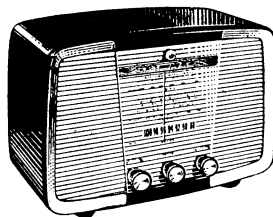


# **MURPHY SERVICE MANUAL SUPPLEMENT**

**FOR USE WITH THE A362 SERVICE MANUAL**



## **INTRODUCTION**

This supplement gives the differences between the A362T and the A362.

The A362T covers three wave-bands, Medium, Trawler, and V.H.F. Band II. The Trawler wave-band includes the frequencies used for the trawler radio-telephone transmissions; the full coverage of the band is from 66·7 metres to 187·5 metres (4·5 Mc/s to 1·6 Mc/s).

*Issued by*

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## NOTES

The differences between the two models lie in the aerial and oscillator coils, the wave-band switch, and some of the associated components, together with some other components mentioned in the parts lists. To prevent i.f. break-through on

the Trawler wave-band, an i.f. rejector (L20, C25) has been added in the aerial circuit.

The modifications detailed on pages 4 and 16 of the A362 manual are all incorporated in the A362T.

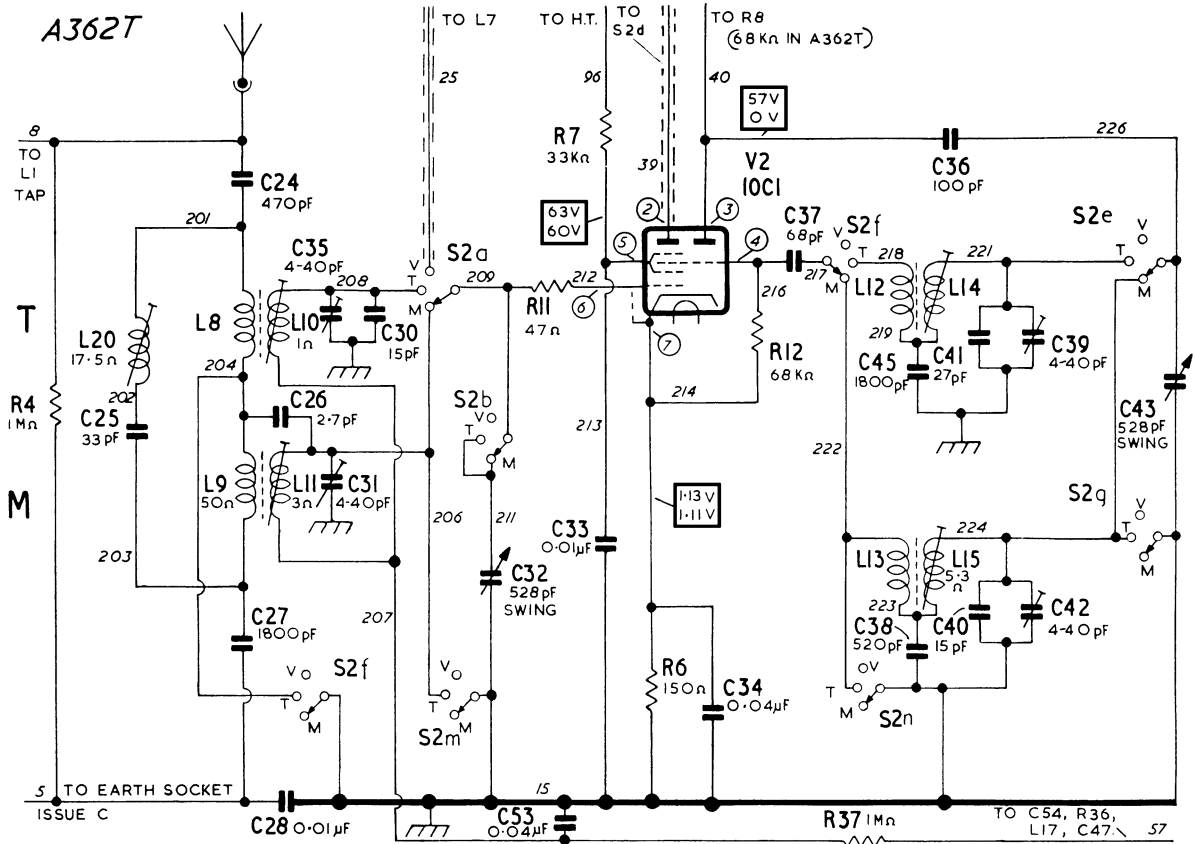


Fig. 1. The M and T band aerial and oscillator circuit.

The wave-band switch (S2) is shown in the M position. Circuit voltages are shown within rectangles and were measured under no-signal conditions using a 20 K $\Omega$ /V meter, with the receiver switched first to the M band (upper reading) and then to Band II (lower reading).

