

**Digital Satellite Finder
Operator's Manual
950-2150MHz**

Please read this manual carefully before using it for the first time.

The technical specifications and operating methods included in this manual are subject to changes without notice. In case of any inquires after a period of usage, please consult the manufacturer.

**Charge the battery before using it for the first time.
(Recommended time is 5 hours)**

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Chapter One, Introduction of the Digital Satellite Finder

Digital satellite finder is a simple and convenient instrument for setting and aligning a satellite dish. According to parameters of the satellite, you can set and align a satellite dish very accurately and conveniently.

Features as follows:

1. Graphic user interface, which is easy to use.
2. Easy to use, even for the beginner. It can calculate Azimuth, Elevation and Polarization automatically according to local longitude and latitude and show this in a graphic way.
3. It can communicate with PC through the serial port and you can update new satellite parameters conveniently.
4. Large memory capacity which can pre-store 80 satellite's parameters and 80 measurement records.

Chapter Two, Introduction of the Digital Satellite Finder's Function

1. Panel Function

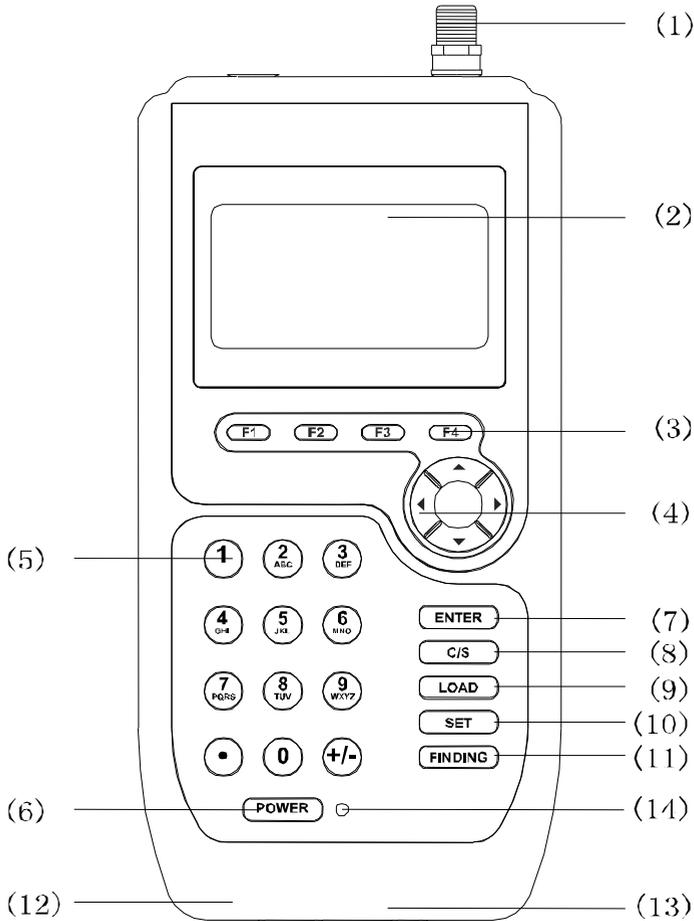


Fig. 2-1

(1) RF INPUT:

It can be changed to BNC or F type as required by the user.

(2) LCD Graphic Display:

It can display various measured parameters for the function you have selected. It has an LED background light which the user can

freely turn on or turn off.

(3) Function key:

There are four function keys, [F1] -- [F4], they have different functions in different interfaces.

(4) Direction key-Navi Key: Press [▼],[▲],[◀],[▶] keys to select items in menus.

(5) Number keys:

Number keys are made up of 0-9, and [•][+/-] keys so you can type in data conveniently.

(6) POWER key

(7) ENTER key

(8) C/S key:

Delete what you type in.

(9) LOAD key:

Load the record of measurement or configuration

(10) SET key

Press it to enter 'CONFIGURATION' item.

(11) FINDING key: press it to show the list of Satellites or entries in list format. Enter this item directly at any interface.

(12) A port for download data

(13) Charger port

(14) Charge indicator

2. Quick Manual

Easy Finder function is designed for a finder that has already setup the local longitude and latitude and the satellite's name and parameters have been saved into the finder. It is suitable for beginner users and makes the satellite finding easy, fast and convenient.

(1) Press [POWER] key to switch on power, then it will enter main menu automatically.

(2) Press the [FINDING] key to enter the "Load Satellite" item, as shown in figure 2-2.

Load Satellite:			
▶61.5°W Rainbow 1			
61.5°W Echostar 3			
63.0°W Estrela do			
65.0°W Brasilsat B			
↑	↓	EXIT	OK

Fig. 2-2

- (3) Press [F1],[F2] to select a record one by one or press [▲],[▼] navi key to select a satellite you want to align to by page.
- (4) Press [F4] or [ENTER] to enter the “Orientation” item, as shown in figure 2-3. AZ means Azimuth, EL means Elevation, PO means Polarization. According to those parameters shown here, you can setup a satellite dish.

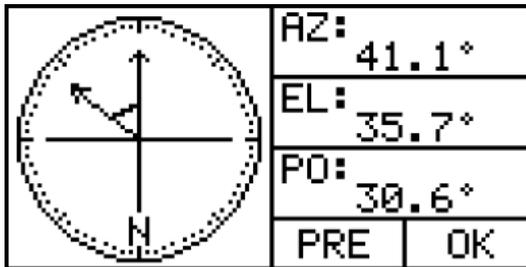


Fig. 2-3

- (5) Press [F4] or [ENTER] to enter the “Spectrum” item, as shown in figure 2-4.

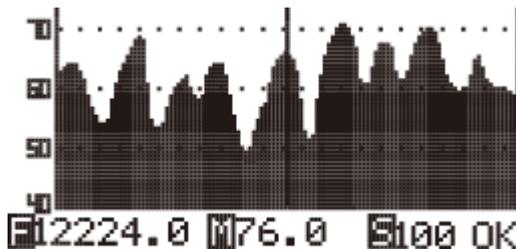


Fig. 2-4

(6) Press [F4] or [ENTER] to enter the “Aim” item, as shown in figure 2-5. You can press F2 to turn on/turn off beep sound. Align the dish to get the maximum values of audible sound and signal level strength and quality. Press F2 to switch on/off beep sound.

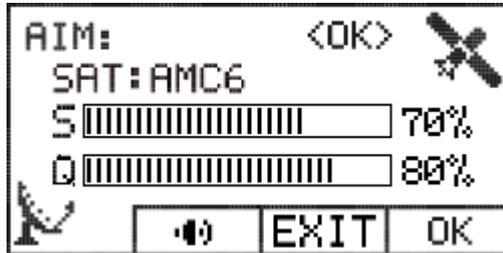


Fig. 2-5

(7) Press [F4] or [ENTER] to enter the “Search” item, as shown in figure 2-6. If the dish is aligned correctly, there will be “OK” displayed on the top right corner of the screen. Or else adjust the DiSEqC motor or dish slightly to make it lock.



Fig. 2-6

(8) You can save a record, if you need to. (Refer to step five of example one) .

3. Detailed Operation Guide

(1) Main Menu

Main menu is shown as Fig. 2-7



Fig. 2-7

There are five function icons on the top of the screen. They are Finding, Spectrum, Configuration, Load and Config Meter.

