

H A N D B O O K

for

V.H.F. TRANSMITTER

RACK MOUNTING

D.C.A. TYPE NO: T32

HANDBOOK IDENT NO: Y5/HB1053

VINTEN COMMUNICATION PRODUCTS PTY. LTD.

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Richmond.

Victoria.

Australia.

I N D E X

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1.0 BRIEF SPECIFICATION.

1.1 CLASSIFICATION.

Transmitter Type T32 is designed to operate in the frequency band 118 Mc./S. to 136 Mc./S. The unit operates from 240V 50 C.P.S. and is intended for rack mounting.

1.2 COMPOSITION AND TYPE NUMBER.

D.C.A. Type T32 identification number Y5/814.
Transmitter Type T32 is complete with power supply on the chassis and arranged for single sided Standard Rack mounting complete with panel and ventilated dust cover.

1.3 BRIEF SPECIFICATION.

The Transmitter is crystal controlled, amplitude modulated with modulation capability of 100% with an RF input to the antenna of 5 watts. A demodulated carrier monitor is provided with an output level of 0 dbm. The crystal frequency is multiplied twelve times to obtain the output frequency. All RF stages are transformer coupled to minimise spurious radiation. The modulator includes an efficient limiter. The modulation level control is preset and mounted on the chassis; the AC on/off switch and Xtal oven switch are on the front panel. Remote control function is provided for balanced PTT.

1.4 POWER REQUIREMENTS : (Typical)

Phases	One
Voltage	190-270
Frequency	50 C.P.S.
Power Consumed	45 watts Standby
	80 watts Transmit

1.5 PERFORMANCE SPECIFICATIONS :

Radio Frequency Section: 5 stage crystal controlled total multiplication twelve times.

Crystal Frequency : 9.83 Mc./S. to 11.4 Mc./S.

Crystal Tolerance : 0.0035%

Output Frequency : Single frequency in the band 118 Mc./S. to 136 Mc./S.

Power Output : 5 watts carrier to 50 ohm load from push pull Class C output stage.

Modulation : Plate and screen modulation of the final amplifier. Less than 5% distortion for 90% modulation with limiter operating.

Carrier Noise : Greater than 45 db below level corresponding to 100% modulation.

Frequency Response : \pm 3db 300 C.P.S. to 3000 C.P.S.

Spurious Radiations : All less than 70 db below rated output.

1.6 ELECTRON TUBE AND CRYSTAL COMPLEMENT.

1.6.1 ELECTRON TUBE COMPLEMENT

Type	Circuit Ref.	Function
6U8	V1	Crystal Oscillator and tripler
QQE03/12	V2	Doubler-Doubler
QQE03/12	V3	Class C Power Amplifier
12AU7	V4	Line Amplifier
6BA6	V5	Limiter Control Tube
12AT7	V6	Audio Driver
QQE03/12	V7	Push-Pull Modulator
QA202	W1	Limiter Diode
1N2096	W2 W3 W4 W5	Rectifiers
1N2092	W6	Bias Rectifiers
QA95	W7	Monitor Rectifier

Total Quantity of each Type :

Type	Number
6BA6	1
6U8	1
12AT7	1
12AU7	1
QQE03/12	3
QA202	1
1N2096	1
1N2092	1
QA95	1

1.6.2 CRYSTAL COMPLEMENT.

One Transmitter Crystal AT cut in HC6U holder adjusted to 0.001% with a parallel capacity of 20 pf.

1.7 SPECIAL TOOLS :

Two separate tuning tools are supplied with each transmitter, located in stowage clips on the chassis.

1. A nylon tool for capacitor adjustments.
2. A combination tool for use with R.F. transformers consisting of a core tuning tool and a core locking ring tool.

1.8 MECHANICAL CONSTRUCTION AND DIMENSIONS.

The chassis is constructed in 18 S.W.G. M.S. sheet, panels and dust covers in 20 S.W.G. M.S. sheet.

Finish to surfaces are as follows :

- (a) Chassis : Cadmium plated and passivated prior to screen printing.
- (b) Panels and Dust Covers : Painted to D.C.A. specifications.
- (c) Fittings, Hardware etc. : Chrome, nickel or cadmium according to end use.

The unit occupies 10½" of rack space (6 units)

Total weight including dust cover and panel -
38 lbs.

2.0 TECHNICAL DESCRIPTION.

2.1 TRANSMITTER :

Radio Frequency Section.

