

Technical Manual

STEREO ACTIVE CONTROLLER

RHA10

REMOTE HANDUNIT

RHR10AT

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Specifications

| | |
|----------------------------|-------------------------------|
| Total Harmonic Distortion | |
| (20 Hz — 20 kHz, | |
| rated output) | No more than 0.004% |
| (20 Hz — 20 kHz, | |
| 10 V output)..... | No more than 0.004% |
| Intermodulation | |
| Distortion | |
| (60 Hz : 7 kHz = 4 : 1) .. | No more than 0.004% |
| Input (1-5) Sensitivity/ | |
| Impedance..... | 140 mV/13 kohms |
| REC OUT Impedance .. | 100 ohms |
| Output Sensitivity/ | |
| Impedance..... | 0.775 V/100 ohms |
| Frequency response..... | 4 Hz — 100 kHz ± 0.1 dB |
| Signal-to-Noise Ratio | |
| (IHF A Network)..... | 100 dB |
| Power Supply..... | AC 120 V/60 Hz, 230 V/50 Hz, |
| | 240 V/50 Hz |
| Power Consumption | 12 W (2.4 W during standby) |
| Dimensions..... | 470 (W) × 76 (H) × 332 (D) mm |
| | (18 1/2" × 3" × 13 1/16") |
| Weight | 7.7 kg/16.90 lbs |

- Specifications and design subject to possible modification without notice.

Serial No.
Beginning

| SYMBOL | PARTS NO. | DESCRIPTION |
|-----------------------------------|---------------------|------------------------|
| <u>016E-1192-00T PCB ASSEMBLY</u> | | |
| C401, 402 | 041 25BGF100M | CAP, ELEC. 25V100UF |
| C403, 404 | 041 25BGF100M | CAP, ELEC. 25V100UF |
| C405, 406 | 044 MKT1818-410/015 | CAP, M. P 100V104K |
| C407, 408 | 044 MKT1818-410/015 | CAP, M. P 100V104K |
| C501, 502 | 041 25BGF47M | CAP, ELEC. 25V47UF |
| C503, 504 | 044 FKP2-100V101 | CAP, P. P 100V100PF |
| C505, 506 | 041 50BGF010M | CAP, ELEC. 50V10UF |
| C507, 508 | 041 25BGF47M | CAP, ELEC. 25V47UF |
| C515, 516 | 041 35BGF100M | CAP, ELEC. 35V100UF |
| C517, 518 | 041 35BGF100M | CAP, ELEC. 35V100UF |
| C901, 902 | 041 LGS1H472MHS | CAP, ELEC. 50V4700UF |
| C903, 904 | 041 LGS1H472MHS | CAP, ELEC. 50V4700UF |
| C905, 906 | 041 35BGF470M | CAP, ELEC. 35V470UF |
| C907, 908 | 041 35BGF470M | CAP, ELEC. 35V470UF |
| C909, 910 | 041 35BGF100M | CAP, ELEC. 35V100UF |
| C911, 912 | 041 35BGF100M | CAP, ELEC. 35V100UF |
| C915, 916 | 041 35BGF470M | CAP, ELEC. 35V470UF |
| C917, 918 | 041 25BGF100M | CAP, ELEC. 25V100UF |
| C922 | 043 250VZF103 | CAP, CERA. 250V0. 01UF |
| C923 | 043 250VZF103 | CAP, CERA. 250V0. 01UF |
| C924 | 043 250VZF103 | CAP, CERA. 250V0. 01UF |
| C925, 926 | 044 MKT1818-410/015 | CAP, M. P 100V0. 1UF |
| C927, 928 | 044 MKT1818-410/015 | CAP, M. P 100V0. 1UF |
| C001 | 043 250VZF103 | CAP, CERA 250V0. 01UF |
| C002 | 043 250VZF103 | CAP, CERA 250V0. 01UF |
| D501, 502 | 034 1N4148 | DIODE |
| D503, 504 | 034 1N4148 | DIODE |
| D505, 506 | 034 1N4148 | DIODE |
| D507, 508 | 034 1N4148 | DIODE |
| D509, 510 | 034 MA27W-A | DIODE |
| D701 | 034 1N4148 | DIODE |
| D713 | 034 1N4148 | DIODE |
| D714 | 034 1N4148 | DIODE |
| D715 | 034 1N4148 | DIODE |
| D901, 902 | 034 BR84 | DIODE |
| D905 | 034 RD24EB | DIODE |
| D907 | 034 RD24EB | DIODE |
| D908 | 034 RD18EB | DIODE |
| D909 | 034 RD18EB | DIODE |
| D910 | 034 E562 | DIODE |
| D912 | 034 E562 | DIODE |
| IC401, 402 | 031 AD712JN | IC |
| Q501, 502 | 033 2SC2362K-FG | TRANSISTOR |
| Q503, 504 | 033 2SC2362K-FG | TRANSISTOR |
| Q505, 506 | 033 2SA1016K-FG | TRANSISTOR |
| Q507, 508 | 033 2SA1016K-FG | TRANSISTOR |
| Q509, 510 | 033 2SA1016K-FG | TRANSISTOR |
| Q511, 512 | 033 2SC2362K-FG | TRANSISTOR |
| Q513, 514 | 033 2SA1016K-FG | TRANSISTOR |
| Q515, 516 | 033 2SC2362K-FG | TRANSISTOR |

