

SBF-325 SERVICE NOTES

SBF-325 DISASSEMBLY

SPECIFICATIONS

Input level

L: +4dBm (+20dBm max)
H: -16dBm (0dBm max)

Input impedance:

(13kΩ)
over 100k ohms

Output level

H: +4dBm (+20dBm max)
L: -16dBm (0dBm max)

Output impedance: less than 2kΩ

Delay time

FLANGER mode: 0.5ms ~ 15ms
CHORUS mode: 5ms ~ 15ms

Frequency response (Delay line):

75Hz ~ 14kHz (±3dB)

Noise level:

less than -70dBm

Modulation speed:

0.2s ~ 40s
[0dBm = 0.775V RMS]

First Edition

Power consumption: 10W

Dimensions:

482(W) x 92(H) x 247(D) mm
19" rack mount EIA-2U

Weight:

4.5kg

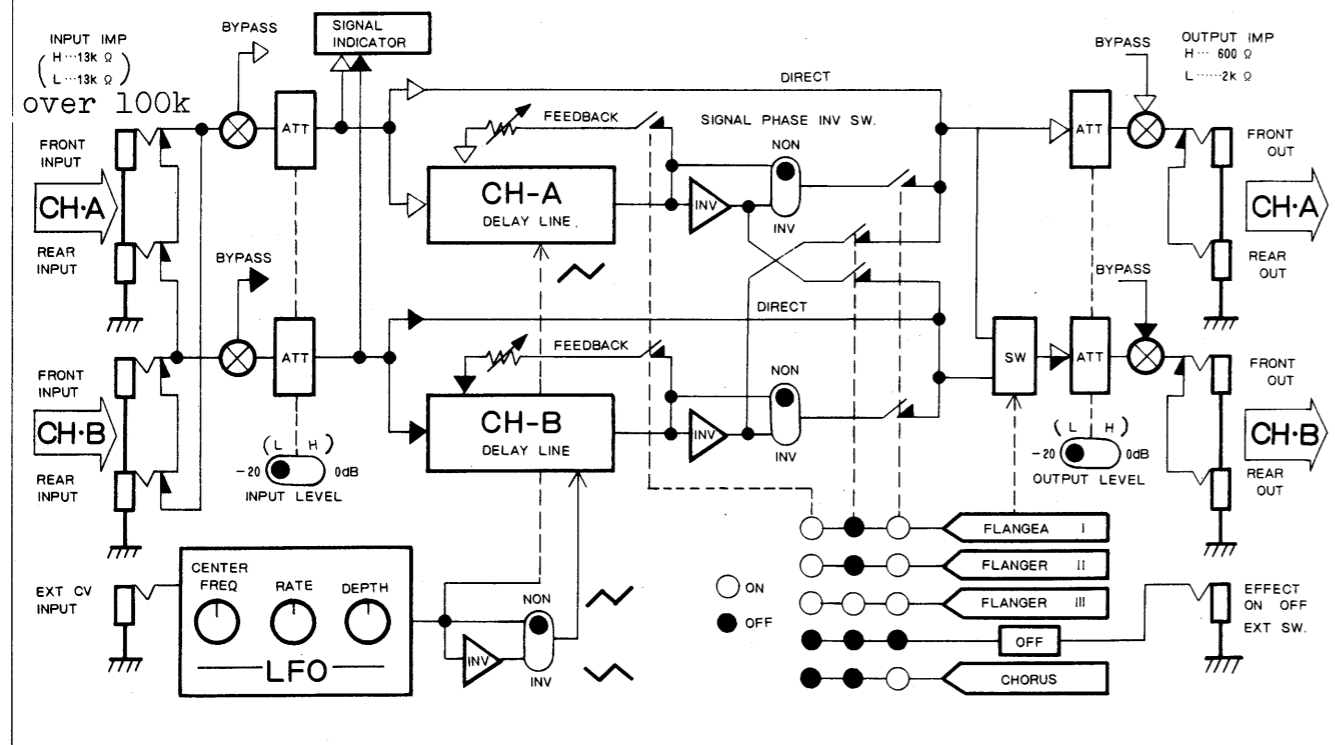


Jack
HLJ-0261-01-030
(009-037)

