

TABLE 1.1 - TWO FREQUENCY KIT PARAMETER

RT-85 EXCITER PCB COMPONENT VARIATIONS												
BAND (MHz)	OFFSET (MHz) (S)	HIGHER FREQUENCY	OSCILLATOR TYPE (KIT TYPE)	CRYSTAL FREQUENCY (MHz)	JP103	JP104	IC106	R194 CONNECTION	R114	C163	R116	R748
UHF (HB) (450-470)	9.5	Tx	1LY82282 (1LK82281)	7.725	OUT	IN	HD74LS93P	From IC106-8 to IC106-11 (N2=16)	OUT	12p	N/A	OUT
UHF (HB) (470-480) (490-500)	5.2	Rx	2LY82282 (2LK82281)	8.1	OUT	IN	HD74LS93P	N/A (N2=8)	OUT	120p	2K2	OUT
UHF (HB) (480-490)	5.2	Tx	3LY82282 (3LY82281)	6.65	OUT	IN	HD74LS93P	From IC106-8 to IC106-11 (N2=16)	OUT	12p	N/A	OUT
UHF (SHB) (500-520)	10.0	Rx	4LY82282 (4LK82281)	5.7	OUT	IN	HD74LS93P	N/A (N2=8)	8K2	120p	N/A	OUT
VHF (HB) (148-174)	0.81	Rx	5LY82282* (5LK82281)	5.1475	N/A	IN	N/A	N/A (N2=16)	N/A	N/A	N/A	N/A
VHF (HB) (148-174)	5.2	Rx	5LY82282* (5LK82281)	4.05	N/A	IN	N/A	N/A (N2=16)	4K7	N/A	N/A	N/A

* This module can be used with other frequency crystals and the required set of capacitors C3, C4 and C5.

N/A indicates "Not Affected", i.e. no change is to be made.

CRYSTAL FREQUENCY CALCULATION

Formula: $f_{XTL} = \frac{N1}{N2} f_{Tx}$

Where: $f_{Tx} = f_{Rx} - S$; for f_{Tx} below f_{Rx}
 $= f_{Rx} + S$; for f_{Tx} above f_{Rx}

$f_{Rx} = 21.4\text{MHz}$
 $S = \text{Spacing (MHz)}$
 $N1 = \text{Tx Oscillator Divider (4 in all cases)}$
 $N2 = \text{Tx PLL Divider (8 or 16)}$

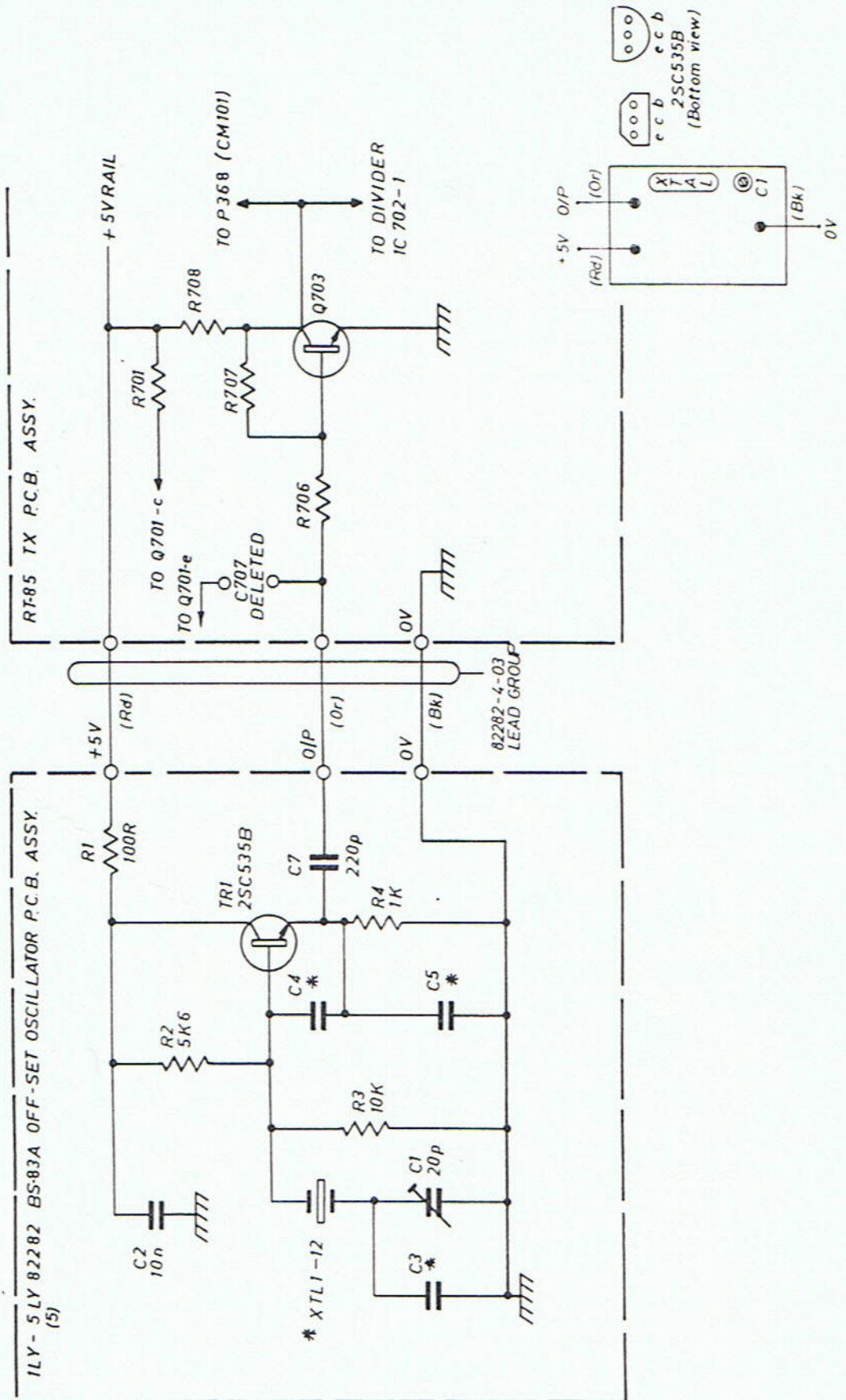


Fig 1.16 - Offset Oscillator Circuit Diagram