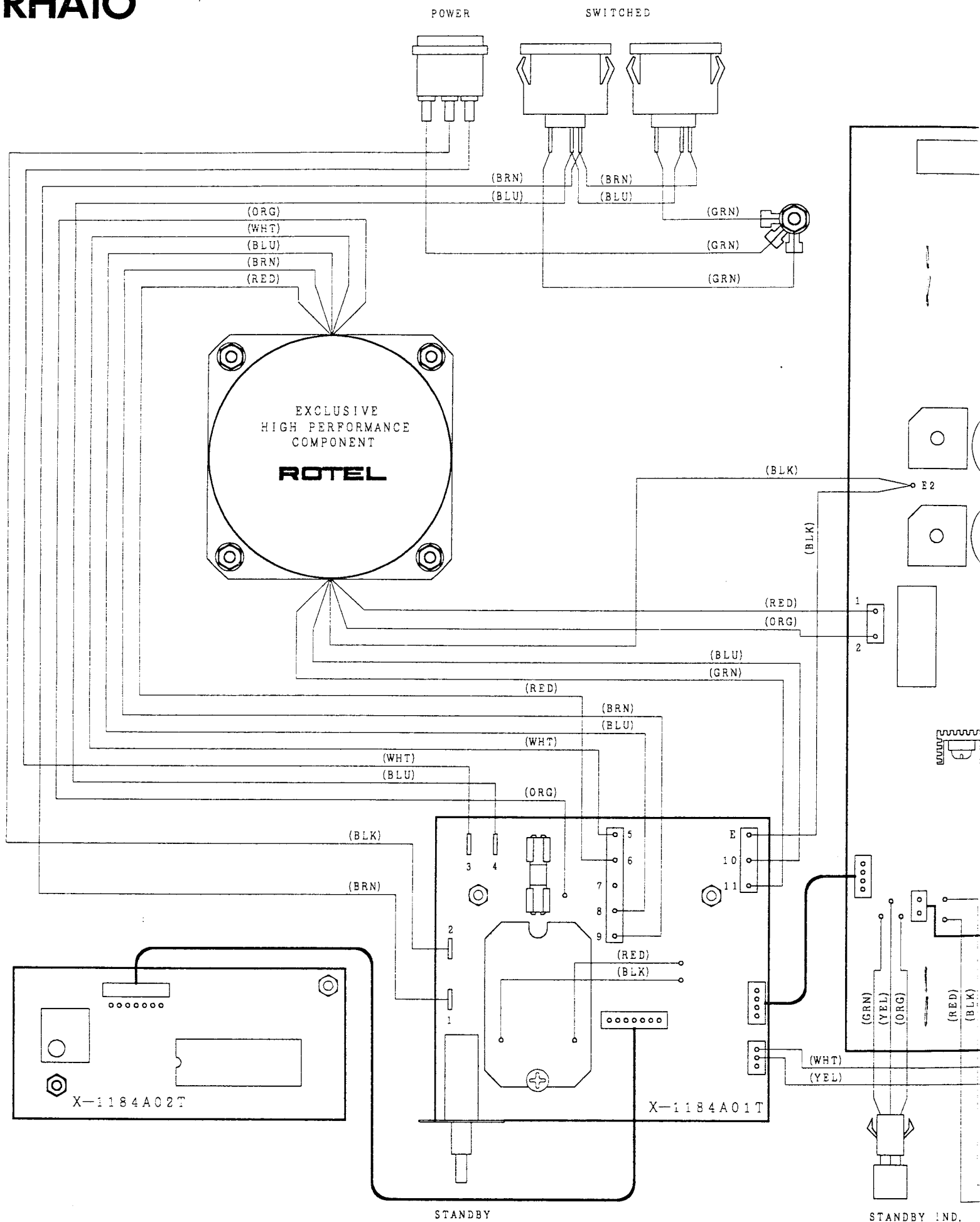
| SYMBOL | PARTS NO. | DESCRIPTION |
|-----------|-----------------|-------------------|
| Q517, 518 | 033 2SC2682-P | TRANSISTOR |
| Q519, 520 | 033 2SA1142-P | TRANSISTOR |
| Q701 | 032 2SC536K-FG | TRANSISTOR |
| Q702 | 032 2SC536K-FG | TRANSISTOR |
| Q710 | 032 2SC536K-FG | TRANSISTOR |
| Q711 | 032 2SC536K-FG | TRANSISTOR |
| Q901, 902 | 033 2SB631K-EF | TRANSISTOR |
| Q903, 904 | 033 2SD600K-EF | TRANSISTOR |
| Q905, 906 | 033 2SC536K-EF | TRANSISTOR |
| Q907, 908 | 033 2SA608K-FG | TRANSISTOR |
| Q909 | 033 2SD600K-EF | TRANSISTOR |
| Q910 | 033 2SB631K-EF | TRANSISTOR |
| R201, 202 | 054 MK23K32FECZ | R, METAL 1% 3.32K |
| R203, 204 | 054 MK23K32FECZ | R, METAL 1% 3.32K |
| R205, 206 | 054 MK23K32FECZ | R, METAL 1% 3.32K |
| R207, 208 | 054 MK23K32FECZ | R, METAL 1% 3.32K |
| R209, 210 | 054 MK23K32FECZ | R, METAL 1% 3.32K |
| R401, 402 | 054 MK2221KFECZ | R, METAL 1% 221K |
| R403, 404 | 054 MK2221KFECZ | R, METAL 1% 221K |
| R405, 406 | 054 MK2001KFECZ | R, METAL 1% 1K |
| R407, 408 | 054 MK2001KFECZ | R, METAL 1% 1K |
| R409, 410 | 054 MK2100KFECZ | R, METAL 1% 100K |
| R411, 412 | 054 MK2100KFECZ | R, METAL 1% 100K |
| R413, 414 | 054 MK2100RFECZ | R, METAL 1% 100R |
