

THE R-392 ON THE AIR

I recently purchased an R-392 and have been using it as a second receiver for several months.

The R-392 is a triple conversion receiver with a tuning range from 500 kHz to 32 MHz. This range is covered in one megahertz steps except for the first band which covers 500 kHz to 1 MHz. The calibration accuracy is 300 Hz.

Power Supply

The R-392 requires 28V dc approximately for both the filaments and plate supply. The total current required is 3 amps.

FILE THESE AREAS DOWN 1/8 IN. TO FIT.

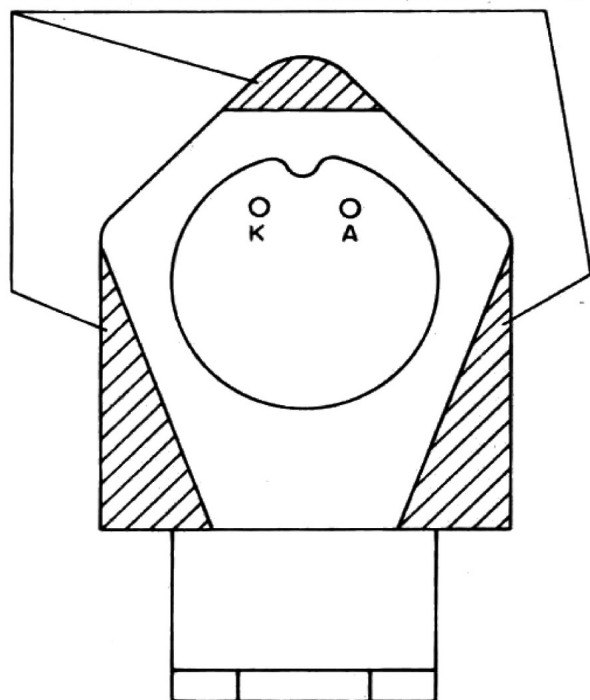


Fig. 1. Modification to power plug marked FRANK UW1320FA13.

The power supply uses a 27V transformer with a rating of at least 3 amps.

The regulator is a Darlington pair consisting of Q1 and Q2. The base of Q1 is controlled by a 27V zener diode. This sets the output voltage at the emitter of Q2 at somewhat less than 27V. Q2 is heat sunk to the chassis using a mica washer. Q2 is mounted with a mica washer on its own heat sink (a Motorola HEP 500 unit). This heat sink should be mounted in a vertical position with the fins at right angles to the top of the chassis. Mount Q1 and Q2 using silicone grease.

Power Plug

The power plug I purchased would not fit the receiver. I modified the plug by filing away part of the lower part of the case as seen in Fig. 1. The plug is labeled FRANK UW13020Fa13.

Audio

The audio output impedance is 600Ω. I use a speaker system with a 500Ω to 4Ω transformer installed in the speaker cabinet. Fair Radio Sales Co., P.O. Box 1105, 1016 E. Eureka St., Lima, Ohio 45802, sells the LS-166/U speaker recommended by the R-392/URR manual.

Controls

Most of the controls are standard on any communications receiver. The controls covered here are peculiar in the R-392.

FUNCTION SWITCH

Off – Power off.

Normal – Power on.

Limiter – Noise limiter on.

Net – Defeats transmit/receive relay.

SQ – Squelch. Received carrier trips relay to turn on receiver audio. The squelch level is controlled by the rf gain squelch thresh.

AGC SWITCH

Off – Removes AGC voltage from receiver grids.

On – Places automatic gain voltage on the receiver grids.

Cal – In the CAL position the 100 kHz calibration signal is turned on and the

CALIBRATION

Example:

Calibrate to the nearest 100 kHz the frequency of 7.200 MHz.

1. Turn AGC switch to CAL.
2. Turn on BFO and set BFO to 0.
3. Set MegaHertz dial to 7.
4. Set kiloHertz dial to 200.
5. Zero beat the 100 kHz signal with the kiloHertz dial.
6. Lock the kiloHertz dial.
7. Push in and adjust the dial zero to the nearest 100 kiloHertz.
8. Unlock dial zero.
9. Turn AGC switch to AGC.

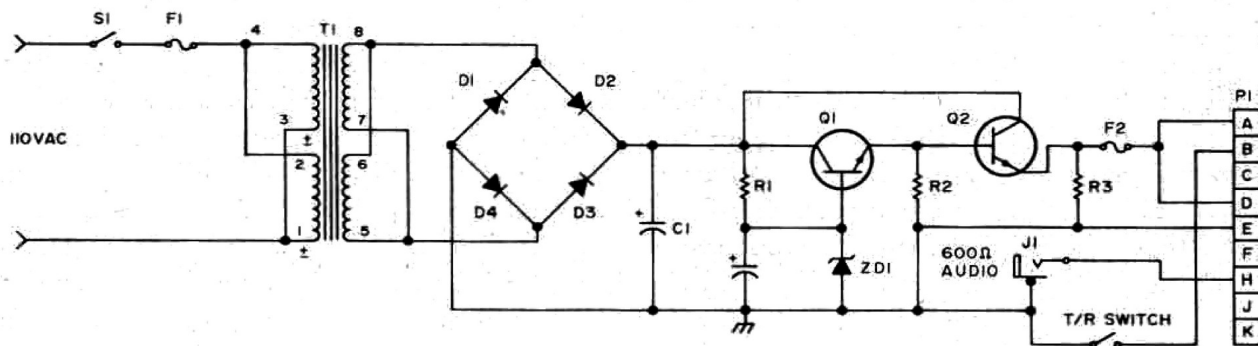


Fig. 2. R-392/URR power supply.

receiver input is removed from the antenna input connectors by a relay.

DIAL LOCK

Locks the kHz dial.

DIAL ZERO

When pushed in and turned this allows the kiloHertz dial to be moved a small amount when the dial lock is on.

I-F OUT

455 kHz out for i-f type FSK RTTY converter (possibly the CV 278 frequency converter) this output could feed an external i-f amplifier with a 455 kHz filter and a product detector.

TUNING

Example:

Let us say we want to receive on the 40m band on 7.250 MHz.

1. Set the MegaHertz dial to 7.
2. Set the kiloHertz dial to 250.

I would recommend the purchase of an instruction book for the R-392/URR receiver. This manual will give you complete information on repair, alignment and operation.

Parts List

Si – toggle switch.

F1 – 1.5A slow blow fuse.

F2 – 5A fast blow fuse.

T1 – Fair Radio Sales Co., Part No. 5950-645-3854. 26.4V @ 3.04A.

D1-D4 – 6A 100 Piv. HEP R0101

C1 – 4000 μ F 50V.

C2 – 100 μ F 50V.

R1 – 470 Ω 2W.

R3 – 1000 Ω 2W.

ZD1 – 27V zener diode HEP 608.

Q1, Q2 – RCA SK 3027 or HEP 704.

J1 – Phone jack.

P1 – R392/URR power plug. Fair Radio Sales Co.

Quantity
2 – HEP 450 transistor mounting kit (mica washer, socket and screws).

1 – HEP 500 heat sink.

1 – Tube of silicone grease.

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