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CAUTION NOTICE

The following safety precautions must be followed to assure continued reliability and safety against fire and shock hazard:
1. Replacement parts used during servicing of this appliance must have identical characteristics as those offered and recommended by H. H. Scott, Inc.
2. A dielectric test is to be performed on each appliance following the re-assembly and before returning the unit to the customer.
3. The dielectric test to be performed on H. H. Scott, Inc. electric components serviced in the United States and Canada for use in these countries shall consist of not less than the following: *
   1) A dielectric tester designed to supply not less than 1100 volts at 60 Hz and employing leakage current indicator(s), is to be used.
   2) The tester is to be connected per the instructions enclosed with the instrument, or as follows:
      a. The tester is connected to the power line receptacle and the power switch is turned on.
      b. Sufficient time is allowed for the tester supply to stabilize and then the output voltage is adjusted for 1080V.
      c. Leads of the tester, usually marked GND and HV, are connected between chassis ground and both blades of the male plug of the power cord.
      d. Switch tester to "test" and observe leakage indicator. Leakeage current must not exceed 0.5 mA.

* Dielectric tests made by service personnel in countries other than USA and Canada must use test equipment and procedures specified by the safety agency serving that country.
SPECIFICATIONS: 460A(480A)

Minimum Continuous RMS Output Power per channel, both channels driven into 8 Ohms from 20 Hz — 20 kHz with no more than rated THD
70 watts (85 watts)

Total Harmonic Distortion [78 IHF rated, at 20 Hz — 20 kHz]
0.04% (0.03%)

Intermodulation Distortion [at rated output, 60:7000 Hz; 4:1]
0.04% (0.03%)

Frequency Response [at 1 watt output, ±0.5 dB]
20 Hz to 20 kHz

Power Bandwidth [at — 3 dB]
10 Hz to 40 kHz

Damping Factor [at 1 kHz, for 8 Ohm load]
> 100

Input Sensitivity [for rated output]
Phono 1: 2.5 mV
Phono 2 Hi: 2.5 mV
Phono 2 Lo: 5 mV
Aux, Tuner: 150 mV
Accessory Input: 150 mV
Tape Play Jacks 1 and 2: 150 mV
Tape 2 DIN Input: 150 mV

Maximum Input Voltage
Phono 1: 180 mV
Phono 2 Hi: 180 mV
Phono 2 Lo: 360 mV
Aux, Tuner: 10V
Accessory Input: 10V
Tape Play Jacks 1 and 2: 10V
Tape 2 DIN Input: 10V

Signal-to-Noise Ratio [shorted input, IHF A network]
Phono 1; Ref. 10 mV: 90 dB
Phono 2; Ref. 10 mV: 90 dB
Aux, Tuner: 95 dB
Tape Play Jacks 1 and 2: 95 dB
Tape 2 DIN Input: 95 dB

Tone Control Range
Bass (100 Hz): ±10 dB
Mid (1 kHz): ±6 dB
Treble (10 kHz): ±10 dB

Filter Attenuations [12 dB/oct.]
High (8 kHz): —3 dB
Sub-sonic (18 Hz): —3 dB

Loudness Contour Compensation [Volume Control set to —30 dB]
100 Hz: +7 dB
10 kHz: +3.5 dB

Crosstalk
1 kHz: 80 dB

Channel Balance [maximum Volume Control]
0.5 dB

RIAA Tolerance [78 RIAA rated, 20 Hz to 20 kHz]
±0.5 dB

Channel Separation [78 IHF rated]
Phono 1 and 2 (1 kHz): 65 dB
Aux, Tuner, Accessory Input, Tape Play 1 and 2,
Tape 2 DIN Input (1 kHz): 75 dB

Tape Recording Output Level [at rated input sensitivity level]
Tape 1 Rec: 150 mV
Tape 2 Rec: 150 mV
Tape 2 DIN Output: 30 mV

AC Power Requirement
117V AC 60 Hz (US/Canada version)
100V/117V/220V/240V, switchable
AC 50/60 Hz (European version)