| R415, 416 | 054 MK2100RFECZ | R, METAL 1% 100R |
| R501, 502 | 054 VSH101 | R, METAL 100R |
| R503, 504 | 054 VSH473 | R, METAL 47K |
| R505, 506 | 054 MK21K21FECZ | R, METAL 1% 1.21K |
| R507, 508 | 054 MK21K21FECZ | R, METAL 1% 1.21K |
| R509, 510 | 054 MK21K21FECZ | R, METAL 1% 1.21K |
| R511, 512 | 054 MK21K21FECZ | R, METAL 1% 1.21K |
| R513, 514 | 054 MK2274RFECZ | R, METAL 1% 274R |
| R515, 516 | 054 MK2274RFECZ | R, METAL 1% 274R |
| R517, 518 | 054 MK222K1FECZ | R, METAL 1% 22.1K |
| R519, 520 | 054 MK2475RFECZ | R, METAL 1% 475R |
| R521, 522 | 054 MK2475RFECZ | R, METAL 1% 475R |
| R523, 524 | 054 MK2221RFECZ | R, METAL 1% 221R |
| R525, 526 | 054 VSH472 | R, METAL 4.7K |
| R527, 528 | 054 VSH223 | R, METAL 22K |
| R529, 530 | 054 VSH100 | R, METAL 10R |
| R531, 532 | 054 VSH100 | R, METAL 10R |
| R533, 534 | 054 VSH473 | R, METAL 47K |
| R535, 536 | 054 VSH101 | R, METAL 100R |
| R701 | 054 MK2100KFECZ | R, METAL 1% 100K |
| R702 | 054 MK247K5FECZ | R, METAL 1% 47.5K |
| R703 | 054 MK2100kFECZ | R, METAL 1% 100k |
| R704 | 054 MK2475RFECZ | R, METAL 1% 475R |
| R710 | 054 MK2221KFECZ | R, METAL 1% 221k |
| R711 | 054 MK25K62FECZ | R, METAL 1% 5.62K |
| R712 | 054 MK21k82FECZ | R, METAL 1% 1.82K |

