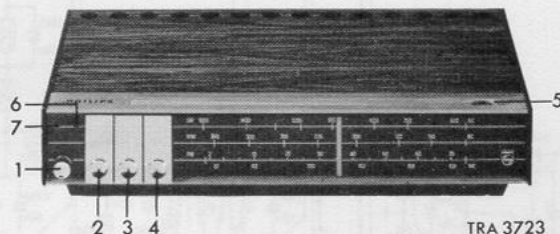


# Service manual



TRA 3723

## PHILIPS



- |                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>① Mains switch<br/>Netschakelaar<br/>Interrupteur secteur SK-C-D<br/>Netzschalter<br/>Commutatore rete</p> <p>② LW-switch<br/>LG-schakelaar<br/>Commutateur GO<br/>LW-Schalter<br/>Commutatore OL</p> | <p>③ MW-switch<br/>MG-schakelaar<br/>Commutateur PO SK-B<br/>MW-Schalter<br/>Commutatore OP</p> <p>④ FM-switch<br/>FM-schakelaar<br/>Commutateur FM SK-A<br/>UKW-Schalter<br/>Commutatore FM</p> <p>⑤ Tuning<br/>Afstemming S710<br/>Syntonisation S712<br/>Abstimmung C401a, b<br/>Sintonia</p> | <p>⑥ FM stereo indicator<br/>FM stereo-indikator LA410<br/>Indicateur FM stéréo<br/>UKW-Stereo-Indikator<br/>FM indicatore stereo</p> <p>⑦ Mains indicator<br/>Netindikator<br/>Indicateur secteur LA411<br/>Netzindikator<br/>Indice rete</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Voltages        | 110, 117, 127, 220, 240 V | Spanningen      | Tensions        | Spannungen      | 110, 117, 127, 220, 240 V | Tensioni        |
|-----------------|---------------------------|-----------------|-----------------|-----------------|---------------------------|-----------------|
| Consumption     | 4 W                       | Verbruik        | Consommation    | Verbrauch       | 4 W                       | Consumo         |
| IF-AM /00/33    | 452 kHz                   | MF-AM /00/33    | FI-AM /00/33    | ZF-AM /00/33    | 452 kHz                   | FI-AM /00/33    |
| IF-AM /16/22/30 | 460 kHz                   | MF-AM /16/22/30 | FI-AM /16/22/30 | ZF-AM /16/22/30 | 460 kHz                   | FI-AM /16/22/30 |
| IF-FM           | 10,7 MHz                  | MF-FM           | FI-FM           | ZF-UKW          | 10,7 MHz                  | FI-FM           |
| Dimensions      | 332x73x210 mm             | Afmetingen      | Dimensions      | Abmessungen     | 332x73x210 mm             | Dimensioni      |

### Wave ranges - Golfgebieden - Gammes d'ondes - Wellenbereiche - Scala d'onde

|                        |                                 |
|------------------------|---------------------------------|
| LW - LG - GO - LW - OL | : 150 - 260 kHz (2000 - 1154 m) |
| MW - MG - PO - MW - OP | : 520 - 1605 kHz ( 577 - 187 m) |
| FM - UKW               | : 87,5 - 104 MHz                |

