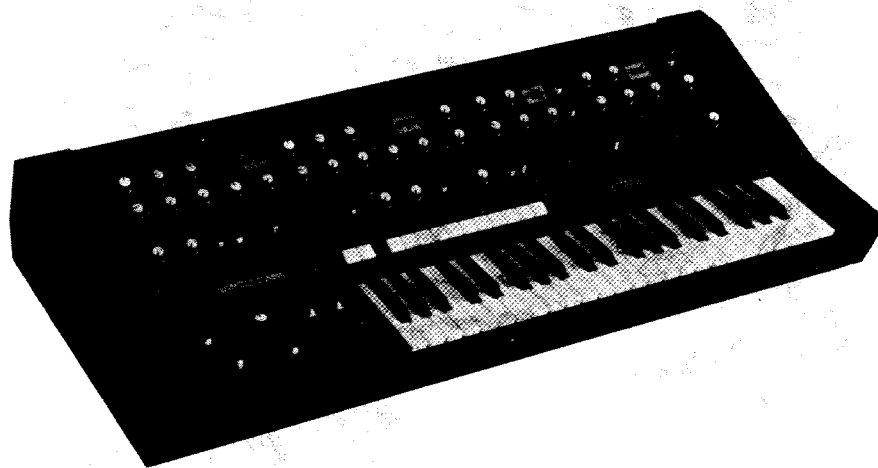


YAMAHA

PROGRAMMABLE MEMORY SYNTHESIZER

CS-40M



SERVICE MANUAL

SK Circuit Board & Wiring

C1

Pin No.	Pin Name	Wire Color	Destination
1	EK	BL	PL-E (C3-6)
2	+15	BR	IF-+15 (C6-6)
3	-15	YE	IF--15 (C6-2)
4	K2	RE	JK2-K1 (C2-2)
5	K1	BR	JK1-K1 (C2-2)

C2

Pin No.	Pin Name	Wire Color	Destination
1	L1	BR	VCO-L1 (C5-3)
2	-10	BE	VCO--10 (C2-1)
3	-10	BE	VCO--10 (C5-1)
4	L2	RE	VCO-L2 (C2-3)
5	T2	VI	JK2-T1 (C2-5)
6	T1	BE	JK1-T1 (C2-5)
7	LTR	GR	PA-LTR (C6-6)
8	LT	BE	MOD-LT (C12-1)
9	T3	OR	MOD-T3 (C11-1)

C3

Pin No.	Pin Name	Wire Color	Destination
1	S	OR	PL-S (C1-7)
2	MP	YE	PL-MP (C1-3)
3	+5	GR	PL+5 (C1-2)
4	-10	BE	PL--10 (C1-1)
5	E	BL	DC-DE (C1-9)

C4

Pin No.	Pin Name	Wire Color	Destination
1	B1	BR	KS-B1 (C2-1)
2	B2	RE	KS-B2 (C2-2)
3	B3	OR	KS-B3 (C2-3)
4	B4	YE	KS-B4 (C2-4)
5	B5	GR	KS-B5 (C2-5)
6	B6	BE	KS-B6 (C2-6)
7	B7	VI	KS-B7 (C2-7)
8	B8	GY	KS-B8 (C2-8)

C5

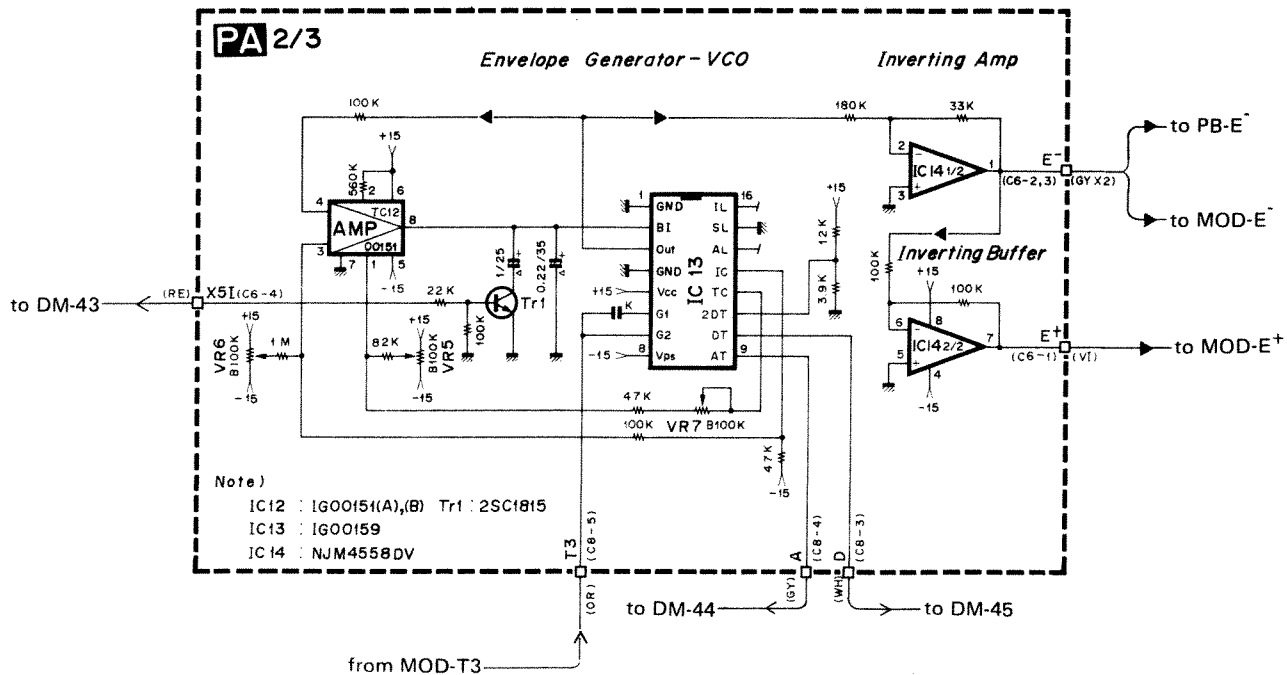
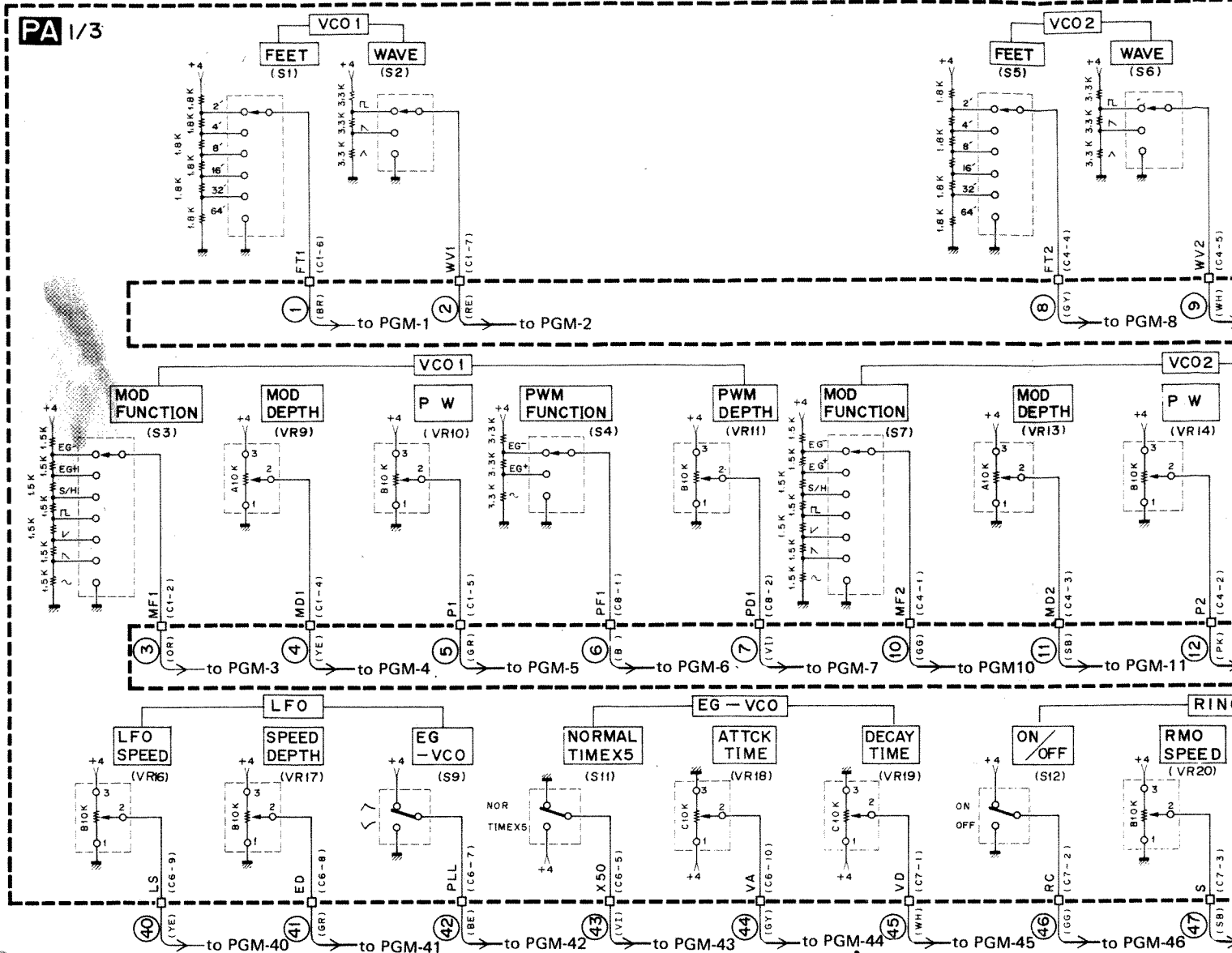
Pin No.	Pin Name	Wire Color	Destination
1	N1	WH	KS-N1 (C1-3)
2	N2	GG	KS-N2 (C1-4)
3	N3	SB	KS-N3 (C1-5)
4	N4	PK	KS-N4 (C1-6)
5	N5	BR	KS-N5 (C1-1)
6	N6	RE	KS-N6 (C1-2)

