

Dual Digital Satellite Meter with a built in 22KHz tone generator

Specifications:

Input Frequency:	950-2150MHz
Input Level:	-25 dBm - 75dBm
Insertion Loss:	3.5 dB
Impedance:	75 Ohms
Measuring Method:	LCD display with full text graphics Pitch tone on audio speaker
Power Supply:	From receiver through coaxial cable 12-18VDC or Optional external 10.8VDC battery with center pin positive (+)
Power Consumption:	40mA 50mA utilizing audio speaker
Overload Protection:	800mA LNB current draw limiter
Input Voltage Tolerance:	Battery up to +18vDC max Receiver up to +28vDC max
Accessories :	Leather carrying case, Rechargeable Ni-Cads, AC wall charger,
(Optional & Chargeable)	DC Auto-charger, RG-59 jumper with quick connectors

Overview

The meter can be connected directly to the DirecTV 5x4 switch or can be connected directly to any standard LNB.

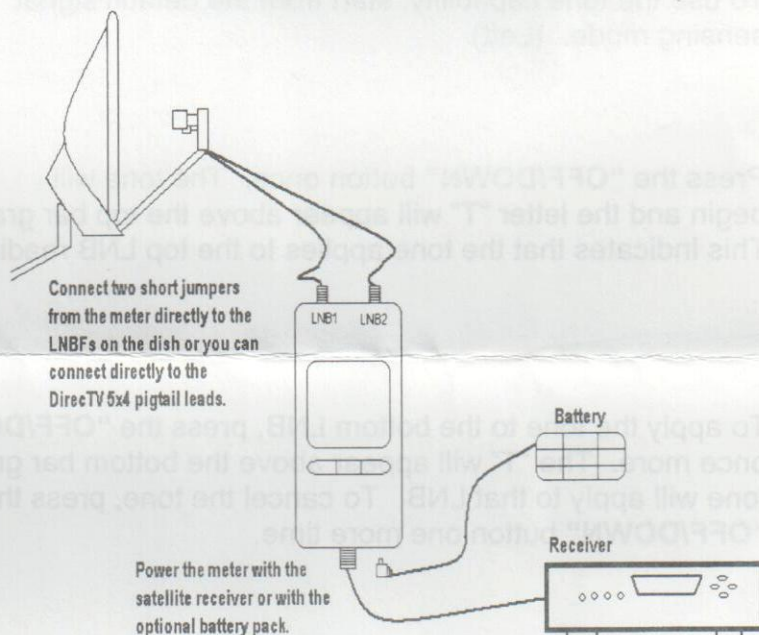
The meter can be powered by your satellite receiver or by connecting it to an optional battery. If you have a satellite receiver connected, the meter will default to the power "ON" state. If you are using a battery pack for power, you must press the "**ON/MENU**" button to turn the meter on.

You can have both the battery and the satellite receiver plugged in simultaneously without damaging any components.

We offer an optional battery pack or you can use a pack like in a cell phone as long as the center pin of the input jack is positive (+) and it supplies no more than 18vDC.

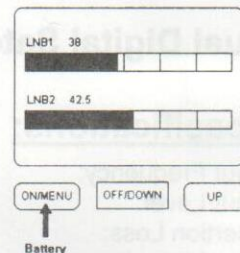
The meter is designed to be an aid in aligning satellite antennas so that they can provide maximum performance. Please be aware of the fact that there are numerous satellites which will cause the meter to respond with a signal reading. The installer must select the correct satellite(s) for alignment. It is quite easy to select the wrong satellite and find that the satellite receiver indicates "No Signal". The software provided with the satellite receiver can provide the elevation and azimuth of the satellite(s) desired. With this information in-hand and a good compass you can point the antenna in the proper direction. Then, with the aid of the meter, the performance of the antenna can be maximized by watching the tuning bar and digital strength readings.

Please take time to read this instruction manual so you will be familiar with the capabilities of the meter.



Operation

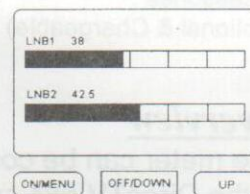
Connect the satellite receiver or (optional) battery to the meter. If you have connected a satellite receiver, the meter will power up automatically. If you are using a battery, press the **"ON/MENU"** button. The meter is immediately ready to begin antenna alignment. The signal strength is indicated in digits just above each bar graph. As you move the dish, you will see the increase and decrease in signal strength. The objective is to maximize the signal reading on both bar graphs by minor azimuth, elevation and rotation adjustments. When you have maximized the readings, lock the mount bolts. Reattach the LNBs to the switches or cables provided with the antenna. Then check your efforts with the satellite receiver.



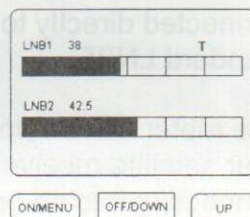
Audible Tone

An audible tone is available if you would prefer listening to the meter rather than trying to watch the digital readings or bar graph. The audible tone is selectable and applies to only one LNB at a time.

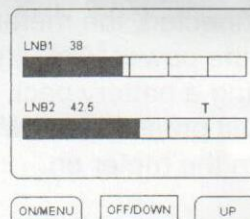
To use the tone capability, start from the default signal sensing mode. (Left)



Press the **"OFF/DOWN"** button once. The tone will begin and the letter "T" will appear above the top bar graph. This indicates that the tone applies to the top LNB reading.

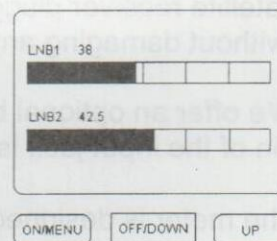


To apply the tone to the bottom LNB, press the **"OFF/DOWN"** button once more. The "T" will appear above the bottom bar graph and the tone will apply to that LNB. To cancel the tone, press the **"OFF/DOWN"** button one more time.

