Digital Satellite Meter 1600

Users Manual

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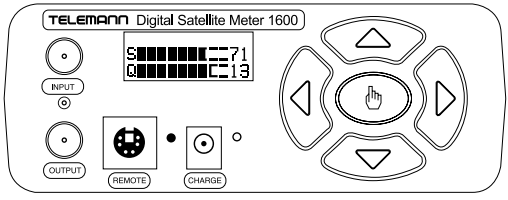
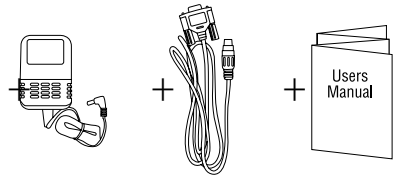
What's in the box





Power Adapter RS232C Cable Users Manual

1600 meter with internal battery, portable bag and neck strap

If the packing box was damaged during transportation, please keep the box as it was and contact to the dealer or service center. Also, if anything is missed in the box, contact to the dealer or Telemann.

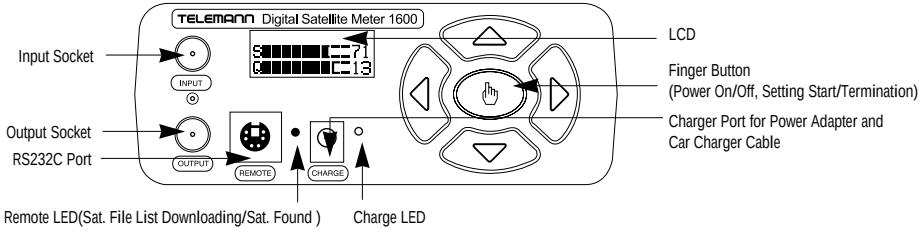
Charging the battery

The batteries will need to be charged for about 8hours at least before the first use of meter. Plug the charger(DC adapter) into the meter and its not possible to use the meter when the batteries are being charged. The meter protects the batteries from overcharging. When charging is completed, the charge LED color will be turned red to green. The charging time depends on the state of batteries.

When the battery becomes low, you will hear the audible warning tone and see battery indicator( ) on the screen. You should turn the meter off and recharge the batteries for more than 8hours. If the battery charge level becomes exceedingly low, the meter will be automatically off.

The power adapter port on the front of the meter is used for the car charger port(12V DC). Plug the one side end of car charger cable into the charger port and the other side end to car lighter socket. When you use a car charger, get the car started before charging the batteries. The car charger cable(12V DC) can be supplied by Telemann or our dealer and if you use other charger, this will be out of warranty and may damage the meter.

Getting Started



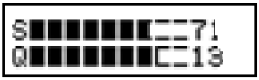
■ Turn the meter on

To turn the meter on, press and hold FINGER button and the first screen shows model 1600 and the battery charge percentage.

As soon as you release the button press, the second screen shows satellite name and tp number(or channel name) for a while. If you want to select other satellite, LNB local frequency and other LNB settings, please refer to page 3.

The second screen is automatically changed to the third screen shows signal level and “SEARCHING” message.

■ Identifying a satellite and aligning a dish on a satellite



S : Signal Level(dB or %)

Q : Signal Quality(SNR, dB or %)

When “S” is blinking, the audible tone is heard and press FINGER button once to see the level unit. Move a dish until the position of satellite is correct. When the meter detects the correct position of satellite, the remote LED light turns on and “SERCHAING” message is changed to SNR value at the same time.

Keep moving a dish until “S” and “Q” levels are peaked and the meter beeps the highest audible tone. If you wish to select other TP(or channel) for same satellite, press LEFT or RIGHT button.

When “S” is blinking, press DOWN button. “Q” blinks and the audible tone is off at the same time. Press FINGER button to see the SNR unit.

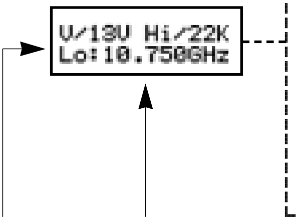
Press DOWN button once and the screen shows SR, FEC and BER. The actual BER is being measured.

