DC INTEGRATED PRE-AMPLIFIER

LABORATORY REFERENCE SERIES

5C50

SERVICE MANUAL

CIRCUIT DESCRIPTION

EQUALIZER CIRCUIT

A DC configuration amplifier is adopted, utilizing FET's at the top stage. The differential circuit accompanied by cascode-bootstrap cinfiguration is driven into current-mirror load. The main circuitry is packed into a hybrid type I.C. of LUX's original Dual Monolithic Linear I.C. (DML-02 No. H-101) in order to reduce DC-drift.

Signals from H101 are amplified by the cascode amp composed by Q101 and Q102, thus reducing and stabilizing the feedback amount of transistors, which contributes to improve characteristic or linearity in high frequency range.

This equalizer circuit is of the NF type offering 36dB gain at 1kHz, and the overload voltage is 300mV (1kHz, RMS).

FLAT-AMP, LINEAR EQUALIZER

Almost same configuration as that of the equalizer circuit is adopted except the feedback elements.

For the feedback elements, adopted are the frequency selective components, which function as the Linear Equalizer by switching with the rotary switch S301.

The Linear Equalizer provides the maximum variation of $\pm$1.5dB at approximately 1kHz axis and is operative on all signal sources. In the center "flat" position, these frequency selective components are throughly bypassed to be a mere flat amplifier, whose gain is 16.5dB.

DC DRIFT SENSER

In case some leakage is found at the output terminals of these equipments connected to the AUX or the TUNER terminal of the SC50, the DC ingredients are applied as signals to the input of this preamplifier. In the extreme case, the operational point of the flat amplifier is shifted, therefore the DC drift senser is provided to warn the presence of DC ingredients at the input by sensing the leakage at the output of flat amplifier.

(+) voltage is detected by Q501 and Q503, while (-) voltage is detected by Q504, both of which are amplified by Q506 and Q508. When DC is shifted, the offset indicator lights up to warn the DC drift. Actually, the offset indicator lights up when DC exceeding $\pm$450mV is sensed at the output of flat amplifier, and the pilot lamp on the front panel turns into red.

FILTERS

The filters of the SC50 are composed of the subsonic filter to cut the ultra low frequency range and the active type high cut filter of -12dB/oct. The subsonic filter consists of the paralled T-type filter (so-called twin T-type) and the CR attenuation filter of -6dB/oct. The frequency can be selected by the lever switch S004, and the cut off characteristic can be varied by VR006. The high cut filter is an active filter of emitter-follower type and provide a cut off characteristic of -12dB/oct. The frequency can be selected by S005.

The emitter-follower amplifier of constant current drive type composed of Q401 and Q402 operates only as a buffer amplifier for the subsonic filter function, and operates as elements for active filter when the high cut filter is turned on. The amplifier composed of Q401 and Q402 is thoroughly bypassed when both of subsonic filter and high cut filter are turned off.

POWER SUPPLY

By changing the power supply selecting connector, this preamplifier can be operated in 100V, 120V, 220V or 240V. But note that the rating of primary fuse varies depending on the AC mains voltage (i.e.: 1A for 100V, 120V area, and 0.5A for 220V, 240V area)

The rating of the transformer secondary fuse and the potential between the fuse point and the earth point are:

F002, F003	(ORG)	0.3A	AC11V x 2
F004, F005	(BLU)	0.5A	AC31V x 2

Winding on the "ORG" tap is the power supply for the blinker circuit [(+) voltage only] and also for the DC drift senser circuit via the bridge-rectifying circuit. Winding on the "BLU" tap is for the $\pm$30V power supply for equalizer, flat amp and filter amp via regulator composed of Q801 - Q806, after being bridge-rectified. Power supply for the muting circuit is taken direct from the "BLU" tap.

ALIGNMENT PROCEDURE

DC Balance & DC Offset Adjustment

* DC Balance Adjustment

Before proceeding to alignment, short-circuit the input terminals of PHONO-1 or AUX. Set the volume control to the minimum position.

Turn the power switch to on. After confirming operation of the Time Delay Muting Circuit, proceed to the following adjustment.

(A) Adjustment of DC Balance of Equalizer Amplifier

Connect a DC voltmeter such as digital voltmeter or synchroscope etc. to the Test Point (T.P.) C110a and C110b on the printed circuit board PB-1074. Then adjust VR101a and VR101b to obtain 0V DC against ground (earth).

(B) Adjustment of DC Balance of Flat Amplifier

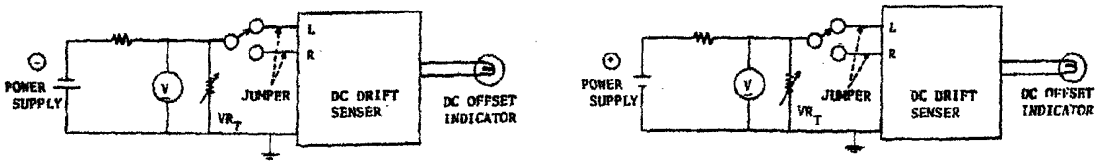
Connect a DC voltmeter to the Test Point (T.P.) provided in the vicinity of C207b and C207a. Then adjust VR201a and VR201b to obtain 0V DC against ground (earth).

