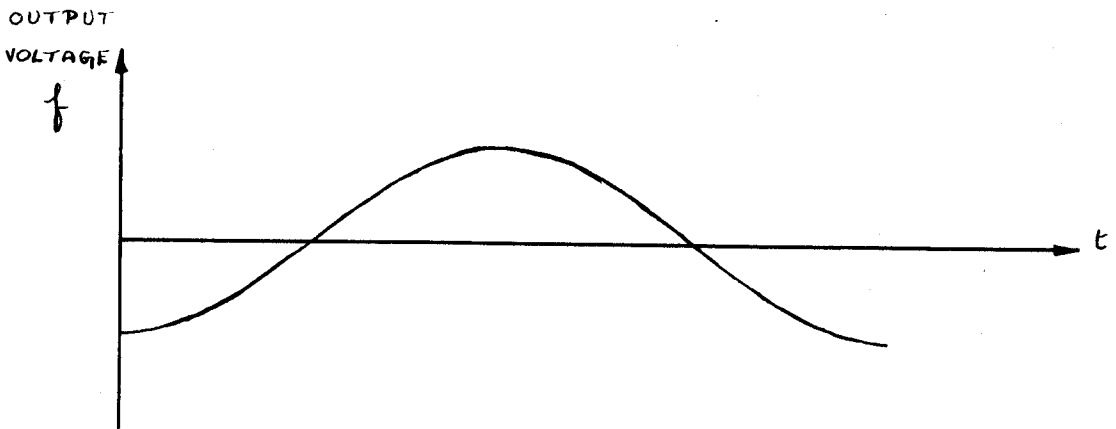
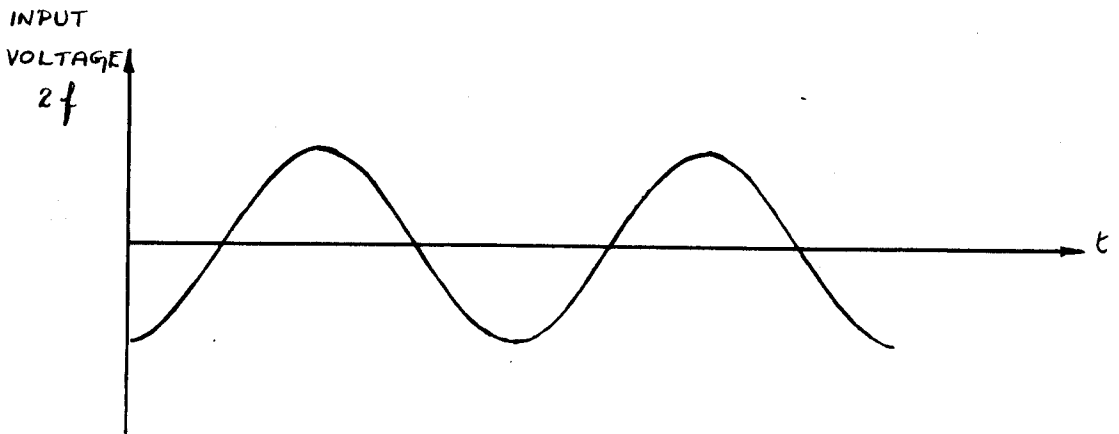