[F1]-[F4] function key explanation : There are four function icons

on the bottom of the screen. [F1] , [F2] , [F3] , [F4] keys are their corresponding keys. Their function is shown as follows:

[F1]: move to left;

[F2]: move to right;

[F3]: turn on/off background light;

[F4]: enter.

Press [F1] and [F2] key to select one of five icons ([▲] and [▼] or [◀] and [▶] keys which are on the Circular pad and have the same functions) and then press [F4] or [ENTER] to confirm and enter the function.

(2) Satellite Finding Function

Under main menu press [F1],[F2] or direction keys [◀],[▶] to select 'Finding' icon, as shown in Fig. 2-8.

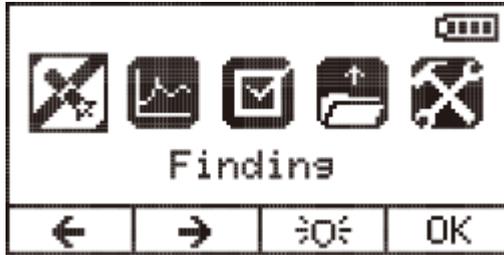


Fig. 2-8

Press [F4] or [ENTER] to enter 'Finding' item. You can align a dish from this section as well as the finding button. The Finding function includes three parts, as shown in Fig. 2-9.

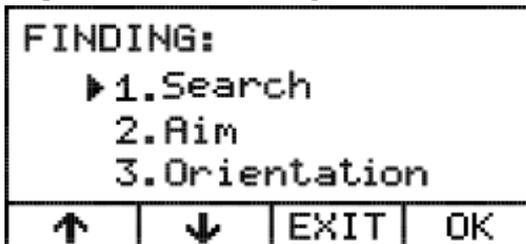


Fig. 2-9

a. 'Search' Item

Search function works for signal level measurement, bit error rate, carrier noise ratio and will tell you whether the satellite's signal has been found. (Value of measurement above is only for reference. Measurement precision is only for reference but that will not affect the results of accurate satellite finding).

Under 'FINDING' item, press [F1],[F2] or [▲],[▼] to select 'Search' item, and press [F4] or [ENTER] to enter 'SEARCH' item, as shown in figure 2-10.

Explanation:

Bar code indicates signal intensity. The bar is longer, the signal is stronger.

‘FREQ’ is downstream frequency of a certain satellite’s channel.

‘LEVEL’ is signal level of current frequency.

‘BER’ is bit error rate of current frequency.

‘C/N’ is carrier noise ratio of current frequency.

‘Save’ function allows to save the current result for future records.

Note: It will make a “beep” sound when satellite has been found.

There will be an <OK> icon in the top right corner of the screen. This means the satellite has been found correctly and then ‘BER’ and ‘C/N’ will display on the screen.

Press [F1],[F2] or direction keys [▲],[▼] to move the arrow to point to ‘Freq’, press[F4] or [ENTER] to enter ‘FREQ’ item, there will be an underline under the number. Press [▲],[▼] to adjust the frequency by $\pm 0.5\text{MHz}$. This is a convenient way to adjust the frequency, and then press [F4] or [ENTER] to exit then the underline disappears.



Fig. 2-10

When you have finished the measurement, you can save it as a measurement result record. Press [F1],[F2] or [▲],[▼] to move the arrow to point to ‘Save’ icon, as shown in figure 2-11. Press [F4] or [ENTER] to enter ‘Save’ item, as shown in figure 2-12.



Fig. 2-11



Fig. 2-12

Press [F1],[F2] to select a record one by one or press direction keys [▲],[▼] to change pages. Press [F4] to select a record, press [F4] or [ENTER] to type in record name. To search conveniently the name can be numbers or letters but no more than 12 characters, as shown in figure 2-13.

Method of typing :

Type in a “1” with [1] key;

Type in a “A、 B、 C、 a、 b、 c、 2” with [2];

Type in a “D、 E、 F、 d、 e、 f、 3” with [3];

Type in a “G、 H、 I、 g、 h、 i、 4” with [4];

Type in a “J、 K、 L、 j、 k、 l、 5” with [5];

Type in a “M、 N、 O、 m、 n、 o、 6” with [6];

Type in a “P、 Q、 R、 S、 p、 q、 r、 s、 7” with [7];

Type in a “T、 U、 V、 t、 u、 v、 8” with [8];

Type in a “W、 X、 Y、 Z、 w、 x、 y、 z、 9” with [9];

Type in a “0”with [0];

Type in a “.” or “space” with [·].

When you have finished typing in one character, press [F4],[ENTER] or [▶] to move the underline to next character.

For example : Type in record name as ‘OK3’

- Select a position where you want to type it in. Press [F4] or [ENTER] to enter typing mode.
- Press [6] three times to type in ‘O’.
- Press [F4],[ENTER] or [▶]to move the underline to next character.
- Press [5] twice to type in ‘K’.
- Press [F4],[ENTER] or [▶]to move the underline to next character.
- Press [3] seven times to type in ‘3’.
- Press [F4],[ENTER] or [▶]to move the underline to next character.
- Finish.

When you have finished typing, press [F4],[ENTER] or [▶]to save it, as shown in figure 2-14. After saving the Data is shown as figure 2-15.

Press [F3] to exit from this item, or press [C/S] to go back to main menu.



Fig. 2-13

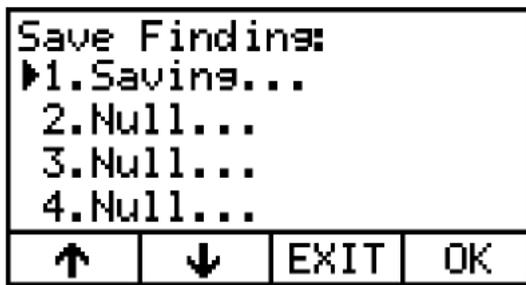


Fig. 2-14

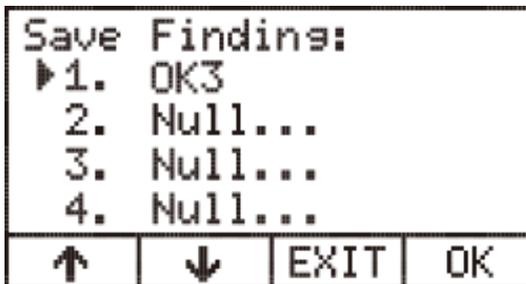


Fig. 2-15

b. 'Aim' Item

'Aim' function works for the satellite's signal level strength. It helps you to recognize satellite's signal level quickly and visually.

Under 'FINDING' item, press [F1],[F2] or direction keys [▲],[▼] to move arrow to point to 'Aim' item, as shown in figure 2-16.

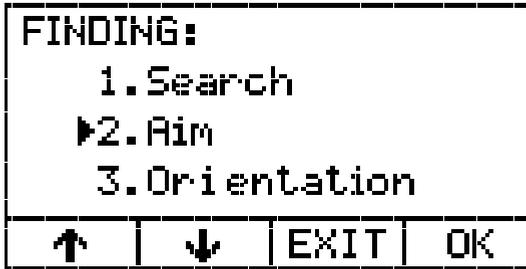


Fig. 2-16

Press [F4] or [ENTER] to enter ‘Aim’ item, as shown in figure 2-17. In this mode, you can easily find the maximum value of the satellite’s signal level through watching the indication bar’s length and speaker’s tone. When the indication bar is longer and the speaker’s tone is higher, the signal level is stronger. You will see displayed two indication bars, signal strength and signal quality. For Digital reception you must have the maximum quality possible. You can press F2 to turn on/turn off beep sound. Press [F3] to exit from this item. Press [F4] or [ENTER] to enter ‘Search’ item.

