BSS

EPC760 TEST PROCEDURE

31:01:94 Rev. 3.

This manual should be read through before attempting to test an amplifier.

Please note: if an amplifier is being tested from scratch this manual should be followed exactly in the order it is laid out.

You must be aware of where hazardous voltages are located. Familiarise yourself with these positions. They are mostly underside of the unit along the left hand half of the amplifier. There is 400V DC on the bridge rectifier at the centre rear of the amplifier near the output connectors, this also has 240V mains on it. There is also 240V mains at the centre front where the mains feeds from the PCB to the power ON/OF switch. All the rest is + and _ 200V between the front and rear of the amplifier on the left hand lower side. Assuming the amp has no covers on it, it is not advisable that the amp be tested by a person working on his or her own IT IS HAZARDOUS TO DO SO.

EQUIPMENT NEEDED

Oscilloscope (needs to be able to measure 80KHz square wave), oscillator set to +10dBv at 1KHz but switched off, an 8 and 4 ohm ohm load, this can be made up of electric fire bars, but has to be able to dissipate 1400 watts and a current probe, the kind which a wire can be passed through.

THIS PROBE MUST BE POWERED FROM + & - 15Vdc, THE DC MUST BE APPLIED TO BOTH RAILS SIMULTANEOUSLY AND NEVER 1 RAIL AT A TIME.

INITIAL CHECKS

All output devices to be inspected for solder integrity, all PSU devices to be checked for solder integrity.

Mains input Bridge Rectifier to be checked for wire orientation.

Ensure the spaded wires are not connected between the 760A board TP101 and the mains bridge rectifiers.

All mains wiring to be checked for correct orientation.

Check orientation of pulse transformers TX102 and TX103.

Make sure the gap between the heatsinks is symmetric.

Set relay cal preset P201 to 10 o'clock, set all other presets to fully anti-clock-wise position.

Do not reset pots on an amp which is in for repair as this is factory set and should never need to be changed unless the power transformer or L103, L104, L105, C113, C114, are changed for new ones.

Plug front panel in via ribbon cable, plug pot cables coming from front panel into relevant sockets.

It will be necessary to use 2 channels of scope, 1 channel for monitoring the current sinewave and 1 channel for monitoring the PSU clock.

Connect scope probe to test point TP102 OSC, set scope time base to 2us and 5V per centimetre for the clock channel and .2V per centimetre for the current sinewave channel (this should be equivalent to 2 amps per division if the correct probe set for 10 amps per div. is being used, consult BSS AUDIO for technical data).

Set level controls on front panel fully anti-clock-wise.

Set LOAD switch for 2 OHMS and MODE switch to 2 Channel mode.

Set power switch off.

Put a T250ma fuse in FS101.

Connect to a variac which is set at 0 Volts.

AUXILIARY PSU CHECKS

Set input mains to 90 Volts, power unit up and check PSU startup sequence:

1- Front panel LOAD and MUTE leds light.
2- Relay RL101 comes on after 2 seconds delay, followed by:-
3- Relay RL102 comes on, after a 1 second delay, then:-
4- PSU clock starts up (mark space changes).
5- MUTE leds go off.

Check pre-regulator voltage, should be +18 - +19Vdc.

Check regulated voltage should be +15Vdc + - 200mv.

Depower and increase mains voltage to 200V.

Power on and observe:

1- Relay RL102 only comes on.

Recheck the pre-regulator voltage should now be +25Vdc.

Power down and change SET LOAD to 4 ohms, power on and check:

1- RL103 and RL104 should come on.

Depower, change SET LOAD switch back to 2 ohms and increase mains voltage to 223V.

Power on and observe:

1- Relay RL106 comes on, followed by:-
2- Relay RL102.

Depower and increase mains voltage to 240V.

Power on and observe:

1- Relay RL105 comes on, followed by:-
2- Relay RL102.

Depower.

Relay RL105 and RL106 must be calibrated to come on together, at between 242V and 243.5V AC. To do this set the Mains V at about 243, power on and check whether RL105-106 come on together, if not use preset P201 to calibrate, rotate clock-wise to make more sensitive.

Depower and decrease mains voltage to 214V.

Power up and observe:

1- Only relay RL102 should come on.

Depower and increase mains voltage to 216V.

Power up and observe:

1- Relay RL106 should come on followed by:-
2- Relay RL102.

Depower and wind variac to 0 Volts.

POWER CHECKS

Connect current measuring jig to J208.

Connect external bridge rectifier from variac output to BR101 red and black terminals.

Ensure that the variac which this is connected to is at 0 Volts before you plug in.

Connect current loop with current probe attached, to J103.

Plug unit into 240V outlet and power on, wait for startup sequence to complete, observe 80KHz clock should have a mark space ramp up and unequal mark space ratio, off time is longer than on time.

FAULT LINE CHECK

Dab a ground (for a 1/8 of a second) on the right hand side of R296 (channel 1) and R298 (channel 2), clock should go off then instantly ramp on again, do same on both resistors.

Dab ground on resistors again, this time for 1 second on each resistor

Clock should go off.
Fault lines should permanently stay active.
Red fault leds should flash continuously.

Apply ground to TP104/SHUTDOWN RESET, this will cause the amp to go out of fault mode and the clock should reset in a total count of about 7 seconds.

If all is well wind up variac supply through external bridge rectifier, verrrrry sllllowy, observe 90 Volt meters and current (from current probe on scope channel) as you do so, + - 90V rails should rise together, stop at the number 3 position on the 90V Volt meters.

The +/- 27V current meters should read about 4 on meter scale.

The +/- 90V current meters should read 0 on meter scale.

The +/-100V current meters should read 4 on meter scale.

Measure voltages on J208 as follows:

Pin 4 = -13ish
Pin 7 = +13ish
Pin 2 or 3 = -28ish
Pin 8 or 9 = +28ish
Pin 1 = -54ish
Pin 10 = +54ish

Right hand side of R373 should be +10ish
Right hand side of R374 should be -10ish

Pin 4 of U209 should be -7ish
Pin 8 of U209 should be +7ish

Continue to wind variac up (verrrry sllllowy) the MUTE relays will unmute at the no. 4 position on the +/- 100V volt meters, wind all the way up to 240V, observe current usage as you go, then measure volts on J208:

Pin 4 = -27V
Pin 7 = +27V
Pin 2 or 3 = -56V
Pin 8 or 9 = +56V
Pin 1 = -100V
Pin 10 = +100V

Right hand side of R373 should be +23V
Right hand side of R374 should be -23V

Pin 4 of U209 should be -15V
Pin 8 of U209 should be +15V

Check Volts across temperature devices TH201 and TH701 should be -2.9Vdc.

Measure DC offset on both channels of amplifier output, should be < 10mv. If out select IC U214 channel 1 or U213 channel 2.

BIAS

The bias now needs to be set but drifts with temperature so is set in 2 stages.

Stage 1: measure across R701 (.1R 2.5W) channel 1 using a floating meter, should - be 0 Volts.

Adjust bias preset P205 until voltage across R701 is about 2.5mv measure all resistors relating to device outputs on channel 1, 18 in all, make sure they are all in the range 2.2 - 3.5mv.

Do same for channel 2 measuring across R707 (.1R 2.5W) as initial resistor, then measure all other resistors for channel 2.

Stage 2 of Bias setting is done at the end of the test procedure as this has to be done under more controlled conditions and requires the amp to be at maximum operating temperature.

SIGNAL PATH CHECKS

Set amplifier input sensitivity to +10, oscillator source should be 1KHz and turned down all the way.

Plug in a 16 Ohm load to channel 1 output, plug in signal from oscillator but make sure it's turned all the way down, sllllowy bring the signal level up observing rise in current level on power current meters and PSU signal from current probe.

Increase until amp clip led is on, +/- 90V current meters should read about 2 on the meter scale. Do this test for channel 2.

Wind signal down to -20 using amp level control and change output load to 8 Ohms, do previous test again but observe, at max level the +-90V current meters should now read about 4 on the scale.

Do this test for channel 2, then wind signal down using amp level control.

Wind variac volts down to 0 Volts, power of and set amp SET LOAD switch to 4 Ohms mode.

Power on, wait for startup sequence to complete then wind variac up to 240V, power rails should now be around 85Volts.

Check current probe signal on the scope while turning variac up, wind input signal up observe current meters should now reach about 6-7 on the scale.