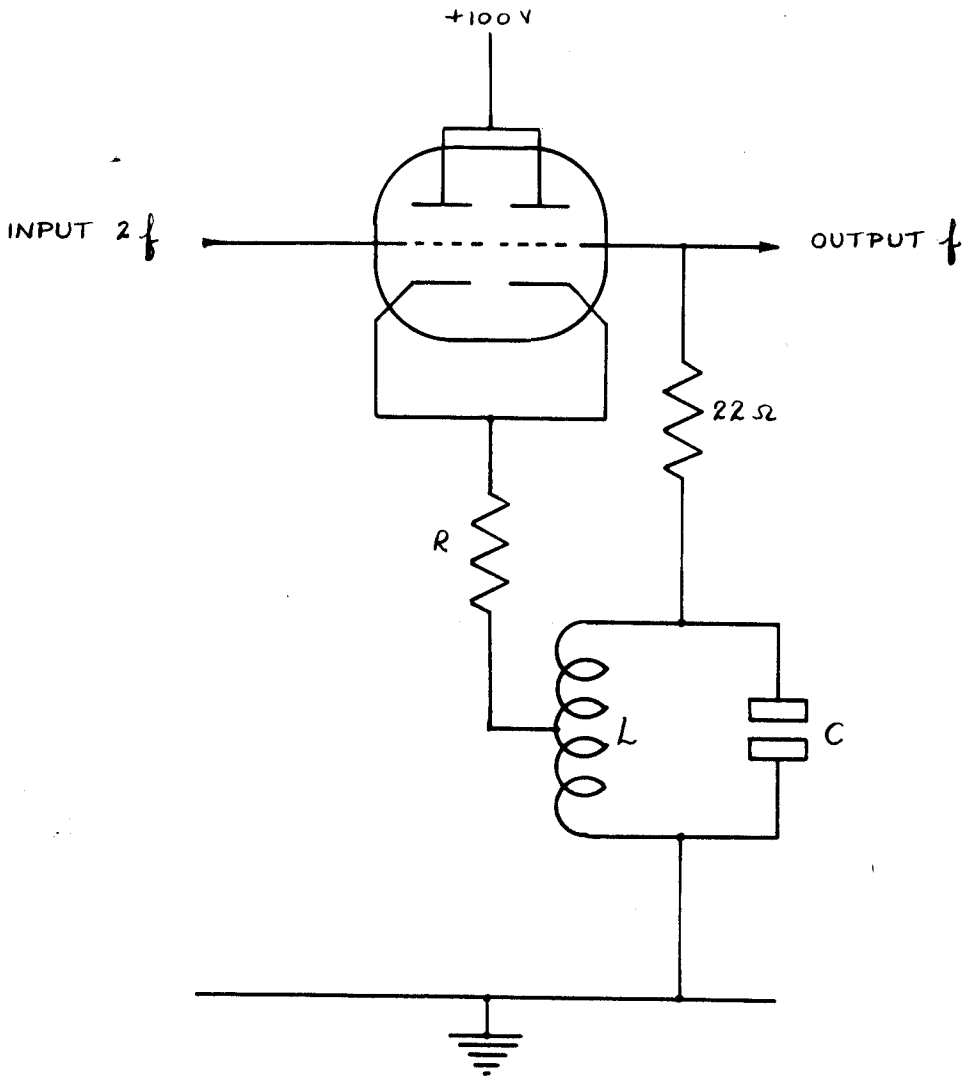
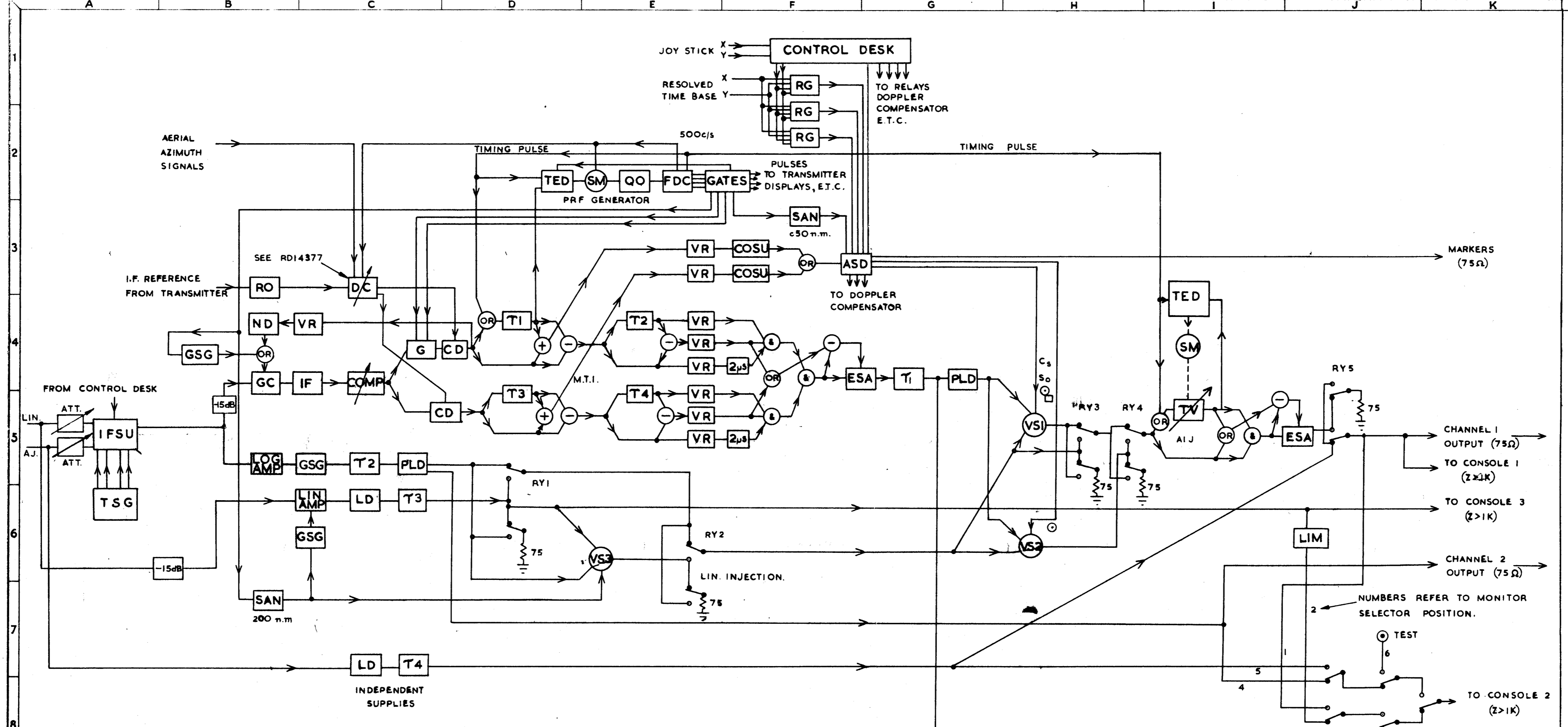


