



## SSM-22 Satellite Signal Meter WITH RECHARGEABLE NICAD BATTERY AND CHARGER

### APPLICATIONS

The SSM-22 is used in the alignment of a satellite antenna (dish) and for checking the signaling from a satellite receiver (IRD) to an LNB. It can supply LNB voltages of 13V, 13V/22KHz, 18V, 18V/22KHz to an LNB from its internal rechargeable nicad battery. It will also check for those signals from an IRD.

### SPECIFICATIONS

Frequency range	950-2150MHz
Impedance	75 ohm
RF Connectors	Type F female
Sensitivity (per transponder)	-33 to +5 dBm 1 transponder -45 to -7 dBm 16 transponders -48 to -10 dBm 32 transponders
Insertion Loss	4dB
Signal Indicator	Analog Meter and Audio Tone
LNB Voltage Measurement	0-25VDC
LNB Current Measurement	0-500mA
LNB Voltage	13V, 18V, 13V/22KHz, 18V/22KHz
Tone Output	0.6V square wave, 22KHz
Tone Indicator	Requires >300mV, 18-24KHz
Nicad battery capacity	600 mA hour
Time Between Charges	3 hours between charges at 175 mA LNB current
Wall Plug Charger Output	24VDC at 100 mA
Charge time	10 hours
Dimensions H x W x D	3.6" x 5.8" x 4.3" (91 x 147 x 109 mm)
Weight	33 oz. (950g)

### WARRANTY

This Pro Brand International, Inc. (PBI) equipment is warranted to be free from defects in material and workmanship under normal use and service for ONE (1) YEAR. PBI shall repair or replace this unit, model SSM-22 if tested defective, at no charge, or at its option, refund the purchase price, if the equipment is returned to PBI not more than 1 YEAR after shipment. PBI is not responsible for shipping expenses for repair or replacement of equipment.

No warranty claim shall be honored on any unit that has been repaired or altered in any way so as to affect its stability or durability, or which has been subject to misuse, negligence or accident. This warranty does not cover equipment which has been impaired by severe weather conditions such as excessive wind, ice, storms, lightning or other natural occurrences over which PBI has no control, nor shall this Warranty apply to equipment which has been operated or installed other than in accordance with the instructions. Contact PBI immediately upon failure and confirm a RMA number from the customer service department.

**This warranty is expressly in lieu of all other agreements and warranties, expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, PBI does not authorize any person to assume for it the obligations contained in this warranty and PBI neither assumes nor authorizes any representative or other person to assume for it any other liability in connection with the equipment delivered or provided.**

**In no event shall PBI be liable for any loss of profits, loss of use, interruption of business, or indirect, special or consequential damages of any kind.**

In no event shall PBI be liable for damages in an amount greater than the purchase price of the equipment.



## 1) Operating From The Internal Battery

This feature allows alignment of the satellite dish prior to installation of the IRD or coax cable download.

Connect the unit as shown in Fig 4a.

Select "BATTERY ON".

## 2) Operating from the satellite receiver

This feature allows checking of the IRD voltage, current and any 22KHz tone supplied to the LNB.

Connect the unit as shown in Fig 4b.

Select "BATTERY OFF".

## 3) Testing the internal battery condition

Select "BATTERY ON", Select "18V", Select "V" Check the indicated voltage is in the "green" region.

Recheck with an LNB connected.

If the indicated voltage is in the "yellow" or "red" regions, then the battery requires charging.

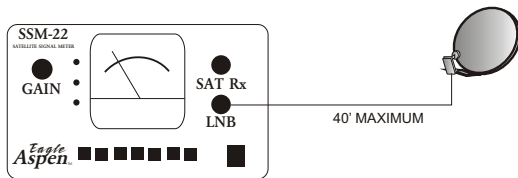
Refer to the section on Battery Care.

## 4) Connecting the unit

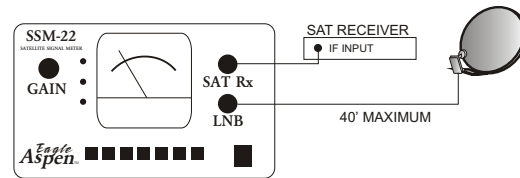
Connect the unit as shown with a short cable between meter and LNB.

Take care to avoid short circuits on the coax cable and NEVER connect the IRD to the meter's LNB connector.

4a. LNB powered from built-in battery.



4b. LNB powered from satellite receiver.



## 5) Setting LNB Voltage to 13V or 18V

This only applies when using battery power. Select the correct position on the 13V/18V switch. In most systems, this will select either of the two available polarizations.

## 6) Setting LNB Voltage to 0 KHz or 22 KHz

This only applies when using battery power. Select the correct position on the 0 KHz / 22KHz switch. The 22KHz setting should only be used to select the "alternate satellite" in dual satellite systems that use continuous 22KHz tone signalling, AND where an INTEGRATED LNB/multiswitch is used, thus making a direct connection to the LNB impossible. An LED indicator shows when a 22KHz tone is supplied to the LNB.

## 7) Measuring the LNB Voltage

Select the "V" position of the switch. The meter then indicates LNB voltage. LED indicators also confirm the LNB voltage is above or below 15V.

## 8) Measuring the LNB Current

Select the "mA" position of the switch.  
The meter then indicates LNB current.

## 9) Dish Alignment

Set up and approximately align the dish using the system instructions. On the meter, select level and tone if required. Adjust the dish for maximum reading on the meter or highest pitch tone. Use the "GAIN CONTROL" to maintain approximately 80% meter indication.

## 10) Battery Care

Prior to using a new meter, charge the unit overnight. During charging, for the correct charge rate to be obtained, "BATTERY OFF" must be selected.

When the battery condition indicator is at or near "yellow", the unit should be recharged overnight. This will normally occur after approximately 3 hours of typical use.