

STEREO CASSETTE DECK

TC-K96R

US Model
Canadian Model
AEP Model
UK Model
E Model

SUPPLEMENT

No. 2
November, 1979

The photo-coupler circuit has been added to improve the auto shut-off operation.

File this supplement with the service manual.

ADDED PARTS

Ref. No.	Part No.	Description	
	♣ 1-602-215-00	Printed Circuit Board, photo-interrupter	(B)
D1001	8-719-101-11	SR110	(B)
D1002	8-719-815-55	1S1555	(B)
Q1001	8-729-101-13	PH103	(C)
Q1002	8-729-663-47	2SC1364	(C)

CHANGED PARTS

Ref. No.	Description	Part No.	
		Former Part	New Part
S24	Bracket, tape counter (B)	♣ 3-558-330-00	♣ 3-558-486-00
	Tape Counter, w/switch (H)	1-548-526-00	1-548-526-21

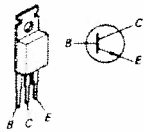
- Circled letters (A) to (Z) are applicable to European models only.
- Items marked "♣" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

SONY
SERVICE MANUAL

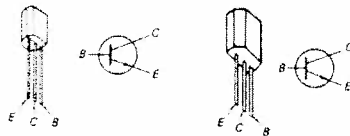
● Replacement Semiconductors

For replacement, use semiconductors except in ().

Q601 : 2SC1173



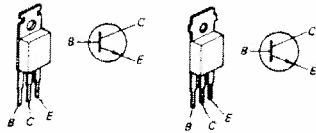
Q811, 812 : 2SC1364 (2SC634A)



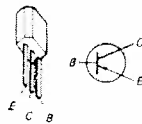
D601~604, 607 } 10E2
D609, 619, 620 }
D801~809 } 1S1555
D612~618 }
D622, 623, 626 }
D627 : 1S1555 (1T40)



Q602 : 2SC1061 (2SC1419)



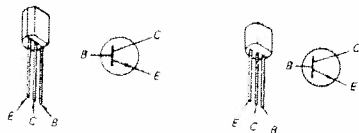
Q814, 819 : 2SA678 (2SA677)



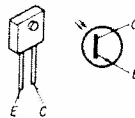
D608 : EQB01-15 (EQA01-15R)
D611 : EQB01-11Z (EQA01-11R)



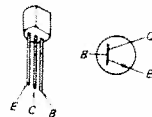
Q603, 607~619 }
Q621, 624~627 } 2SC1364 (2SC1634)
Q629, 631 }
Q801, 808, 810 }
Q820, 821 }



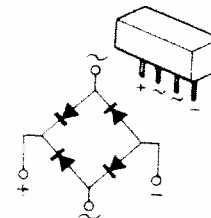
Q1001 : PH103



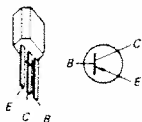
Q1002 : 2SC1364



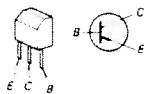
D605, 606 : 1SVB10



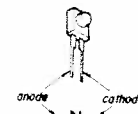
Q604 : 2SA678



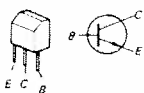
Q605, 606 : 2SB605



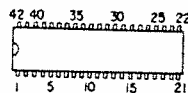
D1001 : SR110



Q620, 622 } 2SD571
Q628 }



IC601 : μ PD547-022

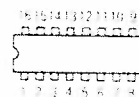


(Top view)

D1002 : 1S1555

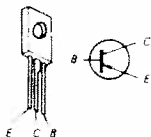


IC602 : TC4019P

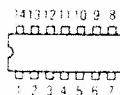


(Top view)

Q803, 804 } 2SB548
Q816, 817 }

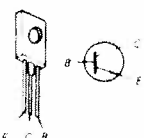


IC607 : TC4069P



(Top view)

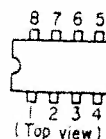
Q802, 805 } 2SD414
Q815, 818 }



IC801 : CX065A

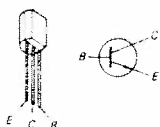


IC603~606 : μ PC4557C (μ PC4557)
IC802~804 : μ PC4558C (μ PC4558)



(Top view)