Power Consumption
US/Canada: 200W (240W), Europe: 530W (630W)

Dimensions
17”W, 5-1/4”H, 14-1/4”D
430W, 132H, 330D (mm)

Net Weight
27 lbs (29 lbs)
12.3 kgs (13 kgs)
CIRCUIT DESCRIPTION

Phono Preamplifier
This is a negative feedback type of phono equalizer, it consists of three low noise transistors per channel. Open loop gain of the circuit is 86 dB. Negative feedback for gain adjustment and equalization is provided by resistors R1, and R2 and capacitors C1 and C2 connected between emitter of Q3 and emitter of Q1 giving a gain of 35.5 dB @ 1 kHz.
Units produced for use in Europe include circuitry to provide playback equalization conforming to IEC standards publication 98 amended September 1976 ie: +16.3 dB @ 50 Hz, −13.7 dB @ 10 kHz. Units produced for North America provide playback equalization conforming to RIAA standards ie: +16.9 dB @ 50 Hz, −13.7 dB @ 10 kHz.
Additional rolloff below 30 Hz required by IEC standard is provided by C3. The circuit is powered by a split power supply of ±33V to provide an over load capability of greater than 200 mV at 1.0 kHz.

Volume Amplifier
The signal from the volume control is amplified 20 dB by the dual transistor amplifier Q1 and Q2 (refer to block diagram, page 4). Gain is set by the ratio of R23 to R21.

Tone Control
The tone control circuit is a negative feedback type which utilizes common emitter amplifier Q3 and emitter follower Q2 as the active elements. That is, the gain of Q3 is controlled by the tone control circuitry.
Mid Tone Control: At 1 kHz the bass and treble controls have little effect on the gain since the impedance of capacitor C1, is high which effectively removes VR1 from the circuit. Impedance of capacitors C3 and C4 is low, effectively shorting VR3 thus at midrange frequencies near 1 kHz the gain is mainly determined by the position of VR2.
Bass Tone Control: As the frequency decreases below 1 kHz, the impedance of C3 and C4 increases proportionally. At very low frequencies, C1 and C2 are effectively open, removing VR1 and VR2 from the circuit. Thus at low frequencies, the
gain is mainly determined by the position of the Bass tone control VR3. Rotation towards R1 will boost the low frequencies, while turning it towards R2 will cut the bass.

**Treble Tone Control**: At high frequencies, VR2 and VR3 are effectively short circuited. At these frequencies, however, C1 impedance decreases, so that VR1 becomes the main control of the circuit gain. Rotating VR1 towards R3 will boost the treble, while turning it towards R4 cut the treble response.

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### Power Amplifier

This circuit is an OCL, fully complementary amplifier. The input stage consists of a differential amplifier (Q1 and Q2). The differential amp is a matched transistor pair in one package providing excellent common mode rejection and low DC offset. Q10 acts as the voltage amplifier providing voltage swing to nearly full plus and minus supply. Current gain is then provided by the fully complementary Darlington pairs of Q8 and Q9 for the positive swing, Q13 and Q14 for the negative swing. The output stage bias is set by the multiple diode array and variable resistor. As previously described, amplifier gain is set by tone control circuitry.

The driver and output stage is protected from short circuit and overload by transistors Q6, Q7, Q11 and Q12, which short out the driving signal when current through the output transistors reaches and excessive level.

The model 480A is designed using a differential current mirror loaded low noise input stage, where a transistor pair (Q3 and Q4) are connected to provide an active load to the differential amplifier to further minimize distortion products.
Relay Protection Circuit
This circuit protects the speakers from the possibility of DC potential at the amplifier outputs, as well as eliminating transients during turn on or turn off.

**Turn On/Off:** When the unit is first switched on, Q2 quickly turns on, holding Q3 off. After several seconds, determined by the charging time of C1 through R6, Q2 turns off, thus turning on Q2 and activating the relay which connects the audio output to the speakers. At turn off, Q4 immediately turns on, which turns Q2 on and Q3 off, instantly opening the speaker relay.