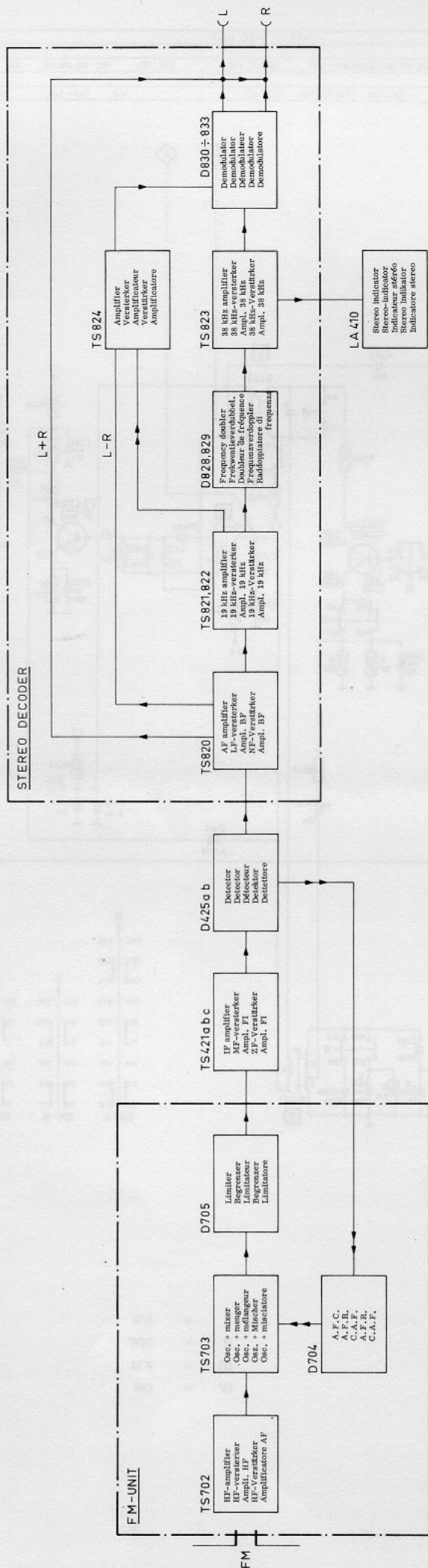
Index: CS23780-CS23785

Subject to modification

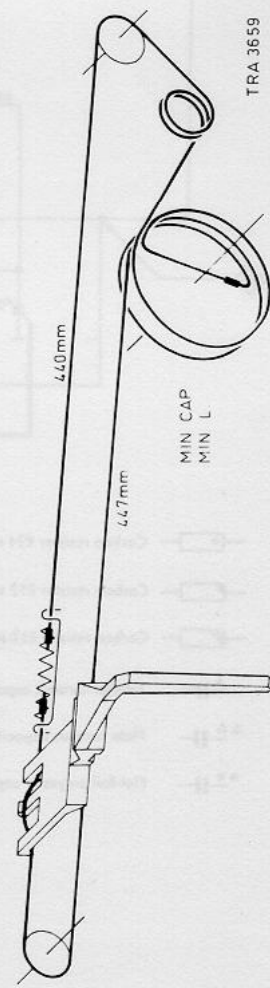
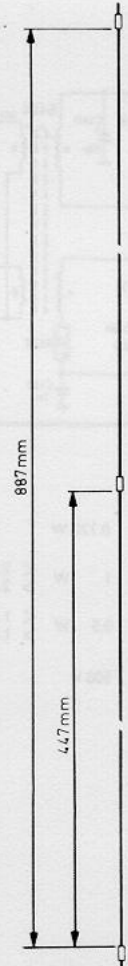
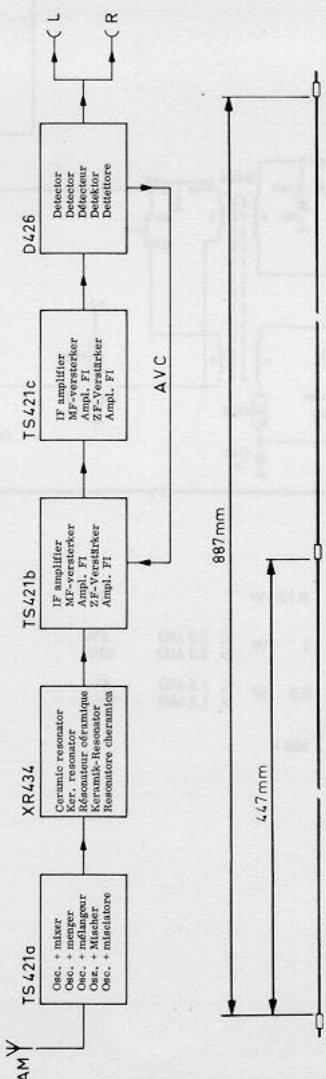
4822 725 10424

Printed in the Netherlands

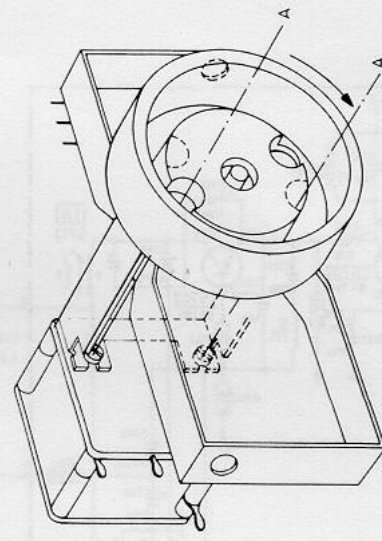




AC  
DC



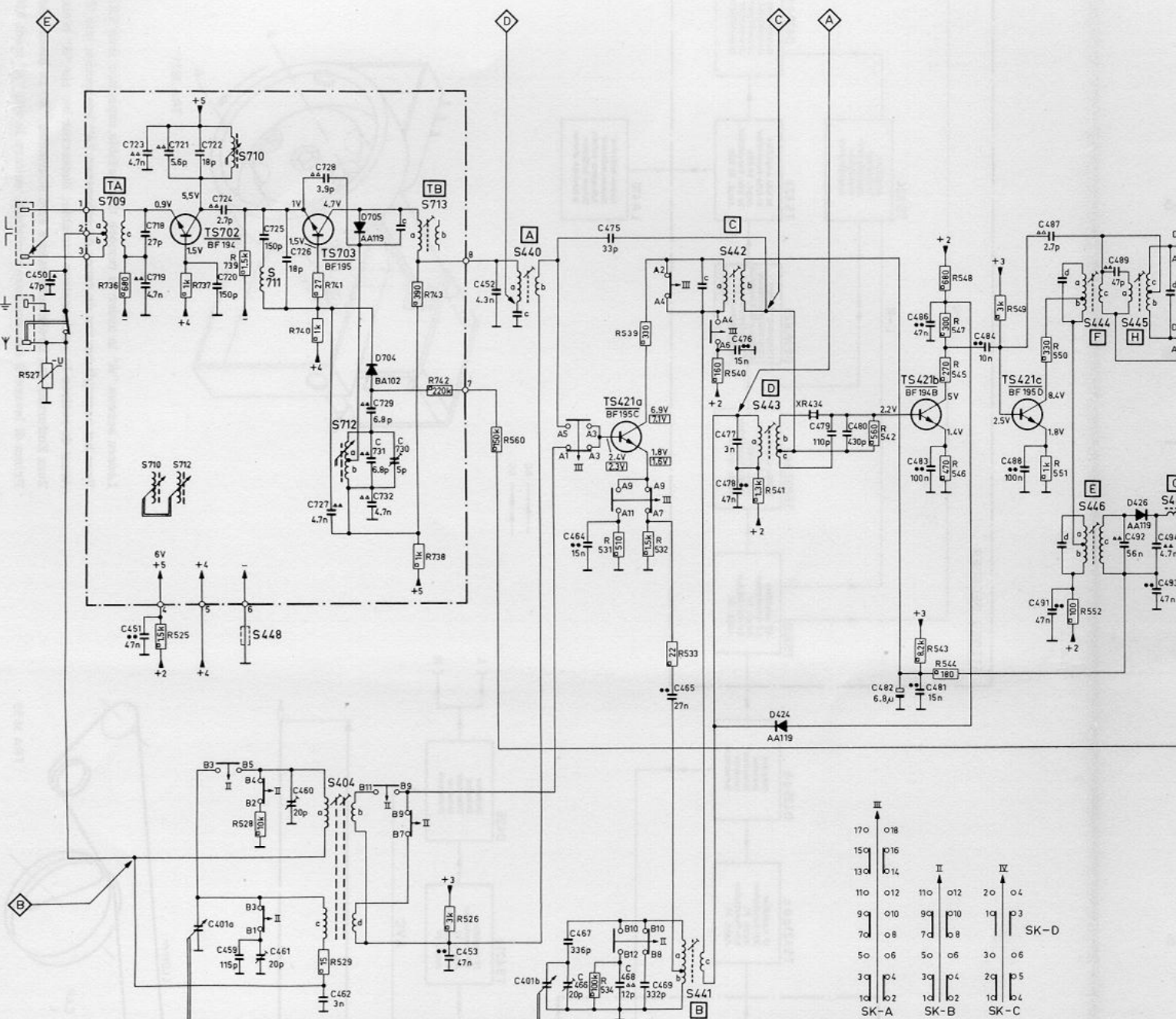
TRA 3659



TRA 3665

Loosen screws "A" in order to remove the variable capacitor (see TRA3671).  
 Voor het verwijderen van de varco de schroeven "A" losdraaien (zie TRA3671).  
 Avant de retirer le condensateur variable, desserrer les vis "A" (voir TRA3671).  
 Zum Entfernen des Drehkondensators sind Schrauben "A" zu lösen (siehe TRA3671).  
 Prima di levare il condensatore variabile, suture le viti "A" (vedi TRA3671).

