



CANADIAN TYPE APPROVAL



HF-90

12.345

KHZ

OFF

ON

LSB

↑
CHAN

ALARM
MODE

↑
CLAR

↓
CHAN

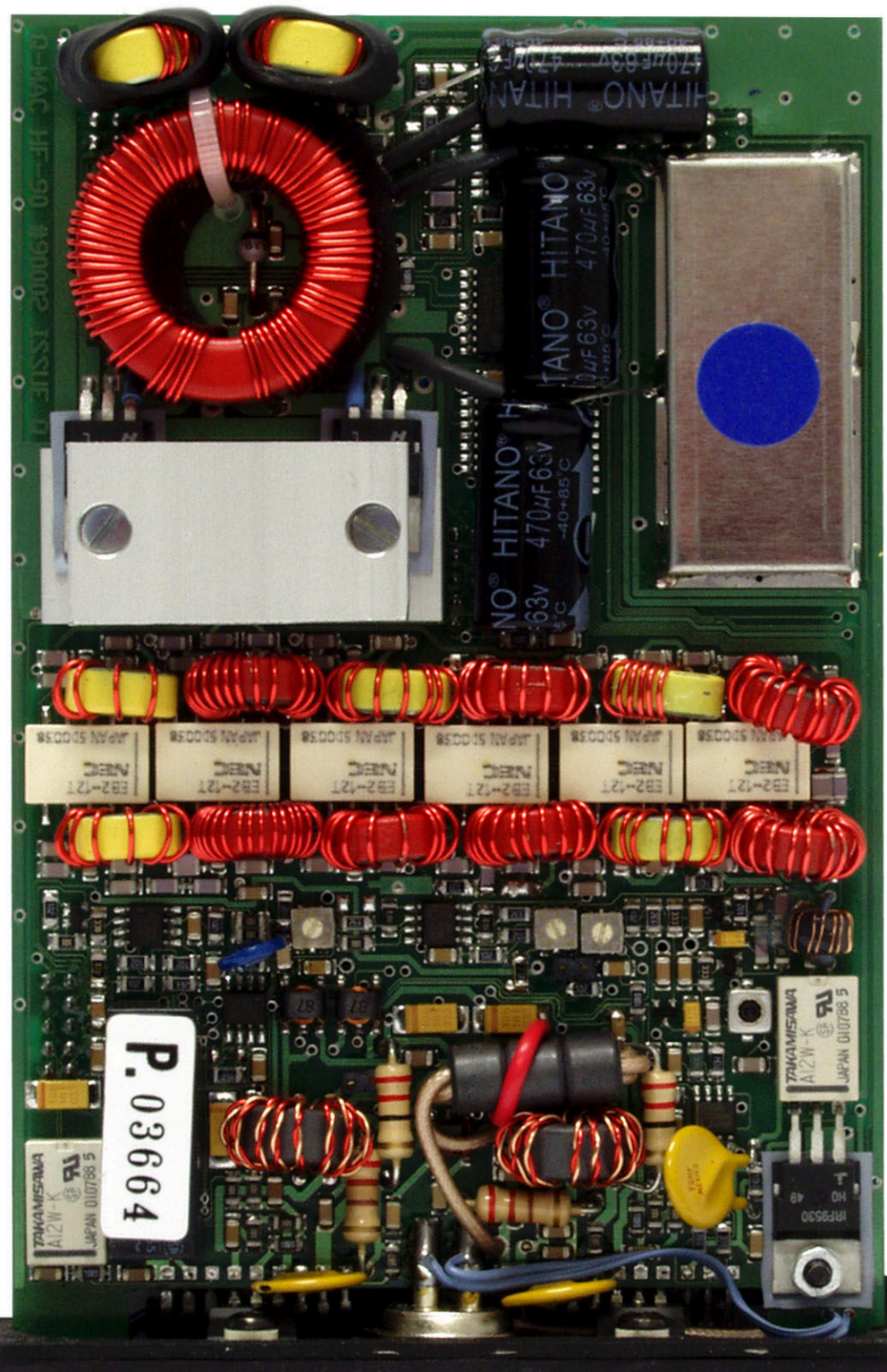
TUNE

↓
CLAR

VOLUME







P. 03664

TAKAMISAWA
AI2W-K
JAPAN 01010 1010758 5

TAKAMISAWA
AI2W-K
JAPAN 01010 1010758 5

IRF9530

H0

49

EB2-121
NEC
JAPAN 510038

EB2-121
NEC
JAPAN 510038

EB2-121
NEC
JAPAN 510038

EB2-121
NEC
JAPAN 510038

EB2-121
NEC
JAPAN 510038

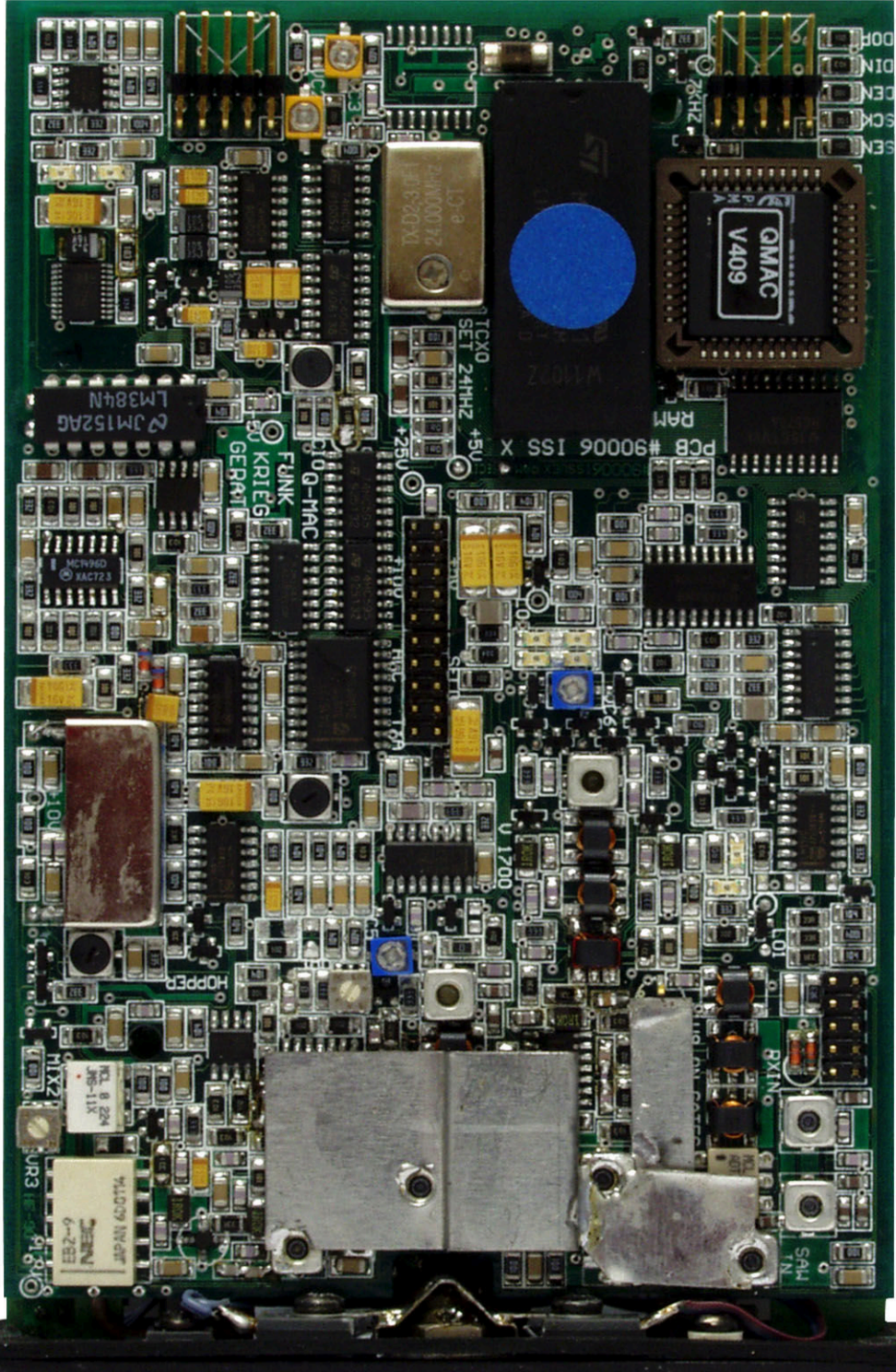
EB2-121
NEC
