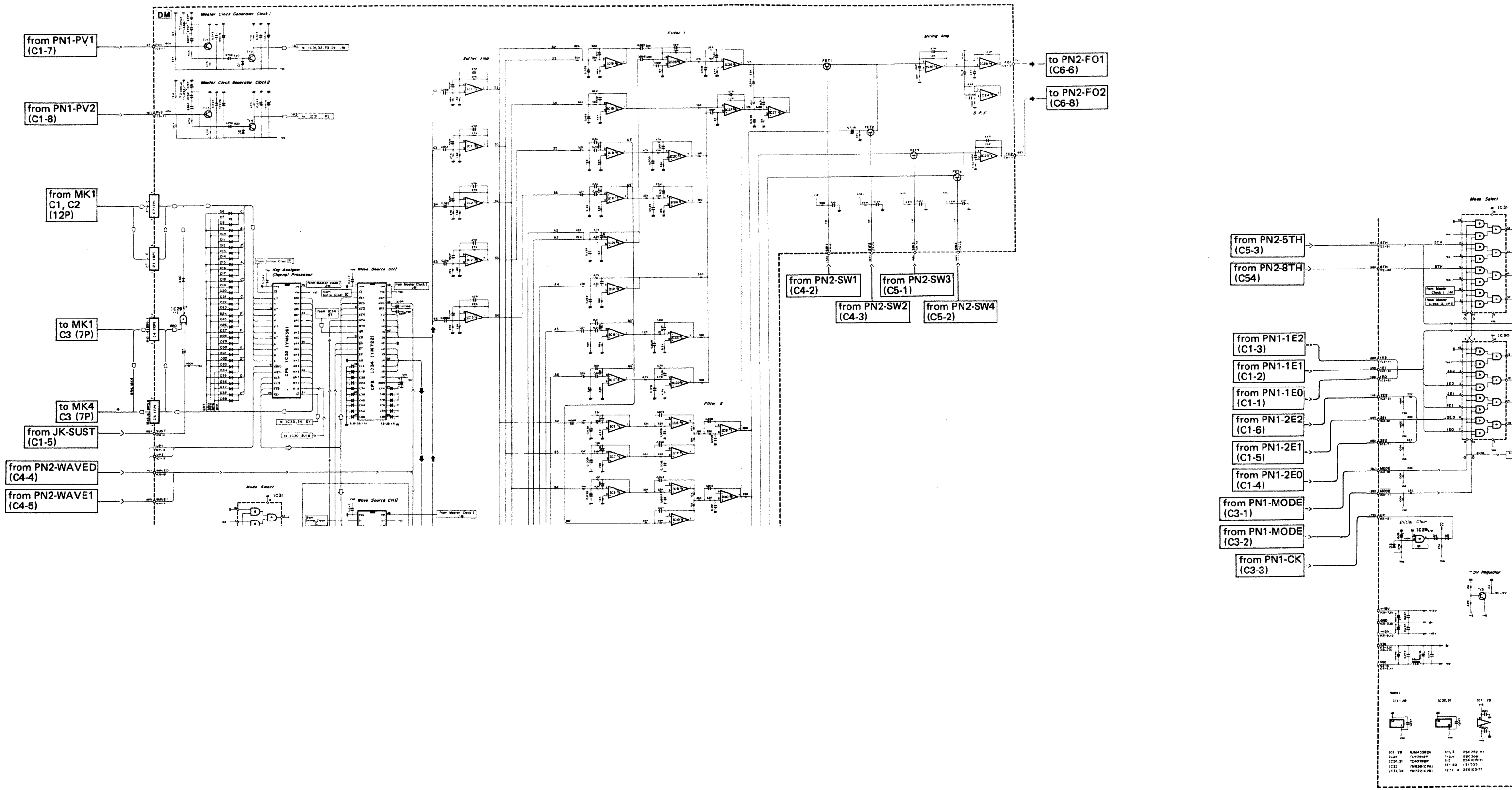


DM Circuit Diagram



EFT Circuit Board & Wining

• Connector

C2			
Pin No.	Pin Name	Wire Color	Destination
1	GND	S BR S	JK-GND (C2-4)
2	UB1	S BR S	JK-UB1 (C2-3)
3	GND	S RE S	JK-GND (C2-6)
4	UB2	S RE S	JK-UB2 (C2-5)
5	GND	S OR S	JK-GND (C2-2)
6	H.P	S OR S	JK-HP (C2-1)
7	GND	—	—

C4			
Pin No.	Pin Name	Wire Color	Destination
1	—15V	YE	DC-15V (C3-4)
2	—15V	—	—
3	GND	—	—
4	GND	BL	DC-GND (C4-7)
5	GND	—	—
6	+15V	—	—
7	+15V	BR	DC+15V (C4-4)

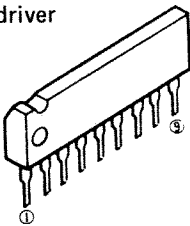
C6			
Pin No.	Pin Name	Wire Color	Destination
1	VDD	RE	DC-VDD (C2-6)
2	VDD	—	—
3	VSS	—	—
4	VSS	GY	DC-VSS (C1-7)
5	VSS	—	—

C3			
Pin No.	Pin Name	Wire Color	Destination
1	FLG	S WH	PN2-FLG (C6-10)
2	GND	S WH S	PN2-GND (C6-9)
3	FG	VI	PN1-FG (C3-5)
4	MX	S GY	PN2-MX (C7-4)
5	GND	S GY S	PN2-GND (C7-3)
6	EQ	S GG	PN2-EQ (C7-2)
7	GND	S GG S	PN2-GND (C7-1)

C5			
Pin No.	Pin Name	Wire Color	Destination
1	TR	OR	PN1-TR (C3-4)
2	TS2	VI	PN1-TS2 (C2-2)
3	TS1	BE	PN1-TS1 (C2-1)
4	FTR	YE	JK-FTR (C1-1)
5	TD2	WH	PN1-TD2 (C2-4)
6	VM	SB	PN1-VM (C2-3)
7	TD1	GG	PN1-TD1 (C2-5)

