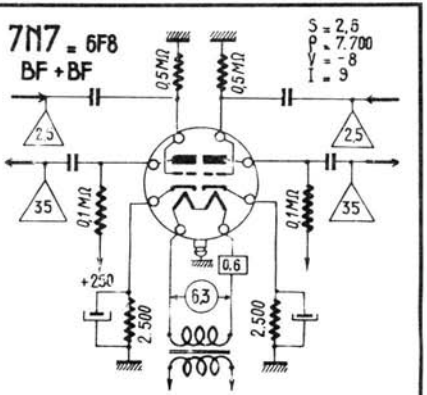
7K7
D + BF



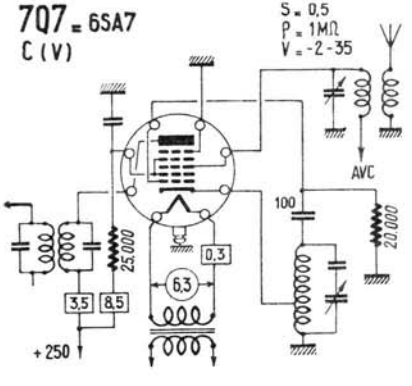
7L7
HF (T)



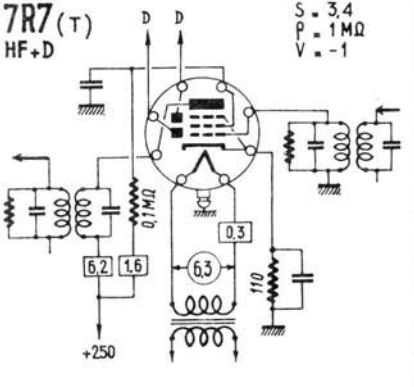
7N7 = 6F8
BF + BF



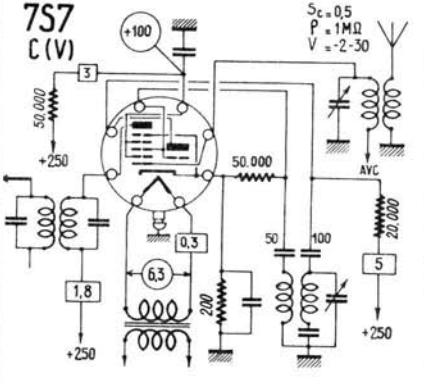
7Q7 = 6SA7
C (V)



7R7 (T)
HF + D

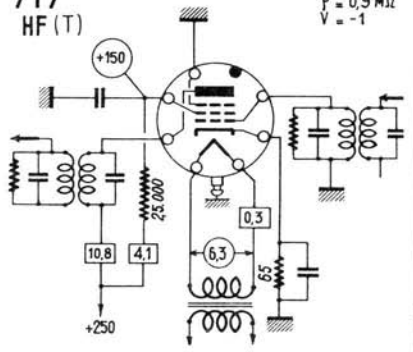


7S7
C (V)



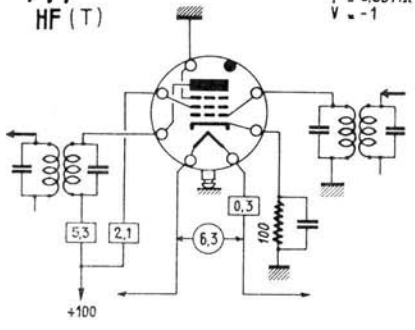
7T7
HF (T)

S = 4,9
P = 0,9 MΩ
V = -1



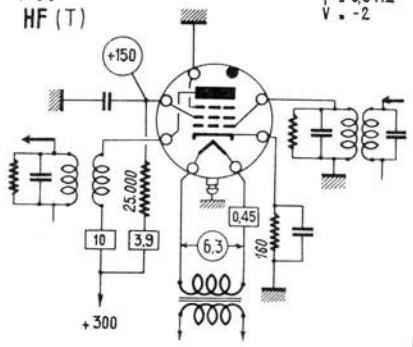
7T7
HF (T)

S = 4
P = 0,35 MΩ
V = -1



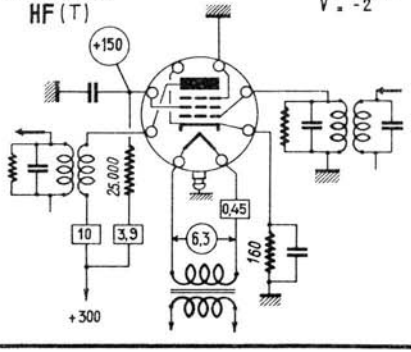
7V7
HF (T)

S = 5,8
P = 0,3 MΩ
V = -2



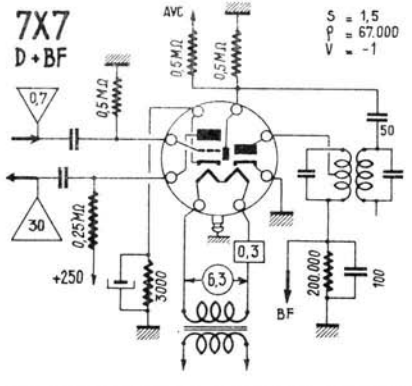
7W7 = 7V7
HF (T)

S = 5,8
P = 0,3 MΩ
V = -2

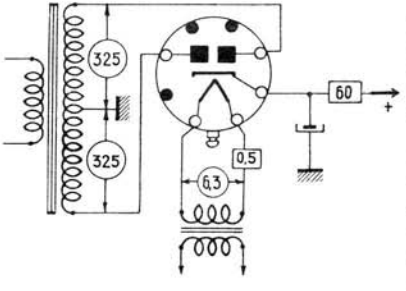


7X7
D + BF

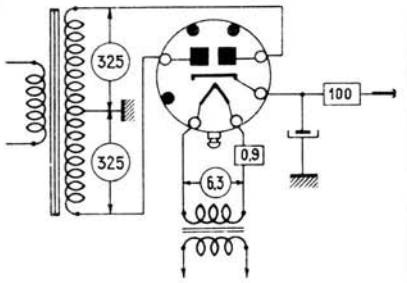
S = 1,5
P = 67.000
V = -1



7Y4
R

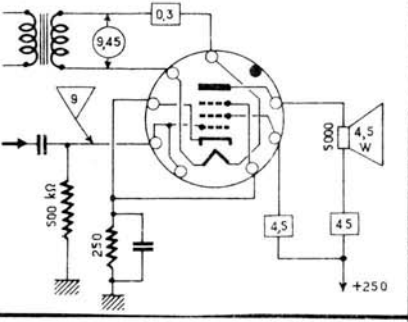


7Z4
R

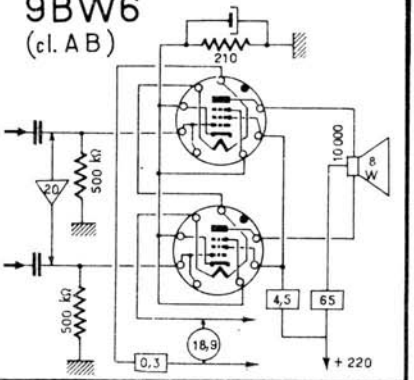


9BW6
P

S = 4,1
P = 52 kΩ
V = -12,5

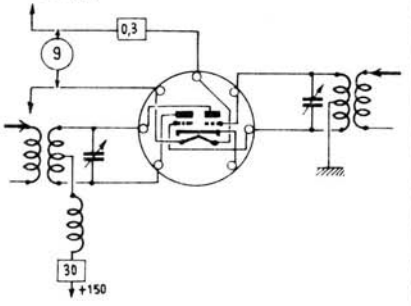


9BW6
(cl. AB)



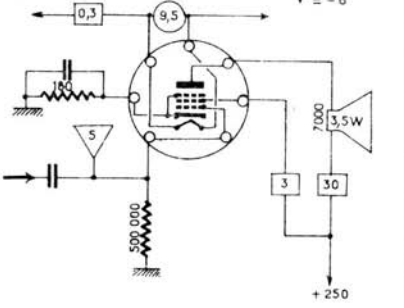
9J6
HF(T)

S = 5,3
P = 7.100
V = -10



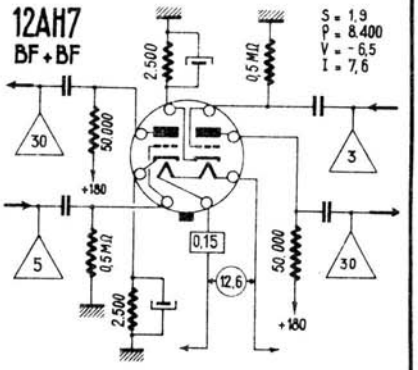
9P9
P

S = 7
P = 60000
V = -6



12AH7
BF + BF

S = 1,9
P = 8.400
V = -6,5
I = 7,6

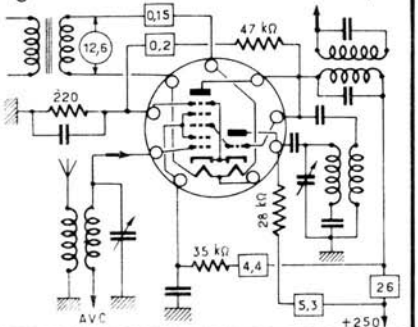


9A8 = PCF80

12AH8

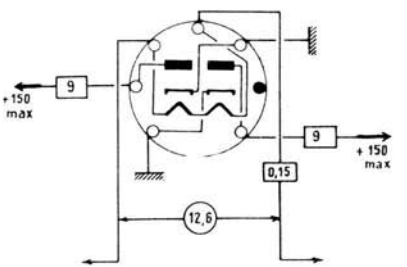
C

S_c = 0,5
ρ = 1,5 MΩ
V = −3/−25



12AL5 = 6AL5

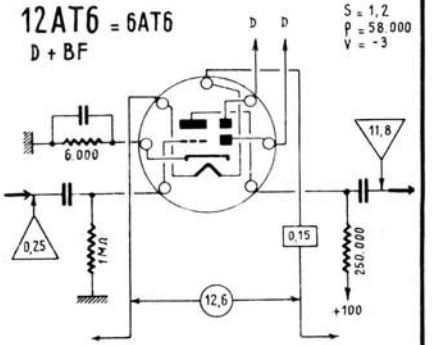
D



12AT6 = 6AT6

D + BF

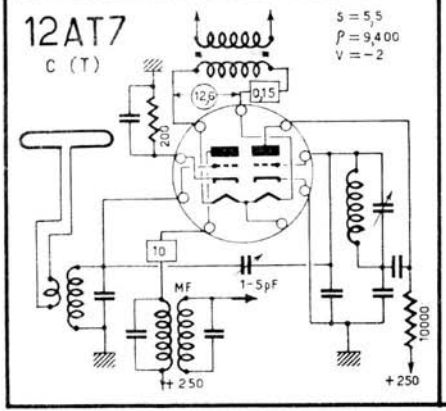
S = 1,2
ρ = 58.000
V = −3



12AT7

C (T)

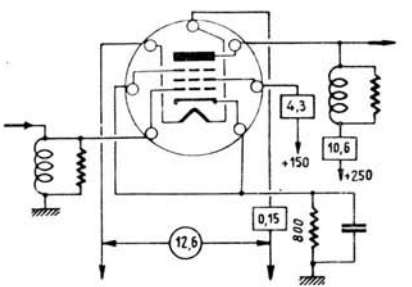
S = 5,5
ρ = 9.400
V = −2



12AU6

HF (T)

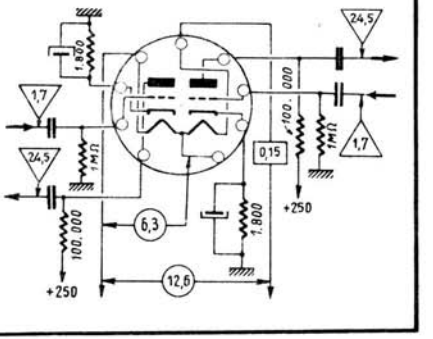
S = 5,2
ρ = 1 MΩ
V = −1



12AU7

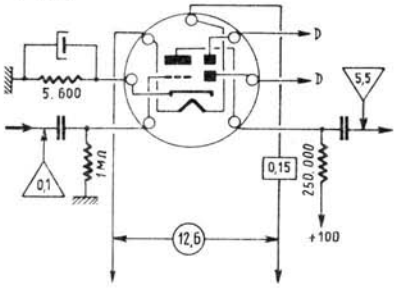
BF

S = 2,2
ρ = 7.700
V = −8,5



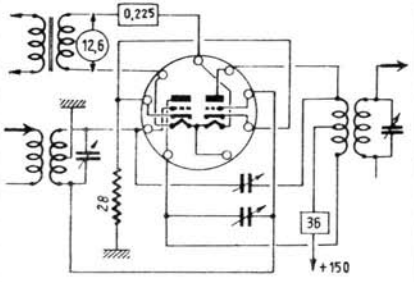
12AV6
D + BF

S = 1,6
P = 62.500
V = -2



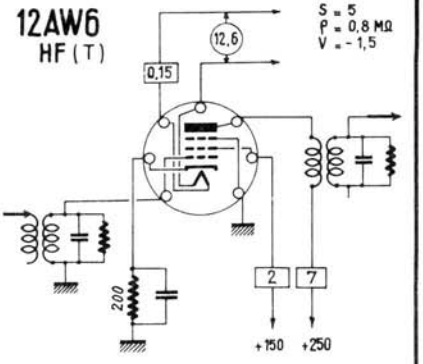
12AV7
HF (T)

S = 8,5
P = 4800
V = -1

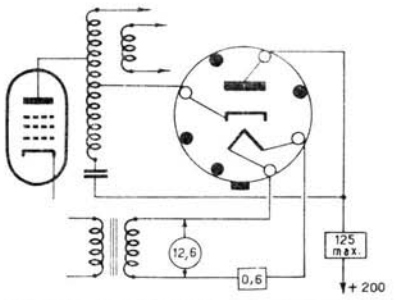


12AW6
HF (T)

S = 5
P = 0,8 MΩ
V = -1,5

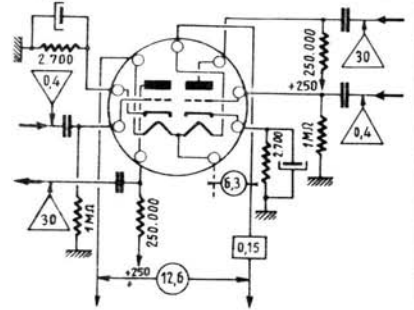


12AX4
D (T)



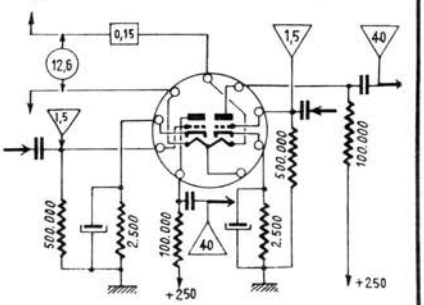
12AX7
BF

S = 1,6
P = 62.000
V = -2



12AY7
BF

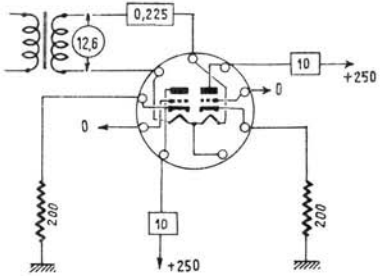
S = 1,75
P = 43000
V = -4



12AY6 = 12AT6

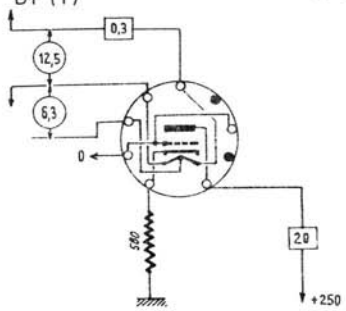
12AZ7
HF (T)

S = 5,5
P = 10 900
V = -2



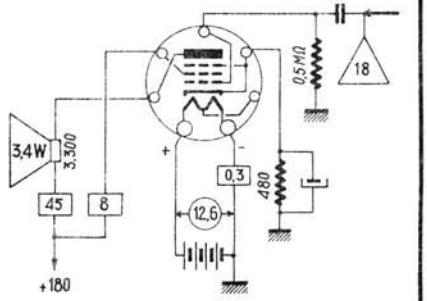
12A4
BF (T)

S = 7,8
P = 2560
V = -9



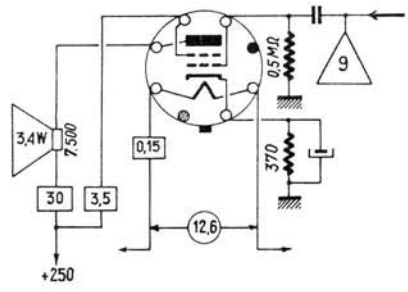
12A5
P

S = 2,4
P = 35.000
V = -25



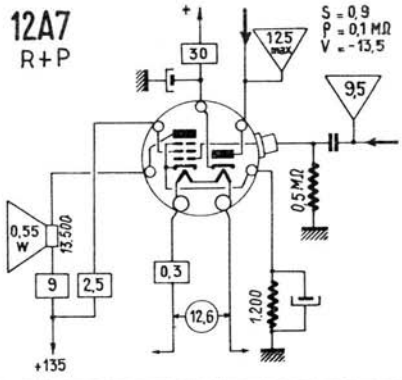
12A6
P

S = 3
P = 70.000
V = -12,5



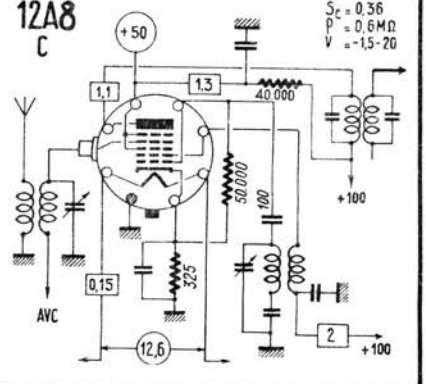
12A7
R+P

S = 0,9
P = 0,1 MΩ
V = -13,5

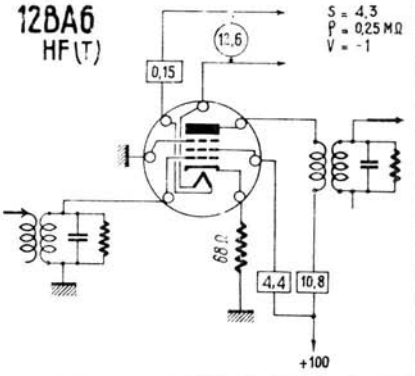


12A8
C

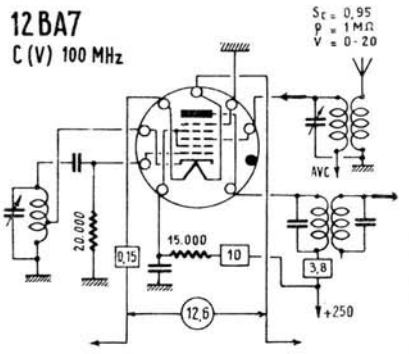
S_c = 0,36
P = 0,6 MΩ
V = -1,5-20



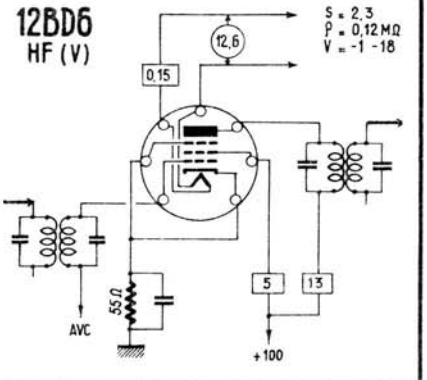
12BA6
HF (T)



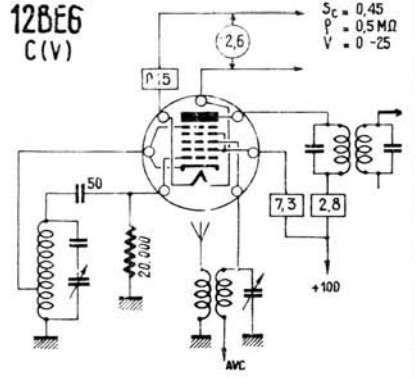
12BA7
C (V) 100 MHz



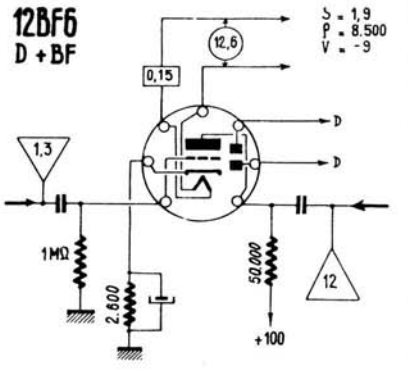
12BD6
HF (V)