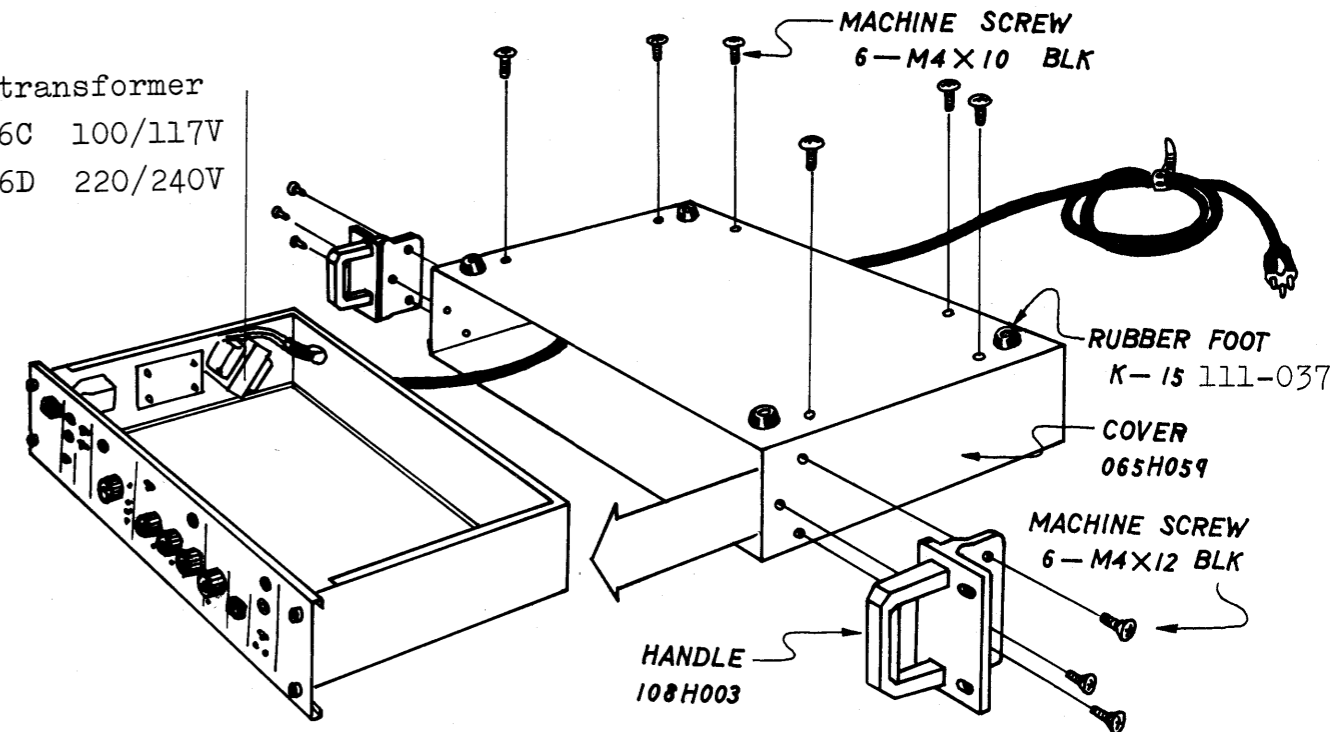
Lever switch
SSM-022 (001-232)