C6

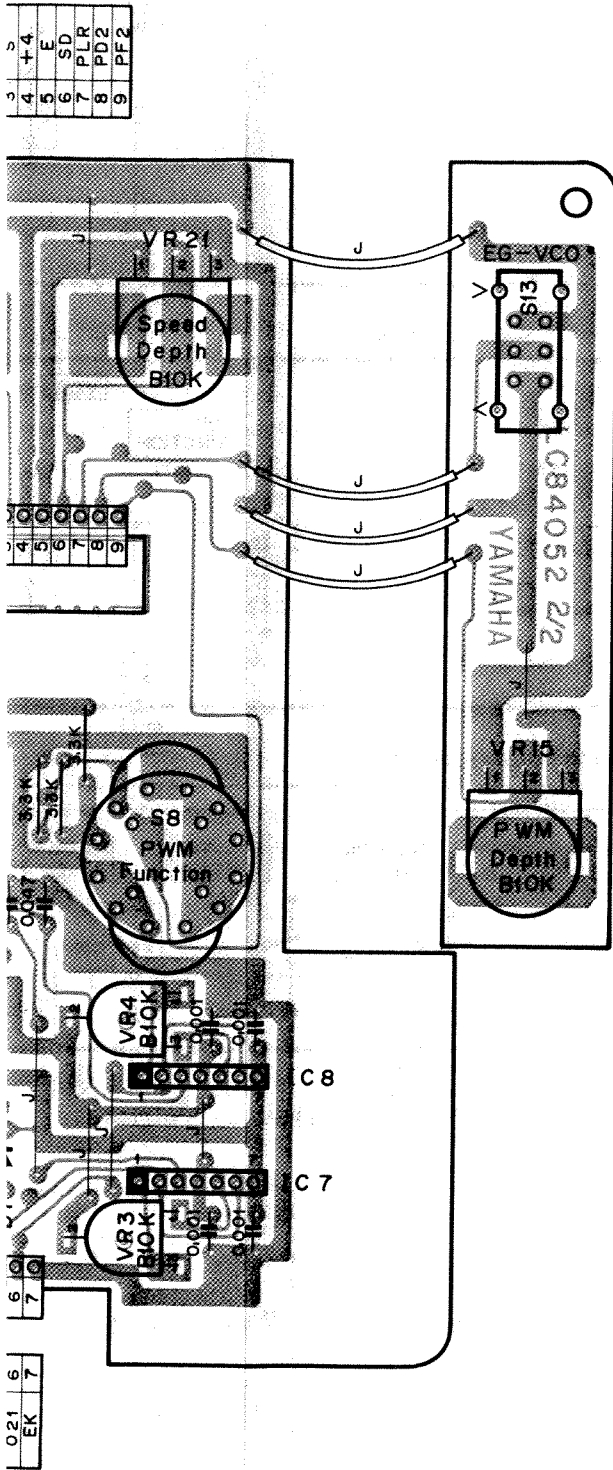
Pin No.	Pin Name	Wire Color	Destination
1	VR	OR	PL-VR (C2-6)
2	PG	YE	PL-PG (C1-6)
3	PS	GR	PL-PS (C1-5)

Note)

- Circuit Board : LC84031-1/2
- IC
 - IC1 : YM615
 - IC2 : IC4050BP
 - IC3 : BA617
 - IC4,5 : NJM4558DV
 - IC6,9 : TC4016BP
 - IC7,8 : TA7531M
 - IC10,11 : TA7505M
 - IC12 : TC4069BP
 - IC13 : TA7504S
- Transistor
 - Tr1, 2, 5, 6 : 2SA1015
 - Tr3 : 2SC2120
 - Tr4 : 2SA150
- Diode
 - D1 ~ 23 : 1S1555
- Capacitor
 - △ marked : Tantalum Capacitor
 - * marked : Polyphopylene Capacitor



PA Circuit Board & Wiring



C1

Pin No.	Pin Name	Wire Color	Destination
1	DE	BL	DC-DE (C1-8)
2	MF1	OR	PGM-3 (C4-8)
3	L	BR	MOD- (C8-3)
4	MD1	YE	PGM-4 (C4-7)
5	P1	GR	PGM-5 (C4-6)
6	FT1	BR	PGM-1 (C4-10)
7	WV1	RE	PGM-2 (C4-9)

C8

Pin No.	Pin Name	Wire Color	Destination
1	PF1	BE	PGM-6 (C4-1)
2	PD1	VI	PGM-7 (C4-2)
3	D	WH	DM-45 (C7-2)
4	A	GY	DM-44 (C7-1)
5	T3	OR	MOD-T3 (C11-2)

C2

Pin No.	Pin Name	Wire Color	Destination
1	K2	YE	PA-K2 (C5-2)
2	K2	YE	FA-K2 (C4-4)
3	K1	OR	PA-K1 (C5-4)
4	K1	OR	FA-K1 (C4-9)
5	O11	S-BR	VCO-K (C6-2)
6	O12	S-RE	VCO-K (C3-2)
7	EK	S-BR	S-RE

C3

Pin No.	Pin Name	Wire Color	Destination
1	-15	YE	DC-15 (C1-5)
2	+15	BR	DC+15 (C1-1)
3	EK	BL	PL-E (C3-5)
4	EK	BL	JK1-EK (C2-3)
5	EK	BL	JK2-EK (C2-3)

C4

Pin No.	Pin Name	Wire Color	Destination
1	MF2	GG	PGM-10 (C4-5)
2	P2	PK	PGM-12 (C5-9)
3	MD2	SB	PGM-11 (C6-1)
4	FT2	GY	PGM-8 (C4-3)
5	WV2	WH	PGM-9 (C4-4)

C5

Pin No.	Pin Name	Wire Color	Destination
1	K2	YE	JK2-K0 (C2-1)
2	K2	YE	PA-K2 (C2-1)
3	K1	OR	JK1-K0 (C2-1)
4	K1	OR	PA-K1 (C2-3)
5	O21	S-OR	VCO-K (C4-2)
6	O22	S-YE	VCO-K (C1-2)
7	EK	S-YE	S-OR

