

2.4 DESCRIPTION OF OTHER CIRCUITS

NEMO21 INFORMATION & COMMUNICATIONS FCC ID : 07MRPO-401 JOB # : 318BK0 EXHIBIT # : 10

TRANSMITTER

(1) RF AMPLIFICATION

THE OUTPUT OF BUFFER AMP Q702 IS FED THROUGH TUNING C119 TO THE BASE OF PRE DRIVER AMP Q103.

THE OUTPUT IS THEN SUPPLIED THROUGH CAPACITOR C116 TO RF DRIVER AMP Q102.

THE OUTPUT OF Q102 IS SPLITTED WITH TUNING CIRCUIT L107, C111, C112, L113, AND GOES TO THE BASE OF FINAL RF AMP Q101.

THE OUTPUT OF Q101 IS SUPPLIED TO THE ANTENNA THROUGH L-C TUNING CIRCUIT.

(2) CIRCUIT FOR SUPPRESSION OF SPURIOUS RADIATION

THE TUNING CIRCUIT BETWEEN THE OUTPUT OF FINAL AMP Q101 AND ANTENNA, 4-STAGE

"PHI TYPE" NETWORK L101, L102, L103, C101, C102, C103, C104, SERVES AS A SPURIOUS RADIATION SUPPRESSOR.

THIS NETWORK ALSO SERVES TO MATCH THE IMPEDANCE BETWEEN TX FINNAL POWER AMP Q101 AND THE ANTENNA.

(3) MAXIMUM MODULATION CONTROL

MODULATION SIGNALS ARE FILTERED WITH RC NETWORK AND GOES TO THE AUDIO AMP IC401 TO MAKE NOMINAL SIGNAL LEVEL TO ACHIEVE WANTED MODULATION.

TO CONTROL INCOMING AUDIO SIGNAL, IC806 PIN14 AND CORRESPONDING LEVEL LIMITTING CIRCUIT CONTROLS WITH RV401.

ADJUST RV401 SHALL NOT EXCEED ± 2.5 KHz DEVATION UNDER.1KHZ AF 20dB UP FROM 1.5KHZ DEVATION LEVEL INPUT.

RECEIVER

(1) RF AMP Q5, Q6 AMPLIFY RF SIGNAL FROM ANTENNA,THE AMPLIFIED RF SIGNAL IS FED THROUGH TUNING LC FILTER L203, L204 TO THE BASE OF MIXER AMP Q7, ALSO VCO SOURCE'S FREQUENCY LOWER 21.7MHz THAN THE FREQUENCY OF EACH CHANNEL IS SUPPLIED TO MIXER

(2) THE SOURCE OF 21.7MHz FREQUENCY PASSED TUNING COIL L208, C237 IS FED THROUGH XF201 TO IF AMP Q8.

(3) THE 450KHz FREQUENCY SIGNAL PRODUCED FROM IC201 BY MIXING THE OUTPUT SOURCE OF XF201 21.7MHz FILTER AND THE SOURCE OF 21.25MHz FREQUENCY FROM CRYSTAL OSCILLATOR X501.

(4) THE IC201 IS A FM DETECTOR WHICH PRODUCES AUDIO SIGNAL THE AUDIO SIGNAL (IC201 PIN 9) IS FED THROUGH C229 TO AUDIO POWER AMP (IC301). FOR DRIVING SPEAKER.