Jack
HLJ-0264-01-030
(009-030)
the same on rear

BLOCK DIAGRAM



Power transformer
022-086C 100/117V
022-086D 220/240V



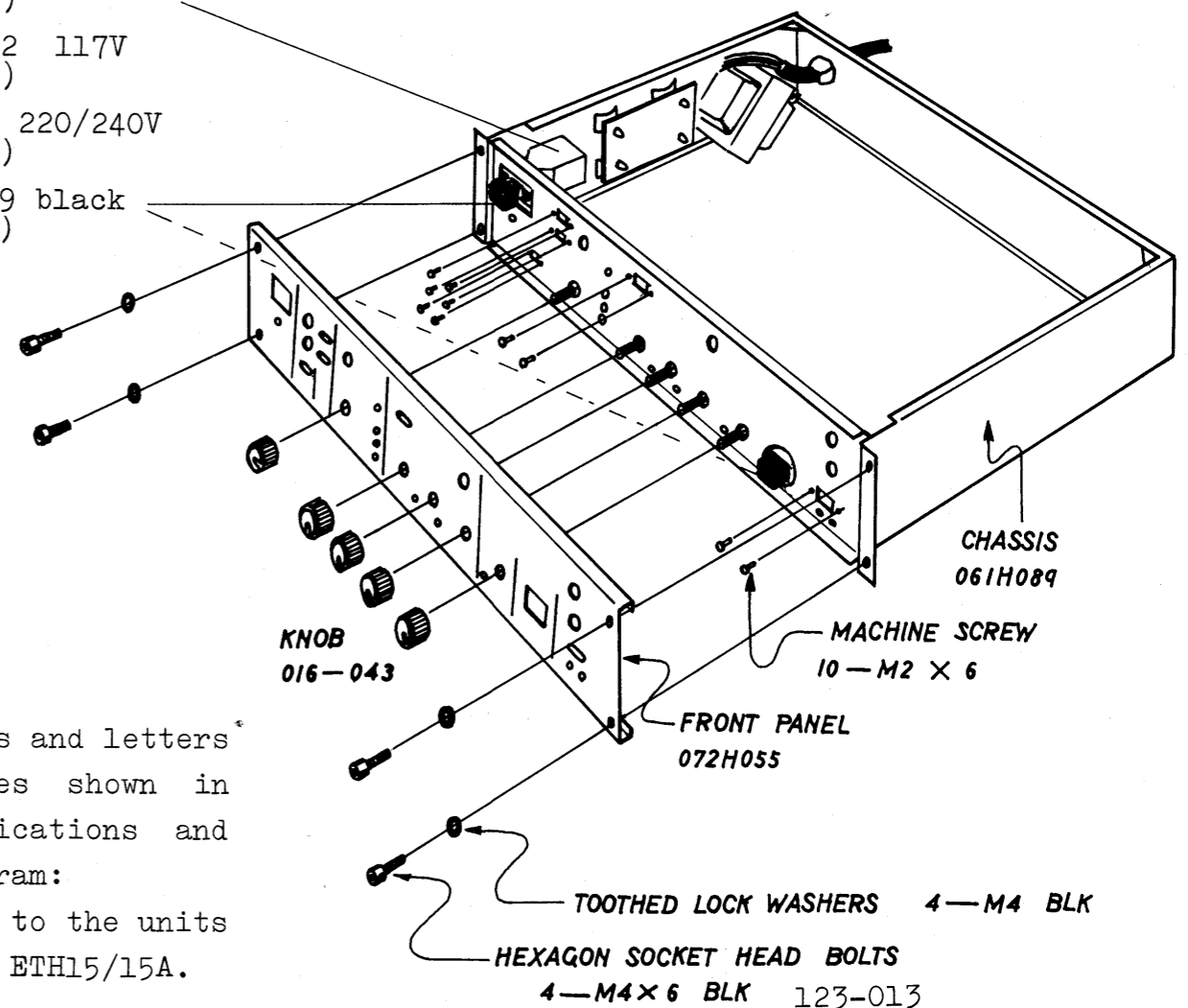
Switch

SDG5P-001-1 100V
(001-215)