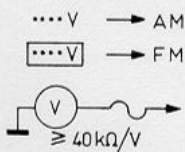
|   |                                                            |      |          |          |         |        |              |               |                        |                               |                       |              |          |                  |      |      |                            |                |
|---|------------------------------------------------------------|------|----------|----------|---------|--------|--------------|---------------|------------------------|-------------------------------|-----------------------|--------------|----------|------------------|------|------|----------------------------|----------------|
| S | TA.709.                                                    | 710. | 711.448. | 712.404. | 713.TB. | 440.A. | 441.B.       | 442.C. 443.D. | F.444.446.E. 445.H. 44 |                               |                       |              |          |                  |      |      |                            |                |
| C | 723.718.719. 721. 722.720.724. 725. 726. 728.727. 729+732. |      |          |          |         |        |              |               |                        |                               |                       |              |          |                  |      |      |                            |                |
| C | 450.                                                       | 451. | 401a.    | 459.     | 461.    | 460.   | 462.         | 453.          | 452.                   | 401b.466.467.464.475.468.469. | 465.                  | 476.477.478. | 479.480. | 482.481.486.483. | 484. | 488. | 487.491.                   | 489.492.494.45 |
| R | 527.                                                       | 736. | 737.     | 739.     | 741.    | 740.   | 743.738.742. |               |                        |                               |                       |              |          |                  |      |      |                            |                |
| R | 525.                                                       |      | 528.     |          | 529.    |        | 526.         |               | 560.                   |                               | 534.531. 539.532.533. |              | 540.541. |                  | 542. |      | 543+548. 549. 550.551.552. |                |



- Carbon resistor E24 series 0.125 W 5%
- Carbon resistor E12 series 1 W < 2.2 MΩ 5%  
> 2.2 MΩ 10%
- Carbon resistor E12 series 0.5 W < 1.5 MΩ 5%  
> 1.5 MΩ 10%
- Tubular ceramic capacitor 500 V
- Plate ceramic capacitor
- Flat-foil polyester capacitor

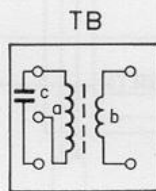
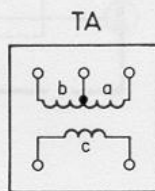
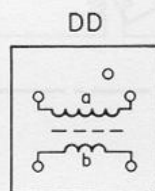
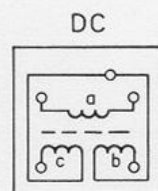
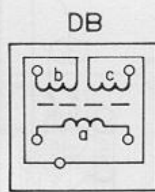
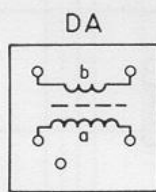
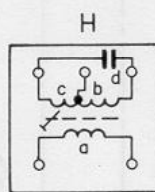
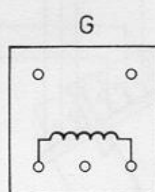
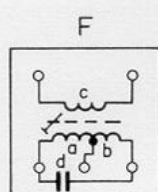
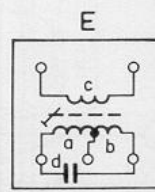
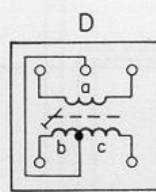
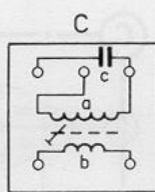
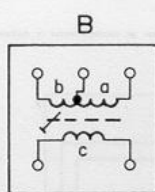
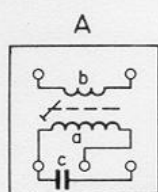
I = LW  
 II = MW  
 III = FM  
 IV = ON

| S405  |              |
|-------|--------------|
|       | $V_{(open)}$ |
| 6-7   | 35 V         |
| 7-8   | 35 V         |
| 9-10  | 9.1 V        |
| 10-11 | 10.5 V       |

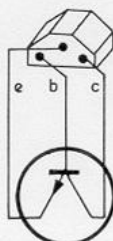


The circuit diagram has been drawn in position LW.

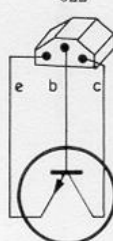
|   |                     |                |                                     |
|---|---------------------|----------------|-------------------------------------|
| S | TA. 710.            | 711. 712.      | TB.                                 |
| C |                     |                |                                     |
| C | 723. 719. 720. 722. | 721. 724. 718. | 725. 727. 728. 729. 726. 730 ÷ 732. |
| R |                     |                |                                     |
| R | 737.                | 738. 739. 736. | 740. 741. 742. 743.                 |



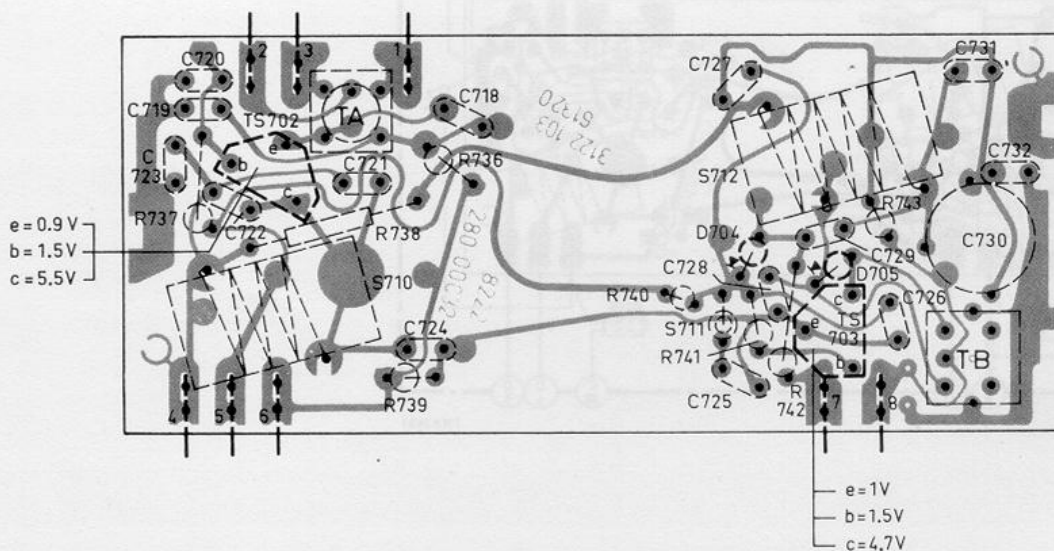
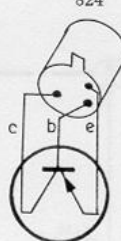
TS421  
a, b, c  
TS702, 703



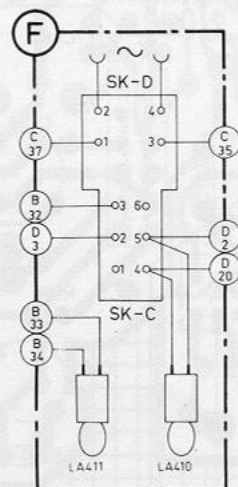
TS820  
821  
822



TS823  
824







Wire <sup>(D 15)</sup> (mentioned under unit A) leads to unit D, and is then referred to as <sup>(A 15)</sup>

Draad <sup>(D 15)</sup> (genoemd bij unit A) gaat naar unit D, en is daar <sup>(A 15)</sup> genoemd.