JAPAN 510038

NO HITANO® H
470µF 63V
-40~+85°C

TANO® HITANO
470µF 63V
-40~+85°C

HITANO HITANO
470µF 63V
-40~+85°C

3-MAC HF-90 19mm2 ISSUE 71



GMAC
V409

L3-8
94M0072
41E20X1



LM384N
UM152AG

MCMND
XACT23

KRIEGEL
GERMANY

FUNK
Q-HAC



HOPPER

MIX2
MIX3

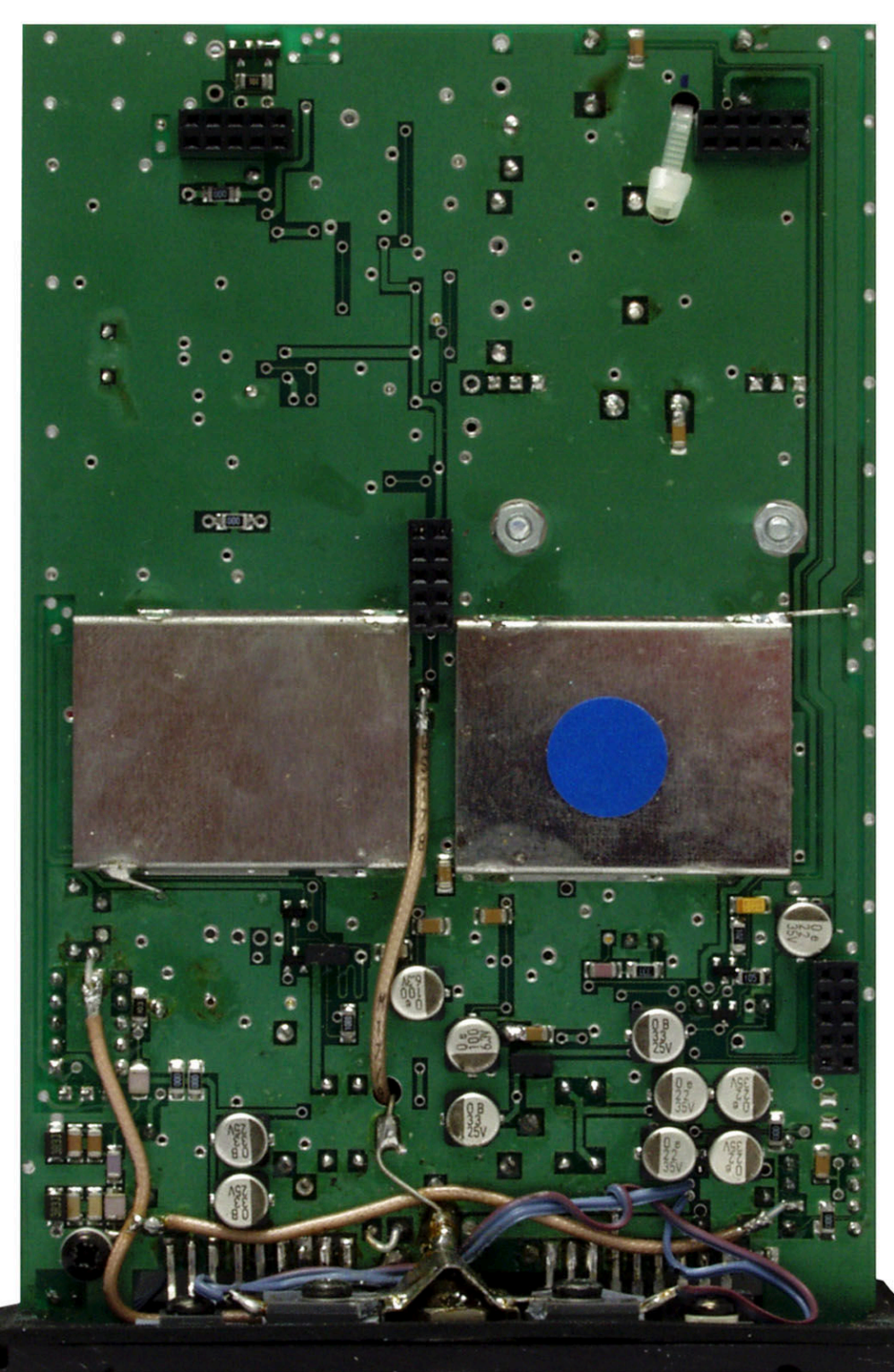
EB2-9
PINEC
JAPAN 4C-074

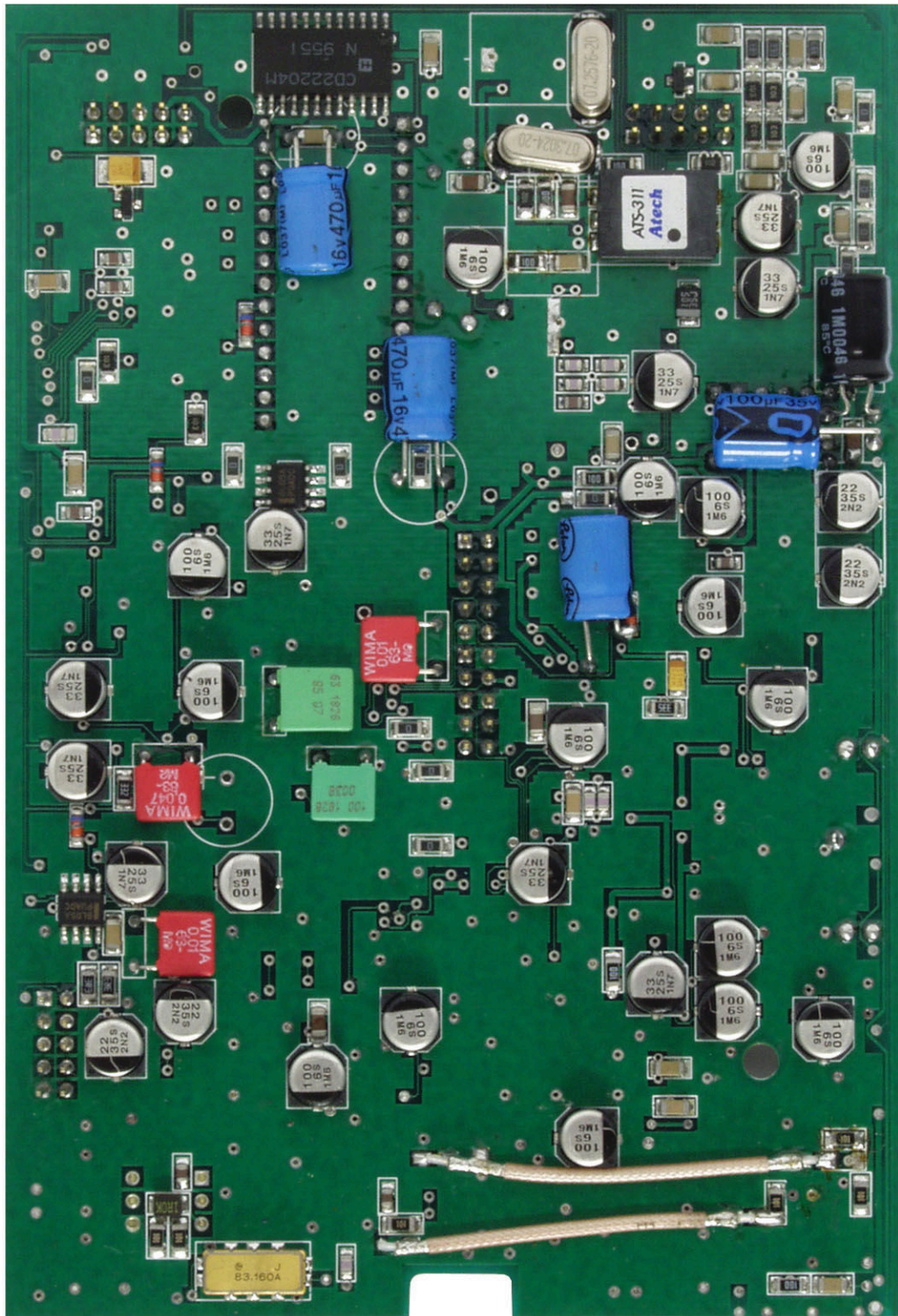
RXIN

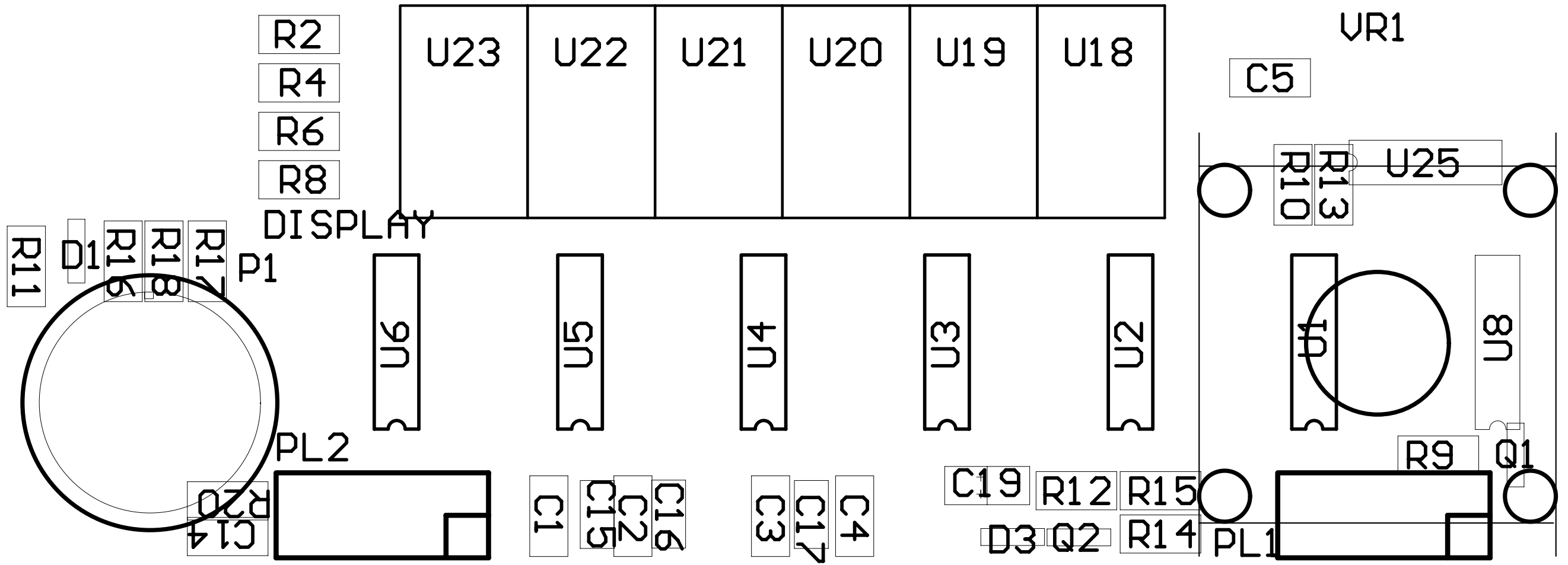
S94
TN

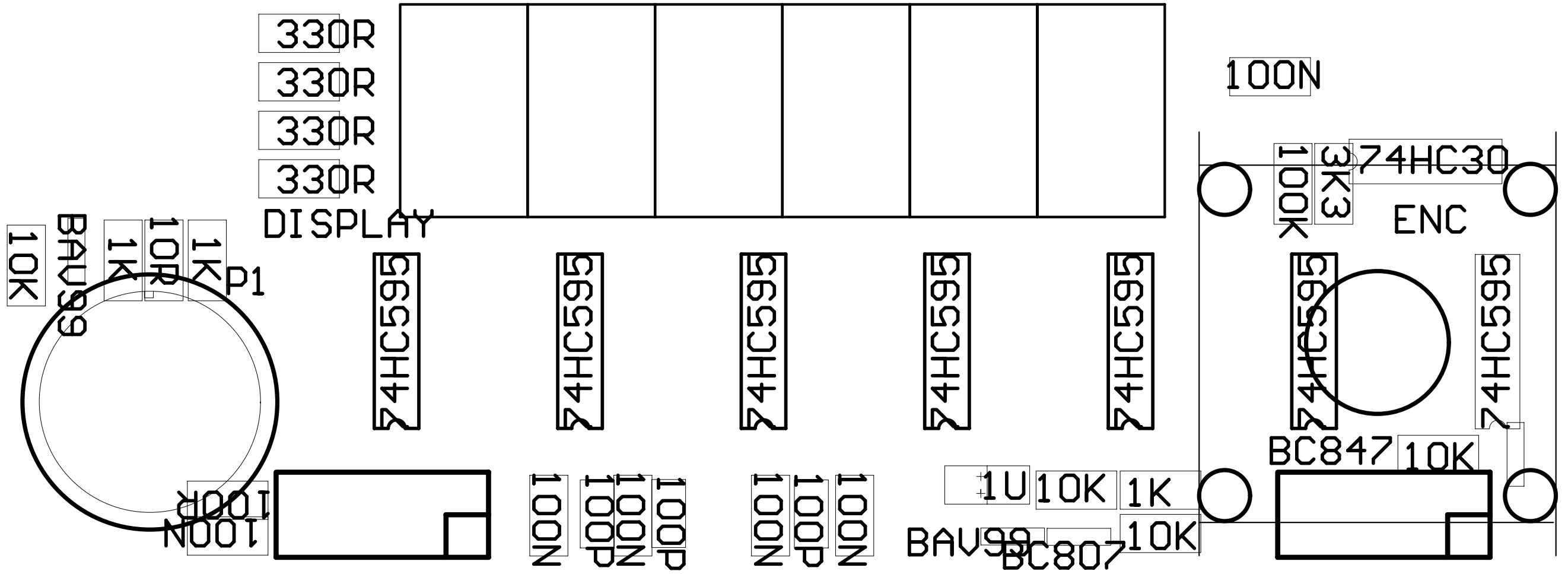