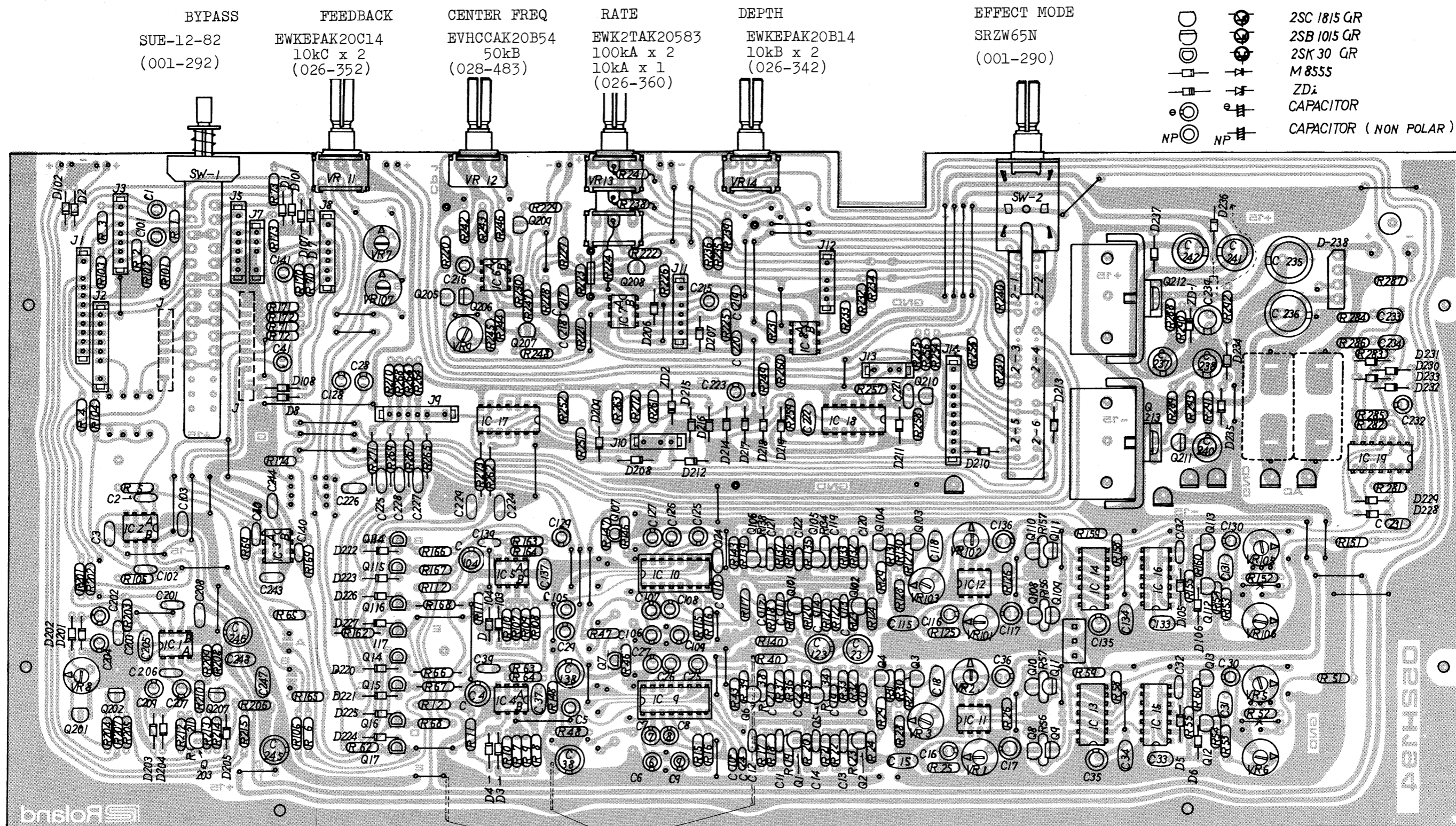
SDG5P-001-2 117V
(001-216)

SDG5P-502 220/240V
(001-217)

Button no.9 black
(016-009)



The figures and letters in parentheses shown in the Specifications and Block Diagram:
applicable to the units containing ETH15/15A.



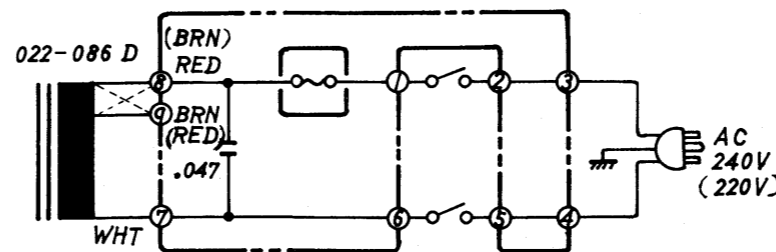
ETH-15(151H-15) (PCB 052H194)

For replacement, compatible ETH-15A is available.
(ETH15A: ETH15 with roadmap)

Q1~6, 8, 10, 13, 201, 203, 205, 208, 209, 210	
101~106, 108, 110, 113	2SC-1815GR
Q9, 11, 12, 109, 111, 112, 202, 204, 206, 211	2SC-1015GR
Q7, 107, 14~17, 114~117,	2SK-30AGR
D1	M8555
D238	1B4B41
ZD1	HZ 161L

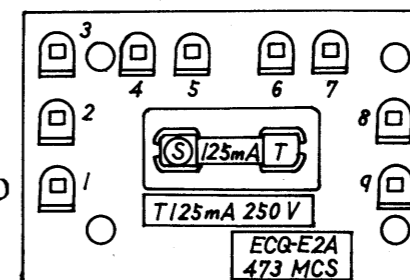
Q 212	2SD-526Y
Q 213	2SB-596Y
ZD2	HZ 6A3
IC1-68	μPC-4558
IC 9, 10	NE-570
IC 11, 12	MN-3007
IC 13, 14	TC-4013BP
IC 15, 17	TC-4069UBP
IC 18, 19	TC-4001BP
IC7	LF353