## CIRCUIT ALIGNMENT

The following notes cover the alignment of the Trawler band r.f. and oscillator circuits, and the i.f. rejector; the i.f., Medium wave, and Band II circuits are aligned as for the A362. The i.f. rejector and Trawler band adjustments must be made before the Medium wave-band adjustments. In normal circumstances, it is unlikely that the

i.f. rejector will need readjustment.

Since the A362 manual was published, the v.h.f. balancing capacitor (C21) has been changed to a fixed capacitor (5.6 pF,  $\pm 0.5$  pF, cer., 750V d.c., Part No. 66799). The references to the balancing capacitor adjustments on pages 2, 5, and 7 should therefore be disregarded.

PROCEDURE

**I.f. rejector.** Connect the signal generator to the T and M aerial and earth sockets via a dummy aerial and tune it to 470 Kc/s, with the modulation "on". Switch the receiver to the M band and tune it to the highest wavelength. Adjust L20 core for minimum a.f. output.

**Trawler band.** Connect the signal generator as above and tune it and the receiver to 2.5 Mc/s (120 m., or 79° on the receiver calibration scale);

adjust L14 and L10 (chassis top) for maximum output. Tune the signal generator and the receiver to 3.7 Mc/s (80 m., or 134° on the receiver calibration scale); adjust C39 and C35 (chassis underside) for maximum output. Repeat the adjustments until there is no further improvement.

*Note.* The receiver oscillator frequency is above the signal frequency.