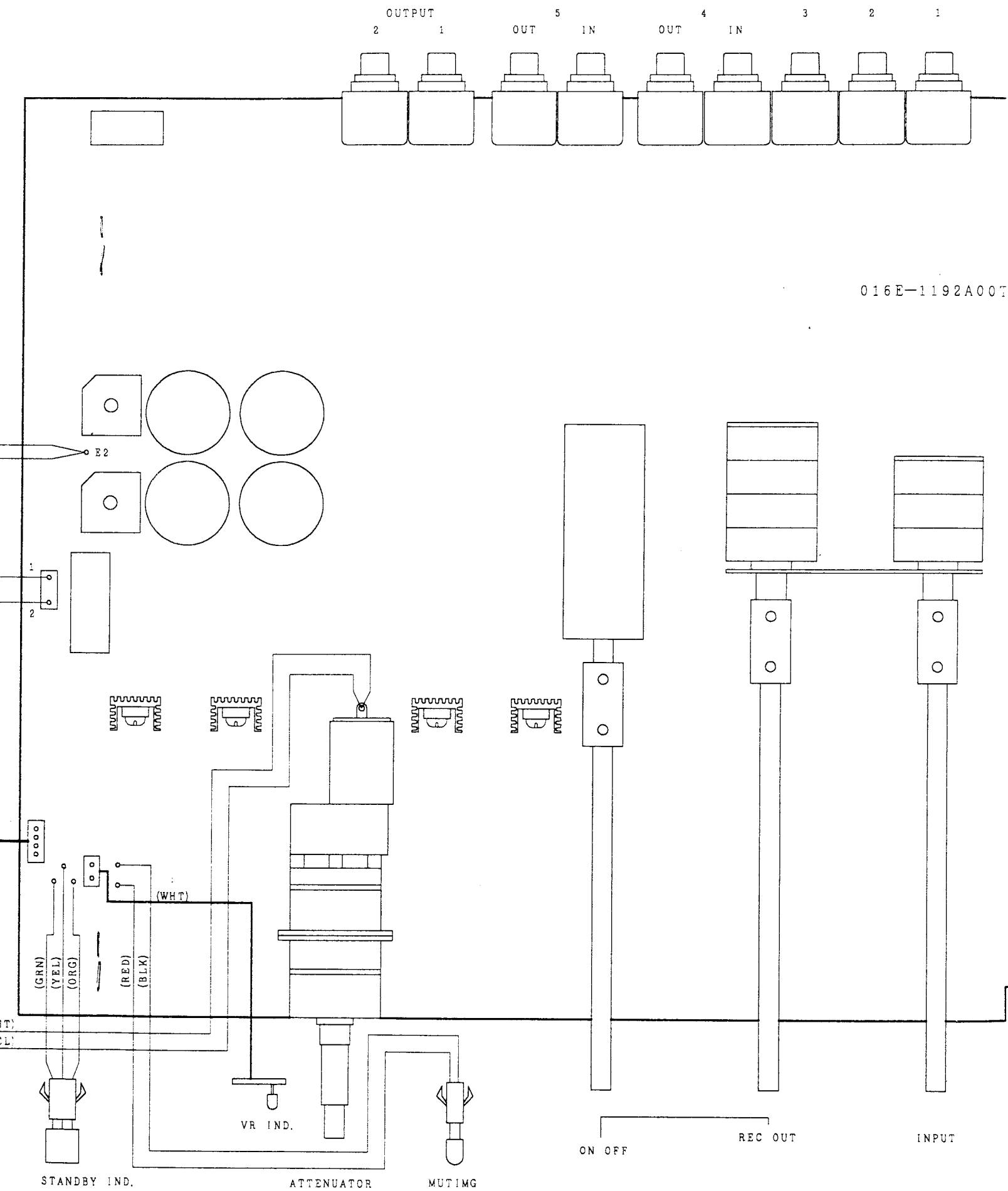
| SYMBOL | PARTS NO. | DESCRIPTION |
|-----------------------------------|---------------------|-------------------------|
| R713 | 054 MK25K62FECZ | R, METAL 1% 5.62K |
| R714 | 054 RSS1X-180F | R, METAL 1W 180R |
| R715 | 054 MK2221KFECZ | R, METAL 1% 221K |
| R904 | 054 MK21K21FECZ | R, METAL 1% 1.21k |
| R905 | 054 MK21K21FECZ | R, METAL 1% 1.21k |
| RY701 | 063 RY24W-KJ | RELAY |
| RY710 | 063 DH24D2-0 | RELAY |
| SW1 | 062 C-4407A01 | INPUT SELECTOR SWITCH |
| SW2 | 062 C-4407A02 | REC OUT SELECTOR SWITCH |
| SW3 | 062 4TR-2908 | REC OFF SWITCH |
| VR501 | 151 C-4410A02 | VR 20K WITH MOTOR |
| <u>016X-1184-01T PCB ASSEMBLY</u> | | |
| C721 | 041 U16V220 | CAP, ELEC. 16V220UF |
| C722 | 043 50VZF103 | CAP, CERA 250V0.01UF |
| C951 | 041 U35V470 | CAP, ELEC. 35V470UF |
| C952 | 041 U35V100 | CAP, ELEC. 35V100UF |
| C953 | 041 U16V100 | CAP, ELEC. 16V100UF |
| C954 | 044 DE7150F472M | SPARK KILLER |
| C955 | 043 250VZF103 | CAP, CERA 250V0.01UF |
| D721 | 034 RD12EB | DIODE |
| D722 | 034 RD5.6EB | DIODE |
| D950 | 034 W02 | DIODE |
| D951 | 034 1N4148 | DIODE |