Repeat steps (A) and (B) more than 5 minutes after the above adjustment, and confirm the drift is within $\pm$300mV for the equalizer amplifier section, or $\pm$3mV for the flat amplifier section.

DC Offset Sensitivity Adjustment

Disconnect the jumper wires at the side of C207a and C207b provided to the right of T.P. terminals of flat amp section.

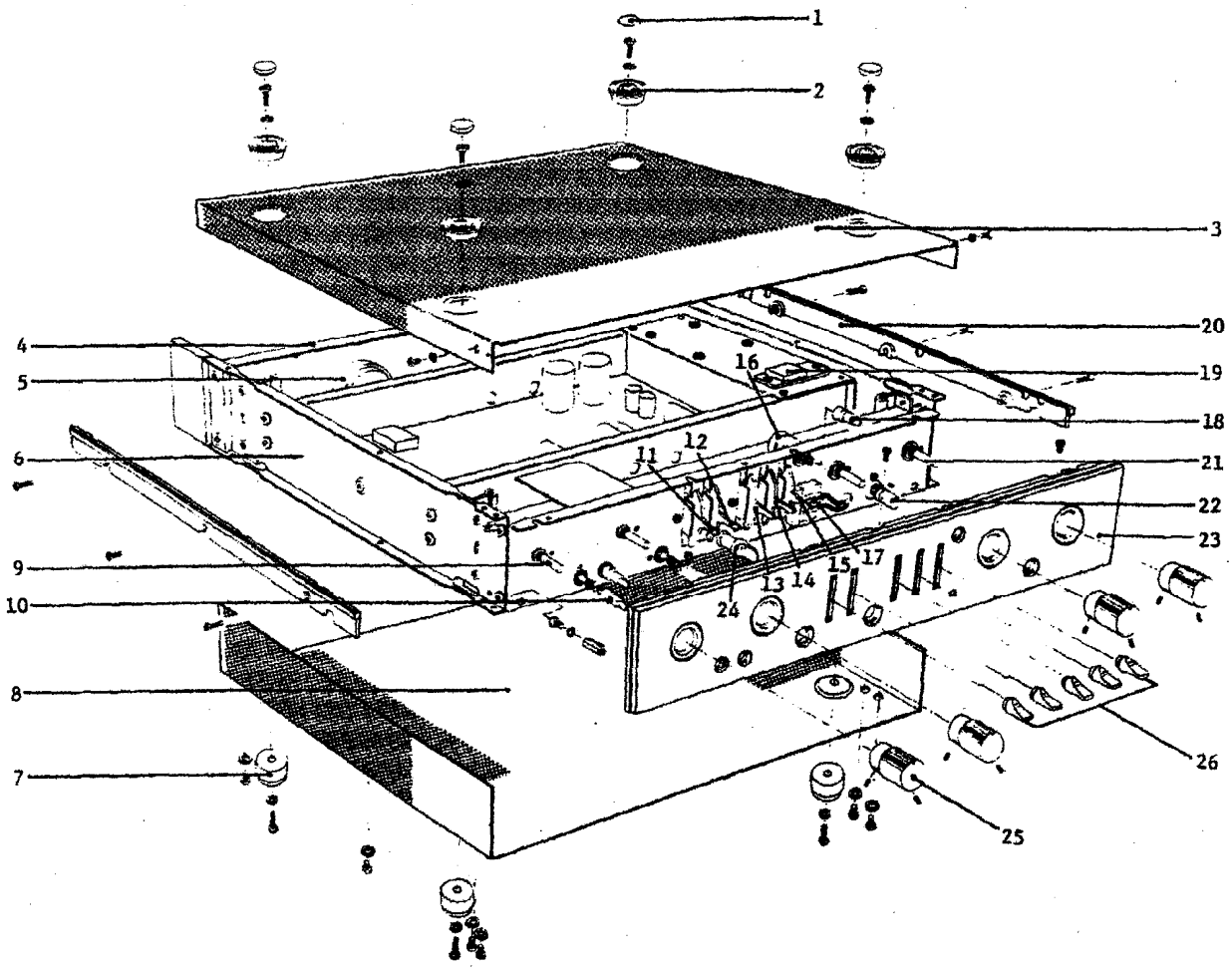
Connect DC power supply between the two jumper wires described above and ground as per the diagram below. Adjust VR_T to obtain a point that makes the pilot lamp turn from white to red color, and the DC offset indicator lamp is turned on, then make note the voltage at that time.



Check (+) and (-) voltage respectively for both channels. It is all right when it is within $\pm$450mV.

General Caution

Because of DC amp configuration, DC offset senser will possibly be operated when some DC ingredients are applied to the input, or the DC ingredients will affect the maximum output, or other performances especially at the PHONO EQUALIZER section. Therefore it is necessary to pay careful attention to use quality oscillator without DC leakage, or carefully adopt large mylar capacitor in series not to induce noises.