PLATE No.



REPORT No. RD/G 1528

TITLE
**PROPOSED SIGNAL PROCESSING SCHEME
 FOR TYPE 84 RADAR.**



SYMBOL	MEANING
AGC	AUTOMATIC GAIN CONTROL
AIJ	ANTI-IMPULSIVE JAMMING BY P.R.F. DISCRIMINATION
AJ	ANTI-(NOISE) JAMMING RECEIVER
ASD	AREA SWITCHING DISTRIBUTION
CD	COHERENT DETECTOR
Cs	CLUTTER SWITCHING VOLTAGE
COMP	VARIABLE I.F. AMPLITUDE COMPRESSOR.
COSU	CLUTTER-OPERATED SWITCHING UNIT
DC	DOPPLER COMPENSATION EQUIPMENT (SEE RD14377)
ESA	ELECTRONICALLY SWITCHED ATTENUATOR
FDC	FREQUENCY DIVIDER CHAIN
G	GATE
GC	GAIN CONTROL
GSG	GAIN SWEEPING GENERATOR
IF	I.A.G.C. I.F. AMPLIFIER
IFSU	I.F. SWITCHING UNIT
LD	LINEAR DETECTOR
LIM	LIMITER
ND	NOISE DETECTOR
OR	DIODE "GATE" GIVING OUTPUT WHEN A SIGNAL IS AT ONE OR THE OTHER INPUT.
PLD	PULSE LENGTH DISCRIMINATOR
QO	QUARTZ OSCILLATOR (4.096 Mc/±10 ⁻⁶)