DEVICE DYNAMICS CHECK

Input signal should be +10dBv at 1Khz.

All the output devices now need to be checked to ensure that they are sharing current equally.

Measure the AC voltage across all the device output resistors, they should measure about 35mv AC.

If any devices are out by more than 20% they should be changed as there life cycle will be significantly reduced.

PSU TUNING AND SYNCH

Wind variac down to 0 Volts, wait 10 seconds, depower unit, unplug current meter jig and replace with PCB EPC760E power plug, switch amp to BRIDGE MODE, plug 8ohm load into the + terminals on the output.

Bridge mode will cause both channels to be driven from channel 1 input.

At this point both relays RL105 & RL106 must be on, to achieve this either use a variac set at 244V or put a resistor in parallel with R236 (about 1M) this will force both relays on, regardless of input voltage.

Power on and wait for startup cycle to complete, wind variac all the way up, observe current cycle on scope.

The power supply frequency must now be tuned.

This is achieved by use of P101 (FREQ) and P102 (SYNC).

There is a time gap between the positive and negative half cycles of the current sinewave.

The positive going half cycle of the current sinewave has to be synchronised with the negative going half cycle of the current sinewave. This will allow the PSU to operate at maximum efficiency.

Some parts of this test need to be done at maximum power which is why we have chosen bridge mode, minimum time should be spent on this test as it does require a little more current than the amp is capable of sustaining for longer periods.

Wind input signal up till the power supply is using about 6 amps, set frequency using P101, rotate pot until the gap between the positive and negative half cycles is as small as it can be but leave a small gap, typically about a 5th of a scope centimetre.

At this point set the synch pot P102 to about 12 o'clock, nothing visible should happen, set scope to 1V per centimetre, increase input signal to full scale, current should rise to about 30amps.

Set level control to min, change amp load to 4 Ohms.

Do this next bit reasonably quickly.

Wind input level up, current should rise to 45 amps, at this point the amp may do an over current fault, the power supply will shut down for about 3 - 4 seconds then should automatically restart.

wind input level down and allow amp to reset.

Wind input level up again so the maximum current usage is 44 amps.

Using synch preset P102 set the gap between positive and negative peaks to be as small as possible, but they must not overlap.

An overlap will cause undue current usage in the PSU drive devices and as a consequence they will become out of synch and possibly blow up.

Switch input signal of, wind variac down, wait 10 seconds and depower amp, remove remote bridge rectifier, plug in the RED & BLACK wires which come from the amps built in bridge rectifier, put a 6.5 amp fuse in the fuse holder FS102.

Change the amp load back to 8 Ohms and plug into channel 1 output terminals.

Switch to 2 Channel mode.

BEWARE - DO THIS NEXT BIT CAREFULLY

This test checks the circuits around TC101 BTA26-600R TRIAC.

When the amplifier is switched on it goes through a slow start procedure.

After the mains relay comes on the PSU capacitors will charge up through a 4R7 25 watt metal clad resistor, R101 (located near the mains bridge rectifier), when the charge cycle is complete typically after 3 seconds the 4R7 resistor will be shorted by a TRIAC TC101 (also located near the mains rectifier).

If for some reason this circuit fails, the 4R7 resistor will explode violently.

This is partly the reason to do this part with a 6.5amp fuse instead of the correctly rated 20amp fuse.

This FAULT can occur if the TRIAC does not switch on, or the mains bridge rectifier fails.

Power unit on and wait for startup sequence to complete.

If all goes well depower and change fuse to 20 amp version. Unplug current probe, replace this with a current loop link plug.

AUDIO CALIBRATION

At this point a 1uF 1000V capacitor should be put in parallel with the output load, be sure this is done at the load end of the cable running from the amplifier output.

Power on but make sure that only RL105 primary relay comes on.

When amp has completed it's startup sequence switch input signal on and make sure it's set for +10dBv at 1Khz.

Use P203 channel 1 and P202 channel 2 to set a calibrated output of 55V RMS. Do same for channel 2.

SIGNAL INTEGRITY

Clip signal heavily by turning the input up, check for oscillations and other gremlins.

Measure the frequency response, should be 1dB down at 10Hz, 3dB down at 45 - 47Khz and flat in between.

Leave signal set at HF and step the input level up by 10dB, this should trigger the HF kill circuit and the amp will go into latch kill.

Reset by powering off then on.

Do above for channel 2.

Set signal 1dB below clip and measure distortion at 100Hz, 1Khz and 10Khz:

100Hz = 0.005%
1Khz = 0.005%
10Khz = 0.03%

This is assuming the analyser is measuring THD+NIOSE with a 30Khz Low pass in circuit.

Set input signal to +6dBv, drop amp level control to -20, unplug 8 Ohm load, plug .5 Ohm load into channel 1 with current probe attached to + terminal, set scope for 1V per cent.

Wind input signal up, the amp should go into latch fault mode when the signal reaches about 2.5 centimetres on the scope.

Do same on channel 2.

A latch fault mode can only be cleared by powering of and on again.

OVER VOLTAGE CHECK

Apply a 100K resistor in parallel with R304 47K (located near J208, power on and wait for startup cycle to complete, the unit should do a non latch fault then cycle round and go into latched fault kill.

HARDWARE ASSEMBLY

The front panel should now be fitted to the main chassis making sure that the pot wires coming from the front panel have a stress free path where they pass between the front panel and front panel metal screen.

These wires should be looped through the plastic wire clips which are stuck to the inside of the amp side panel then routed below the input transformer assembly.

Fix the front panel to the main frame with 2 M3.5x8 C/S screws in the middle of the front panel then use M4x8 C/S screws in the four corners. 3 M2.5x6 C/S are then fitted through the underside of the front panel into the main PCB.

Fit perspex covers.

THERMAL CYCLE

The thermal cycle is important to ensure that all the device thermal paths are intact and that 1 device is not getting significantly hotter than another.

To aid this process the metal tabs of the devices should be painted with thermochromic paint so that the temperature can be mapped.

Switch to bridge mode and plug amp load (8 ohms) into the + terminals.

This test is best done with the amplifier on its side to be able to view both sides of the heatsinks.

Bring signal level up to the -3dB led on the level meter, observe devices as they warm up, make sure that no devices are getting hotter than the others, if 1 does then power down and solve this immediately.

Problems of this nature are caused by:

Dirt under the device, an incorrectly placed spring, the device has been soldered down in such a way that it is left lying at an angle or it has not been selected properly and is using more bias than it should.

Please observe static control during this next process.

To achieve the best solution it is best to remove the device, clean of any heatsink compound from both device and heatsink, make sure there are no manufacturing defects ie bumps in the heatsink or on the device then apply new heatsink compound and refit the device.

When refitting the device, solder only the middle leg first, then place the spring so that it is dead centre of the device tab, solder other 2 legs, then apply pressure to the middle of the device with a screwdriver or something similar and while pressing down resolder all 3 legs. This will ensure the device stays flat against the heatsink.

Resume thermal test as before and continue to monitor the thermal progress of all the devices. The temperature will progress through a color spectrum:

RED	= 82C - 88C
YELLOW	= 88C - 89C
GREEN	= 89C - 97C
GREEN TO BLUE	= 97C - 99C
BLUE	= 99C - 100C
DARK BLUE	= 100C - 101C
BLACK	= 102C

Under normal operating conditions the amp will go into thermal fault mode when the devices get to BLUE 99C, if any go black they must be changed or the reason for them getting hot must be solved.

SOAKING

The amps should now go on a soaking cycle of 50 hours minimum.

It is best to use a 12 ohm load with the amp in 2 Channel mode set for 8 ohm operation. Drive the amp with a tone bursted signal which runs a mark space ratio of 50/50 up to the -3dB led only.

FINAL QC

Full power at 120V:

Power unit from variac set at 120V, put amp in bridge mode, plug load into the + output terminals and power up, wait for startup cycle to complete then wind input signal all the way up. Leave for about a minute.

AUDIO CHECK

At this point the unit must be given a listening test, this is best achieved by taking a voltage tap from the output load (assuming you are using electric fire bars as a load).

Remove perspex covers and replace with proper metal ones.

Depower, unplug signal source and replace with an input from a CD player or similar.

Wind variac up to 240V, set input sensitivity to -2, power on and wind level all the way up.

Before starting the music, check the background HF noise level, it should be just hearable through the tweeters.