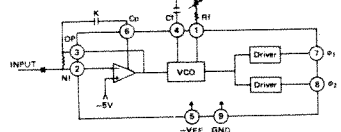
Notes

•IG03290: IC1
BBD driver

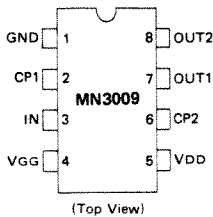


1	2	3	4	5	6	7	8	9
Rf	-IN	OP	Cf	VEE	Cp	φ1	φ2	GND

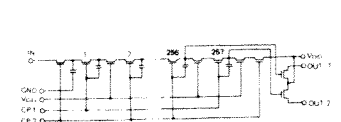
Block & Schematic Diagram



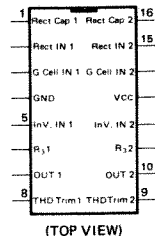
•MN3009: IC2
256 stage BBD



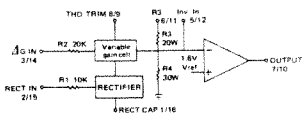
Block & Schematic Diagram



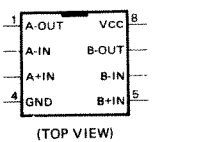
•NE570: IC3
COMPANDER



Block & Schematic Diagram



•NJM4558DV: IC5 ~ 12
Dual Operational Amplifier



Logic Diagram

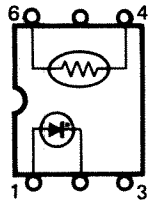
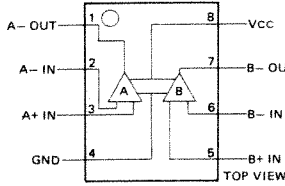


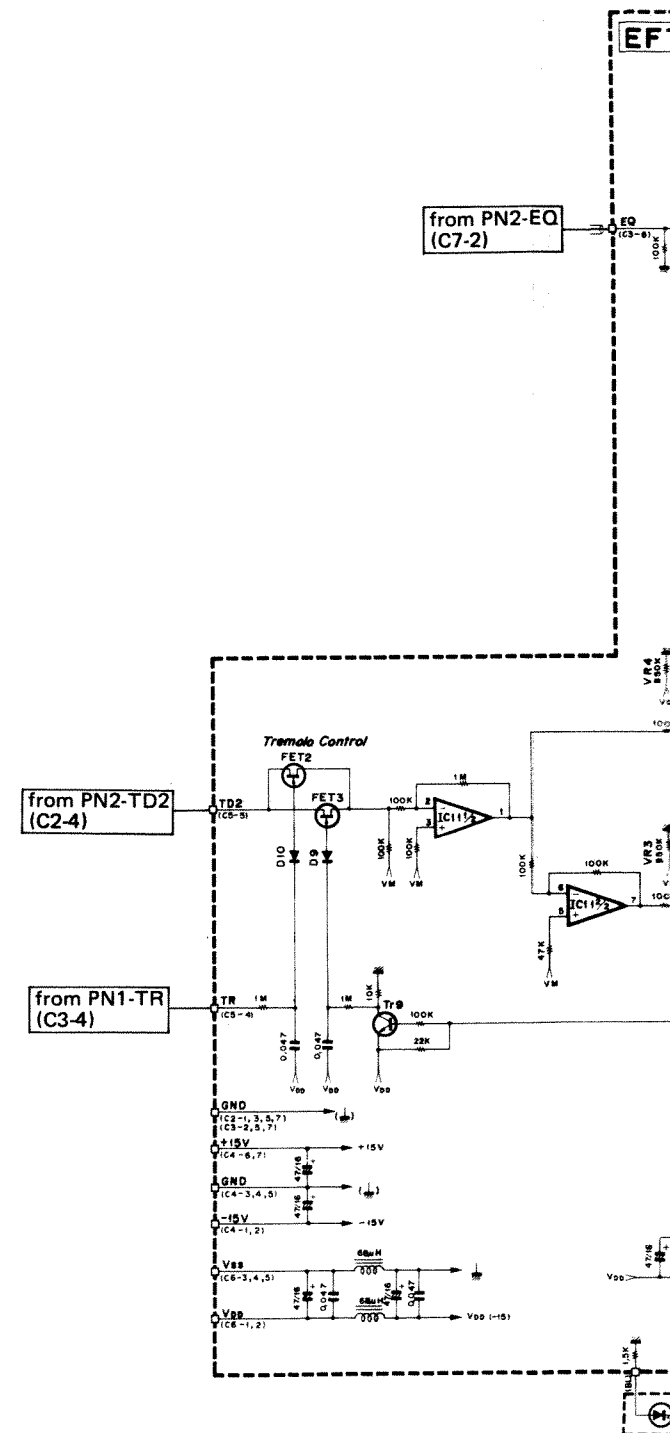
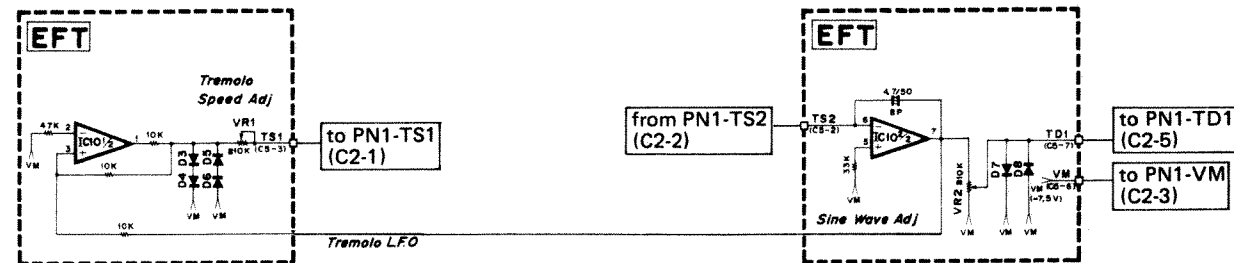
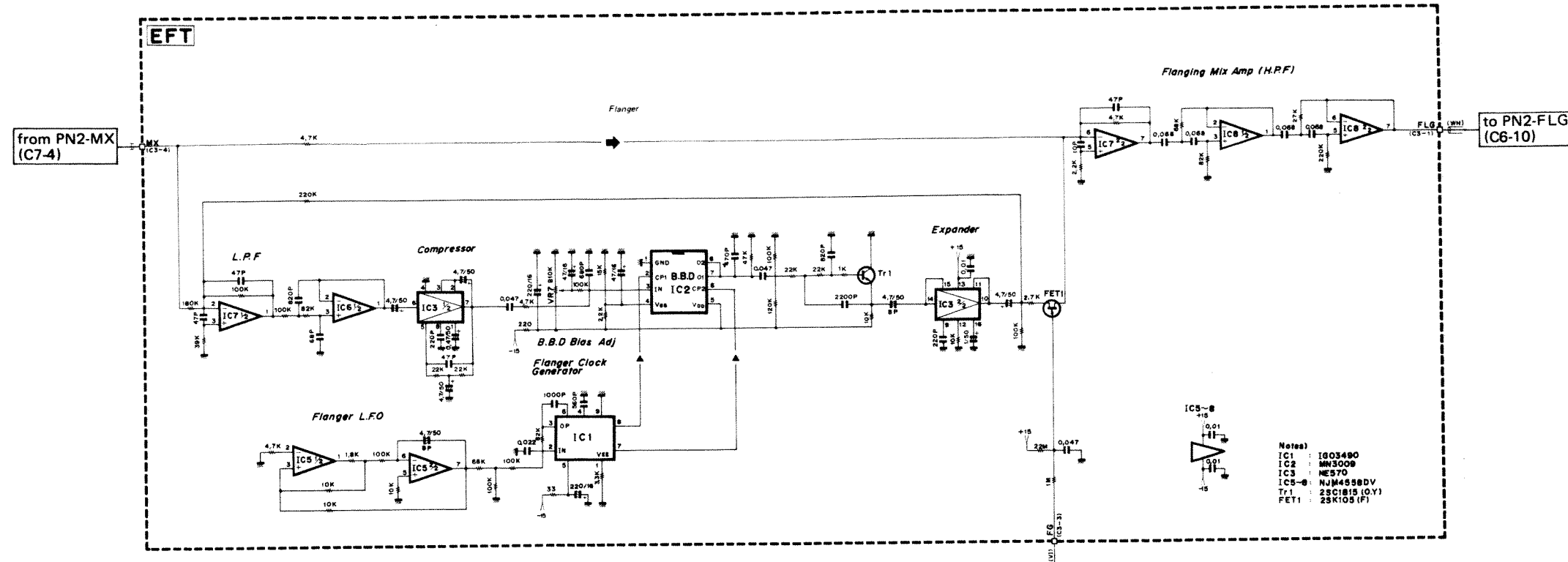
Photo Cappler
•P1501: PC1, 2