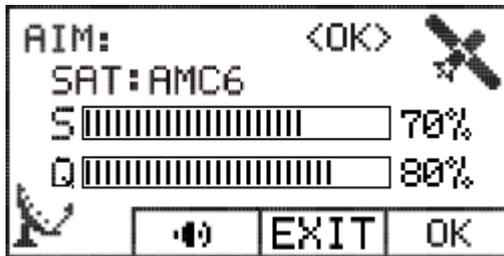


Fig. 2-17

c. **‘Orientation’ Item**

‘Orientation’ function works for calculating three important parameters of the satellite dish according to user’s local position automatically. Three parameters are azimuth, elevation and polarization of LNB. According to these parameters, you can complete elementary settings of a satellite dish very easily and speed up satellite finding.

Under 'FINDING' item, press [F1],[F2] or direction keys [▲],[▼] to move arrow to point to 'Orientation' item, as shown in figure 2-18.



Fig. 2-18

Press [F4] or [ENTER] to enter the 'Orientation' item, as shown in figure 2-19.

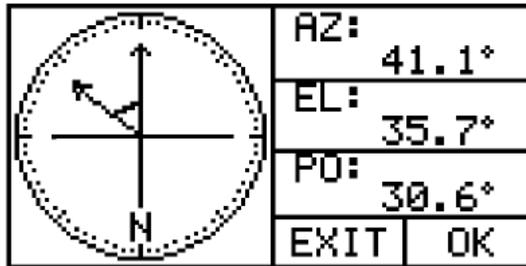


Fig. 2-19

There is a circle on the left of the screen. It is for compass reference only. N means north, the opposite arrow points to south. If your location is in north half of the earth, Letter will be N. The arrow must point to south when you align satellite dish. If your location is in south half of the earth, letter will be S. The arrow must point to north when you align satellite dish.

AZ is Azimuth.

EL is Elevation.

PO is Polarization.

Before you set the satellite dish, you should configure all above parameters for satellite and LNB.

Press [F3] to exit this item, press [F4] or [ENTER] to enter 'Spectrum' item.

(3) Spectrum Measurement Function

Under main menu, press [F1],[F2] or direction keys [◀],[▶] to select the 'Spectrum' icon, as shown in figure 2-20.



Fig. 2-20

Press [F4] or [ENTER] to confirm and enter 'Spectrum' item, as shown in figure 2-21. "F" is frequency. "M" is the signal level value. "S" is bandwidth. Adjust the satellite dish until the spectrum waveform is the same as the prestored spectrum and the get the best satellite signal status. When the satellite signal is locked there will be "OK" displayed in the bottom right corner of the screen. Press [F3] to exit spectrum measurement function.

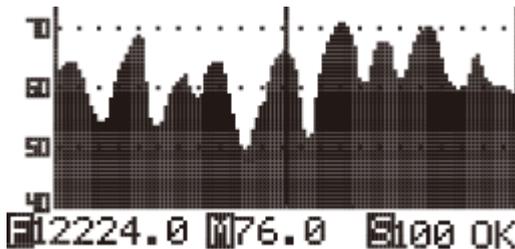


Fig. 2-21

Press [F1] to switch "S" between 50,100,200,500. Press [F2] to enter "Save Spec Photo" mode, as shown in figure 2-22.



Fig. 2-22

Press [F1],[F2] to select a record one by one or press direction keys [▲],[▼] to change pages. Press [F4] to select a record, press [F4] or [ENTER] to type in record name. To search conveniently the name can be numbers or letters but no more than 12 characters, as shown in figure 2-23.

Method of typing :

Type in a “1” with [1] key;

Type in a “A、 B、 C、 a、 b、 c、 2” with [2];

Type in a “D、 E、 F、 d、 e、 f、 3” with [3];

Type in a “G、 H、 I、 g、 h、 i、 4” with [4];

Type in a “J、 K、 L、 j、 k、 l、 5” with [5];

Type in a “M、 N、 O、 m、 n、 o、 6” with [6];

Type in a “P、 Q、 R、 S、 p、 q、 r、 s、 7” with [7];

Type in a “T、 U、 V、 t、 u、 v、 8” with [8];

Type in a “W、 X、 Y、 Z、 w、 x、 y、 z、 9” with [9];

Type in a “0” with [0];

Type in a “.” or “space” with [·].

When you have finished typing in one character, press [F4],[ENTER] or [▶] to move the underline to next character.

When you have finished typing, press [F4],[ENTER] or [▶] to save it, as shown in figure 2-24. After saving the Data is shown as figure 2-25.



Fig. 2-23



Fig. 2-24



Fig. 2-25

(4) Manual Setting Satellite’s Parameters.

When a satellite’s name which you need or satellite’s parameters

has been changed, with this function you can type in a channel's parameters or the satellite detail which you need. You can go to www.lyngsat.com website to check out the newest parameters.

Under main menu, press [F1],[F2] or direction keys [◀],[▶] to select the 'Configuration' icon. Press [F4] or [ENTER] to confirm and enter 'Configuration' item, as shown in figure 2-26. After pressing [F4] or [ENTER] button to confirm , you will be in the manual satellite parameter configuration menu (as shown in figure 2-27) At this moment the pointer is pointing on 'Save' , if you don't need to change the satellite's parameters , you can press [F4] directly to enter 'Spectrum' function then press [F4] to enter 'Aim' direct satellite seeker , by pressing [F4] again you will be able to reach the 'Search' menu.

You can select an item by press [F1] or [F2] or [▲][▼][◀] [▶] and then press [F4] or [ENTER] to confirm and enter the function.

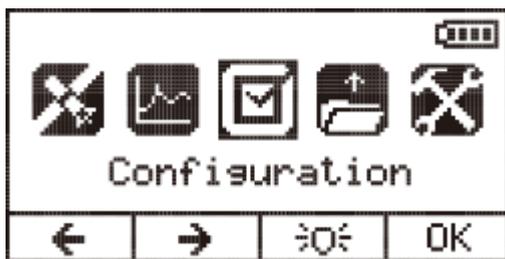


Fig. 2-26



Fig. 2-27



Fig. 2-28

a. **‘LO’ local Oscillation Frequency (MHz)**

Press [F1],[F2] or [▲][▼][◀][▶] to move the arrow to point to ‘LO’. Press [F4] or [ENTER] to confirm and enter the ‘LO’ item. There will be an underline under the current number. Press the number keys to type in LO frequency. Its unit is MHz. Then press [F4] or [ENTER] to confirm then underline disappears, as shown in figure 2-28. (the range of local oscillation frequency should be in 0MHz, 4500-5500MHz or 9500-11500MHz)

b. **‘F’ downstream frequency (MHz)**

‘F’ downstream frequency is the frequency which is used for sending signal to earth from satellite. (Unit: MHz)

Press [F1],[F2] or [▲][▼][◀][▶] to move arrow to point to ‘F’ , press[F4] or [ENTER] to confirm and enter ‘F’ item. There will be an underline under the current number. Press the number keys to type in ‘F’ frequency. Then press [F4] or [ENTER] to

confirm then underline disappears, as shown in figure 2-29. (Absolute value of the difference between ‘F’ downstream frequency and ‘LO’ frequency should be in the range of 950-2150MHz.)