Start music, the amp should clip (choose a music track which will force this to happen e.g. Annie Lennox, Diva, track 3), this will ensure that none of the FAULT circuits can be forced into a false fault.

THERMAL CYCLE

This test allows for bias drift at high temperature.

Set the input sensitivity back to +10.

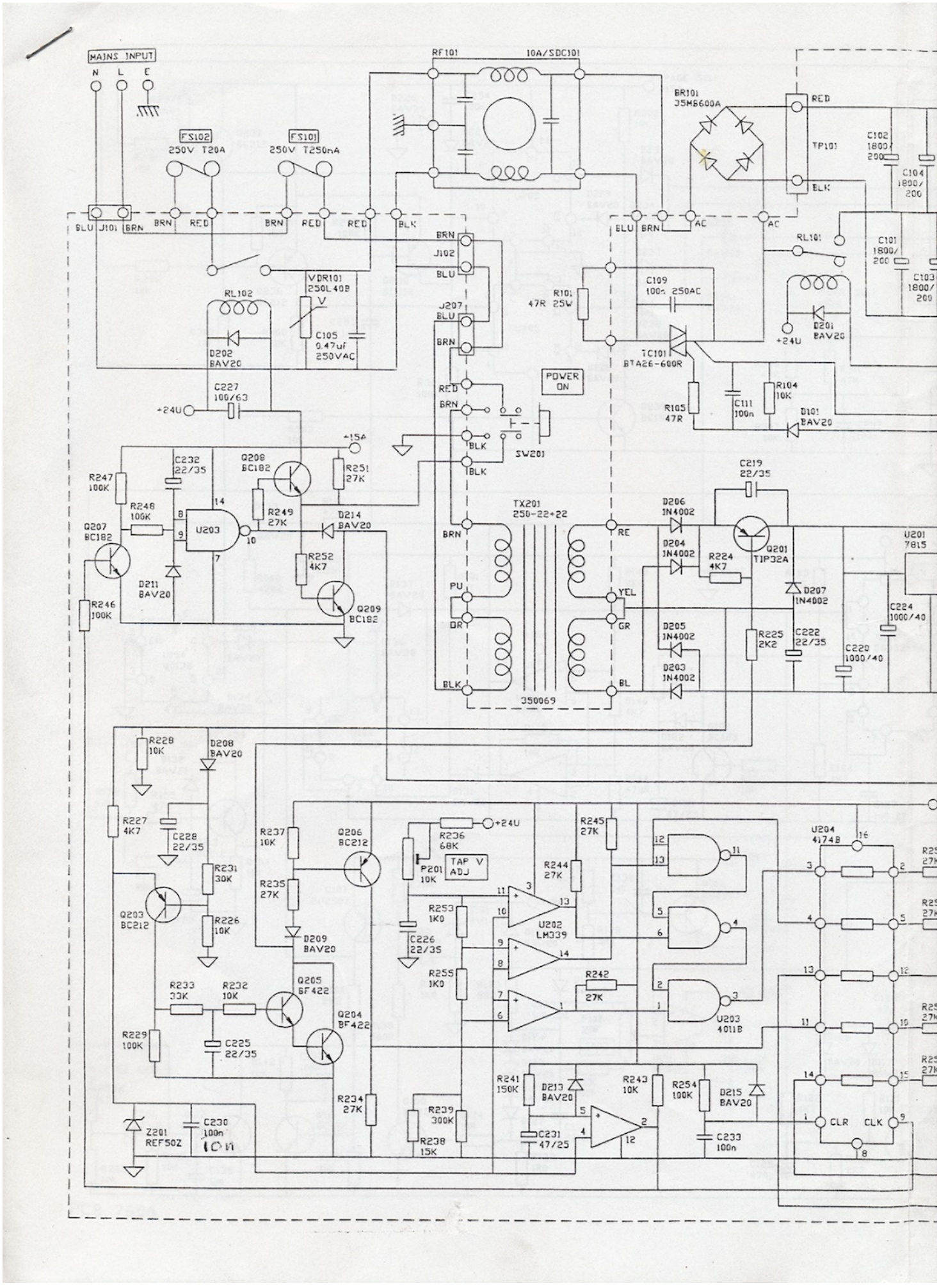
Bias Calibrtion STAGE 2

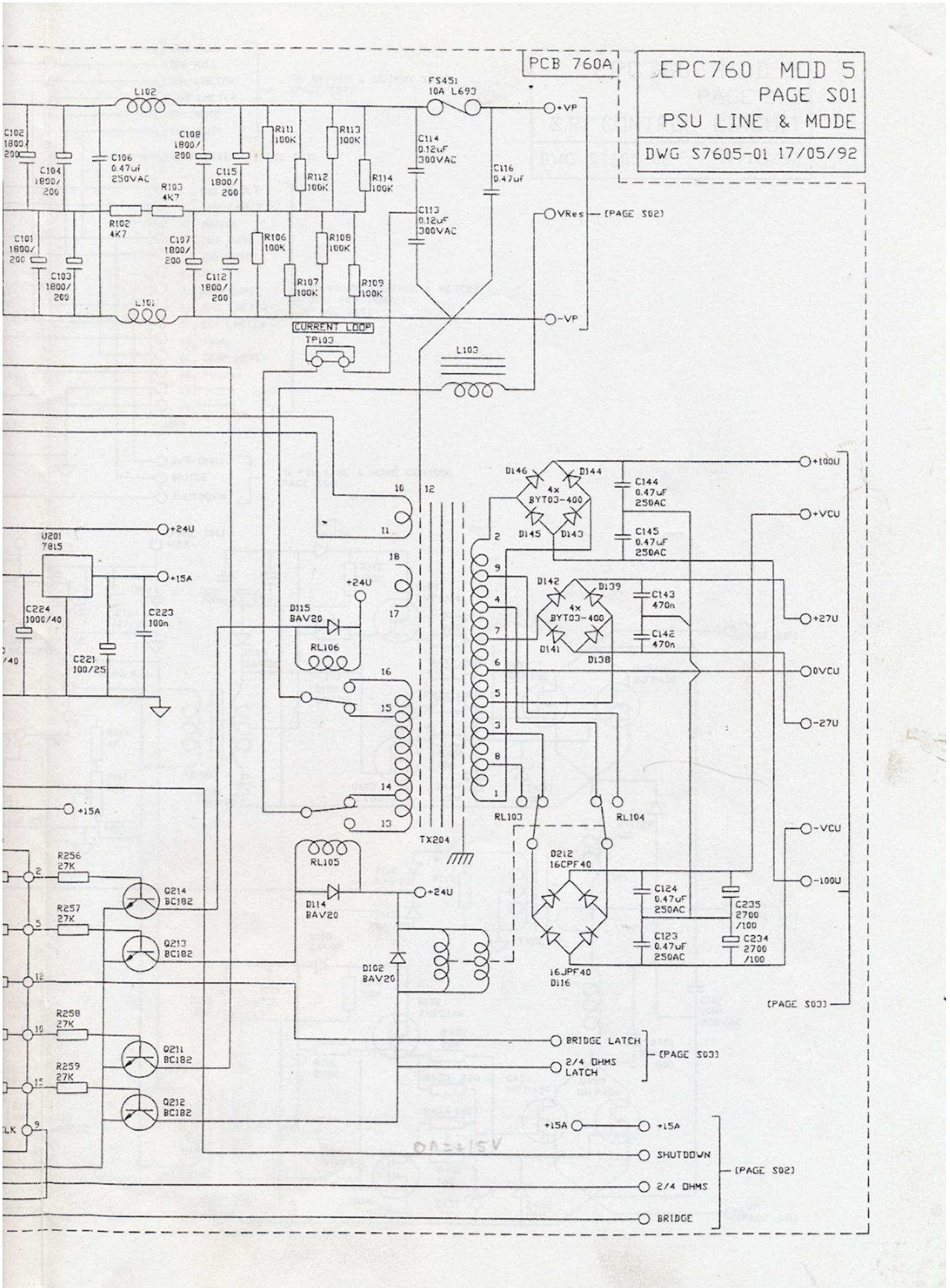
Warm the amp up to maximum temperature, when it goes into thermal fault mode remove the perspex top and measure the voltage across R706 channel 1 and R707 channel 2, the voltage should read no more than 4.0mv DC, adjust if necessary using P205 channel 1 and P204 channel 2.