Le fil <sup>(D 15)</sup> (mentionné sous bloc A) va vers le bloc D, ou il est numéroté <sup>(A 15)</sup>

Draht <sup>(D 15)</sup> (bei Einheit A genannt) führt nach Einheit D, und ist dort <sup>(A 15)</sup> nummeriert.

Il filo <sup>(D 15)</sup> (di cui al blocco A) va verso blocco D, dovè marcato con <sup>(A 15)</sup>

Ledning <sup>(D 15)</sup> (nämnd under enhet A) leder till enhet D, och är där betecknad <sup>(A 15)</sup>

Ledning <sup>(D 15)</sup> (nævnt under enhet A) fører til enhed D, hvor den er angivet som <sup>(A 15)</sup>

Lodning <sup>(D 15)</sup> (se under enhet A) fører til enhet D, og er her betegnet med <sup>(A 15)</sup>

Johdin <sup>(D 15)</sup> (mainittu yksikössä A) johtaa yksikköön D, ja nimetään siten <sup>(A 15)</sup>

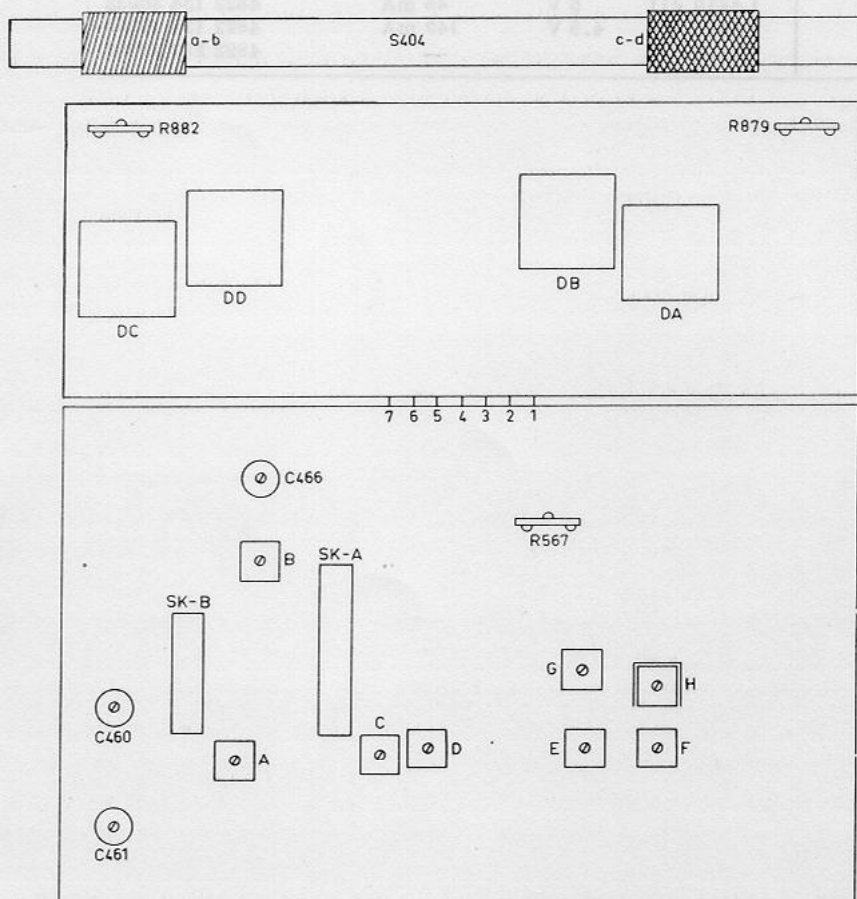


- 1 Determine the generator frequency at which the output voltage is maximum.
  - 2 Open bridge  $\Delta$ . Short-circuit C497 and detune  $\Delta$  and  $\Delta$ . Connect an oscilloscope to  $\Delta$ . Adjust for max. height and symmetry.
  - 3 Close bridge  $\Delta$ . Connect the oscilloscope to  $\Delta$ . Adjust for max. height and symmetry of the S-curve. Check the zero passage with the aid of a d.c. voltmeter.
  - 4 Adjust for max. AM rejection. If necessary, readjust S-curve.
  - 5 Tune.
  - 6 Connect a stereo generator (e.g. PM 6455).
  - 7 Disconnect points 1 and 6 of the decoder from the main printed circuit board. Adjust R879 for max. resistance with respect to +2. Adjust R882 for min. resistance.
  - 8 Level of input signal so high that stereo indicator just does not light up (approx. 33 mV).
  - 9 Level of input signal so high that stereo indicator just lights up.
- \* At a pilot signal (19 kHz) of 30...33 mV<sub>ac</sub> on point 1 the stereo indicator should light up.

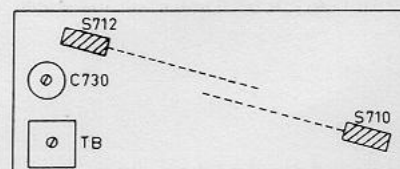
- 1 Rechercher la fréquence du générateur à laquelle la tension de sortie est au maximum.
  - 2 Ouvrir le pont  $\Delta$ . Court-circuiter C497. Dérégler  $\Delta$  et  $\Delta$ . Brancher l'oscilloscope à  $\Delta$ . Régler à hauteur et symétrie maximales.
  - 3 Fermer le pont  $\Delta$ . Connecter l'oscilloscope à  $\Delta$ . Ajuster la courbe en "S" sur hauteur et symétrie maximales. Vérifier le passage du zéro à l'aide d'un voltmètre de tension continue, par exemple.
  - 4 Réajuster sur suppression maximum AM. Corriger éventuellement la courbe en "S".
  - 5 Syntoniser.
  - 6 Brancher le générateur stéréo (un PM 6455, par exemple).
  - 7 Détacher les points 1 et 6 du décodeur de la platine principale. Régler R879 sur résistance maximum par rapport à +2. R882 sur résistance minimale.
  - 8 Régler le niveau du signal d'entrée de telle sorte que l'indicateur stéréo ne s'allume tout juste pas ( $\pm 33$  mV).
  - 9 Régler le niveau d'entrée de telle sorte que l'indicateur stéréo s'allume tout juste.
- \* L'indicateur stéréo doit s'allumer au signal témoin (19 kHz) de 30-33 mV<sub>ac</sub> au point 1.

