

# INSTRUCTION MANUAL

*Clegg* VENUS

**SSB Transceiver For 6 Meters**

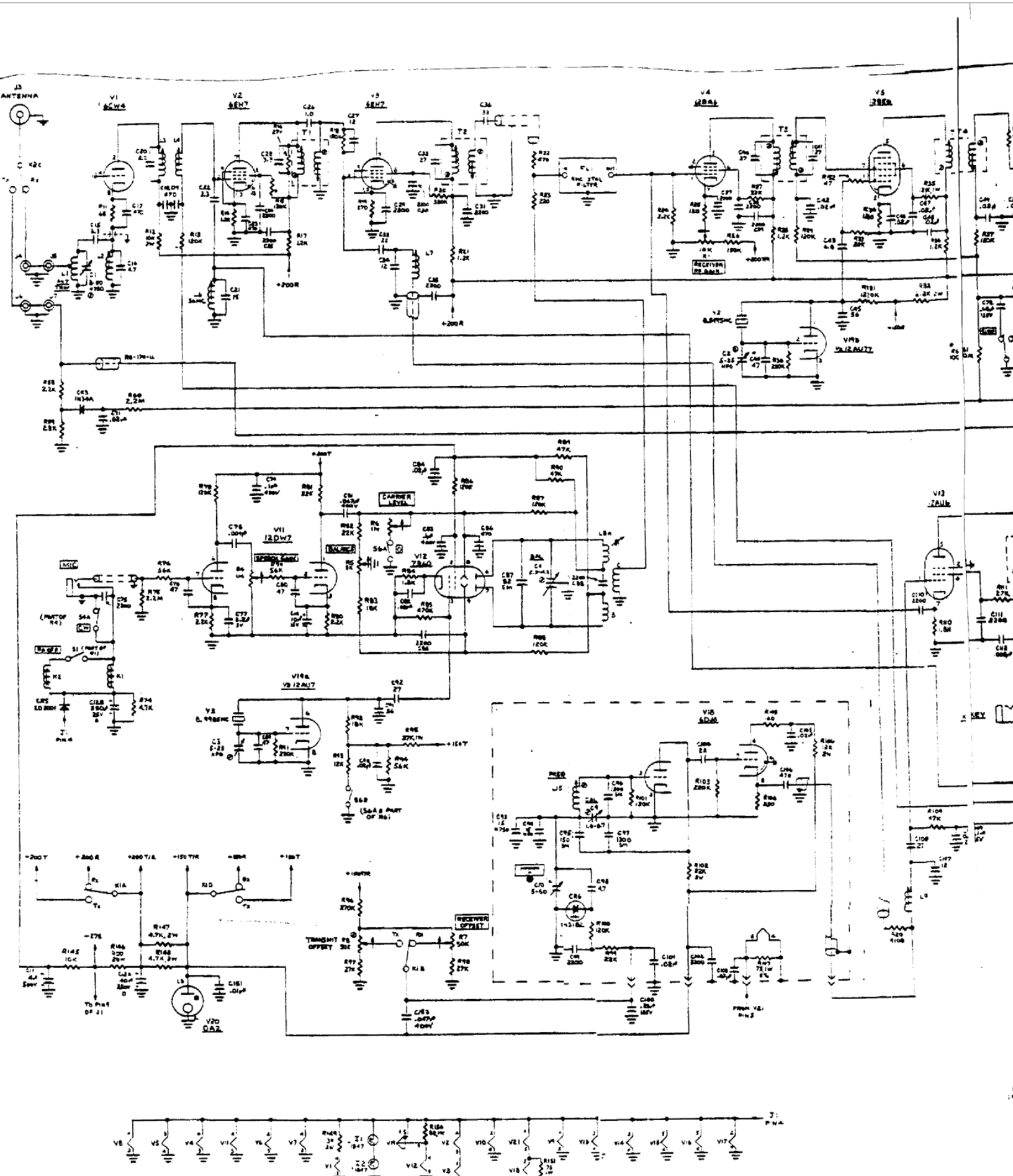


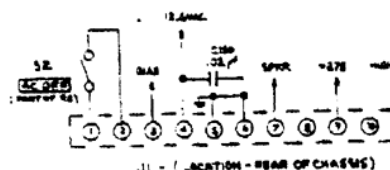
