The AN/ARC-54

Module Circuit Diagrams

1. Tone squelch (selective call)
2. Homing
3. High Frequency oscillator HFO
4. Low Frequency Oscillator LFO
5. Variable IF amplifier
6. RF Amplifier
7. Mechanical Tuning Unit
8. Power Amplifier
9. RF subframe
10. Main chassis
11
12. Fixed IF
13. Receiver Audio
14. Transmitter Audio
15. Power Supply Unit
16. Harmonic Filter
High Frequency Xtal Oscillator
26.025 … 64.025 MHz in 20 steps of 2MHz
Low Frequency Xtal Oscillator
4475 … 5425 kHz in 20 steps of 50 kHz
RF 30.00 … 69.95 in 800 channels of 50kHz
Variable IF 4975 … 5925 kHz
Fixed IF 500 kHz

RT 348 / ARC-54

Harmonic filter
Power Amplifier
Rx mixer
Tx mixer
RF Amplifier 30-70 MHz

Low Frequency Oscillator LFO

Tone squelch

Fixed IF 500kHz

AM detector

Variable I.F. 4-6 MHz

PSU

Squelch gate

FM Det.

Fixed IF 500kHz

Rx Audio

Frequency control

Squelch control

Mechanical Tuning unit

FM osc

Tx Audio
All diodes 1N276  Gold bonded germanium

ARC-54 RF Amplifier and High Frequency Oscillator
18 march 2011 kb
ARC-54 Var I.F and Low Frequency Oscillator
2 march 2011 kb
ARC-54  RF Power Amplifier

Tube heaters
5854  6.3V  0.175A
5686  6.3V  0.35A
7984  13.5V 0.58A
Ceramic filter
500kHz Bandwidth
40kHz TL42630C-1

To AM detector for homing

Encoded audio preamp

Audio out to tone and Rx audio

All 10 transistors 2N338

encoded audio preamp
Audio out to tone and Rx audio

Ceramic filter
500kHz Bandwidth
40kHz TL42630C-1

To AM detector for homing

Encoded audio preamp

Audio out to tone and Rx audio

All 10 transistors 2N338

encoded audio preamp
Audio out to tone and Rx audio

ARC-54 Fixed IF module
26 feb 2011 kb
ARC-54 Receiver Audio

28 March 2011 kb
K1001 controls the ±27V TR bus
K1002 is the antenna (coax) relay
K1 enables the +500 and +250V

**ARC-54 Power Supply**
25-2-2011 kb