Jumpers on the foil side



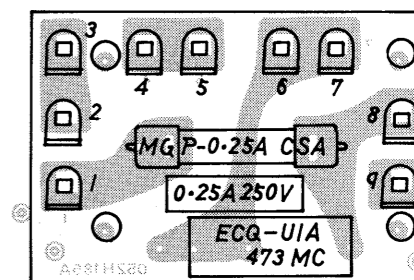
POWER SW. SDG-5P-502

220, 240V



OPH 085 A

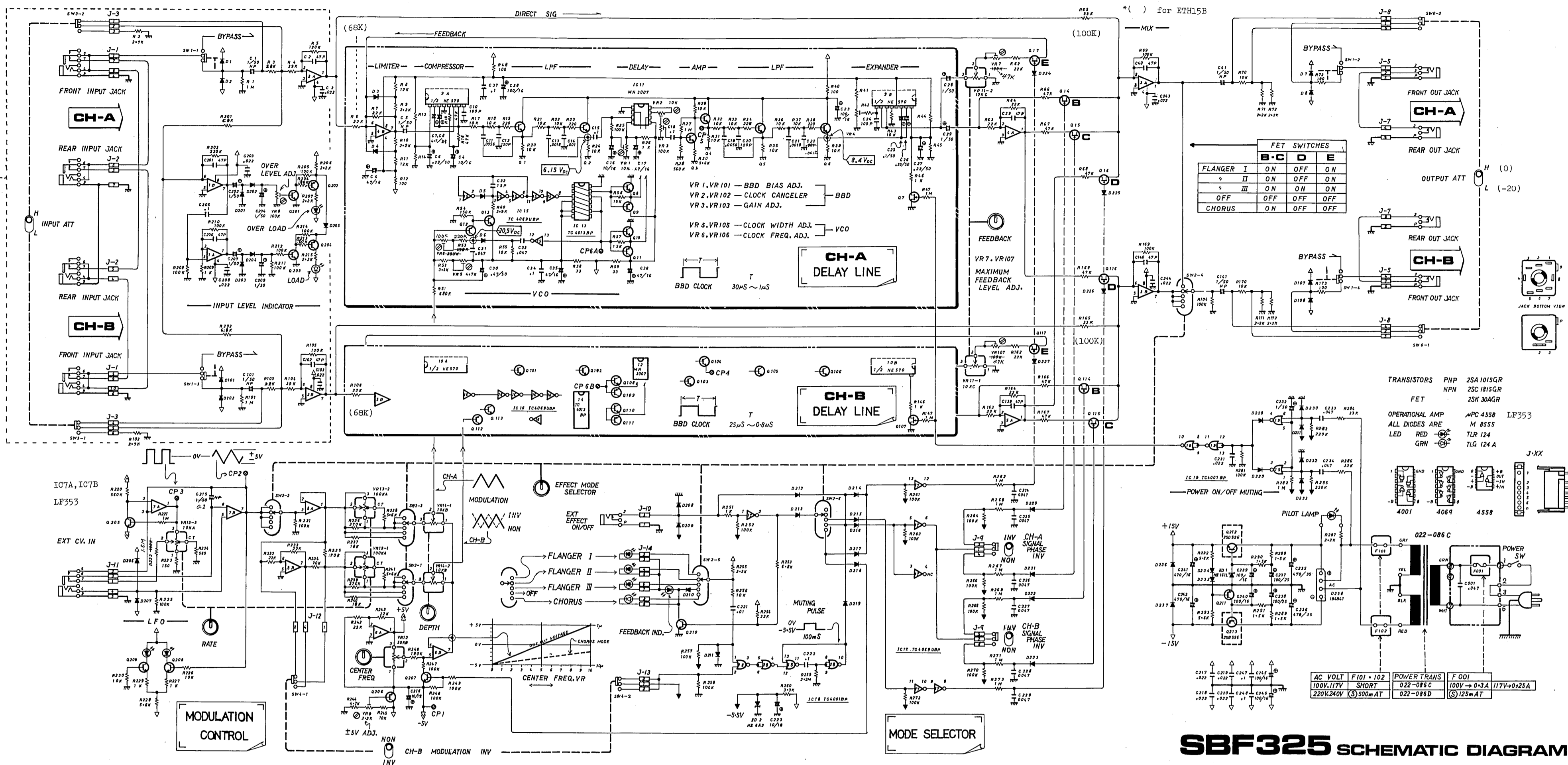
117V



(see OVERALL DIAGRAM)

OPH 084 A

Circuits in this dotted line are applicable only for ETH15/15A. For ETH15B see page 5.