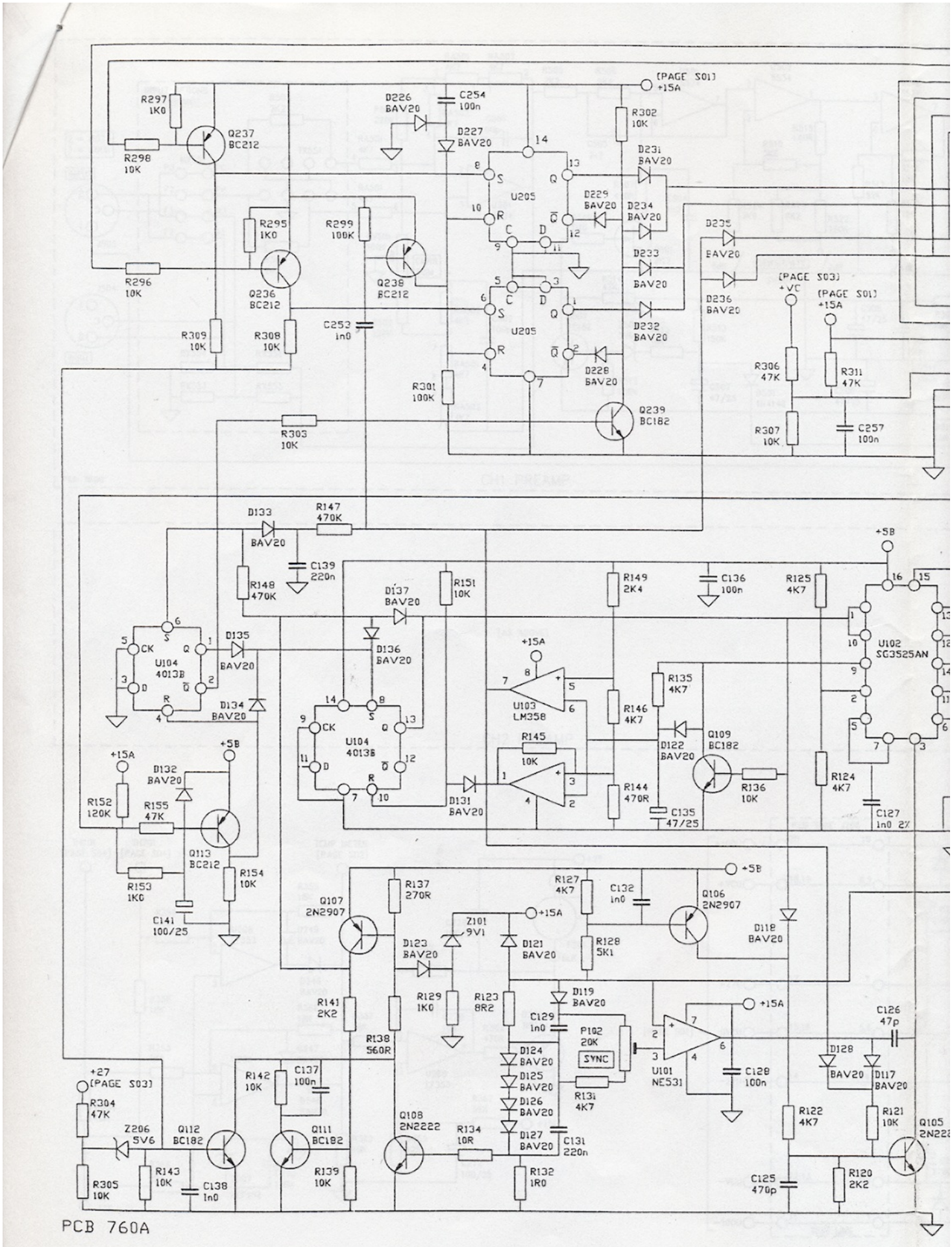
Check all output resistors.

Power down, set to 2 Channel mode and set level controls to min.

The End


MAINS INPUT
N L E
FS102
250V T20A
FS101
250V T250mA
RF101
10A/SDC101
BR101
35MB600A
RED
TP101
BLK
C102
1800/
200
C104
1800/
200
C101
1800/
200
C103
1800/
200
BLU J101 BRN
BRN RED
BRN RED
RED BLK
BLU BRN AC AC
RL101
J102
BRN
BLU
VDR101
250L40B
V
C105
0.47uf
250VAC
RL102
D202
BAV20
J207
BLU
BRN
RED
BRN
BLK
BLK
SW201
POWER
ON
R101
47R 25W
C109
100n 250AC
D201
BAV20
+24U
TC101
BTA26-600R
R104
10K
R105
47R
C111
100n
D101
BAV20
C227
100/63
+24U
+15A
C232
22/35
Q208
BC182
R251
27K
R247
100K
R248
100K
14
8
9
10
7
U203
R249
27K
D214
BAV20
Q207
BC182
D211
BAV20
R252
4K7
Q209
BC182
R246
100K
TX201
250-22+22
BRN
PU
OR
BLK
RE
YEL
GR
BL
350069
C219
22/35
D206
1N4002
D204
1N4002
R224
4K7
Q201
TIP32A
U201
7815
D207
1N4002
C224
1000/40
D205
1N4002
R225
2K2
C222
22/35
C220
1000/40
D203
1N4002
R228
10K
D208
BAV20
R227
4K7
C228
22/35
R231
30K
Q203
BC212
R226
10K
R237
10K
Q206
BC212
R236
68K
+24U
P201
10K
TAP V
ADJ
R235
27K
D209
BAV20
R253
1K0
C226
22/35
R255
1K0
U202
LM339
R245
27K
R244
27K
R242
27K
U204
4174B
U203
4011B
R233
33K
R232
10K
Q205
BF422
Q204
BF422
R229
100K
C225
22/35
R234
27K
R241
150K
D213
BAV20
R243
10K
R254
100K
D215
BAV20
C231
47/25
C233
100n
R239
300K
R238
15K
Z201
REF50Z
C230
100n
CLR
CLK