- 1 Frekwentie van de generator opzoeken, waarbij de uitgangsspanning maximaal is.
  - 2 Brug  $\Delta$  openen. C497 kortsluiten,  $\Delta$  en  $\Delta$  ontregelen. Oscillograaf aan  $\Delta$  aansluiten. Afregelen op maximale hoogte en symmetrie.
  - 3 Brug  $\Delta$  sluiten. Oscillograaf aan  $\Delta$  aansluiten. "S" kromme afregelen op maximale hoogte en symmetrie. Nuldoorgang controleren m.b.v. gelijkspanningsvoltmeter.
  - 4 Afregelen op maximale AM-onderdrukking. "S" kromme eventueel bijregelen.
  - 5 Afstemmen.
  - 6 Stereo-generator aansluiten (bijv. PM 6455).
  - 7 Punt 1 en 6 decoder losmaken van hoofdprint. R879 op maximale weerstand t.o.v. +2 regelen. R882 op minimale weerstand regelen.
  - 8 Niveaue inputsignaal zo groot, dat stereoindicator juist niet brandt ( $\pm 33$  mV).
  - 9 Niveaue inputsignaal zo groot, dat stereoindicator juist brandt.
- \* Bij pilotsignaal (19 kHz) van 30-33 mV<sub>ac</sub> op punt 1 moet de stereoindicator gaan branden.

- 1 Suche die Frequenz des Generators deren Ausgangsspannung maximal ist.
  - 2 Öffne Brücke  $\Delta$ . Schliesse C497 kurz. Entregle  $\Delta$  und  $\Delta$ . Schliesse den Oszillografen an Punkt  $\Delta$  an. Auf maximale Höhe und Symmetrie abgleichen.
  - 3 Schliesse Brücke  $\Delta$ . Den Oszillografen an  $\Delta$  anschliessen. "S"-Kurve auf maximale Höhe und Symmetrie abgleichen. Nulldurchgang mit z.B. einem Gleichspannungsvoltmeter kontrollieren.
  - 4 Gleiche auf maximale AM-Unterdrückung ab. "S"-Kurve ggf. korrigieren.
  - 5 Abstimmen.
  - 6 Schliesse Stereo-Generator an (z.B. PM 6455).
  - 7 Löse Punkt 1 und 6 des Decoders von der Hauptprintplatte. R879 auf maximalen Widerstand in bezug auf +2 regeln. R882 auf minimalen Widerstand abgleichen.
  - 8 Wähle den Pegel des Eingangssignals derartig, dass der Stereoindikator gerade nicht aufleuchtet ( $\pm 33$  mV).
  - 9 Wähle den Pegel des Eingangssignals derartig, dass der Stereoindikator gerade aufleuchtet.
- \* Bei einem Anzeigesignal (19 kHz) von 30-33 mV<sub>ac</sub> an Punkt 1, soll der Stereoindikator aufleuchten.



- 1 Determinare la frequenza del generatore a cui si ha la massima tensione d'uscita.
  - 2 Aprire il ponte  $\Delta$ . Cortocircuitare C497 e portare fuori i ponti  $\Delta$  e  $\Delta$ . Collegare un oscilloscopio al punto  $\Delta$ . Regolare per ampiezza massima e per buona simmetria.
  - 3 Ripristinare i collegamenti del ponte  $\Delta$ . Collegare l'oscilloscopio al punto  $\Delta$ . Regolare per massima ampiezza e buona simmetria della curva ad "S". Controllare il passaggio per lo zero a mezzo di un voltmetro c.c.
  - 4 Regolare per massima reiezione dell'AM se necessario regolare nuovamente la curva ad "S".
  - 5 Sintonizzare.
  - 6 Collegare un generatore stereo (sd esempio PM 6455).
  - 7 Staccare i punti 1 e 6 del decodificatore del pannello stampato principale. Regolare R879 per massima resistenza rispetto al +2. Regolare R882 per minima resistenza.
  - 8 Il livello del segnale in ingresso deve essere così ampio che l'indicatore stesso è appena spento (circa 33 mV).
  - 9 Il livello del segnale in ingresso deve essere così ampio che l'indicatore stereo è appena acceso.
- \* Per un segnale pilota (19 kHz) di 30...33 mV c.a. al punto 1 l'indicatore stesso deve accendersi.



