

APPENDIX

CIRCUIT TO SUPPRESS SPURIOUS RADIATION AND CONTROL MODULATION

AUDIO CIRCUIT

AF signal obtained from the connector CN3 is feed in to the IC1 and amplified by the internal AF-AMP.

Amplified AF signal is then feed in to Comander circuit that consists with the IC101 op-amp and the compander IC3, compressed to 2 to 1 ratio.

Compressed signal is then Pre-Emphasized by the IC1 internal AF -AMP.

The 32.15KHz pilot tone signal produced by the Tone-Generator circuit in the IC1 is superposed by control signal produced by the IC201 micro controller.

Above two signals are adjusted appropriately by the VR51 (32.15KHz) and the VR1 (AF signal), then mixed and send to the VCO301.

The Q1 detect peak signal that applied to the CN3 and dimmer the power LED D207

MODULATOR CIRCUIT

The modulator circuit is a direct FM type built around the VCO, VCO301. The modulated output from the VCO is sent to the RF final amplifier, which boosts the output to a nominal level of .002W ERP (Low) or .005W ERP (High).

RF PRE-AMPLIFIER & FINAL AMPLIFIER

RF signal out from the VCO301 is feed in to the two stages RF amplifier consisted by tow 2SC5226 transistors, Q351 and Q354.

Q352 is switch for the RF amp first stage Q351.

Q353 is switch for the RF amp second stage Q351 and it controls RF output level to 10mW(Low) or 35mW(Hi) that sets individually by adjust power level control trimmers, VR351 (35mW) and VR352 (10mW).

The output filter comprised of L356 to 360 and C357 to 378 suppresses the output harmonics RF signal passed output filter is then feed in to the antenna connector C352 and then transmitted to the air by the external antenna connected to the C352.

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CIRCUITS AND DEVICES TO STABILIZE FREQUENCY

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

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