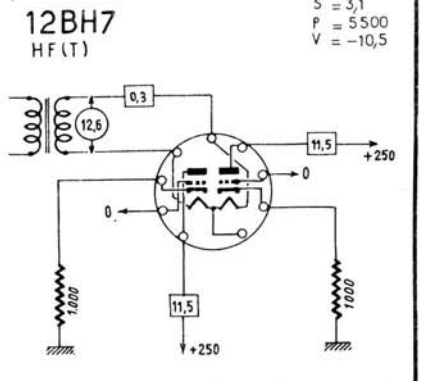
12BE6
C (V)



12BF6
D + BF

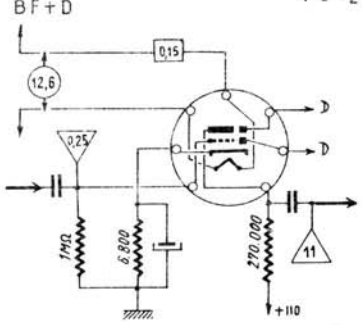


12BH7
HF (T)

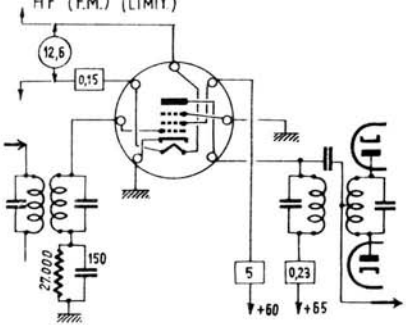


12BK6
BF + D

S = 1,6
ρ = 62 000
V = −2

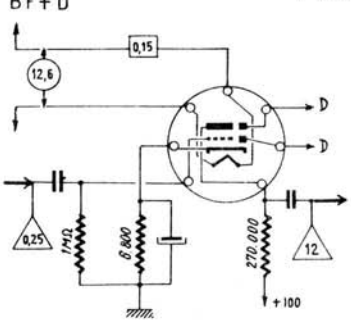


12BN6
HF (F.M.) (LIMIT)



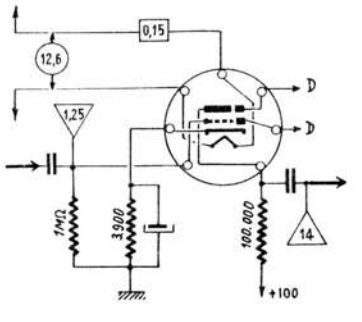
12BT6
BF + D

S = 1,3
ρ = 54 000
V = −1



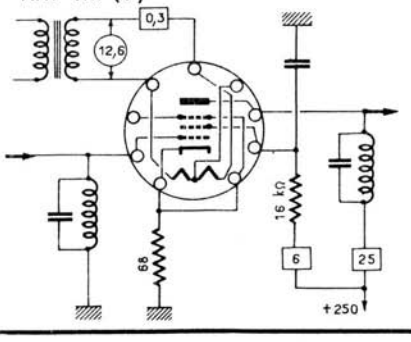
12BU6
BF + D

S = 1,9
ρ = 8 500
V = −9



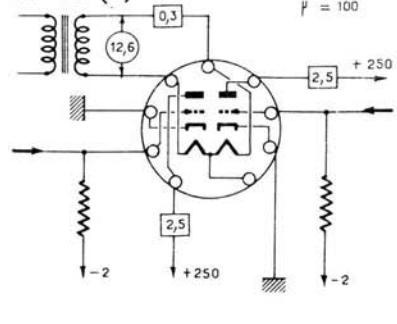
12BY7
H.F. V.F. (T)

S = 12
ρ = 110 kΩ
V = −0,5



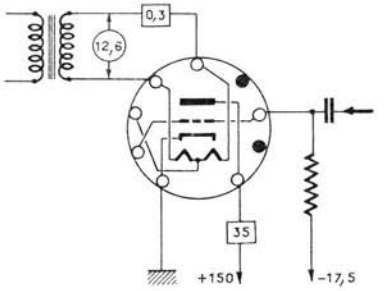
12BZ7
B.F. V.F. (T)

S = 3,2
ρ = 31,8 kΩ
V = −2
μ = 100



12B4
B.F. (T)

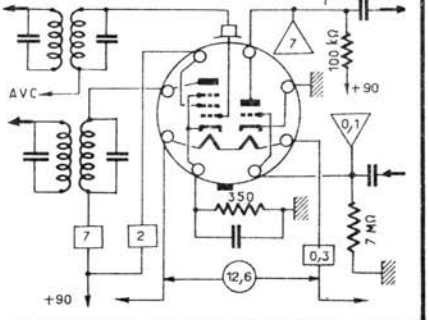
S = 6,5
V = −17,5 kΩ
μ = 6,5



12B8
H.F. B.F.

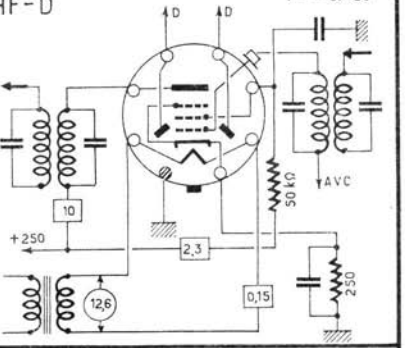
Penthode
S = 1,8
P = 200 kΩ
V = −3/−35

Triode
S = 2,4
P = 37 kΩ
V = 0
μ = 90



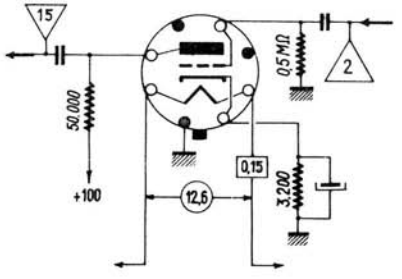
12C8
HF-D

S = 1,325
P = 600 kΩ
V = −3/−20



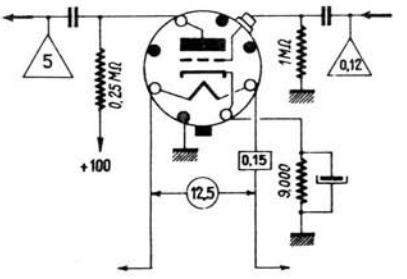
12E5 = 6P5
BF

S = 1,15
P = 12.000
V = −5

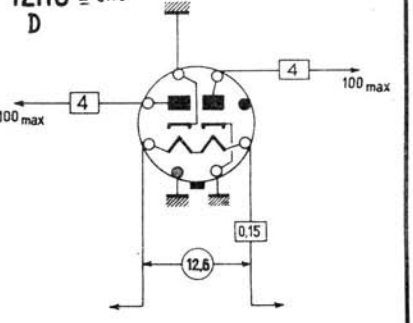


12F5 = 6F5
BF

S = 1,5
P = 60.000
V = −2

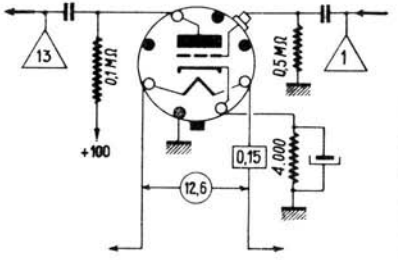


12H6 = 6H6
D



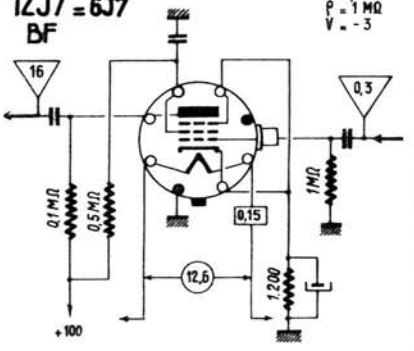
12J5 = 6J5
BF

S = 3
P = 6.700
V = -3



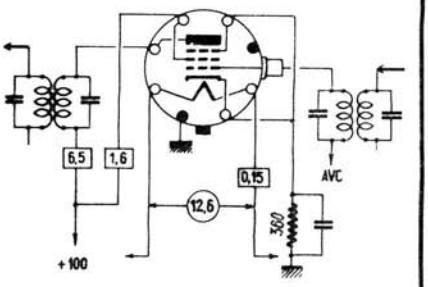
12J7 = 6J7
BF

S = 1,16
P = 1 MΩ
V = -3



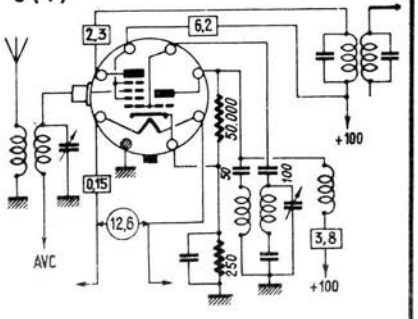
12K7 = 6K7
HF (V)

S = 1,32
P = 0,25 MΩ
V = -3 -38,5



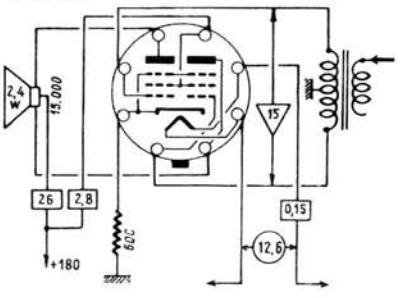
12K8 = 6K8
C (V)

Sc = 0,325
P = 0,4 MΩ
V = -3 -30



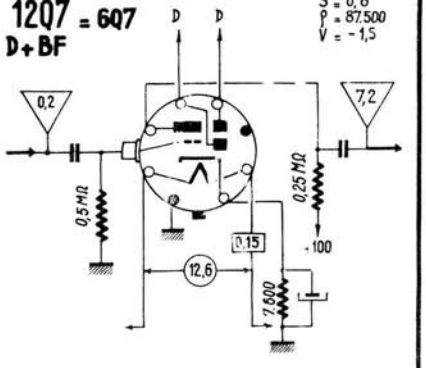
12L8
P (cl. AB)

V = -9



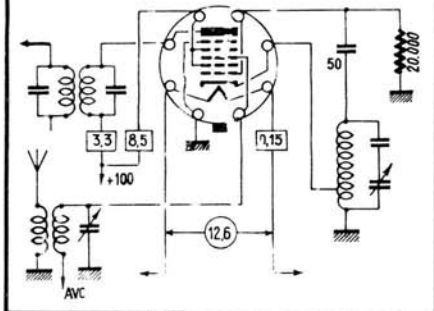
12Q7 = 6Q7
D + BF

S = 0,8
P = 87.500
V = -1,5



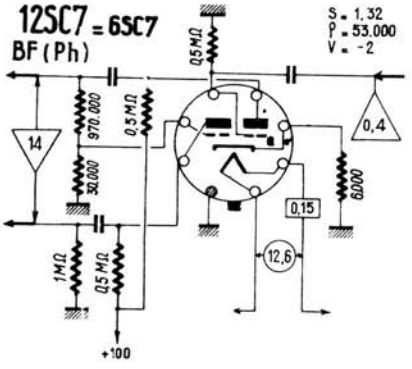
12SA7 = 6SA7
C (V)

S_c = 0,425
P = 0,5 MΩ
V = 0 -35



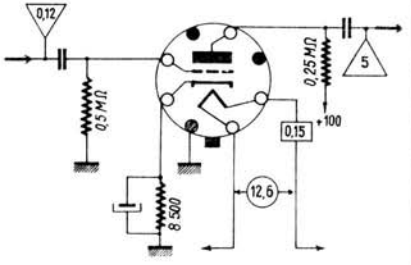
12SC7 = 6SC7
BF (Ph)

S = 1,32
P = 53.000
V = -2



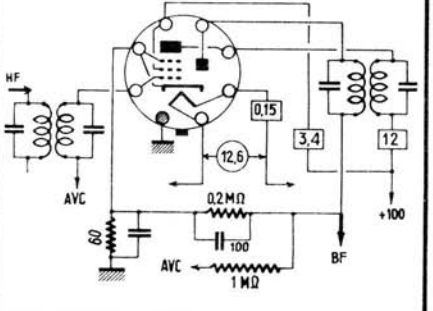
12SF5 = 6SF5
BF

S = 1,5
P = 66.000
V = -2

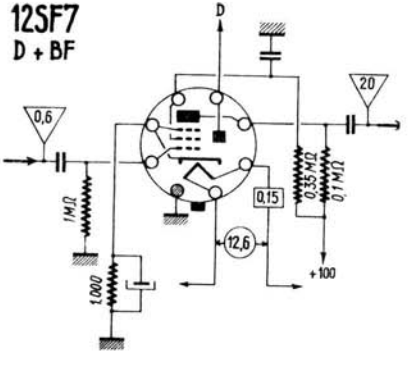


12SF7 = 6SF7
HF (V)

S = 1,9
P = 0,2 MΩ
V = -1 -35

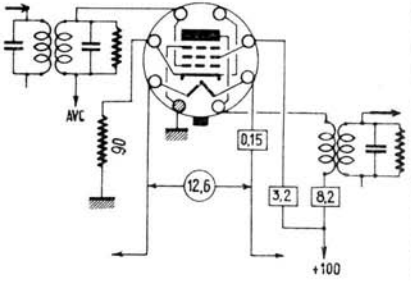


12SF7
D + BF



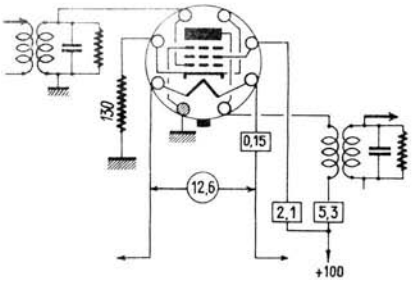
12SG7 = 6SG7
HF (V) (T)

S = 4,1
P = 0,25 MΩ
V = -1



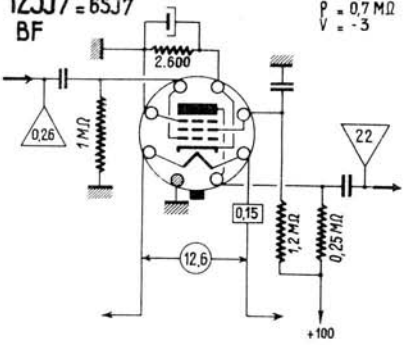
12SH7
HF (T)

S = 4
P = 0,35 MΩ
V = -1



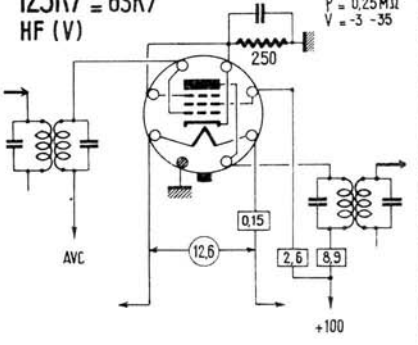
12SJ7 = 6SJ7
BF

S = 1,5
P = 0,7 MΩ
V = -3



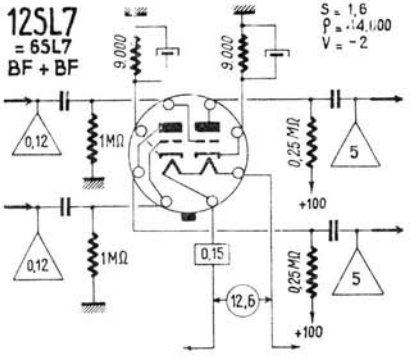
12SK7 = 6SK7
HF (V)

S = 1,9
P = 0,25 MΩ
V = -3 -35



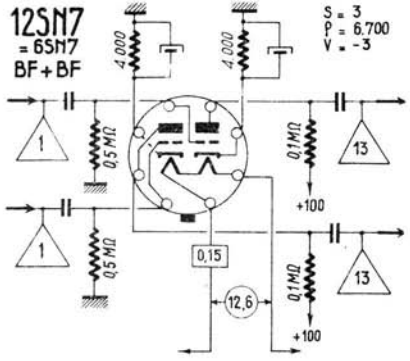
12SL7
= 6SL7
BF + BF

S = 1,6
P = 14.000
V = -2



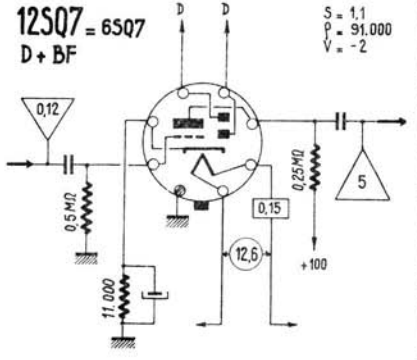
12SN7
= 6SN7
BF + BF

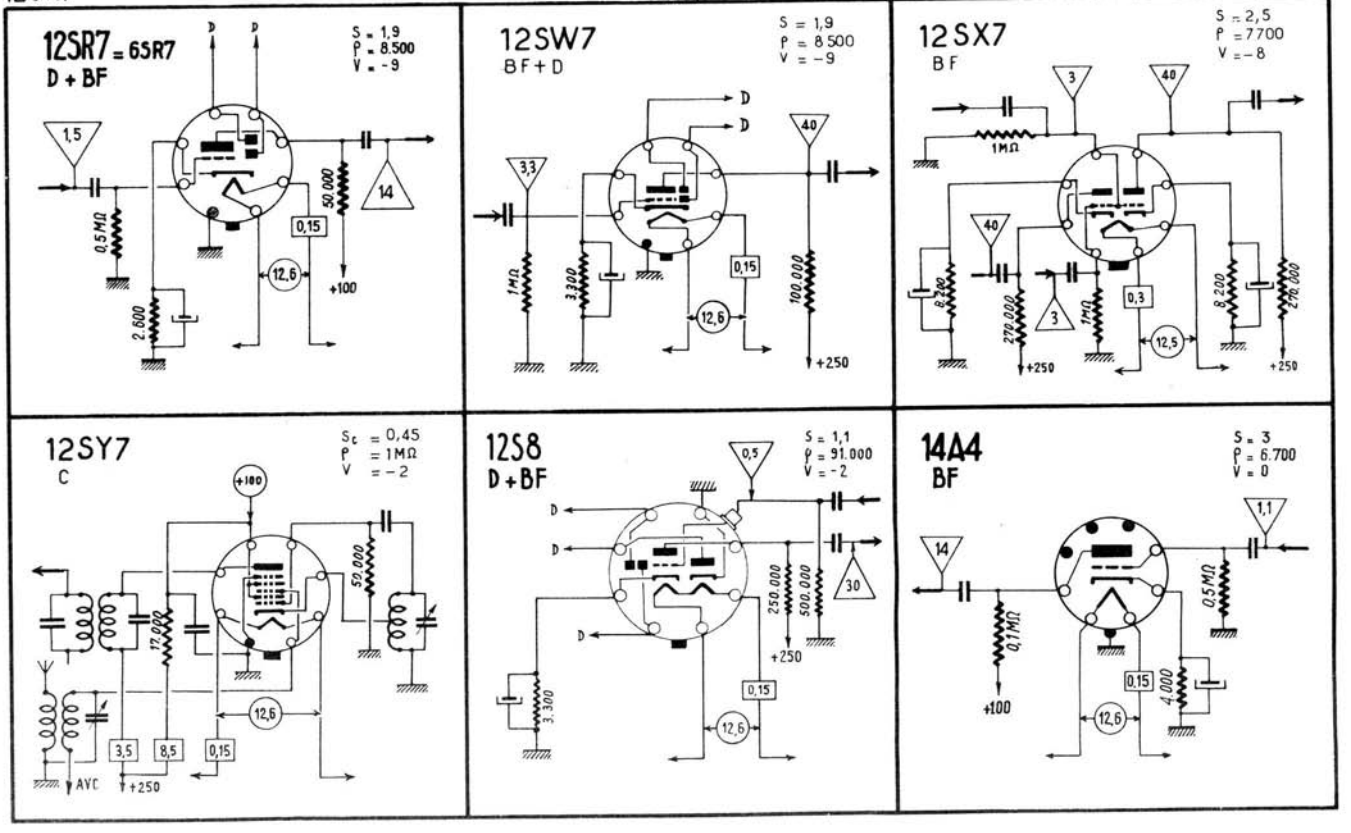
S = 3
P = 6.700
V = -3



12SQ7 = 6SQ7
D + BF

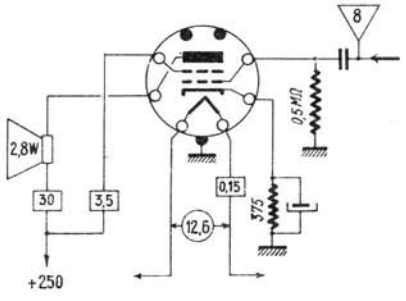
S = 1,1
P = 91.000
V = -2




12SR7 = 6SR7
D + BF
S = 1,9
ρ = 8.500
V = -9
1,5
0,5 MΩ
2.600
50.000
14
0,15
12,6
+100
12SW7
BF + D
S = 1,9
ρ = 8.500
V = -9
3,3
1 MΩ
3.300
40
0,15
12,6
100.000
+250
12SX7
BF
S = 2,5
ρ = 7700
V = -8
3
40
1 MΩ
40
8.200
270.000
3
1 MΩ
0,3
12,5
+250
12SY7
C
Sc = 0,45
ρ = 1 MΩ
V = -2
+100
50.000
17.000
12,6
3,5
8,5
0,15
AVC
+250
12S8
D + BF
S = 1,1
ρ = 91.000
V = -2
0,5
250.000
500.000
30
+250
3.300
0,15
12,6
14A4
BF
S = 3
ρ = 6.700
V = 0
1,1
14
0,1 MΩ
0,5 MΩ
+100
0,15
4.000
12,6