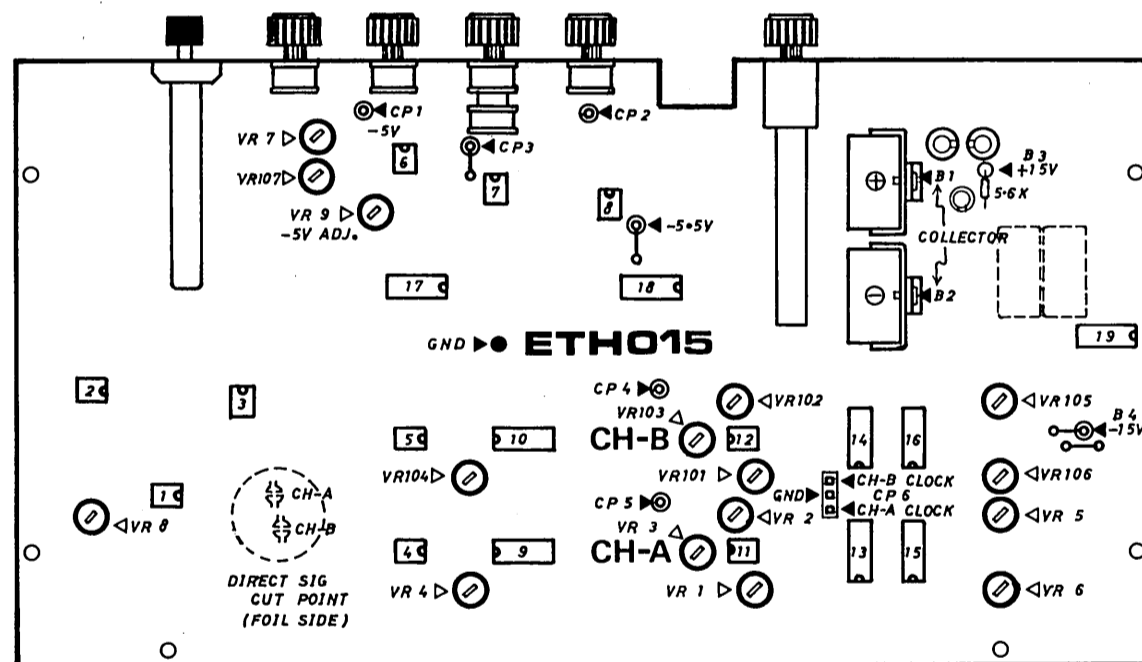
SBF325 SCHEMATIC DIAGRAM

- TRANSISTORS PNP 2SA 1015GR
NPN 2SC 1815GR
FET 2SK 304GR
OPERATIONAL AMP μ PC 4558 LF353
ALL DIODES ARE M 8555
LED RED TLR 124
GRN TLG 124 A