C6

Pin No.	Pin Name	Wire Color	Destination
1	E+	VI	MOD-E+ (C7-3)
2	E-	GY	PB-E- (C1-7)
3	E-	GY	MOD-E- (C7-5)
4	X5I	RE	DM-43 (C5-1)
5	X50	VI	PGM-43 (C8-6)
6	LTR	GR	SK-LTR (C2-7)
7	PLL	BE	PGM-42 (C9-1)
8	ED	GR	PGM-41 (C9-2)
9	LS	YE	PGM-40 (C7-8)
10	VA	GY	PGM-44 (C8-5)

C7

Pin No.	Pin Name	Wire Color	Destination
1	VD	WH	PGM-45 (C8-4)
2	RC	GG	PGM-46 (C9-3)
3	S	SB	PGM-47 (C9-4)
4	+4	VI	PB+4 (C1-1)
5	E	BL	DC-AE (C1-3)
6	SD	PK	PGM-48 (C9-5)
7	PLR	BR	PGM-49 (C9-6)
8	PD2	RE	PGM-14 (C5-7)
9	PF2	BR	PGM-13 (C5-8)

Note)

1. Circuit Board : LC84050 [2]

2. IC

IC1, 5 : TC4016BP
 IC2, 6, 14 : NJM4558DV
 IC3, 4, 7, 8 : TA7504S
 IC9 : TC4069BP
 IC10 : TC4017BP
 IC11 : TC4075BP
 IC12 : iG00151(A)(B)
 IC13 : iG00159

3. Transistor

Tr1, 2 : 2SC1815

4. Diode

D1, 2, 3 ~ 10 : 1S1555

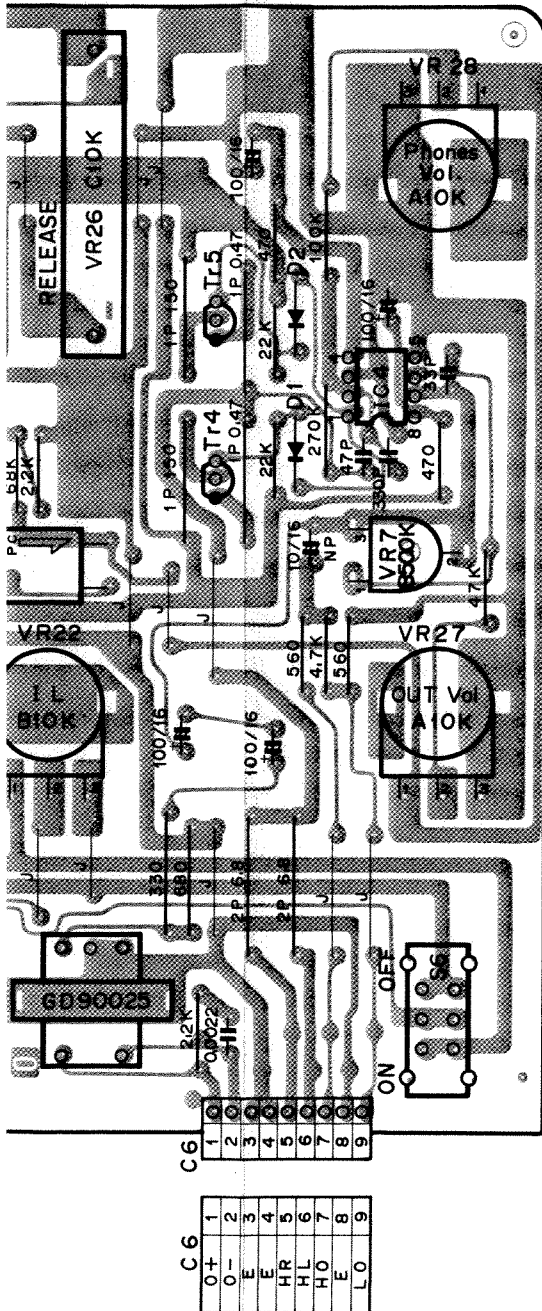
5. Capacitor

K marked : 1000P

△ marked : Tantalum Capacitor

View from the printed pattern side of the circuit board

PB Circuit Board & Wiring



C1

Pin No.	Pin Name	Wire Color	Destination
1	+4	VI	PA-+4 (C7-4)
2	+5	GR	DC-+5 (C2-7)
3	+5	GR	PB-+5 (C4-3)
4	-10	BE	DC- -10 (C2-10)
5	-10	BE	PB- -10 (C4-4)
6	PLR	BR	DM-49 (C7-6)
7	E	GY	PA-E (C6-2)
8	SD	PK	DM-48 (C7-5)
9	S	SB	DM-47 (C7-4)

C6

Pin No.	Pin Name	Wire Color	Destination
1	O+	RE	XLR-2
2	O-	WH	XLR-3
3	E	-	-
4	E	S-GG-S	-
5	HR	RE	HP-2
6	HL	OR	HP-3
7	HO	S-GG	JK1-HO (C1-2)
8	E	S-SB-S	-
9	LO	S-SB	JK2-LO (C1-2)

C2

Pin No.	Pin Name	Wire Color	Destination
1	V1	OR	PGM-15 (C5-6)
2	V2	YE	PGM-16 (C5-1)
3	FMF	WH	PGM-21 (C7-3)
4	CO	BE	PGM-18 (C5-3)
5	FMD	GG	PGM-22 (C7-2)
6	RE	VI	PGM-19 (C5-4)
7	ED	SB	PGM-23 (C7-1)
8	M	WH	FA-M (C1-8)
9	-15'	YE	JK1- -15' (C1-6)
10	-15"	YE	KJ2- -15" (C1-6)

C7

Pin No.	Pin Name	Wire Color	Destination
1	AA	PK	PGM-36 (C7-4)
2	AD	BR	PGM-37 (C7-5)
3	AS	RE	PGM-38 (C7-6)
4	AR	OR	PGM-39 (C7-7)
5	X5A	SB	PGM-35 (C7-9)

C8

Pin No.	Pin Name	Wire Color	Destination
1	N	GR	PGM-17 (C5-2)
2	FA	OR	PGM-27 (C6-3)
3	FD	YE	PGM-28 (C6-4)
4	FS	GR	PGM-29 (C6-5)
5	FR	BE	PGM-30 (C6-6)
6	X5F	RE	PGM-26 (C6-2)
7	PL	BR	PGM-25 (C6-7)
8	E	BL	MOD-E (C2-3)

C3

Pin No.	Pin Name	Wire Color	Destination
1	-15	YE	DC- -15 (C2-5)
2	E	BL	DC-AE (C2-3)
3	E	-	-
4	+15	BR	DC-+15 (C2-1)
5	RC	GG	DM-46 (C7-3)
6	FM	GY	PGM-20 (C5-5)
7	KCV	PK	PGM-24 (C6-8)

C4

Pin No.	Pin Name	Wire Color	Destination
1	AMF	WH	PGM-33 (C8-1)
2	~ 1	VI	PGM-31 (C8-3)
3	+5	GR	PB-+5 (C1-3)
4	-10	BE	PB- -10 (C1-5)
5	AMD	GG	PGM-34 (C7-10)
6	~ 2	GY	PGM-32 (C8-2)
7	IL	OR	FA-IL (C1-6)
8	BY	RE	PGM-50 (C9-7)

C5

Pin No.	Pin Name	Wire Color	Destination
1	D	PK	FA-D (C9-5)
2	D	RE	DM-50 (C1-5)
3	F1	YE	FA-A13 (C9-11)
4	F2	GR	FA-A23 (C9-4)
5	E	S-BR-S	-
6	I1	S-BR	FA-A01 (C9-8)
7	I2	S-RE	FA-A02 (C9-9)
8	E	S-RE-S	-
9	EI	GR	JK1-EXP (C1-5)

Note)