•RZ12: RY

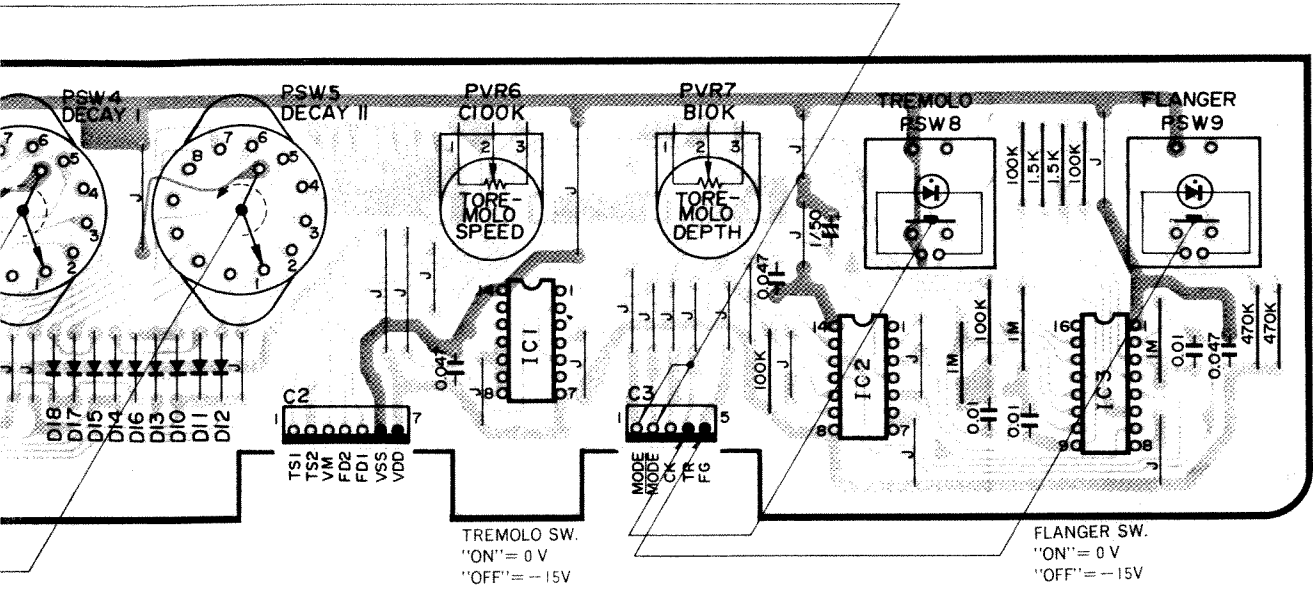
EFT Circuit Board & Wining

Item	Setting	Test Point	Adjustment	Adj. Point	Rem.
FLANGER OSC		IC5 pin 7			Check
		IC1 pin 7 pin 8	 $f = 120\text{kHz} \sim 25\text{kHz}$ Make sure that FM mod. is applied in above freq. range.		Check
FLANGER WAVEFORM	FILTER I – 1 only on. Press C ₅ key.	IC3 pin 10	 Adj. for perfect symmetry.	VR7	Adj.
TREMOLO OSC	TREMOLO SPEED —MAX	IC10 pin 7	 $f = 15 \pm 0.5\text{Hz}$	VR1	Adj.
Speed	TREMOLO SPEED —MIN	IC10 pin 7	 $f = 0.5 \pm 0.4\text{Hz}$		Check
Depth	TREMOLO DEPTH —MAX TREMOLO SW —ON	IC11 pin 1 IC11 pin 1	 Adjust for sine-wave.	VR2	Adj.
MODULATION BALANCE					
OUT 1		IC9 pin 1		VR3	Adj.
OUT 2		IC9 pin 7	 Adjust for 95% mod. Check that IC9 pin 1 is 180 degrees out of phase.	VR4	Adj.
UNBALANCED output circuit	FILTER I – 1 —ON	EQ (C3-6)	Adjust so 0.8 times the EQ terminal input signal appears at UB1, UB2.		
OUT 1	C ₅ Key —ON	UB1 (C2-2)		VR5	Adj.
OUT 2		UB2 (C2-4)		VR6	Adj.
MUTING	Power	Tr6 Emitter	 2 sec \pm 20% 3msec		Check