| F905 | 036 (S)T1A | FUSE 5ST1 |
| | 036 (U)F2.5A | FUSE 5MF2.5 |
| IC720 | 031 LB1645N | IC |
| IC951 | 031 LM7806 | IC |
| MOV1 | 034 TNR9G391K | METAL OXIDE VARISTOR |
| MOV2 | 034 TNR9G221K | METAL OXIDE VARISTOR |
| Q720 | 032 2SD863-EF | TRANSISTOR |
| Q951 | 032 2SC536-FG | TRANSISTOR |
| Q952 | 032 2SD863-EF | TRANSISTOR |
| R720 | 054 RSS1X-68F | R, METAL 1W 68R |
| R721 | 054 MK23K32FECZ | R, METAL 1% 3.32K |
| R722 | 054 MK2010RFECZ | R, METAL 1% 10R |
| R951 | 054 RSS1X-100F | R, METAL 1W 100R |
| R952 | 054 MK222K1FECZ | R, METAL 1% 22.1K |
| R953 | 054 MK2825RFECZ | R, METAL 1% 825R |
| R954 | 054 MK2010KFECZ | R, METAL 1% 10K |
| R955 | 054 ERQ14AJ2R2P | R, FUSE 5% 2.2R |
| RY950 | 063 VFB24HU | RELAY |
| S731 | 061 4TR-2386#1 | 1 KEY PUSH SWITCH |
| <u>X-1184-02T PCB ASSEMBLY</u> | | |
| C730 | 041 U10V47 | CAP, ELEC. 16V47UF |
| C731 | 041 U16V100 | CAP, ELEC. 16V100UF |
| C732 | 044 MKT1818-410/015 | CAP, M. P 100V0.1UF |
| C733 | 044 MKT1818-410/015 | CAP, M. P 100V0.1UF |
| C734 | 043 50VYB221 | CAP, CERA 50V220pF |
| C735 | 043 50VYB221 | CAP, CERA 50V220pF |