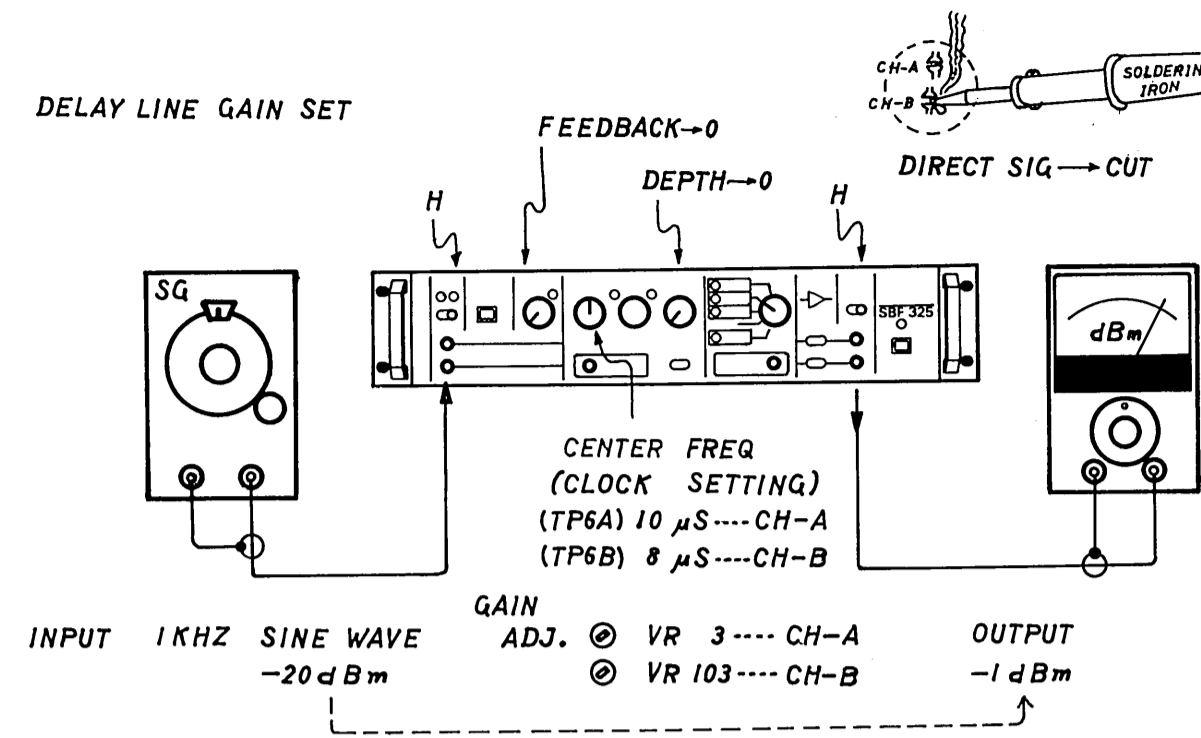
AC VOLT	F101 = 10Z	POWER TRANS	F001
100V, 117V	SHORT	022-086 C	100V \rightarrow 0.3A
220V, 240V	300m AT	022-086 D	117V \rightarrow 0.25A

ADJUSTMENT

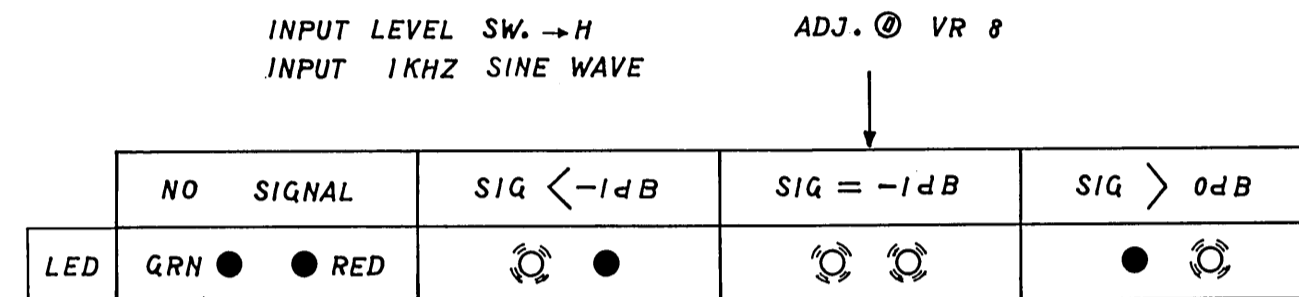
	CHECK POINT	ADJ.	SETTING & STANDARD VALUE	
(1) POWER SUPPLY	100V • 220V	B 1	+ 23.0V	
	" • "	B 2	- 22.5V	
	117V • 240V	B 1	+ 28.3V	
	" • "	B 2	- 27.8V	
	100V•117V•220V•240V	B 3	+14.7 ~ 15.4V	
	B 4	-14.5 ~ 15.2V		
(2) LFO ADJ.	LFO RATE (Check only)	CP-1	VR 9 -5.00V ± 0.05V	
		CP-2	RATE → 0 T=40S ~ 44S " → 10 T=0.2S	
(3) VCO ADJ.			DEPTH → 0 FLANGER → MODE → CHORUS	
	CH-A	CP-6A	VR 5 CENTER FQ. → 0 T=30μS T=30μS " → 10 T=1μS T=9~10μS	
	CH-B	CP-6B	VR105 " → 0 T=25μS T=25μS " → 10 T=0.8μS T=7.4~8μS	
(4) BBD BIAS ADJ.			DEPTH → 0	
			MODE -- FLANGER I	
			Feed signal (CH-A or B input jack) large enough to cause slight clipping.	
	1 CH-A	CP-6A	CENTER	CLOCK ≐ 10μS
	3 CH-B	CP-6B	FQ	" ≐ 8μS
2 CH-A	CP 5	VR 1		
4 CH-B	CP-4	VR 101		
(5) BBD. CLOCK LEAK CANCEL	CH-A	CP-5	VR 2	
	CH-B	CP-4	VR 102	