<u>Tube</u>	<u>Function</u>	<u>Remarks</u>
V1A 6U8	Oscillator Amplifier	Screen is utilised as plate of oscillator circuit and is electron coupled to plate circuit of V1A, giving an amplified voltage of frequency 'f' which is transferred to V1B by T1. Output at 3f is transferred by T2 to V2A.
Pentode Triode	Tripler	
V2A 6QE03/12	Doubler	Output at 6f is coupled via C20 to V2B.
Double Tetrode	Doubler	Output at 12f is coupled by T3 to V3. Output is balanced with respect to earth.
V3 6QE03/12	Push-pull Power	Modulated output at 12f is coupled into load by T4.
Double Tetrode	Amplifier	

CIRCUIT DETAILS :

The crystal oscillator is a Colpitts type. T1 couples the output of the oscillator-amplifier to V1B which with its transformer load (T2) triples the frequency. T2 also couples the signal to V2A which doubles the frequency in its load L1, C19. The output of V2A at 6f is coupled by C20 to V2B which also acts as a doubler. T3 selects the output of V2B at 12f and feeds it to V3 as a balanced signal to drive the push-pull power amplifier.

Screen and Anode modulation is used on V3 and the output is transferred to the feeder by T4. T4 is a double tuned transformer with the output tapped off the secondary. The R.F. Passes to the aerial via a low pass filter to the aerial socket. The low pass filter reduces harmonic radiations to a level less than -70db with respect to the carrier level. There is also a portion of the R.F. tapped off the aerial socket for monitoring purposes. This demodulated carrier appears on terminals No's 7 and 8 on TS1.

2.1 TECHNICAL DESCRIPTION (Continued)CIRCUIT DETAILS (Cont'd)

All the stages except the power amplifier have resistance capacity decoupling networks in the HF line.

Metering at TP1, TP2, TP3, TP4 and TP5 is provided for easy and direct tuning of each stage.

Fixed grid bias of approximately 25 volts is used on the final power amplifier to prevent the ratings of V3 being exceeded in the event of failure of grid drive.

2.2 MODULATOR.

<u>Tube</u>		
V4A	Line	
$\frac{1}{2}$ 12AT7	Amplifier	Low level input
V4B	Line	Control voltage audio
$\frac{1}{2}$ 12AT7	Amplifier	amplifier
V5	Limiter	Constant output stage,
6BA6	Amplifier	controlled by bias volts
V6	Driver	Phase splitter
12AT7		
V7	Push-pull	Class AB1
QQE03/12	Modulator	Output to modulation

CIRCUIT DETAILS :

The input stage V4A amplifies line signal. Cathode feedback is used in this stage. The output is coupled via C32 to V4B. A proportion of the output of V4A is not used for modulation purposes but is amplified by V4B and rectified by W1. A negative voltage is developed at the junction of R30, R32. This negative voltage reduces the gain of V5 and as the voltage is proportioned at the audio level, limiting takes place. By adjusting R25 it is possible to maintain a high average level of modulation without overmodulating. The output from V5 is fed via C41 to V6 which is operating as a phase splitter and driver.

Balanced output from V6 is fed to V7 via C43 and C44 to the modulator tube V7. Fixed bias is used on V7 and it operates in Class AB1. The output is fed to the modulation transformer, the secondary of which is in series with the HF supply to the power amplifier.

2.2 MODULATOR (Continued)

CIRCUIT DETAILS (Cont'd)

A resistance network applies approximately 85% of the modulating voltage to the screen of the power amplifier. TP6 provides method of metering the modulator plate current.

Decoupling networks are provided in the HT line supplying V4 and V5 in order to reduce carrier noise.

2.3 POWER SUPPLY :

The T32 Power Supply consists of a normal AC to DC supply. S1 is used in the primary of power transformer T7 for switching the transmitter on and off. F1 protects the transmitter against abnormally high currents and voltages.

The secondaries of T7 consist of the following windings and functions :

- (a) A 6.3 volt winding for the transmitter heaters.
- (b) A 6.3 volt winding.
- (c) A 30 volt winding not used.
- (d) A 50 volt winding for bias supply which is applied to a half wave rectifier circuit from which -25 volts bias for the power amplifier and -21 volts bias for the modulator is obtained, each with its own resistance capacitance filter.
- (e) A H.T. winding tapped at 20, 170 and 190 volts. 170 volts is fed to a bridge connected rectifier circuit of silicon rectifiers. 200 volts DC output is fed via a capacitance input filter to the transmitter H.T. line.

2.4 CRYSTAL OVEN POWER SUPPLY

When the equipment is fitted with a crystal oven unit, the heater of this oven is supplied from a separate step down transformer delivering 12 volts AC. The primary is supplied via a separate input tag strip and switch which permits the oven to be switched independently of the main equipment.