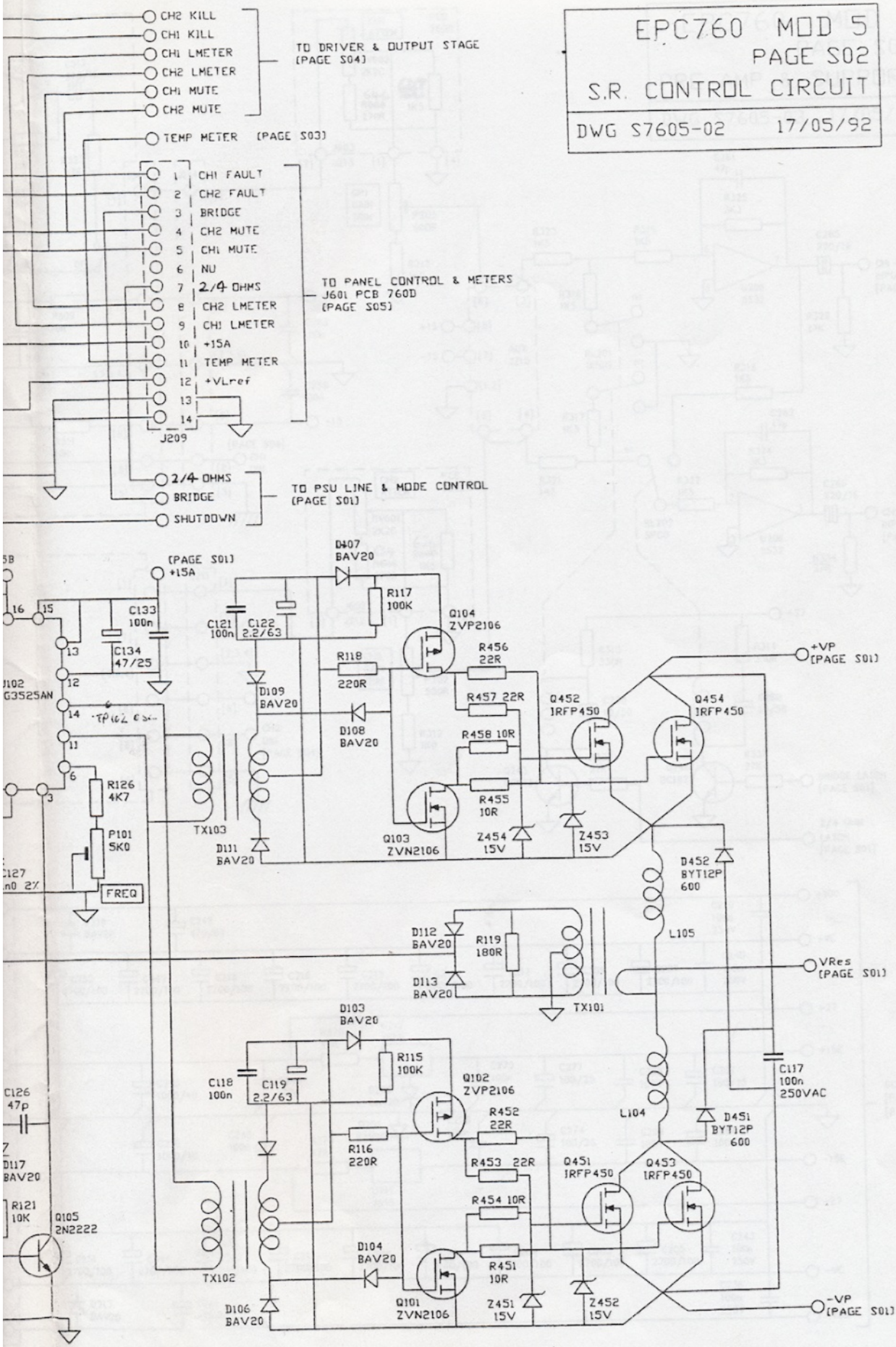

PCB 760A
EPC760 MOD 5
PAGE S01
PSU LINE & MODE
DWG S7605-01 17/05/92
FS451
10A L693
L102
L101
+VP
-VP
VRes
[PAGE S02]
CURRENT LOOP
TP103
L103
C102 1800/200
C104 1800/200
C106 0.47uF 250VAC
C108 1800/200
C115 1800/200
C101 1800/200
C103 1800/200
C107 1800/200
C112 1800/200
R102 4K7
R103 4K7
R111 100K
R112 100K
R113 100K
R114 100K
R106 100K
R108 100K
R107 100K
R109 100K
C114 0.12uF 300VAC
C113 0.12uF 300VAC
C116 0.47uF
U201 7815
+24U
+15A
C224 1000/40
C223 100n
C221 100/25
D115 BAV20
RL106
TX204
D146
D144
4x BYT03-400
D145
D143
C144 0.47uF 250AC
C145 0.47uF 250AC
+100U
+VCU
D142
D139
4x BYT03-400
D141
D138
C143 470n
C142 470n
+27U
0VCU
-27U
RL103
RL104
D212 16CPF40
16JPF40 D116
C124 0.47uF 250AC
C123 0.47uF 250AC
C235 2700 /100
C234 2700 /100
-VCU
-100U
[PAGE S03]
RL105
D114 BAV20
D102 BAV20
R256 27K
R257 27K
R258 27K
R259 27K
Q214 BC182
Q213 BC182
Q211 BC182
Q212 BC182
BRIDGE LATCH
2/4 OHMS LATCH
[PAGE S03]
+15A
SHUTDOWN
2/4 OHMS
BRIDGE
[PAGE S02]

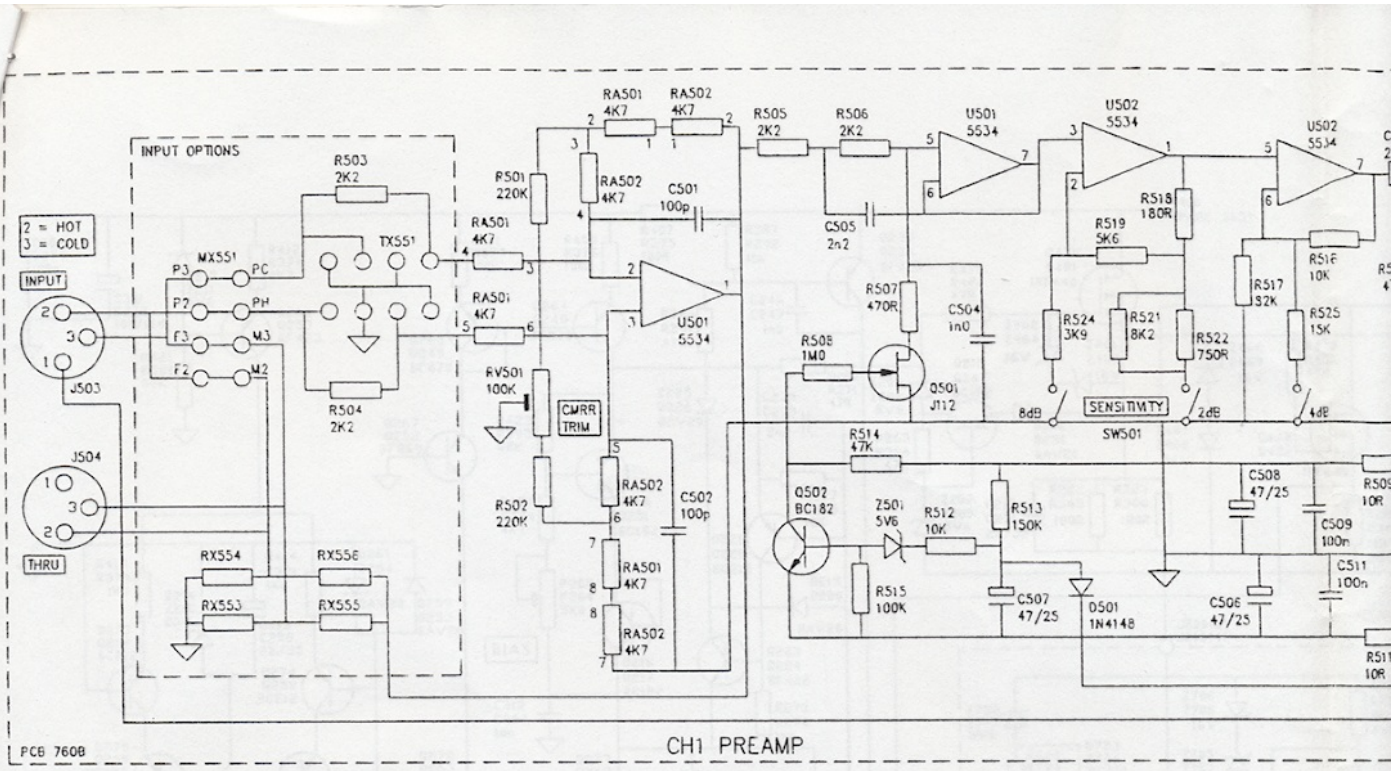

(PAGE S01)
+15A
R297 1K0
Q237 BC212
R298 10K
D226 BAV20
C254 100n
D227 BAV20
R302 10K
D231 BAV20
D229 BAV20
D234 BAV20
D233 BAV20
D232 BAV20
D228 BAV20
U205
R295 1K0
R296 10K
Q236 BC212
R299 100K
Q238 BC212
R309 10K
R308 10K
C253 1n0
R301 100K
R303 10K
Q239 BC182
D235 BAV20
D236 BAV20
(PAGE S03)
+VC
R306 47K
R307 10K
R311 47K
C257 100n
D133 BAV20
R147 470K
R148 470K
C139 220n
D137 BAV20
R151 10K
D135 BAV20
D136 BAV20
D134 BAV20
U104 4013B
+5B
R149 2K4
C136 100n
R125 4K7
U102 SG3525AN
+15A
U103 LM358
R135 4K7
R146 4K7
R145 10K
D122 BAV20
Q109 BC182
R144 470R
C135 47/25
R136 10K
R124 4K7
C127 1n0 2%
D132 BAV20
R152 120K
R155 47K
Q113 BC212
R154 10K
R153 1K0
C141 100/25
R137 270R
Q107 2N2907
Z101 9V1
D123 BAV20
R129 1K0
R141 2K2
R138 560R
R127 4K7
C132 1n0
Q106 2N2907
D118 BAV20
R128 5K1
D121 BAV20
R123 8R2
D119 BAV20
C129 1n0
P102 20K
SYNC
R131 4K7
D124 BAV20
D125 BAV20
D126 BAV20
D127 BAV20
C131 220n
R134 10R
R132 1R0
Q108 2N2222
U101 NE531
C128 100n
C126 47p
D128 BAV20
D117 BAV20
R122 4K7
R121 10K
Q105 2N222
C125 470p
R120 2K2
+27
(PAGE S03)
R304 47K
Z206 5V6
Q112 BC182
R142 10K
C137 100n
Q111 BC182
R139 10K
R305 10K
R143 10K
C138 1n0