RG	RECTANGLE GENERATOR
RO	REFERENCE OSCILLATOR (COHO)
RY	RELAY
SAN	SANATRON DELAYED SWITCHING GENERATOR
SM	SERVO MOTOR
So	M.T.I. OUTPUT SELECTION
TED	TIME ERROR DETECTOR
TSG	TEST SIGNAL GENERATING EQUIPMENT
Tn	4μS DELAY CHANNEL (INC. MODULATOR, HYBRIDS, MERCURY DELAY UNIT, DETECTOR, AMPLIFIERS, E.T.C.)
T	TRANSMITTER PULSE LENGTH = 10 μS
To	OVER-ALL DELAY (I.F. INPUT TO VIDEO OUTPUT) ± 30 μS
T1	7 μSECS
T2	16 μSECS
T3	26 μSECS
T4	28 μSECS
VR	VIDEO (FULL WAVE) RECTIFIER
VS	VIDEO (ELECTRONIC) SWITCH
⊙	PERMANENT ECHO M.T.I. RING GATE
□	RECTANGLE GATE (VARIABLE SIZE, SHAPE, POSITION)
+	CLUTTER SIGNAL ADDITION
-	SUBTRACTION
&	COINCIDENCE DETECTOR (PASSING THE SMALLEST OF THE INPUTS)

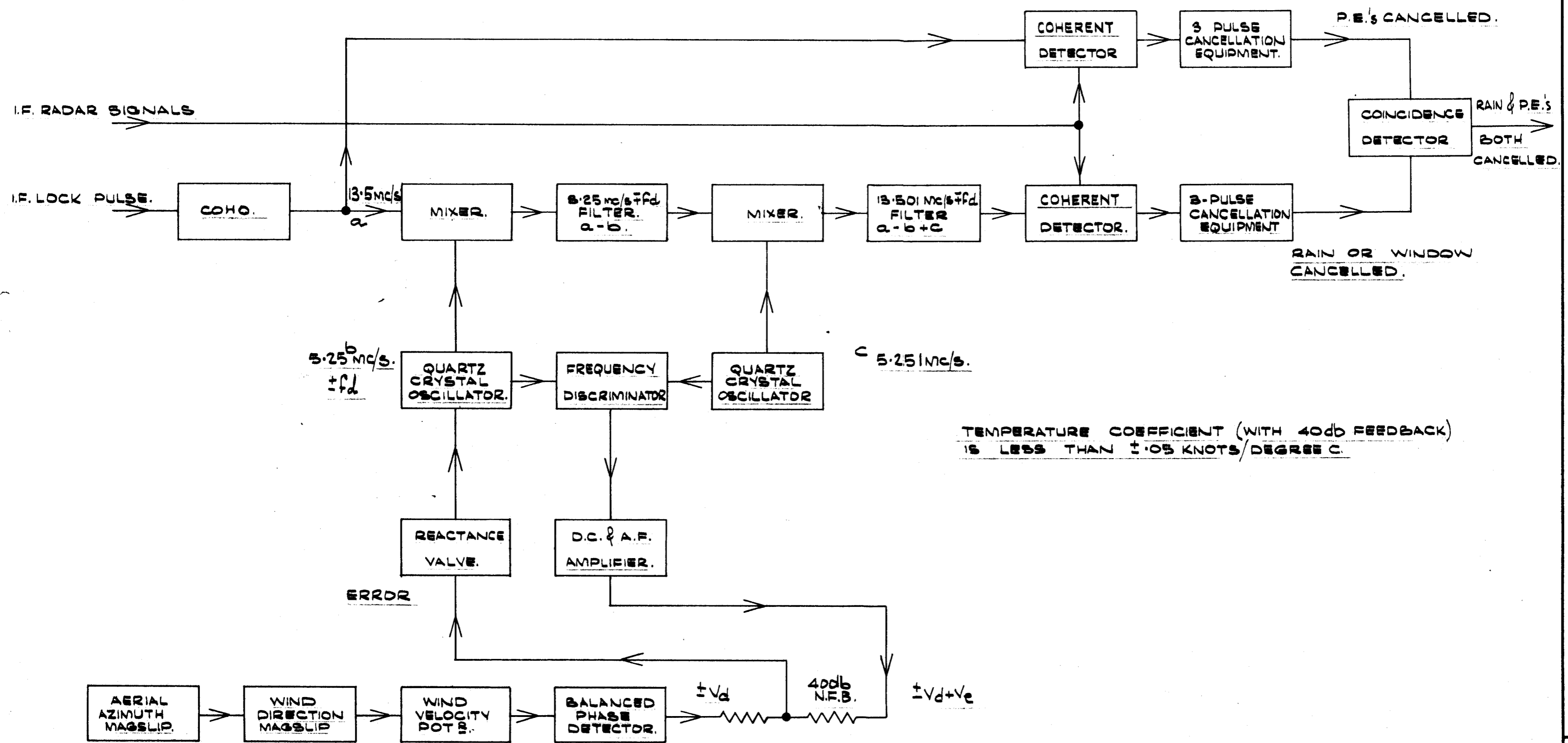
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SCALE	SHEET No
	CONTIN. ON