EFT Circuit Diagram



PN1, 2 Circuit Board & Wining

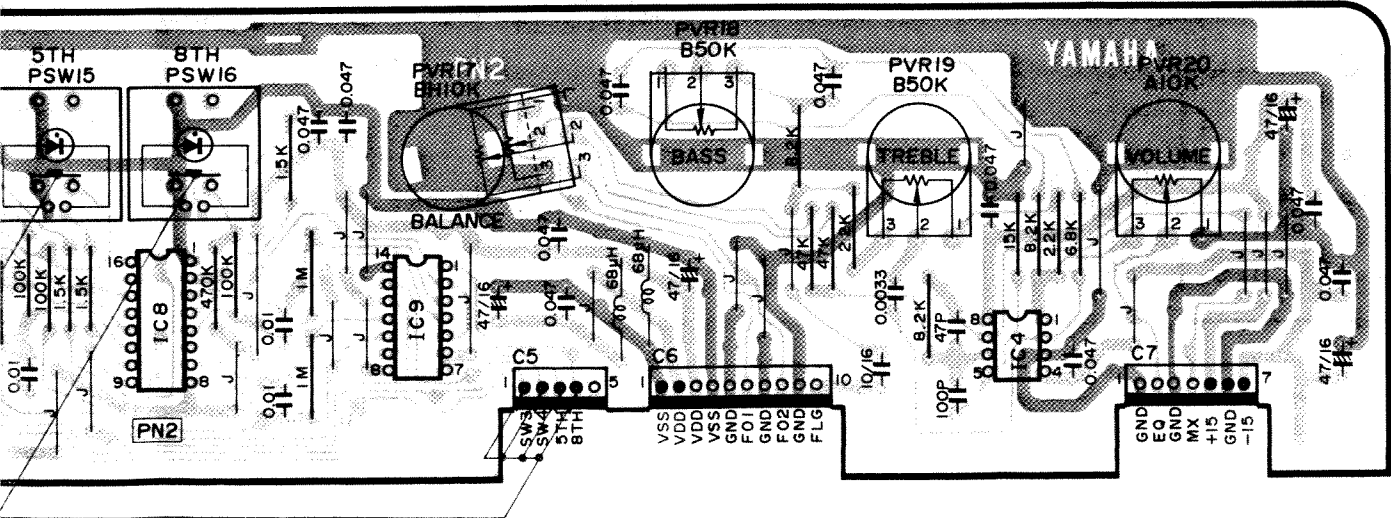


ving.

h	7th	8th
	L	L
	L	L
	H	L

,"L"=-15V

ide(パターン側)



owing conditions.

FILTER4 (C5-2)	5TH (C5-3)	8TH (C5-4)
0 V	0 V	0 V
-15V	-15V	-15V

PN1, 2 Circuit Board & Wining

• Connector

C1

Pin No.	Pin Name	Wire Color	Destination
1	1Q0	SB	DM-1Q0 (C2-8)
2	1Q1	PK	DM-1Q1 (C2-6)
3	1Q2	BR	DM-1Q2 (C2-4)
4	2Q0	RE	DM-2Q0 (C2-7)
5	2Q1	OR	DM-2Q1 (C2-5)
6	2Q2	YE	DM-2Q2 (C2-3)
7	PV1	GR	DM-PV1 (C3-1)
8	PV2	BE	DM-PV2 (C3-5)
9	VSS	VI	DM-VSS (C3-3)
10	VDD	GG	DM-VDD (C3-4)

C2

Pin No.	Pin Name	Wire Color	Destination
1	TS1	BE	EFT-TS1 (C5-3)
2	TS2	VI	EFT-TS2 (C5-2)
3	VM	SB	EFT-VM (C5-6)
4	TD2	WH	EFT-TD2 (C5-5)
5	TD1	GG	EFT-TD1 (C5-7)
6	VSS	GR	PN2-VSS (C6-4)
7	VDD	OR	PN2-VDD (C6-3)

C3

Pin No.	Pin Name	Wire Color	Destination
1	MODE	BL	DM-MODE (C2-2)
2	MODE	BE	DM-MODE (C2-1)
3	CK	PK	DM-CK (C6-2)
4	TR	OR	EFT-TR (C5-1)
5	FG	VI	EFT-FG (C3-3)

C4

Pin No.	Pin Name	Wire Color	Destination
1			
2	SW1	OR	DM-SW1 (C9-6)
3	SW2	GR	DM-SW2 (C9-7)
4	WAVE0	YE	DM-WAVE0 (C6-5)
5	WAVE1	BR	DM-WAVE1 (C6-4)

C5

Pin No.	Pin Name	Wire Color	Destination
1	SW3	BR	DM-SW3 (C9-4)
2	SW4	RE	DM-SW4 (C9-5)
3	5TH	WH	DM-5TH (C2-9)
4	8TH	GR	DM-8TH (C2-10)

C6

Pin No.	Pin Name	Wire Color	Destination
1	VSS	GY	DC-VSS (C1-7)
2	VDD	RE	DC-VDD (C2-7)
3	VDD	OR	PN1-VDD(C2-7)
4	VSS	GR	PN1-VSS(C2-6)
5	GND	S VI S	-
6	FO1	S VI	DM-FO1 (C9-2)
7	GND	S BE S	-
8	FO2	S BE	DM-FO2 (C9-1)
9	GND	S WH S	EFT-GND (C3-2)
10	FLG	S WH	EFT-FLG (C3-1)

C7

Pin No.	Pin Name	Wire Color	Destination
1	GND	S GG S	EFT-GND (C3-7)
2	EQ	S GG	EFT-EQ (C3-6)
3	GND	S GY S	EFT-GND (C3-5)
4	MX	S GY	EFT-MX (C3-4)
5	+15V	BR	DC+15V(C4-5)
6	GND	BL	DC-GND (C4-8)
7	-15V	YE	DC-15V (C3-5)

Notes)

•TC4013BP: IC1, 2, 5, 7, 9
Dual "D" Flip Flop
with Set/Reset Capability

Block Diagram

Truth Table

•TC4050BP: IC3, 6, 8
Hex Buffer/Converter
(Non Inverting)

Logic Diagram

•NJM4558DV: IC4
Dual Operational Amplifier

Logic Diagram

•Push SW.(Knob:grey)

PSW1 : MODE
PSW8 : TREMOLO
PSW9 : FLANGER
PSW15 : 5TH
PSW16 : 8TH

•Push SW. (Knob:white)

PSW11: FILTER 1
PSW12: FILTER 2
PSW13: FILTER 3
PSW14: FILTER 4

•Rotary SW. Single Circuit,
8 positions.

PSW4 : DECAY I
PSW5 : DECAY II

•Rotary SW. Three-Circuit,
4 positions.