■ Turn the meter off

After aligning a dish, mount bolts and press FINGER button for more than 2sec. to turn the meter off

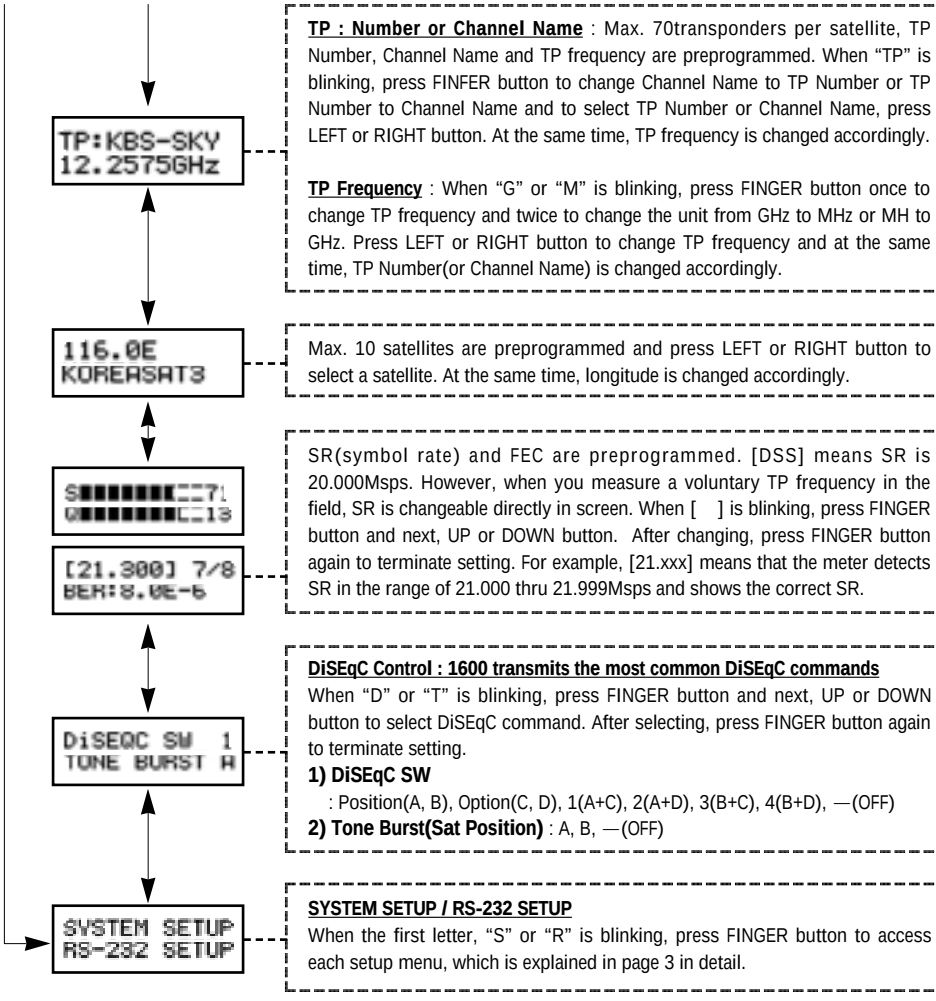
■ Main Menus(Satellite/LNB/DiSEqC/System/RS-232)

Main menus rotate by pressing UP or DOWN button repeatedly.



Signal Polarization/Band Switching : Signal polarization [V(R) / H(L)] and band(High/Low) are switched by LNB voltage (13V/18V) and 22KHz signal(ON/OFF), respectively. When “V(or H)” or “Hi(or Lo)” is blinking, press FINGER button to switch LNB voltage(13V or 18V) or 22KHz signal(22K or --) , respectively.

LNB Local Frequency : When “Lo” is blinking, press RIGHT or LEFT button to move figure position and UP or DOWN button to change figure. After changing, press FINGER button to terminate setting. In order to select the popular local frequency, press UP or DOWN button when the first figure of local frequency is blinking.