| SYMBOL | PARTS NO. | DESCRIPTION |
|--------------------------------|------------------|-------------------------|
| C736 | 041 U25V10 | CAP, ELEC. 25V10UF |
| D731 | 034 1N4148 | DIODE |
| IC731 | 031 LC6522C-3433 | IC |
| IC732 | 031 SBX1610-02 | IC |
| Q731 | 032 2SC536K-FG | TRANSISTOR |
| R730 | 054 MK2100RFECZ | R, METAL 1% 100R |
| R731 | 054 MK247K5FECZ | R, METAL 1% 47.5K |
| R732 | 054 MK247K5FECZ | R, METAL 1% 47.5K |
| R733 | 054 MK247K5FECZ | R, METAL 1% 47.5K |
| R734 | 054 MK247K5FECZ | R, METAL 1% 47.5K |
| R735 | 054 MK247K5FECZ | R, METAL 1% 47.5K |
| R736 | 054 MK247K5FECZ | R, METAL 1% 47.5K |
| X731 | 023 CSB800J500 | CERAMIC FILTER |
| <u>X-1184-03T PCB ASSEMBLY</u> | | |
| D771 | 034 LTL2201A | LED |
| <u>OTHERS</u> | | |
| 011 | PZ2-01A00 | FRONT PANEL |
| 012 | PK4-13A00 | KNOB 23φ |
| 012 | PK4-14A00 | KNOB 33φ (WF) |
| 012 | PK4-15C00 | KNOB 33φ (WR) |
| 012 | PK4-16A00 | KNOB PUSH 15X15 |
| 014 | PK3-04B00T | BOTTOM BOARD |
| 014 | PK3-01A00 | UPPER BOARD |
| 014 | PK3-24A00 | WOOD SIDE BOARD |
| 015 | TRP-620 | REAR CHASSIS |
| 019 | PK4-07A00T | METAL FOOT |
| 022 | T-1041S03 | POWER TRANSFORMER |
| 069 | C-4459A00 | AC OUTLET |
| 069 | 4TR-2786 | AC INLET |
| 069 | PK4-25A00T | EARTH TERMINAL |
| 072 | C-4392A01 | AC CORD for USA, CANADA |
| 072 | C-4393A01 | AC CORD for EUROPA |
| 072 | C-4393A02 | AC CORD for UK |
| 072 | C-4423A01 | AC CORD for AUSTRALIA |
| 081 | PZ4-11A00 | INSIDE CARTON |
| RHR-10AT | | REMOTE HANDSET |
| <u>E-1193 PCB ASSEMBLY</u> | | |
| IC1 | 031 LC7461M-8100 | IC |
| D1 | 034 SE313 | LED |
| Q1 | 032 2SC2274K-EF | TRANSISTOR |
| X1 | 023 CSB455EB | CERAMIC FILTER |
| C1 | 034 50VSL101 | CAP, CERA 50V100pF |
| C2 | 034 50VSL101 | CAP, CERA 50V100pF |
| C3 | 041 U16V47 | CAP, ELEC. 50V47UF |
| <u>OTHERS</u> | | |
| 011 | PZ3-16A00T | FRONT PANEL (METAL) |
| 019 | PZ3-17A00T | PANEL (PLASTIC) |
| 014 | PZ3-26A00T | BOTTOM BOARD |
| 014 | PZ4-25A00T | SENSOR WINDOW |
| 019 | PZ3-22A00T | RUBBER BUTTON |
| 019 | PZ4-27A00T | BATTERY COVER |