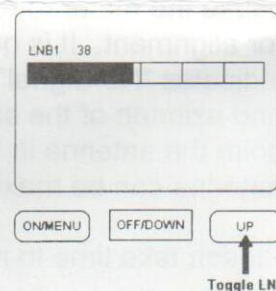


General Information

Note that you must select only one LNB to receive video signals for a viewable picture. The meter is effectively dividing it's attention to both ports LNB1 and LNB2 when both bar graphs are presented. This is perfect for dish alignment but interrupts the data stream to the receiver(s) and they will present no video in this mode.



If you want to check the video with the meter in the line, press the **"UP"** button to select the LNB you would like to view. This illustration indicates that we have selected LNB1. The video data will now pass smoothly from LNB1 through the meter and can be interpreted correctly by the satellite receiver.



The meter can provide much more information about your satellite system. To access the expanded menu area, press the **"ON/MENU"** button. The screen illustrated (left) will appear and provide a very detailed range of tests and adjustments. The menu map as well as details about what each function can do for you is listed in this manual. Press the **"UP"** or **"OFF/DOWN"** button to scroll the arrowhead pointer up and down through the menu.

>VIEW SIGNAL
VIEW RECEIVER
22KHZ MODE
MAX HOLD
ATTEN
LCD-CONTRAST

ON/MENU

OFF/DOWN

UP

Menu Discussion

VIEW SIGNAL

This is the screen you will see when you first turn the meter on. These bars indicate the general signal strength of both LNBFs. If desired, you can look at only one LNB by pressing the **"UP"** button. Press the **"UP"** button again to look at only the second LNB, one more press of the **"UP"** button takes you back to both LNBFs.

VIEW RECEIVER

Displays the voltage provided by the satellite receiver or battery. Indicates the current draw in mA of the LNB (if only one is connected) or total draw of both LNBFs if two are connected. Also indicates if a 22KHz tone is being sent by the receiver. These readings verify the receiver operation. Also, you can measure voltage at the receiver and then at the end of the coax, this will help calculate the voltage loss through the coax cable.

Pressing the **"OFF/DOWN"** button brings up a second screen which displays the requested port number from a DishNetwork receiver.

22KHZ MODE

The meter has a built-in 22KHz tone generator which can be activated by this function. This allows you to control many typical switches (such as the DirecTV 5x4 switch) and select two different LNBFs at the same time. For example you can look at the 119° satellite (if the 22KHz tone is activated) on the top graph and 101° on the bottom bar graph simultaneously. If the 22KHz is set OFF the tone will NOT pass from a receiver. Note that the 22KHz tone can only be activated on LNB1 (top port ONLY).

MAX HOLD

This function superimposes a small bar at the end of the bar graph (signal strength) which keeps track of the maximum signal received. This can be turned on or off as needed.

ATTEN

The attenuate item is hidden from view, you must press the **"OFF/DOWN"** button to scroll down to it. This attenuates (reduces) both the signal meter readings to lower numbers. Handy if the bar graph is maxed out. Note that the 'A' text is now displayed. To turn this feature off, go back to **>ATTEN** and select OFF.

LCD-CONTRAST

Scroll down to **"DARKER"** or **"LIGHTER"**, then press the **"ON/MENU"** button repeatedly to darken or lighten graphics. Scroll back up to **"EXIT"** and press the **"ON/MENU"** button to save.

AUTO OFF

This sets the automatic timer to turn the meter off when the battery is used for power. Scroll down to the setting you prefer and press the **"ON/MENU"** button to save the time you selected.

Menu Map

Press **"ON/MENU"**

Then scroll down with
the arrow head selector

>VIEW SIGNAL

Press **"ON/MENU"**

LN81 38
LN82 42.5

>VIEW RECEIVER

Press **"ON/MENU"**

GENERAL:
VOLT = 15.8
CURR = 000MA
22K = OFF

Press **"OFF/DOWN"**

DISH SWITCH
Sw21 = PORT #1
Sw42 = PORT #1
Sw84 = PORT 1A

>22KHZ MODE

Press **"ON/MENU"**

> RECEIVER
OFF
ON
TOGGLE

Press **"ON/MENU"**

LN81 38
LN82 42.5

RECEIVER
>OFF
ON
TOGGLE

Press **"ON/MENU"**

Kills 22KHZ tone from receiver

LN81 38 OFF
LN82 42.5

RECEIVER
OFF
>ON
TOGGLE

Press **"ON/MENU"**

LN81 38 22K
LN82 42.5

RECEIVER
OFF
ON
>TOGGLE

Press **"ON/MENU"**

Toggles between ON and OFF

LN81 38 22K
LN82 42.5

>MAX HOLD

Press **"ON/MENU"**

>MAXHOLD ON
MAXHOLD OFF

Press **"ON/MENU"**

Maximum bar is indicated

LN81 38
LN82 42.5

MAXHOLD ON
>MAXHOLD OFF

Press **"ON/MENU"**

Maximum bar deleted

LN81 38
LN82 42.5

>ATTEN

Press **"ON/MENU"**

ATTEN ON
>ATTEN OFF

Press **"ON/MENU"**

LN81 38
LN82 42.5

>ATTEN ON
ATTEN OFF

Press **"ON/MENU"**

LN81 1.5 A
LN82 1.9 A

>LCD-CONTRAST

Press **"ON/MENU"**

>EXIT
DARKER
LIGHTER

>AUTO OFF

Press **"ON/MENU"**

>OFF
1 MIN
5 MIN
15 MIN