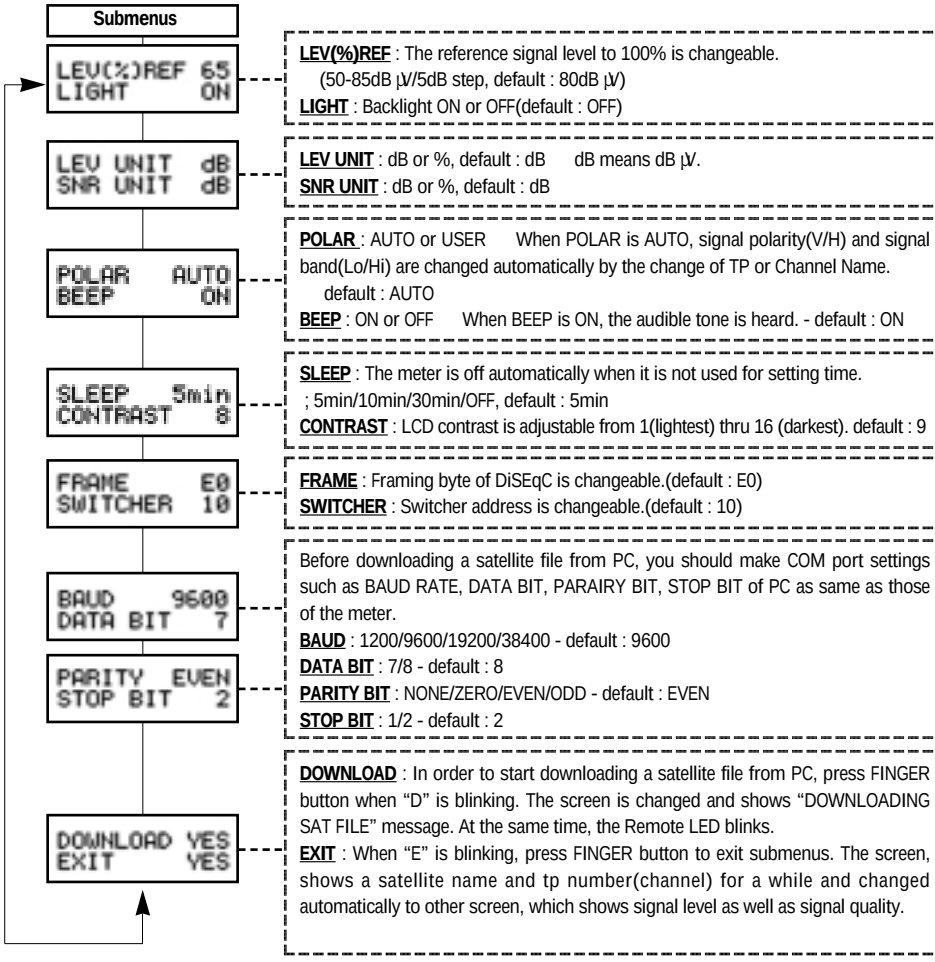


■ System Setup / RS-232 Setup

There are two ways to enter submenus related with SYSTEM/RS-232 SETUP. Submenus rotate by pressing UP or DOWN button repeatedly.

1) After turning the meter on, press UP or DOWN button repeatedly till "SYSTEM SETUP/RS-232 SETUP" screen is shown. When "S" or "R" is blinking, press FINGER button to enter submenus.

2) After tuning the meter on, press DOWN button for more than 2sec, and you can enter submenus directly.
In order to change settings, press FINGER button and next, UP or DOWN button. After changing, press FINGER button again to terminate setting.



QUICK OPERATIONS & INITIALIZATION

1) LCD backlight ON/OFF

Even LCD backlight is OFF in SYSTEM SETUP menu, you can turn it on or off directly by pressing DOWN button for more than 2sec.

2) LCD contrast adjustment

Turn the meter off. Press and hold RIGHT button and next, press FINGER button. Release the FINGER button pressing first and then, the RIGHT button pressing. “CONTRAST ADJ USE U D & F” message is displayed in the screen. Press UP(darker) or DOWN (lighter) to adjust LCD contrast and then, press FINGER button to terminate setting.