TCXO
SET 24MHZ +5V
PCB #90006 ISS X

U1700









330R
330R
330R
330R

DISPLAY

74HC595

74HC595

74HC595

74HC595

74HC595

100N

100K
3K3

74HC30

ENC

74HC595

74HC595

BC847 10K

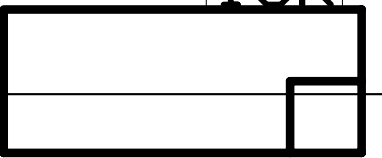
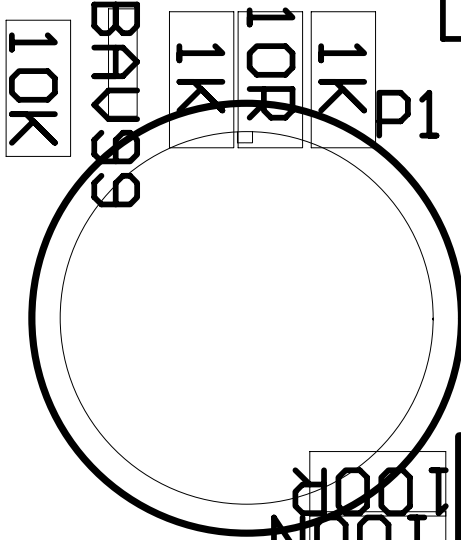
1U 10K 1K

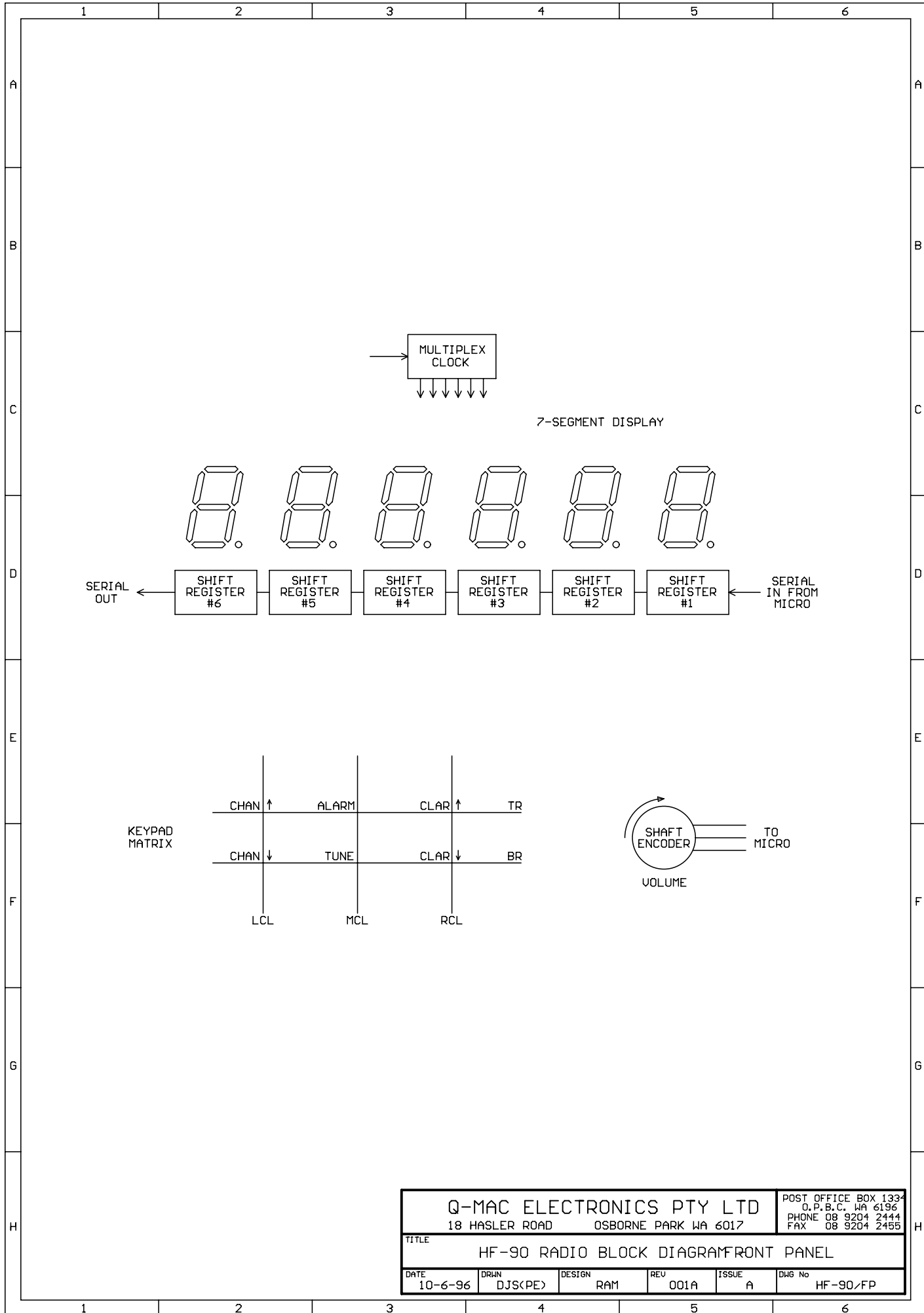
BAU99 BC807 10K

100P
100N
100P
100N

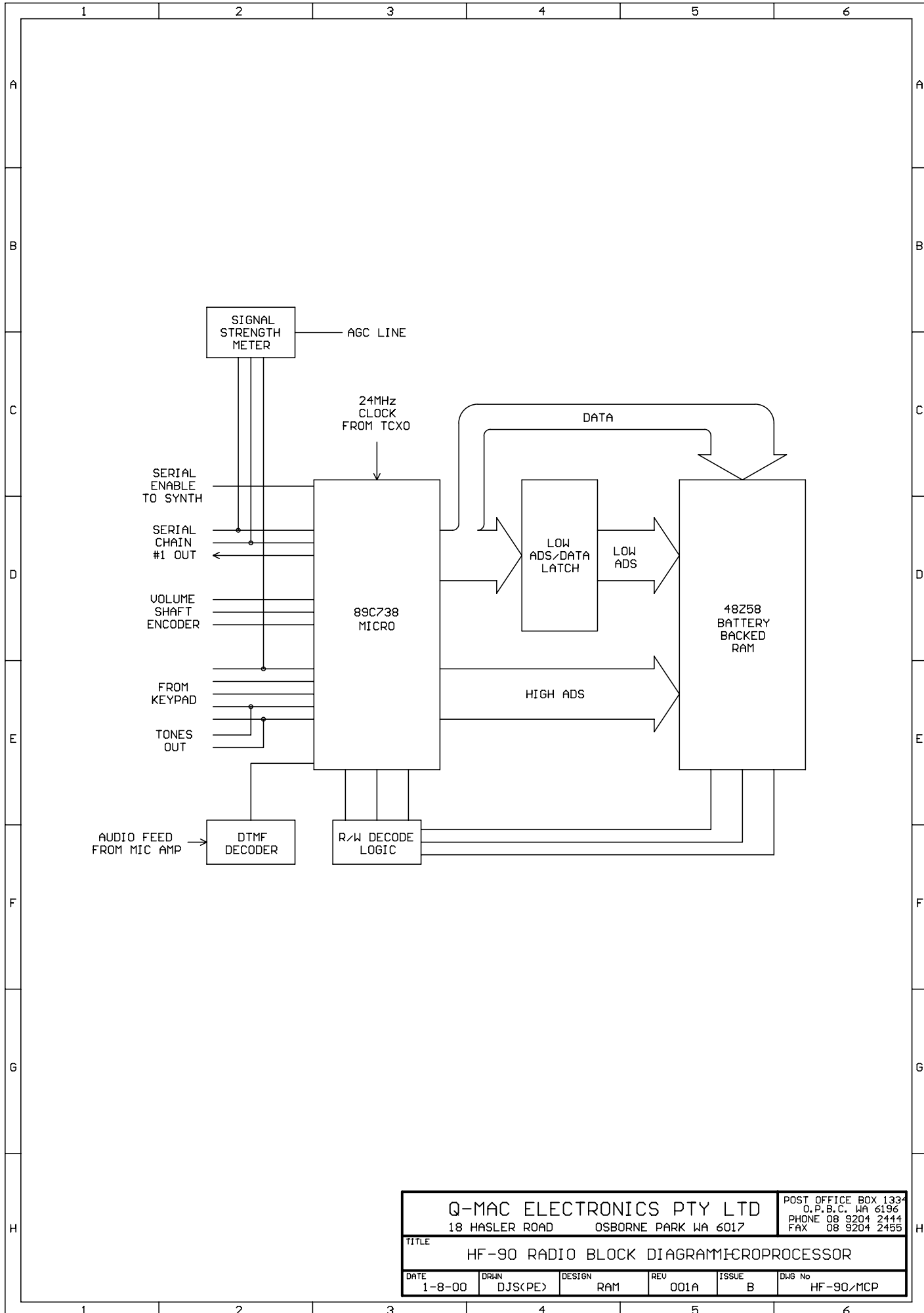
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100P
100N