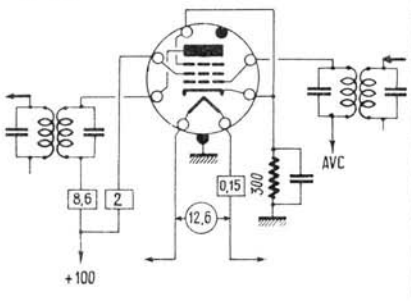
14A5
P

S = 3
P = 70.000
V = -12,5



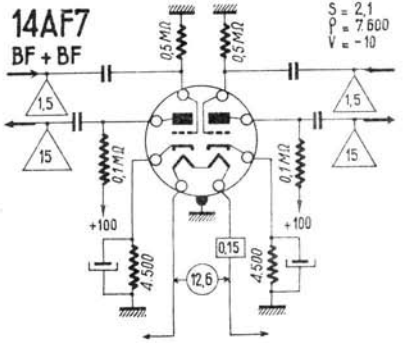
14A7
HF (V)

S = 2
P = 0,8
V = -3 -35



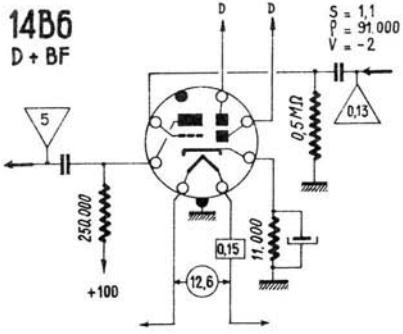
14AF7
BF + BF

S = 2,1
P = 7.600
V = -10



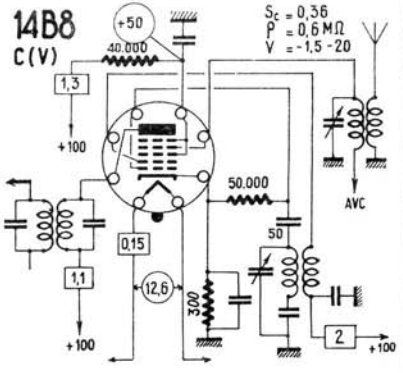
14B6
D + BF

S = 1,1
P = 91.000
V = -2



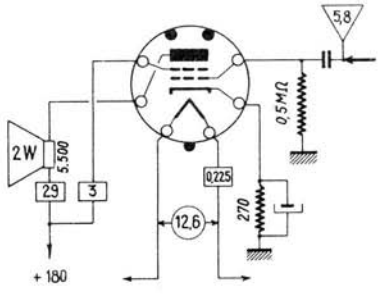
14B8
C(V)

Sc = 0,36
P = 0,6 MΩ
V = -1,5 -20



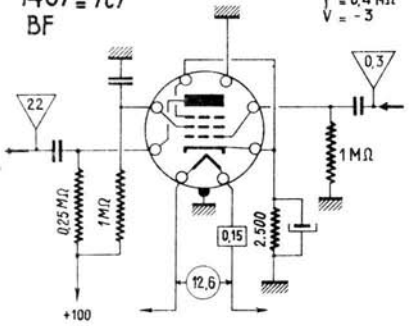
14C5 = 7C5
P

S = 3,7
P = 58.000
V = -8,5



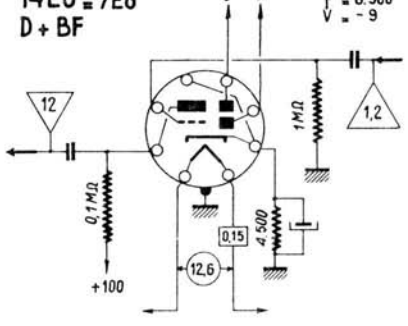
14C7 = 7C7
BF

S = 2,2
P = 0,4 MΩ
V = -3



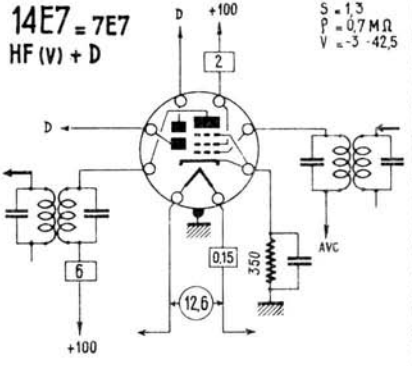
14E6 = 7E6
D + BF

S = 1,9
P = 8.500
V = -9



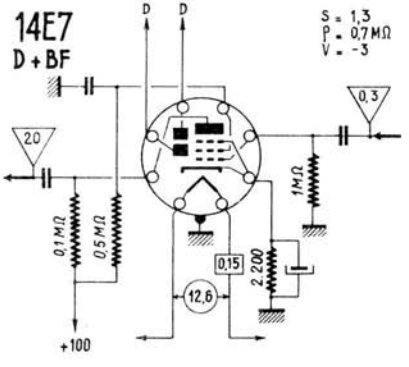
14E7 = 7E7
HF (V) + D

S = 1,3
P = 0,7 MΩ
V = -3 -42,5



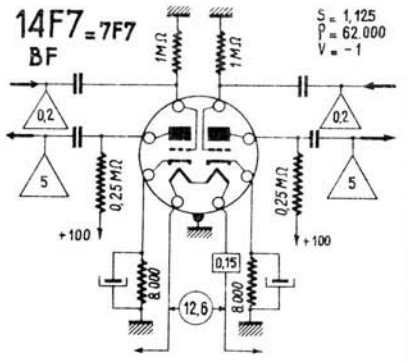
14E7
D + BF

S = 1,3
P = 0,7 MΩ
V = -3



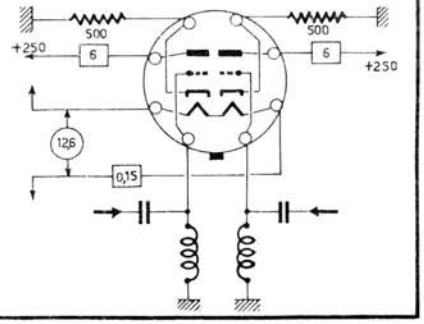
14F7 = 7F7
BF

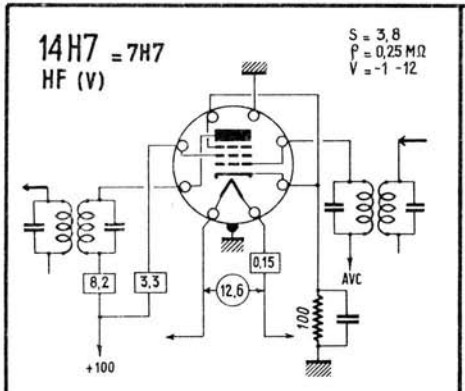
S = 1,125
P = 62.000
V = -1

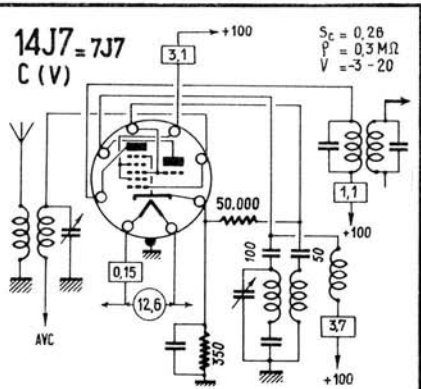


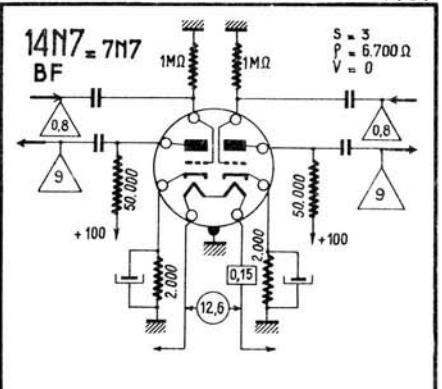
14F8
HF

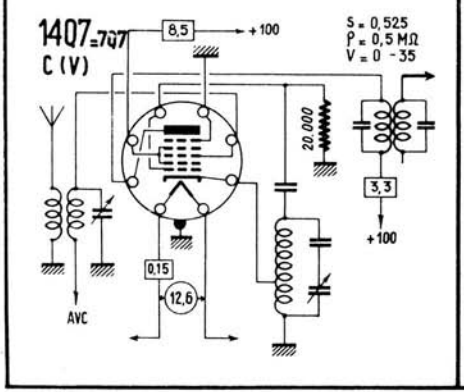
S = 3,3
μ = 48

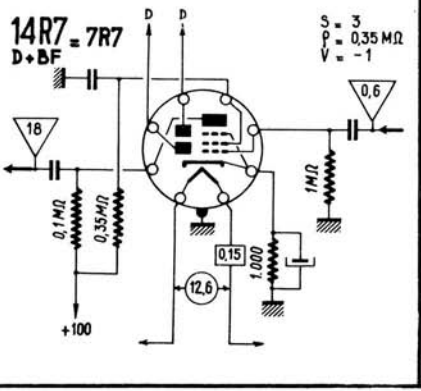


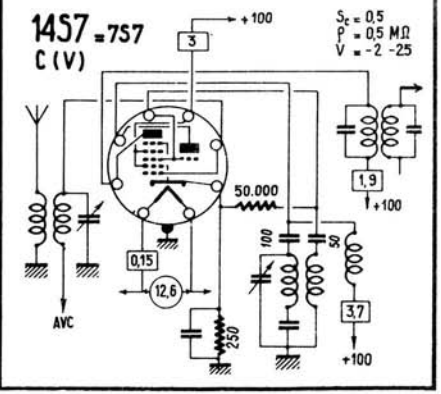

14H7 = 7H7
HF (V)
S = 3,8
ρ = 0,25 MΩ
V = -1 -12
8,2
3,3
12,6
0,15
AVC
100
+100


14J7 = 7J7
C (V)
Sc = 0,26
ρ = 0,3 MΩ
V = -3 -20
+100
3,1
50.000
1,1
+100
0,15
12,6
100
50
350
3,7
AVC
+100


14N7 = 7N7
BF
S = 3
ρ = 6.700 Ω
V = 0
1MΩ
1MΩ
0,8
0,8
9
9
50.000
50.000
+100
+100
2.000
2.000
0,15
12,6

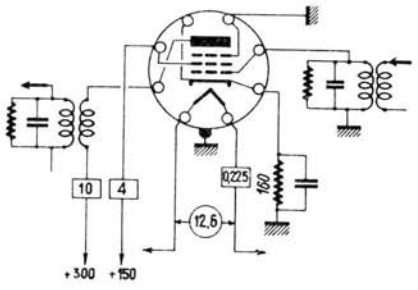

14Q7 = 7Q7
C (V)
8,5
+100
S = 0,525
ρ = 0,5 MΩ
V = 0 -35
20.000
3,3
+100
0,15
12,6
AVC


14R7 = 7R7
D+BF
D
D
S = 3
ρ = 0,35 MΩ
V = -1
18
0,6
1MΩ
0,1MΩ
0,35MΩ
0,15
1.000
12,6
+100


14S7 = 7S7
C (V)
+100
3
Sc = 0,5
ρ = 0,5 MΩ
V = -2 -25
50.000
1,9
+100
0,15
12,6
100
50
3,7
250
AVC
+100

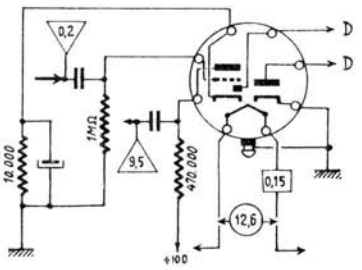
14W7 = 7W7
HF (T)

S = 5,8
ρ = 0,3 MΩ
V = -2,2

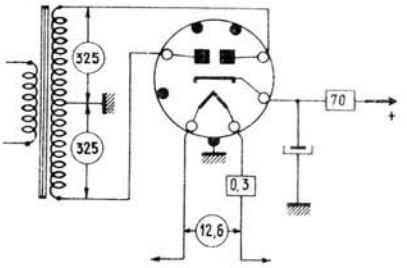


14X7
BF + D

S = 1,5
ρ = 85.000
V = -1

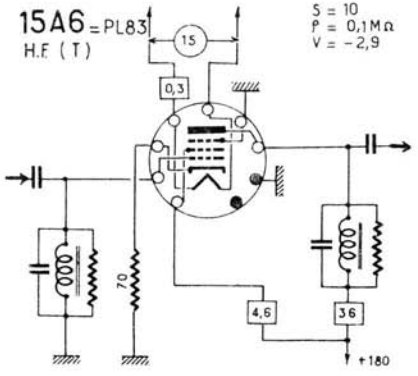


14Y4
R



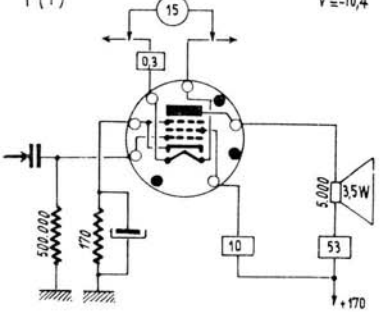
15A6 = PL83
H.F. (T)

S = 10
ρ = 0,1 MΩ
V = -2,9

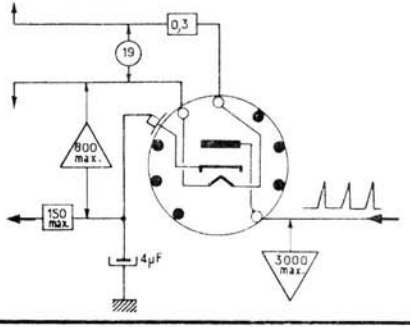


16A5 = PL82
P (T)

S = 9,5
ρ = 20.000
V = -10,4



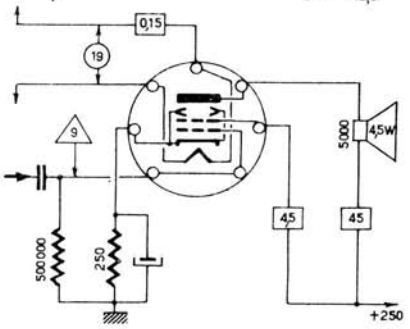
17Z3
R (T) (T.H.T.)



19AQ5

P

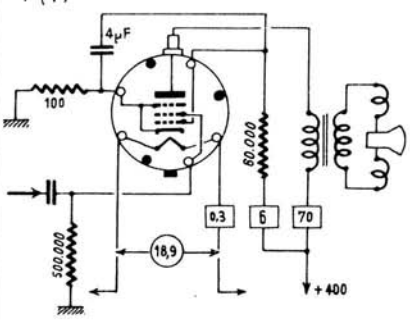
S = 4,1
P = 52000
V = −12,5



19BG6

P (T)

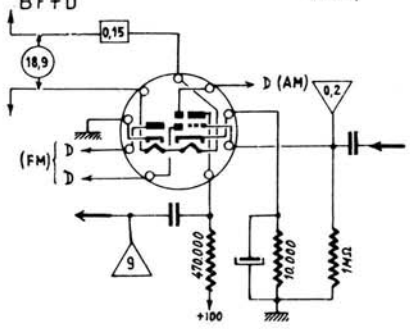
S = 6
V = −50 (max)



19C8 (AM/FM)

BF+D

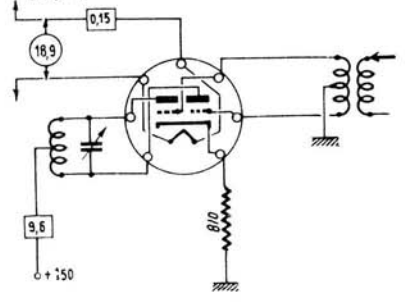
S = 1,25
P = 80000
V = −1



19J6

HF (T)

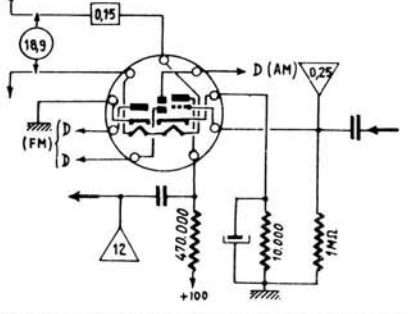
S = 1,9
P = 10.200
V = −8



19T8

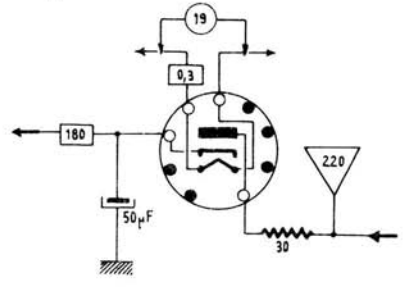
BF+D (A.M./F.M.)

S = 1,3
P = 54000
V = −1



19U3 = PY80

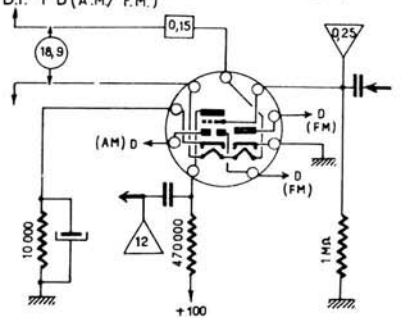
R



19V8

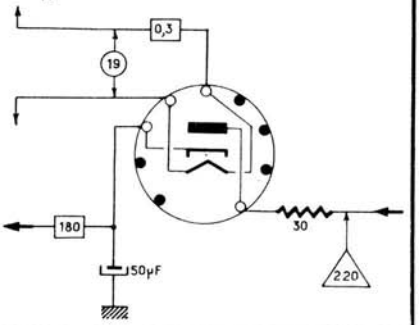
B.F. + D (A.M/ F.M.)