1.	UW1073	Spacer
2.	UW1072	"
3.	UG1001	Bonnet
4.	UC1048	Back Panel
5.	AS0082	MC Trans Socket
6.	UD1023	Side Panel
7.	WN1010	Leg
8.	UE1088	Bottom Plate
9.	SR0074	Rotary sw. (function)
10.	WJ1076	Mould Knob
11.	SL0032	Lever sw. (monitor)
12.	SL0033	" (dubbing)
13.	SL0034	" (subsonic)
14.	SL0034	" (high cut)
15.	SL0030	" (attenuator)
16.	RV0150	VR (att. preset)
17.	AL0002	Lamp
18.	WJ1077	Mould Knob
19.	AC0013	AC Selector Socket
	AC0014	AC Selector Plug
20.	WC1029	Side Mould Plate
21.	RV0176	Main Volume
22.	WJ1072	Mould Knob
23.	WA1073	Front Panel
24.	WJ1076	Mould Knob
25.	WK1092	Metal Knob
26.	WJ1071	Mould Knob

Replacement Parts List

Resistors: ±5%, 1/4 watt deposite carbon unless noted otherwise.
M.F.....metal film resistor
F.P.....flame proof fixed carbon film resistor

Capacitors: MI.....mica, MY.....mylar, P.....polystyrol
C.....ceramic, E.....electrolytic, N.....non polarized

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SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R101a	RD0049	390	V1	R110a	RD0042	1.2k	X1
101b	RD0049	390	V2	110b	"	1.2k	X2
102a	"	390	V1	111a	RD0050	330	Y1
102b	"	390	V2	111b	"	330	Y2
103a	RD0012	270k	V1	112a	RD0026	22k	X1
103b	RD0012	270k	V2	112b	"	22k	X2
104a	RN0370	330 ±1% MF	W1	113a	"	22k	Y1
104b	"	330 " "	W2	113b	"	22k	Y3
105a	"	330 " "	W1	114a	RS1052	56 F.P.	Y1
105b	"	330 " "	W2	114b	"	56 F.P.	Y2
106a	RN0380	820 " "	V2	115a	RD0048	470	Y1
106b	"	820 " "	V3	115b	"	470	Y2
107a	RD0043	1k	W2	116a	RD0013	220k	Z1
107b	"	1k	W3	116b	"	220k	Y3
108a	RN0420	39k ±1% MF	X2	117a	RD0004	1M	Y1
108b	"	39k " "	X3	117b	"	1M	Y3
109a	RN0446	470k " "	X2				
109b	"	470k " "	X3				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C101a	CM0008	47pF ±10% 100V MI	V1
101b	"	47pF " " MI	V2
102a	CQ0026	0.001uF ±10% 50V MY	W1
102b	"	0.001uF " " MY	W2
103a	CQ0007	0.068uF " " MY	W1
103b	"	0.068uF " " MY	W3
104a	"	0.068uF " " MY	W1
104b	"	0.068uF " " MY	W2
105a	CQ0020	0.0039uF " " MY	X1
105b	"	0.0039uF " " MY	X2
106a	CM0020	15pF " 100V MI	X1
106b	"	15pF " " MI	X2
107a	CQ0020	0.0039uF " 50V MY	X1
107b	"	0.0039uF " " MY	X2
108a	CQ0009	0.047uF " " MY	X1
108b	"	0.047uF " " MY	X2
109a	CQ0009	0.047uF " " MY	Y1
109b	"	0.047uF " " MY	Y2
110a	CQ0954	2.2uF " 100V MY	Y1
110b	"	2.2uF " " MY	Z2
111a	CQ0267	100pF ±5% 50V P	Y2
111b	"	100pF " " P	Y3
112a	CQ0065	180pF " " P	X1
112b	"	180pF " " P	X3
113a	CQ0068	1800pF " " P	X1
113b	"	1800pF " " P	X3
114a	CQ0210	620pF " " P	X1
114b	"	620pF " " P	X3
115a	CQ0070	6200pF " " P	X1
115b	"	6200pF " " P	X3

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
H101a	TC0023	Phono Equalizer Amp. DML-02	W1
101b	TC0023	Phono Equalizer Amp. DML-02	W3

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
Q101a	TR0125	2SA836	X1	Q103a	TR0152	2SC1940	X1
101b	"	"	X2	103b	"	"	X2
102a	"	"	X1	104a	"	"	Y1
102b	"	"	X2	104b	"	"	Y3

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
D101a	TV0005	VD1221	X1	D102a	TV0005	VD1221	X1
101b	"	VD1221	X2	102b	TV0005	VD1221	X2

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
VR101a	RT0067	DC balance 2k-B	W1
101b	"	" 2k-B	W2

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R201a	RD0004	1M	Z6	R209a	RD0050	330	Z7
201b	"	1M	Z3	209b	"	330	Z4
202a	RD0039	2.2k	Z6	210a	RD0054	150	Y8
202b	"	2.2k	Z3	210b	"	150	Y5
203a	RN0370	330 1% MF	Y7	211a	RD0013	220	Z8
203b	"	330 1% MF	Y4	211b	"	220	Z5
204a	"	330 1% MF	Y7	212a	RS1052	56 FP	Z8
204b	"	330 1% MF	Y4	212b	"	56 FP	Z5
205a	RN0400	5.6k 1% MF	Z6	213a	RD0026	22k	Z7
205b	"	5.6k 1% MF	Z3	213b	"	22k	Z5
206a	RD0042	1.2k	Z7	214a	RN0410	15k 1% MF	Z6
206b	"	1.2k	Z4	214b	"	15k " "	Z4
207a	RD0026	22k	Y8	215a	RN0412	18k " "	Z7
207b	"	22k	Y5	215b	"	18k " "	Z4
208a	RD0050	330	Z7	216a	RD0030	10k	Z6
208b	"	330	Z4	216b	"	10k	Z4

