

SECTION 1
OUTLINE

1-1. CIRCUIT DESCRIPTION

[Switching of Class-A and Class-B Amplifiers]

The switching between the class-A and the class-B amplifiers is done by switching the bias voltage of the amplifier.

- For the class-A amplifier, Q122 and Q123 (Q222 and Q223) are turned off by operating the reed relay RY101 (RY201). Therefore, the bias voltage for the class-A amplifier is determined by RT103 (RT203). The

B voltage is switched by RY601 to that for the class-A amplifier.

- For the class-B amplifier, the reed relay RY101 (RY201) do not operate. RT103 (RT203) is short-circuited because Q122 and Q123 (Q222 and Q223) are turned on. As a result, the bias voltage for the class-B amplifier is determined by RT102 (RT202). The

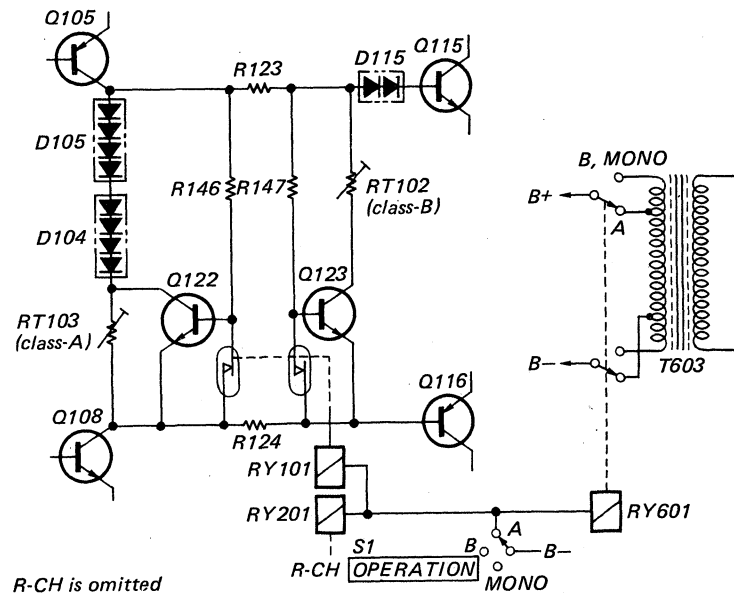


Fig. 1-1.

[MONO Operation]

The left and right channel amplifiers are connected and operated in series (BTL) as shown in Fig. 1-2.

Note that the output forms a balanced push-pull circuit, thus the output power becomes approximately double. The balanced output is obtained by using the original power amplifier input-output phase inversion and inserting a load in series between the each output hot side.

Thus, same but opposite phase signal is supplied to the left and right channel power amplifier inputs simultaneously. As a result, the power applied to the load is doubled.

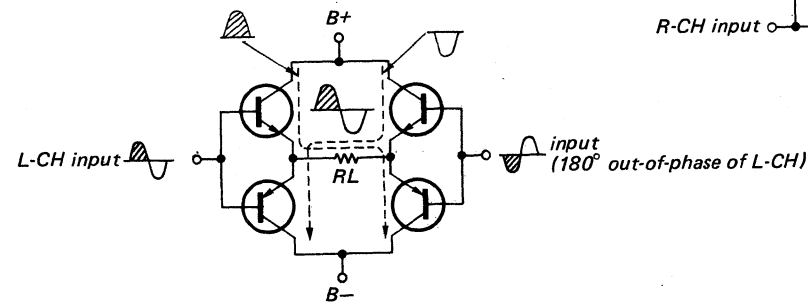


Fig. 1-2.