S = 1,3
P = 54 000
V = -1



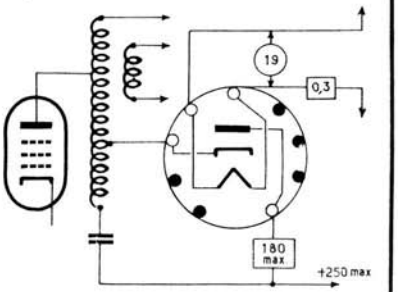
19W3

R



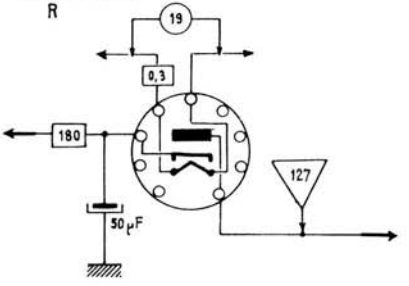
19X3

R (T)



19Y3 = PY82

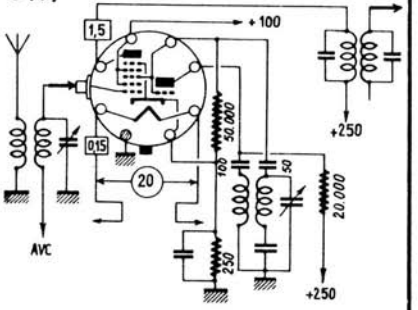
R



20J8

C (V)

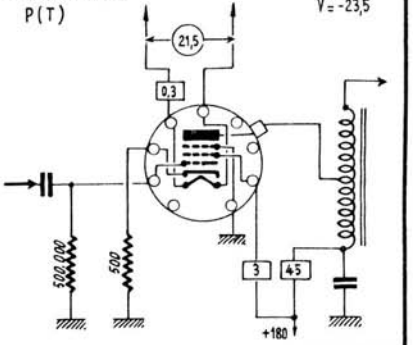
Sc = 0,27
P = 2 MΩ
V = -3 - 25



21A6 = PL81

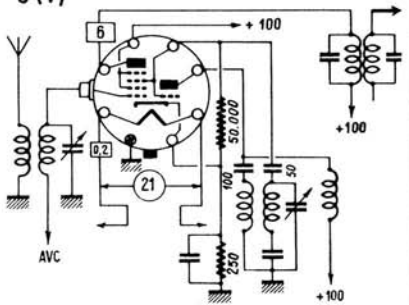
P (T)

S = 6,5
V = -23,5



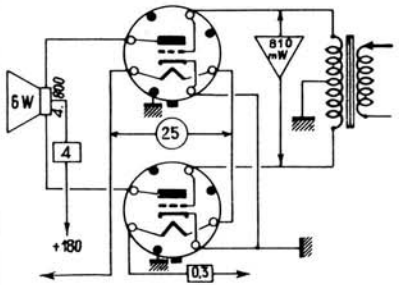
21TH8 = 6TH8
C (V)

S_c = 0,27
ρ = 2 MΩ
V = -3 -28



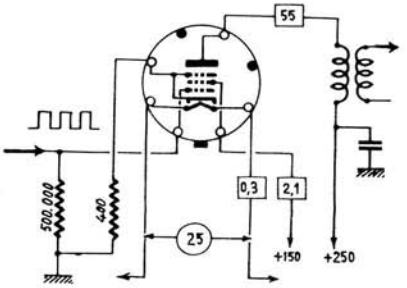
25AC5
P (cl. B)

S = 3,8
ρ = 15.200Ω



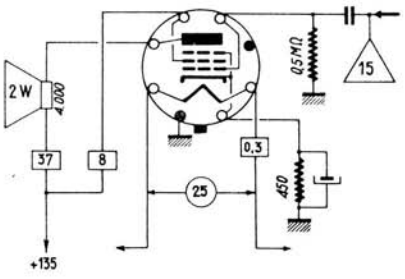
25AV5 = 6AV5
P (T)

S = 5 8
V = -22,5



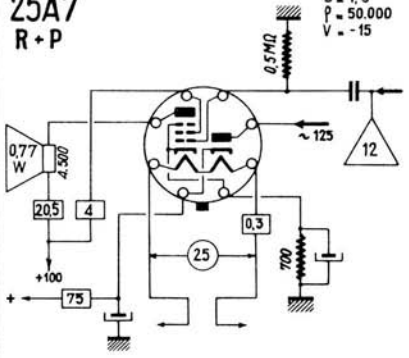
25A6
P

S = 2,4
ρ = 35.000
V = -20



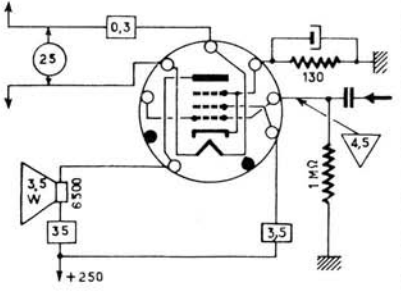
25A7
R + P

S = 1, 8
ρ = 50.000
V = -15



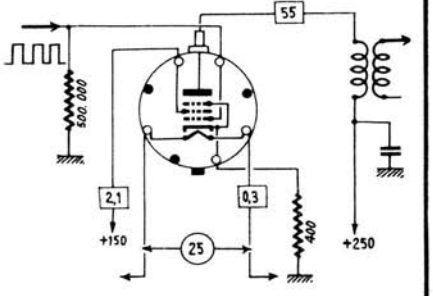
25BK5
P

S = 8,5
ρ = 100 kΩ
V = -5



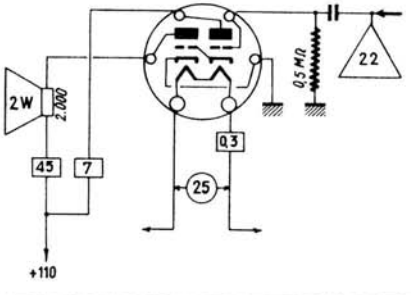
25BQ6 = 6BQ6
P (T)

S = 5,5
V = - 22,5



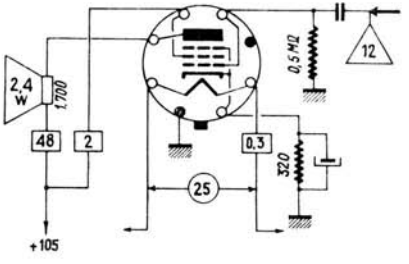
25B5
P

S = 2,2
P = 11.500
V = 0



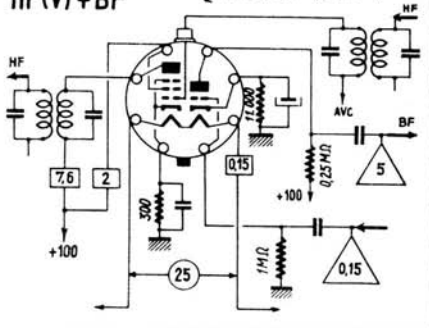
25B6
P

S = 4,8
P = 15.500
V = - 16

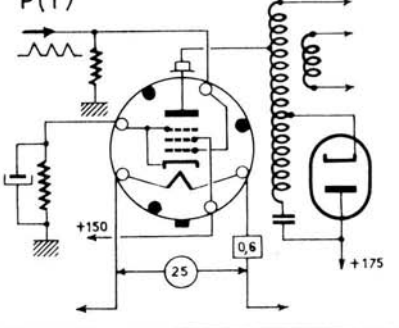


25B8
HF (V) + BF

PENTHODE S = 2 P = 0,185 MΩ V = - 3 - 41
TRIODE S = 1,5 P = 75.000 Ω V = - 1

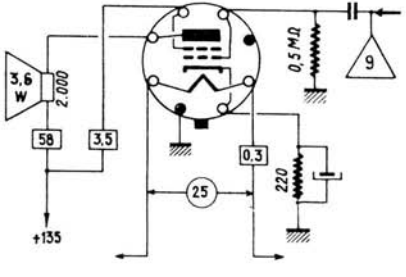


25CD6
P (T)



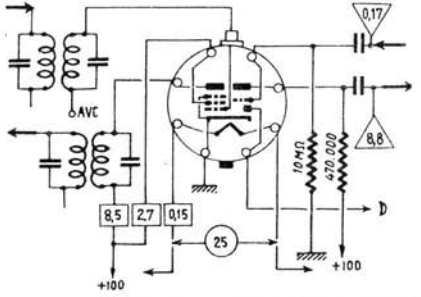
25C6
P

S = 7
P = 9.300
V = - 13,5



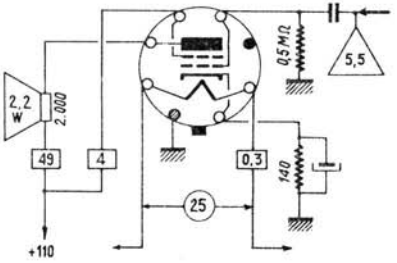
25D8
HF +BF+D

	PENT	TRIODE
S	1,9	1,1
P	200000	91.000
V	-3	-1



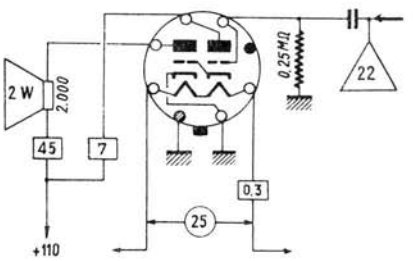
25L6
P

S = 8,2
P = 10.000
V = -7,5

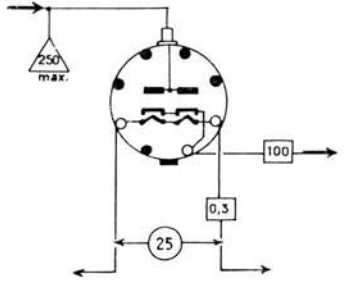


25N6 = 25B5
P

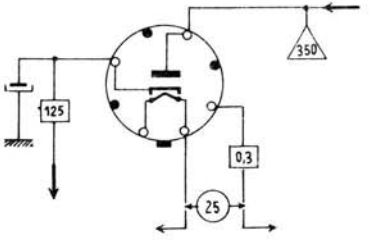
S = 2,2
P = 11.500
V = 0



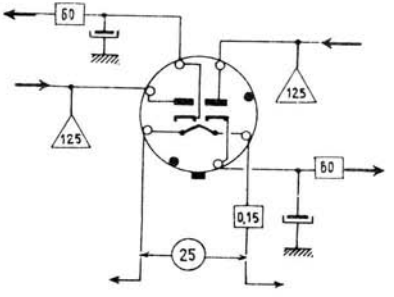
25T3G
R (T)



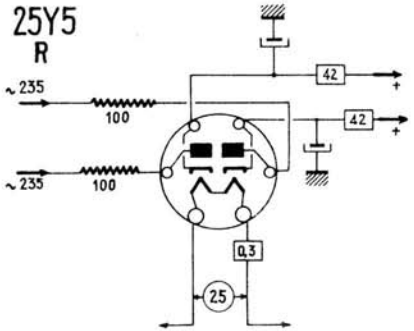
25W4
R



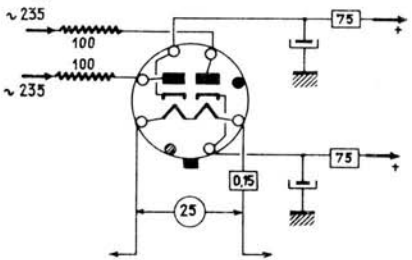
25X6
R



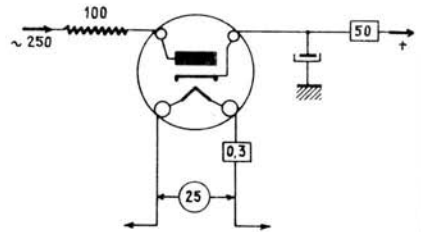
25Y5
R



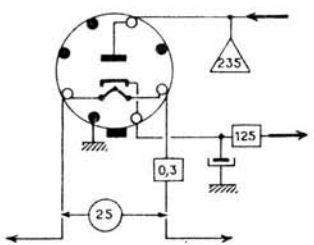
25Y6
R



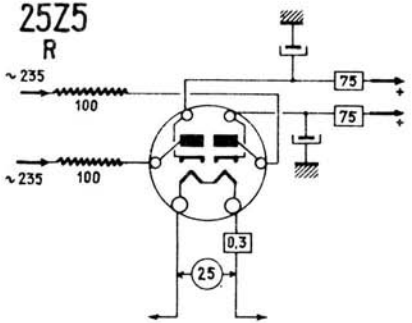
25Z3
R



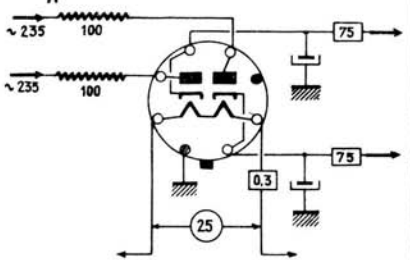
25Z4
R



25Z5
R

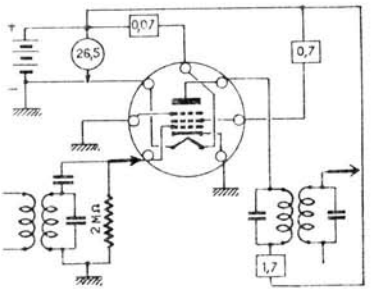


25Z6
R



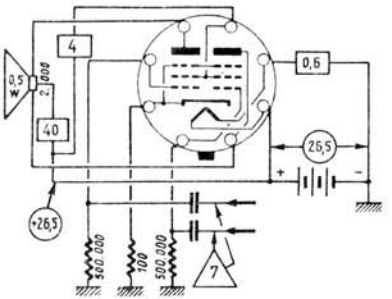
26A6
HF

S = 4
P = 1 MΩ
V = -2



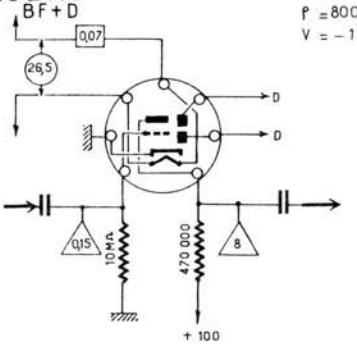
26A7 = 28D7
P (Cl. A2)

S = 5
V = -4,5



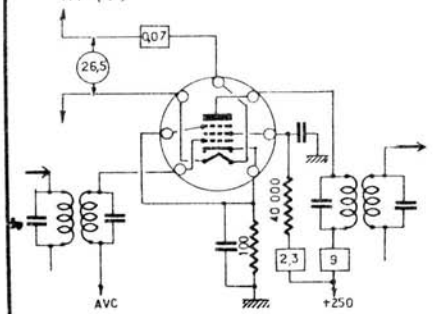
26BK6
BF + D

S = 1,25
P = 80000
V = -1



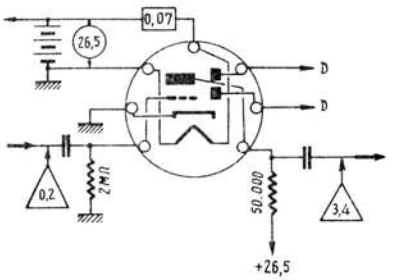
26CC6
HF (V)

S = 2
P = 720000
V = -1/-8



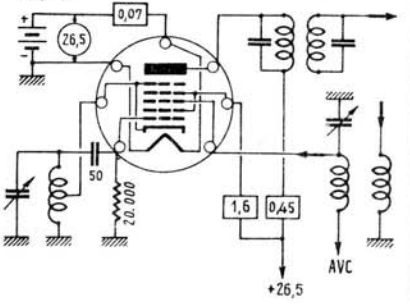
26C6
D + BF

S = 1,1
P = 15.500
V = 0

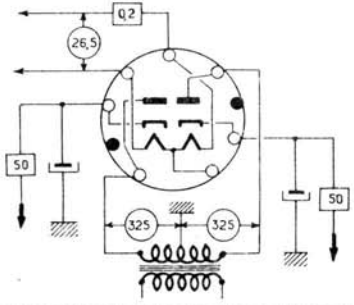


26D6
C (V)

Sc = 0,27
P = 1 MΩ
V = 0-30

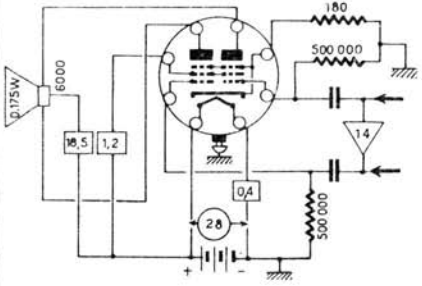


26Z5
R

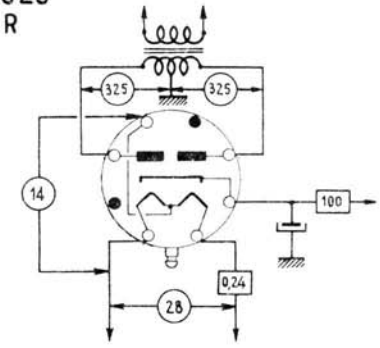


28D7
P (CL.AB)

S = 3,4
P = 4.200
V = -3,5

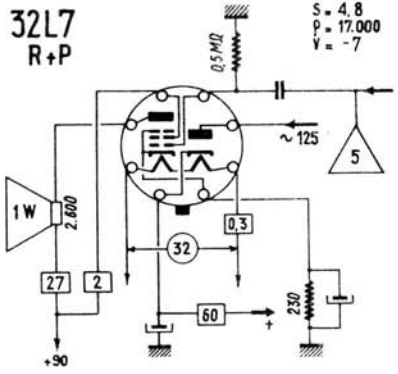


28Z5
R



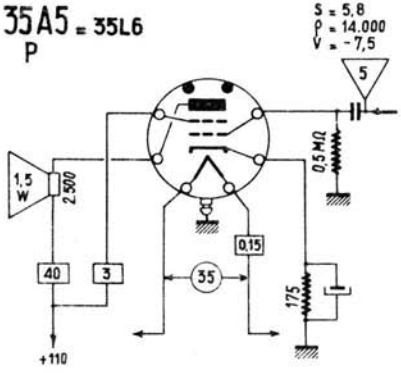
32L7
R+P

S = 4,8
P = 17.000
V = -7



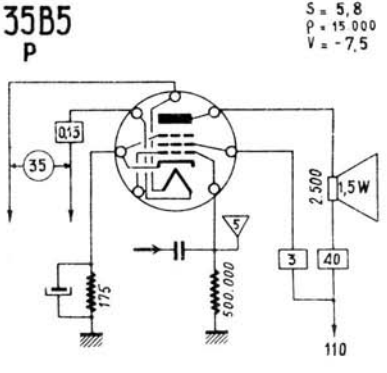
35A5 = 35L6
P

S = 5,8
P = 14.000
V = -7,5



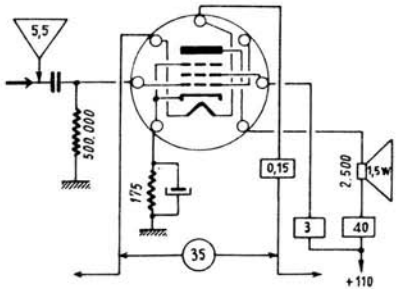
35B5
P

S = 5,8
P = 15.000
V = -7,5



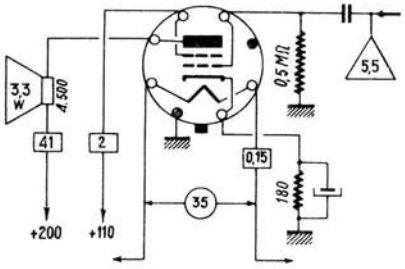
35C5
P

S = 5,8
P = 14.000
V = -7,5

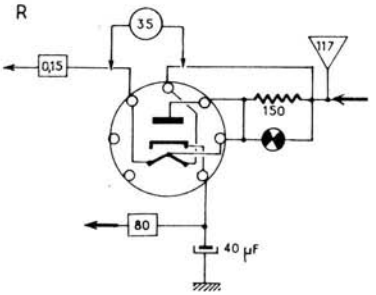


35L6 = 35A5
P

S = 5,8
P = 14.000
V = -7,5

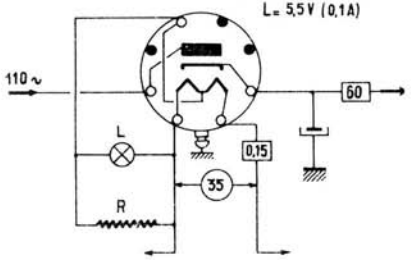


35W4
R

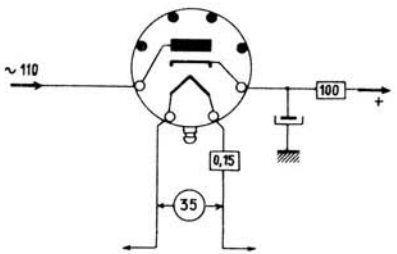


35Y4 = 35Z5
R

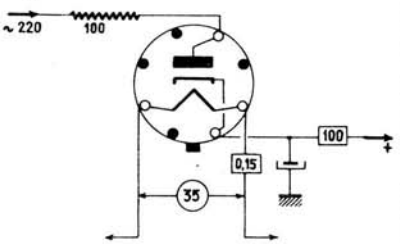
R = 300 I = 60
R = 150 I = 70
R = 100 I = 80
I = 90
L = 5,5 V (0,1 A)