**Center Point Potential Detect:** This circuit, composed primarily of Q1, D1 and D2, protects the loudspeakers from DC at the amplifier output. When excessive plus or minus DC appears at R1 or R2, Q1 turns on, which activates Q2 and opens the speaker relay. At the same time, LD1, the front panel protection indicator, is activated.

**Power Supply (Refer to Block Diagram)**
The main power supply consists of a full wave bridge rectifier and two 10,000 μF capacitors. The B+ and B− regulators (Q13 + Q14) supply ±33V for the phono preamplifiers.

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**ADJUSTMENT**

**Equipment Required**
Audio signal generator.
DC voltmeter.
Speaker load resistors, 8 ohm, 100 watt.
Digital voltmeter or DC milliammeter.
The following adjustments are the same for both the left and the right channel.

**Bias Adjustment**
1) Connect 8 ohm resistors to the speaker A terminals, and set the Speaker Mode switch to A position.
2) Turn the Volume control fully counter-clockwise.
3) Turn RV1 fully counterclockwise.
4) Depending on available equipment, use A or B:
   - **A.** Set digital voltmeter to most sensitive voltage range. Connect probes across R37 and R39 (Voltmeter bias test points, L channel). Turn unit on. Let it idle for at least one minute. Adjust RV1 for 40 mV across the resistors.
   - **B.** With unit off, remove jumper between PC board terminals E and E, and connect ammeter, set to 100 mA range. Turn unit on and let it idle for at least one minute. Adjust RV1 for 40 mA.
5) Perform the same procedure for the right channel, except measure voltage across R38 and R40 (voltmeter bias test points, R channel) or replace jumper from D to D with ammeter. Adjustment is made with RV2.
6) Leave the amplifier on for about 30 minutes, then recheck measurement. A tolerance of ±25% is acceptable. Re-adjust if necessary.

Power Meter Calibration
1) Connect the audio signal generator to the amplifier and apply 1 kHz signal to Aux input, Left channel.
2) Connect voltmeter across the left channel load resistor.
3) Turn power on.
4) Adjust the signal generator output so as to obtain 2.83 volts on the voltmeter.
5) Check that the left channel meter indicates 1 watt. If not, adjust RV3.
6) Perform above steps on the right channel, adjusting RV4 if necessary.

Adjustment Location
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<tr>
<th>Part Code</th>
<th>Description</th>
<th>Position</th>
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<td>Rear seat cover</td>
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<td>100000012C</td>
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<td>Brakes</td>
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<td>100000012Z</td>
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Extended View No. Description

40A Mechanical

- 100000012A Rear seat cover
- 100000012B Floor panel
- 100000012C Windshield
- 100000012D Door panel
- 100000012E Bonnet
- 100000012F Engine
- 100000012G Transmission
- 100000012H Differential
- 100000012I Front suspension
- 100000012J Rear suspension
- 100000012K Steering
- 100000012L Brakes
- 100000012M Electrical system
- 100000012N Lighting system
- 100000012O Fuel system
- 100000012P Exhaust system
- 100000012Q Air conditioning
- 100000012R Heating system
- 100000012S Cooling system
- 100000012T Water pump
- 100000012U Alternator
- 100000012V Starter
- 100000012W Battery
- 100000012X Ignition system
- 100000012Y Starter
- 100000012Z Engine control unit

REPLACEMENT PARTS LIST: 460A/480A
* Combination of C7/37 and C8/38 are replaced with 100 μF/6.3V for US/Canada units.