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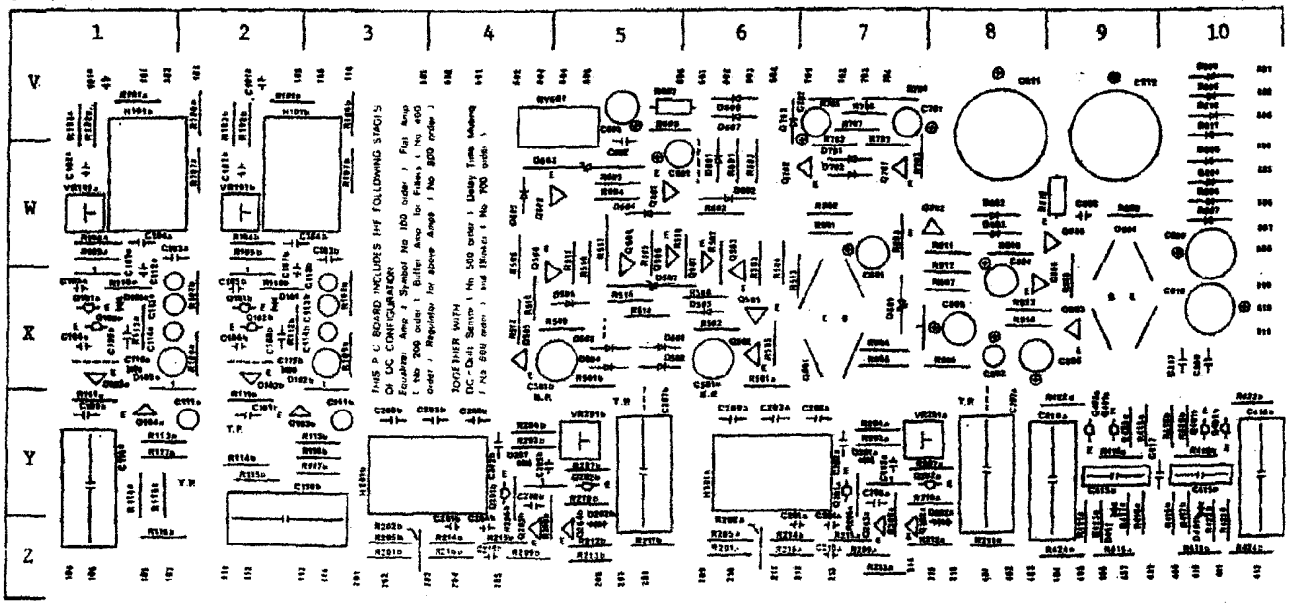

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C201a	CQ0026	0.001uF ±10% 50V MY	Z6
201b	"	0.001uF ±10% " "	Z4
202a	CQ0007	0.068uF " " "	Y7
202b	"	0.068uF " " "	Y4
203a	"	0.068uF " " "	Y6
203b	"	0.068uF " " "	Y4
204a	CQ0020	0.0039uF " " "	Z7
204b	"	0.0039uF " " "	Z4
205a	"	0.0039uF " " "	Y7
205b	"	0.0039uF " " "	Y4
206a	CM0020	15pF " 100V MI	Y7
206b	"	15pF " " "	Y4
207a	CQ0956	4.7uF " " MY	Y8
207b	"	4.7uF " " "	Y5
208a	CQ0009	0.047uF " 50V "	Y7
208b	"	0.047uF " " "	Y4
209a	"	0.047uF " " "	Y6
209b	"	0.047uF " " "	Y3
210a	CM0015	2pF " 100V MI	Z7
210b	"	2pF " " "	Z4

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
H201a	TC0023	Flat Amp DML-02	Y6
201b	TC0023	Flat Amp DML-02	Y4

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
Q201a	TR0125	2SA836	Y7	Q203a	TR0152	2SC1940	Z7
201b	"	2SA836	Y4	203b	"	2SC1940	Z4
202a	"	2SA836	Y8	204a	"	2SC1940	Z7
202b	"	2SA836	Y5	204b	"	2SC1940	Z5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
D201a	TV0005	VD1221	Y7	D202a	TV0005	VD1221	Z8
201b	"	VD1221	Y4	202b	TV0005	VD1221	Z5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
VR201a	RT0067	DC balance 2k-B	Y7
201b	0067	" 2k-B	Y5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R415a	RD0280	4.7M	Z9	R420a	RD0004	1M	Y9
415b	"	4.7M	Z10	420b	"	1M	Y10
416a	RD0035	4.7k	Z9	421a	RD0024	33k	Z9
416b	"	4.7k	Z10	421b	"	33k	Z10
417a	RD0029	12k	Z9	422a	RD0054	150	Y9
417b	"	12k	Z10	422b	"	150	Y10
418a	RD0039	2.2k	Y9	423a	RS0079	120 F.P.	Z9
418b	"	2.2k	Y10	423b	"	120 F.P.	Z10
419a	RD0280	4.7M	Y9	424a	RD0013	220k	Z9
419b	"	4.7M	Y9	424b	"	220k	Z10

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C415a	CQ0953	1uF ±10% 100V MY	Y9
415b	"	1uF ±10% " "	Y10
416a	CQ0956	4.7uF " " "	Y8
416b	"	4.7uF " " "	Y10
417	CK0009	0.1uF +80%-20% 50V C	Y9