100N
100N

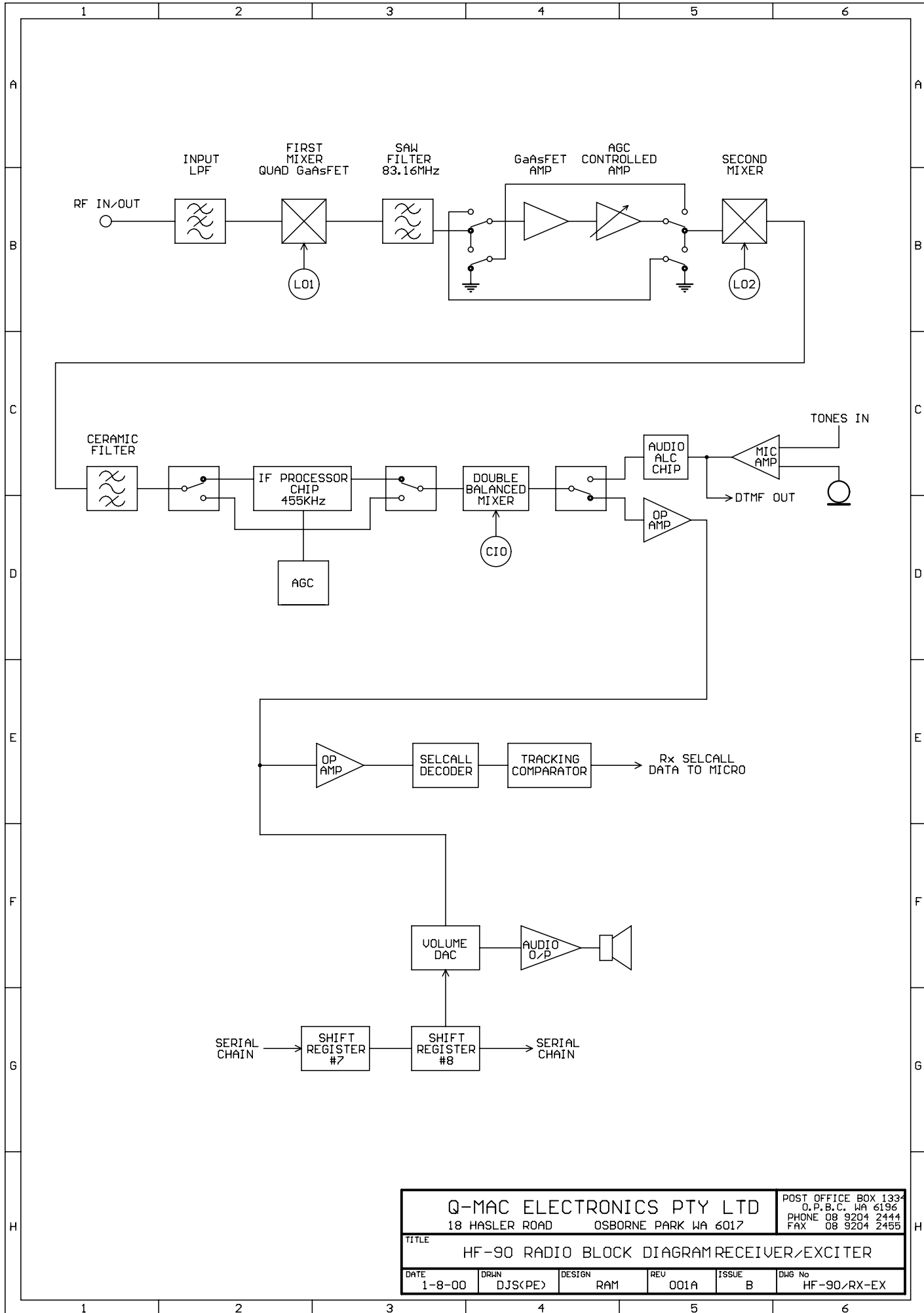




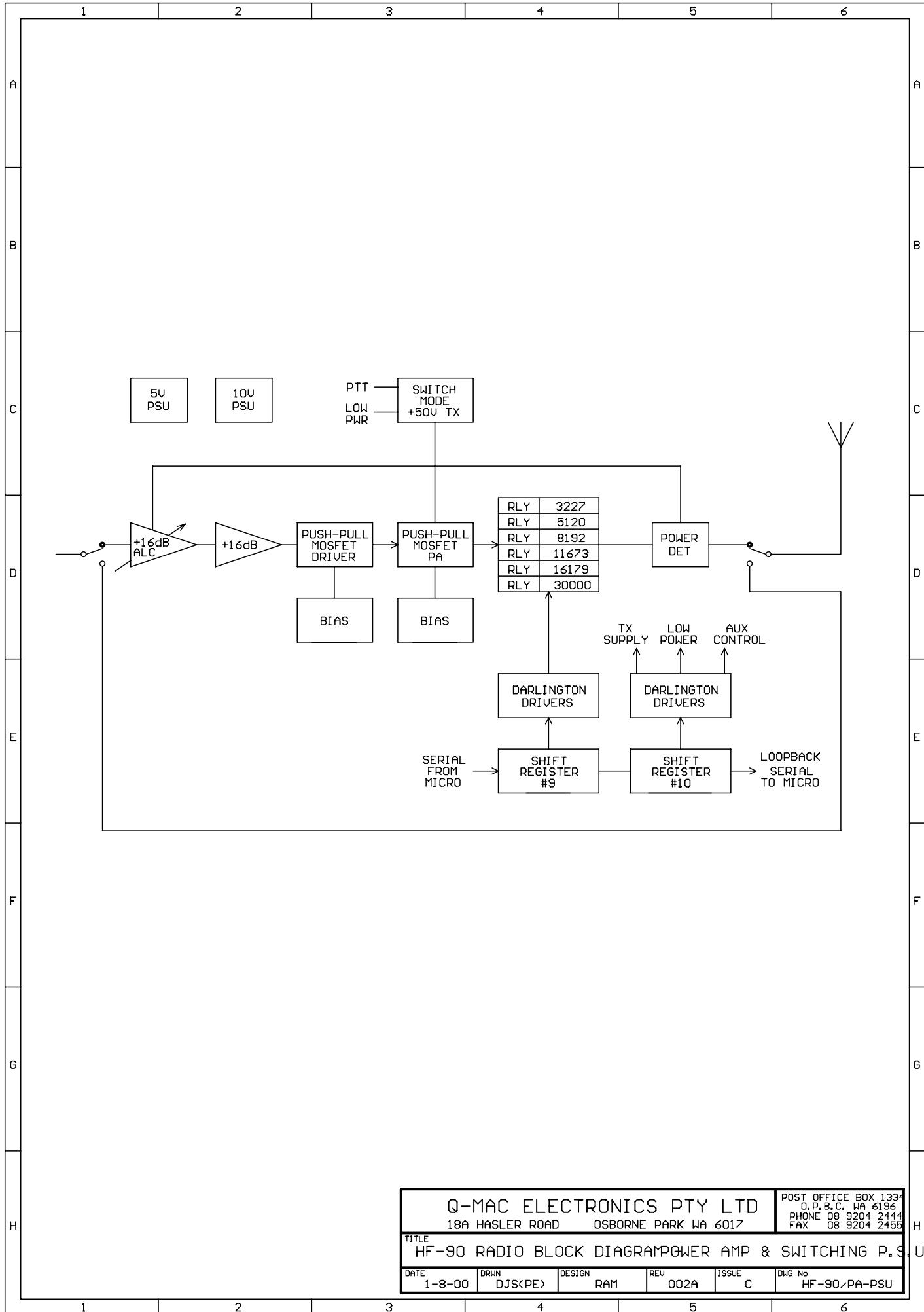
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18 HASLER ROAD OSBORNE PARK WA 6017				O.P.B.C. WA 6196	
				PHONE 08 9204 2444	
				FAX 08 9204 2455	
TITLE HF-90 RADIO BLOCK DIAGRAM FRONT PANEL					
DATE	DRWN	DESIGN	REV	ISSUE	DWG No
10-6-96	DJS<PE>	RAM	001A	A	HF-90/FP



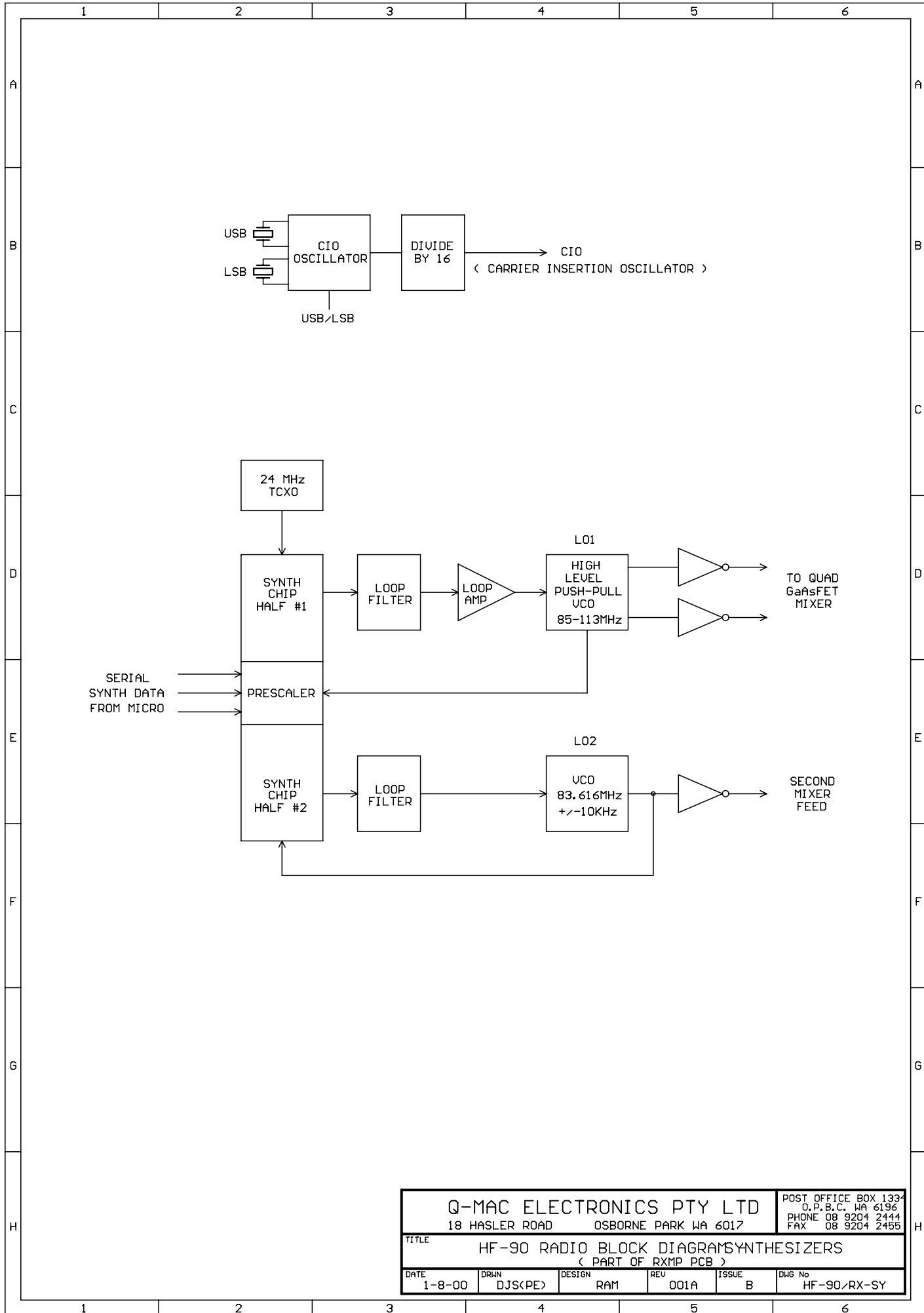
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TITLE HF-90 RADIO BLOCK DIAGRAM-MICROPROCESSOR					
DATE	DRWN	DESIGN	REV	ISSUE	DWG No
1-8-00	DJS<PE>	RAM	001A	B	HF-90/MCP