1. Circuit Board : LC84062

2. IC

IC1 : TC4016BP

IC2 ~ 4, 7 : NJM4558DV

IC5 : μ A796HC

IC6 : iG00151

IC8 : iG00150

3. Transistor

Tr1, 2, 7, 9 : 2SA1015

Tr3, 10, 11 : 2SC1815

Tr4, 6, 8 : 2SC2120

Tr5 : 2SA950

4. FET

FET1, 2 : 2SK105

5. Diode

D1 ~ 5 : 1S1555

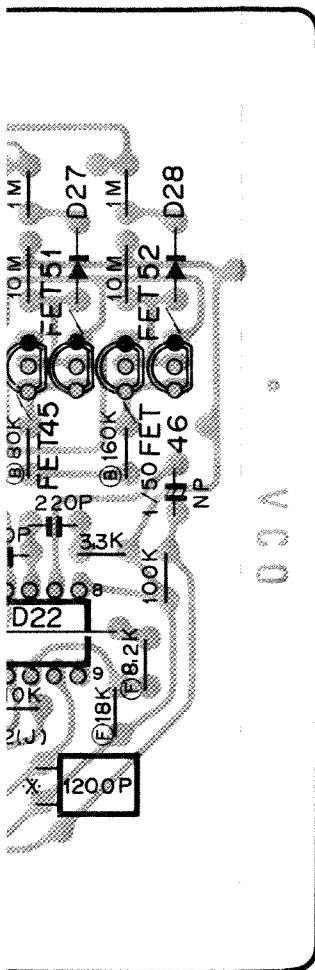
ZD1 ~ 3 : RD6.8EB2

6. Capacitor

Δ marked : Tantalum Capacitor

K marked : 1000P

VCO Circuit Board & Wiring



C1

Pin No.	Pin Name	Wire Color	Destination
1	EK	S-YE-S	
2	K	S-YE	PA-022 (C5-6)
3	-15	YE	DC- -15 (C3-6)
4	-15	YE	VCO- -15 (C3-3)
5	V	PK	MOD-V2 (C9-4)
6	E	BL	DC-AE (C3-4)
7	E	BL	VCO-E (C3-6)
8	+15	BR	DC-+15 (C3-2)
9	+15	BR	VCO-+15 (C3-8)
10	O	YE	MOD-122 (C3-8)

C2

Pin No.	Pin Name	Wire Color	Destination
1	-10	BE	SK-10 (C2-2)
2	-10	—	—
3	L2	RE	SK-L2 (C2-4)

C3

Pin No.	Pin Name	Wire Color	Destination
1	EK	S-RE-S	
2	K	S-RE	PA-012 (C2-6)
3	-15	YE	VCO- -15 (C1-4)
4	-15	YE	VCO- -15 (C4-3)
5	V	SB	MOD-V1 (C9-6)
6	E	BL	VCO-E (C1-7)
7	E	BL	VCO-E (C4-6)
8	+15	BR	VCO+15 (C1-9)
9	+15	BR	VCO+15 (C4-8)
10	O	RE	MOD-I12 (C3-4)

C4

Pin No.	Pin Name	Wire Color	Destination
1	EK	S-OR-S	
2	K	S-OR	PA-Q21 (C5-5)
3	-15	YE	VCO- -15 (C3-4)
4	-15	YE	VCO- -15 (C6-3)
5	V	PK	MOD-V2 (C9-5)
6	E	BL	VCO-E (C3-7)
7	E	BL	VCO-E (C6-6)
8	+15	BR	VCO+15 (C3-9)
9	+15	BR	VCO+15 (C6-8)
10	O	OR	MOD-I21 (C3-6)

C5

Pin No.	Pin Name	Wire Color	Destination
1	-10	BE	SK-10 (C2-3)
2	-10	-	-
3	11	BR	SK-11 (C2-1)

C6

Pin No.	Pin Name	Wire Color	Destination
1	EK	S-BR-S	
2	K	S-BR	PA-O11 (C2-5)
3	-15	YE	VCO ₋ 15 (C4-4)
4	-15	-	-
5	V	SB	MOD-V1 (C9-7)
6	E	BL	VCO-E (C4-7)
7	E	-	-
8	+15	BR	VCO ₊ +15 (C4-9)
9	+15	-	-
10	O	BR	MOD-I11 (C3-2)

C7

Pin No.	Pin Name	Wire Color	Destination
1	64'	BR	IF-64' (C2-5)
2	32'	RE	IF-32' (C1-4)
3	16'	OR	IF-16' (C1-6)
4	8'	YE	IF-8' (C1-8)
5	4'	GR	IF-4' (C2-1)
6	2'	BE	IF-2' (C2-3)

C8

Pin No.	Pin Name	Wire Color	Destination
1	64'	BR	IF-64' (C3-9)
2	32'	RE	IF-32' (C2-7)
3	16'	OR	IF-16' (C3-1)
4	8'	YE	IF-8' (C3-3)
5	4'	GR	IF-4' (C3-5)
6	2'	BE	IF-2' (C3-7)

C9

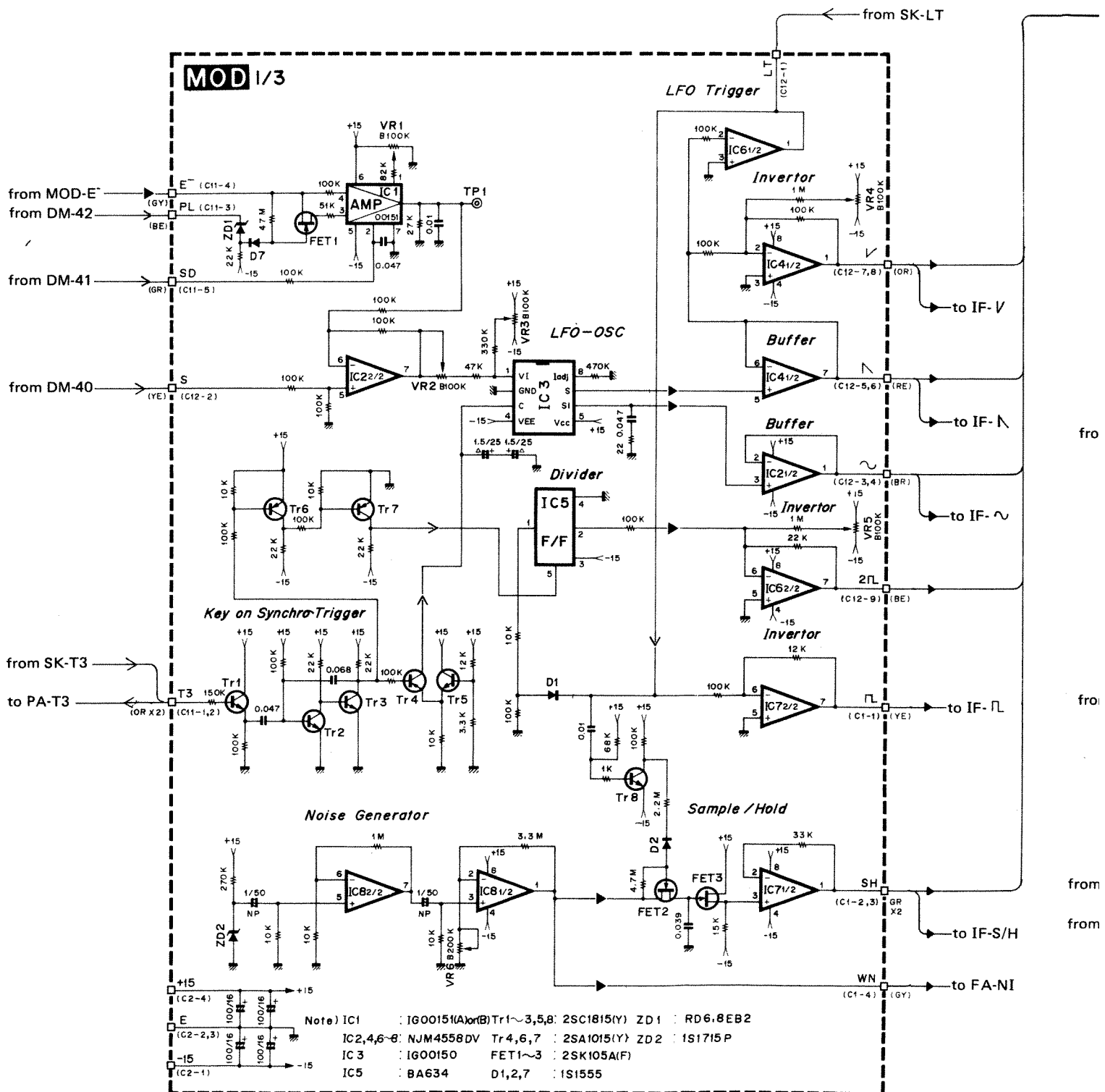
Pin No.	Pin Name	Wire Color	Destination
1	64'	BR	IF-64' (C2-6)
2	32'	RE	IF-32' (C1-5)
3	16'	OR	IF-16' (C1-7)
4	8'	YE	IF-8' (C1-9)
5	4'	GR	IF-4' (C2-2)
6	2'	BE	IF-2' (C2-4)

