

Labgear

S201 Satellite Meter

User Guide



Contents

1	Safety warnings and important information	2
2	Introduction.....	3
3	Key Features	3
4	Product Overview.....	3
5	Battery disposal.....	2
6	Main Menu.....	4
7	Before You Start, set up Tools.....	5
8	Choose Your Preferences in System Settings	6
9	Rough Alignment using the calculator in Tools	6
10	Measure levels and quality with Signal Scan	6
11	Advanced Features	7-8
	a. Satellite Manager	8
	b. Satellite Settings	8
	c. Transponder Manager	8

1 Warning:

Do not disassemble the meter. Do not submerge in water.

Do not leave it unattended when charging.

Do not leave unused for extended periods of time. Routinely check the charge status of the meter, and charge accordingly.

Lithium-ion batteries can explode, or cause injury if disassembled, short circuited, or exposed to high temperature. The meter is powered by a 7.4V/800mAh Li-Ion rechargeable battery pack and must be treated with caution and care.

To prevent the risk of fire, electrical shock and personal injury, avoid using any mains charger or 12V car charger other than the one supplied with the product and avoid handling the battery improperly. Always make sure the meter is disconnected from any power sources, and the battery removed when performing any routine cleaning. Do not try to repair the unit or charger yourself.

Important Information:

- Do not dispose of the battery with domestic waste, please use an appropriate recycling facility
- Do not charge the battery in a high temperature environment
- Do not let the battery become wet or immerse the battery in water
- Avoid exposing the battery to excessive shock or vibration
- Do not use a damaged battery
- Keep the battery away from children
- When charging has completed the charger must be switched off and disconnected from the mains and the meter
- Do not pull the lead of the charger when disconnecting it from the mains power supply
- Do not use an extension lead. Plug the charger directly into an electrical socket
- Never use a damaged charger or a charger with a damaged lead. Dispose of the damaged charger safely at your local recycling centre in the Waste Electrical and Electronic Equipment (WEEE) disposal area, where facilities exist. Check with your local authority for recycling advice. Contact our Customer Care line for a replacement.
- If the charger fails to operate dispose of it safely at your local recycling centre in the Waste Electrical and Electronic Equipment (WEEE) disposal area, where facilities exist. Check with your local authority for recycling advice. Contact our Customer Care line for a replacement.
- Charging temperature range: 0°C to 45°C
- Operating temperature range: -20°C to 60°C

2 Introduction

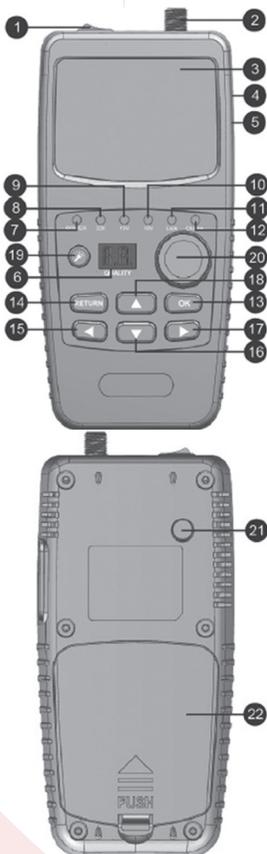
Thank you for choosing the Labgear S201, a great aid to satellite dish and LNB alignment, pre-loaded with masses of data and tools to make your job simpler and quicker.

Before you start please take time to read through this instruction leaflet which we hope will help you get the most out of your meter.

3 Key Features

- Digital Satellite Meter compatible with DVB-S and S2 and DiSEqC 1.0/1.1 with 22kHz tone
- Displays both signal strength and signal quality with sound and light alarms to aid alignment
- Computes Azimuth, dish Elevation and LNB Polarisation angles for all satellites based on your location
- Stores information on 100 of the most popular satellites worldwide
- LNB short circuit protection built-in
- Includes magnetic compass to assist alignment
- 7.4V/800mAh rechargeable Li-Ion battery and mains power charger included
- Easy to carry with protective sleeve and shoulder strap
- Software upgrades possible from a PC using the USB port and cable supplied

4 Product Overview



No	Description	Function
1	Power Switch	Turn meter on/off
2	LNB IN	Connect to satellite down lead
3	LCD Screen	Colour display
4	Micro USB Port	Connects to PC for software updates
5	DC Socket	Connects to charger
6	Digital display	Shows signal quality
7	Power	Power indicator light
8	22KHZ	22Khz indicator light
9	13V	Vertical polarization voltage output light
10	18V	Horizontal polarization voltage output light
11	LOCK	Signal lock indicator light
12	Charger	Charging LED indicator
13	OK	OK key
14	Return	Return key
15	◀	Left key
16	▼	Down key
17	▶	Right key
18	▲	Up key
19	🔦	Torch Switch
20	Compass	Magnetic compass
21	Torch	LED light
22	Cover	Battery compartment