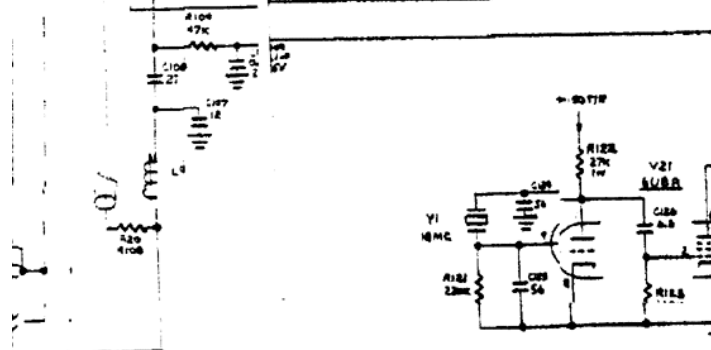
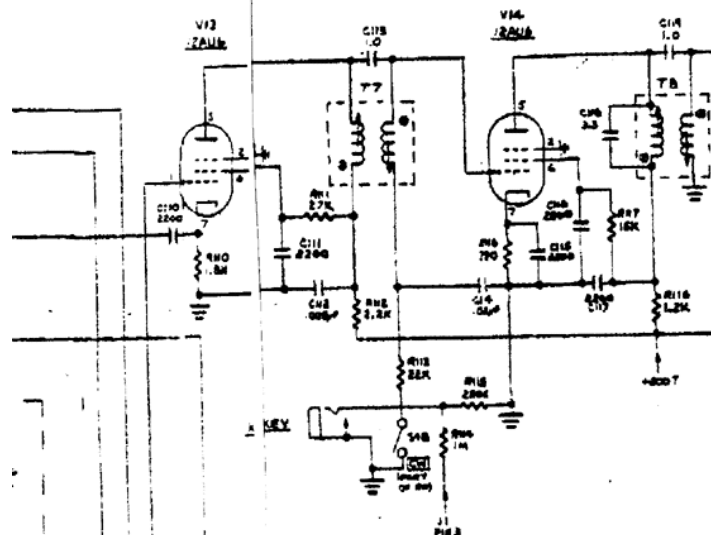
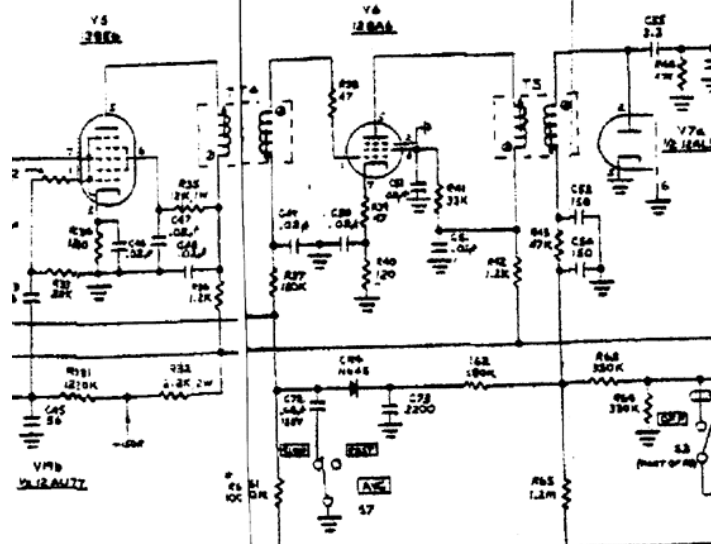
VENUS VOLTAGE TABLE