480A

* Combinations of C7/37 and C8/38 are replaced with 100 μF/6.3V for US/Canada units.
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<th>Description</th>
<th>Part Code</th>
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<td>Fuse (F2, 3), 7A</td>
<td>ZFBQ70201Z</td>
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<tr>
<td>22</td>
<td>Fuse (F4), 0.5A</td>
<td>ZFBQ50103Z</td>
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<td>23</td>
<td>Chassis bridge</td>
<td>MB851SZ001</td>
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<td>24</td>
<td>Heatsink plate</td>
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<td>25</td>
<td>Heatsink</td>
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<td>Power amplifier board</td>
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<td>28</td>
<td>(Q23, 24), 2SB705</td>
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<td>Chassis bridge (right)</td>
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<td>Record/Input select bracket</td>
<td>MS766SZ021</td>
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<td>Coil spring</td>
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<td>Shaft joint</td>
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<td>34</td>
<td>Short</td>
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<td>Rear panel</td>
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<td>36</td>
<td>Ground thumb screw</td>
<td>BWM30A08SN</td>
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<td>37</td>
<td>Input circuit board</td>
<td>PSPA03C00X</td>
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<td>38</td>
<td>Tape input board</td>
<td>PSA02C00X</td>
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<td>Speaker output terminal (J5, 6)</td>
<td>YTS04S007U</td>
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<td>Power selector board</td>
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<td>Switch bracket</td>
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<td>Voltage selector (J4)</td>
<td>YJZ10S001U</td>
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<td>Voltage identification plate, US/Canada:</td>
<td>YPZ06S004U</td>
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<td>AC accessory outlet (J2, 3)</td>
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<td>AC power receptacle (J1)</td>
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<td>Fuse holder (J8)</td>
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<td>Fuse (F1) 110–117V: 6A</td>
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<td>220–240V: 3A</td>
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<td>Front escutcheon panel</td>
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<td>Protect LED socket</td>
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<td>Knob, Tape/Input, Mode, Speaker</td>
<td>MN376AA019</td>
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<td>55</td>
<td>all lever switches</td>
<td>VN360SX001</td>
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<td>56</td>
<td>Capacitance/Impedance</td>
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<td>57</td>
<td>Volume</td>
<td>MN366XA024</td>
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<td>Tone, Balance</td>
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<td>Power</td>
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<td>61</td>
<td>Bottom plate</td>
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<td>62</td>
<td>Foot</td>
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<td>63</td>
<td>Cabinet cover</td>
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**Parts on Main Chassis**

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<tr>
<td>C1, 2</td>
<td>US/Canada: Ceramic capacitor, 4,700p*, 125V AC</td>
<td>CKDX472PMM</td>
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<tr>
<td>D13, 14</td>
<td>Europe: Oil-paper capacitor, 0.01*450V</td>
<td>CNST103MAN</td>
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<td></td>
<td>Quadruple diode array, STV-4H</td>
<td>QVFSTV4HXD</td>
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**Miscellaneous**

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<td>Operation Manual, US/Canada: 460A</td>
<td>KT460A**AX</td>
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<td>KT480A**AX</td>
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<tr>
<td>US/Canada: 460A</td>
<td>KT460AE**AX</td>
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<tr>
<td>Europe: 480A</td>
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<td>480A:</td>
<td>KN440A**03</td>
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<td>Cushoning, 460A</td>
<td>KN480A**03</td>
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**PSPW033COX [Power Supply]**