SELECTOR POSITION	CHANNEL 1		MONITOR	
	DESCRIPTION	RELAYS	DESCRIPTION	RELAYS
1	FULLY PROC	— — — 5	CHAN 1	6 7 —
2	SEMI PROC	— — — 4 5	LIN MOD	— 7 —
3	PLD	— 3 — 5	M T I	— — —
4	LIN	1 3 — 5	PLD	— — 8
5	A/J DIRECT	— — — —	A/J	6 — 8
6			SPARE	— 7 8

ISSUE No. 1	2	3	4	5					
C.N. No.									
DATE 7-7-58	2-3-60	8-4-60	10-4-60	18-11-60					

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NOTE: - $f_d = 4.4 \text{ c/s}$, PER RADIAL KNOT.
(POSITIVE FOR APPROACHING TARGETS.)

ISSUE NO	
METHODS APPROVAL	
ROTAPLATED	
DATA FILE	
INDEX REF	
USED ON	
SHEET No.	
CONTIN. ON	

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SECRET.

TITLE

DOPPLER COMPENSATION SCHEME
FOR TYPE 84 RADAR

SYMBOL	MEANING.
AMT.	AERIAL MAGSLIP (AZIMUTH) TRANSMITTER.
BPF.	BAND-PASS FILTER.
ES	ELECTRONIC SWITCH.
FD	AUDIO FREQUENCY DISCRIMINATOR.
f_c	"COHERENT LOW I.F." OR "COHO" OFFSET $\approx 100\text{kc/s}$
f_d	DOPPLER (COMPENSATION) FREQUENCY.
f_i	INTERMEDIATE FREQUENCY $\approx 13.5\text{Mc/s}$
f_p	TRANSMITTER PULSE REPETITION FREQUENCY $= 250\text{c/s}$
f_x	AUXILIARY QUARTZ OSCILLATOR MEAN FREQ $\approx 5.25\text{Mc/s}$.
M	MIXER.
-	SUBTRACTION.
MR	MAGSLIP RECEIVER (ANGLE ADDER)
NFB	NEGATIVE FEED-BACK.
QO	QUARTZ OSCILLATOR.
RO	REFERENCE OSCILLATOR (COHO OR CLIF UNIT.)
SR	SYNCHRONOUS RECTIFIER.
⊙	PERMANENT ECHO RING SWITCHING VOLTAGE.
Y	FREQUENCY MODULATOR.