PCB 760A

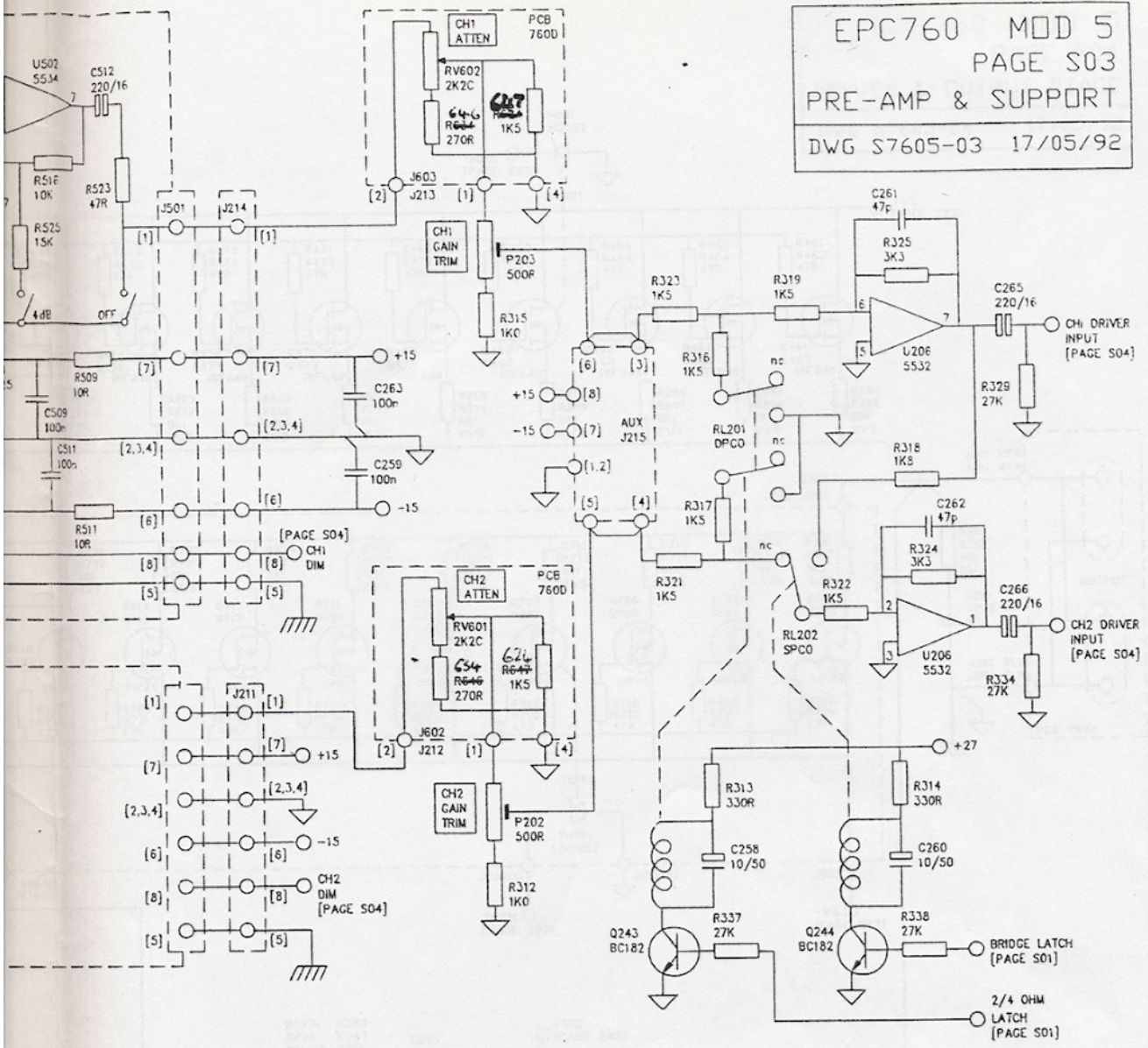
EPC760 MOD 5
PAGE S02
S.R. CONTROL CIRCUIT