Fig. 2-29

c. ‘SR’ Symbol Rate

‘SR’ Symbol Rate means the speed of the data transmission. It is the bit rate of the signal and parameter of the channel. ‘SR’ unit is Mb/s.

Press [F1],[F2] or [▲][▼][◀][▶] to move the arrow to point to ‘SR’. Press [F4] or [ENTER] to confirm and enter the ‘SR’ item. There will be an underline under the current number. Press the number keys to type in ‘SR’. Then press [F4] or [ENTER] to confirm then the underline disappears, as shown in figure 2-30. (The range of ‘SR’ should be in 1000-45000.)

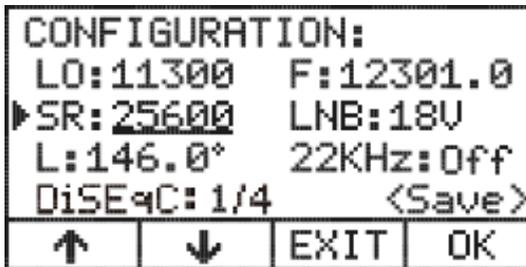


Fig. 2-30

d. ‘LNB’ Power Supply

You can select power supply voltage in the ‘LNB’ item.

Press [F1],[F2] or [▲][▼][◀][▶] to move the arrow to point to 'LNB'. Press [F4] or [ENTER] to confirm and enter the 'LNB' item, press [F4] or [ENTER] to switch among 0V、13V(V、R) and 18V(H、L), as shown in figure 2-31.



Fig. 2-31

e. 'L' Satellite Longitude

Satellite longitude is the position of the satellite over the earth. Press [F1],[F2] or [▲][▼][◀][▶] to move the arrow to point to 'L'. Press [F4] or [ENTER] to confirm and enter the 'L' item. There will be an underline under the current number. Press the number keys to type in 'L'. And then press [F4] or [ENTER] to confirm then underline disappears, as shown in figure 2-32. (the range of the satellite longitude is in -180°~ +180°east longitude is positive , west longitude is negative)

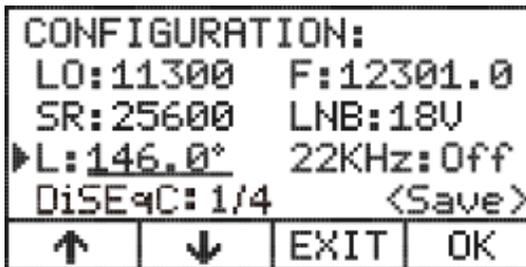


Fig. 2-32

f. **‘22KHz’ Status Switch**

The ‘22KHz’ status switch is if high band switching is to be used. Refer to the transponders detail to see if this should be switched on. Press [F1],[F2] or [▲][▼][◀][▶] to move the arrow to point to ‘22KHz’. Press [F4] or [ENTER] to confirm and enter the ‘22KHz’ item. Press [F4] or [ENTER] to change it to on or off, as shown in figure 2-33.



Fig. 2-33

g. **‘DiSEqC’ Digital Satellite Equipment Control**

The meter support ‘DiSEqC’ digital satellite equipment control function.

Press [F1],[F2] or [▲][▼][◀][▶] to move the arrow to point to ‘DiSEqC’. Press [F4] or [ENTER] to confirm and enter the ‘DiSEqC’ item. Press [ENTER] to change between 1/4, 2/4, 3/4, 4/4, 1/2, 2/2 or OFF, as shown in Fig. 2-34.

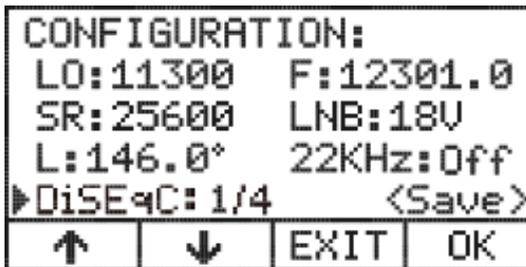


Fig. 2-34

h. 'SAVE'

When finish above configuration, you can save it as a configuration record. Press [F1],[F2] or [▲][▼][◀][▶]to move the arrow to point to 'Save' item, as shown in figure 2-35.



Fig. 2-35

Press [F4] or [ENTER] to enter the 'Spectrum' function and starts to seek the satellite. Press [F4] or [ENTER] to enter the 'Aim' function. Press [F3] and choose 'Save', to save the parameters, as shown in figure 2-36.

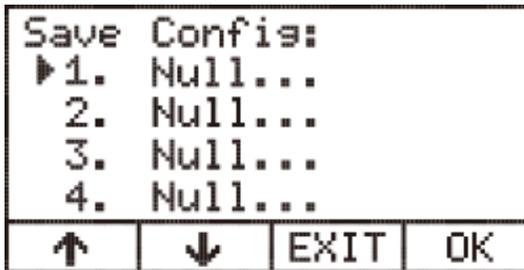


Fig. 2-36



Fig. 2-37

Press [F1],[F2] to select record one by one or press direction keys

[▲],[▼] to change page. After selecting a record, press [F4] or [ENTER] to type in a record name no more than 12 characters. The record name can be letters or numbers (as shown in figure 2-37).

Method of typing :

Type in a “1” with [1],

Type in a “A、 B、 C、 a、 b、 c、 2” with [2]

Type in a “D、 E、 F、 d、 e、 f、 3” with [3]

Type in a “G、 H、 I、 g、 h、 i、 4” with [4]

Type in a “J、 K、 L、 j、 k、 l、 5” with [5]

Type in a “M、 N、 O、 m、 n、 o、 6” with [6]

Type in a “P、 Q、 R、 S、 p、 q、 r、 s、 7” with [7]

Type in a “T、 U、 V、 t、 u、 v、 8” with [8]

Type in a “W、 X、 Y、 Z、 w、 x、 y、 z、 9” with [9]

Type in a “0”with [0]

Type in a “.” or “space” with [·].

When finished typing in one character, press [F4],[ENTER] or [▶] to move the underline to next character.

For example : Type in record name as ‘SC2’

- Select position where you want to type in. Press [F4] or [ENTER] to enter typing status.
- Press [7] four times to type in ‘S’.

- Press [F4],[ENTER] or [▶]to move the underline to next character.
- Press [2] thrice to type in ‘C’.
- Press [F4],[ENTER] or [▶]to move the underline to next character.
- Press [2] seven times to type in ‘2’.
- Press [F4],[ENTER] or [▶]to move the underline to next character.
- Finish.

When finish typing, press [F4],[ENTER] or [▶]to save it, as shown in figure 2-38. After saving the interface is shown as figure 2-39. Press [F3] to exit this item or press [C/S] to go back to the main menu.



Fig. 2-38



Fig. 2-39

(5) ‘Load’

Under the main menu, press [F1],[F2] or [◀],[▶] to select the

'Load' icon, as shown in figure 2-40.