3.0 MAINTENANCE

3.1 TABLES OF VOLTAGES AND CURRENTS.

3.1.1 POWER SUPPLY VOLTAGES :

Operating Voltage	Heater Voltage	HT Volts	Bias Volts at TP4	Bias Volts at R42 R43
240V AC	6.3	200	25	21

3.1.2. POWER SUPPLY CURRENTS :

Operating Voltage	High Tension Current mA
240V AC	160 mA

NOTE: The AVO model 8 multimeter or equivalent is suitable to carry out all meter readings except measurements marked 'VV' in section 3.1.3. which should be measured with a V.T.V.M.

3.1.3. TRANSMITTER TABLE.

Unmodulated output 5W.

Valve	Plate		Screen		Grid		Cathode	
	Pin	Volts	Pin	Volts	Pin	Volts	Pin	Volts
V1A 6U8	6	105*	3	65*	2	6.5VV	7	0
V1B 6U8	1	135*	-	-	9	20*	8	2.2
V2A QQE03/12	8	148*	7	78	3	35*	2	0
V2B QQE03/12	6	150*	7	78	1	22VV	2	0
V3 QQE03/12	6 8	215*	7	155	3	53*	2	0
V4A 12AU7	6	25	-	-	7	0	8	1.2
V4B 12AU7	1	22	-	-	2	0	3	.8
V5 6BA6	5	18.5	6	18	1	0	7	0
V6 12AT7	1 6	105 105	- -	- -	2 7	20VV 20VV	3 8	23.5 23.5
V7 QQE03/12	6 8	218 218	7	219	3	22W 22VV	2	0 0

* Measured between decoupled points and earth.

3.1.4 TRANSMITTER TEST POINT READINGS.

H.T. 220V Output 5W unmodulated.

Position	Scale Divisions	
	100 μ A Meter	Actual Current
TP1	50	.5 mA
TP2	70	.4 mA
TP3	50	.55 mA
TP4	60	2.5 mA
TP5	60	60 mA
TP6	40	36 mA *

* rises to 60 mA at 100% mod.

3.2 MAINTENANCE ADJUSTMENTS AND ALIGNMENTS.3.2.1. TRANSMITTER ALIGNMENT.

$$\frac{\text{Carrier Frequency}}{\text{Crystal Frequency}} = 12 \text{ Mc./S.}$$

Plug in the crystal. Connect RF Power Output Meter or matched antenna to antenna socket. Plug in the 100 μ A meter into TP1. Operate the P.T.T. relay armature manually or by applying earth and 50V DC to TS1 terminals 4 and 5.

Tune the bottom slug of T1 for maximum deflection. Tune the top slug of T1 for maximum deflection. The Meter reading should be 50 divisions approximately. Reduce this reading by 10 Divisions by screwing top slug of T1 in. Plug the meter into TP2. Tune both slugs of T2 for maximum deflection, approximately 70 Divisions. Plug the meter into TP3. Tune C19 for maximum, approximately 50 Divisions. Tune C23 for a minimum. Plug the meter into TP4. Tune C24 and C23 for maximum approximately 60 Divisions. Plug the meter into TP5. Screw C28 out to minimum capacity. Tune C26 for a minimum approximately 30 to 35 Divisions. Tune C28 for a maximum. Reading should be 60 Divisions. If this reading is not obtained, adjust the coupling of T4 and retune C28. Repeat until the reading is 60 Divisions. The power output should be 5 watts.

3.2.2. CHECKING TRANSMITTER AUDIO LIMITER.

Connect an audio generator with an output impedance of 600 ohms to a balanced attenuator using screened and insulated cable, then from the attenuator to terminal 1 and 2 on TS1 on the transmitter using screened and insulated cable. Earth the screen of the cable at terminal 3 on TS1 only. With an input to the transmitter of 0 dbm at 1,000 cycles, adjust the modulation to approximately 50% by rotating the mod. set control R25. Reduce the input to -15 dbm, between these limits the modulation percentage should not change by more than 2 db, if a greater variation results the limiter amplifier valve, V5, (6BA6) should be replaced and the test repeated. Readjust the modulation to 100% with an input of 0 dbm.