C10

Pin No.	Pin Name	Wire Color	Destination
1	64'	BR	IF-64' (C3-10)
2	32'	RE	IF-32' (C2-8)
3	16'	OR	IF-16' (C3-2)
4	8'	YE	IF-8' (C3-4)
5	4'	GR	IF-4' (C3-6)
6	2'	BE	IF-2' (C3-8)

Note)

1. Circuit Board : LC84070 2
 2. IC
 IC1, 3, 5, 7 : iG00153
 IC2, 4, 6, 8 : TA7504S
 3. FET
 FET : 2SK30A
 4. Diode
 Diode : 1S1555
 5. Capacitor
 ※marked : Styrol Capacitor



MOD Circuit Board & Wiring

C1

Pin Name	Wire Color	Destination
FL	YE	IF- (C5-7) FL
S/H	GR	MOD-S/H (C7-2)
S/H	GR	IF-S/H (C5-5)
WN	GY	FA-NI (C6-2)

C2

Pin Name	Wire Color	Destination
-15	YE	DC- -15 (C2-6)
E	BL	DC-AE (C2-4)
E	BL	PB-E (C8-8)
+15	BR	DC+15 (C2-2)

C3

Pin Name	Wire Color	Destination
S11	GR	FA-A11 (C6-6)
I11	BR	VCO-O (C6-10)
S12	BE	FA-A12 (C6-5)
I12	RE	VCO-O (C3-10)
S21	VI	FA-A21 (C9-1)
I21	OR	VCO-O (C4-10)
S22	GY	FA-A22 (C8-8)
I22	YE	VCO-O (C1-10)

C4

Pin Name	Wire Color	Destination
Q22	GY	FA-F22 (C6-4)
Q21	VI	FA-F21 (C6-5)
FL 2	GR	IF-FL 2 (C7-6)
FL 2	BE	IF-FL 2 (C7-9)
FL 2	YE	IF-FL 2 (C7-5)

C5

Pin Name	Wire Color	Destination
P2	PK	DM-12 (C2-3)
P1	GR	DM-5 (C11-1)
PD2	RE	DM-14 (C2-1)
PD1	VI	DM-7 (C11-3)

C6

Pin Name	Wire Color	Destination
MF1	OR	DM-3 (C1-2)
MF2	GG	DM-10 (C2-5)
PF1	BE	DM-6 (C11-2)
PF2	BR	DM-13 (C2-2)

C7

Pin Name	Wire Color	Destination
2 FL	BE	MOD-2 FL (C12-9)
S/H	GR	MOD-S/H (C1-2)
E+	VI	PA-E+ (C6-1)
E+	GY	MOD-E+ (C11-4)
E+	GY	PA-E+ (C6-3)

C8

Pin Name	Wire Color	Destination
✓	OR	MOD-✓ (C12-7)
FL	RE	MOD-FL (C12-5)
FL	BR	PA-L (C1-3)
FL	BR	MOD-FL (C12-3)

C9

Pin No.	Pin Name	Wire Color	Destination
1	MD2	SB	DM-11 (C2-4)
2	MW	GG	PL-MO (C2-7)
3	MD1	YE	DM-4 (C1-1)
4	V2	PK	VCO-V (C1-5)
5	V2	PK	VCO-V (C4-5)
6	V1	SB	VCO-V (C3-5)
7	V1	SB	VCO-V (C6-5)

C10

Pin No.	Pin Name	Wire Color	Destination
1	O12	PK	FA-F12 (C7-2)
2	FL 1	BR	IF-FL 1 (C7-4)
3	FL 1	RE	IF-FL 1 (C7-7)
4	FL 1	OR	IF-FL 1 (C7-8)
5	O11	SB	FA-F11 (C7-1)
6	-10	BE	DC- -10 (C3-10)
7	-10	BE	FA- -10 (C4-5)
8	+5	GR	DC+5 (C3-7)
9	+5	GR	FA+5 (C4-6)

C11

Pin No.	Pin Name	Wire Color	Destination
1	T3	OR	SK-T3 (C2-9)
2	T3	OR	PA-T3 (C8-5)
3	PL	BE	DM-42 (C5-2)
4	E	GY	MOD-E (C7-4)
5	SD	GR	DM-41 (C5-3)

C12

Pin No.	Pin Name	Wire Color	Destination
1	LT	BE	SK-LT (C2-8)
2	S	YE	DM-40 (C5-4)
3	FL	BR	MOD-FL (C8-4)
4	FL	BR	IF-FL (C5-8)
5	FL	RE	MOD-FL (C8-2)
6	FL	RE	IF-FL (C5-6)
7	✓	OR	MOD-✓ (C8-1)
8	✓	OR	IF-✓ (C5-4)
9	2 FL	BE	MOD-2 FL (C7-1)