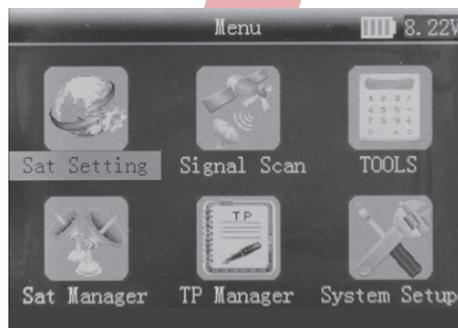
5 Battery Charging

1. Ensure that the meter is switched off. Connect the charger plug to the charging socket (5) on the right hand side of the meter.
 2. Plug the charger into a mains socket the charging LED indicator (12) will light up green.
 3. When the battery is fully charged, the charging LED indicator (12) will go out.
 4. Unplug the charger from the mains socket and disconnect the charger from the meter.
- Do not leave the torch unsupervised when charging is taking place.

6 Main Menu

Switch the power ON and you will enter the main Menu which shows battery status and has the following options:

- Sat Setting
- Signal Scan
- TOOLS
- SAT Manager
- TP Manager
- System Setup



7 Before You Start – choose the satellite and enter your location

Use the ◀ ▶ keys to select TOOLS and press (OK).

The display will open with the cursor on Satellite Name. To select a different satellite press ▶ now scroll up or down using the ▲ ▼ keys until you find the satellite you want. Satellites are listed in order of their location angle, e.g.

No	E/W	Angle	Name
33	E	13.0	Ku-HotBird 13
43	E	28.2	Ku-Astra 28.2

Select your satellite by pressing (OK).

Now scroll down and set your location. This is the location of the dish you are installing in Longitude and Latitude. There are a number of places you can go to find your coordinates including websites like www.gridreferencefinder.com. Your meter will accept entries to one decimal place, which is roughly an accuracy of +/-3miles, which for initial dish alignment is more than accurate enough.

Information is normally given like this:

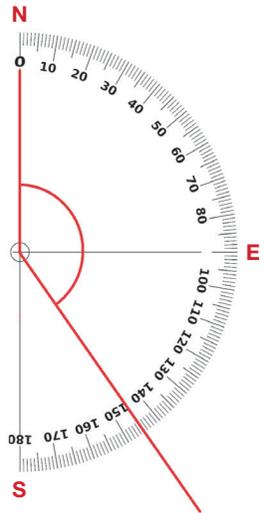
Labgear factory		
Post Code MK42 0NX		
Longitude:	-0.5	NOTE: a minus sign means WEST of Greenwich
Latitude:	52.1	NOTE: a positive is NORTH of the equator

Use ▲ ▼ then (OK) to enter longitude then ▲ ▼ for each digit and ▶ ◀ to select East or West. Repeat the steps for latitude using ▶ ◀ to select North or South.

The screen will now display

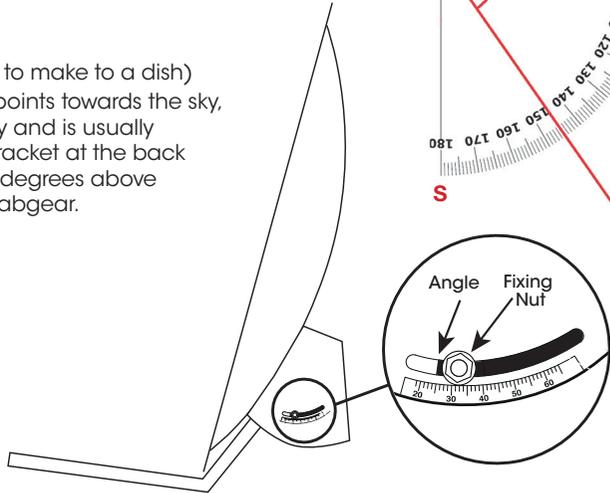
Azimuth

From our factory Astra 28.2 has an Azimuth angle of 145.2) which means that from magnetic North you need to point the dish South East at an angle like this:



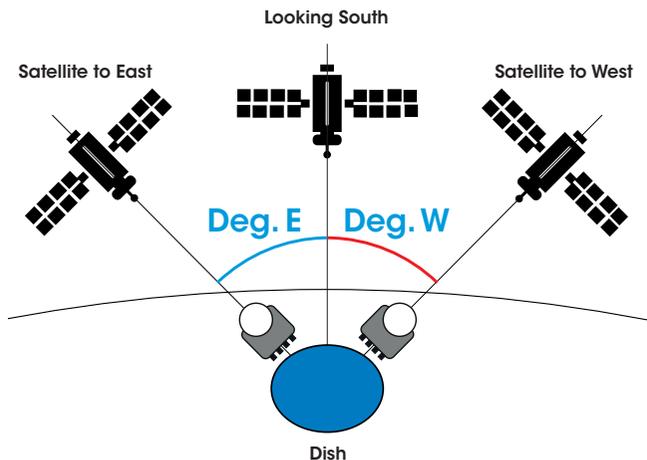
Elevation

(Generally the first adjustment to make to a dish)
This is the angle that the dish points towards the sky, offset from pointing horizontally and is usually indicated with marks on the bracket at the back of the dish. Astra is about 24.8 degrees above horizontal when viewed from Labgear.