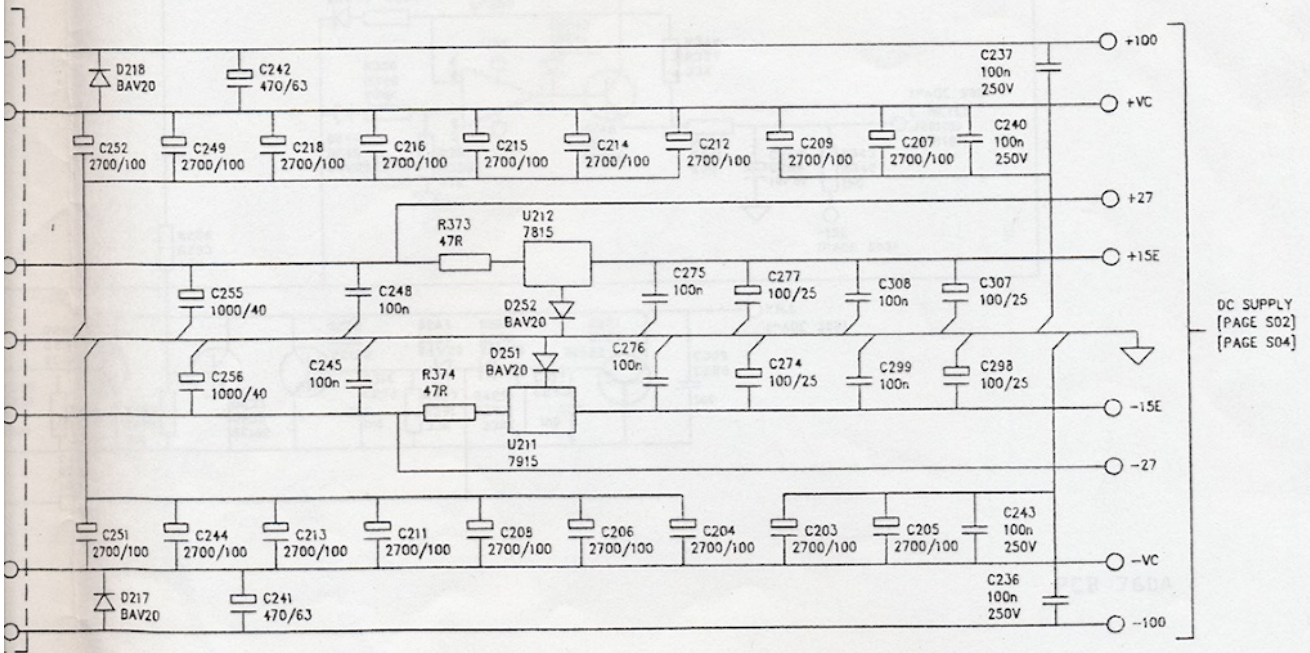
DWG S7605-02 17/05/92

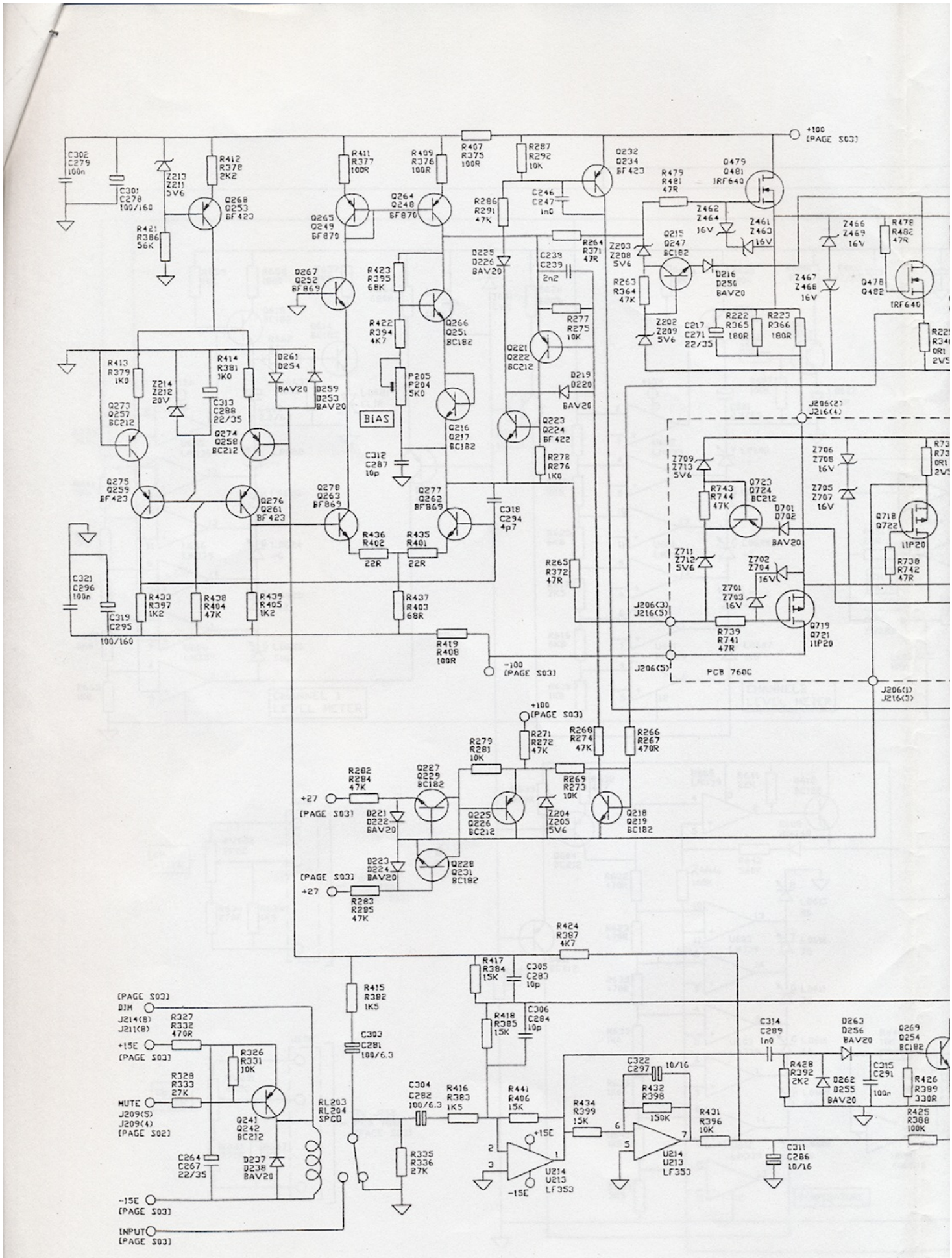



INPUT OPTIONS
2 = HOT
3 = COLD
INPUT
J503
J504
THRU
R503 2K2
R504 2K2
MX551
TX551
RX554
RX556
RX553
RX555
RA501 4K7
RA502 4K7
R501 220K
R502 220K
RV501 100K
CMRR TRIM
C501 100p
C502 100p
U501 5534
R505 2K2
R506 2K2
C505 2n2
R507 470R
C504 1n0
R508 1M0
Q501 J112
U502 5534
R518 180R
R519 5K6
R524 3K9
R521 8K2
R522 750R
R516 10K
R517 82K
R525 15K
8dB
2dB
4dB
SENSITIVITY
SW501
R514 47K
Q502 BC182
Z501 5V6
R512 10K
R513 150K
R515 100K
C507 47/25
D501 1N4148
C508 47/25
C509 100n
C511 100n
PCB 7608
CH1 PREAMP
[AS ABOVE]
CH2 PREAMP
TH201 [PAGE S04]
TH701 [PAGE S04]
TEMP METER [PAGE S02]
R355 18K
R358 1K8
U208 LF353
D249 BAV20
D246 BAV20
R356 10K
R361 18K
R357 18K
R353 1K8
U208
D247 BAV20
D248 BAV20
R354 10K
R368 4K7
Z207 REF252
C273 100n
-15E
R363 10K
R369 12K
C272 100/25
R359 47K
C229 100/63
C270 10n
U209 LF353
R362 470R
Q202 TIP32A
R367 56K
+15E
+27
RED
F201
BLK
PCB 760E J208
+100U
+VCU
+27U
[PAGE S01]
0VCU
-27U
-VCU
-100U
TEST LINK

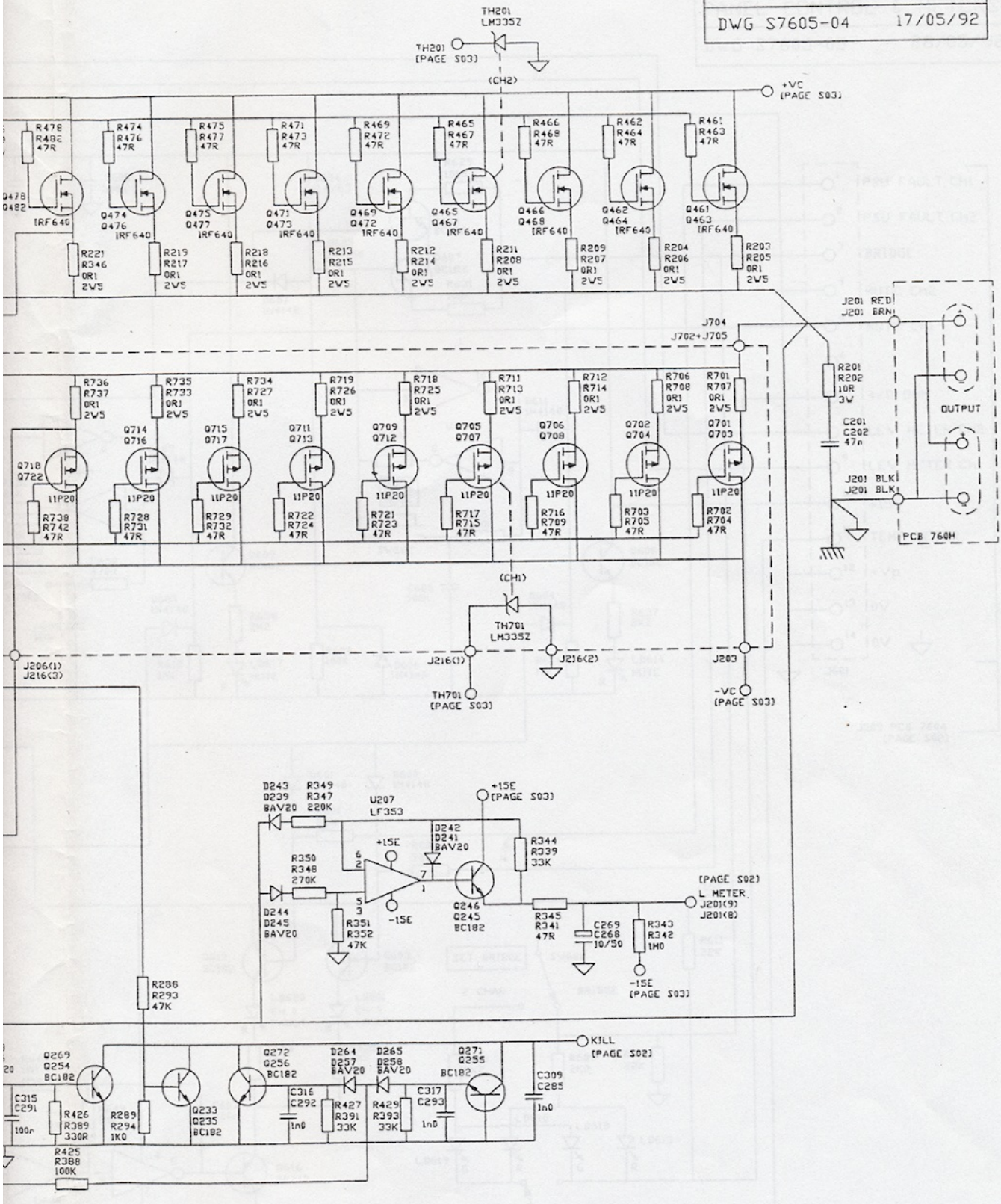
EPC760 MOD 5
PAGE S03
PRE-AMP & SUPPORT
DWG S7605-03 17/05/92