Note

1. Circuit Board : LC84082

2. IC

IC1,29,31,33,34 : iG00151

IC2,4,6 ~ 8,30,32 : NJM4558DV

IC3 : iG00150

IC5 : BA634

IC13,14,15,23 ~ 28 : TC4016BP

IC9 ~ 12 : iG00158

IC16 ~ 19 : NJM2901

IC20 ~ 22 : TC4030BP

3. Transistor

Tr1 ~ 3,5,8 : 2SC1815

Tr4,6,7,9 ~ 12 : 2SA1015

4. FET

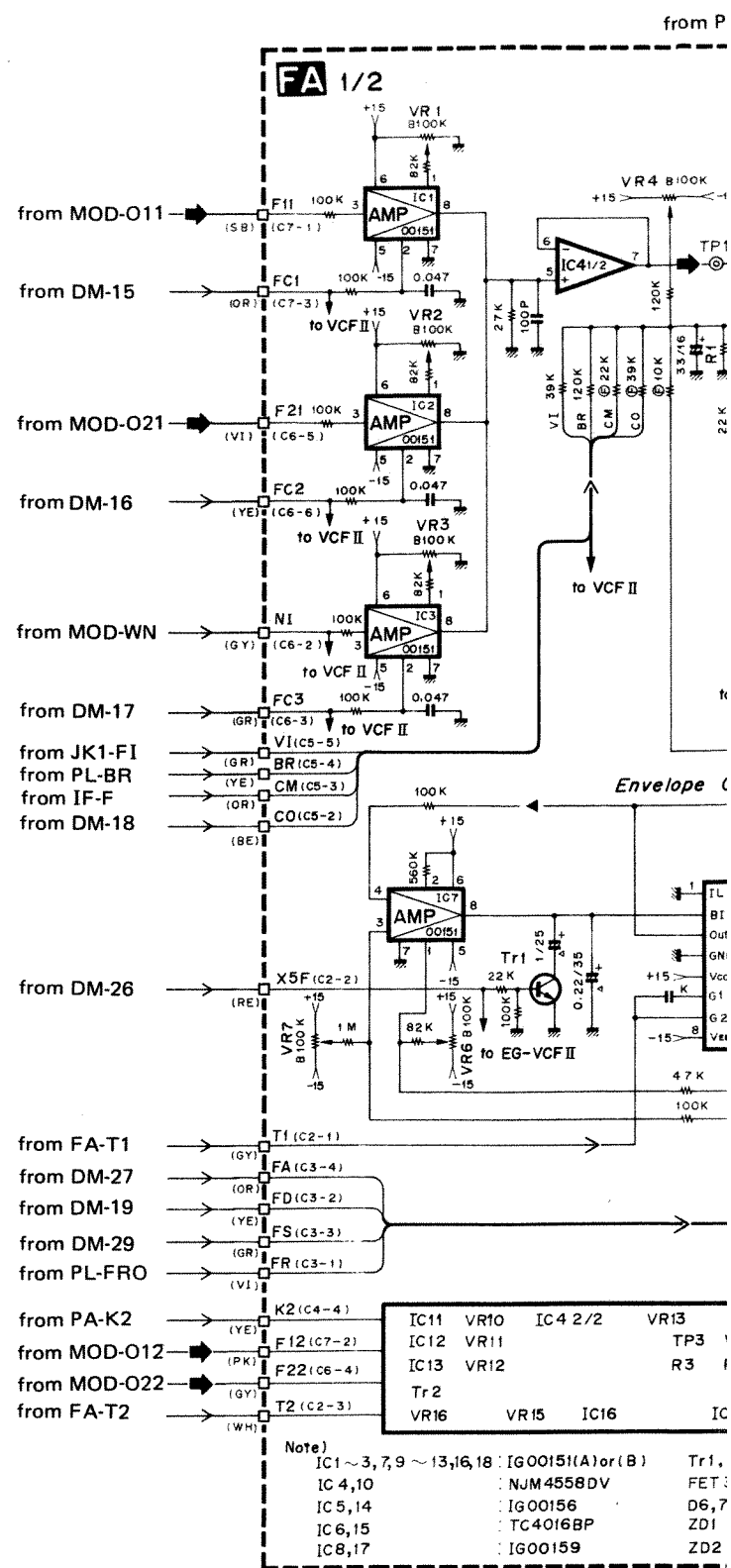
FET1,2,3 : 2SK105A

5. Diode

D1 ~ 7 : 1S1555

ZD1 : RD6,8EB2

ZD2 : 1S1715P



FA Circuit Board & Wiring

C1

Pin No.	Pin Name	Wire Color	Destination
1	AR	GR	PL-ARO (C2-4)
2	AD	BR	DM-37 (C8-3)
3	AS	RE	DM-38 (C8-4)
4	AA	PK	DM-36 (C8-2)
5	MD	GR	IF-A (C7-3)
6	IL	OR	PB-IL (C4-7)
7	VI	GY	JK2-AT (C1-7)
8	M	WH	PB-M (C2-8)

C8

Pin No.	Pin Name	Wire Color	Destination
1	E	BL	DC-AE (C3-3)
2	E	BL	JK2-E (C1-4)
3	+15	BR	DC+15 (C3-1)
4	+15	BR	FA+15 (C8-1)
5	A12	BE	MOD-S12 (C3-3)
6	A11	GR	MOD-S11 (C3-1)
7	AC1	VI	DM-31 (C4-4)
8	A22	GY	MOD-S22 (C3-7)

C2

Pin No.	Pin Name	Wire Color	Destination
1	T1	GY	FA-T1 (C10-2)
2	X5F	RE	DM-26 (C9-2)
3	T2	WH	FA-T2 (C10-5)

C9

Pin No.	Pin Name	Wire Color	Destination
1	A21	VI	MOD-S21 (C3-5)
2	AC2	GY	DM-32 (C4-3)
3	A23	GR	FA-FO2 (C4-3)
4	A23	GR	PB-F2 (C5-4)
5	D	PK	PB-D (C5-1)
6	E	S-BR-S	
7	E	S-RE-S	
8	A01	S-BR	PB-11 (C5-6)
9	A02	S-RE	PB-12 (C5-7)
10	A13	YE	FA-FO1 (C4-8)
11	A13	YE	PB-F1 (C5-3)

C3

Pin No.	Pin Name	Wire Color	Destination
1	FR	VI	PL-FRO (C2-2)
2	FD	YE	DM-28 (C9-4)
3	FS	GR	DM-29 (C9-5)
4	FA	OR	DM-27 (C9-3)
5	ED	SB	DM-23 (C3-2)
6	PL	BR	DM-25 (C9-1)

C10

Pin No.	Pin Name	Wire Color	Destination
1	T1	GY	JK1-T0 (C2-4)
2	T1	GY	FA-T1 (C2-1)
3	X5A	SB	DM-35 (C8-1)
4	T2	WH	JK2-T0 (C2-4)
5	T2	WH	FA-T2 (C2-3)

C4

Pin No.	Pin Name	Wire Color	Destination
1	L	GY	IF-L (C4-3)
2	B	BE	IF-B (C4-1)
3	FO2	GR	FA-A23 (C9-3)
4	K2	YE	PA-K2 (C2-2)
5	-10	BE	MOD-10 (C10-7)
6	+5	GR	MOD+5 (C10-8)
7	H	VI	IF-H (C4-2)
8	FO1	YE	FA-A13 (C9-10)
9	K1	OR	PA-K1 (C2-4)
10	KC	PK	DM-24 (C3-1)

C5

Pin No.	Pin Name	Wire Color	Destination
1	RE	VI	DM-19 (C10-5)
2	CO	BE	DM-18 (C10-4)
3	CM	OR	IF-F (C7-2)
4	BR	YE	PL-BR (C3-3)
5	VI	GR	JK1-F1 (C1-7)

C6

Pin No.	Pin Name	Wire Color	Destination
1	+15	BR	FA+15 (C8-4)
2	NI	GY	MOD-WN (C1-4)
3	FC3	GR	DM-17 (C10-3)
4	F22	GY	MOD-O22 (C4-1)
5	F21	VI	MOD-O11 (C4-2)
6	FC2	YE	DM-16 (C10-2)

C7

Pin No.	Pin Name	Wire Color	Destination
1	F11	SB	MOD-O11 (C10-5)
2	F12	PK	MOD-O12 (C10-1)
3	FC1	OR	DM-15 (C10-1)
4	-15	YE	DC-15 (C3-5)

10	KC
9	K1
8	FO1
7	H
6	+5
5	-10
4	K2
3	FO2
2	B
1	L

Note)

1. Circuit Board : LC84090 [3]

2. IC

IC1 ~ 3,7,9,11 ~ 13,16

18,19,20,22,24,26, : iG00151

28 ~ 31,33

IC4,10,21,23,27 : NJM4558DV

IC5,14 : iG00156

IC6,15 : TC4016BP

IC8,17,25,32 : iG00159

3. Transistor

Tr1 ~ 5 : 2SC1815

4. FET

FET1 ~ 4 : 2SK105

5. Diode

D1 ~ 7 : 1S1555

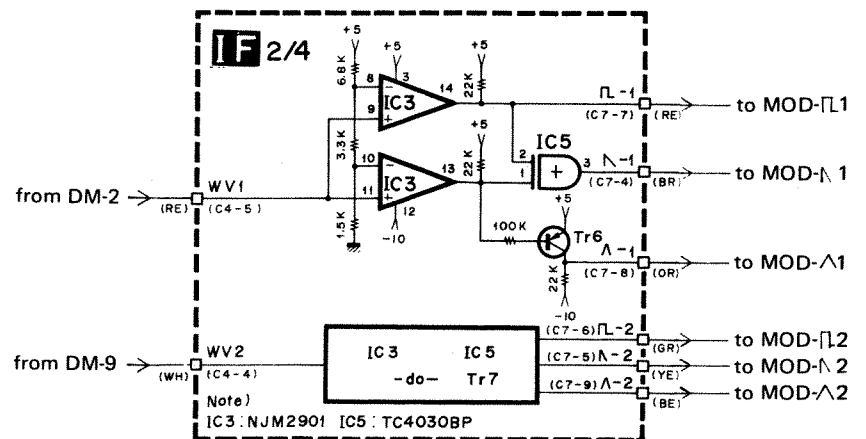
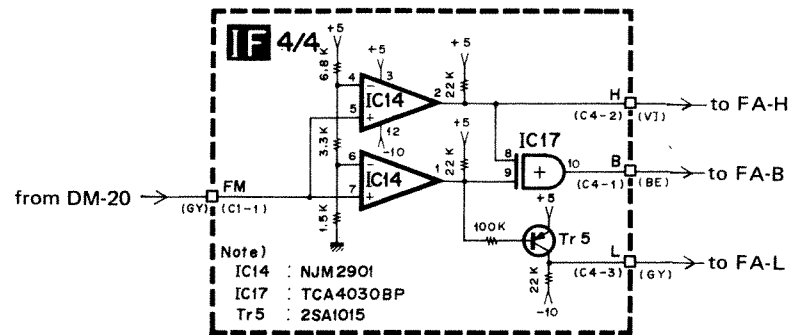
ZD1 : RD9.1EB3