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
Q401a	TR0165	2SC1775A	Y9	Q402a	TR0165	2SC1775A	Y9
401b	"	2SC1775A	Y10	402b	TR0165	2SC1775A	Y10

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
D401a	TV0005	VD1221	Y9
401b	TV0005	VD1221	Y10

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R501a	RD0020	68k	X6	R510	RD0035	4.7k	X4
501b	"	68k	X5	511	RD0017	100k	X5
502	RD0017	100k	X6	512	RD0039	2.2k	X4
503	RD0022	47k	X6	513	RD0035	4.7k	X7
504	RD0035	4.7k	X6	514	RD0030	10k	X5
505	RD0039	2.2k	X6	515	RD0030	10k	W5
506	RD0035	4.7k	W4	516	RD0043	1k	X5
507	RD0024	33k	X6	517	RD0024	33k	W5
508	RD0030	10k	X6	518	RD0045	820	X6
509	RD0017	100k	X5	519	RD0067	15	X5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C501a	CE0282	47uF 25V N	X6
501b	CE0282	47uF 25V N	X5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
Q501	TR0025	2SC1345	X6	Q505	TR0025	2SC1345	X4
502	"	2SC1345	X6	506	"	2SC1345	X5
503	TR0125	2SA836	X6	507	"	2SC1345	X6
504	"	2SA836	X5	508	TR0153	2SA915	X5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
D501	TD0015	1S1554	X5	D505	TD0015	1S1554	X6
502	"	1S1554	X5	506	"	1S1554	X5
503	"	1S1554	X5	507	TD0028	WZ-162	X5
504	"	1S1554	X5				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R601	RD0017	100k	W6	R605	RD0037	3.3k	W5
602	RD0009	470k	W6	606	RD0033	6.8k	V5
603	RD0255	1.2M	W6	607	RS1568	270 1/2W FP	V5
604	RD0037	3.3k	W5				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C601	CE0086	10uF +50%-10% 25V E	W6
602	CK0009	0.1uF +80%-10% 50V C	V5
603	CE0101	22uF +50%-10% 50V E	V5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
D601	TD0015	1S1554	W6	D605	TD0015	1S1554	W4
602	"	1S1554	W6	606	TD0004	1N4004	V6
603	TD0027	WZ-120	W5	607	TD0004	1N4004	V6
604	TD0015	1S1554	W5				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
Q601	TR0125	2SA836	W5	RY601	AY0025	RZ-24	V5
602	TR0025	2SC1345	W5				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R701	RD0004	1M	W7	R705	RD0026	22k	V7
702	"	1M	W7	706	RD0027	18k	V7
703	RD0035	4.7k	W7	707	RD0067	15	V7
704	RD0041	1.5k	V7				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C701	CE0085	33uF +50%-10% 25V E	V7
702	CE0085	33uF +50%-10% 25V E	V7

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
Q701	TR0025	2SC1345	V7
702	TR0025	2SC1345	V7

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
D701	TD0015	1S1554	W7
702	"	1S1554	W7
703	TD0018	1K188	V6

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R801	RD0027	18k	W7	R809	RS1078	680 1/4W FP	W9
802	RS1078	680 1/4W FP	W7	810	RD0035	4.7k	W8
803	RD0061	47	W7	811	RD0030	10k	W8
804	RD0045	820	X7	812	"	10k	X8
805	RD0030	10k	X7	813	RD0035	4.7k	X8
806	RD0038	2.7k	X8	814	RD0030	10k	X8
807	RD0040	1.8k	X8	815	RS1546	33 1/2W FP	W9
808	RD0037	3.3k	X9				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C801	CE0101	22uF +50%-10% 50V E	W7
802	CE0151	4.7uF +75%-10% 50V E	W8
803	CC0007	100pF +10%-10% 50V C	W9
804	CE0101	22uF +50%-10% 50V E	W8
805	"	22uF " " "	X8
806	"	22uF " " "	X8
807	CK0009	0.1uF +80%-10% 50V C	X10
808	"	0.1uF " " "	X10
809	CE0088	330uF +50%-10% 25V E	W10
810	"	330uF " " "	X10
811	CE1403	1500uF +20%-20% 50V E	V8
812	"	1500uF " " E	V9

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
Q801	TR0222	2SA969	X7	Q804	TR0223	2SC2239	X9
802	TR0025	2SC1345	X8	805	TR0125	2SA836	X8
803	"	2SC1345	X9	806	TR0125	2SA836	X8

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
D801	TD0023	WZ-071	W7	D807	TD0002	1N4002	W10
802	TD0015	1S1554	W8	808	TD0004	1N4004	V10
803	TD0015	1S1554	W8	809	"	1N4004	V10
804	TD0002	1N4002	W10	810	"	1N4004	V10
805	"	1N4002	W10	811	"	1N4004	V10
806	"	1N4002	W10				