35Z3 = 35Z4
R

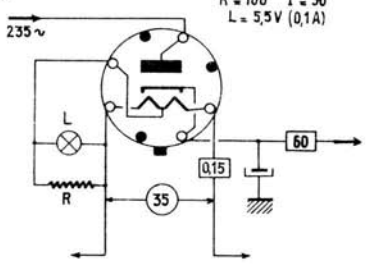


35Z4 = 35Z3
R

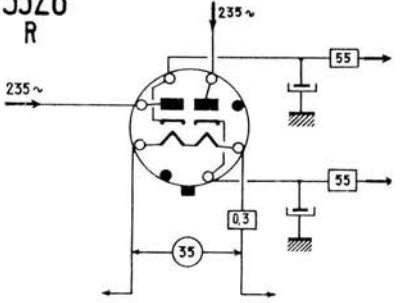


35Z5 = 35Y4
R

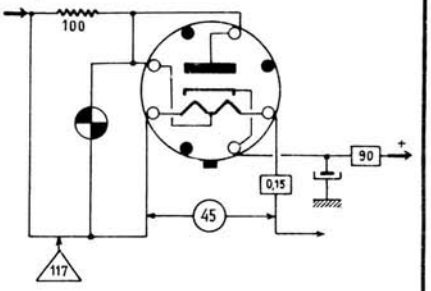
R = 300 I = 60
R = 150 I = 80
R = 100 I = 90
L = 5,5 V (0,1 A)



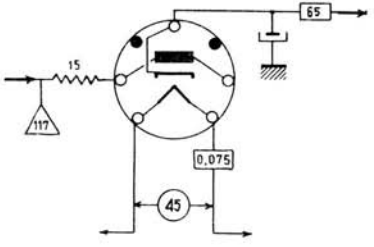
35Z6
R



40Z5
R

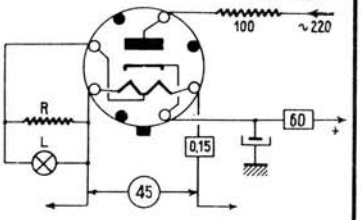


45Z3
R

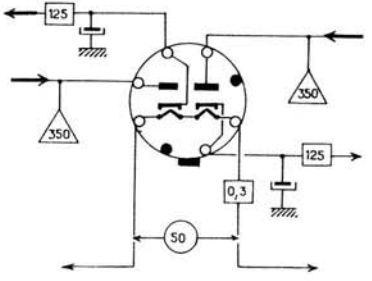


45Z5 = 35Z5
R

R = ∞ I = 60
R = 300 I = 70
R = 150 I = 80
R = 100 I = 90
L = 5,5 V - 0,1 A

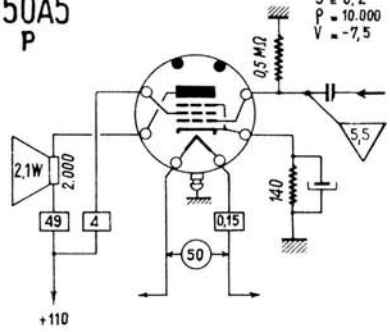


50AX6
R



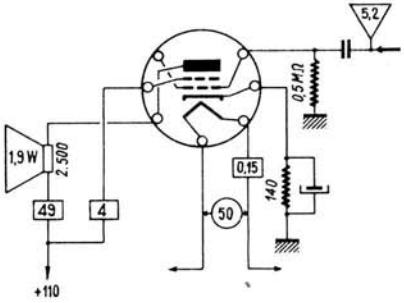
50A5
P

S = 8,2
P = 10.000
V = -7,5

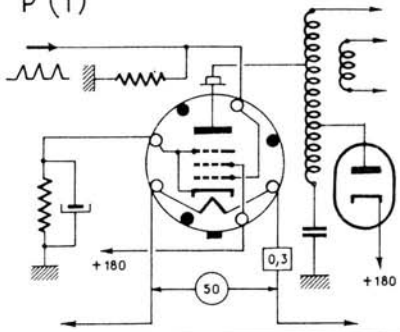


50B5
P

S = 7,5
P = 14.000
V = -7,5

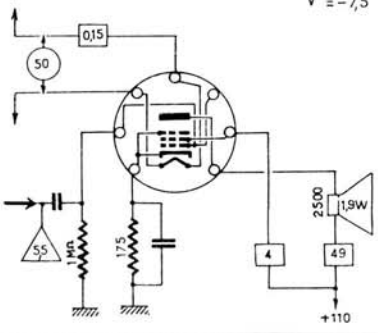


50CD6
P (T)



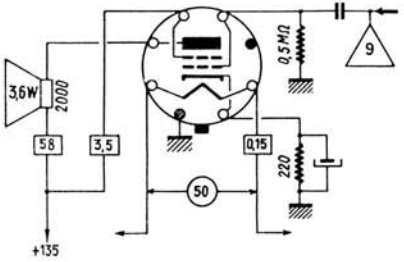
50C5
P

S = 7,5
P = 10000
V = -7,5



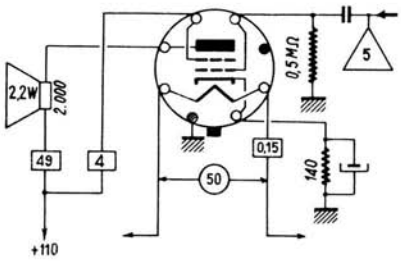
50C6 = 6Y6
P

S = 7
P = 9.300
V = -13,5

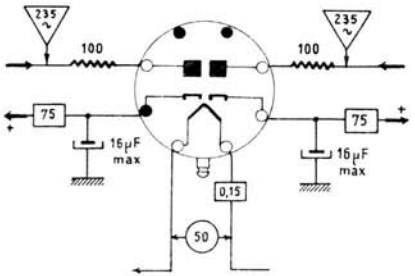


50L6 = 25L6
P

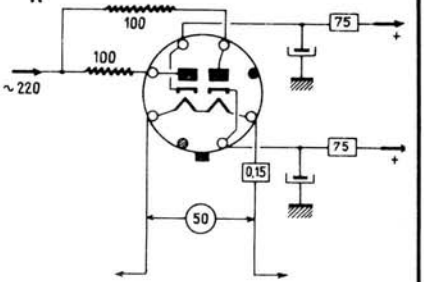
S = 8,2
P = 10.000
V = -7,5



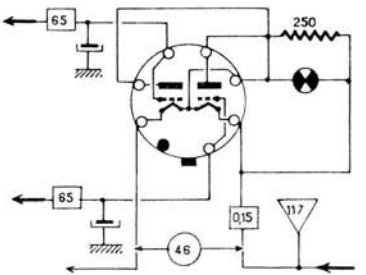
50X6
R



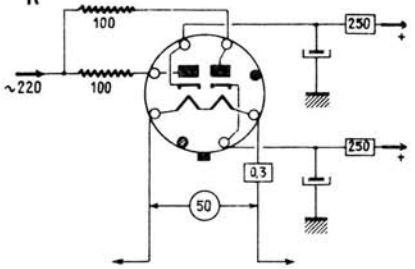
50Y6 = 25Z6
R



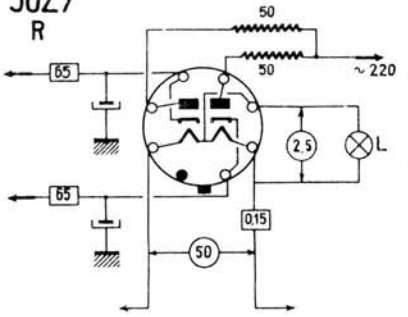
50Y7
P



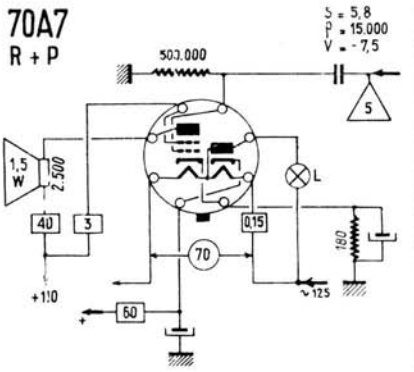
50Z6
R



50Z7
R

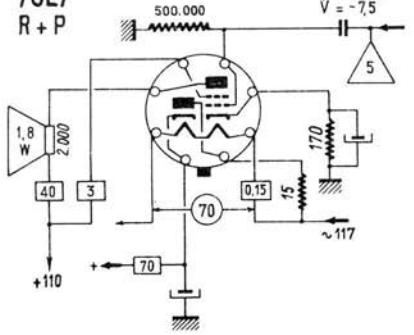


70A7
R + P



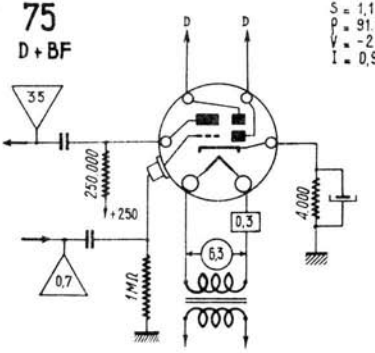
70L7
R + P

S = 7,5
P = 15.000
V = -7,5



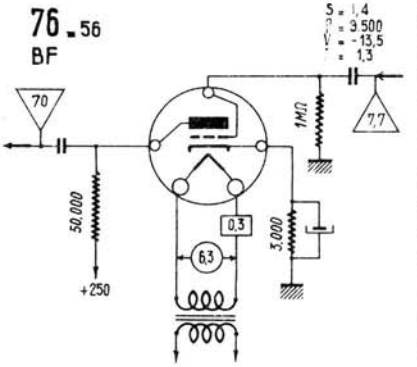
75
D + BF

S = 1,1
P = 91.000
V = -2
I = 0,9



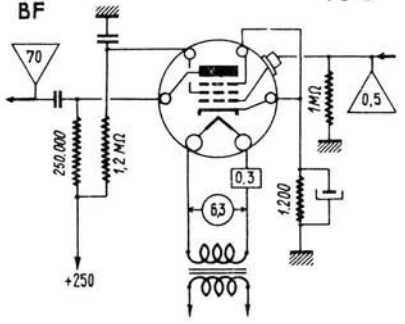
76 = 56
BF

S = 1,4
P = 9.500
V = -13,5
I = 1,3



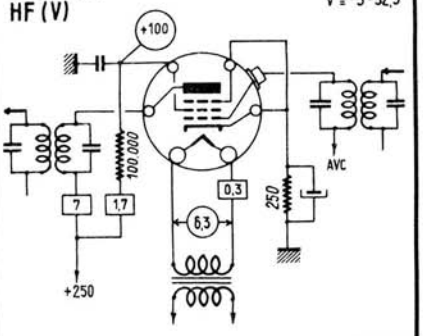
77 = 6J7
BF

S = 1,2
P = 1 MΩ
V = -3

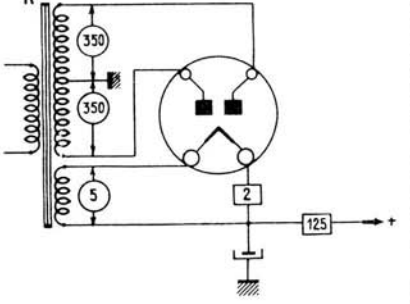


78 = 6K7
HF (V)

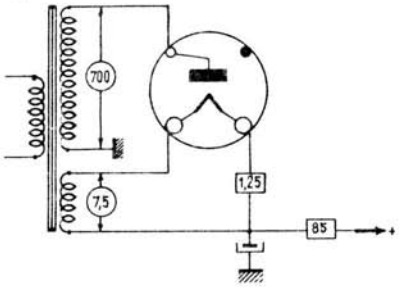
S = 1,45
P = 0,8 MΩ
V = -3 - 52,5



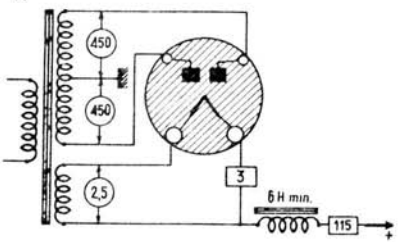
80 = 5Y3
R



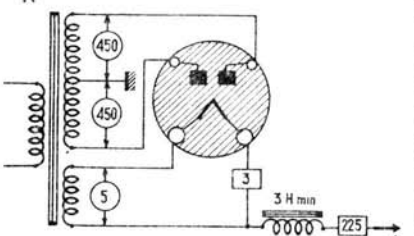
81
R



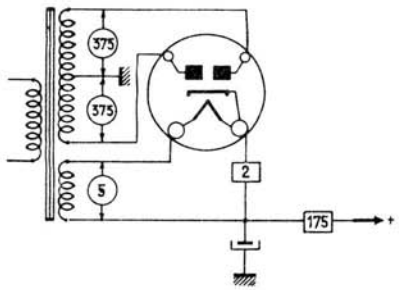
82
R



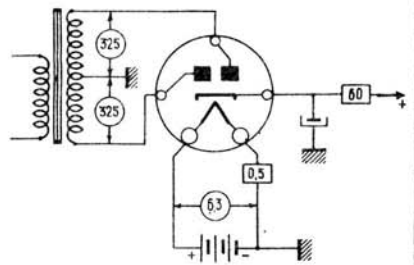
83
R



83V = 5V4
R

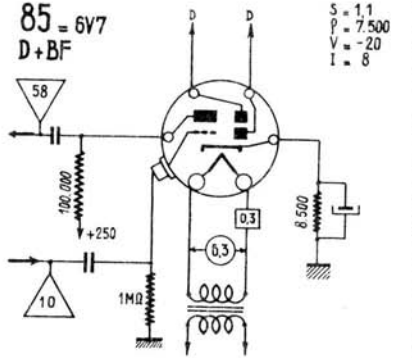


84 = 6Z4
R

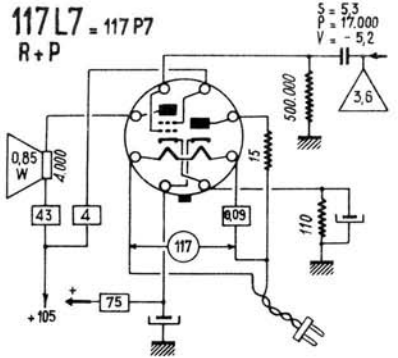


85 = 6V7
D+BF

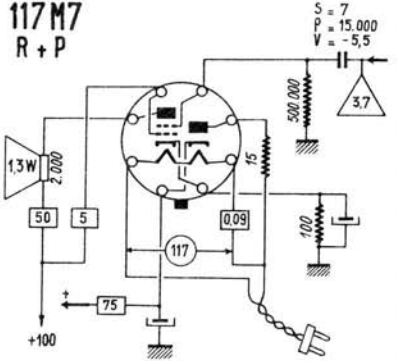
S = 1,1
ρ = 7.500
V = -20
I = 8



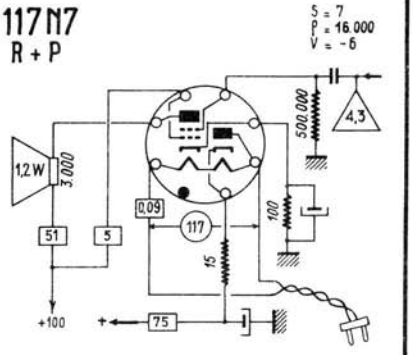
117L7 = 117P7
R + P



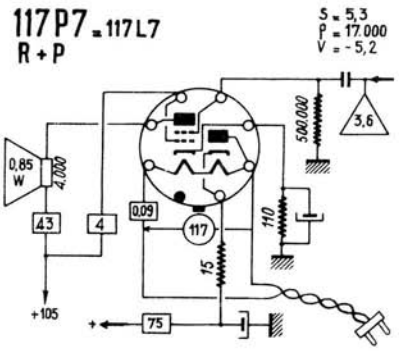
117M7
R + P



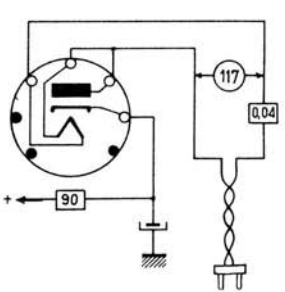
117N7
R + P



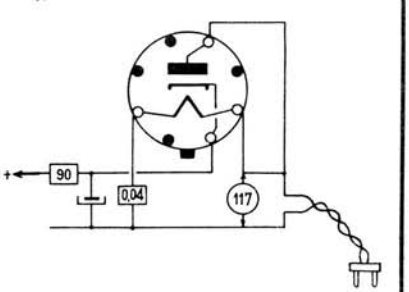
117P7 = 117L7
R + P



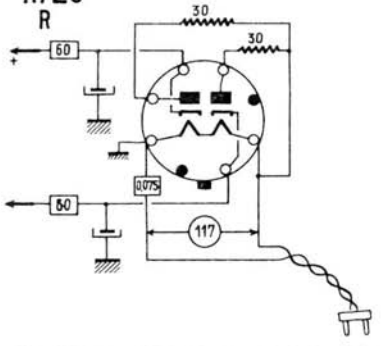
117Z3
R



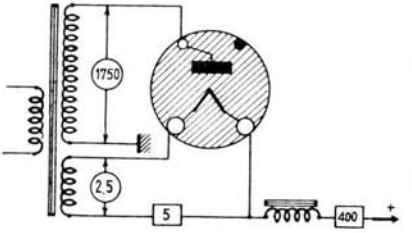
117Z4
R



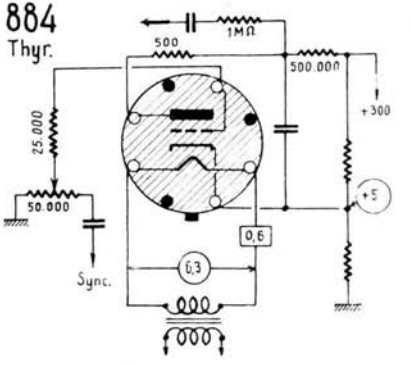
117Z6
R



866
R

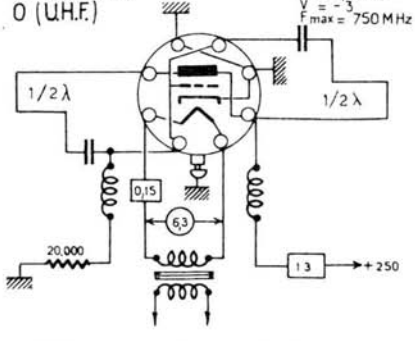


884
Thyr.

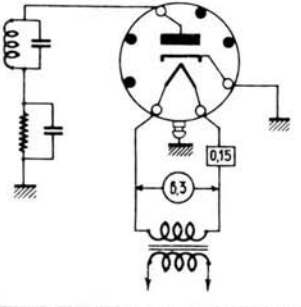


1201 = 7E5
0 (U.H.F.)