PSW10: WAVE

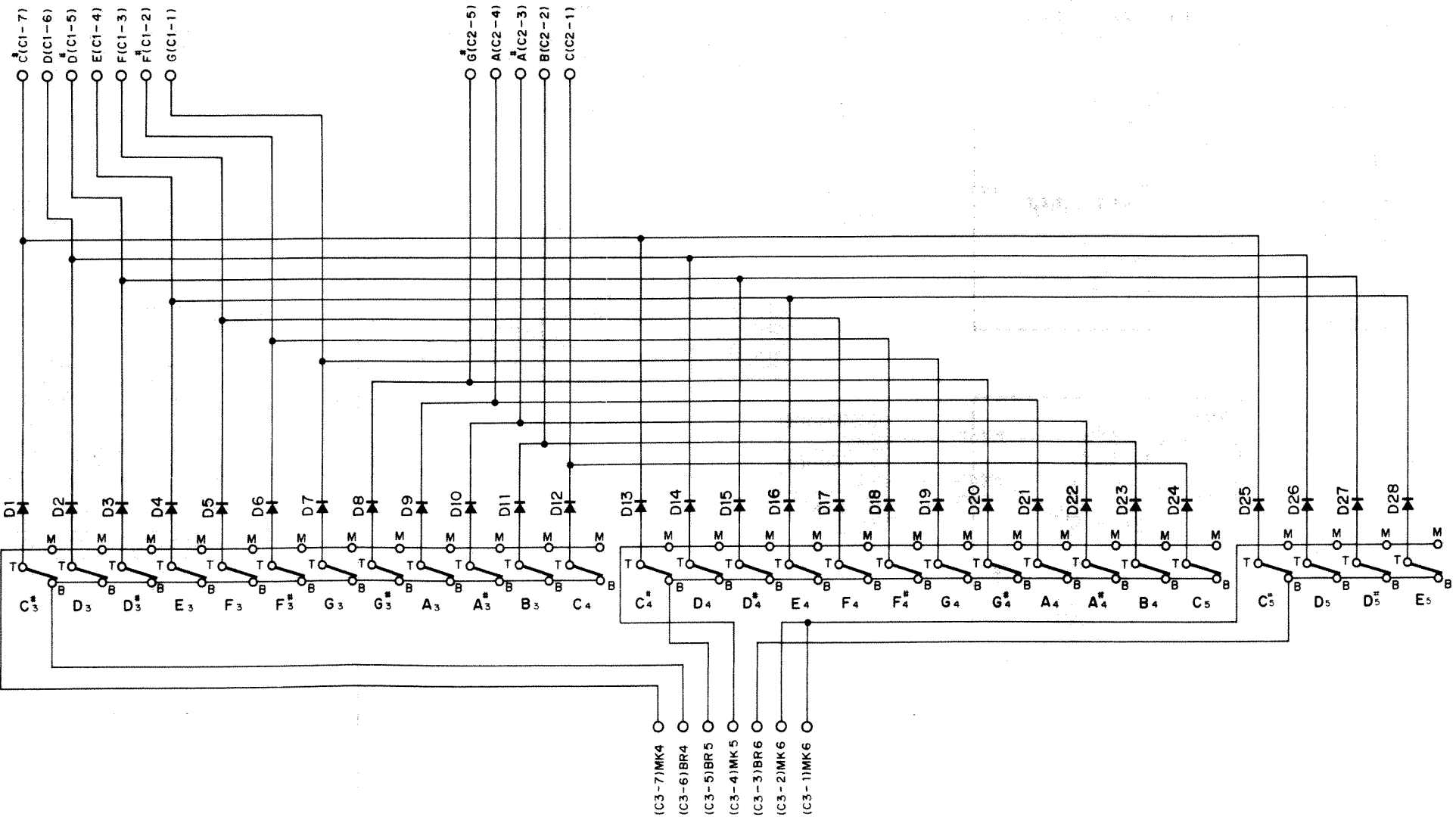
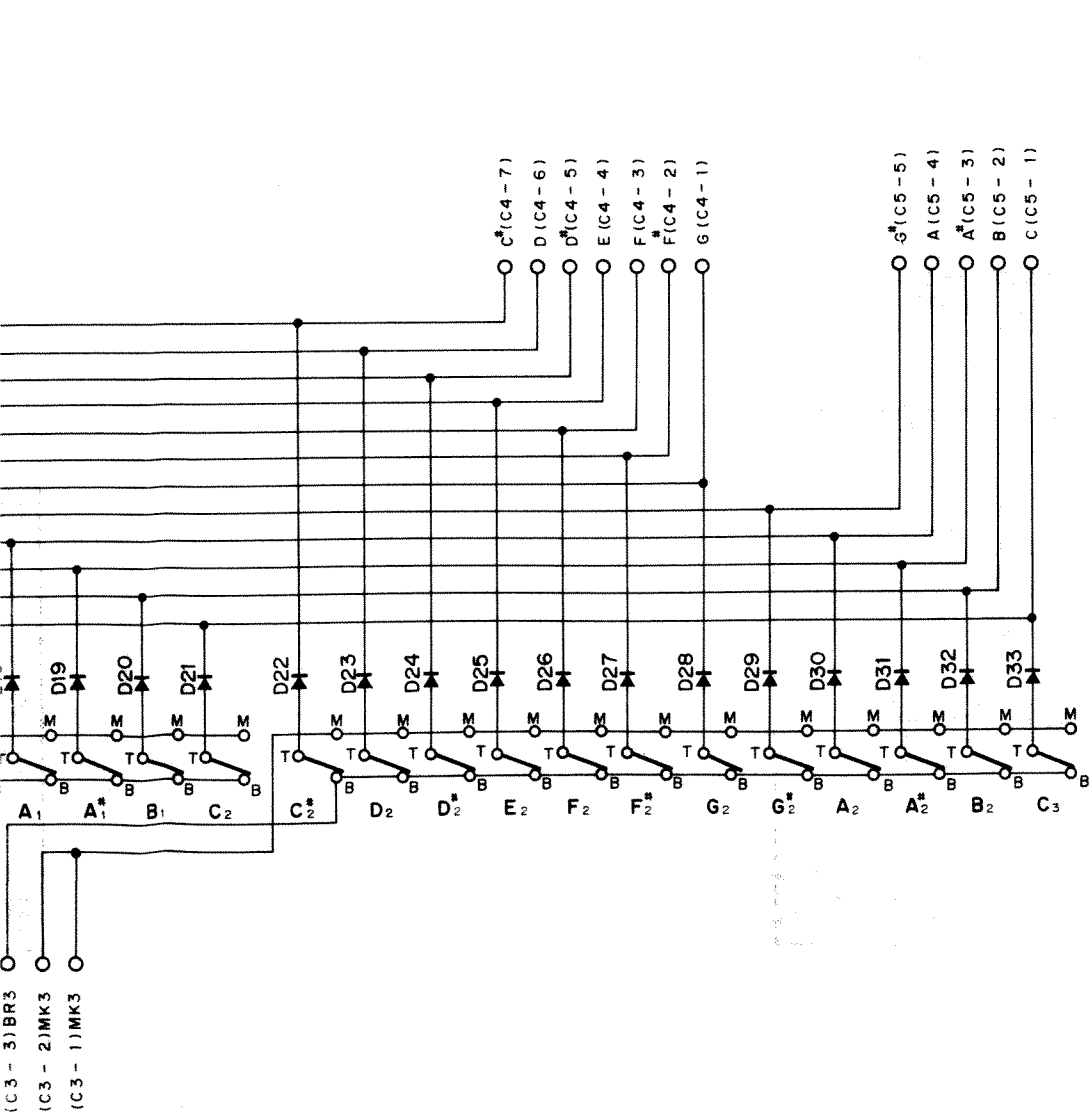
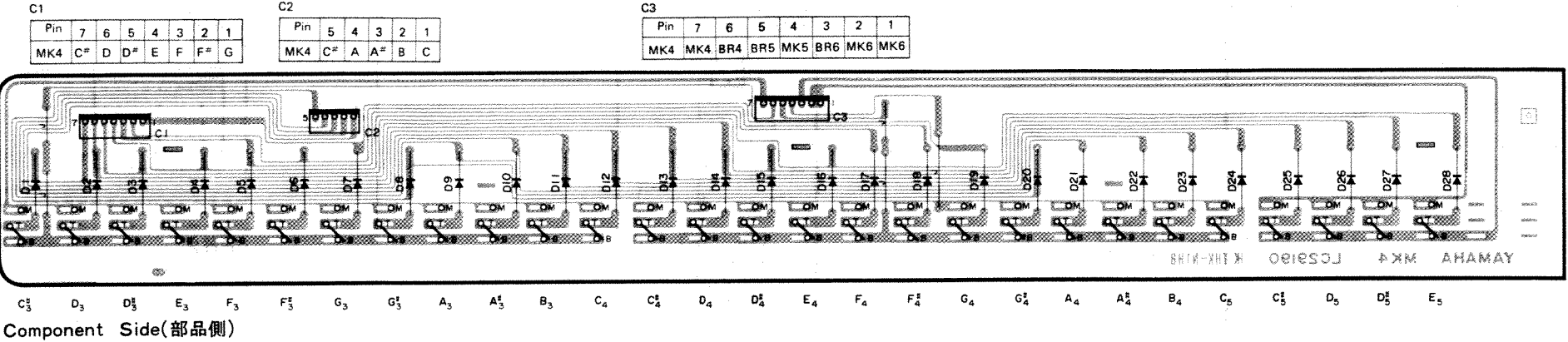
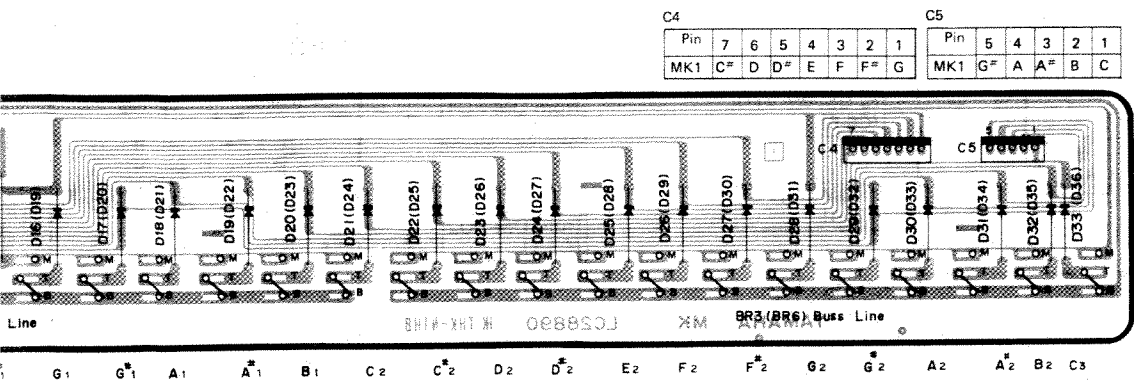
Anode