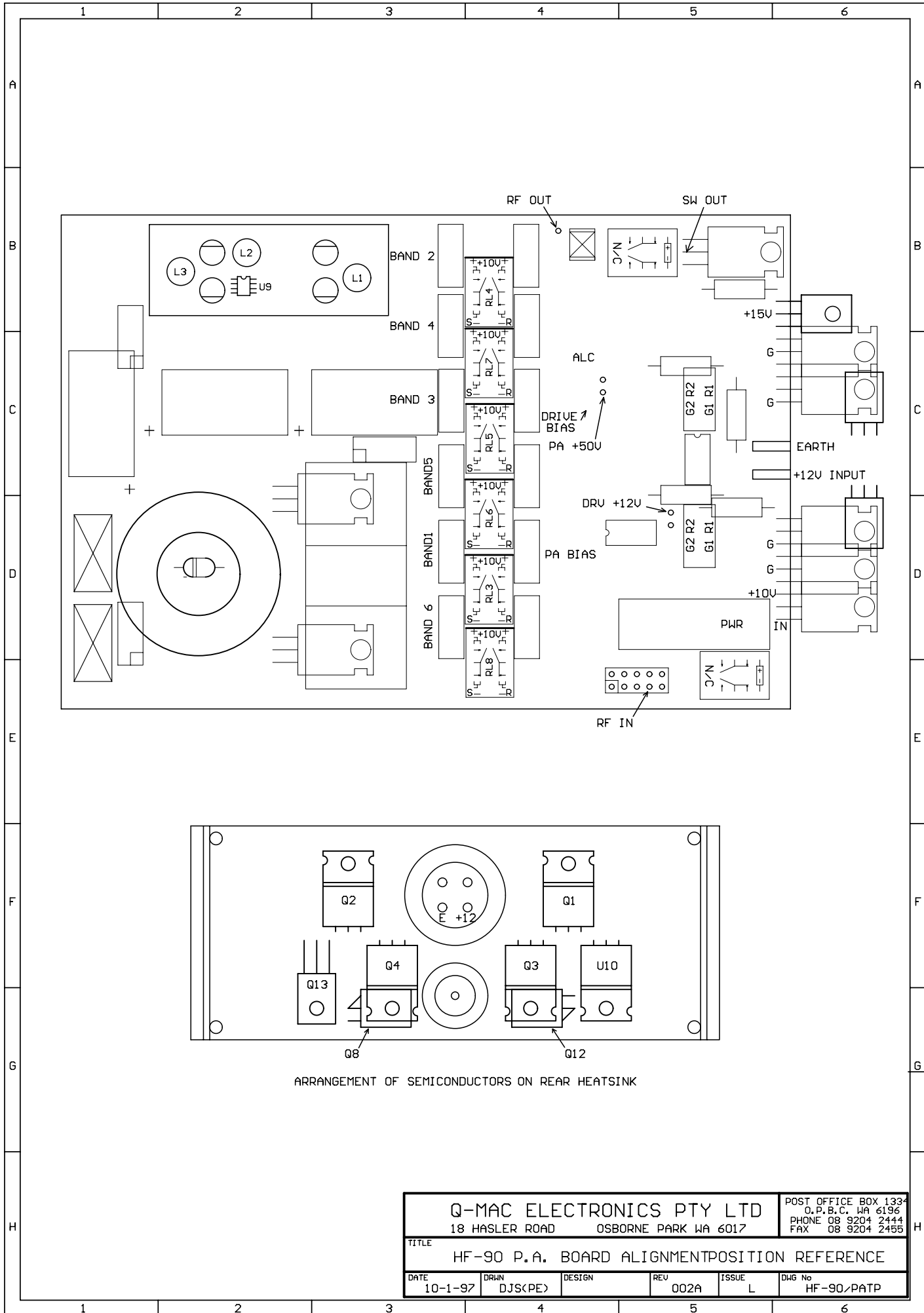
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TITLE HF-90 RADIO BLOCK DIAGRAM RECEIVER/EXCITER						
DATE	DRWN	DESIGN	REV	ISSUE	DWG No	
1-8-00	DJS<PE>	RAM	001A	B	HF-90/RX-EX	



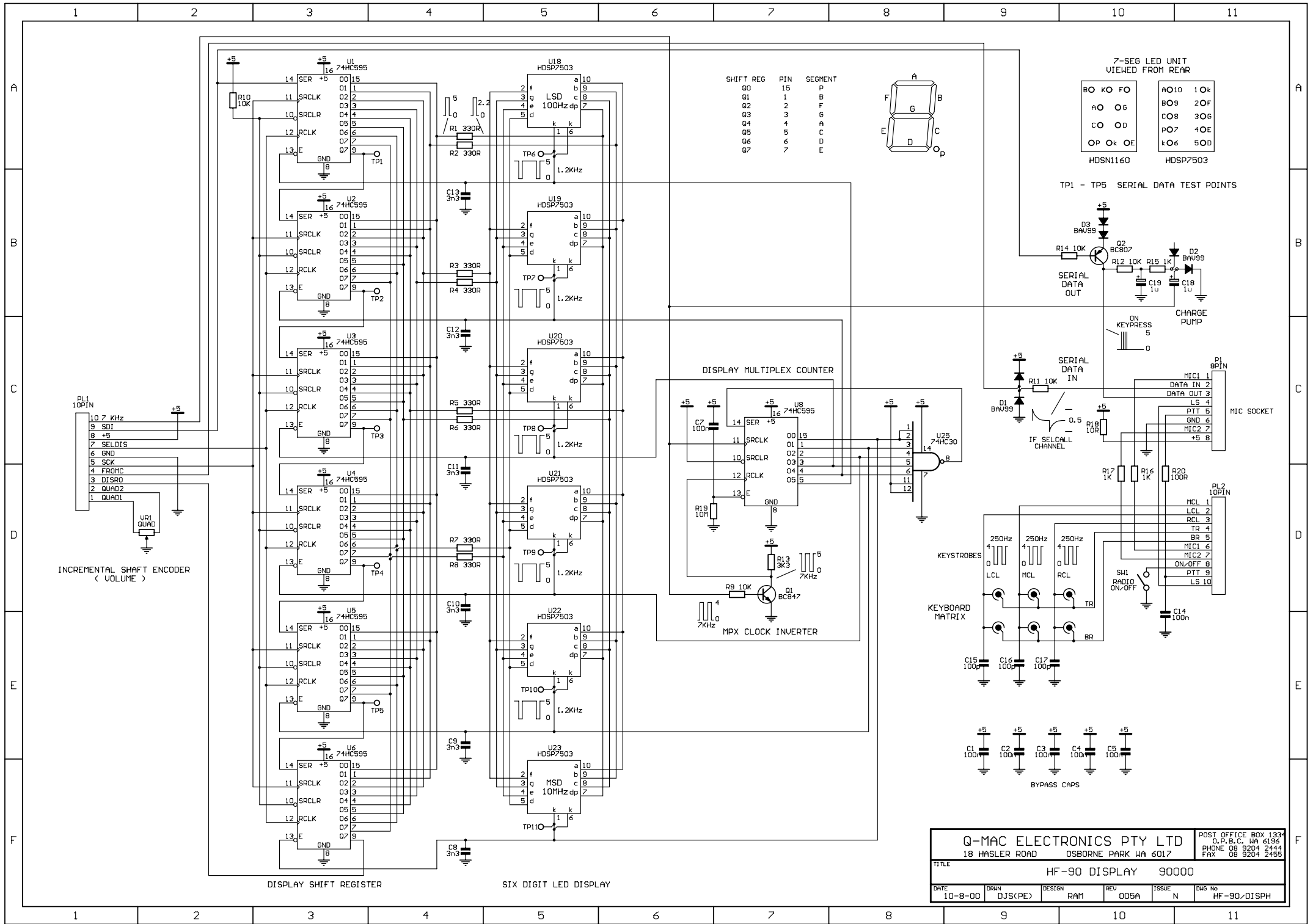
Q-MAC ELECTRONICS PTY LTD 18A HASLER ROAD OSBORNE PARK WA 6017				POST OFFICE BOX 1334 O. P. B. C. WA 6196 PHONE 08 9204 2444 FAX 08 9204 2455	
TITLE HF-90 RADIO BLOCK DIAGRAM POWER AMP & SWITCHING P.S.U.					
DATE 1-8-00	DRAWN DJS(PE)	DESIGN RAM	REV 002A	ISSUE C	DWG No HF-90/PA-PSU