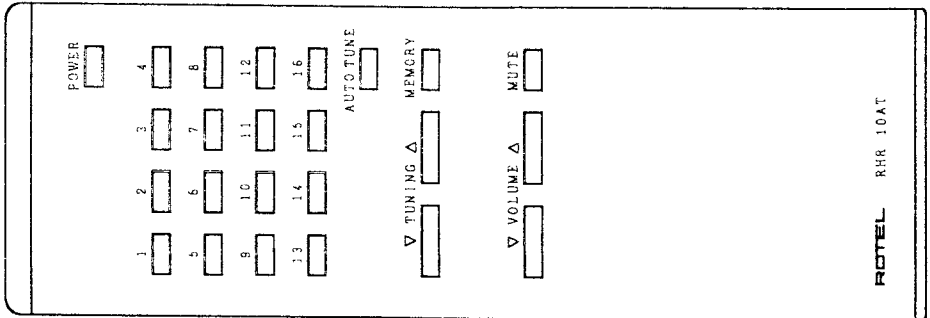
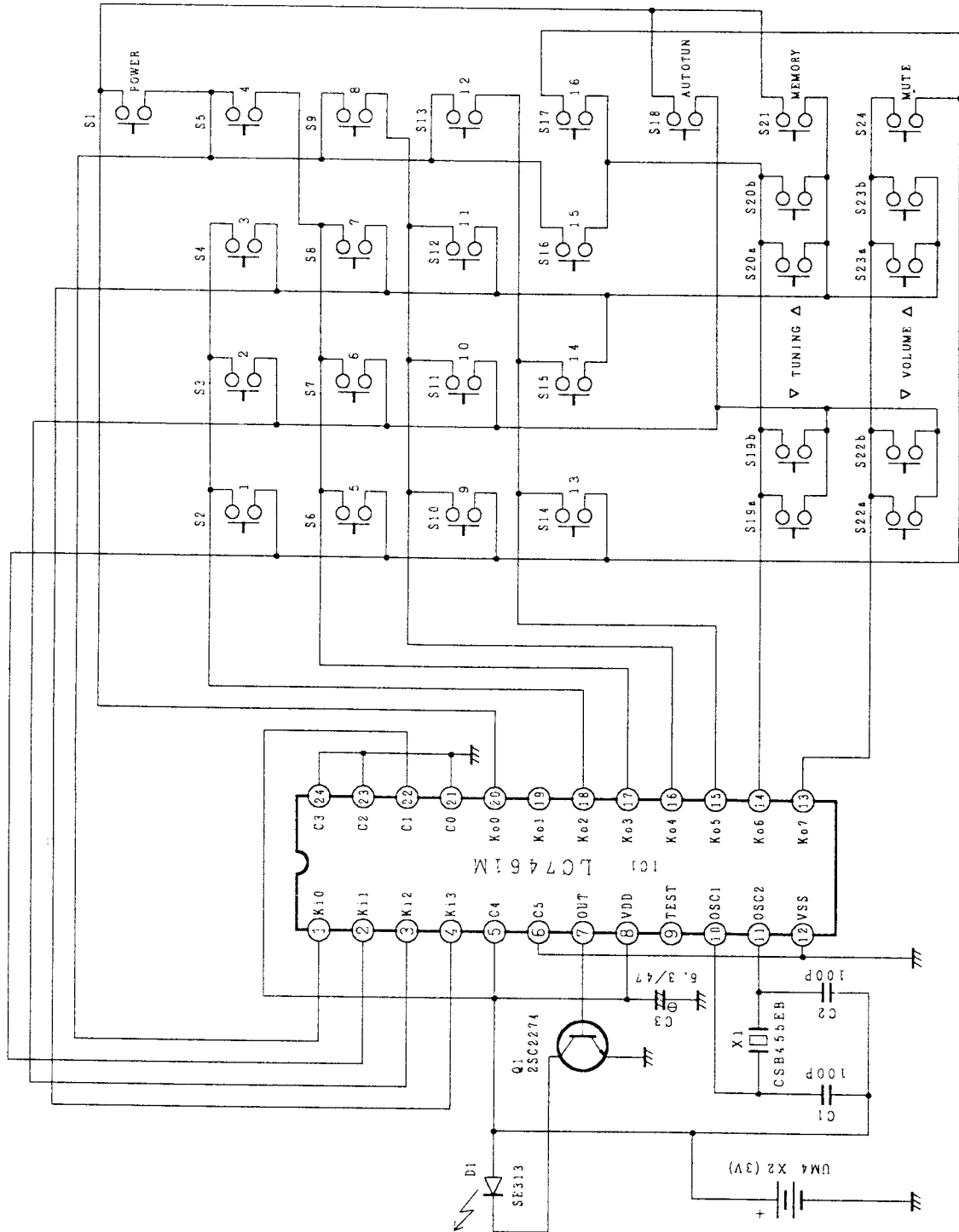
Wiring Diagram