Cathode

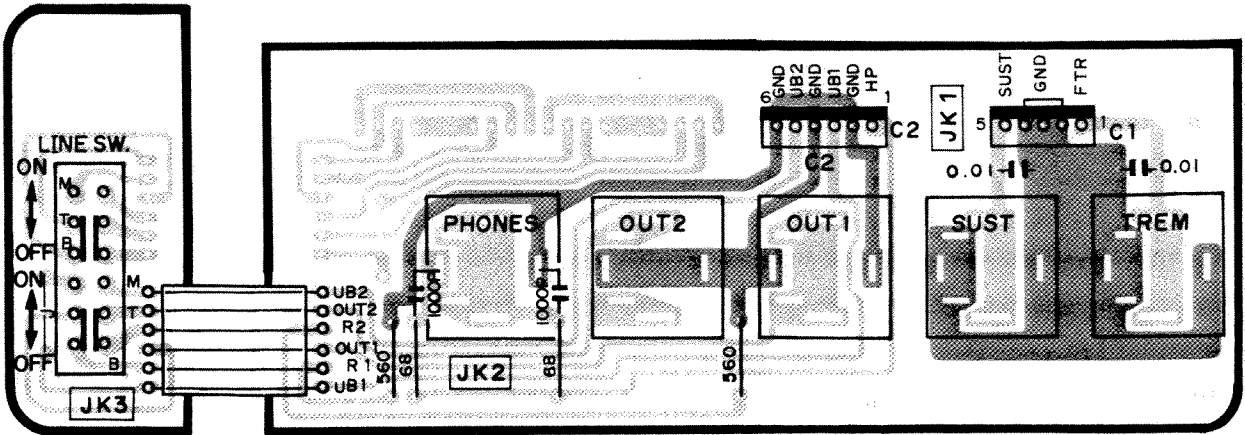
1S1555 : D1 ~ 18

MK4 Circuit Board & Wining, Circuit Diagram

am



JK1, 2 Circuit Board & Wining, Circuit Diagram



Pattern Side (パターン側)