Q-MAC ELECTRONICS PTY LTD 18 HASLER ROAD OSBORNE PARK WA 6017				POST OFFICE BOX 133 O.P.B.C. WA 6196 PHONE 08 9204 2444 FAX 08 9204 2455	
TITLE HF-90 RADIO BLOCK DIAGRAMSYNTHESIZERS (PART OF RXMP PCB)					
DATE	DRWN	DESIGN	REV	ISSUE	DWG No
1-8-00	DJS<PE>	RAM	001A	B	HF-90/RX-SY



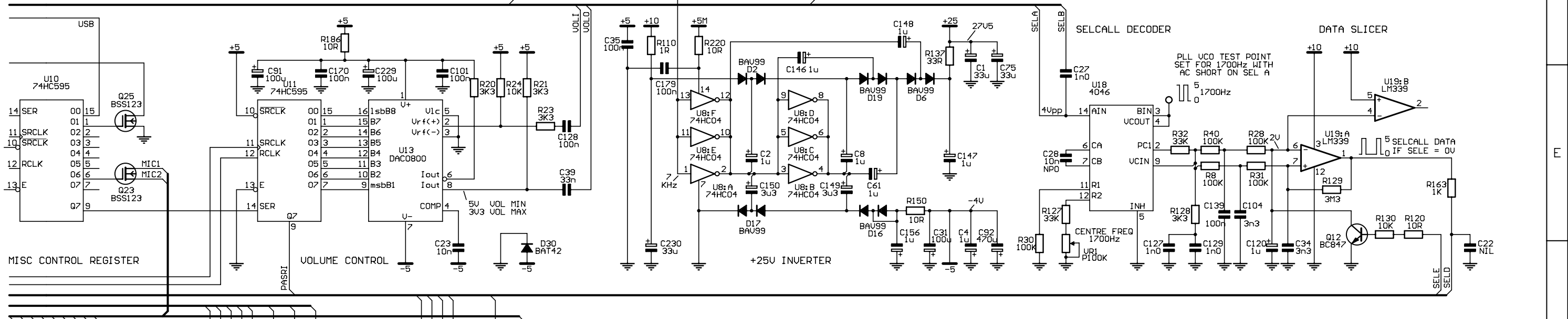
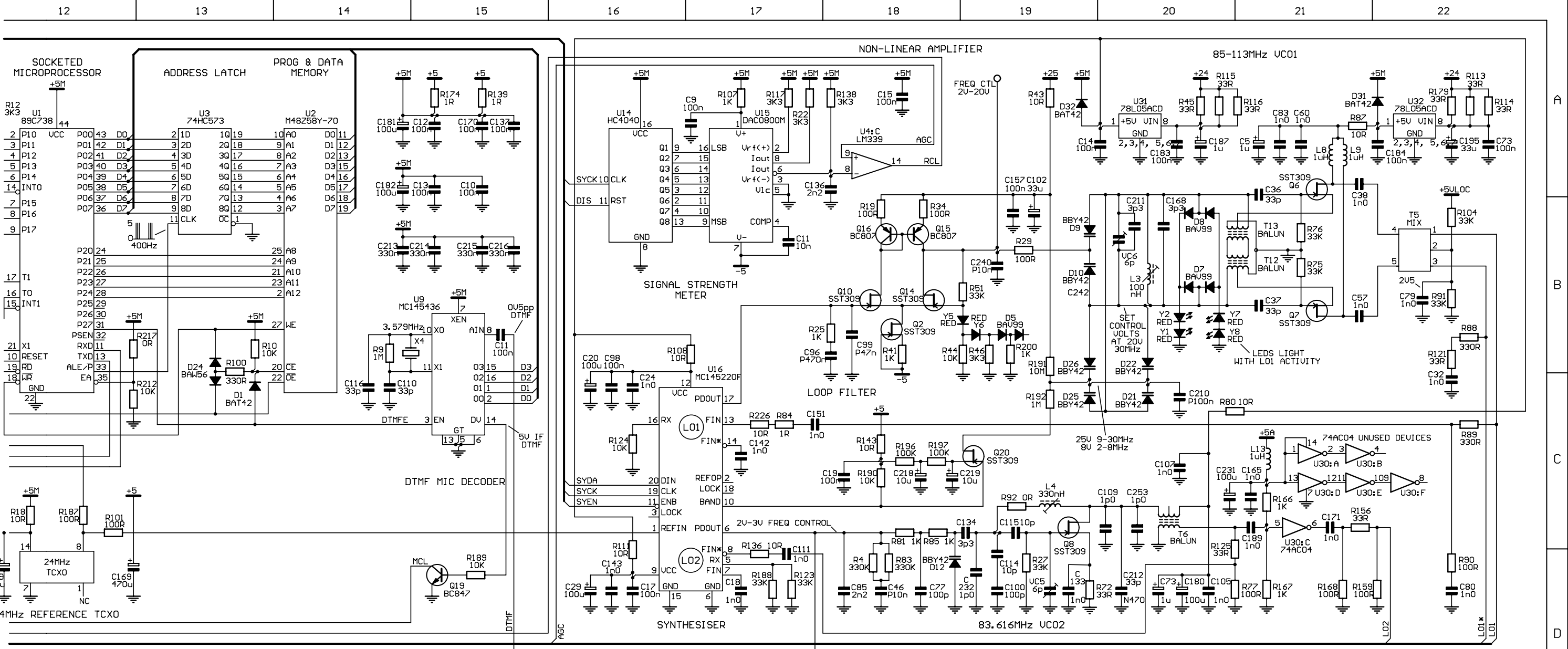
Q-MAC ELECTRONICS PTY LTD				POST OFFICE BOX 1334	
18 HASLER ROAD OSBORNE PARK WA 6017				O.P.B.C. WA 6196	
				PHONE 08 9204 2444	
				FAX 08 9204 2455	
TITLE					
HF-90 P.A. BOARD ALIGNMENT POSITION REFERENCE					
DATE	DRAWN	DESIGN	REV	ISSUE	DWG No
10-1-97	DJS(PE)		002A	L	HF-90/PATP



Q-MAC ELECTRONICS PTY LTD POST OFFICE BOX 1334
 18 HASLER ROAD OSBORNE PARK WA 6017 D.P.B.C. WA 6196
 PHONE 08 9204 2444
 FAX 08 9204 2455

TITLE: HF-90 DISPLAY 90000

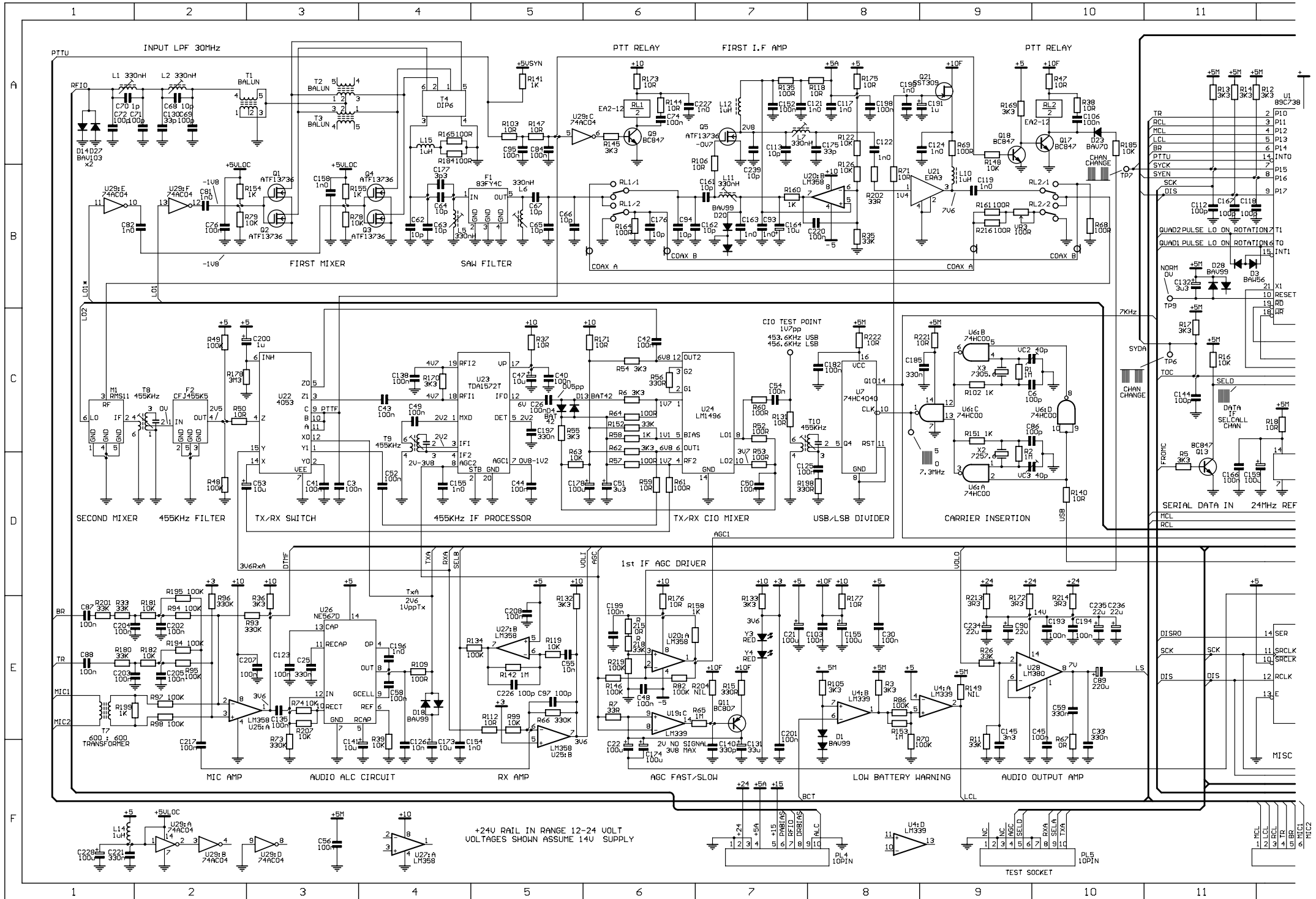
DATE	DRWN	DESIGN	REV	ISSUE	DWG No
10-8-00	DJS(KPE)	RAM	005A	N	HF-90_DISP