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<th>Description</th>
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<tbody>
<tr>
<td>Q1</td>
<td>Transistor, 2SA1015</td>
<td>QTA1015XAT</td>
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<tr>
<td>D1-4</td>
<td>460A: Silicon diode, SR3AM-8B</td>
<td>QDSR3AM8BE</td>
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<td>480A: Silicon diode, SR3AM-8A</td>
<td>QDSR3AM8AE</td>
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<td>D5</td>
<td>Silicon diode, RA-1Z</td>
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<td>D6, 7</td>
<td>1N4448</td>
<td>QDSN4448XZ</td>
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<td>R1, 2</td>
<td>460A: MOF resistor, 2.2k, 2W</td>
<td>RG2ANJ222N</td>
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<td>480A: MOF*** resistor, 2.2k***, 3W</td>
<td>RG3ANJ222N</td>
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<td>R4</td>
<td>460A: MOF resistor, 3.9k, 1W</td>
<td>RG1ANJ392N</td>
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<td>480A: MOF** resistor, 4.7k, 1W</td>
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<td>R6</td>
<td>480A: 390, 1/2W</td>
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<td>Ceramic capacitor, 0.01, 500V</td>
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<td>C2</td>
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<td>Fuse housing</td>
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* All capacitors are rated in micro-farad, and have voltage handling of 50V, both unless otherwise specified.
** Metal-oxide-film (resistor).
*** All resistors are rated in Ohm, and have power handling capability of 1/4W unless otherwise specified.
<table>
<thead>
<tr>
<th>Symbol No.</th>
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<td>IC, TA7318P-2, meter driver</td>
<td>QQM07318AT</td>
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<td>Q1, 2</td>
<td>Transistor, 2SA798</td>
<td>QTA0798XEE</td>
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<td>Q3, 4</td>
<td>Transistor, 2SC2291</td>
<td>QTC2291XAE</td>
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<td>Q5, 6</td>
<td>Transistor, 2SA912</td>
<td>QTA0912XAN</td>
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<td>Q7, 8</td>
<td>2SC1885</td>
<td>QTC1885XAN</td>
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<td>2SA720</td>
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<td>2SC1318</td>
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<td>Q13, 14, 26, 27</td>
<td>2SC1815</td>
<td>QTC1815XAT</td>
</tr>
<tr>
<td>Q15, 16</td>
<td>2SA1015</td>
<td>QTA1015XAT</td>
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<td>Q17, 18</td>
<td>2SC2238</td>
<td>QTC2238XBT</td>
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<td>Q19, 20</td>
<td>2SA968</td>
<td>QTA1968XBT</td>
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<td>Q25</td>
<td>2SA970</td>
<td>QTA0970XBT</td>
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<td>D1-10</td>
<td>Silicon diode, 1N4448</td>
<td>QDSN44448XZ</td>
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<tr>
<td>D11-18</td>
<td>RA-1Z</td>
<td>QDSRA11ZXD</td>
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<td>L1, 2</td>
<td>RFC, 2.5 μH</td>
<td>LA3QH132B</td>
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<tr>
<td>RY1</td>
<td>DC relay, type-24</td>
<td>ZRA444103U</td>
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<td>RV-1, -2</td>
<td>Trimming resistor, 100/B</td>
<td>RPJN010103</td>
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<tr>
<td>RV-3, -4</td>
<td>220/B</td>
<td>RPJN02101</td>
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<tr>
<td>R15, 16</td>
<td>MOF resistor, 150/B, 1/2W</td>
<td>RGHA15J53N</td>
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<td>R25-28</td>
<td>MOF resistor, 150, 1/2W</td>
<td>RGHA15J51N</td>
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<td>R37-40</td>