KEP-NA10709-14 △

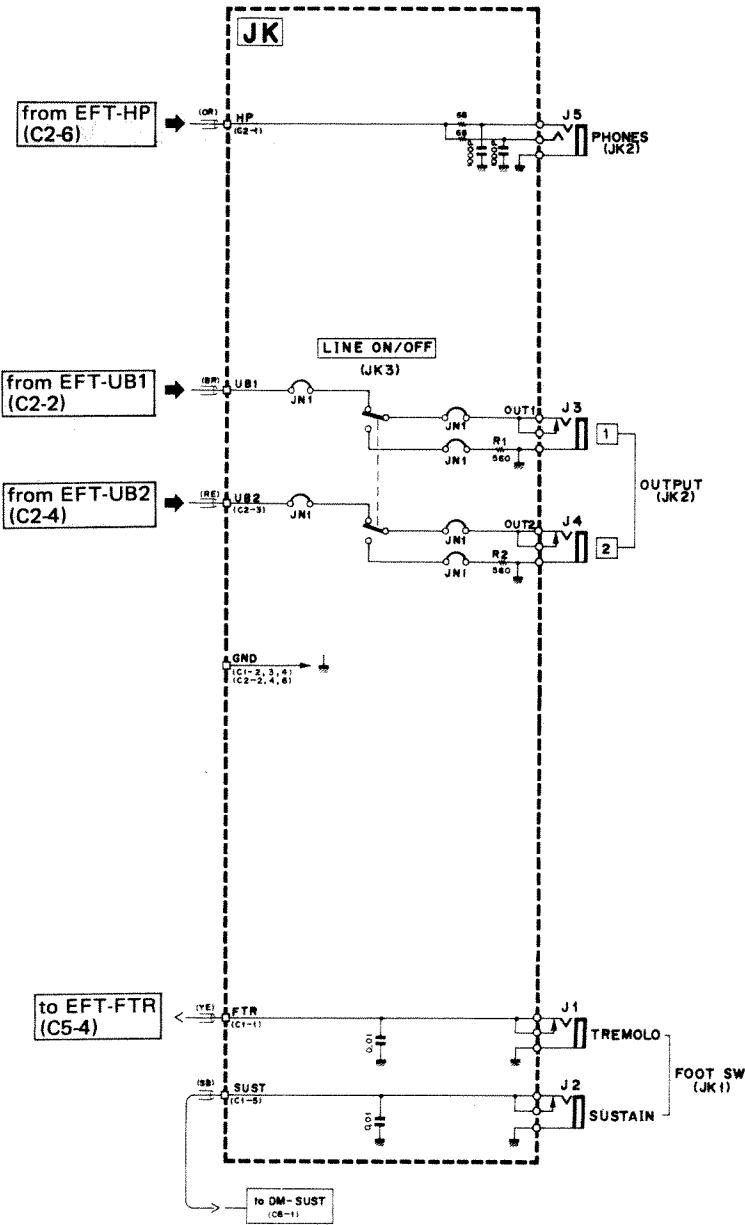
• Connector

C1

Pin No.	Pin Name	Wire Color	Destination
1	FTR	YE	EFT-FTR (C5-4)
2	GND		
3	GND	BL	DC-GND (C4-9)
4	GND		
5	SUST.	SB	DM-SUST. (C8-1)

C2

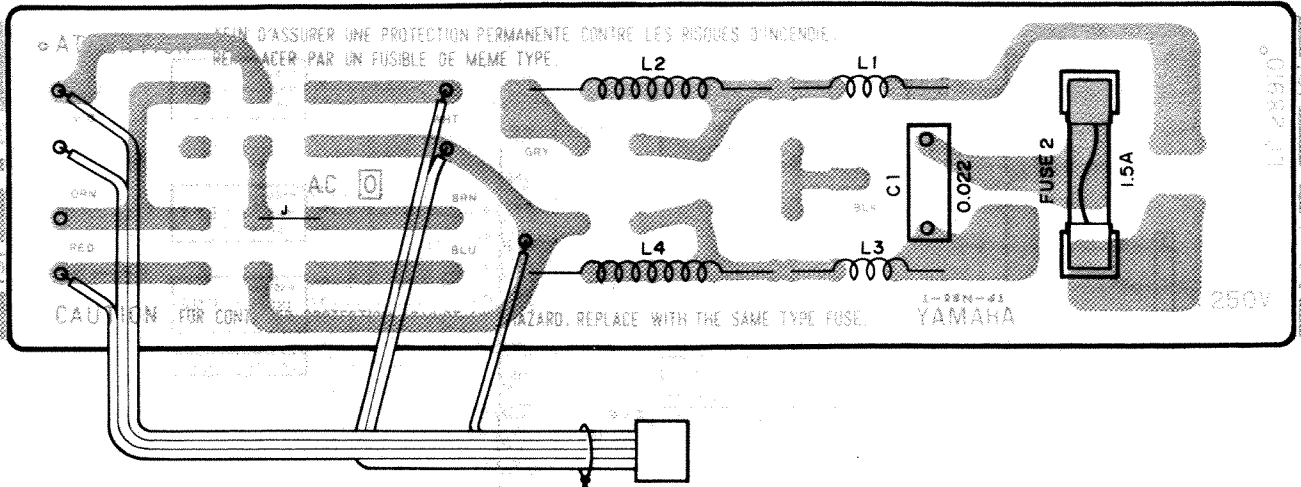
Pin No.	Pin Name	Wire Color	Destination
1	HP	S OR	EFT-HP (C2-6)
2	GND	S OR S	EFT-GND (C2-6)
3	UB1	S BR	EFT-UB1 (C2-2)
4	GND	S BR S	EFT-GND (C2-1)
5	UB2	S RE	EFT-UB2 (C2-4)
6	GND	S RE S	EFT-GND (C2-3)



