# 70 MHz RF system dummy load and associated equipment

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- **Need dummy load, stub-tuner, and directional coupler**
  - Load to absorb up to 2 MW peak power
  - Tuner to match amplifier output impedance
    - Output impedance varies with power ≈ 100 Ω
  - Directional coupler to tune output (maximum power transmission)

- **Dummy Load Performance Specifications:**

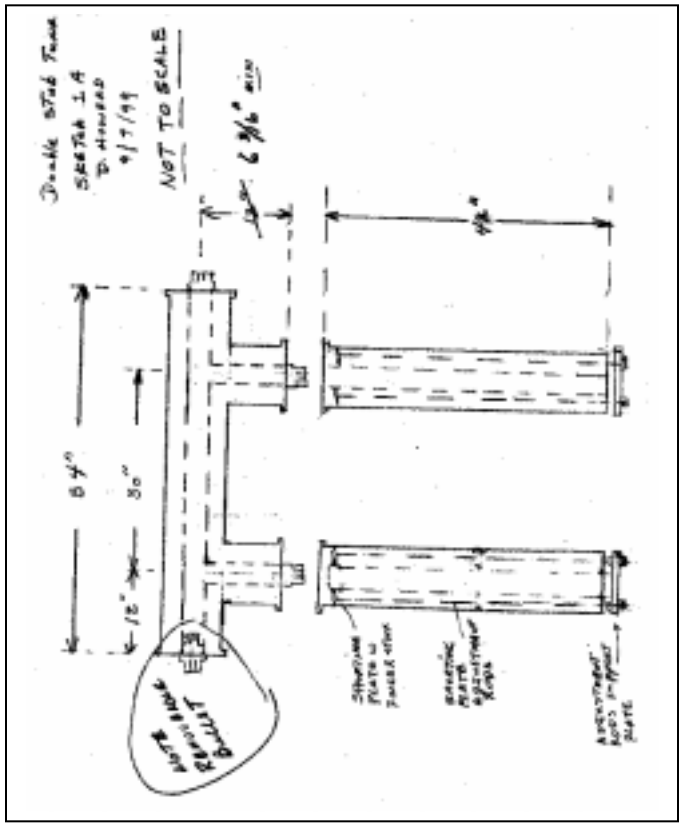
| | |
|---|---|
| Impedance | 50 Ohms |
| Operating Frequency | 30 – 200 MHz |
| VSWR, full operating band | 1.15:1 max |
| Peak Power Rating | $2.5 \times 10^6$ watts |
| Average Power Rating, continuous | $7.5 \times 10^3$ watts |
| RF Leakage | 1.0 mw/cm^2 max. Measured at 1' during full power operation |

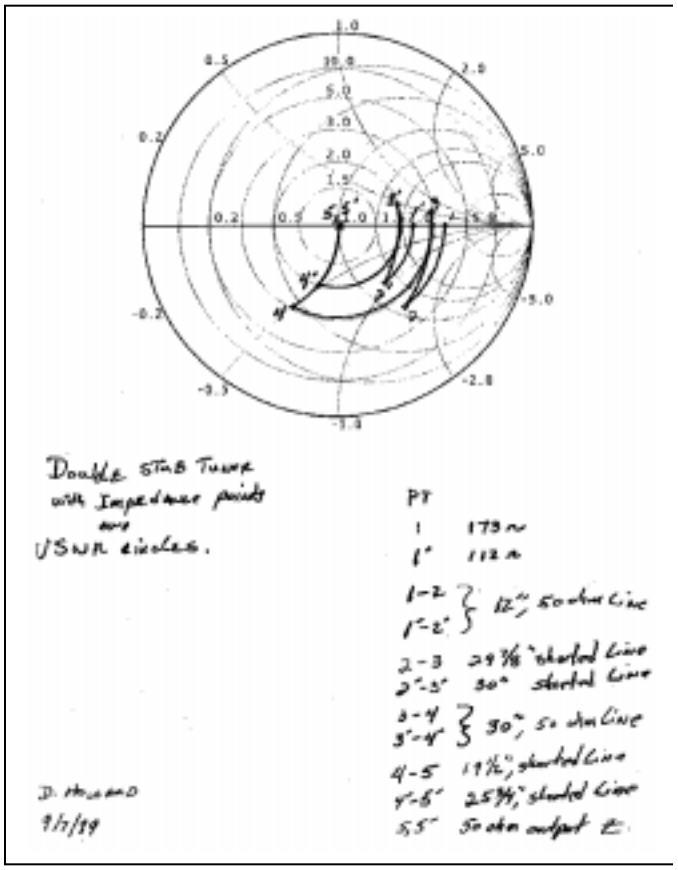
  - Load to be fully portable.
  - Water cooled.
  - Load to be interlocked in the form of contact closures, to indicate excessive dissipation and thermal overload.
  - Ambient operating conditions, 75 +/- 5 degrees Fahrenheit at sea level.
  - Input connector to be 9 3/16" EIA standard 50 ohm coaxial transmission line connector with removable male bullets.

q **Double Stub Tuner Performance Specifications:**

| | |
|---|---|
| Impedance | 50 Ohms |
| RF Leakage | 1.0 mw/cm^2 max. Measured at 1' during full power operation |

- ◊ Input connector to be 9 3/16" EIA standard 50 ohm coaxial transmission line connector with removable male bullets.
- ◊ Adapter connector to be included to mate the load input to the non-standard LBL designed coaxial line amplifier output. All required drawings to design stated adapter would be supplied.