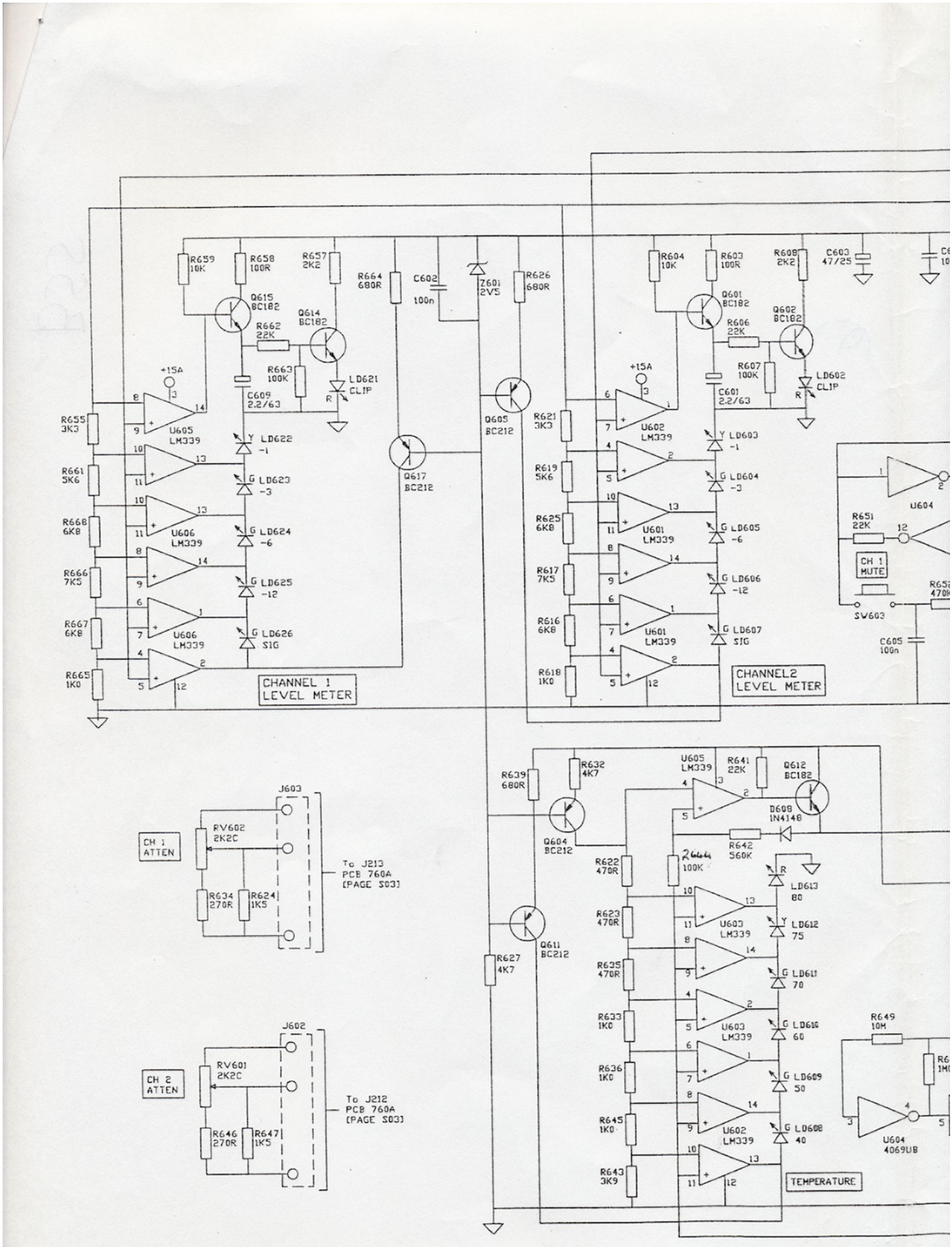



+100 (PAGE S03)
-100 (PAGE S03)
BIAS
PCB 760C
J206(2) J216(4)
J206(3) J216(5)
J206(5)
J206(1) J216(3)
(PAGE S03) DIM J214(8) J211(8)
MUTE J209(5) J209(4) (PAGE S02)
INPUT (PAGE S03)
RL203 RL204 SPCO
U214 U213 LF353
BAV20
BC182
BC212
IRF640

EPC760 MOD 5
PAGE S04
DRIVER & OUTPUT STAGE
DWG S7605-04 17/05/92



PCB 760A

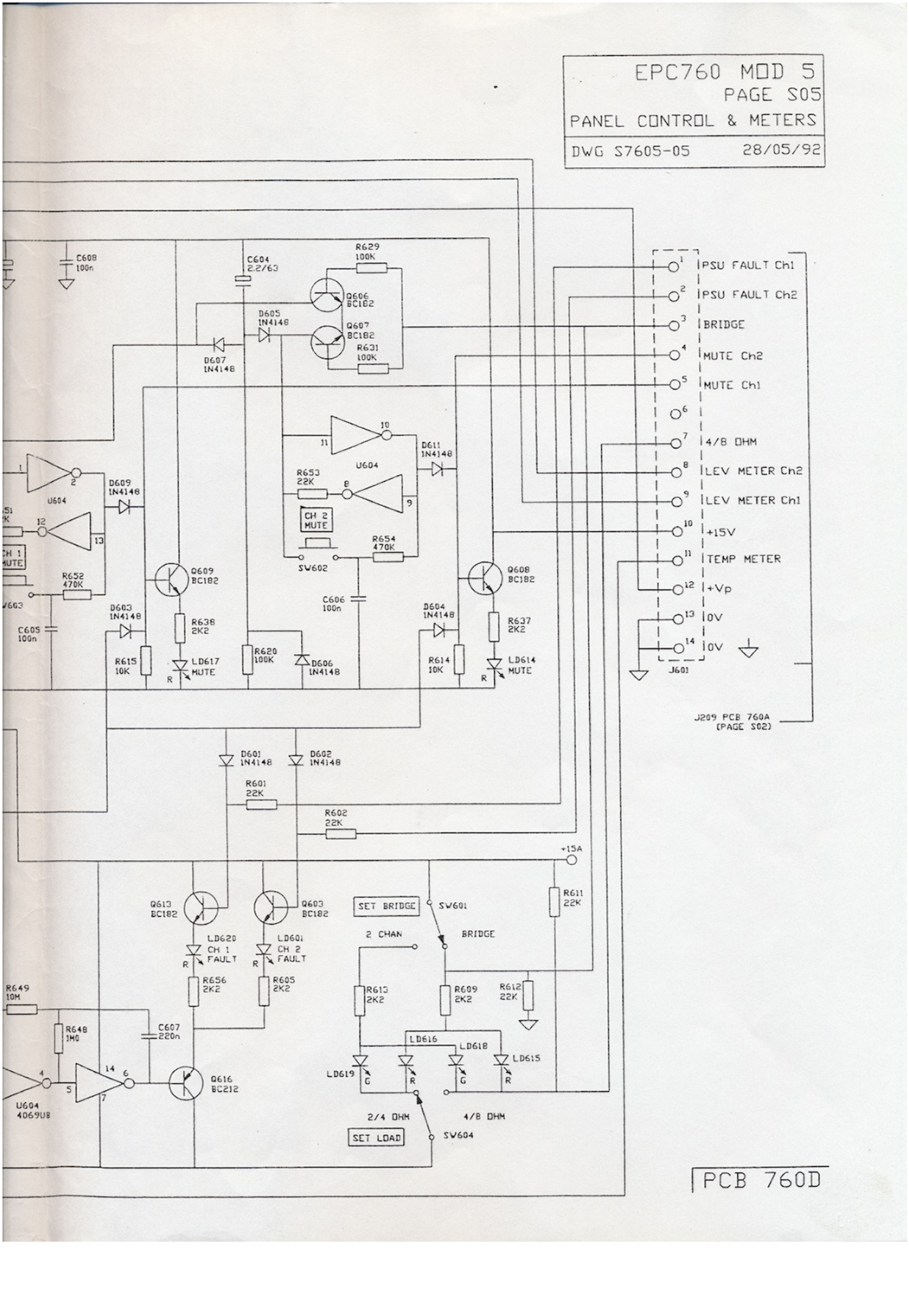

CHANNEL 1 LEVEL METER
CHANNEL2 LEVEL METER
TEMPERATURE
CH 1 ATTEN
CH 2 ATTEN
CH 1 MUTE
To J213 PCB 760A (PAGE S03)
To J212 PCB 760A (PAGE S03)
U604 4069UB

EPC760 MOD 5

PAGE S05

PANEL CONTROL & METERS

DWG S7605-05 28/05/92



PCB 760D