| Wave Range<br>Golfsgebied<br>Gamme d'onde<br>Wellenbereich<br>Scala d'onde | Signal<br>Signaal<br>Signal<br>Signal<br>Segnale    | Connect to<br>Aansluiten aan<br>Connecter à<br>Anschliessen an<br>Connessione a | Trimming point<br>Trimpunt<br>Point de réglage<br>Trimpunkt<br>Punto di regolazione | Adjust<br>Afregelen<br>Régler<br>Abgleichen<br>Regolare | Indication<br>Aanwijzing<br>Indication<br>Anzeige<br>Indicazione |
|----------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------|
| MW (520-1605 kHz)                                                          | /00/33 - 452 kHz 33 nF<br>/16/22/30 - 460 kHz       | A                                                                               | C401<br>max. cap.                                                                   | E                                                       | 1 max.                                                           |
|                                                                            | 1 33 nF                                             |                                                                                 |                                                                                     | E                                                       |                                                                  |
|                                                                            |                                                     | B                                                                               |                                                                                     | D                                                       |                                                                  |
| MW (520-1605 kHz)                                                          | 512 kHz                                             | B                                                                               | C401 max. cap.                                                                      | B                                                       | 1 max.                                                           |
|                                                                            | 1635 kHz                                            |                                                                                 | C401 min. cap.                                                                      | C466                                                    |                                                                  |
| Repeat - Herhalen - Recommencer - Wiederholen - Ricominciare               |                                                     |                                                                                 |                                                                                     |                                                         |                                                                  |
| LW (150-260 kHz)                                                           | 156,5 kHz                                           | B                                                                               | 5                                                                                   | S404c-d                                                 | 1 max.                                                           |
| MW (520-1605 kHz)                                                          | 550 kHz                                             |                                                                                 |                                                                                     | S404a-b                                                 |                                                                  |
|                                                                            | 1500 kHz                                            |                                                                                 |                                                                                     | C460                                                    |                                                                  |
| LW (150-260 kHz)                                                           | 263,5 kHz                                           |                                                                                 |                                                                                     | C461                                                    |                                                                  |
| Repeat - Herhalen - Recommencer - Wiederholen - Ricominciare               |                                                     |                                                                                 |                                                                                     |                                                         |                                                                  |
| FM (87.5-104 MHz)                                                          | 10.7 MHz<br>Δ f = 200 kHz<br>(50 Hz)<br>4.7 nF      | C                                                                               | S712<br>min. L                                                                      | F                                                       | 2                                                                |
|                                                                            |                                                     | D                                                                               |                                                                                     | C                                                       |                                                                  |
|                                                                            |                                                     | E                                                                               |                                                                                     | TB                                                      |                                                                  |
|                                                                            | A                                                   |                                                                                 |                                                                                     | 3 3                                                     |                                                                  |
|                                                                            | H                                                   |                                                                                 |                                                                                     |                                                         |                                                                  |
|                                                                            | 10.7 MHz<br>Δ f = 200 kHz<br>(50 Hz)<br>+ AM 4.7 nF |                                                                                 |                                                                                     | R556                                                    | 4 3                                                              |
| FM (87.5-104 MHz)                                                          | 104 MHz                                             | E                                                                               | S712 min. L                                                                         | C730                                                    | 1 max.                                                           |
|                                                                            | 87.5 MHz                                            |                                                                                 | S712 max. L                                                                         | S710                                                    |                                                                  |
|                                                                            | 96 MHz                                              |                                                                                 | 5                                                                                   | S712                                                    |                                                                  |
| Repeat - Herhalen - Recommencer - Wiederholen - Ricominciare               |                                                     |                                                                                 |                                                                                     |                                                         |                                                                  |

| STEREODECODER                                                |                                                   |                           |                                                         |                                                                  |
|--------------------------------------------------------------|---------------------------------------------------|---------------------------|---------------------------------------------------------|------------------------------------------------------------------|
|                                                              | Signal<br>Signaal<br>Signal<br>Signal<br>Segnale  | To<br>Aan<br>A<br>An<br>A | Adjust<br>Afregelen<br>Régler<br>Abgleichen<br>Regolare | Indication<br>Aanwijzing<br>Indication<br>Anzeige<br>Indicazione |
| ⑦                                                            | Pilot (19 kHz)<br>⑧                               | ◇                         | DA                                                      | ④ max<br>(≥ 150 mV~)                                             |
|                                                              | Pilot (19 kHz)<br>⑨                               |                           | DB                                                      | ⑤ max.<br>(≥ 9,5 V~)                                             |
|                                                              |                                                   |                           | DC                                                      | ⑥ max.<br>(≥ 6 V~)                                               |
|                                                              | Pilot (19 kHz)<br>+ L+R<br>+ L-R (S) ⑨<br>+ 1 kHz |                           | DD                                                      | ⑦ max.                                                           |
| ⑦                                                            | Pilot 19 kHz<br>(33 mV~) ⑨<br>+ Left 1 kHz        | ◇                         | DD                                                      | ⑧ max                                                            |
|                                                              |                                                   |                           | DB                                                      |                                                                  |
| Repeat - Herhalen - Recommencer - Wiederholen - Ricominciare |                                                   |                           |                                                         |                                                                  |
|                                                              | Pilot 19 kHz<br>(33 mV~) ⑨<br>+ Right 1 kHz       | ◇                         | R879                                                    | ⑧ min.                                                           |
|                                                              | Pilot 19 kHz<br>(33 mV~) ⑨<br>+ Right 5 kHz       |                           | R882                                                    |                                                                  |
| Repeat - Herhalen - Recommencer - Wiederholen - Ricominciare |                                                   |                           |                                                         |                                                                  |