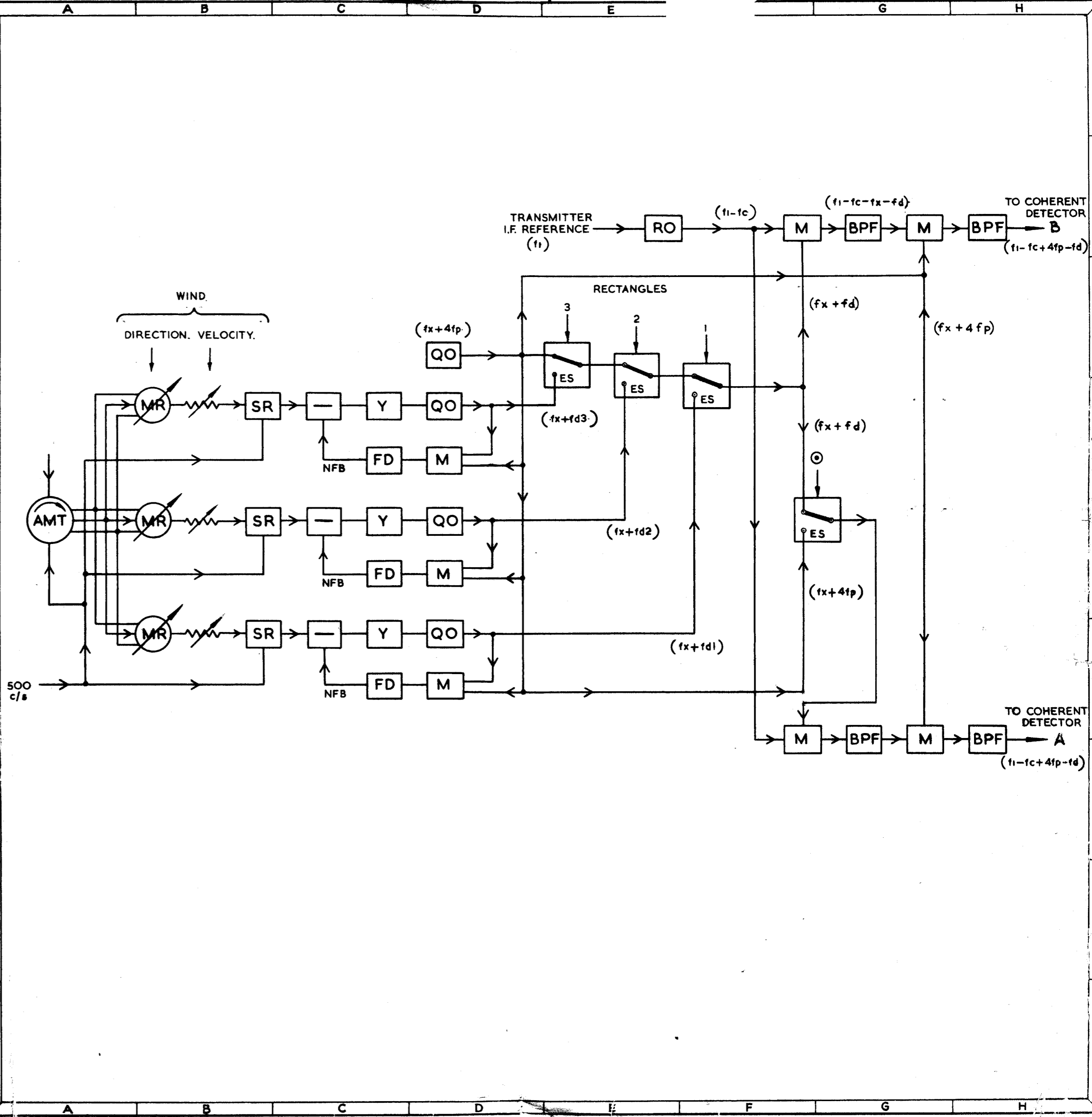
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DRAWING No. RD 14377

SCALE

SHEET No |

CONTIN. ON



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CHECKED	DATE 7.7.58								

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