4.0 COMPONENT SCHEDULE :

Circuit Code	Component Description	Function	D.C.A. Ident No:	Manufacturer & Designation
CAPACITORS :				
C1	68pf ± 2½% 500VW	Crystal Circ.	Y1/2217	Ducon CTR N150
C2	1000pf ± 20% 500VW	Crystal Circ.	Y1/2220	Ducon CDS Hik
C3	100pf ± 10% 500VW	Crystal Circ.	Y1/753	Ducon CTR N750
C4	Variable 2-10 pf	Freq. Adjust.	Y1/2227	Philips CO05BA/10E
C5	10pf ± 10% 500VW	Crystal Circ.	Y1/917	Ducon CTR N750
C6	2200pf GMV 500VW	HT Decoupl.	Y1/2236	Ducon CDS Hik
C7	22pf ± 5% 500VW	T1 Tuning	Y1/2213	Ducon IF
C8	22pf ± 5% 500VW	T1 Tuning	Y1/2213	Ducon IF
C9	2200pf GMV 500VW	V1B Metering Circ.Shunt	Y1/2236	Ducon CDS Hik
C10	2200pf GMV 500VW	TP1 Shunt	Y1/2236	Ducon CDS Hik
C11	2200pf GMV 500VW	V1B Cathode Bypass	Y1/2236	Ducon CDS Hik
C12	2200pf GMV 500VW	HT Decoupling	Y1/2236	Ducon CDS Hik
C13	2200pf GMV 500VW	T2 Tuning	Y1/2236	Ducon CDS Hik
C14	10pf ± 10% 500VW	T2 Tuning	Y1/2215	Ducon IF
C15	10pf ± 10% 500VW	T2 Tuning	Y1/2215	Ducon IF
C16	2200pf GMV 500VW	TP2 Metering Circ.Shunt	Y1/2236	Ducon CDS Hik
C17	2200pf GMV 500VW	TP2 Shunt	Y1/2236	Ducon CDS Hik
C18	1000pf ± 20% 500VW	V2 Screen Bypass	Y1/2236	Ducon CDS Hik
C19	1000pf ± 20% 500VW	HT Decoupl.	Y1/2220	Ducon CDS Hik
C20	Variable 2-10pf 500VW	1st Doubler Tuning	Y1/2220	Ducon CDS Hik
C21	47pf ± 5% 500VW	V2B Grid Coupling	Y1/2226	Ducon CDS Hik
C22	2200pf GMV 500VW	TP3 Shunt	Y1/868	Philips CO05AA/10E
C23	2200pf ± 20% 500VW	HT Decoupl.	Y1/2236	Ducon CTR N750
C24	Variable 2-10pf 500VW	T3 Tuning	Y1/2236	Ducon CDS Hik
C25	Variable 2-10pf 500VW	T3 Tuning	Y1/2226	Philips CO05AA/10E
C26	2200pf GMV 500VW	TP4 Shunt	Y1/2226	Philips CO05AA/10E
	Variable 2-15pf 1000VW	Final Tank Primary Tun.	Y1/2236	Ducon CDS Hik
			Y1/2230	Jackson C711

* D.C.A. Replacement Item

4.0 COMPONENT SCHEDULE (Continued)

Circuit Code	Component Description	Function	D.C.A. Ident No:	Manufacturer & Designation
CAPACITORS :				
C27	Not Used			
C28	Variable 3-25 pf 500VW	Final Tank Secondary Tuning	Y1/2228	Philips C005BA/25E
C29	15pf \pm 1pf 500VW	Aerial Filter	*Y1/853	Ducon CTR N750
C30	15pf \pm 1pf 500VW	Aerial Filter	*Y1/853	Ducon CTR N750
C31	100pf \pm 10% 500VW	V4A Plate Shunt	Y1/753	Ducon CTR N750
C32	2200pf GMV 500VW	V4B Grid Coupling	Y1/2236	Ducon CDS Hik
C33	25 μ F 25VW	V4B Cathode Bypass	Y1/2231	Ducon ET 1 BT
C34	.01 μ F GMV 500VW	Limiter Coupling	Y1/2216	Ducon CDS Hik
C35	8 μ F 300VW	HT Decoupling	Y1/2234	Ducon ET2DT
C36	.5 μ F GMV 100VW	Lim. Time Constant	Y1/2223	Ducon CDT Hik
C37	2200pf GMV 500VW	V5 Grid Coupling	Y1/2236	Ducon CDS Hik
C38	.5 μ F GMV 100VW	V5 Screen Bypass	Y1/2223	Ducon CDT Hik
C39	1000pf \pm 20% 500VW	V5 Plate Bypass	Y1/2220	Ducon CDS Hik
C40	8 μ F 200VW	HT Decoup.	*Y1/2234	Ducon ET2DT
C41	2200pf GMV 500VW	V6 Grid Coupling	Y1/2236	Ducon CDS Hik
C42	0.05 μ F GMV 100VW	V6 Grid Bypass	Y1/2223	Ducon CDT Hik
C43	0.01 μ F GMV 500VW	V7 Grid Coupling	Y1/2216	Ducon CDS Hik
C44	0.01 μ F GMV 500VW	V7 Grid Coupling	Y1/2216	Ducon CDS Hik
C45	2 x 4000pf GMV 500VW	V7 Plate Bypass	Y1/1905	Ducon CDS Hik
C46	16 μ F 450VW	HT Filter	Y1/2235	Ducon ET6CT
C47	16 μ F 450VW	HT Filter	Y1/2235	Ducon ET6CT
C48	25 μ F 50VW	V3 Bias Filter	Y1/2232	Ducon ET2CT
C49	25 μ F 50VW	V2 Bias Filter	Y1/2232	Ducon ET2CT
C50	2200pf GMV 500VW	V2 Heater Bypass	Y1/2236	Ducon CDS Hik
C51	2200pf GMV 500VW	V4 RF Bypass	Y1/2236	Ducon CDS Hik
C52	330pf \pm 20% 500VW	V3 RF Bypass	*Y1/83	Ducon CDS Hik
C53	100pf \pm 10% 500VW	Demod. Carrier Monitor Filter	Y1/753	Ducon CTR N750
C54	100pf \pm 10% 500VW	Demod. Carrier Monitor Filter	Y1/753	Ducon CTR N750