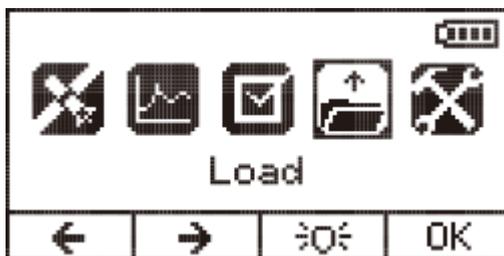


Fig. 2-40

Press [F4] or [ENTER] to confirm and enter 'Load' item, as shown in figure 2-41. There are two submenus under the 'Load' item. You can load a pre configured record or a measured record from here. Configuration function is for editing the configurations of recorded entries pre-stored in the instrument. Finding function is for checking measurement records that were saved before.

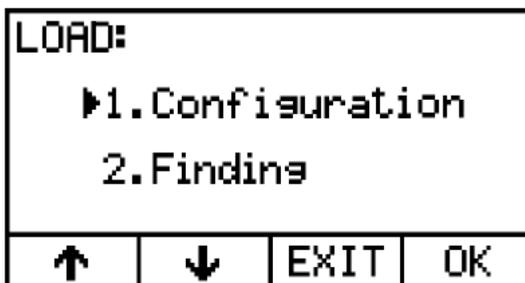


Fig. 2-41

a. **Select Name of Satellite**

This function allows you to select the name of satellite which has been pre-stored in the instrument. There are two methods of viewing the list of stored satellites , first is to see it according to the number of degrees as they are in the sky (as shown in figure 2-42); Or to see them arranged in alphabetical order (as shown in figure

2-43) .

By pressing the [Set] key, you will be able to switch between the alphabetical order and the number of degree arrangement to help you select the name of the satellite.

Press [F1],[F2] or direction keys [▲],[▼] to move arrow to point to 'Configuration'. Then press [F4] or [ENTER] to enter the 'Configuration' item, as shown in figure 2-41.

According to the method of number or degree arrangement:

Press [F1],[F2] or press [▲],[▼] to change pages, when the arrow is pointing to the name of the satellite that you would like to select, press [F4] or [ENTER] key to confirm and check the parameters of this satellite.(as shown in figure 2-42)

According to the method of alphabetical order arrangement:

You can type in a letter or number here >>>>_ to select a satellite's name directly. For example, to select 'Intelsat5' satellite, firstly type in letter 'i', and then press [F4], [ENTER] or [▶] to display as all names with initial 'I'. And then press [F1],[F2] or [▲],[▼] to select the 'Intelsat5' record. Press [F4],[ENTER] or [▶] to load the parameters of this satellite.

After the record loads, as shown in figure 2-44, you can press [F4] or [ENTER] again to change this configuration as the current configuration for satellite finding. Press [F3] to exit back to main menu. 80 configurations can be pre-stored in the instrument.

Load Config:			
▶	61.5°W	Rainbow	1
	61.5°W	Echostar	3
	63.0°W	Estreal	do
	65.0°W	Brasilsat	B
↑	↓	EXIT	OK

Fig. 2-42



Fig. 2-43

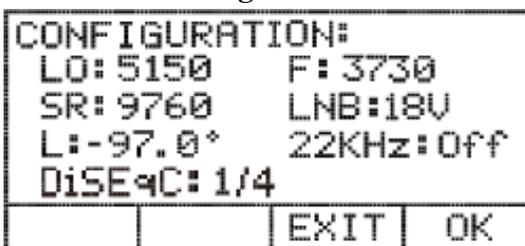


Fig. 2-44

b. Load Measurement Record

The 'Finding' function is for checking measurement records that were saved before.

Press [F1],[F2] or direction key [▲],[▼] to move arrow to point to 'Finding', as shown in figure 2-45.

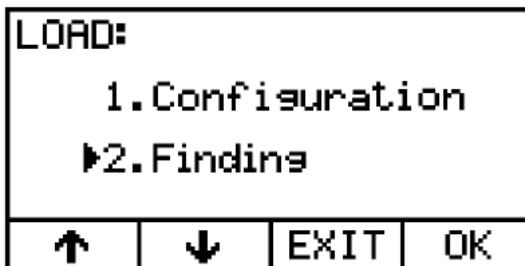


Fig. 2-45

Press [F4] or [ENTER] to enter the 'Finding' item, as shown in 2-46. Press [F1] or [F2] to select one by one or press direction keys [▲],[▼] to change page. When the arrow points to the record

which you want to choose, press [F4] or [ENTER] to confirm and view this record.

You can type in a letter or number here as well. After you have typed it in, press [F4] or [ENTER] to confirm and view this record.

80 measurement records can be pre-stored in the instrument.

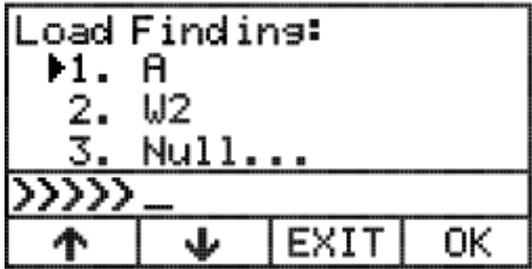


Fig. 2-46

(6) Config Meter

Under the main menu, press [F1],[F2] or [◀],[▶] to select the 'Config Meter' icon, as shown in figure 2-47.



Fig. 2-47

Press [F4] or [ENTER] to confirm and enter the 'Config Meter' item, as shown in figure 2-48. You can check the power that remains in the battery, set the time to automatically turn off the power, change unit of the measurement and set local longitude and latitude, download satellite parameters from computer, and delete configuration.

a. 'Download'

Under the 'Config Meter' menu, press [F1],[F2] or [▲],[▼] to

select the 'Download' , as shown in figure 2-48.



Fig. 2-48

Press [F4] or [ENTER] to confirm and enter the 'download' item, as shown in figure 2-49. Download function is to download satellite channel data to instrument.



Fig. 2-49

After entering this item, plug in the data cable which we provided into the instrument. Through the attached software "FinderMaster" you can download the data of satellite finding conveniently, as shown in figure 2-50. (See details in the "FinderMaster" software operation manual). After downloading press F3 to exit.

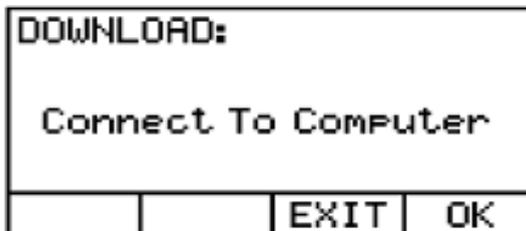


Fig. 2-50

b . ‘Delete Configuration’

Under ‘Config Meter’ mode press [F1], [F2] or direction keys [▲], [▼] to select the ‘Delete Config’ item. Then press [F4] or [ENTER] to enter, as shown in figure 2-51. Press [F1],[F2] to select a record one by one or press direction keys [▲],[▼] to change pages, as shown in figure 2-52. After selecting one record, press [F4] or [ENTER] to delete the current record, as shown in figure 2-53. After deleting press F3 to exit.



Fig. 2-51

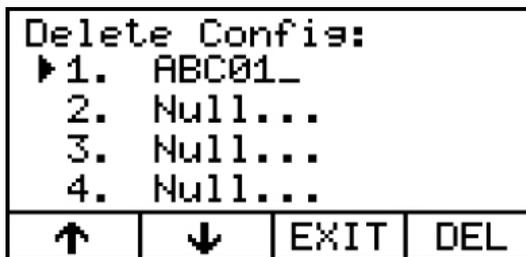


Fig. 2-52



Fig. 2-53

c. 'Option'

Under 'Config Meter' mode press [F1], [F2] or direction keys [▲],[▼] to select the 'Option' item (as shown in figure 2-54). Then press [F4] or [ENTER] to enter, as shown in figure 2-55.



