

APPENDIX 1

ACTIVE SEMICONDUCTOR FUNCTIONS

Reference	Type	Function
AF Circuit		
IC200	Dream T1	AF-amplifier and tone-Generator IC
IC250	NJM2068MD	OP amplifier
IC251	SA572D	Compander IC
RF Circuit		
Q101	2SC4226	RF-Buffer
Q102-103	2SC5226	RF Amplifier
Q104	2SC4738	RF-Power Controller
Q106	DTA114YKA	RF-Switch
IC5	MB1511PFV	PLL IC
IC8	NJU6366	PLL/ 9MHz Ref. Oscillator

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APPENDIX 2

CIRCUITS AND DEVICES TO STABILIZE FREQUENCY

Operating frequency is determined and stabilized by a PLL circuit using a 9MHz crystal-Controlled reference oscillator.

CIRCUIT AND DEVICES TO STABILIZE
FREQUENCY
FCCID: JFZT310D

CIRCUIT TO SUPPRESS SPURIOUS RADIATION AND CONTROL MODULATION**AUDIO CIRCUIT**

The audio signal is injected via the HRS connector into the audio circuit composed of the op amp in IC200, Dream T1, then compressed via the compandor circuit composed of the op amp IC250, and compander IC251 at a 2:1 ratio and is pre-emphasized by AF amp in IC200. The level of the output signal is controlled by the pot VR201 which is injected into the VCO, VCO100.

Output level of the 32.15kHz tone signal that produced by IC200 is controlled by the pot VR200 which is mixed with the audio output signal and injected into the VCO, VCO100.

MODULATOR CIRCUIT

The modulator circuit is a direct FM type built around the VCO, VCO100. The modulated output from the VCO is sent to the RF final amplifier which boosts the output to a nominal level of 10mW at RF output low setting or 30mW at RF output Hi setting.

RF PRE-AMPLIFIER & FINAL AMPLIFIER

The 3 transistor amplifier stages, using 2SC4226 and 2SC5225 type transistors, culminating with a normal transmitter output of 10mW at RF output low setting and 30mW at RF output Hi setting. The output filter comprised of L104, L105, L106, L107, C132, C133, C134 & C135 suppresses the output harmonics and the output to the antenna.

APPENDIX 3