| TUBE  |   | 1    | 2       | 3       | 4       | 5       | 6       | 7       | 8    | 9      | 10     | 11  |
|-------|---|------|---------|---------|---------|---------|---------|---------|------|--------|--------|-----|
| V1    | R | —    | 108     | —       | GND     | —       | —       | —       | .63  | —      | 6.3Vac |     |
| 6CW4  | T | —    | 0       | —       |         | —       | —       | —       | 0    | —      |        |     |
| V2    | R | 4.3  | 0       | NC      | 12.6Vac | 6.3Vac  | GND     | 190     | 82   | 4.3    |        |     |
| 6EH7  | T | 0    | -50     |         |         |         |         | 0       | 0    | 0      |        |     |
| V3    | R | .64  | -.1     | NC      | GND     | 6.3Vac  | GND     | 192     | 25   | .64    |        |     |
| 6EH7  | T | 0    | -.7     |         |         |         |         | 0       | 0    | 0      |        |     |
| V4    | R | 0    | GND     | GND     | 12.6Vac | 192     | 87to195 | 1.5to27 |      |        |        |     |
| 12BA6 | T | -50  |         |         |         | 0       | 0       | 0to17   |      |        |        |     |
| V5    | R | -1.5 | 1.2     | 12.6Vac | GND     | 183     | 100     | 0       |      |        |        |     |
| 12BE6 | T | -.5  | 0       |         |         | 0       | 0       |         |      |        |        |     |
| V6    | R | -3.0 | GND     | GND     | 12.6Vac | 182     | 95      | 1.7     |      |        |        |     |
| 12BA6 | T | -1.0 |         |         |         | 0       | 0       | 0       |      |        |        |     |
| V7    | R | -.3  | -1.3    | GND     | 12.6Vac | GND     | GND     | -.6     |      |        |        |     |
| 12AL5 | T | .17  | -.3     |         |         |         |         | -.16    |      |        |        |     |
| V8    | R | -.5  | .8      | GND     | 12.6Vac | 135     | 38      | -.02    |      |        |        |     |
| 12BE6 | T | -.6  | 0       |         |         | 0       | 0       | -.02    |      |        |        |     |
| V9    | R | 65   | -.3     | .75     | 12.6Vac | GND     | 65      | 0       | .765 | NC     |        |     |
| 12DW7 | T | 83   | -.5     | .85     |         |         | 0       | 0       | 0    |        |        |     |
| V10   | R | NC   | 10      | 12.6Vac | GND     | 265     | 200     | 0       |      |        |        |     |
| 12AQ5 | T |      | 0       |         |         | 305     | 230     | -70     |      |        |        |     |
| V11   | R | 0    | 0       | 0       | 12.6Vac | GND     | 0       | 0       | 0    | NC     |        |     |
| 12DW7 | T | 160  |         | 7.15    |         |         | 160     |         | 1.49 |        |        |     |
| V12   | R | 3.3  | 156     | 0       | 6.3Vac  | GND     | 140     | 147     | 25   | 25     |        |     |
| 7360  | T | 4    | 152     |         |         |         | 142     | 150     | 27   | 26     |        |     |
| V13   | R | -75  | GND     | 12.6Vac | GND     | 0       | 0       | 0       |      |        |        |     |
| 12AU6 | T | -47  |         |         |         | 232     | 215     | 4       |      |        |        |     |
| V14   | R | 0    | GND     | 12.6Vac | GND     | 0       | 0       | 17      |      |        |        |     |
| 12AU6 | T |      |         |         |         | 230     | 195     | 2.75    |      |        |        |     |
| V15   | R | 0    | -76     | 0       | GND     | 12.6Vac | GND     | 0       | GND  | 0to-5  |        |     |
| 12BA7 | T | 80   | -5      | 1.17    |         |         |         |         |      | 225    |        |     |
| V16   | R | 0    | -37     | GND     | GND     | 12.6Vac | NC      | 285     | 285  | GND    |        |     |
| 12BY7 | T | 4.1  | 0       |         |         |         |         | 280     | 210  |        |        |     |
| V17   | R | 0    | 12.6Vac | 0       | 0       | NOTE 1  | 0       | GND     | GND  |        |        |     |
| 6883  | T |      |         | 237     |         |         |         |         |      |        |        |     |
| V18   | R | 41   | -1      | GND     | GND     | 6.3Vac  | 80      | 0       | 2.15 | GND    |        |     |
| 6DJ8  | T |      |         |         |         |         |         |         |      |        |        |     |
| V19   | R | 40   | -6      | GND     | 12.6Vac | 12.6Vac | 0       | 0       | GND  | 6.3Vac |        |     |
| 12AU7 | T | 0    | 0       |         |         |         | 26      | -4      |      |        |        |     |
| V20   | R | 150  | GND     | NC      | NC      | 150     | NC      | NC      |      |        |        |     |
| OA2   | T |      |         |         |         |         |         |         |      |        |        |     |
| V21   | R | 85   | -2.8    | 142     | 12.6Vac | 6.3Vac  | 183     | GND     | GND  | -6     |        |     |
| 6U8A  | T | 85   | -2.8    | 160     |         |         | 220     |         |      | -6     |        |     |
| J1    | R | 0    | 0       | -80     | 12.6Vac | GND     | GND     | 0       | NC   | 275    | NC     | 800 |
|       | T |      |         |         |         |         |         |         |      |        |        |     |
| J10   | R | -6   |         |         |         |         |         |         |      |        |        |     |
|       | T | 230  |         |         |         |         |         |         |      |        |        |     |
| J13   | R | 0    |         |         |         |         |         |         |      |        |        |     |
|       | T |      |         |         |         |         |         |         |      |        |        |     |