<td>460A: Cement resistor, 0.47, 3W</td>
<td>RF03SKR47B</td>
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<td>480A: Cement resistor, 0.47, 5W</td>
<td>RF05SKR47B</td>
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<tr>
<td>R45, 46</td>
<td>MOF resistor, 5.6, 2W</td>
<td>RX2ANJ56N</td>
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<td>R47, 48</td>
<td>MOF resistor, 5.6, 1W</td>
<td>RX1ANJ56N</td>
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<td>R56</td>
<td>460A: MOF resistor, 3.3k, 1W</td>
<td>RG1ANJ332N</td>
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<td>RG1ANJ392N</td>
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<td>R57</td>
<td>460A: &quot;</td>
<td>RG2ANJ561N</td>
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<td>RG2ANJ681N</td>
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<td>R58</td>
<td>MOF resistor, 100, 1/2W</td>
<td>RGHA15J101N</td>
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<td>R59</td>
<td>460A: MOF resistor, 2.2k, 2W</td>
<td>RG2ANJ222N</td>
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<td>480A: &quot;</td>
<td>RG2ANJ242N</td>
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<td>R60</td>
<td>460A: &quot;</td>
<td>RG2ANJ222N</td>
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<td>480A: &quot;</td>
<td>RG2ANJ242N</td>
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<td>R63, 64</td>
<td>MOF resistor, 270, 2W</td>
<td>RG2ANJ217N</td>
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<td>C1, 2</td>
<td>Electrolytic capacitor, 2.2</td>
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<td>C3, 4</td>
<td>Ceramic capacitor, 330p</td>
<td>CCFB331KOT</td>
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<td>C5, 6</td>
<td>&quot; 2p</td>
<td>CCGB020COT</td>
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<td>C7, 8</td>
<td>&quot; 3p</td>
<td>CCGB030D0T</td>
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<td>C9, 10</td>
<td>&quot; 5p</td>
<td>CCGB050COT</td>
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<td>C11, 12</td>
<td>Electrolytic capacitor, 100/10</td>
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<td>C13, 14</td>
<td>&quot; 10/16</td>
<td>CEWD100ALX</td>
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<tr>
<td>C15-18</td>
<td>Ceramic capacitor, 4,700p</td>
<td>CKGB472ZFT</td>
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<tr>
<td>C19-22</td>
<td>460A: Ceramic capacitor, 220p</td>
<td>CCFB221KOT</td>
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<td>480A: &quot;</td>
<td>CCGB470KOT</td>
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<tr>
<td>C23-26</td>
<td>Electrolytic capacitor, 1/100</td>
<td>CEWK010ALX</td>
</tr>
<tr>
<td>C27, 28</td>
<td>Mylar capacitor, 0.056/100</td>
<td>CQMC563KEH</td>
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<tr>
<td>C29, 30</td>
<td>Electrolytic capacitor, 100/10</td>
<td>CEWC101ALX</td>
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<td>C31</td>
<td>...</td>
<td>CEAG220AMN</td>
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<tr>
<td>C32</td>
<td>Mylar capacitor, 0.047</td>
<td>CQMB473KTH</td>
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<tr>
<td>C33, 34</td>
<td>...</td>
<td>CQMB223KTH</td>
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<tr>
<td>C35</td>
<td>Electrolytic capacitor, 1/100</td>
<td>CEWK010ALX</td>
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<tr>
<td>C37, 38</td>
<td>480A only: Ceramic capacitor, 220p</td>
<td>CCFB221KOT</td>
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<tr>
<td>C39, 40</td>
<td>Ceramic capacitor, 100p</td>
<td>CGB101KOT</td>
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<tr>
<td>C41, 42</td>
<td>Electrolytic capacitor, 1/100</td>
<td>CEWK010ALX</td>
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<tr>
<td>C43-46</td>
<td>...</td>
<td>CEAE4R7ALX</td>
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**PSTC027COX [Tone Amplifier]**