Fig. 2-54

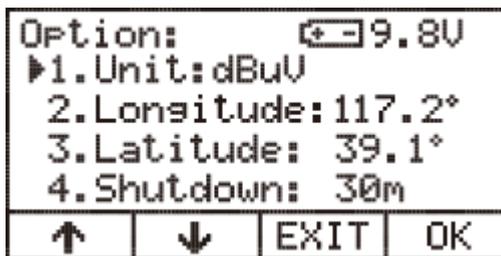


Fig. 2-55

The top right corner shows the battery voltage.

a. 'Unit'

'Unit' shows the current unit. Press [F1],[F2] or [▲],[▼] to move the arrow to point to 'Unit'. Press [F4] or [ENTER] to change the

unit to dBm, dBuV or dBmV, as shown in figure 2-56.

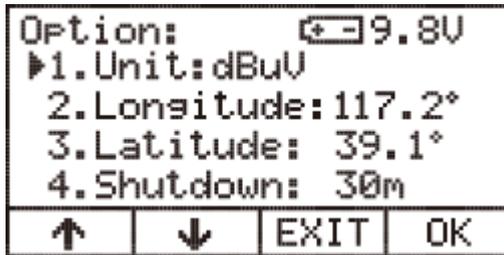


Fig. 2-56

b. 'Longitude' and 'Latitude' can be found easily by internet search.

'Longitude' and 'Latitude' is your location coordinates. You can check it out in the CD-ROM that we provided. Press [F1], [F2] or [▲],[▼] to move the arrow to point to 'Longitude'. Press [F4] or [ENTER] to confirm and enter the 'Longitude' item. There will be an underline under the current number. Press the number keys to type in the longitude. Then press [F4] or [ENTER] to confirm then underline disappears, as shown in figure 2-57. (the range of the longitude is in -180° ~ $+180^{\circ}$, east longitude is positive, west longitude is negative)

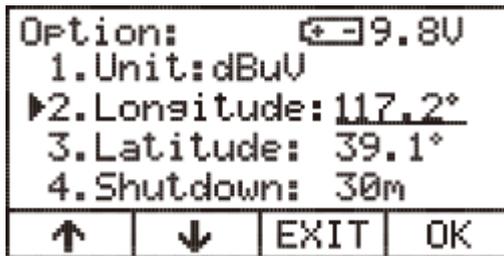


Fig. 2-57

Press [F4] or [ENTER] to confirm and enter the 'Latitude' item. There will be an underline under the current number. Press the number keys to type in the latitude. Then press [F4] or [ENTER] to confirm then underline disappears, as shown in figure 2-58. (the range of the latitude is in -180° ~ $+180^{\circ}$ north latitude is

positive , south latitude is negative)

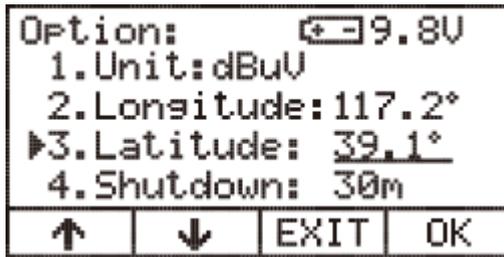


Fig. 2-58

c. ‘Shutdown’

‘Shutdown’ shows the current time of shutdown. Press [F1], [F2] or [▲],[▼] to move the arrow to point to ‘Shutdown’. Press [F4] or [ENTER] to confirm and enter the ‘Shutdown’ item. Press [F4] or [ENTER] to change it to 3m、 10m、 30m or always on, as shown in figure 2-59.

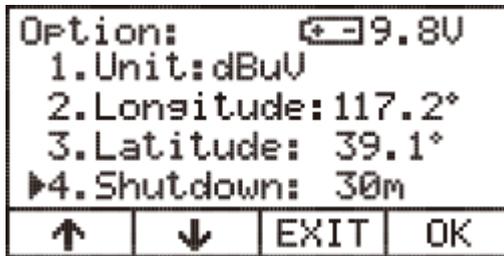


Fig. 2-59

Chapter Three, FinderMaster software operation manual

(1) Install Findermaster on PC

- a. Insert CD-ROM
- b. Double click “setup” that is in the [Findermaster] folder, there

will be an interface of installation, as shown in figure 3-1.

- c. Press the [Browse] button, choose from the file menu where you would like to save the program or use the pre-selected destination (see Fig. 3-1-1).

If the file menu you are trying to save the program on doesn't exist, it will be automatically created before the installation.



Fig. 3-1

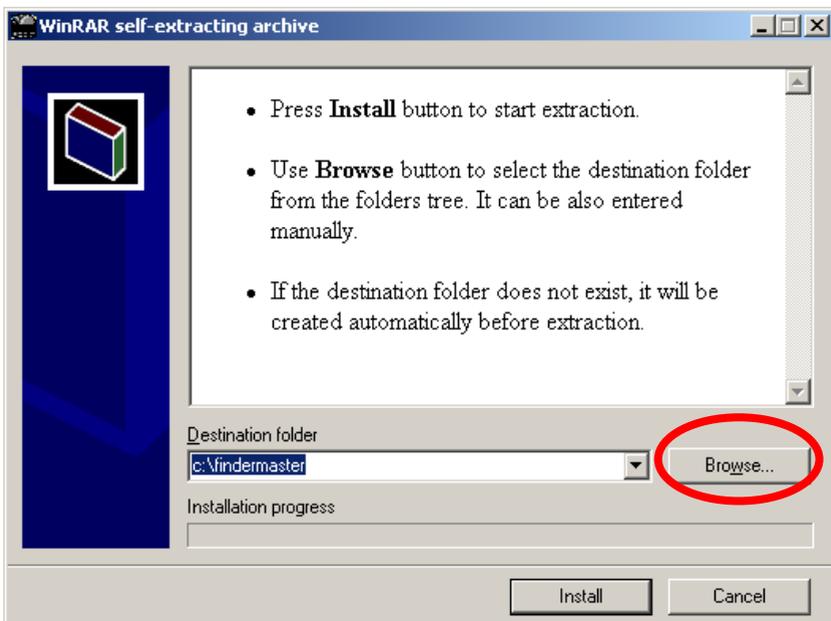


Fig. 3-1-1

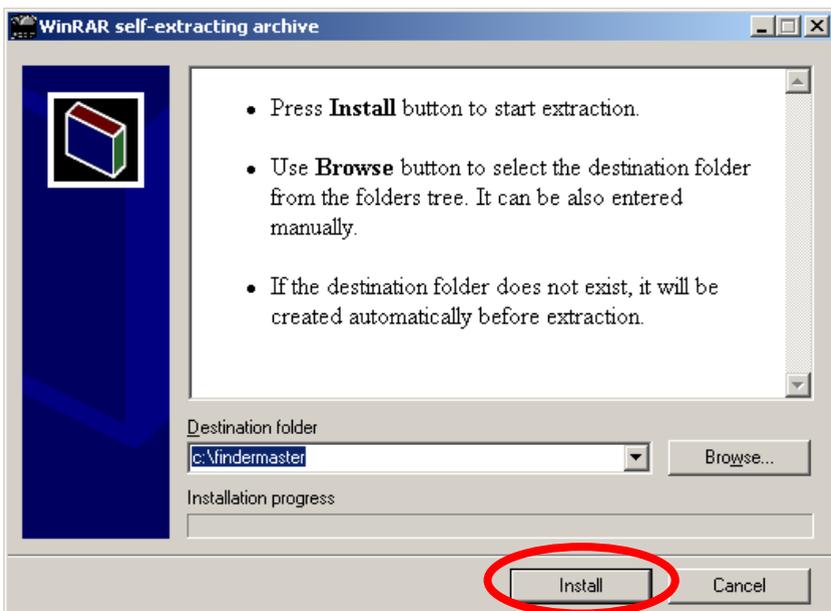


Fig. 3-1-2

d. After installation is completed, there will be an icon on the desktop of PC, as shown in figure 3-2.