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SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R401a	RB0262	2.2M	Y2	R409a	RB0234	150k	Y2
401b	"	2.2M	X4	409b	"	150k	X2
402a	RB0234	150k	Y2	410a	RB0262	2.2M	X3
402b	"	150k	X4	410b	"	2.2M	X3
403a	"	150k	Y3	411a	RB0254	1M	Y4
403b	"	150k	X4	411b	"	1M	X4
404a	RB0228	82k	Z2	412a	"	1M	Y4
404b	"	82k	X4	412b	"	1M	X4
405a	RB0262	2.2M	X3	413a	"	1M	Y4
405b	"	2.2M	X3	413b	"	1M	X4
406a	"	2.2M	Y3	414a	"	1M	Y4
407a	RB0240	270k	X2	414b	"	1M	X4
407a	"	270k	X3	425a	RB0206	10k	Z4
408a	"	270k	X3	425b	"	10k	Z4
408b	"	270k	X2	426a	RB0162	150	Z5
				426b	"	150	Z5

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C401a	CQ0004	0.15uF +10% -10% 50V MY	Y2
401b	"	0.15uF " " MY	X4
402a	"	0.15uF " " MY	Y3
402b	"	0.15uF " " MY	X4
403a	"	0.15uF " " MY	Z2
403b	"	0.15uF " " MY	X4
404a	"	0.15uF " " MY	Y3
404b	"	0.15uF " " MY	X4
405a	CQ0010	0.039uF " " MY	Y3
405b	"	0.039uF " " MY	X3
406a	CQ0004	0.15uF " " MY	X2
406b	"	0.15uF " " MY	X3
407a	"	0.15uF " " MY	X3
407b	"	0.15uF " " MY	X3

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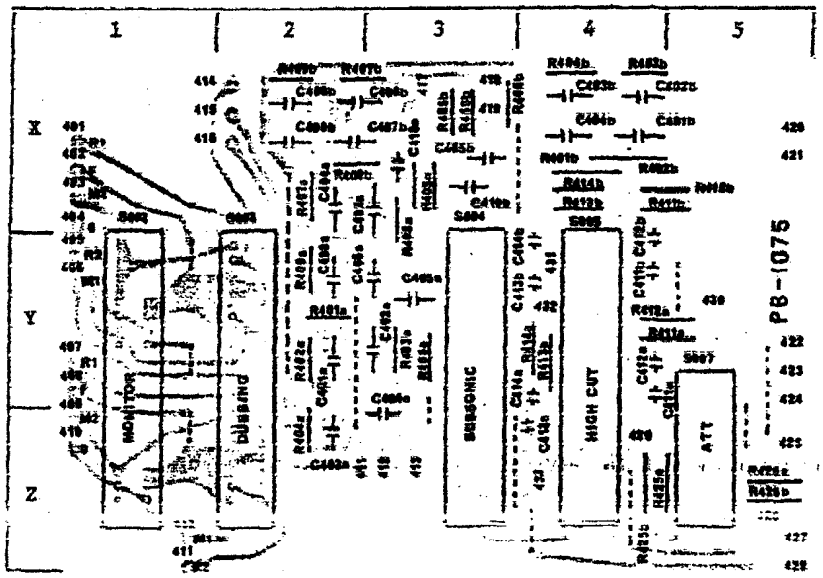

SYMBOLE NO.	STOCK NO.	DESCRIPTION	LOCATION
C408a	CQ0004	0.15uF ±10% 50V MY	Y2
408b	"	0.15uF " " MY	X2
409a	"	0.15uF " " MY	Y3
409b	"	0.15uF " " MY	X2
410a	CQ0007	0.068uF " " MY	X3
410b	"	0.068uF " " MY	X3
411a	CQ0026	1800pF " " MY	Y4
411b	"	1800pF " " MY	Y4
412a	CQ0055	1000pF " " MY	Y4
412b	"	1000pF " " MY	Y4
413a	CQ0022	4700pF " " MY	Z4
413b	"	4700pF " " MY	Y4
414a	CQ0028	2700pF " " MY	Y4
414b	"	2700pF " " MY	Y4

SWITCHES

SYMBOL NO.	STOCK NO.	DESCRIPTION
S002	SL0032	Lever sw. for Monitor 2-3
003	SL0033	Lever sw. for Dubbing 4-3
004	SL0034	Lever sw. for Subsonic 6-3
005	SL0034	Lever sw. for High cut 6-3
006	SL0030	Lever sw. for Att. 2-3

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SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION	SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R301a	RD0027	18k	Z1	R308a	RD0023	39k	Y3
301b	RD0027	18k	X1	308b	"	39k	X2
302a	RD0029	12k	Z1	309a	RD0006	820k	Z3
302b	"	12k	X1	309b	"	820k	X3
303a	RD0021	56k	Z1	310a	RD0020	68k	Z3
303b	"	56k	X2	310b	"	68k	X3
304a	RD0004	1M	Y1	311a	RD0022	47k	Z3
304b	"	1M	X2	311b	"	47k	X3
305a	RD0022	47k	Y2	312a	RD0027	18k	Z1
305b	"	47k	X2	312b	"	18k	X1
306a	RD0027	18k	Y3	313a	RD0280	4.7M	Z2
306b	"	18k	X2	313b	"	4.7M	Y2
307a	RD0026	22k	Y3				
307b	"	22k	X2				

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
C301a	CQ0013	0.022uF ±10% 50V MY	Y1
301b	"	0.022uF " " MY	X1
302a	CQ0024	1500pF " " MY	Z3
302b	"	1500pF " " MY	Y1