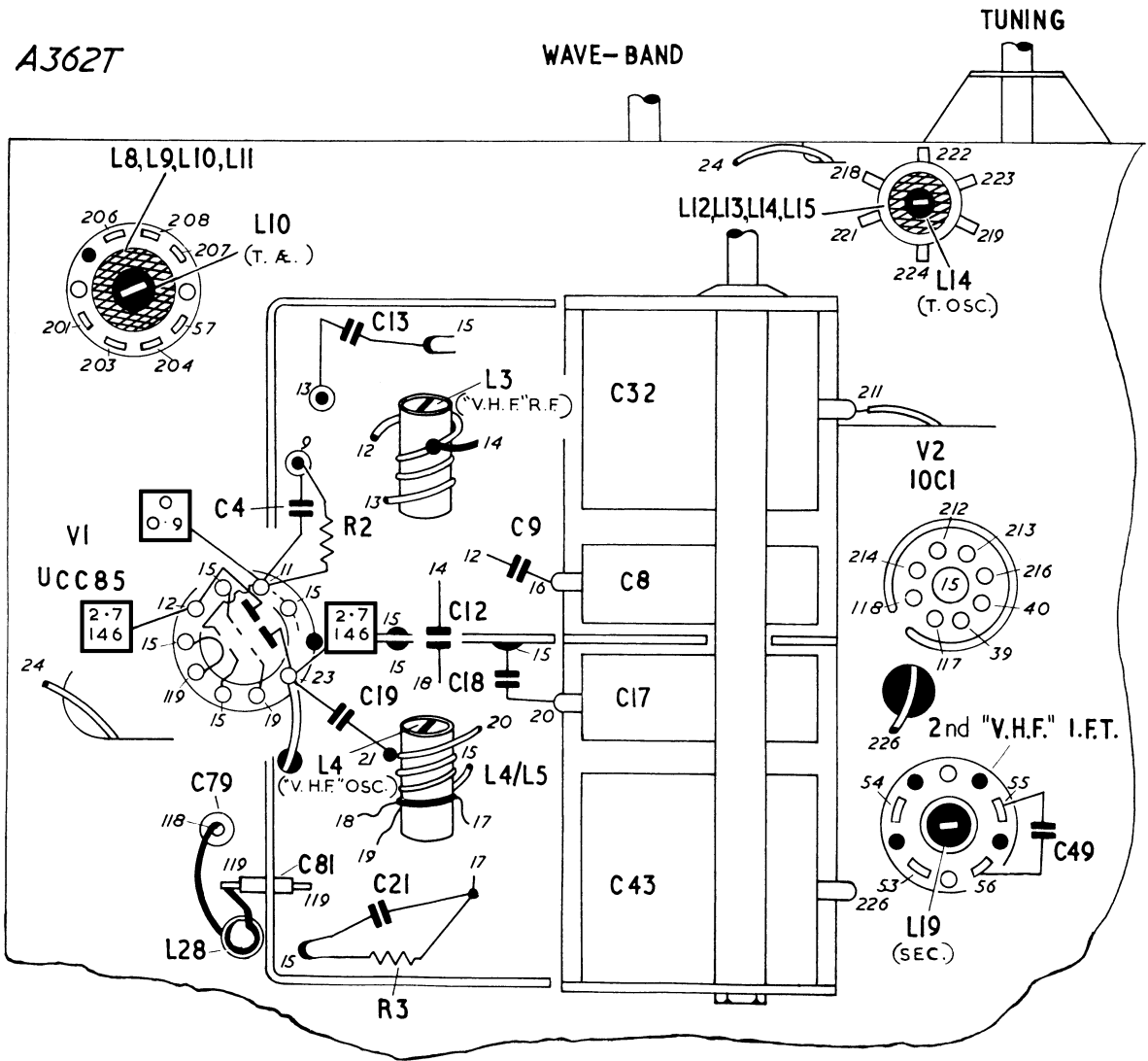


Fig. 2. The r.f. end of the chassis top showing the M and T band aerial and oscillator circuit connections.