* D.C.A. Replacement Item

4.0 COMPONENT SCHEDULE : (Continued)

Circuit Code	Component Description	Function	D.C.A. Ident No:	Manufacturer & Designation
RESISTORS:				
R1	100K ± 10% 1/4W	V1A Grid	*Y8/5492	Ducon RMB
R2	47K ± 10% 1/4W	V1A Screen	*Y8/5488	Ducon RMB
R3	47K ± 10% 1/4W	V1A HT Bleed	*Y8/5488	Ducon RMB
R4	47K ± 10% 1/4W	HT Decoup.	*Y8/168	Ducon RMC
R5	39K ± 10% 1/4W	V1B Grid Return	*Y8/5487	Ducon RMB
R6	100 ± 10% 1/4W	TP1 Shunt	*Y8/767052	Ducon RMB
R7	270 ± 10% 1/4W	V1B Cathode	*Y8/5461	Ducon RMB
R8	10K ± 10% 1/4W	HT Decoupling	*Y8/167	Ducon RMC
R9	68K ± 10% 1/4W	V2A Grid Return	*Y8/5490	Ducon RMB
R10	180 ± 10% 1/4W	TP2 Shunt	*Y8/7676	Ducon RMB
R11	47K ± 10% 1/4W	V2 Screen	*Y8/5488	Ducon RMB
R12	4700 ± 10% 1/4W	HT Decoupling	*Y8/7710	Ducon RMC
R13	68K ± 10% 1/4W	V2B Grid	*Y8/5490	Ducon RMC
R14	12.4K ± 10% 1/4W	TP3 Shunt	*Y8/767052	Ducon RMB
R15	4.7K ± 10% 3W	HT Decoupling	Y8/942	Ducon RWV4J
R16	10K ± 10% 1/4W	V3 Grid Return	*Y7/5480	Ducon RMB
R17	18.4K ± 10% 1/4W	TP4 Shunt	*Y8/5482 1/52	Ducon RMB
R18	39K ± 10% 1/4W	V3 Screen Divider	*Y8/305	Ducon RMC
R19	6.8K ± 10% 1/4W	V3 Screen Divider	*Y8/271	Ducon RMC
R20	1.5 ± 5% 3W	TP5 Shunt	*Y8/966	Ducon RWV4J
R21	560 ± 10% 1/4W	Input Divider	*Y8/5465	Ducon RMB
R22	47 ± 10% 1/4W	Input Divider	*Y8/5452	Ducon RMB
R23	1.5K ± 5% 1/4W	V4A Cathode	*Y8/6192	Philips B830506B
R24	100K ± 10% 1/4W	V4A Plate	*Y8/5492	Ducon RMB
R25	500K ± 10% 1/4W	Set Modulation Depth	Y8/1874	Morganite RVE
R26	1.5K ± 10%	V4B Cathode	*Y8/5470	Ducon RMB