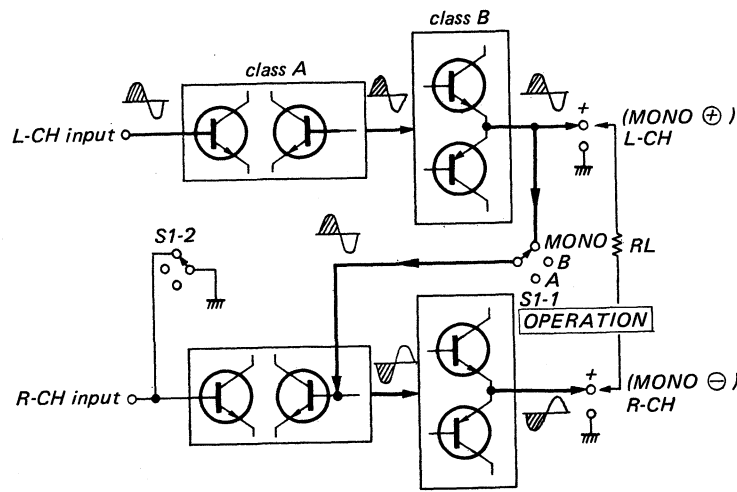
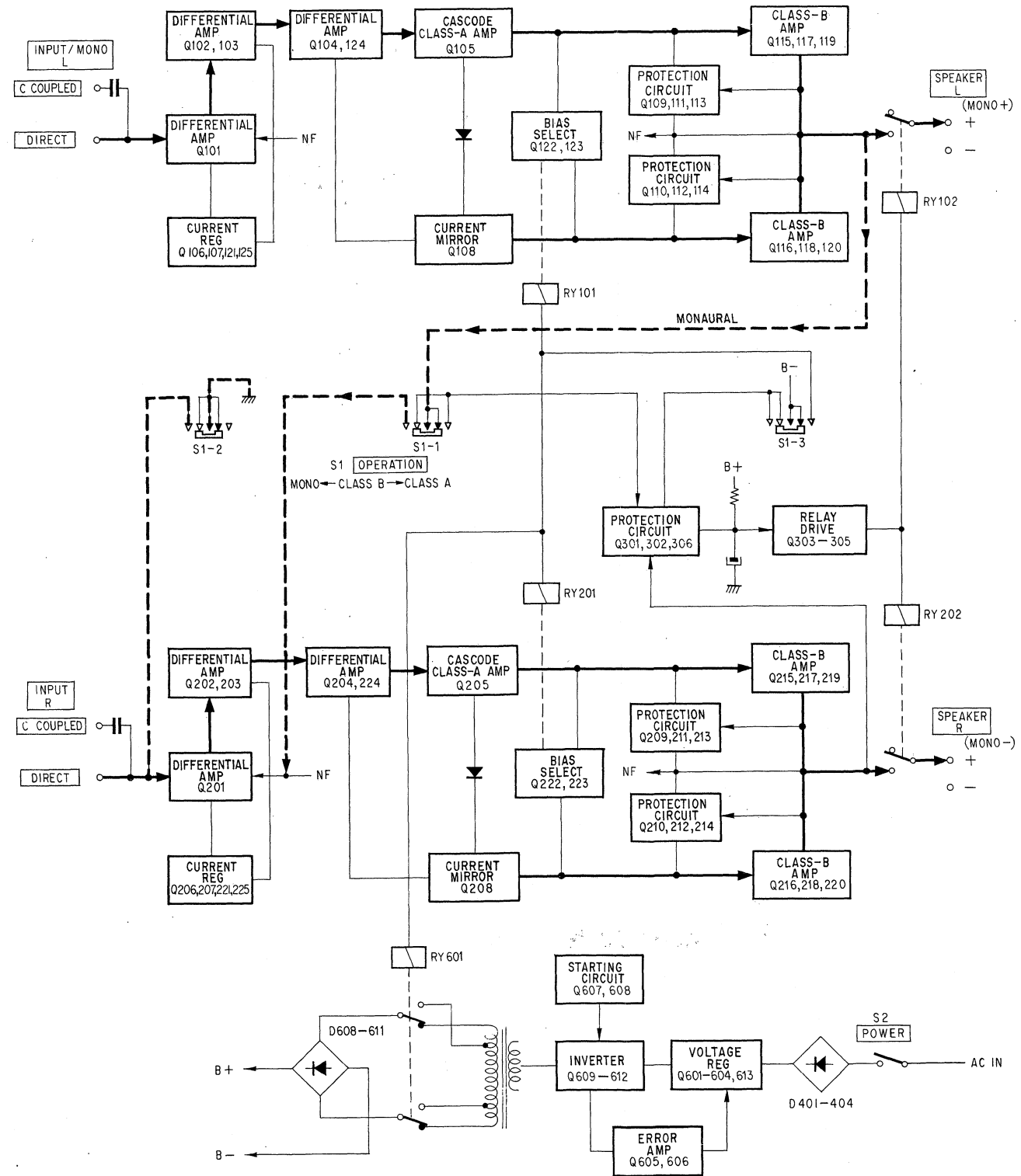
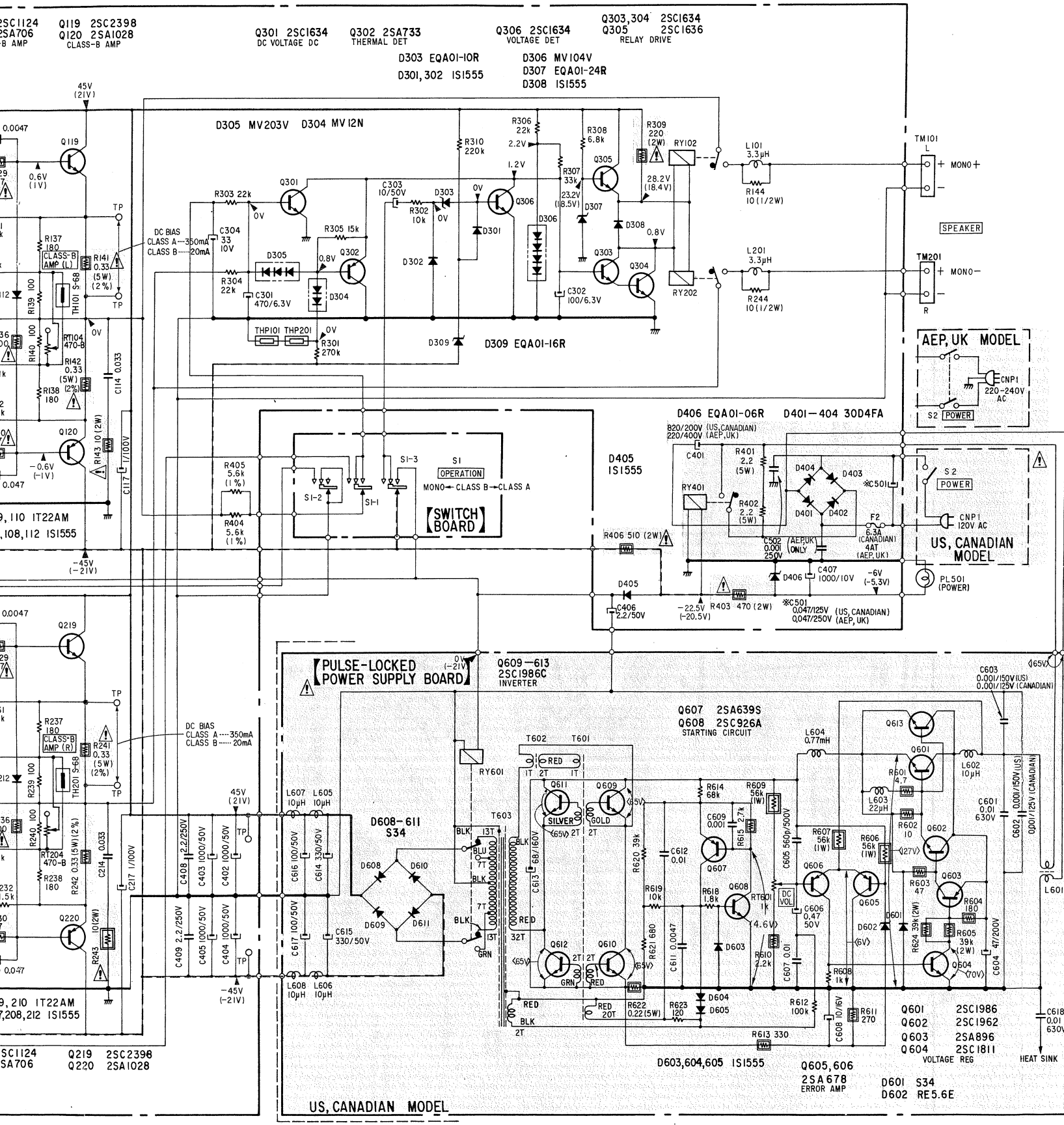


Fig. 1-3.

1-2. BLOCK DIAGRAM





Note:

- All capacitors are in μF unless otherwise noted $\text{pF} = \mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{2} W$ unless otherwise noted. $\text{k}\Omega : 1000 \Omega$; $\text{M}\Omega = 1000 \text{k}\Omega$
- Voltages are dc with respect to ground unless otherwise noted.
- All adjustable resistors have characteristic curve B, unless otherwise noted.
- \square : nonflammable resistor.
- 1% indicates component tolerance.
- \square : panel designation.
- \square : adjustment for repair.
- Readings are taken under no-signal conditions with a VOM (20 $\text{k}\Omega/\text{V}$) (OPERATION switch: CLASS B)
- Voltage values for pulse-locked power supply circuit () class A () with 220 V ac < > with 120 V ac
- The waveforms are taken under class-B operation with 220 V ac unless otherwise noted.
- — : B+ bus.
- - - - : B- bus.
- Switch

Ref. No.	Switch	Position
S1	OPERATION	CLASS B
S2	POWER	OFF

Note: The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