Fig. 3-2

(2) Interface Introduction

Double click Windows desktop icon “Findermaster” to run the software, as shown in figure 3-3.

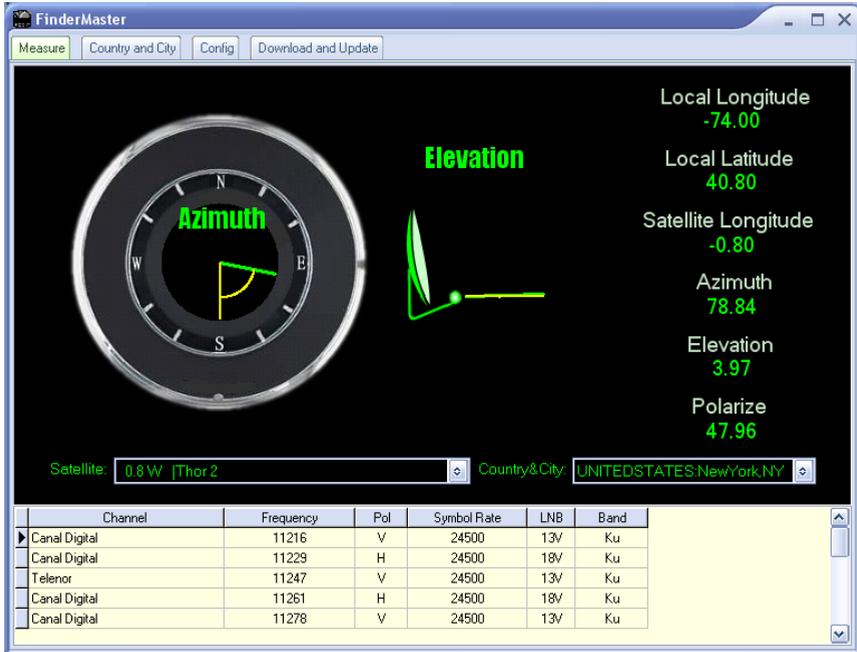


Fig. 3-3

- [Measure]

Under the [Measure] item, you can query parameters of setting satellite, such as local longitude and latitude, satellite longitude, azimuth of satellite dish, elevation of satellite dish, and polarization of LNB.

- **[Country and City]**

Under the [Country and City] item, you can query, add or delete longitude and latitude of country & city.

- **[Config]**

Under the [Config] item, you can query, add or delete satellite and channel.

- **[Download and Update]**

Under the [Download and Update] item, you can download satellite channel to satellite finder and update the data package through our website.

The detail information will be talked as follows:

- a . **[Measure]**

Click [Measure] menu to enter [Measure] item, as shown in figure 3-4.

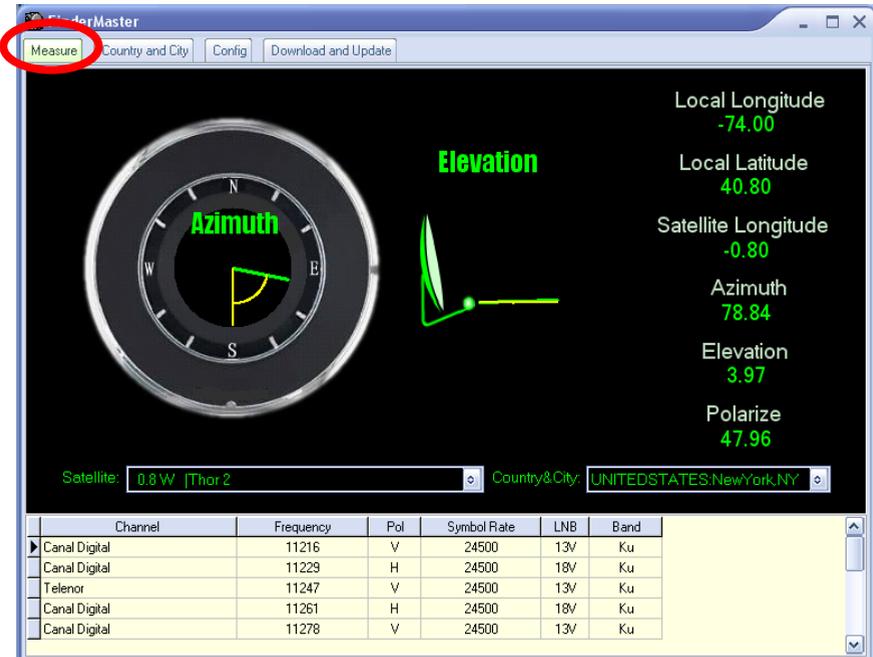


Fig. 3-4

Under [Measure] item :

You can select a country and city from the [Country & City] drop-down box on the right side of the screen and select satellite from the [satellite] drop-down box on the left side of the screen, as shown in figure 3-5.



Fig. 3-5

After selecting, this program will calculate parameters of adjusting the satellite dish automatically. Those parameters include azimuth, elevation and polarize. They will be displayed in a graphic model and a table model.

Graphic Model: (Fig. 3-6)

Azimuth shows azimuth angle of satellite dish;

Elevation shows elevation angle of satellite dish.



Fig. 3-6

Table Model: (Fig. 3-7)

Local Longitude shows local longitude of the satellite dish location;

Local Latitude shows local latitude of the satellite dish latitude;
Satellite Longitude shows satellite longitude;
Azimuth shows azimuth angle of the satellite dish;
Elevation shows elevation angle of the satellite dish;
Polarize shows polarization angle of LNB.

```

Local Longitude
-74.00

Local Latitude
40.80

Satellite Longitude
-103.00

Azimuth
-40.31

Elevation
34.29

Polarize
-29.32

```

Fig. 3-7

The current satellite’s entire channel displays in the table under the screen, as shown in figure 3-8.

Channel	frequency	pol	Symbol Rate	LNB	Beam
▶ SES-Americom	3740	V	29270	13V	C
Fox Sports	3780	V	29270	13V	C
GlobeCast America	3802	H	29270	18V	C
Paxson Communications	3840	H	26681	18V	C
In Demand	3860	V	19510	13V	C

Fig. 3-8

Double click any channel on this table, “Add to download list” dialog box will appear, as shown in figure 3-9. Click [OK] to confirm and add this channel to the download list.