Q-MAC ELECTRONICS PTY LTD
 18 HASLER ROAD OSBORNE PARK WA 6017

HF-90 I.F. STRIP, MICRO SECTION & SYNTH. 90001

DATE	DRWN	DESIGN	REV	ISSUE	DWG No
10-8-00	DJS(PE)	RAM	005A	U	HF-90/RXMPM



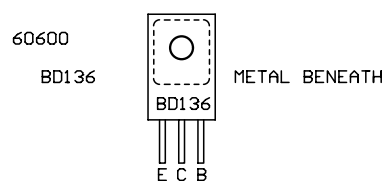
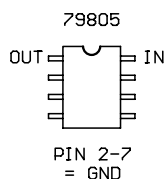
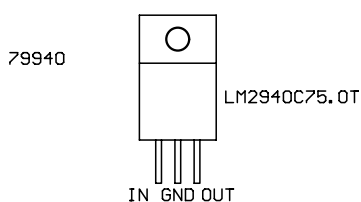
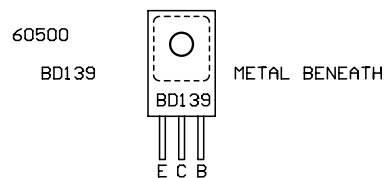
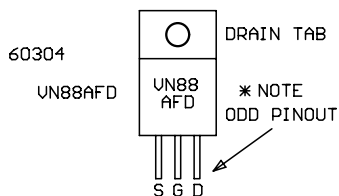
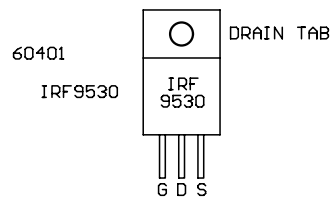
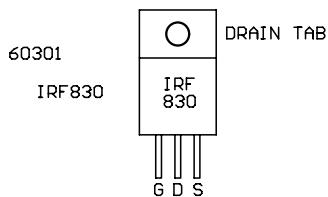
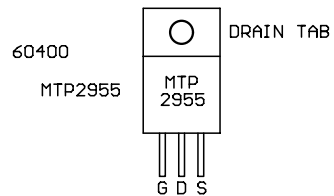
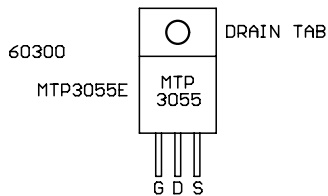
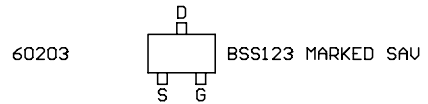
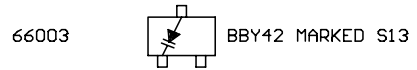
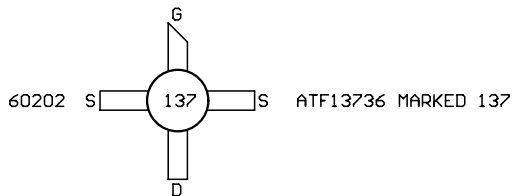
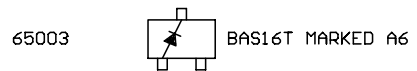
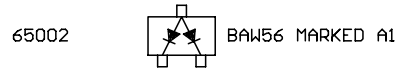
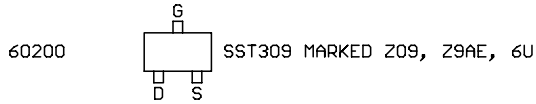
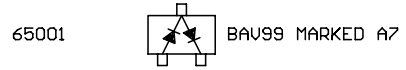
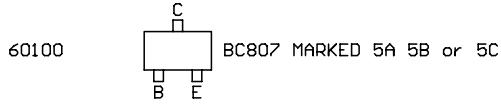
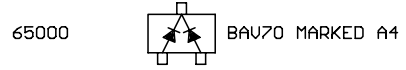
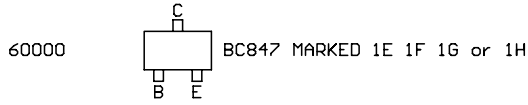
+24V RAIL IN RANGE 12-24 VOLT
VOLTAGES SHOWN ASSUME 14V SUPPLY