Q806, 807 } 2SC1364 (2SC945)
Q809, 813 }

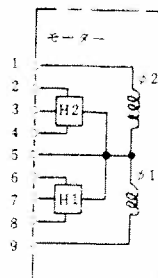


旧モーターを新モーターに交換する
場合は定数変更をお願い致します。

使用区分	記号	新部品
キャプスタン・モーター	R 8 0 5	1-214-180-11 100K 1/4W 金属被膜
	R 8 1 1	1-246-453-00 150Ω 1/4Wカーボン
	R 8 1 2	
	R 8 2 1	
	R 8 2 2	
	R 8 1 4	1-246-519-00 82K 1/4Wカーボン
リール・モーター	R 8 2 4	1-130-134-11 0.082μF 100V複合型コン
	C 8 0 5	
	R 8 5 7	
	R 8 5 8	
	R 8 7 1	1-246-453-00 150Ω 1/4Wカーボン
	R 8 7 2	

新旧モーターの見分け方
ホール素子の抵抗値を測定する。

	旧モーター	新モーター
抵抗値	20 ~ 60 Ω	200 ~ 400 Ω



モーターのコネクターをサーボアンプ基板より外し、2-4、3-5、5-7、6-8ピン間の抵抗を測定する。

(注意) ●セットの電源を入れたままですとピンをショートした時、ホール素子が壊れる場合がありますので必ず電源を切りコネクターを外してチェックして下さい。
●モーター交換ののち必ずサーボアンプ基板のオフセット、ゲイン、テープスピード調整をして下さい。

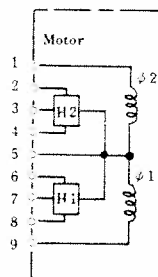
TC-K96R Replacement of BSL Green Motor

Replacement of a former motor with a new one:
The change of constants is required.

Classification for use	Mark	New Parts
Capstan Motor	✕ R 8 0 5	1-214-180-11 100K 1/4W Metal oxide
	✕ R 8 1 1	1-246-453-00 150Ω 1/4W Carbon
	✕ R 8 1 2	
	✕ R 8 2 1	
	✕ R 8 2 2	
	✕ R 8 1 4	1-246-519-00 82K 1/4W Carbon
Reel Motor	✕ R 8 2 4	1-130-134-11 0.082μF 100V Laminated
	✕ C 8 0 5	
	R 8 5 7	
	R 8 5 8	
	R 8 7 1	1-246-453-00 150Ω 1/4W Carbon
	R 8 7 2	

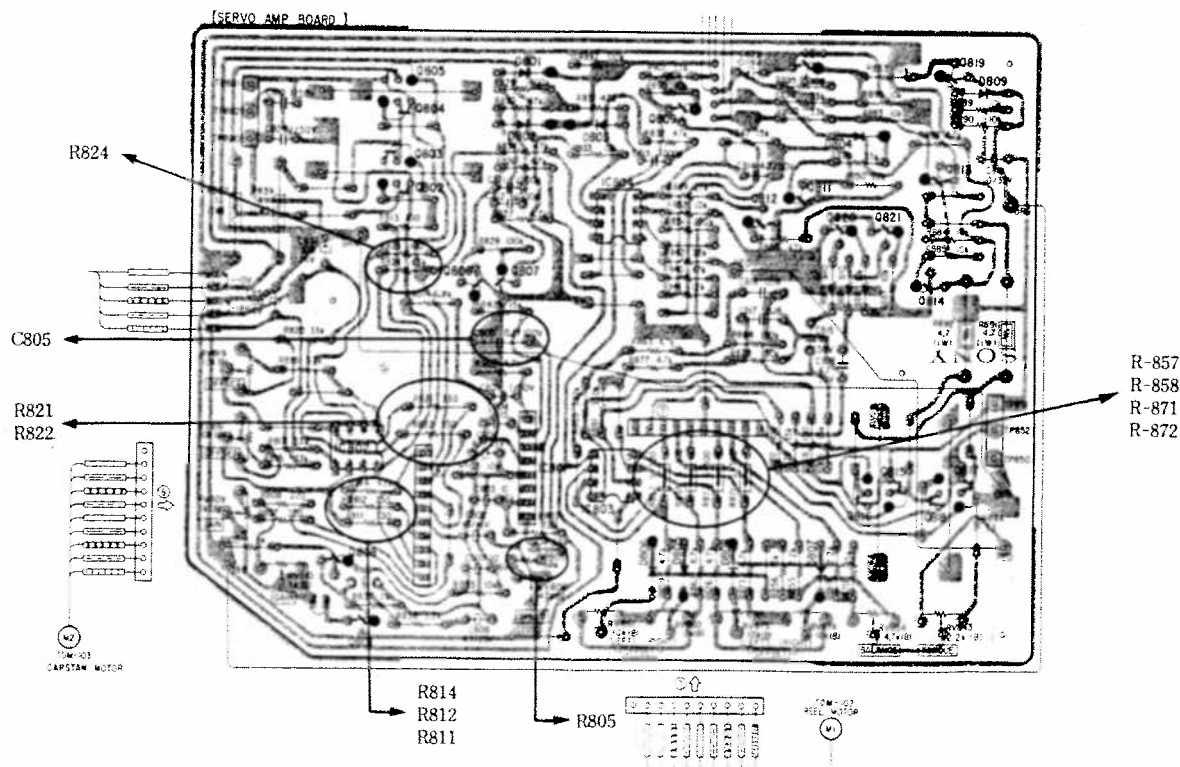
How to discriminate a new motor from a former one:
Resistance value measured of a hall device.