*D.C.A. Replacement Item

4.0 COMPONENT SCHEDULE (Continued)

Circuit Code	Component Description	Function	D.C.A. Ident No:	Manufacturer & Designation
RESISTORS:				
R27	100K ± 10% 1/4W	V4B Load	*Y8/5492	Ducon RMB
R28	47K ± 10% 1/4W	HT Decoupling	*Y8/5488	Ducon RMB
R29	100K ± 10% 1/4W	W1 Return	*Y8/5492	Ducon RMB
R30	4.7M ± 10% 1/4W	W1 Load	*Y8/5512	Ducon RMB
R31	1M ± 10% 1/4W	V5 Grid Return	*Y8/5504	Ducon RMB
R32	1M ± 10% 1/4W	W1 Load	*Y8/5504	Ducon RMB
R33	270K ± 10% 1/4W	V5 Screen	*Y8/5497	Ducon RMB
R34	100K ± 10% 1/4W	V5 Plate	*Y8/5492	Ducon RMB
R35	27K ± 10% 1/4W	HT Decoupling	*Y8/5485	Ducon RMB
R36	470K ± 10% 1/4W	V6 Grid 1	*Y8/5500	Ducon RMB
R37	8.2K ± 10% 1/4W	V6 Grid Cathode Return	*Y8/5479	Ducon RMB
R38	470K ± 10% 1/4W	V6 Grid 2	*Y8/5500	Ducon RMB
R39	560 ± 10% 1/4W	V6 Cathode	*Y8/5465	Ducon RMB
R40	75K ± 10% 1/4W	V6 Plate 2 Load	*Y8/6233	Ducon RMB
R41	68K ± 10% 1/4W	V6 Plate 1 Load	*Y8/5490	Ducon RMB
R42	470K ± 10% 1/4W	V7 Grid 2	*Y8/5500	Ducon RMB
R43	470K ± 10% 1/4W	V7 Grid 2	*Y8/5500	Ducon RMB
R44	1.5 ± 5% 3W	TP6 Shunt	Y8/966	Ducon RWV4J
R45	470K ± 10% 1/4W	Neg. Feedback to V5 Anode	Y8/5500	Ducon RMB
R46	4.7K ± 10% 1/4W	V3 Bias Filter	*Y8/5476	Ducon RMB
R47	8.2K ± 10% 1/4W	V7 Bias Filter	*Y8/5479	Ducon RMB
R48	6.8K ± 10% 1/4W	V3 Bias Bleed	*Y8/5478	Ducon RMB
R49	10K ± 10% 1/4W	V7 Bias Bleed	*Y8/5480	Ducon RMB
R50	150 ± 10% 1/4W	Demod. Carrier Monitor		
R51	1K ± 10% 1/4W	Isolator	Y8/5458	Ducon RMB
R52	680 ± 10% 1/4W	Demod. Carrier Monitor Filter	Y8/5468	Ducon RMB
		Demod. Carrier Monitor Termination	Y8/5466	Ducon RMB

* D.C.A. Replacement Item

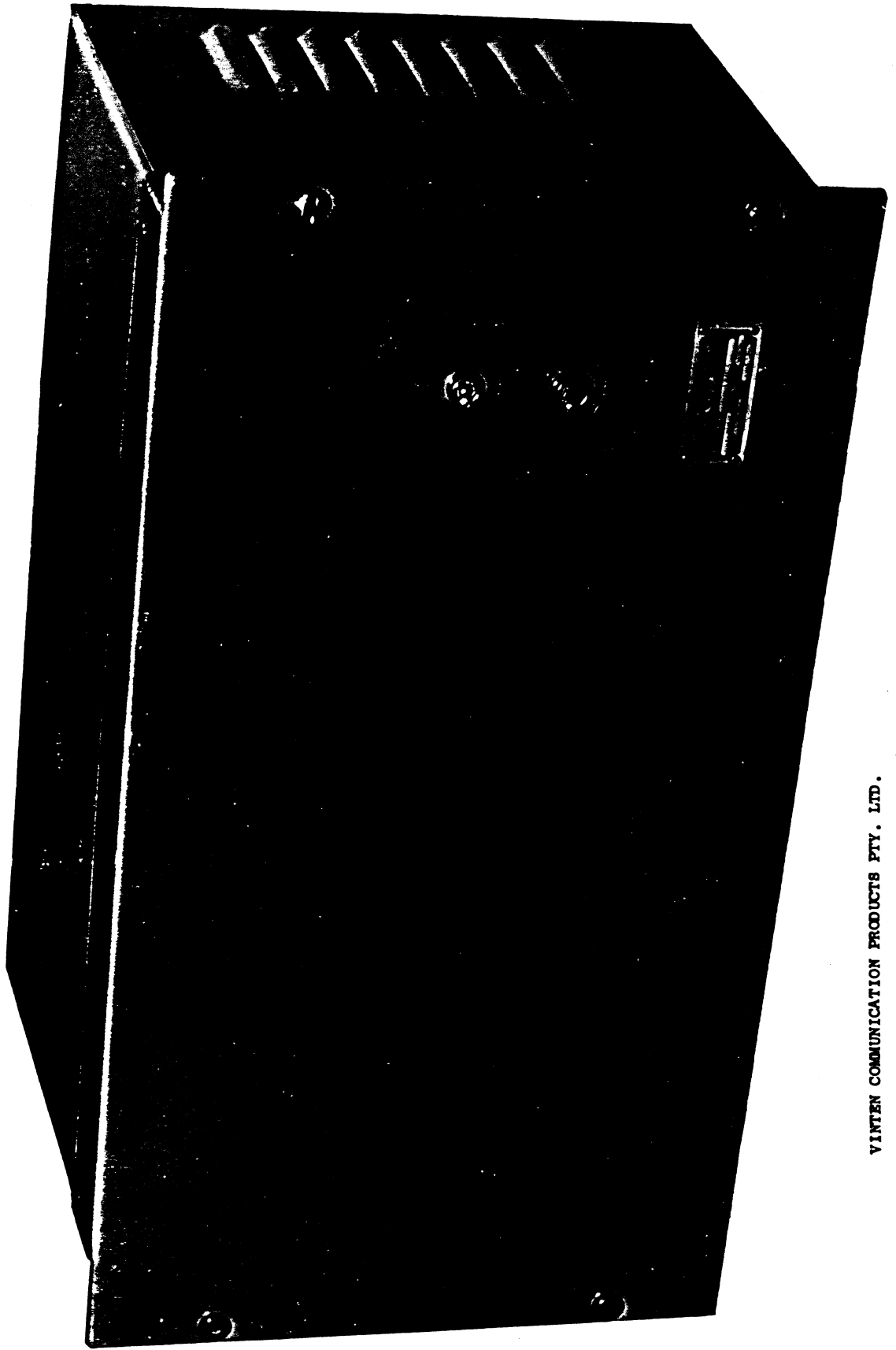
4.0 COMPONENT SCHEDULE (Continued)