SWITCHES

SYMBOL NO.	STOCK NO.	DESCRIPTION
S301	SR0073	Rotary sw. Linear EQ. 2-4-5

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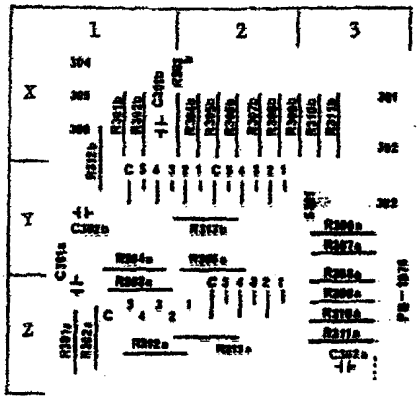

PB-1077

SYMBOL NO.	STOCK NO.	DESCRIPTION	LOCATION
R901a	RD0030	10k	Y2
901b	RD0030	10k	Y3

SWITCHES

SYMBOL NO.	STOCK NO.	DESCRIPTION
S007	SR0075	Slide-Rotary sw. for MODE

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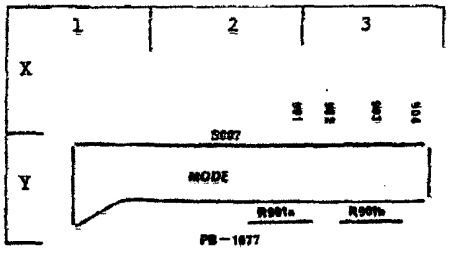


CHASSIS COMPONENTS

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
VR001	RV0112	phono-1 imp. 150k-A	VR004	RV0151	balance 200k-MN
002	RV0112	phono-2 imp. 150k-A	005	RV0176	main VR 100k-A
003	RV0150	att. pre-set 2k-A	006	RV0152	subsonic cont 500kB

SYMBOL NO.	STOCK NO.	DESCRIPTION	SYMBOL NO.	STOCK NO.	DESCRIPTION
R001	RD0024	33k	R004	RD0015	150k
002	RD0024	33k	005	RD0015	150k
003	RD0022	47k	006	RD0056	100

SWITCHES

SYMBOL NO.	STOCK NO.	DESCRIPTION
S001	SR0074	2-4-5 rotary sw. for FUNCTION
008	SP0037	2-2 push sw. for POWER

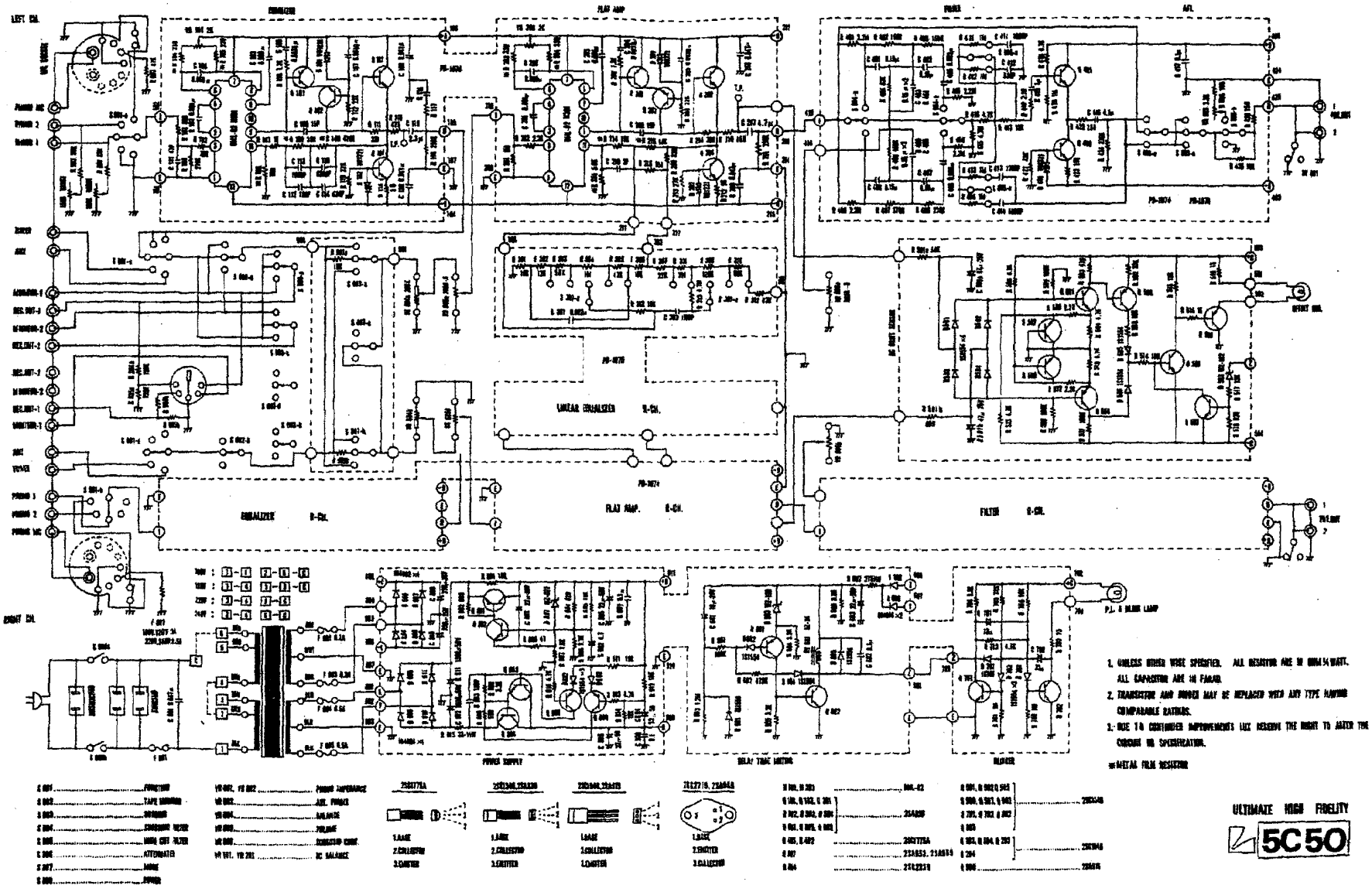
STOCK NO.	DESCRIPTION
UA1030	chassis
UD1023	side panel
UZ1097	extension shaft
PT0113	P-2105 power trans (A-type)