	Former Motor	New Motor
Resistance value	20 ~ 60 Ω	200 ~ 400 Ω



Remove Motor Connector from Servo Amplifier Board and measure the resistance between the pins of each 2-4, 3-5, 5-7 and 6-8.

Note: ● When it is measured with the power on, the pins may be shorted, resulting in possible breakage of the hall device. Be sure to check it with the power turned off and the connectors removed.
● After motor replacement be sure to adjust the voltages on the servo amp board. (Refer to Service Manual for TC-K96R at pages 15~16.)



SCHEMATIC DIAGRAM —System Control Section—
(pages 24-26 of the service manual)

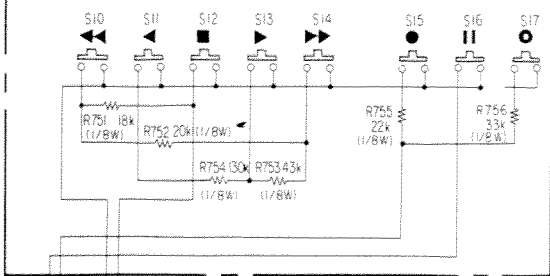
-  : added portion
- All capacitors are in μF unless otherwise noted. $\text{pF} = \mu\mu\text{F}$
50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, $\frac{1}{4}\text{W}$ unless otherwise noted.
 $\text{k}\Omega = 1000\Omega$, $\text{M}\Omega = 1000 \text{ k}\Omega$
-  : panel designation
-  : nonflammable resistor.
- (N) : low-noise resistor.
-  : B + bus.
- Readings are taken under no signal conditions with a VOM
(20 $\text{k}\Omega/\text{V}$).
 -  : Rewind
 -  : Reverse
 -  : Forward
 -  : Fast Forward
 -  : record
 -  : pause
 -  : rec mute
 -  : stop
- Voltage variations may be noted due to normal production tolerances.
- Switch

Ref. No.	Switch	Position
S10—15	FUNCTION	FORWARD
S16	PAUSE	OFF
S17	REC MUTE	OFF
S18	TIMER	OFF
S19	MEMORY	OFF
S20	DIRECTION MODE	
S21	REVERSE	OFF
S22	ERASURE PROOF	OFF
	FORWARD	
S23	ERASURE PROOF	OFF
	CASSETTE LID	
S24	TAPE COUNTER	OFF
S25	DIRECTION	FORWARD
S26	POWER	OFF

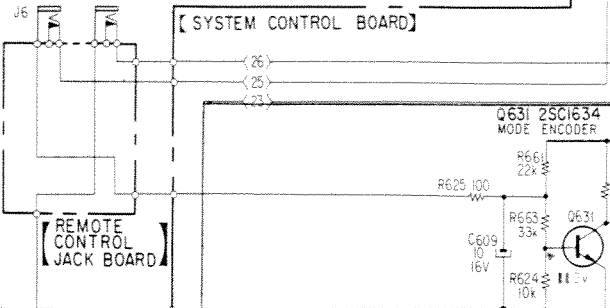
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