(6) DELAY LINE GAIN SET



(7) INPUT LEVEL INDICATOR



(8) FEEDBACK LEVEL

FEEDBACK VR → 10
DEPTH VR → 10
RATE VR → 0

CHANNEL A

Set VR-7 to the point just before oscillation occurs. Check that oscillation does not occur over the entire rotation range of the front panel CENTER FREQUENCY control.

CHANNEL B

Set VR-107 in the same manner as VR-7.

PARTS LIST

072H055	Panel	H55
061H069	Chassis	H89
065H059	Cover	H59
108H003	Handle	H3
111-037	Rubber foot	K-15
016-043	Knob no.43	rotary
016-009	Button no.9	black, push
009-051	Jack HLJ0261-01-010	w/sw.
009-030	Jack HLJ0264-01-030	
022-086C	Power transformer	100/117V
022-086D	Power transformer	220/240V
SWITCH		
001-291	SUE-12-4	push
001-290	SRZW65N	rotary
001-215	SDG5P-001-1	power 100V
001-216	SDG5P-001-2	power 117V
001-217	SDG5P-502	power 220/240V
001-232	SSM022	slide
SEMICONDUCTOR		
017-016	2SK30A-GR	FET
017-155	2SA1015-GR	
017-106	2SC1815-GR	
017-128	2SB596-Y	
017-090	2SD526-Y	
018-081	1B4B41	rectifier bridge
018-087	M8555	diode
018-108	HZ161L	zener 15.3-15.9V
018-109	HZ6A3	zener 5.4-5.7V
019-028	TLR-124	LED red
019-029	TLG-124A	LED green
020-097	μPC4558	
020-051	TC4001BP	
020-041	TC4013BP	
020-084	TC4079UBP	
020-213	MN3007	BBD
020-098	NB570	
020-208	LF353N	dual FET op amp

PCB

151H015A	ETH15A	(PCB 052H194A)
052H195	LED mounting	less parts
052H225	LED mounting	less parts
149HC83A	OPH83A	terminal 100V
149H084A	OPH84A	(052H185A) 117V
149H085A	OPH85A	220/240V

FUSE

008-050	MGP 0.25A	prim. 117V
008-057	CBE T125mA	prim.220/240V
008-063	CBE T500mA	sec. 220/240V

POTENTIOMETER

026-360	EWK2TAK20	583 w/center tap 100kA x 2 + 10kA
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026-342	EWK-EPAK20B14	10kB x 2
026-352	EWK-EPAK20C14	10kC x 2
028-483	BVHCCAK20B54	50kB
030-461	SR19R	2.2kB trimmer
030-463	SR19R	4.7kB trimmer
030-465	SR19R	10kB trimmer
030-471	SR19R	100kB trimmer
030-481	SR19R	250kB trimmer

CONNECTOR

Housing	Wafer terminal
EMCB0315A51	3p EMCSO 350
EMCB0320A51	3p EMCSO 450
EMCB0415A51	4p EMCSO 450
EMCB0440A51	4p EMCSO 550
EMCB0515A51	5p EMCSO 650
EMCB0610A51	6p EMCSO 750
EMCB0640A51	6p EMCSO 950
EMCB0725A51	7p EMCSO 1050
EMCB0920A51	9p
EMCB1010A51	10p

OTHERS

120-015	Sleeve nut no.15	3x18mm
042-041	Terminal(earth) no.41	
012-003	Fuse clip TF-758	
012-049	IC socket ICC-03-016-350T	16-pin dual in-line
048-032	Heat sink no.32	
065-261	Cover no.61	slide switch
123-013	Hexagon socket head bolt	4 x imm

ETH-15B (151H-15B)

(PCB 052H194B)

Components added and revised are identified by indicating their values.
The rest left unchanged.