Circuit Code	Component Description	Function	D.C.A. Ident No:	Manufacturer & Designation
COILS, CHOKES AND TRANSFORMERS :				
T1	Transformer	Oscillator	Y9/1335	Vinten 143X
T2	Transformer	Tripler	Y9/1336	Vinten 144
T3	Transformer	Doubler	Y9/NIV	Vinten 160
T4	Transformer	Final Tank	Y9/NIV	Vinten 161
T5	Audio 600/600 ohm	Audio Input	*Y9/1633	Trimax Type TA673
T6	Modulation	Modulator	Y9/1332	A & R Type MT22
T7	Transformer 190-270 VAC	Power Supply	Y9/1338	A & R Type 1960
T8	Transformer 190-270 VAC	Crystal Oven Supply	Y9/1922	A & R Type FT5618
L1	Coil	Doubler	Y3/NIV	Vinten 158
L2	Coil	Aerial Filter	Y3/NIV	Vinten 159
L3	RF Choke	Modulated H.T.	Y3/NIV	Vinten 154
L4	Choke 10H, 200 mA	H.T.	Y3/1520	A & R Type 3023
VALVES AND CRYSTALS ;				
V1	Valve 6U8	Oscillator Tripler	Y11/698	
V2	Valve QQE03/12	Doubler Doubler	Y11/605	
V3	Valve QQE03/12	Power Amplifier	Y11/605	
V4	12 AU7	Audio Amp.	Y11/68	
V5	6BA6	Limiter Amplifier	Y11/382	
V6	12AT7	Driver	Y11/64	
V7	QQE03/12	Modulator	Y11/605	