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

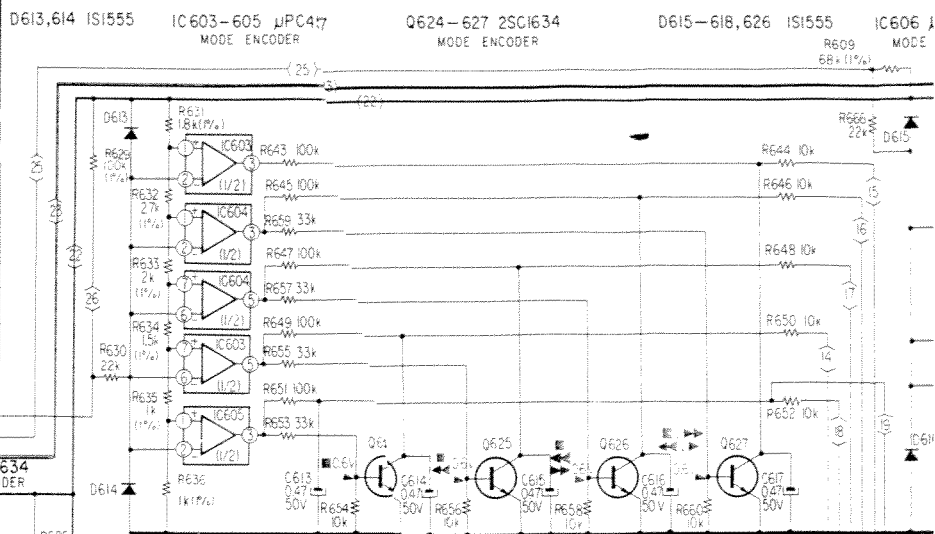
【FUNCTION BUTTON BOARD】



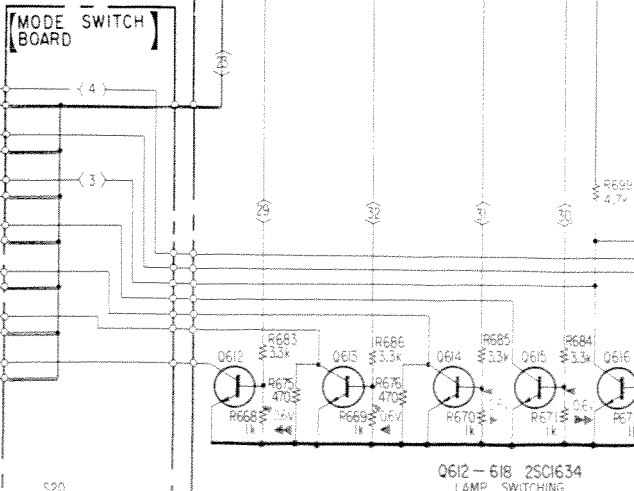
【SYSTEM CONTROL BOARD】