S = 3
P = 0,12 MΩ
V = -3
F max = 750 MHz

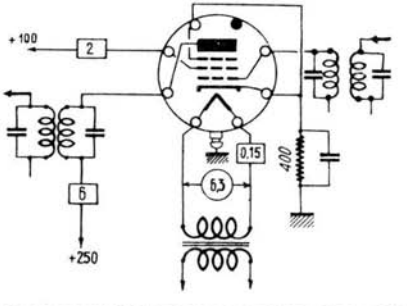


1203 = 7C4
D

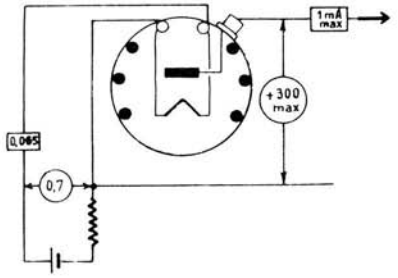


1232 = 7G7
HF (T)

S = 4,5
P = 800.000
V = -2

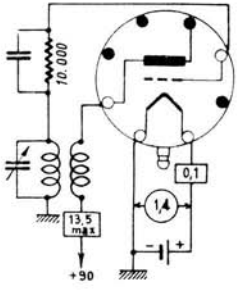


1247
M

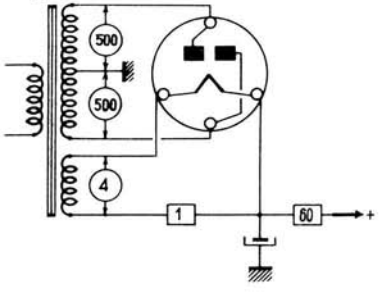


1293
O (V.H.F.)

S = 1,5
V = 0

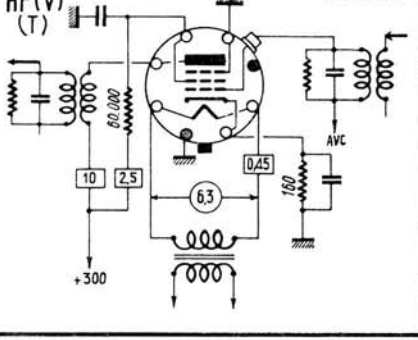


1805
R



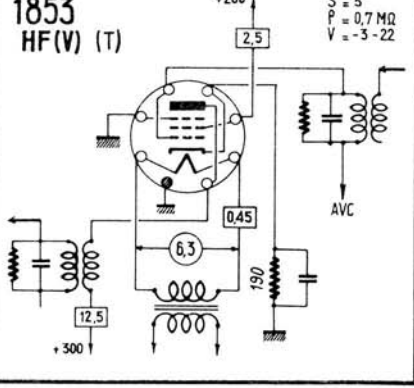
1851
HF(V) (T)

S = 9
P = 0,75 MΩ
V = -3 -22

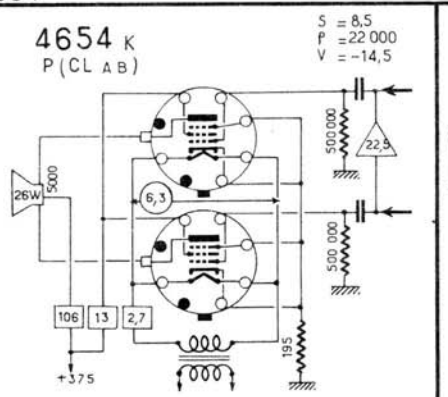


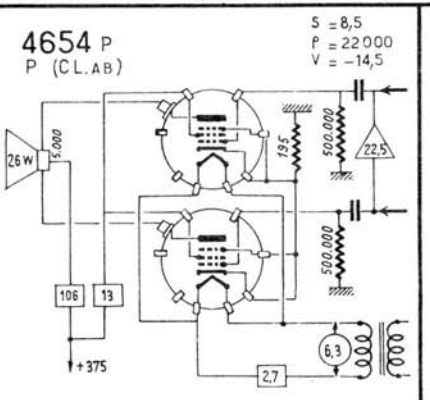
1853
HF(V) (T)

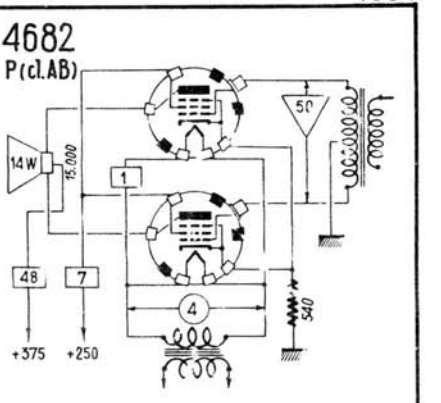
S = 5
P = 0,7 MΩ
V = -3 -22

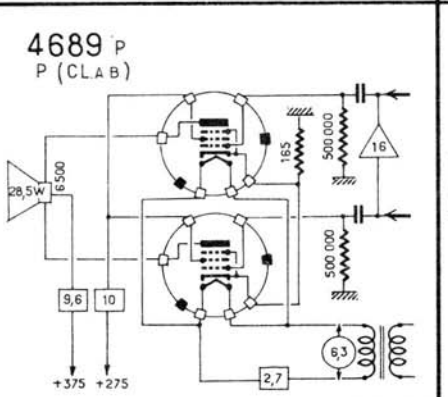


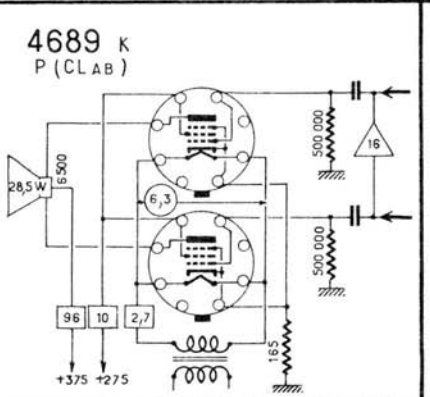
1275 = 5Z3
1276 = 6A3
1291 = 3B7
1299 = 3D6
1612 = 6L7
1629 = 6E5
1852 = 6AC7

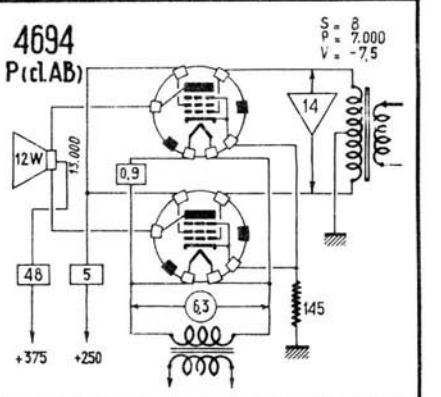

4654 K
P (CL AB)
S = 8,5
P = 22000
V = -14,5
26W
5000
6,3
500.000
22,5
500.000
106
13
2,7
195
+375


4654 P
P (CL.AB)
S = 8,5
P = 22000
V = -14,5
26W
5.000
195
500.000
22,5
500.000
106
13
+375
6,3
2,7


4682
P(cl.AB)
14W
15.000
1
50
48
7
4
540
+375
+250


4689 P
P (CL.AB)
28,5W
6500
165
500.000
16
500.000
9,6
10
6,3
+375
+275
2,7

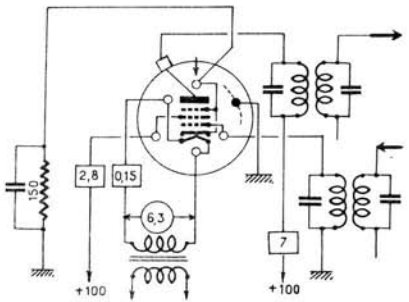

4689 K
P (CL AB)
28,5W
6500
500.000
16
6,3
500.000
9,6
10
2,7
165
+375
+275


4694
P(cl.AB)
S = 8
P = 7.000
V = -7,5
12W
15.000
0,9
14
48
5
6,3
145
+375
+250

4699 = EL6

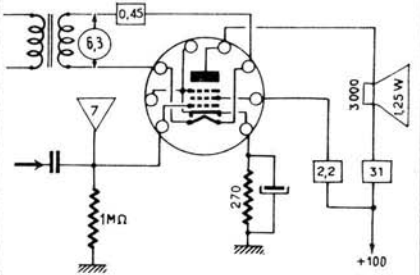
5633
HF.

S = 3,4
P = 200 000
V = −1,5

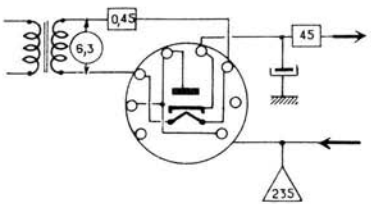


5640
P

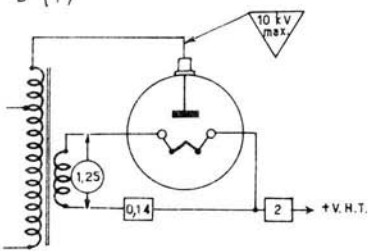
S = 5
P = 15 000
V = −9



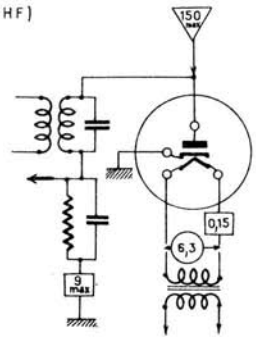
5641
R



5642
D (T)

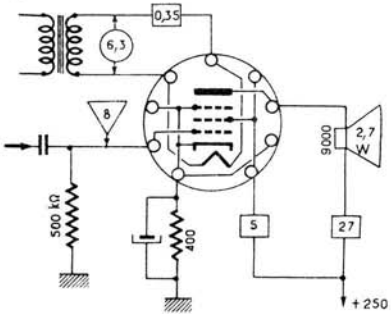


5647
D (VHF)



5686
P

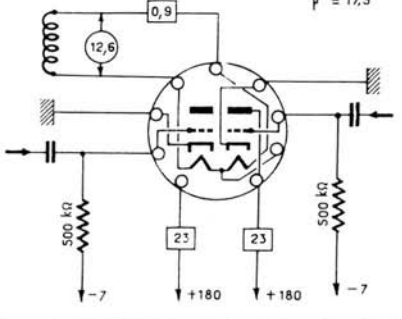
S = 3,1
V = −12,5



5654 = 6AK5 — 5670 = 2C51

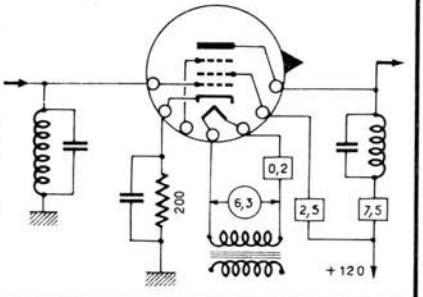
5687
VF (T)

S = 6,4
ρ = 2,7 kΩ
V = −7
μ = 17,5



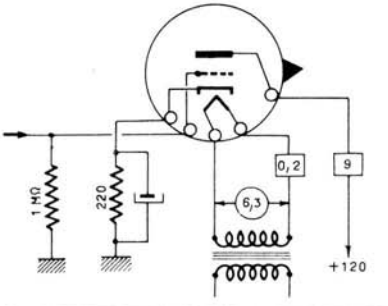
5702
H.F. (T)

S = 5
ρ = 340 kΩ
V = −2



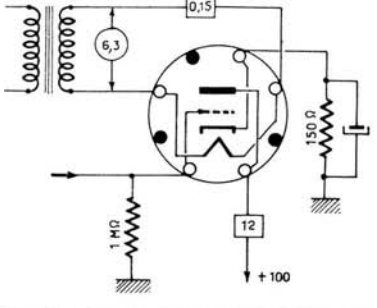
5703
B.F.

S = 5
μ = 25



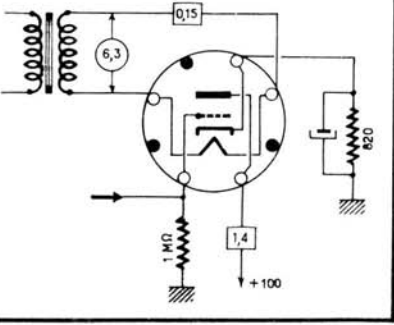
5718
B.F.

S = 5,5
ρ = 3650
V = −2
μ = 20



5719
BF

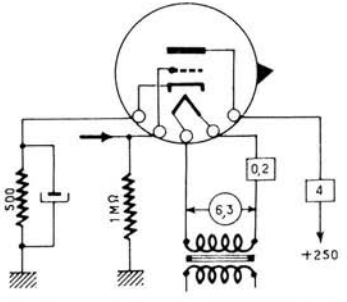
S = 2,7
ρ = 2,6 kΩ
μ = 70



5725 = 6AS6
5726 = 6AL5
5727 = 2D21
5732 = 6K7

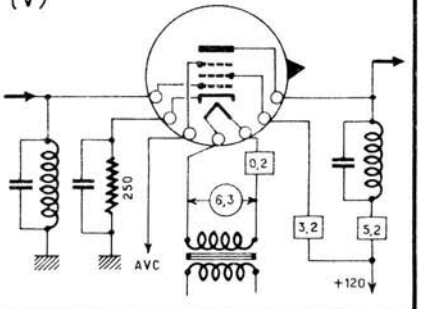
5744
BF

S = 4
P = 70



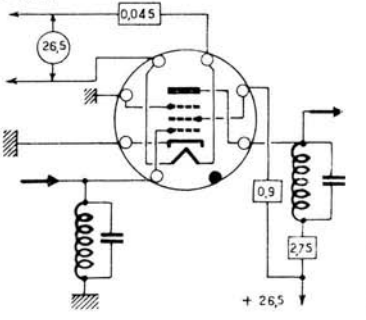
5784
HF (Sp)
(V)

S = 3,2
Vg1 = -2
Vg3 = 0/-10



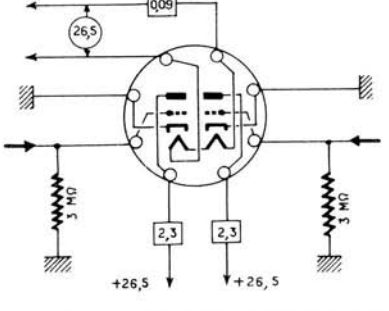
5797
HF (T)

S = 3,45
P = 70 kΩ
V = 0



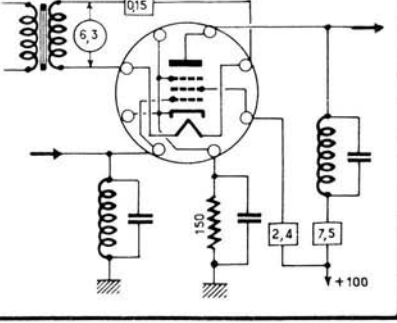
5798
BF

S = 3,15
P = 6,7 kΩ
V = 0
μ = 21



5840
HF(T)

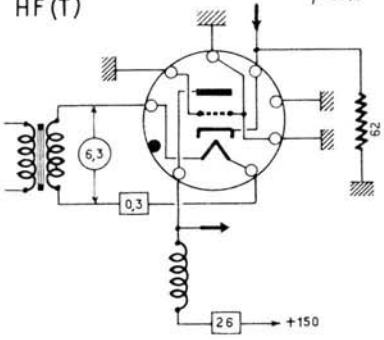
S = 5
P = 230 kΩ



5749 = 6BA6
5750 = 6BE6
5751 = 12AX7
5814 = 12AU7

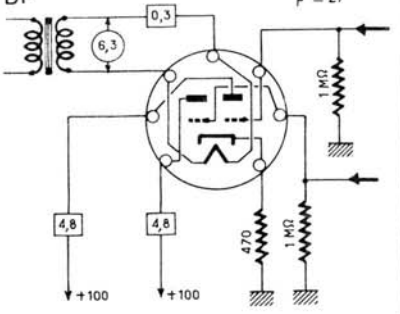
5842
HF (T)

S = 24
ρ = 1,8 kΩ
μ = 43



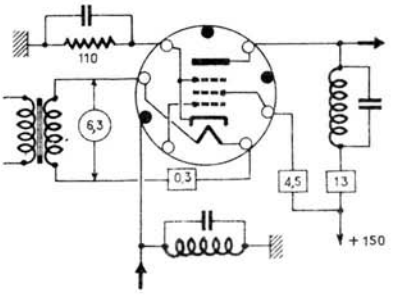
5844
BF

S = 3,4
ρ = 7950
V = −4,5
μ = 27



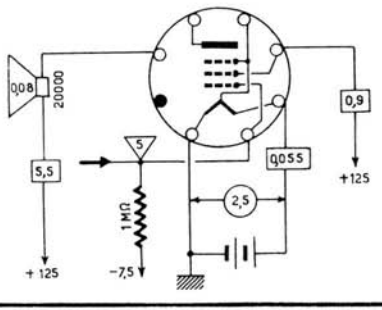
5847
HF (T)

S = 12,5



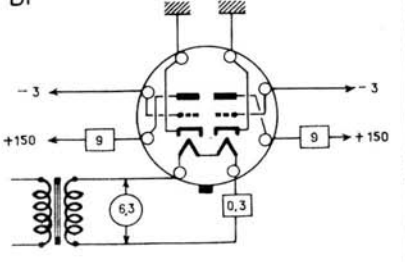
5851
P

S = 1,6
ρ = 175 kΩ
V = −7,5



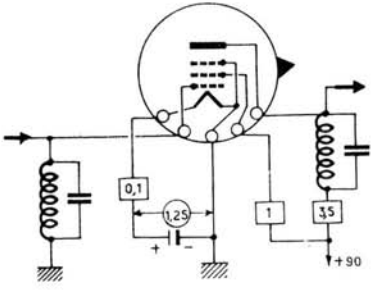
5873
BF

S = 2,9
V = −3
μ = 22



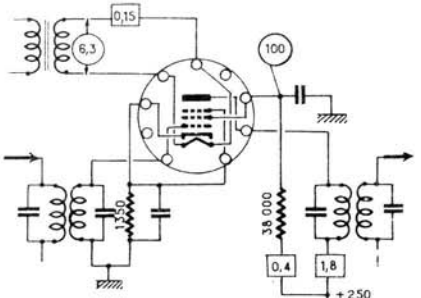
5875
HF

S = 2,5
V = 0

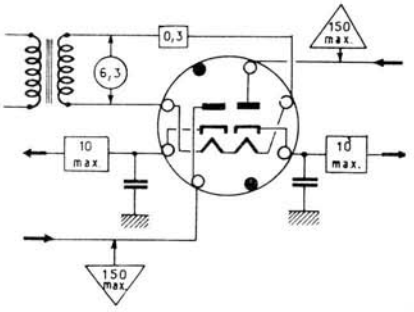


5879
HF

S = 1
P = 2 MΩ
V = -3

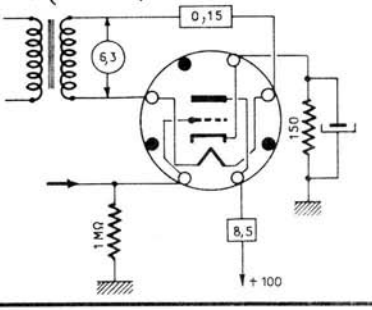


5896 = 6H6
D



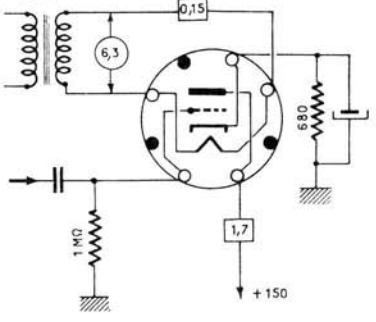
5897
B.F.
0 (500 MHz)

S = 5,8
μ = 27



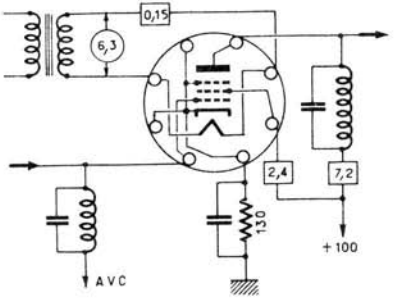
5898
B.I

S = 2,7
μ = 70



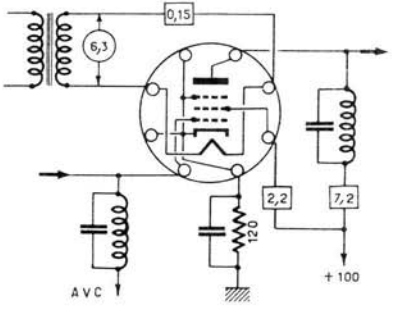
5899
H.F. (V)(T)

S = 4,5
P = 260 kΩ
V = -1,5/-20



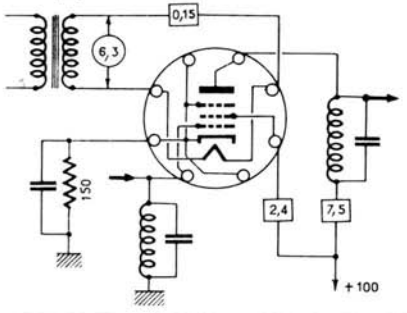
5900
H.F. (V)(T)

S = 4,5
P = 260 kΩ
V = -1,5/-10



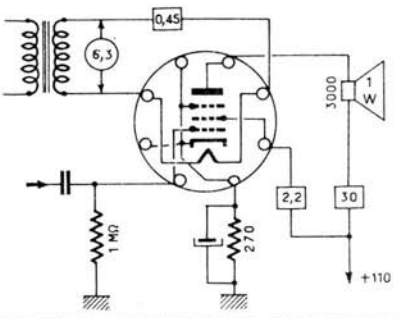
5901
H.F. (T)

S = 5
P = 230 kΩ
V = −1,5

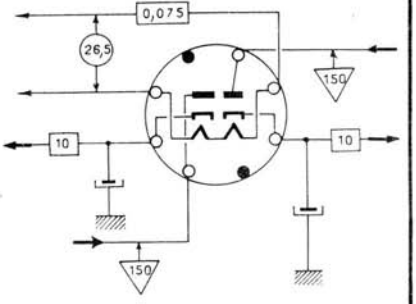


5902
P

S = 4,2
P = 15 kΩ
V = −12,5

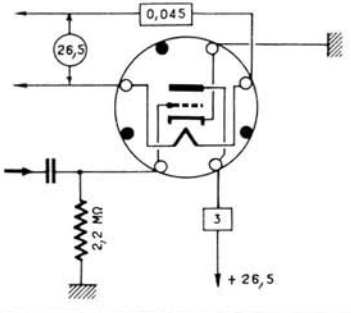


5903
R



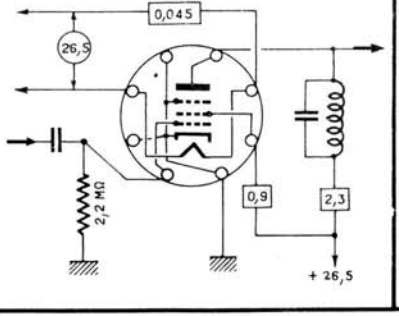
5904
B.F.