ZD2 : RD6.8EB2

6. Capacitor

K marked : 1000P

△ marked : Tantalum Capacitor



IF Circuit Board & Wiring

C1

Pin Name	Wire Color	Destination
FM	GY	DM-20 (C3-5)
FT2	GG	DM-8 (C11-4)
FT1	BR	DM-1 (C1-4)
32'	RE	VCO-32' (C7-2)
32'	RE	VCO-32' (C9-2)
16'	OR	VCO-16' (C7-3)
16'	OR	VCO-16' (C9-3)
8'	YE	VCO-8' (C7-4)
8'	YE	VCO-8' (C9-4)

C2

Pin Name	Wire Color	Destination
4'	GR	VCO-4' (C7-5)
4'	GR	VCO-4' (C9-5)
2'	BE	VCO-2' (C7-6)
2'	BE	VCO-2' (C9-6)
64'	BR	VCO-64' (C7-1)
64'	BR	VCO-64' (C9-1)
32'	RE	VCO-32' (C8-2)
32'	RE	VCO-32' (C10-2)

C3

Pin Name	Wire Color	Destination
16'	OR	VCO-16' (C8-3)
16'	OR	VCO-16' (C10-3)
8'	YE	VCO-8' (C8-4)
8'	YE	VCO-8' (C10-4)
4'	GR	VCO-4' (C8-5)
4'	GR	VCO-4' (C10-5)
2'	BE	VCO-2' (C8-6)
2'	BE	VCO-2' (C10-6)
64'	BR	VCO-64' (C8-1)
64'	BR	VCO-64' (C10-1)

C4

Pin Name	Wire Color	Destination
B	BE	FA-B (C4-2)
H	VI	FA-H (C4-7)
L	GY	FA-L (C4-1)
AV2	WH	DM-9 (C11-5)
AV1	RE	DM-2 (C1-3)
AF	WH	DM-33 (C4-2)
FF	YE	DM-21 (C3-4)
+5	GR	DM-+5 (C12-4)
-10	BE	DM- -10 (C12-2)

C5

Pin Name	Wire Color	Destination
AD	GG	DM-34 (C4-1)
FW	SB	PL-MF (C2-8)
FD	GG	DM-22 (C3-3)
✓	OR	MOD- ✓ (C12-8)
S/H	GR	MOD-S/H (C1-3)
∩	RE	MOD-∩ (C12-6)
∩	YE	MOD-∩ (C1-1)
∩	BR	MOD-∩ (C12-4)

C6

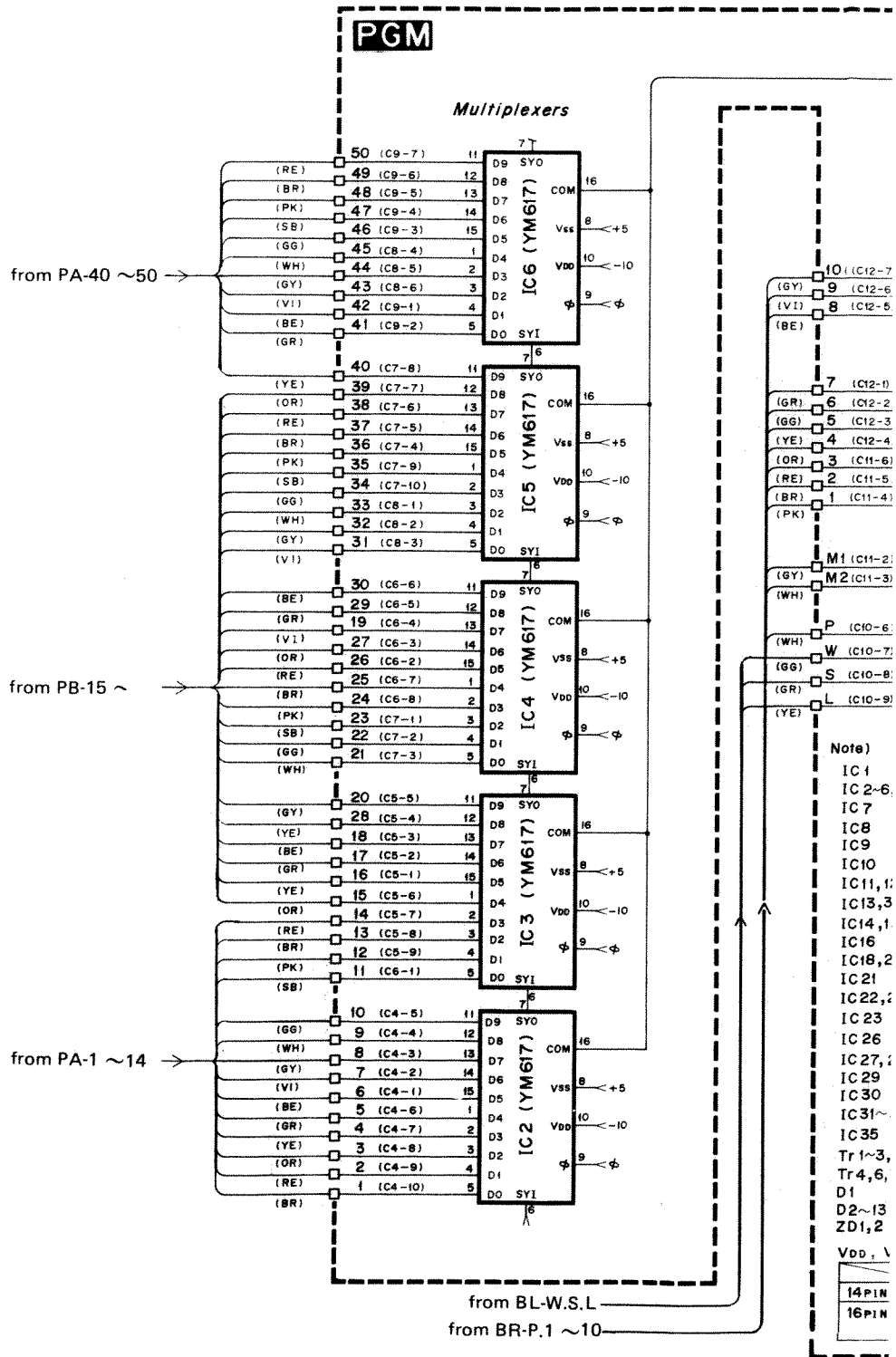
Pin No.	Pin Name	Wire Color	Destination
1	-15	YE	DC- -15 (C4-5)
2	-15	YE	SK- -15 (C1-3)
3	E	BL	DC-AE (C4-3)
4	E	-	-
5	+15	BR	DC-+15 (C4-1)
6	+15	BR	SK-+15 (C1-2)

C7

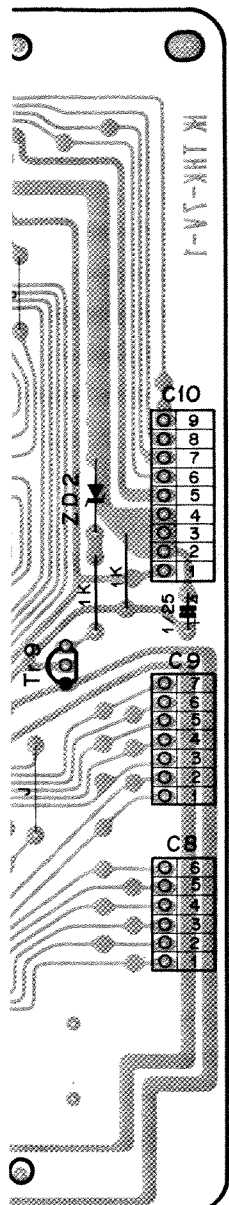
Pin No.	Pin Name	Wire Color	Destination
1	EI	YE	JK2-EI (C1-5)
2	F	OR	FA-CM (C5-3)
3	A	GR	FA-MD (C1-5)
4	∩ 1	BR	MOD- ∩ 1 (C10-2)
5	∩ 2	YE	MOD- ∩ 2 (C4-5)
6	∩ 2	GR	MOD- ∩ 2 (C4-3)
7	∩ 1	RE	MOD- ∩ 1 (C10-3)
8	∩ 1	OR	MOD- ∩ 1 (C10-4)
9	∩ 2	BE	MOD- ∩ 2 (C4-4)