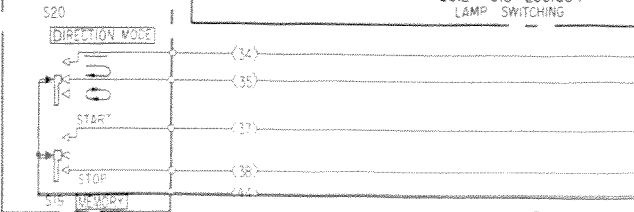
【REMOTE CONTROL JACK BOARD】



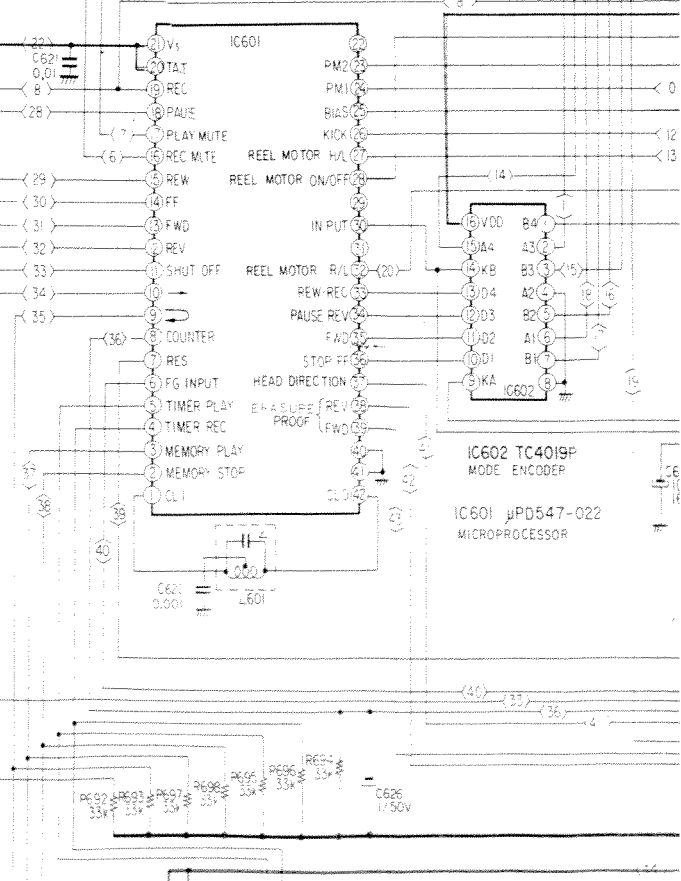
【MODE SWITCH BOARD】

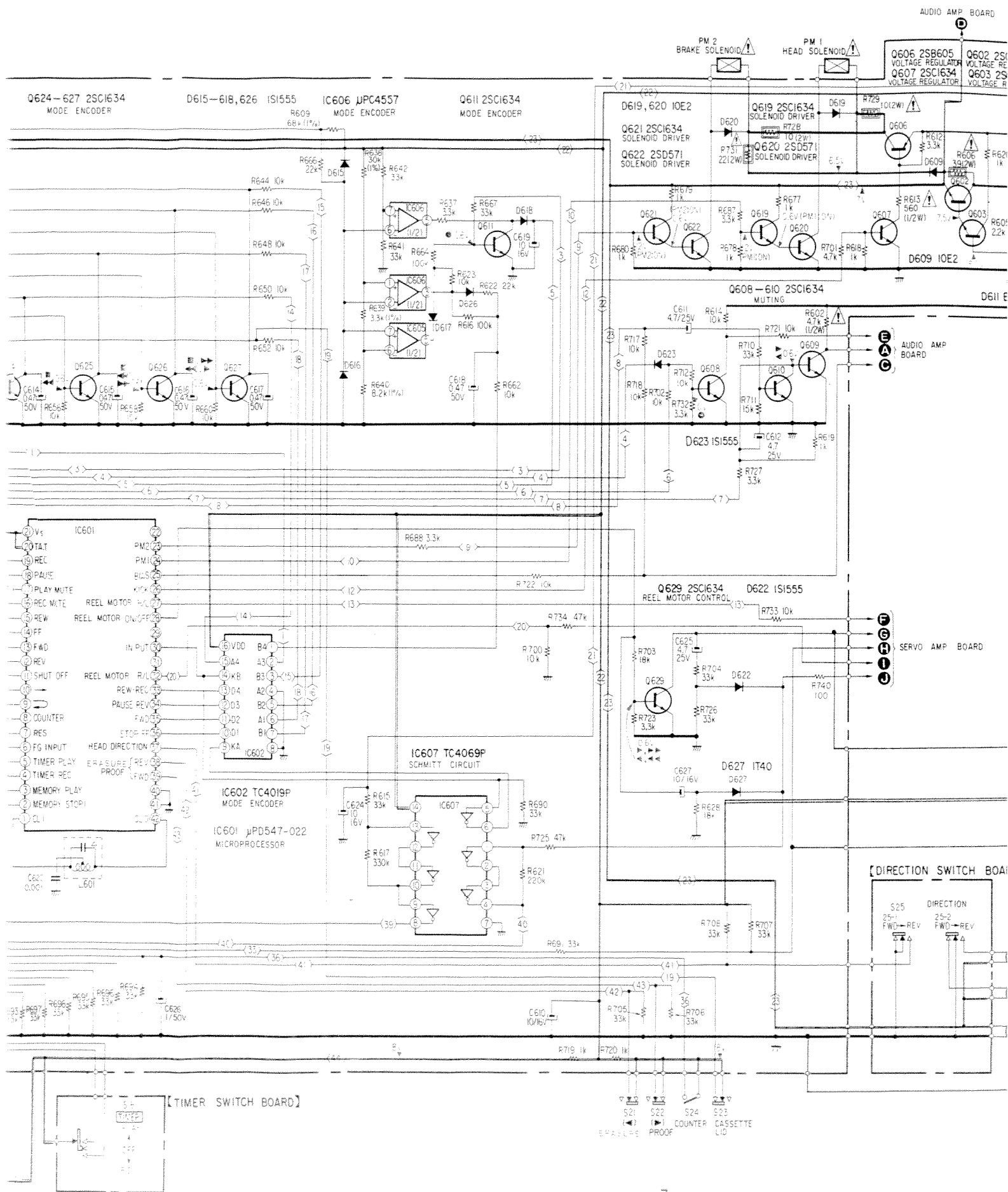


【DIRECTION MODE】



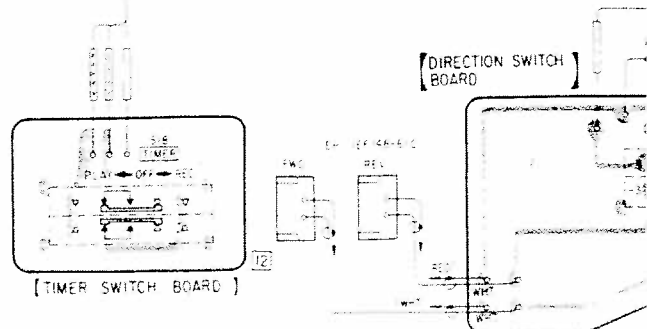