Polarisation (Skew)

This is the angle of skew on the LNB/Dish to align with the satellite. If you get this wrong it not only reduces signal levels but also signal quality as unwanted signals "bleed in" from the other polarity. To align with Astra we would skew the LNB by 20.5 degrees to the East, horizontal when viewed from Labgear.



8 Choose your preferences

Scroll to **System Set** and press (OK)

- **Language** Options
- **Key Tone** (ON/OFF)
- **Lock Tone** (ON/OFF)
- **Flashlight** (ON/OFF)
- **PWR Units** (dBμV/dBmV/dBm)
- **Local Longitude** (Degrees)
- **Local Latitude** (Degrees)

9 Rough alignment

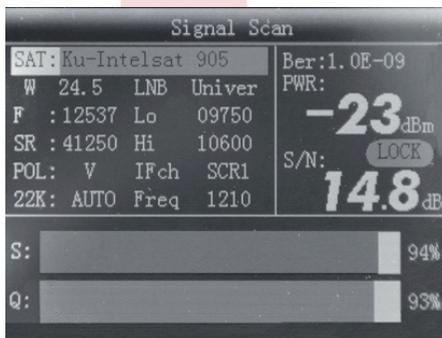
Having set your location and chosen your satellite your Meter can calculate the required positioning of your dish and LNB. Check that you have a clear line of sight in the direction proposed from your location before making any adjustments and roughly align your dish. You are now ready to check the signal.

10 Signal Scan - displays signal level and quality

First - connect the feed from the LNB to the meter, switch ON and select **Signal Scan**.

All of the options on the left hand side of the screen can be changed. The main ones that you may need will be SAT (to change the satellite) and F (to change the transponder you are monitoring on that satellite). If you want to change either of these:

- Use ▲▼ to select the option you want
- Use ◀▶ to access the list, then press ▲▼ to select the option you want.
- When all settings are ok, you can check the LNB signal.
- Connect the f-connector at the top of the meter to a cable feed from the LNB.
Your meter will power the LNB and display Signal Power and Quality



11a SAT MANAGER

Your Labgear satellite meter has been loaded with information on 100 of the most popular broadcasting satellites around the world but if you want to add or amend one you can do this in the

Sat Manager option:

- **Add Satellite**
- **Edit Satellite**
- **Delete Satellite**

Add Satellite: the setting refer to Antenna Setup.

Edit Satellite: press ▲▼ key to page up /down;

then press ◀▶ key to select the satellite; press **OK** to edit satellite setting, refer to Antenna Setup.

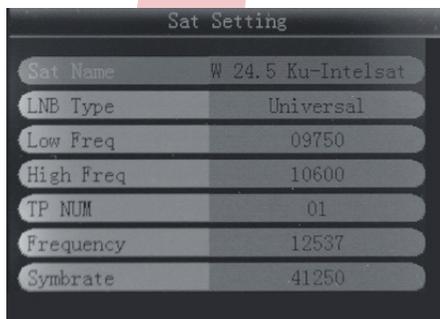
Delete Satellite: refer to Edit Satellite then press **OK** to delete satellite.



11b SAT SETTING

For any of the satellites already loaded onto your meter you can amend a wide range of settings by entering **Sat Setting**

- **Sat Name** - press ◀▶ to select satellite.
- **LNB Type** - press ◀▶ to select LNB Type.
- **Low Freq** - press ◀▶ to select Low Frequency or press **OK**, then use the ▲▼ key to input the value.
- **High Freq** - press ◀▶ to select Hi Frequency or press **OK**, then use the ▲▼ to input the value.
- **TP NUM** (Transponder) - press ◀▶ to select TP number.
- **Frequency** - Frequency of the current transponder, input the value by using the ▲▼ keys.
- **Symbrate** - symbol rate of the current transponder, input the value by using the ▲▼ and ◀▶ keys.



Use the ▼ key to scroll down to see the rest of the **Sat Setting** menu options.

- **Polarity** - press ◀▶ to change to vertical or horizontal polarization.
- **22K** - press ◀▶ to switch the 22KHz tone; if you select "Universal" the 22K setting is AUTO.
- **DiSEqC Mode** - press ◀▶ to set the communication protocol DiSEqC1.0/1.1 or Unicable.
- **DiSEqC type & Input** - If you select **DiSEqC 1.0/1.1**, then press ◀▶ to set the port number. If you select Unicable, then press ◀▶ to select the **IF Channel**, and use ▲▼ to input **Centre Frequency**.
- **LNB Power**- press ◀▶ to switch LNB power ON/OFF.



When all of settings are correct, press **RETURN**, then press **OK** for save the edit.

11c TP MANAGER

For each satellite that we have set-up on the meter there are a selection of the transponders with all of the relevant data loaded but if want to add another or edit an existing one then use the TP MANAGER.

- **Add Transponder**
- **Edit Transponder**
- **Delete Transponder**

Please refer to Satellite Setup.



Waste electrical and electronic products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority for recycling advice.