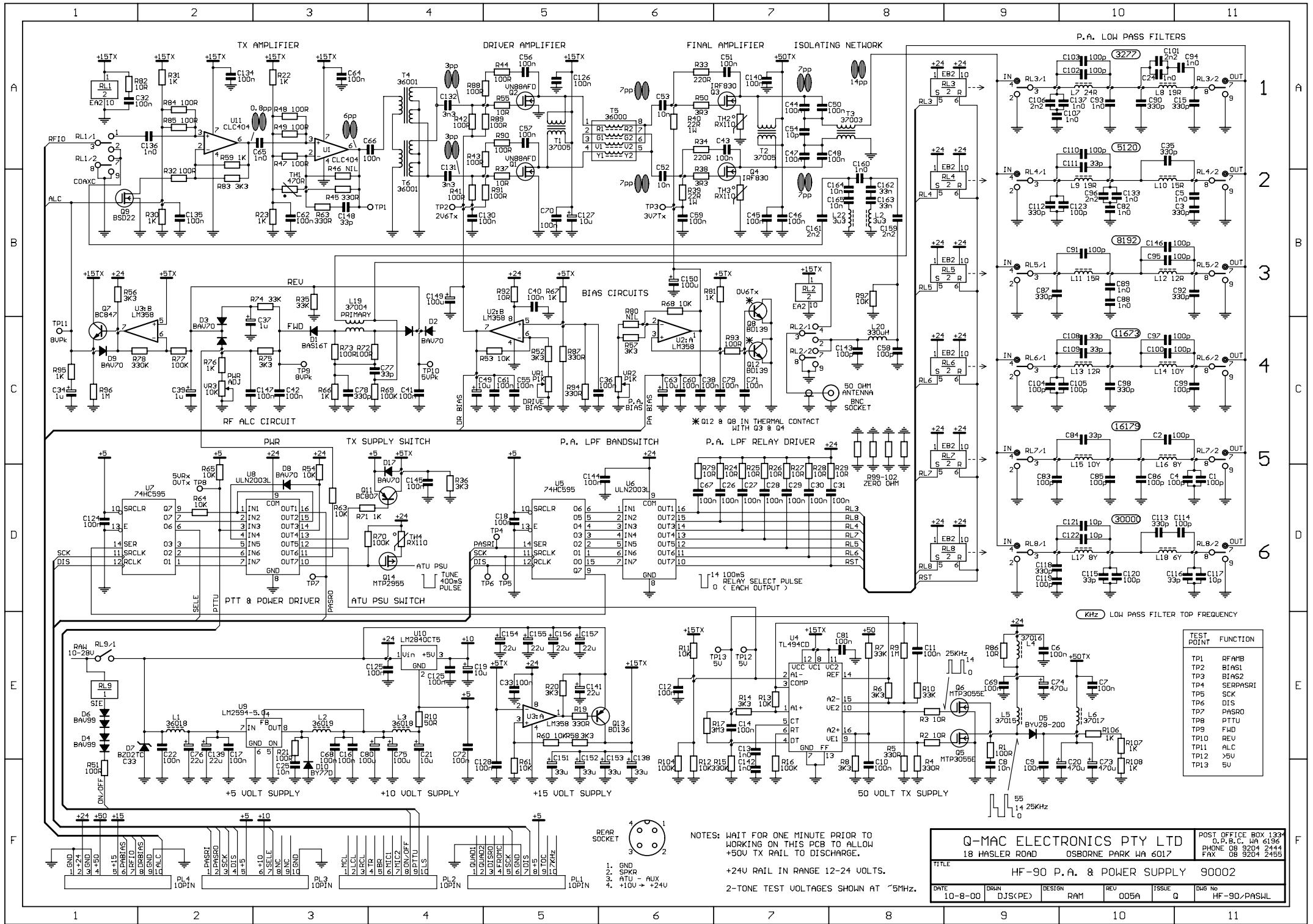
TEST SOCKET

APPENDIX 2: DEVICE PINOUTS

DEVICES ARE NOT DRAWN TO SCALE

*** ALL DEVICES VIEWED FROM TOP ***



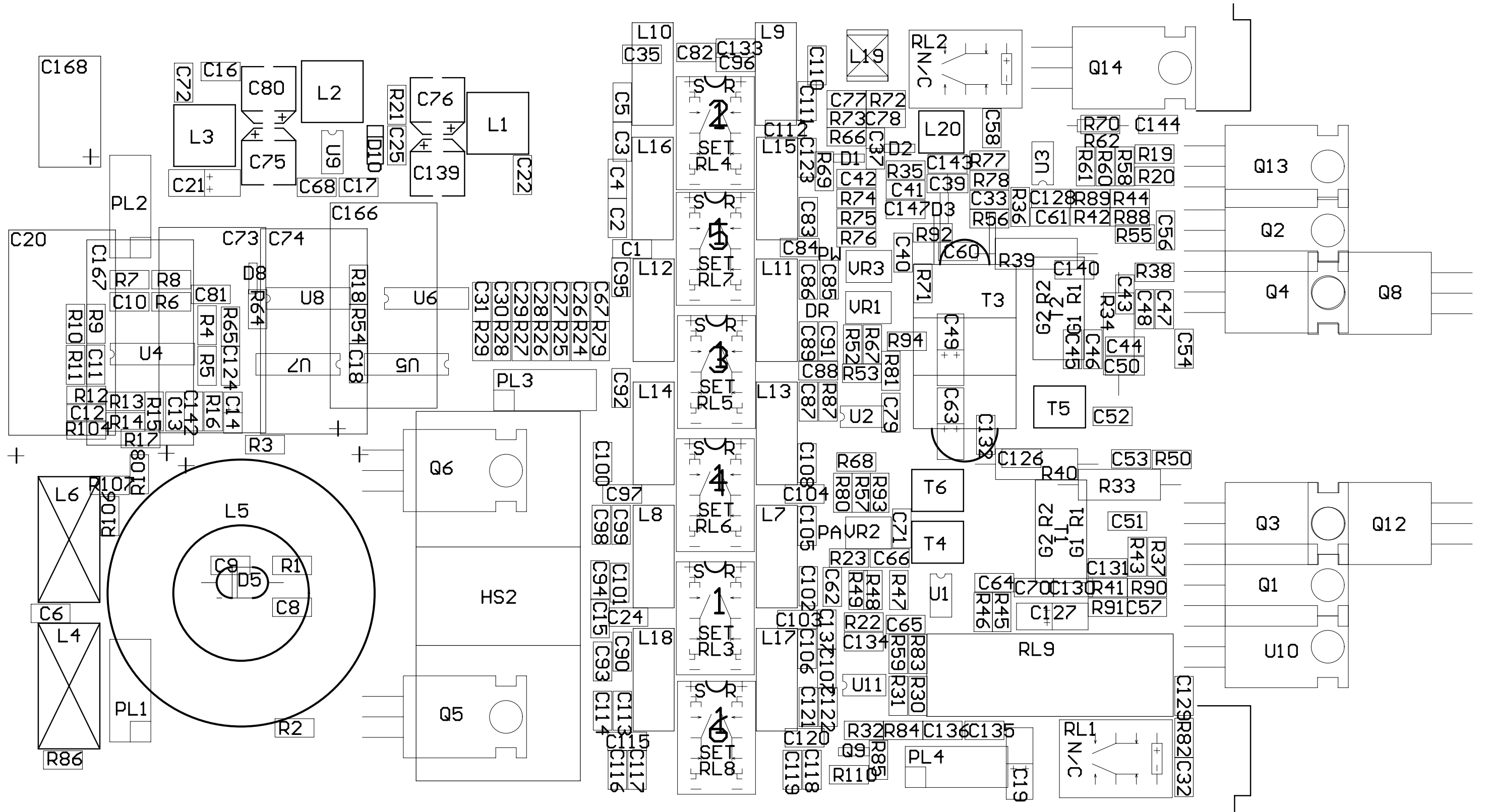


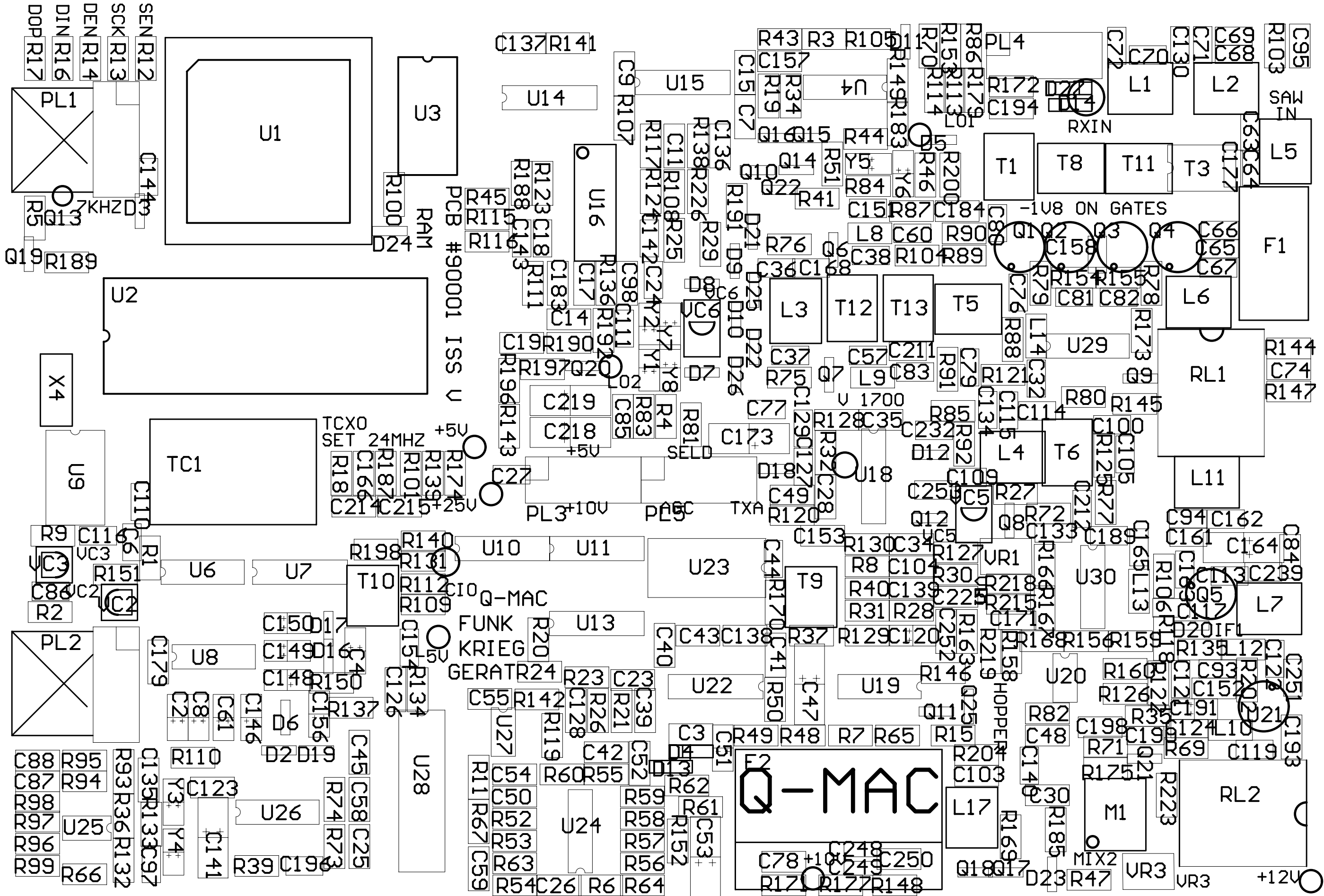
Q-MAC ELECTRONICS PTY LTD
 18 HASLER ROAD OSBORNE PARK WA 6017
 POST OFFICE BOX 133
 D.P.B.C. WA 6186
 PHONE 08 9204 2444
 FAX 08 9204 2455

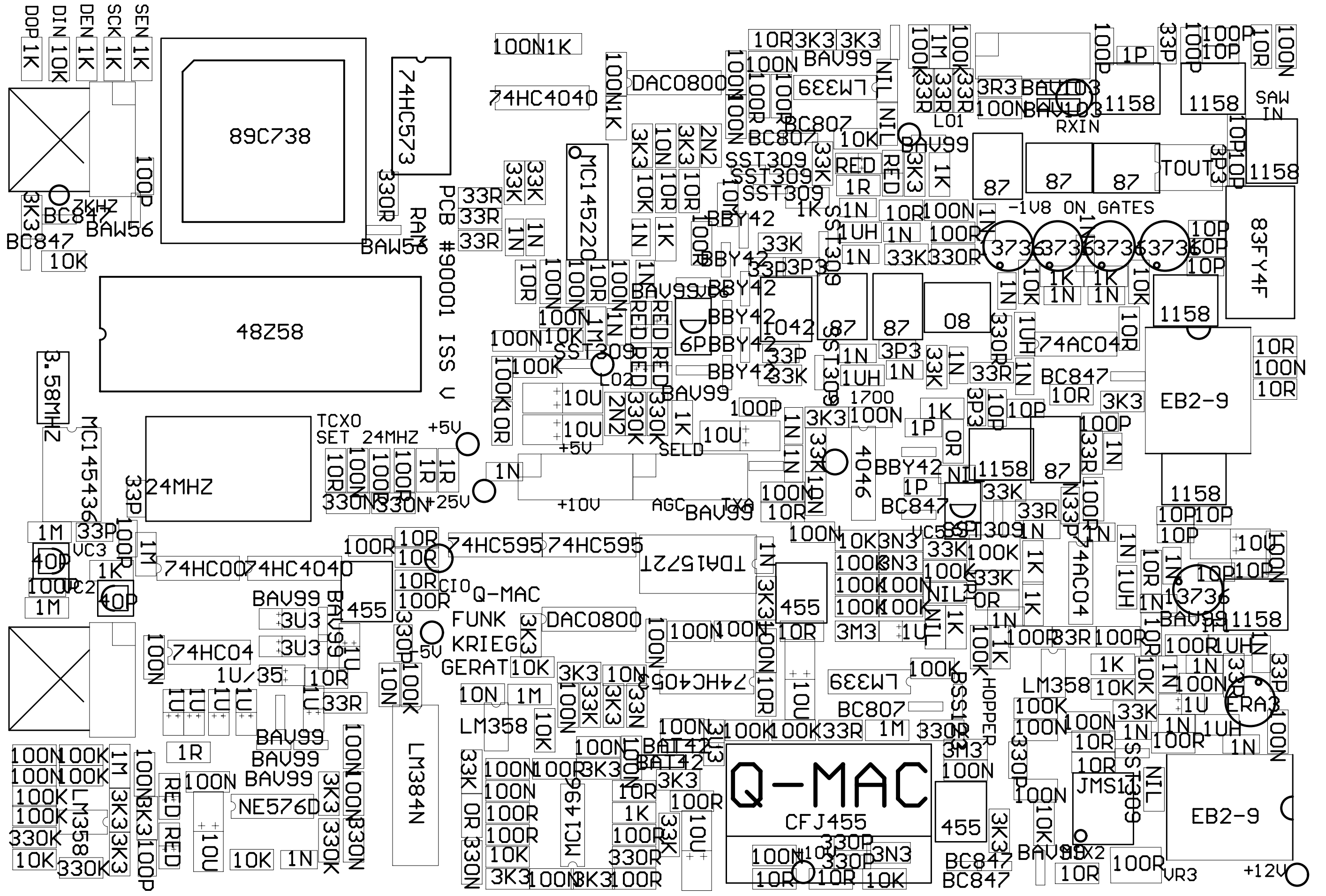
TITLE: HF-90 P.A. & POWER SUPPLY 90002

DATE: 10-8-00	DRAWN: DJS(KPE)	DESIGN: RAM	REV: 005A	ISSUE: Q	DWG No: HF-90/PASHL
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NOTES: WAIT FOR ONE MINUTE PRIOR TO WORKING ON THIS PCB TO ALLOW +50V TX RAIL TO DISCHARGE.
 +24V RAIL IN RANGE 12-24 VOLTS.
 2-TONE TEST VOLTAGES SHOWN AT 5MHz.







89C738

48Z58

24MHZ

74HC00

74HC573

74HC4040

MC145220

TCXO
SET 24MHZ
+5V
+25V

74HC595

BAV99

74HC04

DAC0800

Q-MAC
CFJ455

LM384N

NE576D

EB2-9

EB2-9

83FY4F

EB2-9

EB2-9

EB2-9

EB2-9

SEN 1K

SCK 1K

DEN 1K

DIN 10K

DOP 1K

BC847

BC847

BC847

BC847

BC847

BC847

BC847

BC847

BC847

PCB #90001 ISS U

+12V

+5V

+10V

+5V

+5V

+5V

+5V

+5V

+5V

+5V

+5V

+5V

+5V

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