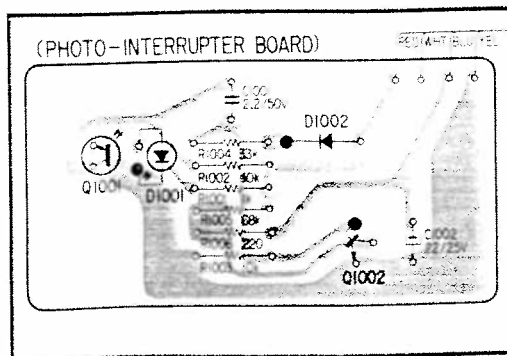
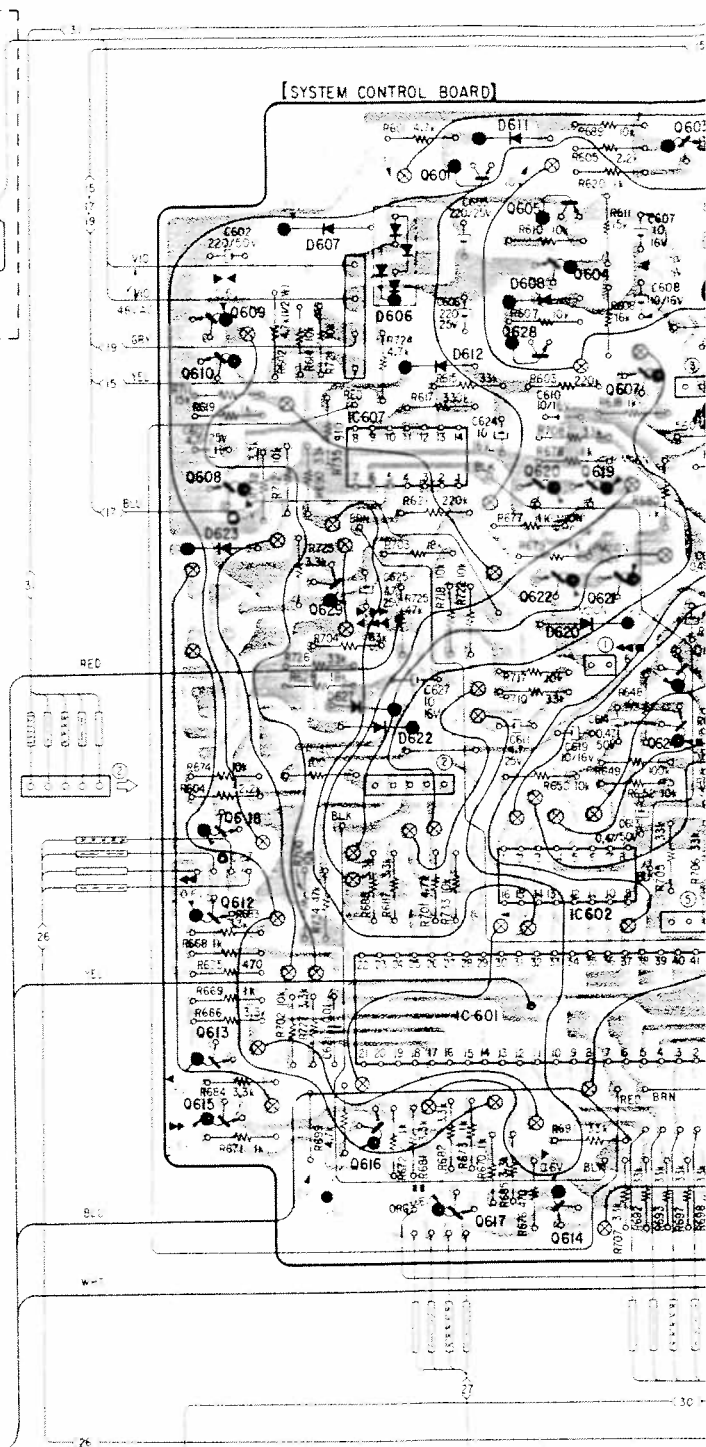
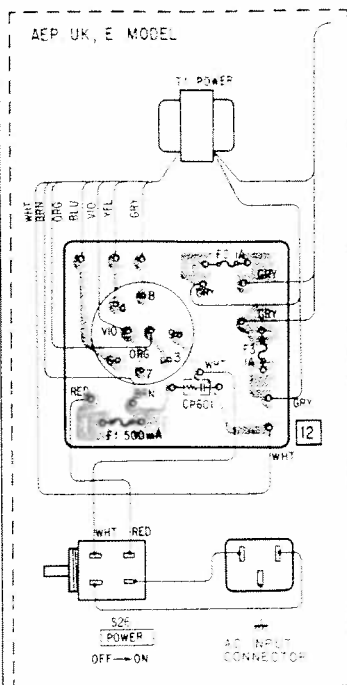
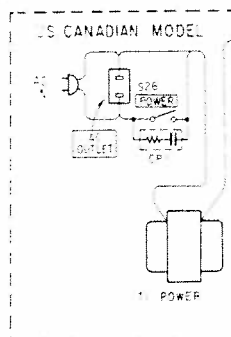
【TIMER SWITCH BOARD】