3) Initializing the meter

Turn the meter off. Press and hold LEFT button and next, press FINGER button. Release the FINGER button pressing first and then, the LEFT button pressing. “DEFAULT OPTION SETUP” message is displayed in the screen. To initialize the meter, press FINGER button and all setting parameters in the meter will be initialized as same as defaults.

■ Downloading/Editing a satellite file list

Max. 10 satellites or 300 transponder are preprogrammed in the meter, but you can change them by downloading/editing your desired satellite list from PC.

1) Downloading/Editing a satellite file list

A. Enter the Telemann url, www.telemannco.com in the address bar and click on “ENGLISH” to open English website. Click on SUPPORT/SERVICE, then DATA. Select the desired satellite file list and download it to PC.

B. When you change satellite name and channel(provider) name, please don’t over max. 10 and 9 characters, respectively and also, if the video encryption is DSS, you should write DSS instead of 20.000 at the place of SR.

When polar is AUTO in the meter, signal band is changed automatically as low band or high band according to the change of TP or Channel Name. Low band and high band of LNB input frequency are preprogrammed as 10.7 11.7GHz(Low Band) and 11.7 12.75GHz (High Band). Signal band is different from LNB type. So, user can change low band or high band in the satellite file list and when changing it, please write “Lo” or “Hi” between signal polarity and channel name. One “Lo” or “Hi” word covers all channels, which belong to “Low Band” or “High Band” of LNB input frequency as the following satellite file lists.

After changing, you should write “END OF LIST” at the last line and save the changed satellite file list into PC.

Sat. Name : Max. 10characters / No space between characters.

```
SATNAME AnikF1R      107.3W
2A        3.760      H  Lo  CBC        28.500  5/6
2B        3.780      V      Tele-Que   28.346  7/8
5B        3.886      V      KARE-TV    6.145  7/8
9B        4.060      V      MeteoMe    28.346  7/8
10B       4.100      V      TheWeath   28.346  7/8
1         11.715     V  Hi  StarChoic  19.510  3/4
17        11.728     H      StarChoic  19.510  3/4
2         11.745     V      StarChoic  19.510  3/4
18        11.758     H      StarChoic  19.510  3/4
3         11.776     V      StarChoic  19.510  3/4
19        11.789     H      StarChoic  19.510  3/4
4         11.806     V      StarChoic  19.510  3/4
20        11.819     H      StarChoic  19.510  3/4
32        12.185     H      StarChoic  19.510  3/4
```

Channel Name : Max. 9characters

```
SATNAME:DIRECTV1      72.7W
2     12.239  L   Hi  DIRECTV   DSS  6/7
4     12.268  L       DIRECTV   DSS  6/7
6     12.297  L       DIRECTV   DSS  2/3
8     12.326  L       DITECTV   DSS  2/3

SATNAME:ASTRA1G      19.20E
66    11.739  V   Hi  VIACOM    27.500  3/4
68    11.778  V       TBS       27.500  3/4
70    11.817  V       CANAL     27.500  3/4
72    11.856  V       CANAL     27.500  3/4

END OF LIST********
```

2) Downloading a satellite file list into the meter

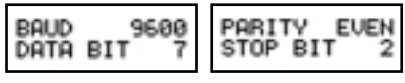
A. Connect RS232C cable between the meter and your PC COM port.
You can download a satellite file list from PC to the meter by using HyperTerminal program. Some versions of Windows have this program as one of basic programs. Click If you don't find it in your PC, please download "HyperTerminal Private Edition", which comes in Window 95/98/NT 4.0, from Telemann website by clinking on SUPPORTS/ SERVICE, then SOFTWARE.

B. Start the HyperTerminal.exe program(hypertrm.exe)

D. This brings up "Connection" dialog. Enter a name and choose an ICON. - whatever you wish. Click OK.

E. "Connect To" dialog appears. Click the selection arrow on the "Connection using" list box, and select the COM port. Click OK

F. "COM Port Properties" box comes up. Turn the meter on and press DOWN button for more than 2sec. Set same parameters of Port settings(BAUD RATE, DATA BIT, parity BIT, STOP BIT) for both the meter and PC. Then, click OK.