|                            |                |                                |                                       |                                   |                |                                         |
|----------------------------|----------------|--------------------------------|---------------------------------------|-----------------------------------|----------------|-----------------------------------------|
| Cabinet compl. /P (palis.) | 4822 425 40121 | Kast compleet /P (palis.)      | Coffret complet /P (palis.)           | Gehäuse komplett /P (Palis.)      | 4822 425 40121 | Mobile completo /P (palis.)             |
| Cabinet compl. /Z (walnut) | 4822 425 40122 | Kast compleet /Z (noten)       | Coffret complet /Z (noix)             | Gehäuse komplett /Z (Nussbaum)    | 4822 425 40122 | Mobile completo /Z (noce)               |
| Cabinet compl. /T (teak)   | 4822 425 40123 | Kast compleet /T (teak)        | Coffret complet /T (teak)             | Gehäuse komplett /T (Teak)        | 4822 425 40123 | Mobile completo /T (teck)               |
| Foot                       | 4822 462 70646 | Voet                           | Pied                                  | Fuss                              | 4822 462 70646 | Piedine                                 |
| Ornamental strip (lower)   | 4822 460 10245 | Sierstrip (onder)              | Enjoliveur (inférieur)                | Zierleiste (unten)                | 4822 460 10245 | Nastro decorativo (inferiore)           |
| Cover in bottom plate      | 4822 426 60027 | Luik in bodemplaat             | Couvercle dans le fond                | Abdeckplatte im Boden             | 4822 426 60027 | Coperchio piastra di fondo              |
| Cover compl. /P (palis.)   | 4822 426 40008 | Bovenplaat kompl. /P (palis)   | Panneau supérieur complet /P (palis.) | Oberplatte komplett /P (Palis.)   | 4822 426 40008 | Pannello superiore completo /P (palis.) |
| Cover compl. /Z (walnut)   | 4822 426 40009 | Bovenplaat kompl. /Z (noten)   | Panneau supérieur complet /Z (noix)   | Oberplatte komplett /Z (Nussbaum) | 4822 426 40009 | Pannello superiore completo /Z (noce)   |
| Cover compl. /T (teak)     | 4822 426 40011 | Bovenplaat kompl. /T (teak)    | Panneau supérieur complet /T (teak)   | Oberplatte komplett /T (Teak)     | 4822 426 40011 | Pannello superiore completo /T (teck)   |
| Knob tuning                | 4822 413 50719 | Afstemknop                     | Bouton de syntonisation               | Abstimmknopf                      | 4822 413 50719 | Manopola di sintonia                    |
| Push-button (mains switch) | 4822 410 20976 | Druktoets (netschakelaar)      | Touche (interrupteur secteur)         | Drucktaste (Netzschalter)         | 4822 410 20976 | Tasto (interruptore di rete)            |
| Slide switch compl. MW     | 4822 277 30391 | Schuifschakelaar compl. MG     | Commutateur à tiroir PO (complet)     | Schiebeschalter MW (komplett)     | 4822 277 30391 | Commutatore a slitta OP                 |
| Slide switch compl. FM     | 4822 277 30415 | Schuifschakelaar compl. FM     | Commutateur à tiroir FM (complet)     | Schiebeschalter UKW (komplett)    | 4822 277 30415 | Commutatore a slitta FM                 |
| Mains switch               | 4822 276 10373 | Netschakelaar                  | Interrupteur secteur                  | Netzschalter                      | 4822 276 10373 | Interruttore di rete                    |
| Slider of slide switch MW  | 4822 278 20272 | Schuif van schuifschakelaar MG | Tiroir du commutateur PO              | Schieber von Schiebeschalter MW   | 4822 278 20272 | Cursore del commutatore a slitta OP     |
| Slider of slide switch FM  | 4822 278 20276 | Schuif van schuifschakelaar FM | Tiroir du commutateur FM              | Schieber von Schiebeschalter UKW  | 4822 278 20276 | Cursore del commutatore a slitta FM     |
| Fixing spring for slider   | 4822 310 20123 | { Veer voor bev. schuif        | { Ressort de fixation du tiroir       | { Feder für Schieber              | 4822 310 20123 | { Molla di fissaggio cas.               |
| Coupling pin for slider    |                | { Pen voor bev. schuif         | { Goupille de fixation du tiroir      | { Kupplungsstift Schieber         |                | { Coppiglia di fissaggio                |
| Coupling piece for slider  | 4822 278 10036 | { Koppelsstuk voor schuif      | { Coupleur du tiroir                  | { Drucktasteneinheit (komplett)   | 4822 278 10036 | { Accoppiatore per slitta               |
| Push-button unit (compl.)  |                | { Druktoetseenheid (compleet)  | { Ens. clavier (complet)              | { Anschl. AM                      |                | { Insieme tastiera (completo)           |
| Socket AM                  | 4822 267 20072 | Aansluiting AM                 | Prise AM                              | Anschluss AM                      | 4822 267 20072 | Presa AM                                |
| Plug AM                    | 4822 264 30042 | Steker AM                      | Fiche AM                              | Stecker AM                        | 4822 264 30042 | Spina AM                                |
| Socket FM                  | 4822 267 30064 | Aansluiting FM                 | Prise FM                              | Anschluss UKW                     | 4822 267 30064 | Presa FM                                |
| Plug FM                    | 4822 264 30043 | Steker FM                      | Fiche FM                              | Stecker UKW                       | 4822 264 30043 | Spina FM                                |
| Socket, 5 poles            | 4822 267 40041 | Aansluiting 5polig             | Prise (5 pôles)                       | Anschluss (5 polig)               | 4822 267 40041 | Presa pentapolare                       |
| Plug, 5 poles              | 4822 264 40023 | Steker 5polig                  | Fiche (5 pôles)                       | Stecker (5 polig)                 | 4822 264 40023 | Spine pentapolare                       |
| Drum AM-FM tuning          | 4822 528 40161 | Trommel AM-FM afstemming       | Tambour AM-FM syntonisation           | Trommel AM-UKW Abstimmung         | 4822 528 40161 | Tamburo AM-FM di sintonia               |
| Pulley                     | 4822 526 80071 | Snaarwiel                      | Poulie                                | Seilrad                           | 4822 526 80071 | Puleggia                                |
| Pointer                    | 4822 450 80285 | Wijzer                         | Aiguille                              | Zeiger                            | 4822 450 80285 | Indica                                  |
| Drive cord                 | 4822 321 30101 | Aandrijfsnaar                  | Corde d'entraînement                  | Antriebssepe                      | 4822 321 30101 | Cordina di trasmissione                 |
| Grommet for FM unit        | 4822 325 60146 | Tule voor bev. FM- eenheid     | Manchon de fix. bloc FM               | Tülle für FM-Einheit              | 4822 325 60146 | Manicotto di fissaggio unità FM         |
| Grommet lamps              | 4822 325 60042 | Tule bevestiging lamp          | Manchon de lampe                      | Tülle für Lampe                   | 4822 325 60042 | Manicotto lampadine                     |
| Holder ferroreceptor       | 4822 401 10507 | Houder voor ferroreceptor      | Porte-ferrorecepteur                  | Halterung für Ferroreceptor       | 4822 401 10507 | Supporto del ferroreceptor              |
| Front and scale compl.     | 4822 464 70031 | Front en schaal kompl.         | Partie frontale et cadran complet     | Front und Skala komplett          | 4822 464 70031 | Scala frontale compl.                   |
| Scale cover (large)        | 4822 466 70194 | Afdekl. schaal (groot)         | Couvercle de cadran (grand)           | Skalenabdeckplatte (gross)        | 4822 466 70194 | Coperchio scala frontale (grande)       |
| Scale cover (small)        | 4822 466 70193 | Afdekl. schaal (klein)         | Couvercle de cadran (petit)           | Skalenabdeckplatte (klein)        | 4822 466 70193 | Coperchio scala frontale (piccolo)      |
| Scale illumination         | 4822 381 10291 | Lichtverder. achter schaal     | Illumination derrière le cadran       | Lichtverteiler hinter Skala       | 4822 381 10291 | Illuminazione scala                     |
| FM tuner + gang cap.       | 4822 210 10139 | FM tuner + varco               | Tuner FM + condens. variable          | FM-Tuner + Drehkondensator        | 4822 210 10139 | Tuner FM + condensatore variabile       |
| Stereodecoder              | 4822 210 30021 | Stereodecoder                  | Décodeur stéréo                       | Stereo-Decoder                    | 4822 210 30021 | Decodificatore stereo                   |

-S- 

|      |      |                |
|------|------|----------------|
| S404 | abcd | 4822 158 60275 |
| S405 |      | 4822 146 20388 |
| S440 | 501- | 4822 153 50033 |
| S441 | 422- | 4822 156 30314 |
| S442 | 501- | 4822 153 50033 |
| S443 | 861- | 4822 156 30244 |
| S444 | 95-- | 4822 153 50031 |
| S445 | 06-- | 4822 153 50032 |
| S446 | 07-- | 4822 153 10101 |
| S447 | 35-- | 4822 156 20184 |
| S448 |      | 4822 526 10024 |