Note)

1. Circuit Board : LC84031-2/2
2. IC
 - IC1 ~ 3, 12 ~ 14 : NJM2901
 - IC4, 5, 15 ~ 17 : TC4030BP
 - IC6 ~ 8 : TC4016BP
 - IC9, 11 : iG00151
 - IC10 : NJM4558DV
3. Transistor
 - Tr1 ~ 7 : 2SA1015



PGM Circuit Board & Wiring



C10

Pin No.	Pin Name	Wire Color	Destination
1	φ	S-GG	DM-φ (C6-7)
2	DE	S-GG-S	
3	DE	BL	DC-DE (C2-8)
4	DE	BL	BB-E
5	VB	OR	BB-V
6	P	WH	BR-P (C4-2)
7	W	GG	SW-O (C-3)
8	S	GR	BL-S (C-5)
9	L	YE	BL-L (C-4)

C11

Pin No.	Pin Name	Wire Color	Destination
1	SY	SB	DM-SY (C12-3)
2	M1	GY	BR-M1 (C1-1)
3	M2	WH	BR-M2 (C1-2)
4	1	PK	BR-1 (C2-1)
5	2	BR	BR-2 (C2-2)
6	3	RE	BR-3 (C2-3)

C12

Pin No.	Pin Name	Wire Color	Destination
1	7	GR	BR-7 (C3-8)
2	6	GG	BR-6 (C3-7)
3	5	YE	BR-5 (C2-5)
4	4	OR	BR-4 (C2-4)
5	8	BE	BR-8 (C3-9)
6	9	VI	BR-9 (C3-10)
7	10	GY	BR-10 (C4-1)

C13

Pin No.	Pin Name	Wire Color	Destination
1	8L	BR	BR-8L (C3-4)
2	1L	WH	BR-1L (C2-10)
3	3L	VI	BR-3L (C2-8)
4	6L	OR	BR-6L (C3-6)
5	5L	GR	BR-5L (C2-6)
6	9L	PK	BR-9L (C3-3)

C14

Pin No.	Pin Name	Wire Color	Destination
1	7L	RE	BR-7L (C3-5)
2	2L	GY	BR-2L (C2-9)
3	4L	BE	BR-4L (C2-7)
4	10L	VI	BR-10L (C3-2)
5	M2L	GG	BR-M2L (C1-3)
6	PL	GR	BR-PL (C3-1)
7	M1L	SB	BR-M1L (C1-4)
8	WL	VI	BL-WL (C-9)
9	LL	RE	BL-LL (C-2)
10	SL	BR	BL-SL (C-1)

C10

9	L
8	S
7	W
6	P
5	VB
4	DE
3	DE
2	DE
1	φ

C9

7	50
6	49
5	48
4	47
3	46
2	45
1	42

C8

6	43
5	44
4	45
3	31
2	32
1	33

Note)

1. Circuit Board : LC84110 4

2. IC

IC1 : YM616
 IC2 ~ 6,17,19 : YM617
 IC7 : TC4016VP
 IC8 : μ PC271C
 IC9 : μ A310HC
 IC10 : TA7531M
 IC11,12 : M58981S-45
 IC13,24 : TC4069BP
 IC14,15 : TC4532BP
 IC16 : TC4028BP
 IC18,20 : TC40175BP
 IC21 : TC4071BP
 IC22,24,25 : TC4081BP
 IC23 : TC4013BP
 IC26 : TC4011BP
 IC27,28 : TC4050BP
 IC29 : TC4072BP
 IC30 : NJM4558DV
 IC30 ~ 33 : M54516P
 IC35 : TC4049BP

3. Transistor

Tr1 ~ 3,5,8 : 2SC1815 (Y)
 Tr4,6,7,9 : 2SA1015 (Y)

4. Diode

D1 : 1N34A
 D2 ~ 13 : 1S1555
 ZD1,2 : 02BZ3.3

5. Capacitor

△ marked : Tantalum Capacitor
 K marked : 1000P

Destination

PA-PLL (C6-7)
PA-ED (C6-8)
PA-RC (C7-2)
PA-S (C7-3)
PA-SD (C7-6)
PA-PLR (C7-7)
PB-BY (C4-8)

DM Circuit Board & Wiring

C1

Wire Color	Destination
YE	MOD-MD1 (C9-3)
OR	MOD-MF1 (C6-1)
RE	IF-WV1 (C4-5)
BR	IF-FT1 (C1-3)
RE	PB-D (C5-2)

C2

Wire Color	Destination
RE	MOD-PD2 (C5-3)
BR	MOD-PF2 (C6-4)
PK	MOD-P2 (C5-1)
SB	MOD-MD2 (C9-1)
GG	MOD-MF2 (C6-2)

C3

Wire Color	Destination
PK	FA-KC (C4-10)
SB	FA-ED (C3-5)
GG	IF-FD (C5-3)
YE	IF-FF (C4-7)
GY	IF-FM (C1-1)

C4

Wire Color	Destination
GG	IF-AD (C5-1)
WH	IF-AF (C4-6)
GY	FA-AC2 (C9-2)
VI	FA-AC1 (C8-7)
BE	PL-FRI (C2-3)

C5

Wire Color	Destination
RE	PA-X5I (C6-4)
BE	MOD-PL (C11-3)
GR	MOD-SD (C11-5)
YE	MOD-S (C12-2)

C6

Wire Color	Destination
BR	DC-+15 (C4-2)
BR	PGM-+15 (C3-4)
BL	DC-AE (C4-4)
BL	PGM-AE (C3-1)
YE	DC- -15 (C4-6)
YE	PGM- -15 (C3-5)
GG	PGM- (C10-1)

C7

Wire Color	Destination
GY	PA-A (C8-4)
WH	PA-D (C8-3)
GG	PB-RC (C3-5)
SB	PB-S (C1-9)
PK	PB-SD (C1-8)
BR	PB-PLR (C1-6)

C8

Pin No.	Pin Name	Wire Color	Destination
1	35	SB	FA-X5A (C10-3)
2	36	PK	FA-AA (C1-4)
3	37	BR	FA-AD (C1-2)
4	38	RE	FA-AS (C1-3)
5	39	YE	PL-ARI (C2-5)

C9

Pin No.	Pin Name	Wire Color	Destination
1	25	BR	FA-PL (C3-6)
2	26	RE	FA-X5F (C2-2)
3	27	OR	FA-FA (C3-4)
4	19	VI	FA-RE (C5-1)
5	29	GR	FA-FS (C3-3)

C10

Pin No.	Pin Name	Wire Color	Destination
1	15	OR	FA-FC1 (C7-3)
2	16	YE	FA-FC2 (C6-6)
3	17	GR	FA-FC3 (C6-3)
4	18	BE	FA-CO (C5-2)
5	28	YE	FA-FD (C3-2)

C11

Pin No.	Pin Name	Wire Color	Destination
1	5	GR	MOD-P1 (C5-2)
2	6	BE	MOD-PF1 (C6-3)
3	7	VI	MOD-PD1 (C5-4)
4	8	GG	IF-FT2 (C1-2)
5	9	WH	IF-WV2 (C4-4)

C12

Pin No.	Pin Name	Wire Color	Destination
1	-10	BE	DC- -10 (C4-10)
2	-10	BE	IF- -10 (C4-9)
3	SY	SB	PGM-SY (C11-1)
4	+5	GR	IF-+5 (C4-8)
5	+5	GR	DC-+5 (C4-7)
6	COM	BE	PGM-COM (C3-3)

Note)

1. Circuit Board : LC84121

2. IC

IC1 ~5 : YM617

IC6 ~30 : NJM4558DV

3. Capacitor

⊢ marked : 0.047 Mylar Capacitor

△ marked : Tantalum Capacitor

DC Circuit Board & Wiring

Before you start tuning and adjustment.

Before you begin tuning and adjustment, care must be exercised as to the following points give below.

1. Unless otherwise noted, the setting should be made as specified in the panel setting diagram.
2. In order to perform accurate tuning, after the power supply is applied, make sure to wait at least 15 minutes of aging period, before you start tuning.