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<tr>
<th>Symbol No.</th>
<th>Description</th>
<th>Part Code</th>
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<tbody>
<tr>
<td>S1</td>
<td>480A only: Lever switch, 2-2***, Acc/Input</td>
<td>SL020215ZB</td>
</tr>
<tr>
<td>S2</td>
<td>Rotary switch, 4-5, Mode</td>
<td>SH040503ZA</td>
</tr>
<tr>
<td>S3</td>
<td>Lever switch, 2-2, Loudness</td>
<td>SL020215ZB</td>
</tr>
<tr>
<td>S4</td>
<td>Push switch, Tone/By-pass</td>
<td>SP01AA29A</td>
</tr>
<tr>
<td>S5, 6</td>
<td>Lever switch, 2-2, Lo-Fil</td>
<td>SL020218ZB</td>
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<tr>
<td>VR</td>
<td>VR, Balance, 200k/MN</td>
<td>RVQA204X01</td>
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<tr>
<td>VR2</td>
<td>460A: Volume, 100k/B</td>
<td>RVDA104B01</td>
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<td></td>
<td>480A: ... 100k</td>
<td>RVZA104B01</td>
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<tr>
<td>VR3-5</td>
<td>VR, Tone, 50k/B</td>
<td>RVQA503B05</td>
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<td>Q1, 2, 7, 8</td>
<td>Transistor, 2SC2240</td>
<td>QTC2240XAT</td>
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<tr>
<td>Q3, 4</td>
<td>...</td>
<td>QTA097XAT</td>
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<tr>
<td>Q5, 6</td>
<td>...</td>
<td>QTA079XEE</td>
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<tr>
<td>R13, 14</td>
<td>MOF resistor, 10, 1/2W</td>
<td>RXHANJ100N</td>
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<tr>
<td>C1, 2</td>
<td>Ceramic capacitor, 220p</td>
<td>CCCC221KOM</td>
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<tr>
<td>C3, 4</td>
<td>Mylar capacitor, 0.12</td>
<td>CQMB124KEH</td>
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<td>C5, 6</td>
<td>Electrolytic capacitor, 1</td>
<td>CEAG012MN</td>
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<tr>
<td>C7, 8</td>
<td>Ceramic capacitor, 10p</td>
<td>CCCC100DM</td>
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<td>C9, 10</td>
<td>...</td>
<td>CCCC407KOM</td>
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<tr>
<td>C11, 12</td>
<td>Electrolytic capacitor, 100/6.3</td>
<td>CEEB101ALX</td>
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<tr>
<td>C13, 14</td>
<td>...</td>
<td>CEEF221ALX</td>
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<tr>
<td>C15, 16</td>
<td>...</td>
<td>CEEE100ALX</td>
</tr>
<tr>
<td>C17-20</td>
<td>Mylar capacitor, 0.047</td>
<td>CQMB473KEH</td>
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<tr>
<td>C21, 22</td>
<td>...</td>
<td>CQMB822KEH</td>
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<tr>
<td>C23, 24</td>
<td>...</td>
<td>CQMB472KEH</td>
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<tr>
<td>C25, 26</td>
<td>...</td>
<td>CQMB103KEH</td>
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<tr>
<td>C27, 28</td>
<td>Electrolytic capacitor, 4.7/25</td>
<td>CEEE4R7ALX</td>
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<tr>
<td>C29, 30</td>
<td>Ceramic capacitor, 47p</td>
<td>CCCC407KOM</td>
</tr>
<tr>
<td>C31, 32</td>
<td>Electrolytic capacitor, 4.7/25</td>
<td>CEEE4R7ALX</td>
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*** No of pole-throw. (Ex. 2-pole/2-throw)
<table>
<thead>
<tr>
<th>Symbol No.</th>
<th>Description</th>
<th>Part Code</th>
</tr>
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<tbody>
<tr>
<td>C33, 34</td>
<td>Electrolytic capacitor, 0.68</td>
<td>CEAGR68ZMN</td>
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<tr>
<td>C35, 36</td>
<td>Mylar capacitor, 0.27</td>
<td>CQMB274KEH</td>
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<td>C37, 38</td>
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<tr>
<td>C39, 40</td>
<td>&quot;</td>
<td>CQMB472KEH</td>
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<td>C41</td>
<td>&quot;</td>
<td>CEEF101ALX</td>
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<tr>
<td>C43, 44</td>
<td>Ceramic capacitor, 27p</td>
<td>CCCC270KOT</td>
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<tr>
<td>C45, 46</td>
<td>&quot;</td>
<td>CCCC101KOT</td>
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<tr>
<td>C47, 48</td>
<td>&quot;</td>
<td>CCCC561KOT</td>
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**PSPA038COX [Preamplifier]**