S = 5
V = 0
μ = 19



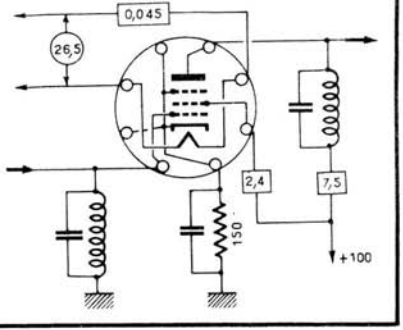
5905
H.F.

S = 2,85
P = 110 kΩ
V = 0



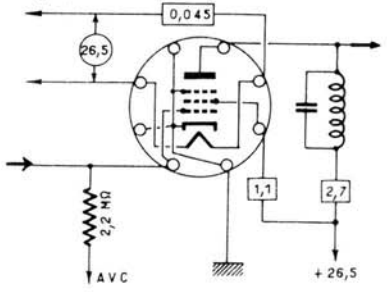
5906
H.F.

S = 5
P = 230 kΩ
V = −1,5



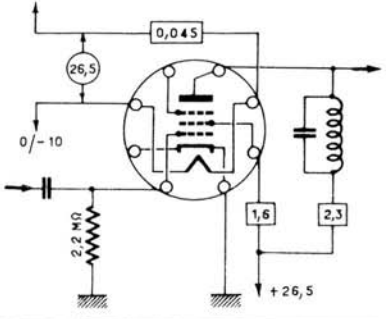
5907
H.F. (V)

S = 3
P = 125 kΩ
V = 0/−10



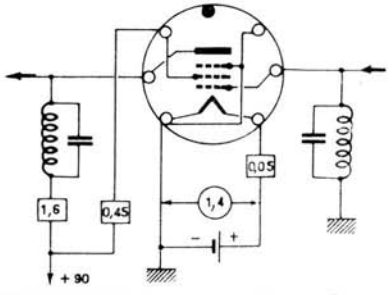
5908
H.F. (V)

S = 1,75
P = 30 kΩ
V = 0

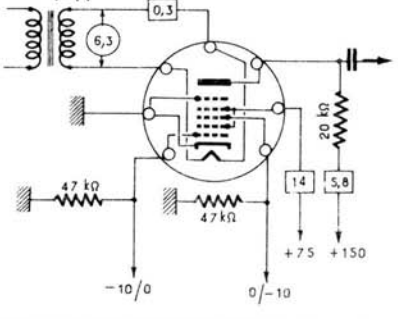


5910
H.F.

S = 0,9
P = 1,5 kΩ
V = 0

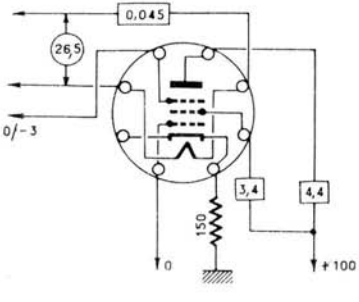


5915
H.F. (Sp)

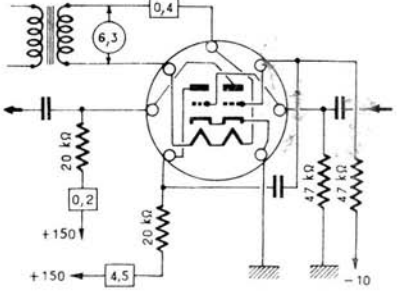


5916
H.F. (Sp)

S = 3
P = 130 kΩ

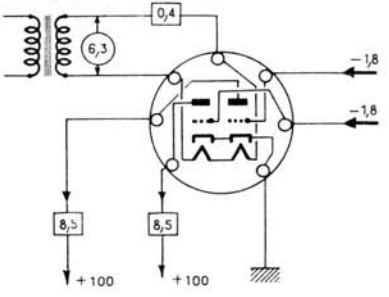


5920
V.F. (T)



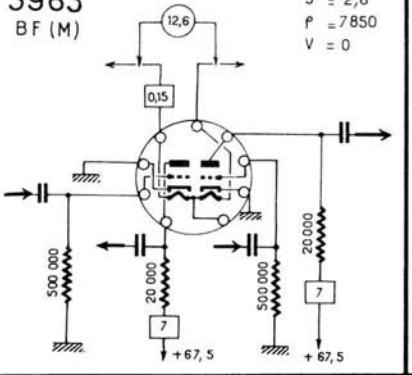
5920
B.F. (T)

S = 5,5
V = −1,8
μ = 25



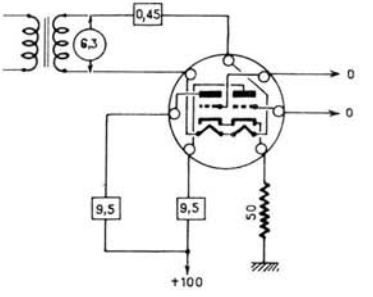
5963
BF (M)

S = 2,8
ρ = 7850
V = 0



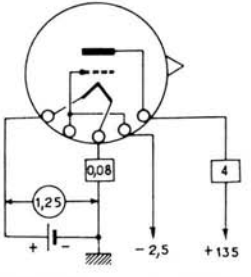
5964
HF / BF

S = 6
ρ = 6500



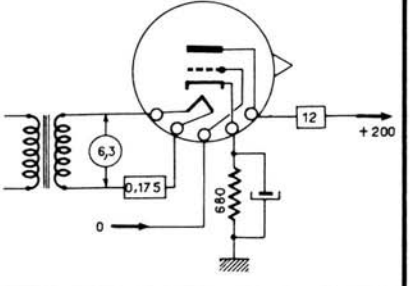
5971
B.F.

S = 2,15
V = − 2,5
μ = 23



5975
B.F. (T)

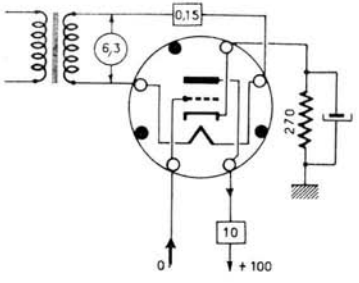
S = 4
ρ = 4 kΩ
μ = 16



5930 = 2A3
5931 = 5U4
5932 = 6L6
5961 = 6SA7

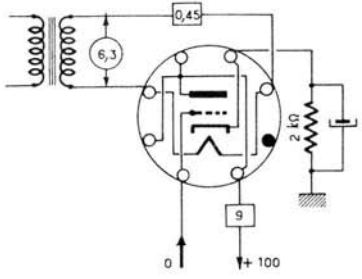
5977
B.F. (T)

S = 4,5
μ = 16

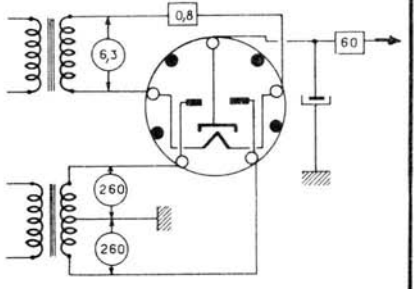


5987
B.F.

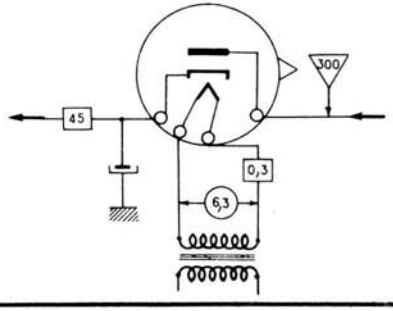
S = 1,8
V = − 18
μ = 4,1



5993
R

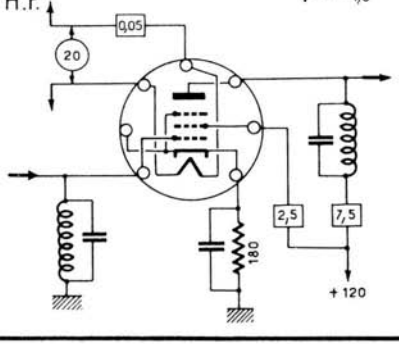


5995
R



6028
H.F.

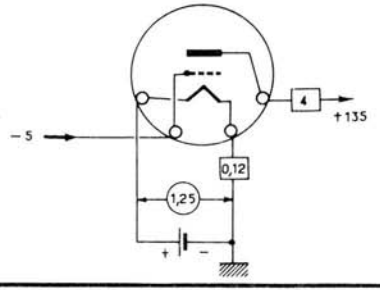
S = 5
ρ = 300 kΩ
V = − 1,8



6005 = 6AQ5
6057 = 12AX7
6058 = 6AL6
6060 = 12AT7
6063 = 6X4

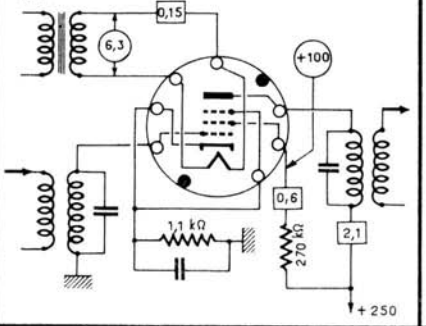
6050
H.F.

S = 1,6
V = −5
μ = 16



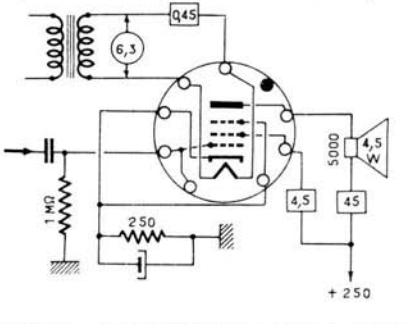
6059
H.F.

S = 1,25
P = 2,5 MΩ
V = −3



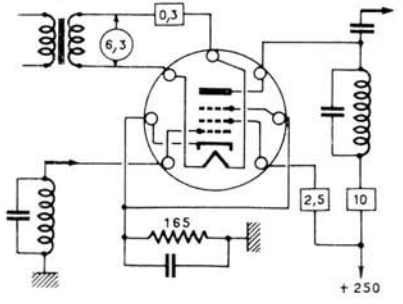
6061
P

S = 4,1
P = 52 kΩ
V = −12,5



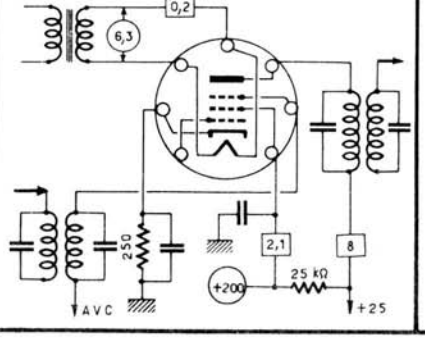
6064
H.F. (T)

S = 7,5
P = 1 MΩ
V = −2



6065
H.F. (V)

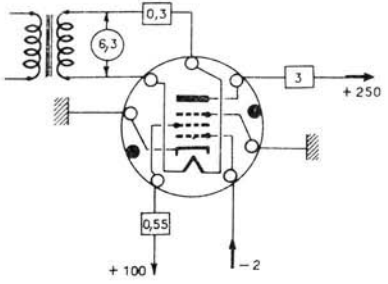
S = 2,5
P = 1 MΩ
V = −2,5/−35



6066 = 6AT6
6067 = 12AU7
6072 = 12AY7
6080 = 6AS7

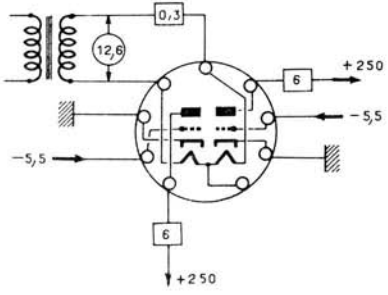
6084
B.F.

S = 1,85
P = 1,8 MΩ
V = −2



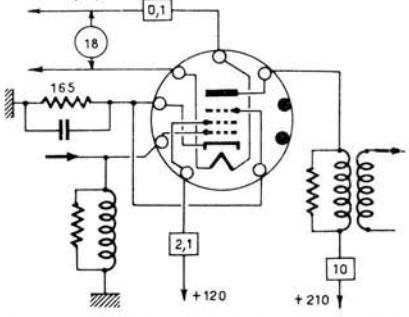
6085
B.F.

S = 2,7
V = −5,5
μ = 30



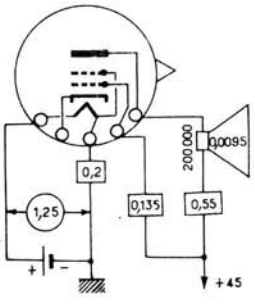
6086
V.F. (T)

S = 9
P = 500 kΩ
V = −1,5



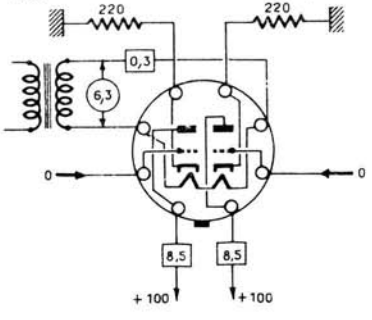
6088
P

S = 0,55
P = 850 kΩ
V = −1,25



6111
B.F.

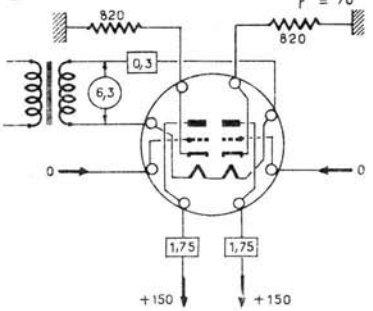
S = 5
V = −1,9
μ = 20



6080 = 6AS7
6113 = 6SL7
6137 = 6SK7

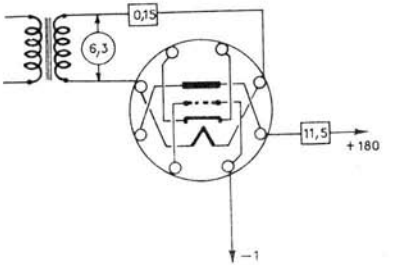
6112
B.F.

S = 2,5
ρ = 40 kΩ
V = 1,25
μ = 70



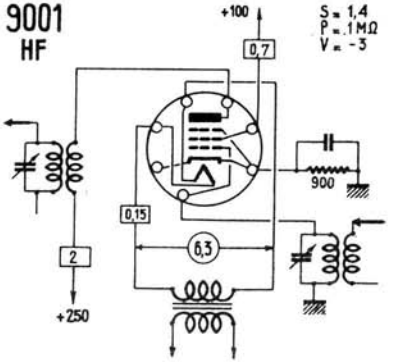
6169
V.H.F.

S = 6,5
ρ = 8,5 kΩ
V = −1
μ = 55



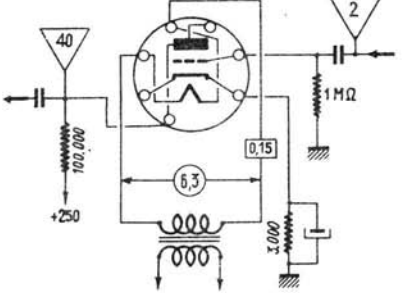
9001
HF

S = 1,4
ρ = 1 MΩ
V = −3



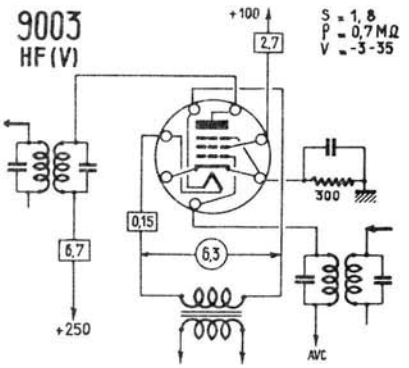
9002
BF

S = 2,2
ρ = 11.400
V = −7

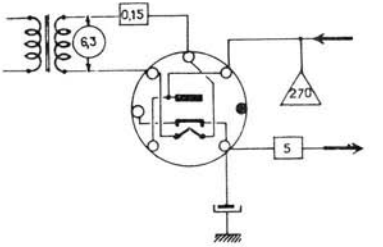


9003
HF (V)

S = 1,8
ρ = 0,7 MΩ
V = −3-35

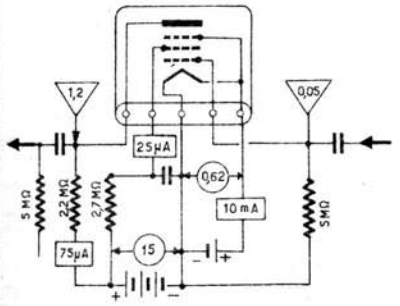


9006
D



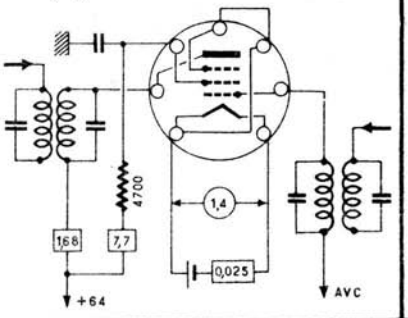
DF64
BF

S = 115 µA/V
ρ = 1 MΩ
V = −0,62



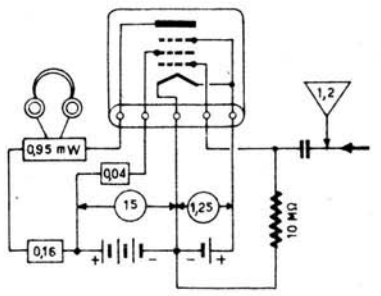
DF97
HF (V)

S = 0,84
ρ = 0,27 MΩ
V = 0/−3,8

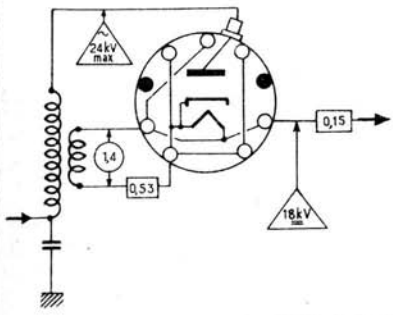


DL64
P

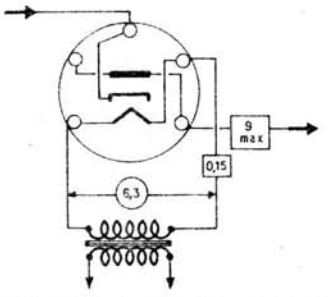
S = 0,18
ρ = 0,4 MΩ
V = −1,5



DY87 = DY86
R(T)