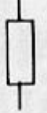
-C- 

|          |         |      |     |   |                |
|----------|---------|------|-----|---|----------------|
| C401     | 4,3 nF  | 25 V | 2   | % | 4822 125 20147 |
| C452     | 115 pF  | 63 V | 1   | % | 4822 121 50269 |
| C459     | 20 pF   | 63 V | 1   | % | 4822 121 50018 |
| C460,461 | 3 nF    | 63 V | 5   | % | 4822 125 50029 |
| C462     | 20 pF   | 63 V | 5   | % | 4822 121 50106 |
| C466     | 336 pF  | 63 V | 1   | % | 4822 125 50029 |
| C467     | 332 pF  | 63 V | 1   | % | 4822 121 50465 |
| C469     | 33 pF   | 63 V | 1   | % | 4822 121 50464 |
| C475     | 33 pF   | 63 V | 5   | % | 4822 121 50005 |
| C477     | 3 nF    | 63 V | 2,5 | % | 4822 121 50414 |
| C479     | 110 pF  | 63 V | 1   | % | 4822 121 50463 |
| C480     | 430 pF  | 63 V | 1   | % | 4822 121 50412 |
| C482     | 6,8 μF  | 40 V |     |   | 4822 124 20351 |
| C490     | 470 pF  |      | 2   | % | 4822 122 30033 |
| C496     | 4,7 μF  | 64 V |     |   | 4822 124 20347 |
| C497     | 2,2 μF  | 63 V |     |   | 4822 124 20343 |
| C500     | 10 μF   | 63 V |     |   | 4822 124 20353 |
| C506,507 | 220 μF  | 16 V |     |   | 4822 124 20395 |
| C508     | 330 μF  | 63 V |     |   | 4822 124 20404 |
| C511     | 1000 μF | 25 V |     |   | 4822 124 20419 |
| C512     | 220 μF  | 63 V |     |   | 4822 124 20396 |

-TS- 

|              |            |                |
|--------------|------------|----------------|
| TS421a, b, c | BF195c     | 4822 130 40421 |
|              | BF194b     |                |
| TS702        | BF194      | 4822 130 40303 |
| TS703        | BF195      | 4822 130 40304 |
| TS820        | BC147      | 4822 130 40311 |
| TS821        | BC147a     | 4822 130 40214 |
| TS822        | BC147      | 4822 130 40311 |
| TS823        | BC107      | 4822 130 40357 |
| TS824        | BC177      | 4822 130 40522 |
| D424         | AA119      | 4822 130 40229 |
| D425a, b     | 2xA119     | 4822 130 30312 |
| D426         | AA119      | 4822 130 40229 |
| D428         | BZY88/C9V1 | 4822 130 30294 |
| D429-431     | BA148      | 4822 130 30256 |
| D704         | BA102      | 4822 130 30272 |
| D705         | AA119      | 4822 130 40229 |
| D828-833     | AA119      | 4822 130 40229 |

-D- 

-R- 

|      |         |                |
|------|---------|----------------|
| R527 | VDR     | 4822 116 20003 |
| R556 | 470 Ω   | 4822 100 10023 |
| R557 | 0,33 MΩ | 4822 110 61174 |
| R565 | 510 Ω   | 4822 111 20012 |
| R566 | 1 kΩ    | 4822 111 20018 |
| R567 | 4,7 kΩ  | 4822 100 10025 |
| R573 | 2,7 Ω   | 4822 111 30338 |
|      | 1/4 W   |                |
|      | 10 %    |                |

- Various -

|           |         |                |
|-----------|---------|----------------|
| XR434     | 452 kHz | 4822 242 70113 |
| XR434     | 460 kHz | 4822 242 70146 |
| LA410,411 | 6 V     | 4822 134 40032 |
| LA412,413 | 4,5 V   | 4822 134 40209 |
| VL1,2     | 140 mA  | 4822 252 20007 |

# Servicemededeling

PHILIPS NEDERLAND B.V. - EINDHOVEN  
TECHNISCHE SERVICE

Ref. R 271

Type 22RH690, 22RH691

Datum november 1974

De transformator welke voor de 22RH690 en 22RH691 wordt geleverd, is gewijzigd.

In fig.1 is de "oude" transformator getekend, zoals deze in de documentatie is opgenomen.

Fig.2 geeft een schets van de "nieuwe" transformator, welke nu geleverd wordt.

Bij de nieuwe transformator is punt 12 vervallen en zijn de plaatsen van de aansluitpunten veranderd.

De nummers van de aansluitpunten van beide transformatoren zoals in fig.1 en fig.2 getekend, corresponderen elektrisch met elkaar. Dientengevolge moet bij het vervangen van de transformator, de draad welke in de oude toestand aan bv. punt 5 was aangesloten, in de nieuwe situatie ook aan punt 5 worden gesoldeerd.

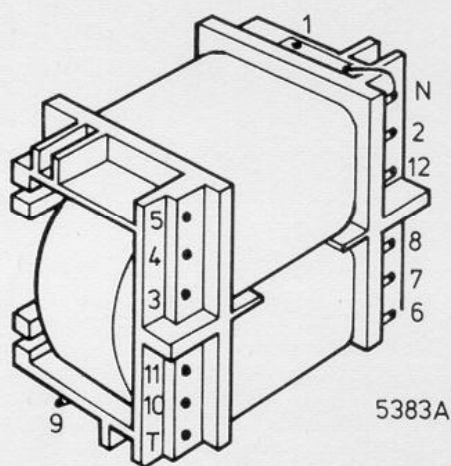


Fig. 1

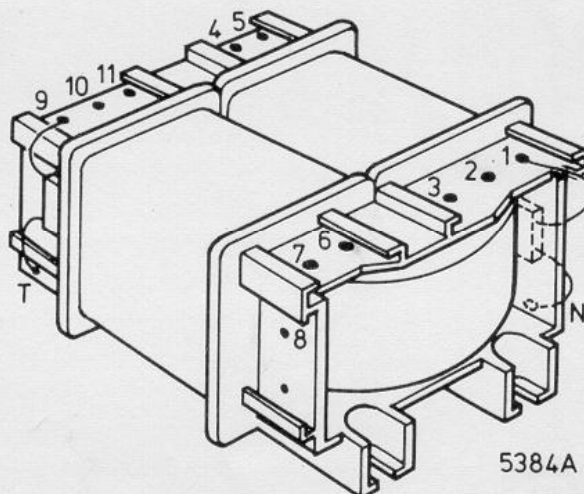


Fig. 2