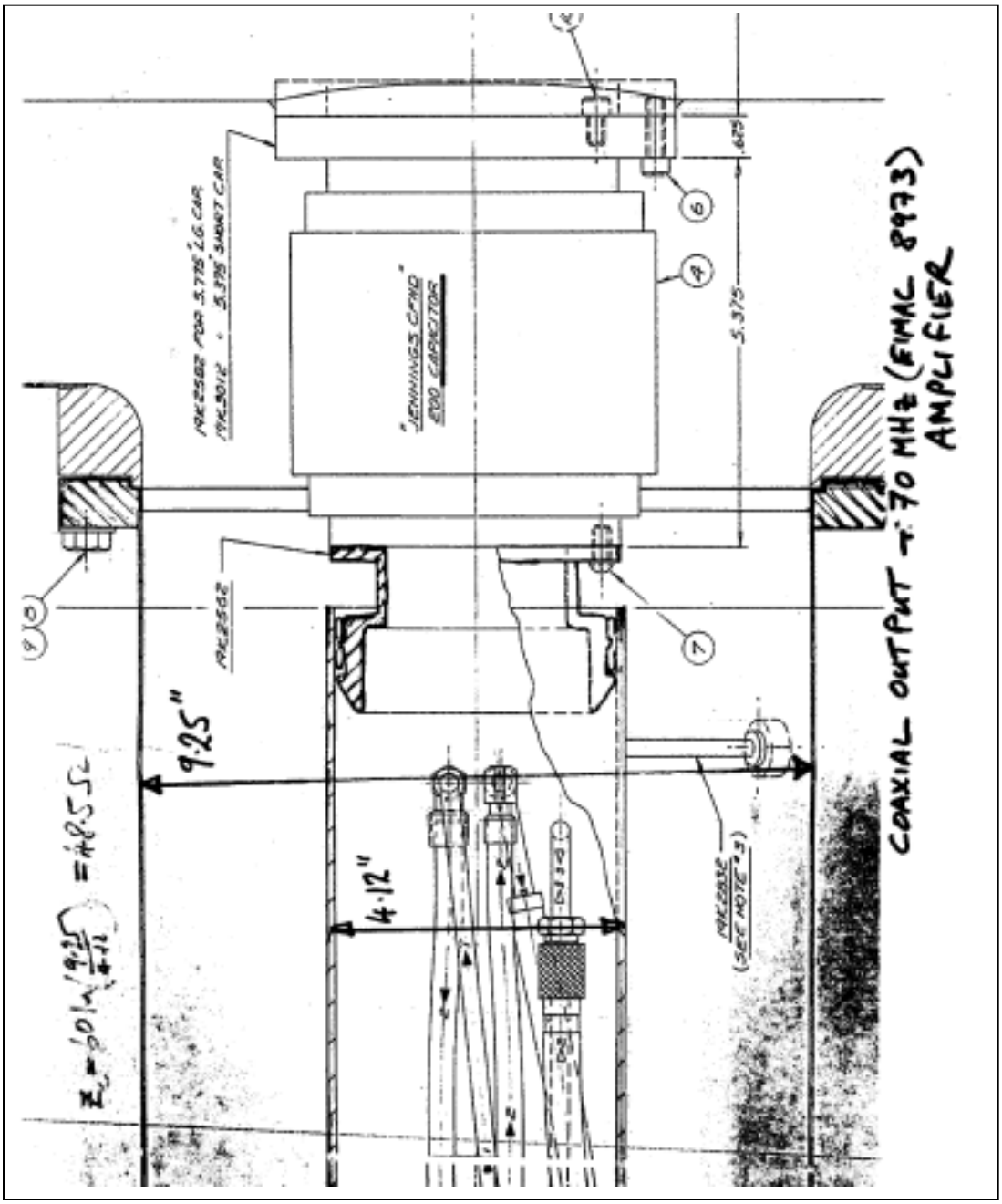
q **Directional Coupler Performance Specifications:**

| | |
|---|---|
| Impedance | 50 Ohms |
| Operating Frequency | 30 – 90 MHz |
| Peak Power Rating | $2.5 \times 10^6$ watts |
| Average Power Rating, continuous | $7.5 \times 10^3$ watts |
| Directional Coupler Attenuation | 60 db, incident and reflected |
| Directional Coupler Directivity | 25 db min. incident and reflected |
| RF Leakage | 1.0 mw/cm^2 max. Measured at 1' during full power operation |

◊ Input connector to be 9 3/16" EIA standard 50 ohm coaxial transmission line connector with removable male bullets.

q **Modifications to the amplifier output**

◊ provide interface between non-standard coaxial line on amplifier output and standard line stub-tuner



q **Potential vendors**

Altronics
CML Engineering
Dielectric Communications
Cablewave Systems
Mega Industries
Myat Inc
RFT RF Technologies Corp
Bird Electronic Corp.