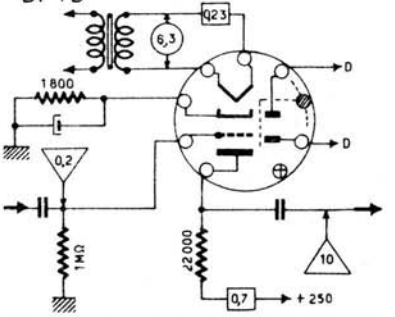


EA76
D



EBC81 (= 6BD7)
BF + D

S = 1,2
ρ = 58000
V = −3

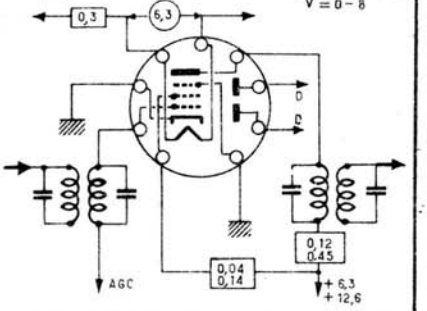


APPENDICE

EBF83
HF(V) + D

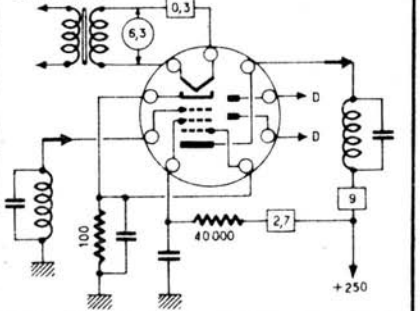
Va 6,3	12,6
S = 0,45	1
S = 0,65	1 MΩ

V = 0 – 8



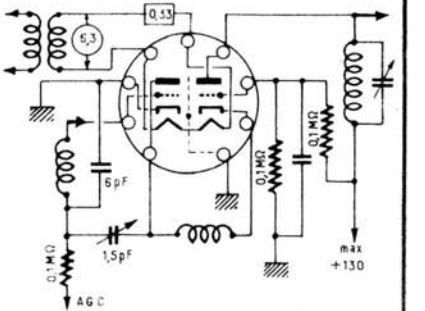
EBF89
HF + D(T)

S = 3,8
P = 1 MΩ
V = – 2



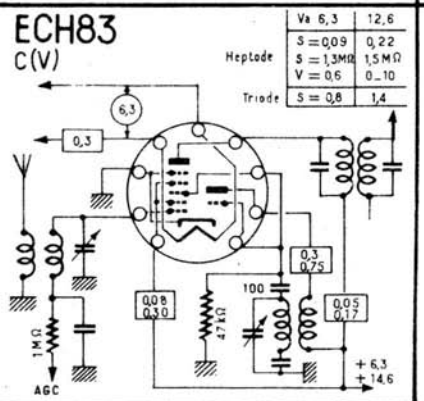
ECC88
HF (V)

S = 12,5



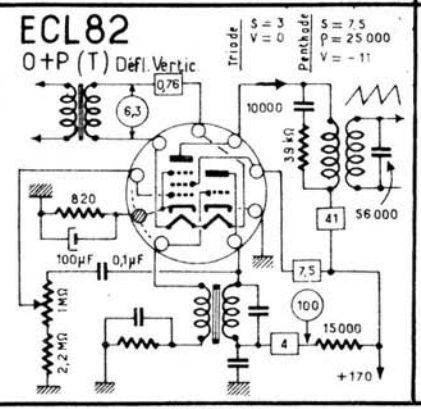
ECH83
C(V)

	Va 6,3	12,6
Heptode	S = 0,09	0,22
	S = 1,3 MΩ	1,5 MΩ
	V = 0,6	0 – 10
Triode	S = 0,8	1,4



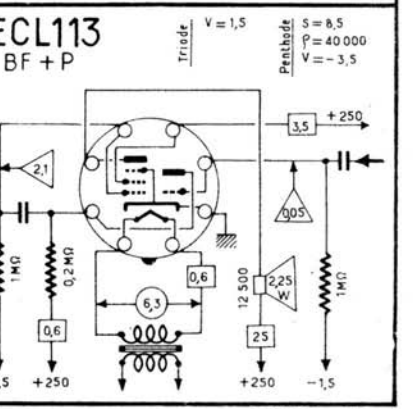
ECL82
0+P (T) Défl. Vertic

Triode S = 3 V = 0,3
Pentode S = 7,5 P = 25 000 V = – 11



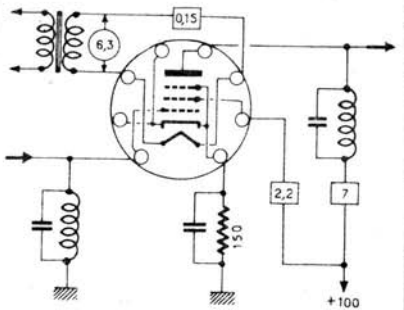
ECL113
BF + P

Triode V = 1,5
Pentode S = 8,5 P = 40 000 V = – 3,5



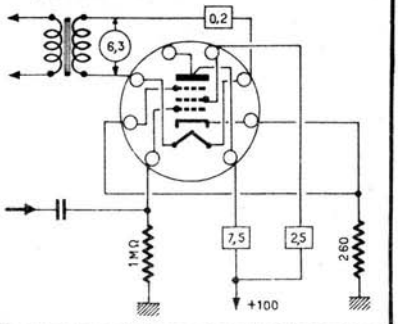
EF72
HF

S = 5
ρ = 0,25 MΩ
V = −1,4



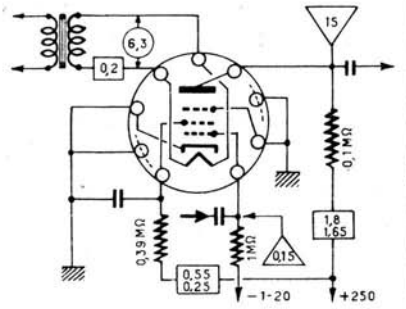
EF73
BF

S = 5,25
ρ = 250 000
V = −2



EF83
BF (V)

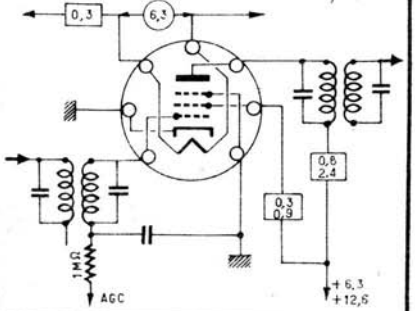
S = 1,6
ρ = 1,6 MΩ
V = −1,6



EF97
H.F. (V)

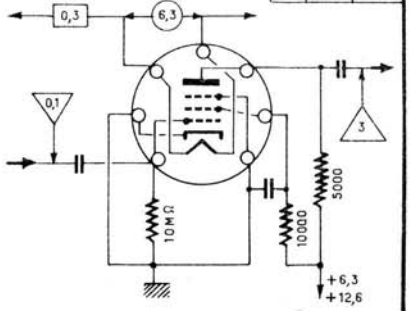
Va 6,3	12,6
S = 0,9	1,8
ρ = 50kΩ	50 kΩ

V = −1/−10



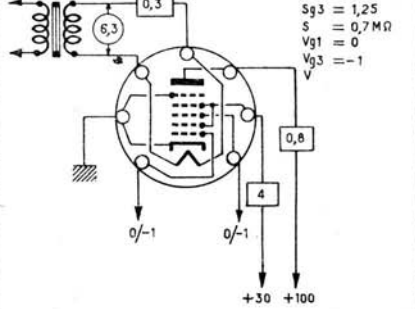
EF98
B.F.

Va	6,3	12,5
S	1,8	3
ρ	50kΩ	50kΩ
V	0	0

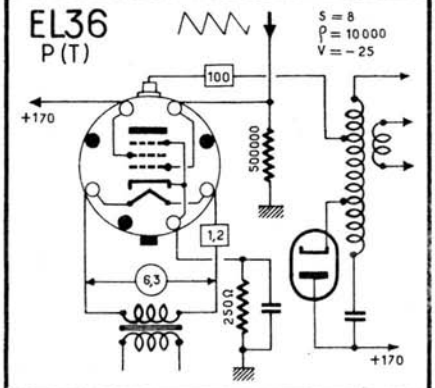


EH90
H.F.

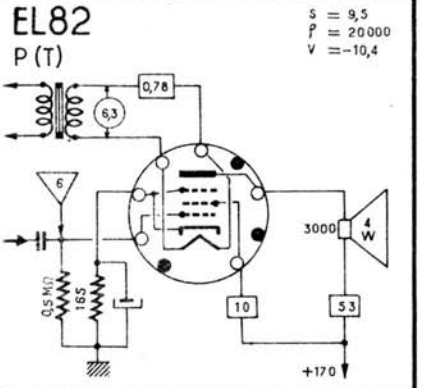
Sg1 = 0,95
ρ = 1 MΩ
Vg1 = −1
Vg3 = 0
Sg3 = 1,25
S = 0,7MΩ
Vg1 = 0
Vg3 = −1
V



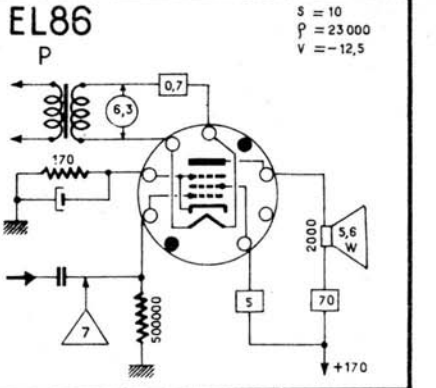
EL36
P (T)



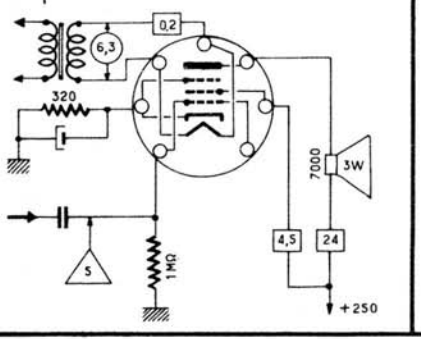
EL82
P (T)



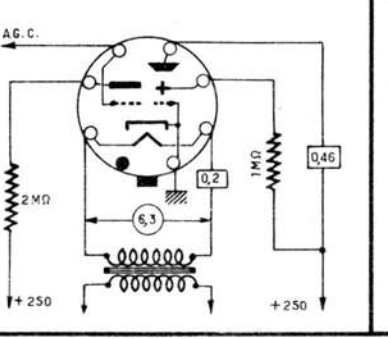
EL86
P



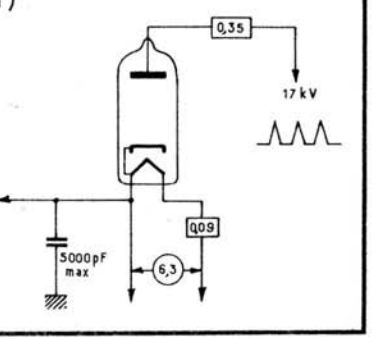
EL95
P



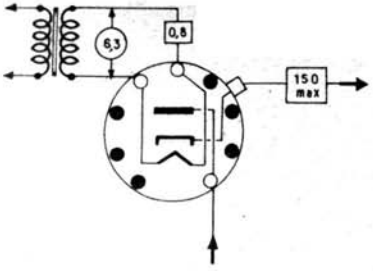
EM35
I



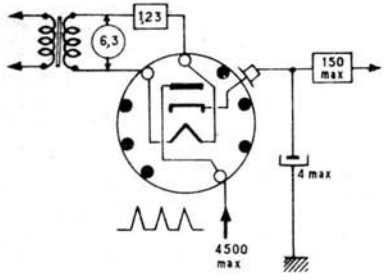
EY51
R (T)



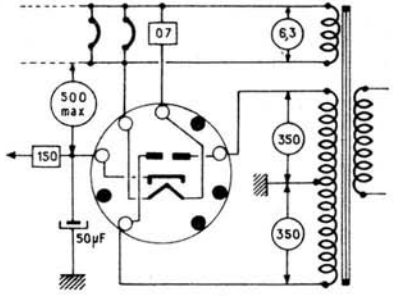
EY81
R (T)



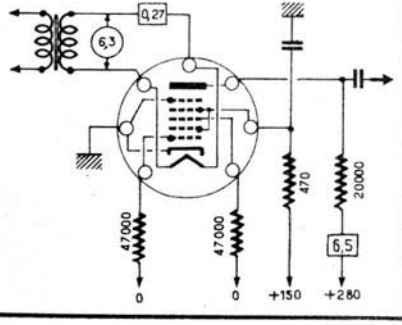
EY88
R(T)



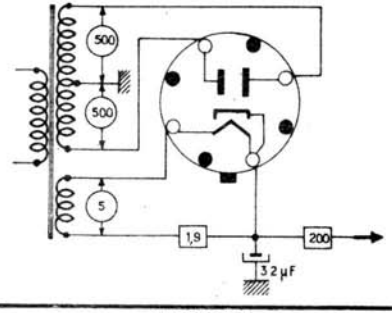
EZ81
R



E91H
S

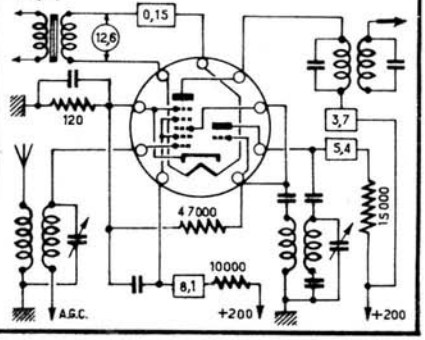


GZ34
R



HCH81
C(V)

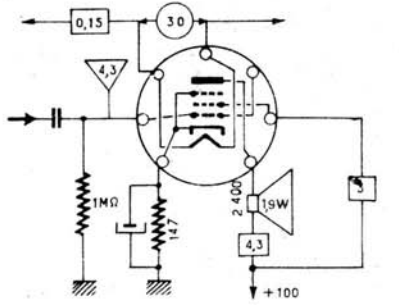
$S_c = 0,77$
$\rho = 1\,M\Omega$
$V = -2,3\text{-}28$



HL94

P

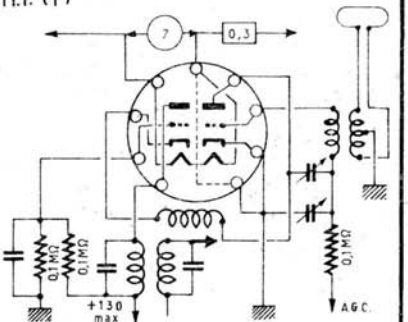
S = 9,2
P = 22000 Ω
V = −6,7



PCC88

H.F. (T)

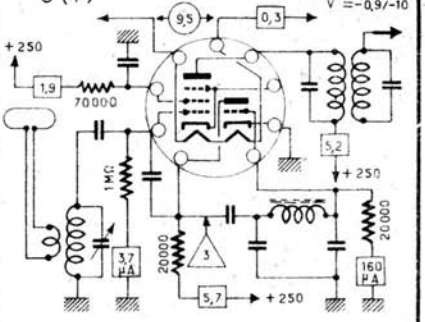
S = 12,5



PCF82

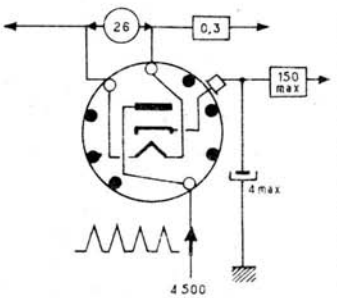
C (T)

Triode: S = 8,5 P = 5000 V = −1
Pentode: S = 5,2 Sc = 1,9 P = 0,4 MΩ V = −0,9/−10



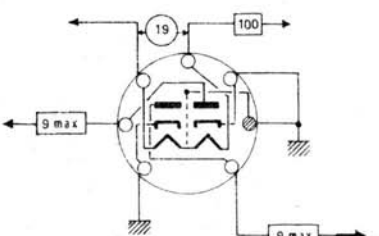
PY88

R (T)



UAA91

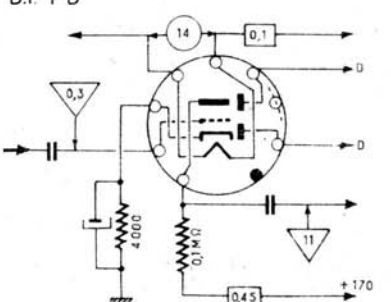
D



UBC81

B.F. + D

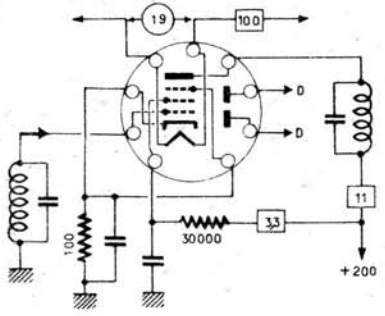
S = 1,65
P = 42000
V = 1,5



UBF89

HF+D(T)

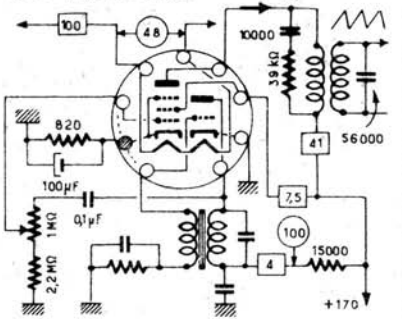
S = 4,5
ρ = 0,6 MΩ
V = −1,5



UCL82

0 +P (T) Défl. Vertic

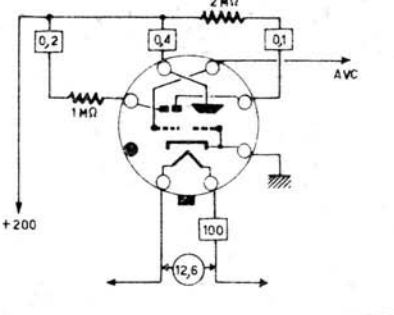
Triode S = 3 V = 0
Pentode S = 7,5 P = 25000 V = −11



UM35

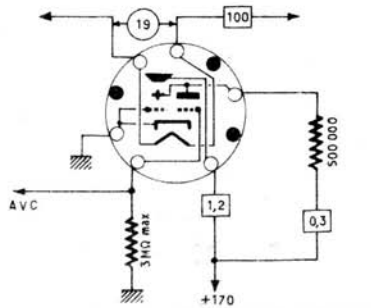
I

V = 0/−3
0/−20



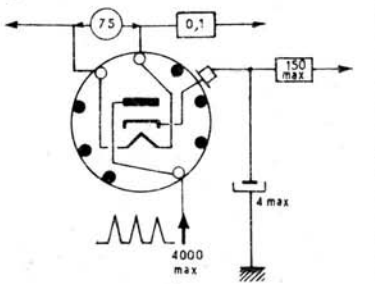
UM80 = UM81

V = −1/−12



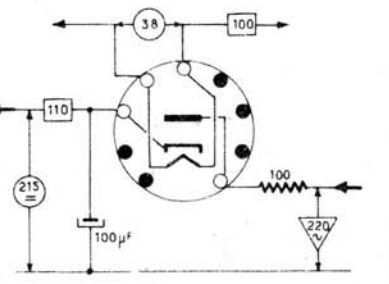
UY88

R (T)



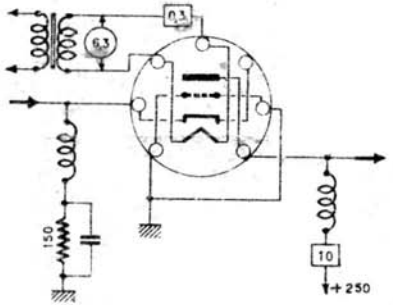
UY85

R



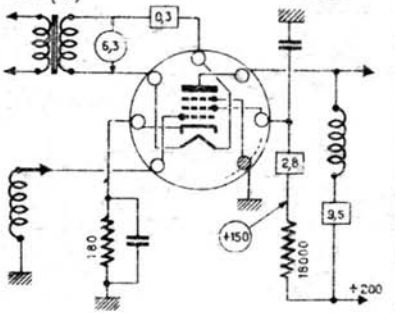
6AQ4
HF (250 MHz)

S = 8,5
P = 12000
V = -1,5



6CB6
HF (T)

S = 6,2
P = 0,6 MΩ
V = 2,2



1AJ4 = DF96
1M6 = DM70
6AK8 = 6T8
6AQ8 = ECC85
6BQ5 = EL84
6BR5 = EM80
6BY7 = EF85
6CD7 = EM34
6CN6 = EL38

6CQ6 = EF92
6DA6 = EF89
6R3 = EY81
6X2 = EY51
7AN7 = PCC84
8A8 = PCF80
9AK8 = PABC80
9AQ8 = PCC85
19D8 = UCH81