H. You now get the HyperTerminal window. Click on File, then Properties, then Settings, then ACSⅡ Setup. "ACSⅡ Setup" dialog appears. We recommend you enter 100minliseconds in the box of Line Delay, but if the downloading speed is too slow or fast, you should adjust it according to your communication condition to transmit the satellite file list to the meter correctly. Click the box of "Append line feeds to incoming line ends". Click on OK.

I. When “D” is blinking on the meter, press FINGER button.

In the HyperTerminal window, click on “Transfer”, then “Send Text File”. As soon as you open the satellite file list, its downloading is started.

Replacing the Battery Pack

The battery pack is replaceable. Turn the meter off. Slide the meter out of its portable bag and remove all four screws on both upper and lower cases. Disconnect battery 2-pin connector from PCB and remove four screws mounting battery pack to upper case. Replace it with new one. Tighten four screws between new battery pack and upper case. Connect battery 2-pin connector to PCB and tighten all four screws for both cases.

Maintenance

▶ Unplug the meter from the wall outlet before cleaning. Don’t use liquid, wax and aerosol cleaner.

▶ Don’t use a wet cloth. Use a dry cloth in cleaning contacting parts.

Warranty

Telemann Corporation(hereafter called “Telemann”) warrants all products against defects in material and workmanship under normal use and provides for one year from the date of purchase by the first buyer. Please note that this does not include consumable items such as batteries.

The liability of Telemann(or its appointed maintenance agent) is limited to the cost of repair and/or replacement of the product under warranty.

In order to keep this warranty effective, the product must be handled and used as prescribed in the operating manuals accompanying this warranty.

In the event that you should require service assistance, please contact the dealer from where the product was initially purchased.

If this is not possible, for example if you moved home, please contact the Telemann Service Team on 82 32 678 8566/7. Please have your full Telemann model number and serial number, date and place, purchase and a brief description of the fault/query ready when contacting our service team.

If the product is outside the warranty period, you should contact the dealer or Telemann service team for a chargeable repair.

If the product is covered by an extended warranty, you should contact the dealer from whom this extended warranty was purchased(usually the same dealer from which the product was originally purchased).

Specifications

■Input Frequency : 950 2,150MHz

■Input Level : 20dB μV 90dB μV

■Input/Output Impedance : 75Ω "F" connector

■Level Resolution : 1dB

■Level Accuracy : ±2.0dB(5 50℃)

■LNB Power
- Output Voltage
  : 13V for V, 18V for H — ±1V
- Max. Output Current : 450mA
  (Meter indicates "OVERLOAD" message)
- Signal Output : 22KHz pulse/DiSEqC

■SNR Range : 3 15dB

■BER Range : 2 X 10-2 2 X 10-8

■Power Supply
- Ni-MH rechargeable battery pack(Built-In)
  : 7.2V, 2,400mAH(1.2V X 6ea.) or satellite receiver through coaxial cable
- Main Adapter : 230V/50Hz, 12V, 500mA
- Battery Status Indication(percentage)

■Battery Performance with full charge
- More than 8hours for Full charge
- About 2.5hour(LNB current 100mA)
- About 5hour(without LNB current)

■Usable Temperature : 5 50℃

■Unit Dimension
- Weight : 550g(including battery pack)
- Character LCD screen : 12 X 2lines
- Dimension
  : 143mm(W) X 136mm(D) X 54mm(H)

Features

■Simple/Fast/Easy Operation
: satellite name, local Frequency, signal polarity, signal band, tp Frequency, tp number(or channel name) are changeable by the user directly in one LCD screen.

■Signal Strength and actual SNR are displayed together.

■SR/FEC/actual BER are displayed together in LCD screen.

■10 satellites or 300 transponders, horizontal/left & vertical/right

■Peak signal level detection with audible tone for aligning dish

■Computer interface
: Serial Port(COM 1, 2,3 or 4) for downloading satellites data

■User can edit a satellite file very easily using HyperTerminal program.

■DVB and DSS compatible

■LCD Backlight On/Off & Contrast Level Control

■DiSEqC switch commands are available.

■CE/FCC approved.

Telemann Corporation

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