NOTE:

V17 PIN 5 - KEY DOWN -30V to -60V (R10)  
 - KEY UP -70V





## TUBE LINEUP

| <u>Tube No.</u> | <u>Tube Type</u> | <u>RECEIVE</u>                  | <u>TRANSMIT</u>            |
|-----------------|------------------|---------------------------------|----------------------------|
| V1              | 6CW4             | RF Amp                          | —                          |
| V2              | 6EH7             | 1st Mixer                       | —                          |
| V3              | 6EH7             | 2nd Mixer                       | —                          |
| V4              | 12BA6            | 9 MC amp                        | —                          |
| V5              | 12BE6            | 3rd Mixer                       | —                          |
| V6              | 12BA6            | 455 KC IF                       | —                          |
| V7A             | 12AL5/2          | AM DET                          | —                          |
| V7B             | 12AL5/2          | AM ANL                          | —                          |
| V8              | 12BE6            | Prod. Det.                      | —                          |
| V9A             | 12DW7/2          | 1st Audio                       | —                          |
| V9B             | 12DW7/2          | S-Meter amp.                    | Relative Output Meter Amp. |
| V10             | 12AQ5            | Audio Output                    | —                          |
| V11             | 12DW7            | —                               | Speech Amp.                |
| V12             | 7360             | —                               | Bal. Modulator             |
| V13             | 12AU6            | —                               | 1st Mixer                  |
| V14             | 12AU6            | —                               | 14 MC Amplifier            |
| V15             | 12BA7            | —                               | 2nd Mixer                  |
| V16             | 12BY7            | —                               | 50 MC Driver/Amp.          |
| V17             | 6883             | —                               | Final Power Amp.           |
| V18             | 6DJ8             | 5.0 to 5.5 MC Master Oscillator | and Cathode follower       |
| V19A            | 12AU7/2          | —                               | 8998.5 KC carrier osc.     |
| V19B            | 12AU7/2          | 3rd Mixer Osc.                  | —                          |
| V20             | OA2              | VOLTAGE                         | REGULATOR                  |
| V21             | 6U8A             | 36 MC Osc.                      | 36 MC Osc.                 |