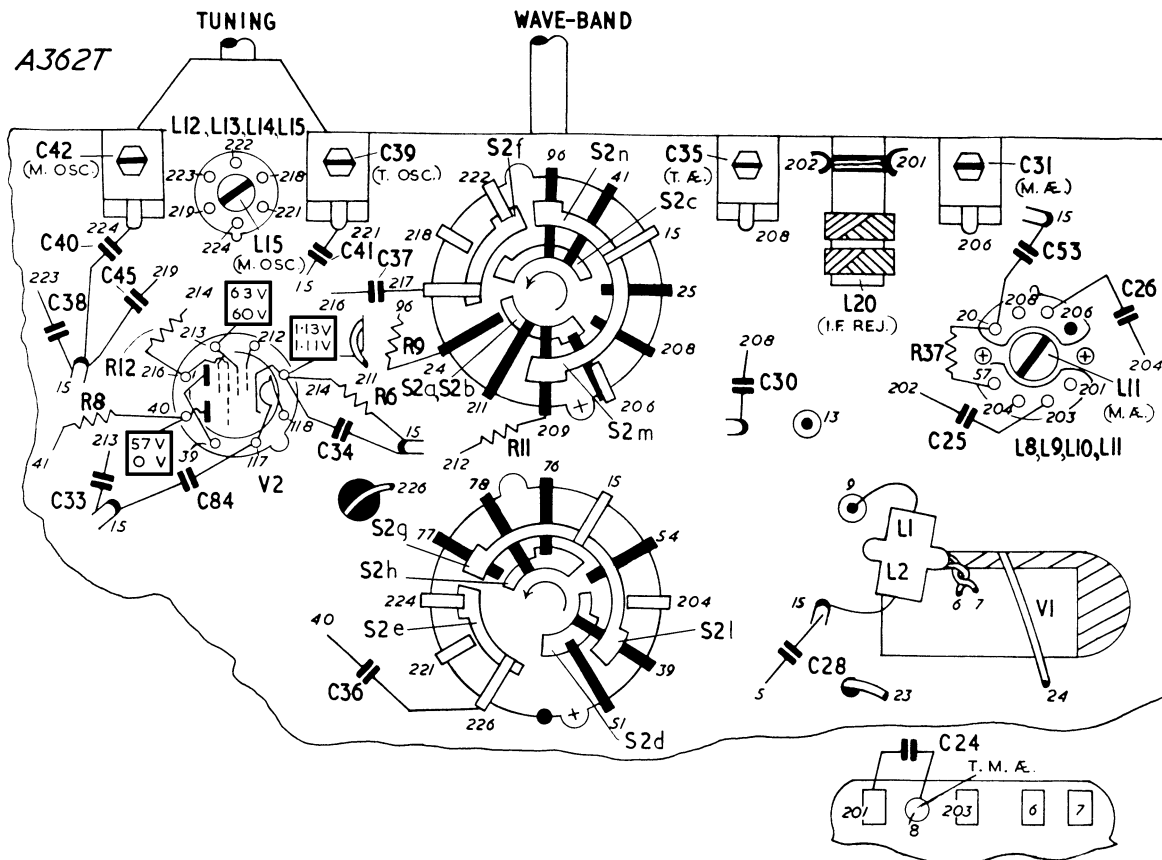


Fig. 3. The r.f. end of the chassis underside showing the M and T band aerial and oscillator circuit connections.

The wave-band switch wafers are viewed from the rear of the chassis and are shown in the M position; the black contacts and inner rotors are on the hidden sides of the wafers. The lugs marked with a cross are the nearer to the chassis.

## PARTS LIST

PART NO.	CIRCUIT NO.	VALUE	TOLERANCE AND REMARKS	PART NO.	CIRCUIT NO.	VALUE	TOLERANCE AND REMARKS
66799	C21	5.6 pF	±0.5 pF, cer., 750V d.c.	56152	{C76	50 μF	{+50% -20%, elec., 275V d.c.
28299	C25	33 pF	2%, p.s.m., 350V d.c.		{C77	50 μF	
—	C29	—	Not used in A362T	25637	R8	68 KΩ	10%, 0.6W
23602	C30	15 pF	10%, p.s.m., 350V d.c.		72151	{L8	—
67965	C32	528 pF (swing)	Ganged capacitor, T and M ae. section (with C8, C17, C43)	{L9		50 Ω	Coupling, M ae.
56323	C35	4-40 pF	Trimmer, T ae.	{L10		1 Ω	Tuned, T ae.
56322	C39	4-40 pF	Trimmer, T osc.	{L11		3 Ω	Tuned, M ae.
67498	C41	27 pF	10%, cer., -ve., 750V d.c.	{L12		—	Coupling, T osc.
67965	C43	528 pF (swing)	Ganged capacitor, T and M osc. section (with C8, C17, C32)	72152	{L13	—	Coupling, M osc.
—	C44	—	Not used in A362T	55856	{L14	—	Tuned, T osc.
28291	C45	1,800 pF	2%, p.s.m., 350V d.c.		{L15	5.3 Ω	Tuned, M osc.
28385	C68	470 pF	20%, p.s.m., 350V d.c.	73460	L20	17.5 Ω	470 Kc/s i.f. rejector
41404	C70	0.1 μF	20%, tub., 350V d.c.		Back		for cabinet
41409	C74	0.005 μF	25%, tub., 500V d.c.		Scale, tuning		Wave-band
				72156	Switch		
				72153			