

WaterHoletm

Volume 2001 Issue B

July 2001

RAInfo.net

12,000 MHz Radio Astronomy Telescope for less than \$200

In the past years I have been experimenting with the 18-inch DDS dish antennas. The dish and LNB have no problem detecting the difference between 3K cold sky, the Sun, warm bricks or a person's body.

I have been building the units, but not spending the required time using the units. This system is NOT a radio astronomy system to be used for serious sky surveys, but it is a tremendous starter unit to give you the excitement of detecting the Sun, your own body radiation or just 300 deg. K tree branches. The unit works great! With zero on the meter for a cold sky, it is full scale on the Sun and about 1/2 scale for a human or 300 deg. K.



A simple RF/IF/Detector unit is a Channel Master Model 1004IFD tuning meter that includes an **audible tuning indicator**.

The Channel Master Model 1004IFD tuning meter as shown below is available from www.starkelectronic.com for \$76 plus shipping.



What else do you need?

The unit normally gets 15 vdc from the satellite receiver in the house via the coax center pin. Put a RF choke of about any value in series with your positive power lead and feed it into the SAT RX terminal. Don't forget the ground or negative connection. The unit will work fine on 12 vdc, but 15-16 vdc is better.

Connect a section of CATV coax also from Radio Shack between the LNB connection on the tuning meter and the output of the LNB on the dish unit.

The output of the tuning meter can be fed into your computer. It's been noted that the coil in the meter movement would pick up movement of the unit by detecting changes in the earth's magnetic field, so you may want to

replace the meter with a resistor that can be switched in and out of the circuit.

What's next?

One of my dish and tuning meters was donated to the Space Place in Madison, WI to provide a demo radio telescope to use along with observations of sunspots. You could do the same!

Kerry Smith, a member of SARA, has detected the moon with his 4-foot dish.

Chuck Forster