RHA10





Schematic Diagram RHR10AT



016E-1193A00

POWER

D1.

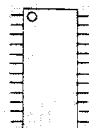
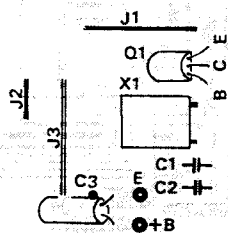

AUTO TUNE

MEMORY

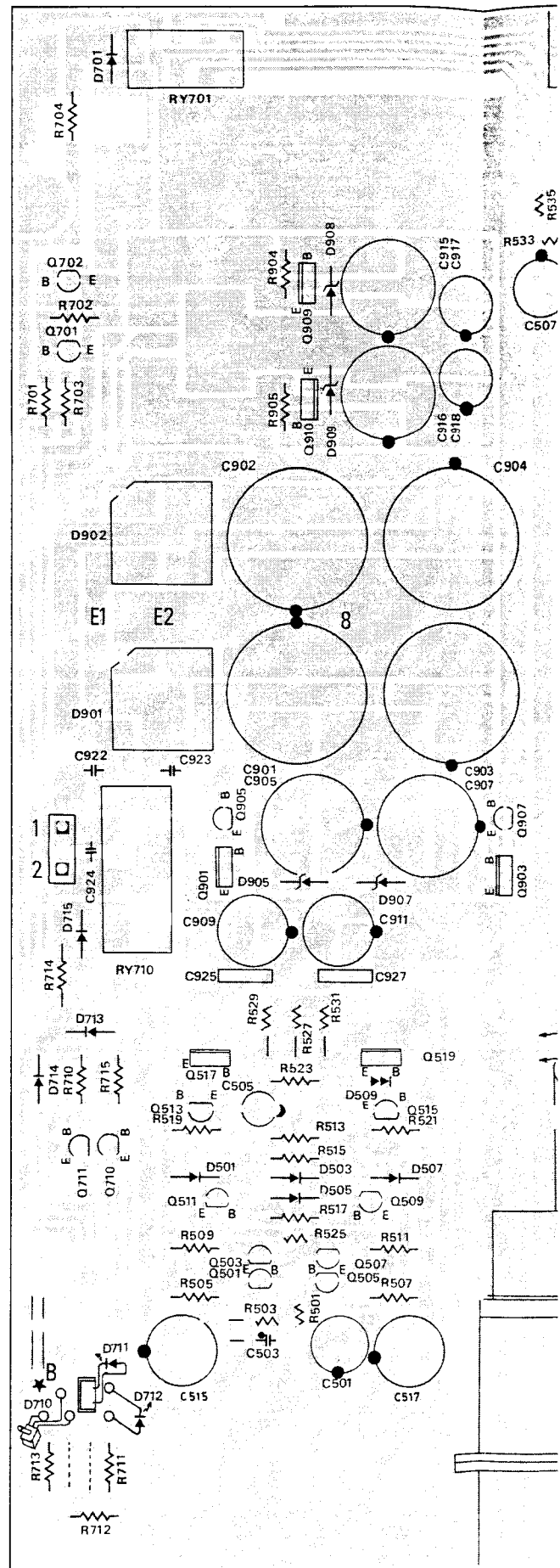
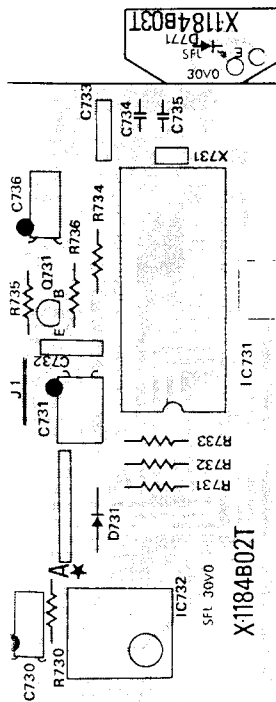
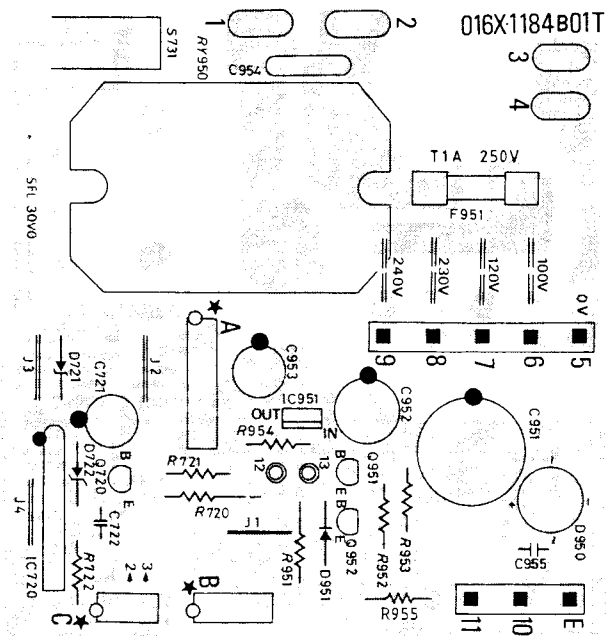
▲ TUNING ▼

MUTE

▲ VOLUME ▼



CAUTION: REPLACE ONLY WITH SAME TYPE FUSE
ATTENTION: UTILISER UN FUSIBLE DE RECHANGE
DE MEME TYPE





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