REAR PANEL

STOCK NO.	DESCRIPTION
AC0010	AC socket
AS0002	DIN connector
AS0082	MC trans socket 12M-60039
AT0062	12 pin jack
AT0063	10 pin jack
UC1048	back panel 1048

SUB PANEL

STOCK NO.	DESCRIPTION
AL0041	lamp 12V-75MA
UB1028	sub panel


LEFT CH.
EQUALIZER
FLAT AMP
PHONO
AUX.
EQUALIZER 8-CH.
FLAT AMP. 8-CH.
LINEAR EQUALIZER 8-CH.
FILTER 8-CH.
RIGHT CH.
POWER SUPPLY
RELAY TIME METER
BLOWER
P.L. & BLOCK LAMP
1. UNLESS OTHER WISE SPECIFIED. ALL RESISTOR ARE W 0.5W 1/4 WATT. ALL CAPACITOR ARE IN FARAD.
2. TRANSISTOR AND DIODE MAY BE REPLACED WITH ANY TYPE HAVING COMPARABLE RATINGS.
3. DUE TO CONTINUOUS IMPROVEMENTS WE RESERVE THE RIGHT TO ALTER THE CIRCUIT OR SPECIFICATION.
※METAL FILM RESISTOR
ULTIMATE HIGH FIDELITY
5C50

SPECIFICATIONS

Output Voltage:	pre.out; typical 1V, max; 18V rec.out; typical 150mV, max; 18V (distortion: no more than 0.005%)
Output Impedance:	pre.out 500 ohms rec.out 500 ohms
Total Harmonic Distortion:	phono-1 & 2; no more than 0.005% (rec.out, 2V, 20 - 20kHz) tuner, aux; no more than 0.005% (pre.out, 2V, 20 - 20kHz) monitor-1 & 2; no more than 0.005% (pre.out, 2V, 20 - 20kHz)
Rated I.M.D.:	phono-1 & 2; no more than 0.002% (rec.out, 2V, 60Hz : 7kHz = 4 : 1) tuner, aux; no more than 0.002% (pre.out, 2V, 60Hz : 7kHz = 4 : 1) monitor-1 & 2; no more than 0.002% (pre.out, 2V, 60Hz : 7kHz = 4 : 1)
Frequency Response:	phono-1 & 2; 20Hz ~ 20,000Hz (±0.2dB) tuner, aux; 1 Hz ~ 200,000Hz (–0.5dB) monitor-1 & 2; 1 Hz ~ 200,000Hz (–0.5dB)
Input Sensitivity: (pre.out 1V)	phono-1 & 2; 2.5mV, tuner, aux; 150mV monitor 1 & 2; 150mV
Input Impedance:	phono-1 & 2; 30k - 50k - 100k ohms (variable) tuner, aux; 50k ohms monitor-1 & 2; 50k ohms
Signal to Noise Ratio:	phono-1 & 2; better than 80dB (IHF A-curve, input short-circuited) tuner, aux; better than 100dB (IHF A-curve, input short-circuited) monitor-1 & 2; bettern than 100dB (IHF A-curve, input short-circuited)
Input Converted S/N Ratio:	phono-1 & 2; no more than –132dB/V (IHF A-curve, input short-circuited) tuner, aux; no more than –116.5dB/V (IHF A-curve, input short-circuited) monitor-1 & 2; no more than –116.5dB/V (IHF A-curve, input short-circuited)
Phono Overload Voltage:	phono-1 & 2; no less than 300mV (1kHz, RMS)
Crosstalk:	phono-1 & 2; no more than –80dB (1kHz) tuner, aux; no more than –95dB (1kHz) no more than –76dB (10kHz)
Additional Features:	Linear Equalizer, Subsonic Filter, High Cut Filter, Input Impedance Adjuster, Tape Monitor (dual line), Tape Dubbing, Audio Attenuator, socket for MC input Transformer, Extra AC outlets.
Power Consumption:	15W
Dimensions:	442(W) x 400(D) x 101(H)mm (17-13/32 x 15-3/4 x 4")
Weight:	Net: 8.2kgs, Gross: 10kgs

LUX CORPORATION, JAPAN

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PHONES 06-834-2222 CABLE:LUXELECT OSAKA TELEX:J63694

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