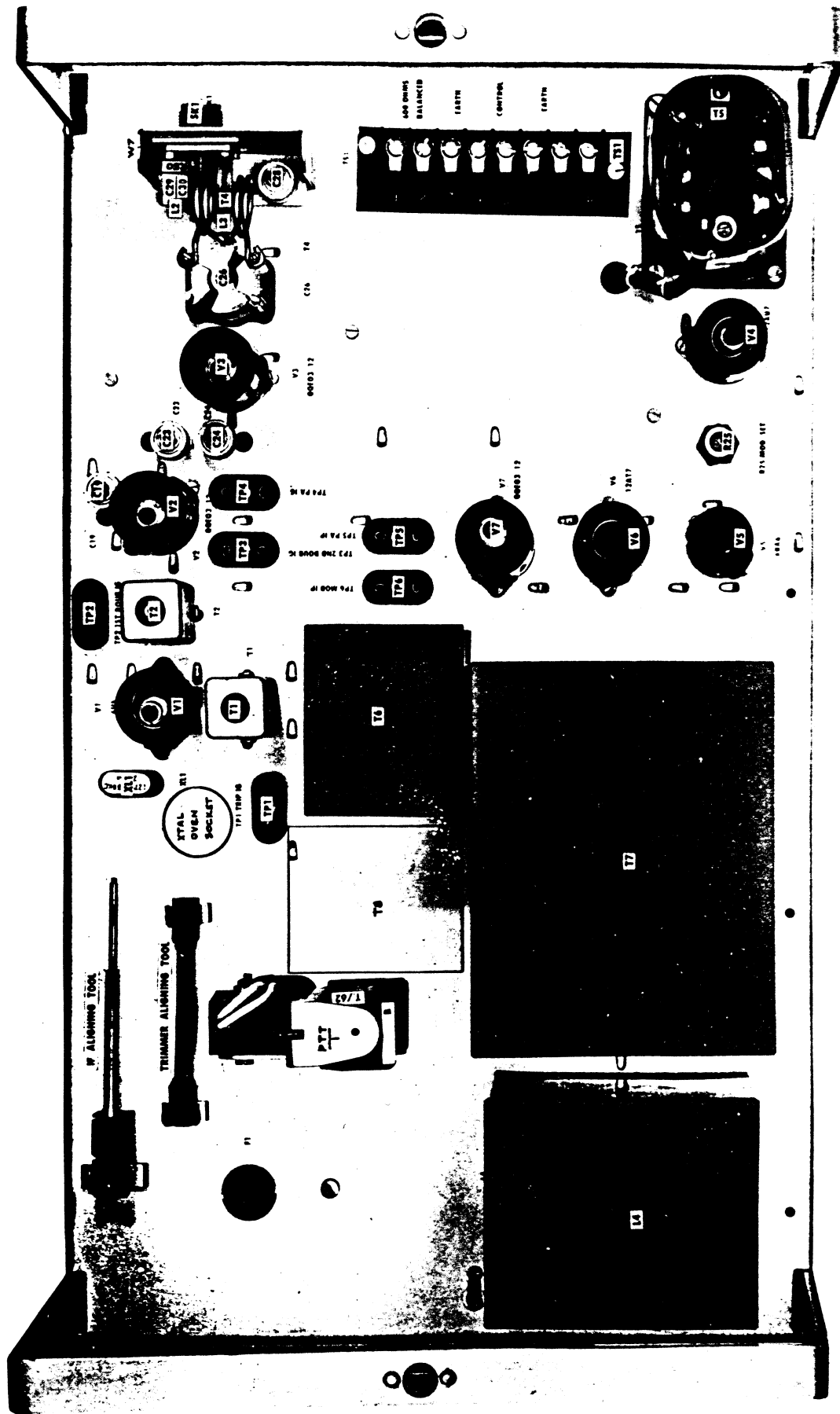
* D.C.A. Replacement Item

4.0 COMPONENT SCHEDULE (Continued)

Circuit Code	Component Description	Function	D.C.A. Ident No:	Manufacturer & Designation
<u>DIODES:</u>				
W1	Silicon Diode 200 PIV	Limiter	Y11/884	Philips OA202
W2	Silicon Diode 600 PIV	HT Rectifier	Y11/899	Ducon 2N1096
W3	Silicon Diode 600 PIV	HT Rectifier	Y11/899	Ducon 2N1096
W4	Silicon Diode 600 PIV	HT Rectifier	Y11/899	Ducon 2N1096
W5	Silicon Diode 600 PIV	HT Rectifier	Y11/899	Ducon 2N1096
W6	Silicon Diode 200 PIV	Bias Rectifier	*Y11/1126	Ducon 2N1096 2N1092
W7	Germanium Diode	Demod. Carrier Monitor Rectifier	Y11/313	Philips OA95
<u>MISCELLANEOUS ;</u>				
TP1	Metering Socket	Tripler Grid	V8/302	Teletron SC12GP
TP2	Metering Socket	1st Doub. Grid	V8/302	Teletron SX12GP
TP3	Metering Socket	2nd Doub. Grid	V8/302	Teletron SC12GP
TP4	Metering Socket	Final Grid	V8/302	Teletron SC12GP
TP5	Metering Socket	Final Plate	V8/302	Teletron SC12GP
TP6	Metering Socket	Mod. Plate	V8/302	Teletron SC12GP
XL1	Crystal Socket		V8/511	Teletron SX22LB
B9A	Valve Sockets		Y11/650	Clix VH499/902
B9A	Valve Shield		Y11/947	Clix SC9/6501/SBM
B9A	Valve Retainer		Y11/946	Clix SC9/8202/B0
B7G	Valve Socket		Y11/646	Clix VH/337/702
B7G	Valve Shield		Y11/663	Clix SCT/6301/SBM
SK1	Co-axial Socket		V8/300	UG58AU
S1	2 Pole Switch	AC Power	V14/796	Cutler Hammer 8372K8
PTT	Relay 2000Q with micro. switch LIN	HT Switching	V13/552	GEC
1	Fuse 3AG	HT Switching	V14/794	Den Dee
F1	Fuseholder, Panel mounting, AC Mains	AC Mains	V12/4	2A Type 3AG
FH1	Tools Aligning for I.F./R.F.	AC Mains	V12/41	
S2	Tools, Aligning for Trimmer 2 Pole Switch	Transformers Conds.	DIH/106	Vinten
XL2	Octal Socket	AC Power	DIH/105	Vinten
	Crystal Oven Unit	Crystal Oven Socket Temperature Control	V14/796	Cutler Hammer 8372K8
			Y11/646	
			Y2/26	James Knight JK0951



VINTEN COMMUNICATION PRODUCTS PTY. LTD.
VHF AM TRANSMITTER DCA TYPE T32 IDENT NO. Y5/814



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TOP VIEW