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<tr>
<th>Symbol No.</th>
<th>Description</th>
<th>Part Code</th>
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<tbody>
<tr>
<td>S1, 2</td>
<td>Rotary switch, Selector, 4-6</td>
<td>SH040603ZA</td>
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<tr>
<td>S3, 4</td>
<td>480A only: Rotary switch, Capacitance/Impedance</td>
<td>SH020301ZA</td>
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<tr>
<td>S5</td>
<td>Slide switch, Phono Sens, 2-2</td>
<td>SS020233ZA</td>
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<tr>
<td>J1-3</td>
<td>RCA jack, 4p</td>
<td>YJP048016U</td>
</tr>
<tr>
<td>Q1, 2, 7, 8</td>
<td>Transistor, 2SA970</td>
<td>QTA0970XAT</td>
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<tr>
<td>Q3-6, 9-12</td>
<td>2SC2240</td>
<td>QTC2240XAT</td>
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<tr>
<td>Q13</td>
<td>2SD526</td>
<td>QTDO526XAT</td>
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<tr>
<td>Q14</td>
<td>2SB596</td>
<td>QTB0596XAT</td>
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<td>D1, 2</td>
<td>Zenner diode, RD-33</td>
<td>QDZRD33XXA</td>
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<td>R79, 38</td>
<td>MOF resistor, 10, 1/2W</td>
<td>RXHANJ100N</td>
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<td>R79, 80</td>
<td>2.7k, 1/2W</td>
<td>RGHANJ272N</td>
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<tr>
<td>C1, 2</td>
<td>460A: Ceramic capacitor, 220p</td>
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<tr>
<td>C3, 4</td>
<td>Electrolytic capacitor, 1</td>
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<tr>
<td>C5, 6</td>
<td>Ceramic capacitor, 27p</td>
<td>CCCC270KOM</td>
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<tr>
<td>C7, 8</td>
<td>Electrolytic capacitor, 47/6.3</td>
<td>CEB470ZMN</td>
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<tr>
<td>C9, 10</td>
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<td>CEEE100ALX</td>
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<tr>
<td>C11, 12</td>
<td>Ceramic capacitor, 33p</td>
<td>CCCC330KOM</td>
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<tr>
<td>C13</td>
<td>Electrolytic capacitor, 100/35</td>
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<tr>
<td>C15, 16</td>
<td>&quot;</td>
<td>CEAG4R7ZMN</td>
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<td>C17</td>
<td>&quot;</td>
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<tr>
<td>C19, 20</td>
<td>“Mylar capacitor, 0.012 ±2%</td>
<td>CQMB123GEH</td>
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<td>C21, 22</td>
<td>&quot;</td>
<td>CQMB393GEH</td>
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<tr>
<td>C23, 24</td>
<td>480A: only: Ceramic capacitor, 150p</td>
<td>CCCC151KOM</td>
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<td>CCCC331KOM</td>
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<td>Electrolytic capacitor, 10/16</td>
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<tr>
<td>C39, 40</td>
<td>Ceramic capacitor, 0.047</td>
<td>CKCB473ZFM</td>
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<td>C41, 42</td>
<td>&quot;</td>
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<tr>
<td>C43, 44</td>
<td>Electrolytic capacitor, 1</td>
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<tr>
<td>C45, 46</td>
<td>Ceramic capacitor, 27p</td>
<td>CCCC270KOM</td>
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<td>C47, 48</td>
<td>Electrolytic capacitor, 22/6.3</td>
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<td>C49, 50</td>
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<td>C51, 52</td>
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<td>C55, 56</td>
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<td>C79, 80</td>
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**PSAZ023COX [Input Terminal]**

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<th>Description</th>
<th>Part Code</th>
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<td>Accessory in/out RCA jacks, 4P</td>
<td>YJP04S016U</td>
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<tr>
<td>J3</td>
<td>Tape DIN-standardized jack, 5P</td>
<td>YJD05S011Z</td>
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<td>C1</td>
<td>Ceramic capacitor, 0.047</td>
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**PSLD013COX [Program LED]**

<table>
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<tr>
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<th>Description</th>
<th>Part Code</th>
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</thead>
<tbody>
<tr>
<td>LD1-4</td>
<td>LED, Program</td>
<td>QLAPR5531R</td>
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**SSW066COX [AF Power Select]**

<table>
<thead>
<tr>
<th>Symbol No.</th>
<th>Description</th>
<th>Part Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>Sliding switch, 4-2</td>
<td>SS040204ZA</td>
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