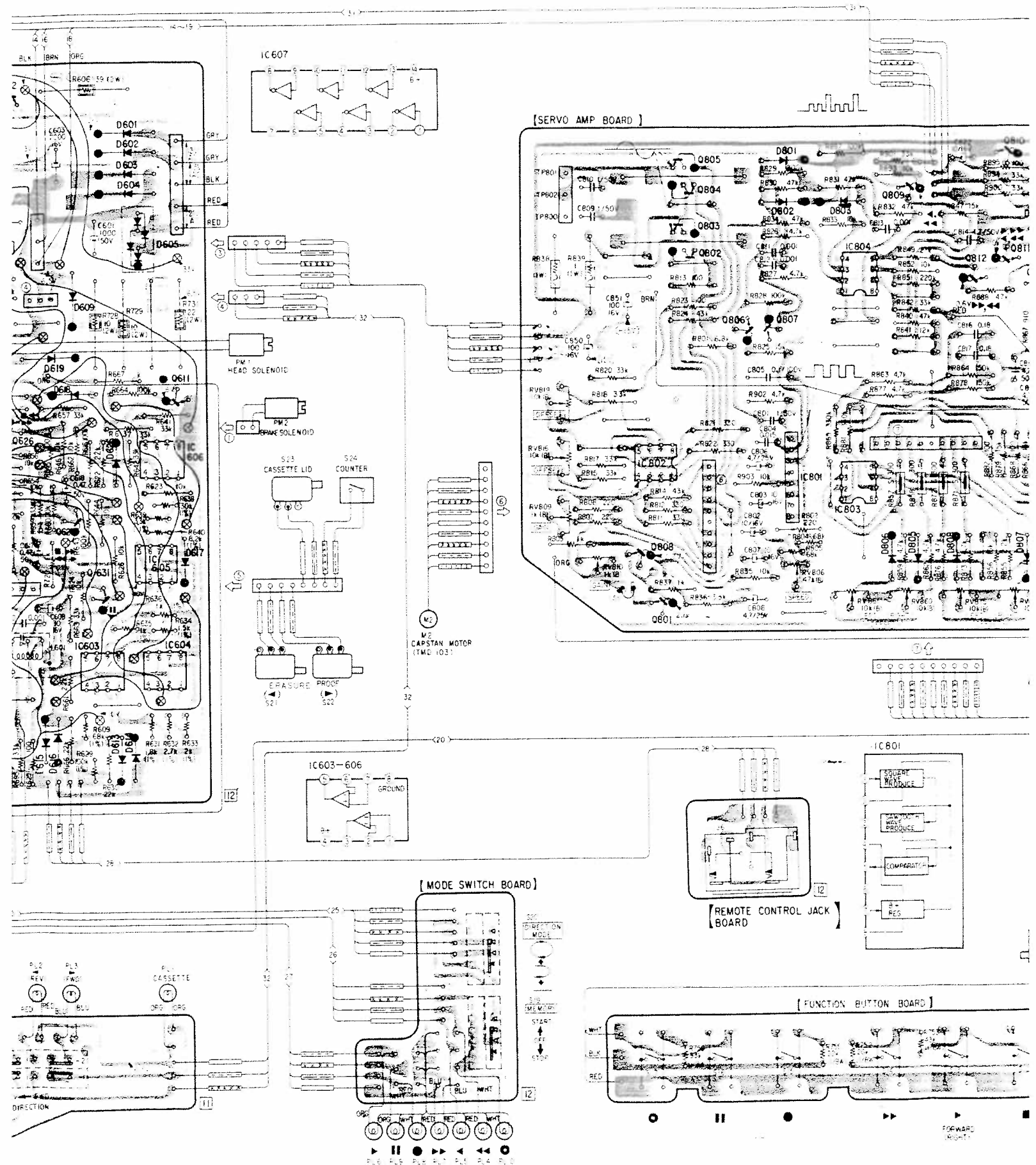


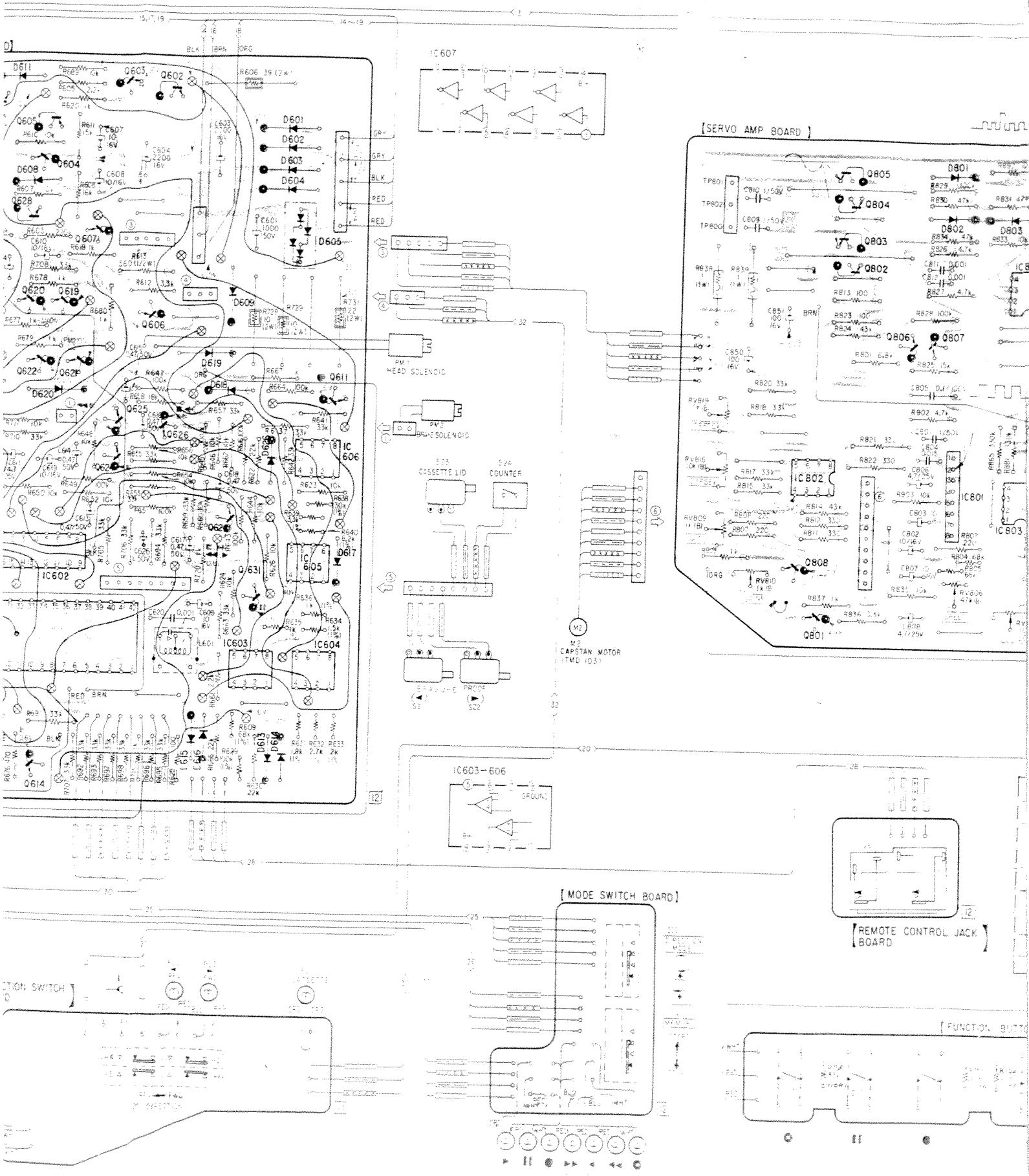


- : added portion

Q, IC	D
603	611
602	
601	
605	601
	607
604	606
	603
	608
609	604
610	
628	612
607	605
IC607	
620,619	609
608	
606	
	623
	619
622,621	
629	
	611
	620 ⁶¹⁸
611	621
625	
626	
	626
624	627,622
IC	
606	
618	627
IC	IC
602,605	
612	617
631	
IC601	
IC	IC
603,604	
613	
615	
616	
	615,616
	613,614
614	
617	







A

AUDIO AMP SECTION

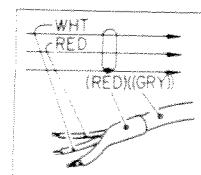
Q, IC	D
810	801
805 819	809
809	802,803
804	804
803	813
802	811
812	820,821
IC804	814
806,807	808
815,817	805,807
816,818	
808	
801	

AUDIO AMP SECTION

B

Replacement Semiconductors: See page 4.

- Color code of sleeving over the end of the jacket.



- : parts extracted from the component side.
- : parts extracted from the conductor side.
- ⊗ : Through hole.
- ⊙ : component-side pattern

④ : E - first pattern

⑤ : E - pattern