KEC-10183-14 △

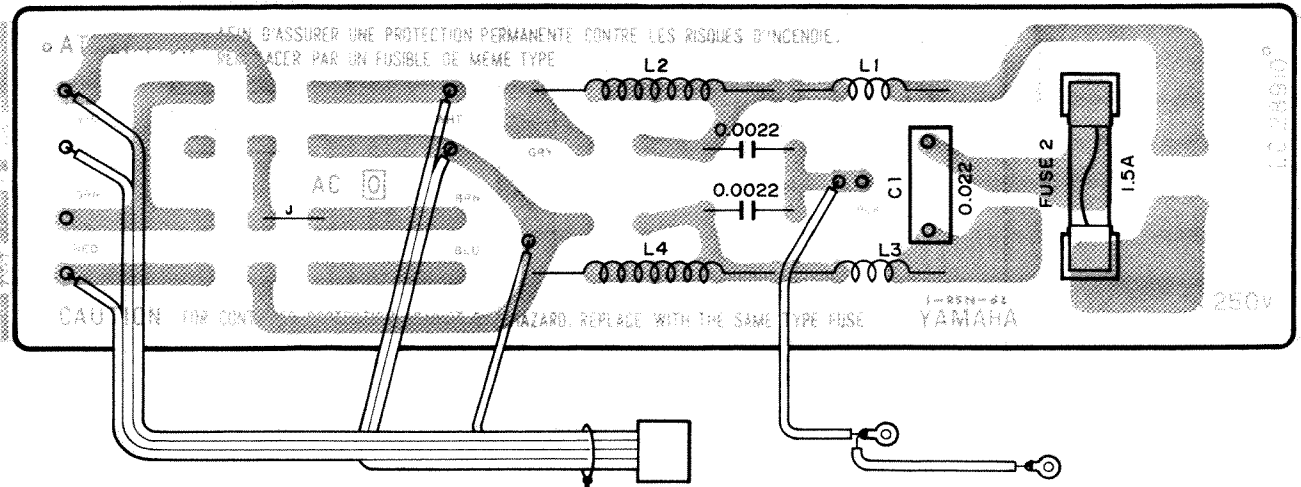
AC Circuit Boarde & Wiring

• Japanese, Canadian Model



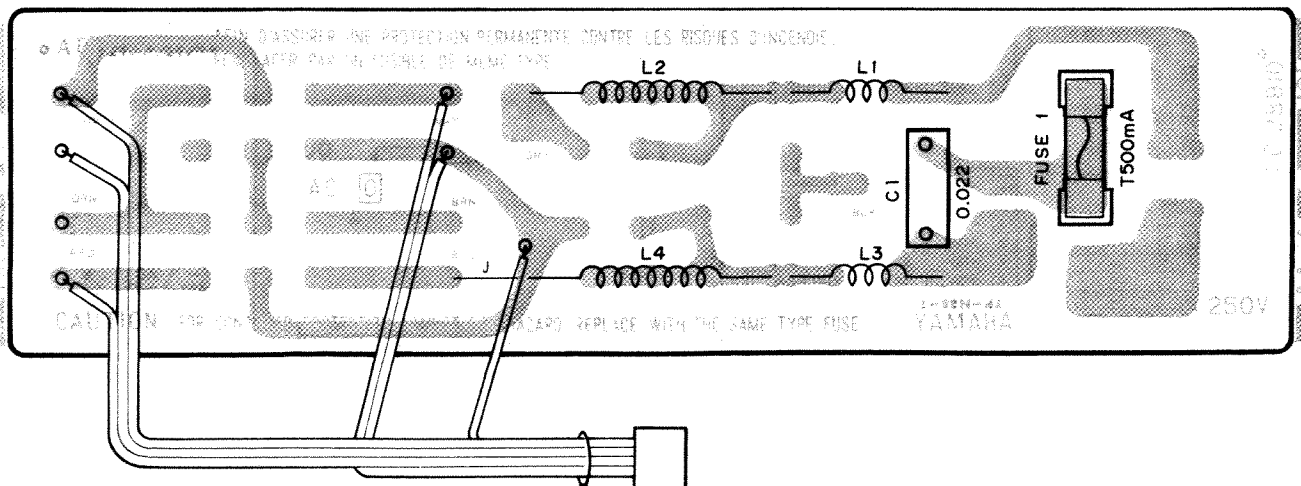
Pattern Side (パターン側)

• U.S. American Model



Pattern Side (パターン側)

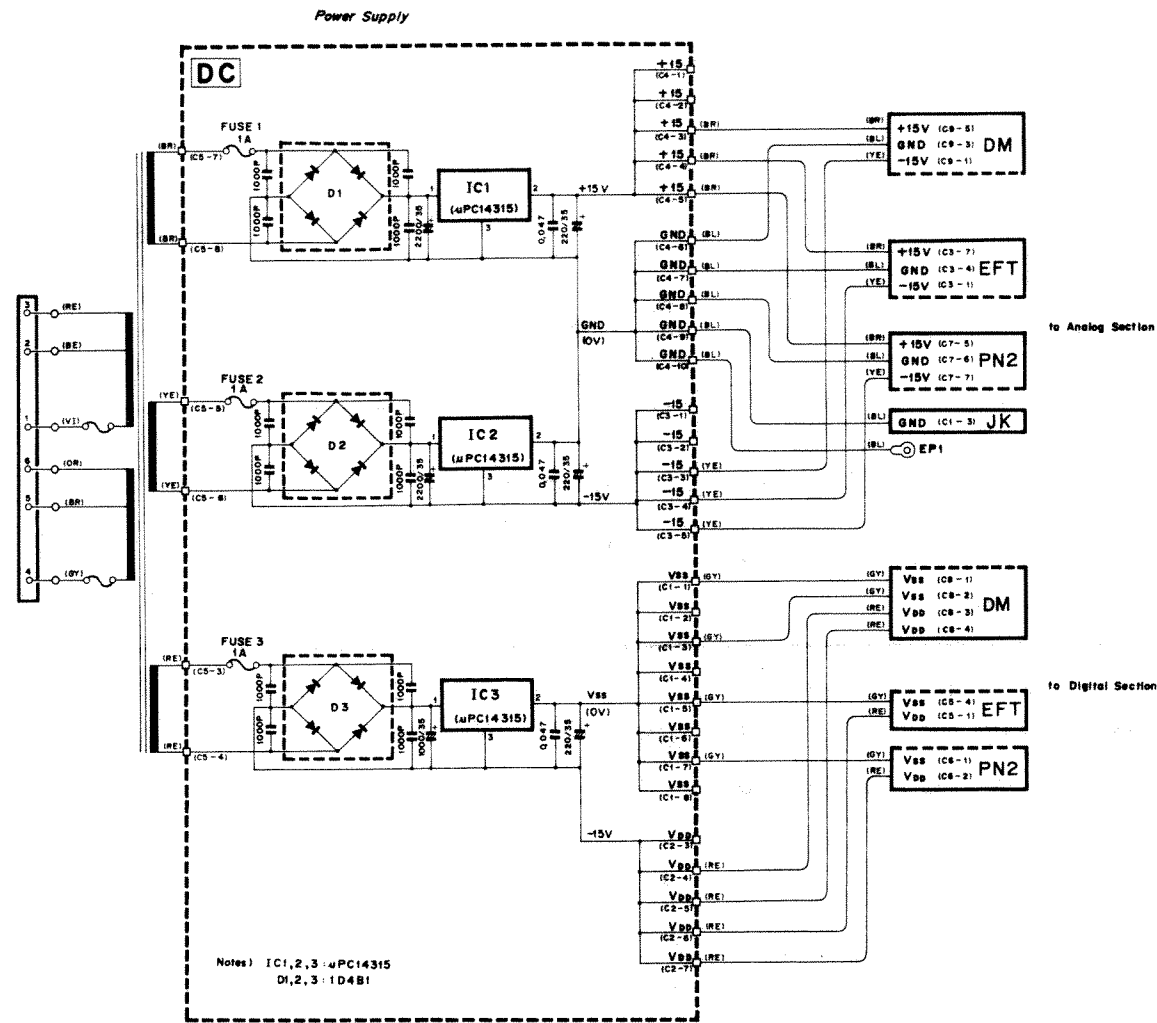
• North European Model



Pattern Side (パターン側)

KEP-NA10703-14 △

DC Circuit Diagram



CP25 SERVICE MANUAL

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C1			
Pin No.	Pin Name	Wire Color	Destination
1	VSS	GY	DM-VSS (C8-1)
2	VSS		
3	VSS	GY	DM-VSS (C8-2)
4	VSS		
5	VSS	GY	EFT-VSS (C6-4)
6	VSS		
7	VSS	GY	PN2-VSS (C6-1)
8	VSS		

C2			
Pin No.	Pin Name	Wire Color	Destination
1			
2			
3	VDD		
4	VDD	RE	DM-VDD (C8-1)
5	VDD	RE	DM-VDD (C8-2)
6	VDD	RE	EFT-VDD (C6-1)
7	VDD	RE	PN2-VDD (C6-2)

C3			
Pin No.	Pin Name	Wire Color	Destination
1	-15V		
2	-15V		
3	-15V	YE	DM-15V (C8-10)
4	-15V	YE	EFT-15V (C4-1)
5	-15V	YE	PN2-15V (C7-7)

C4			
Pin No.	Pin Name	Wire Color	Destination
1	+15V		
2	+15V		
3	+15V	BR	DM+15V (C9-5)
4	+15V	BR	EFT+15V (C4-7)
5	+15V	BR	PN2+15V (C7-5)
6	GND	BL	DM-GND (C9-3)
7	GND	BL	EFT-GND (C4-4)
8	GND	BL	PN2-GND (C7-6)
9	GND	BL	JK-GND (C1-3)
10	GND	BL	EP1

Notes

●μPC14315: IC1, 2, 3
P3PIN

Pin No.	①	③	②
Pin Name	IN	GND	OUT
μPC14315H	23V		15V

●Diode
1D4B1: D1, 2, 3, 4