Fig. 3-9

b. [Country and City]

Click the [Country and City] menu to enter the [Country and City] item, as shown in figure 3-10.

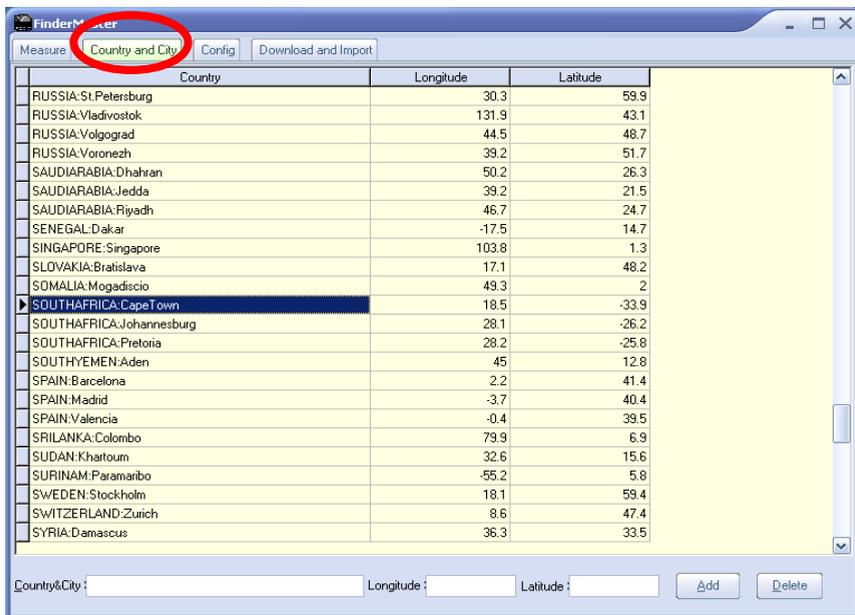


Fig. 3-10

Under this item, you can manually add or delete information of longitude and latitude of country & city.

Type in the English name of the country and city in the “Country &

City” input box, as shown in figure 3-10-1.

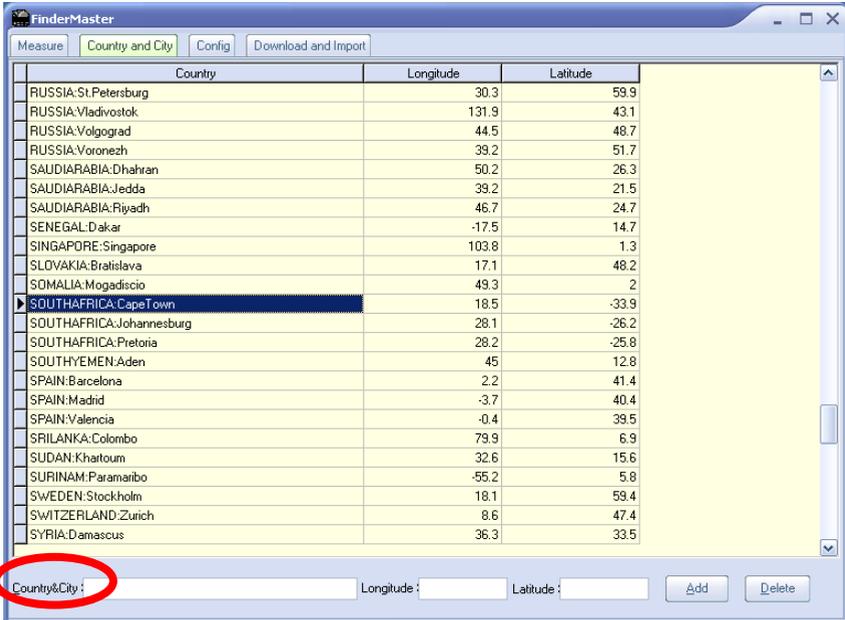


Fig. 3-10-1

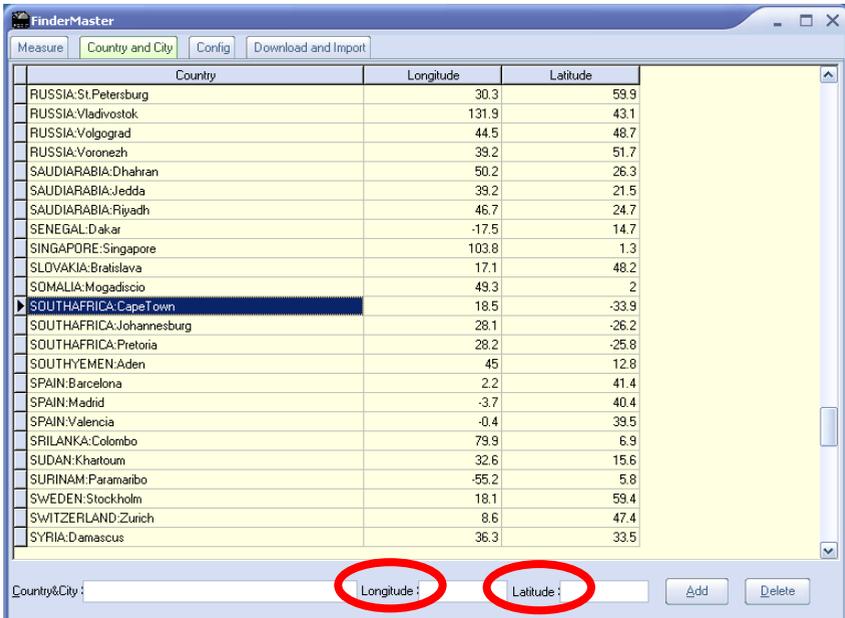


Fig. 3-10-2

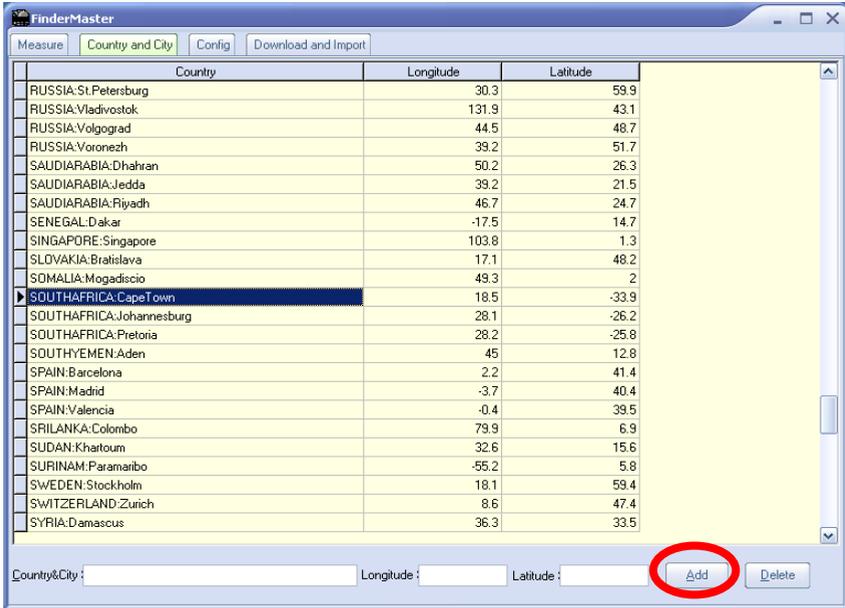


Fig. 3-10-3

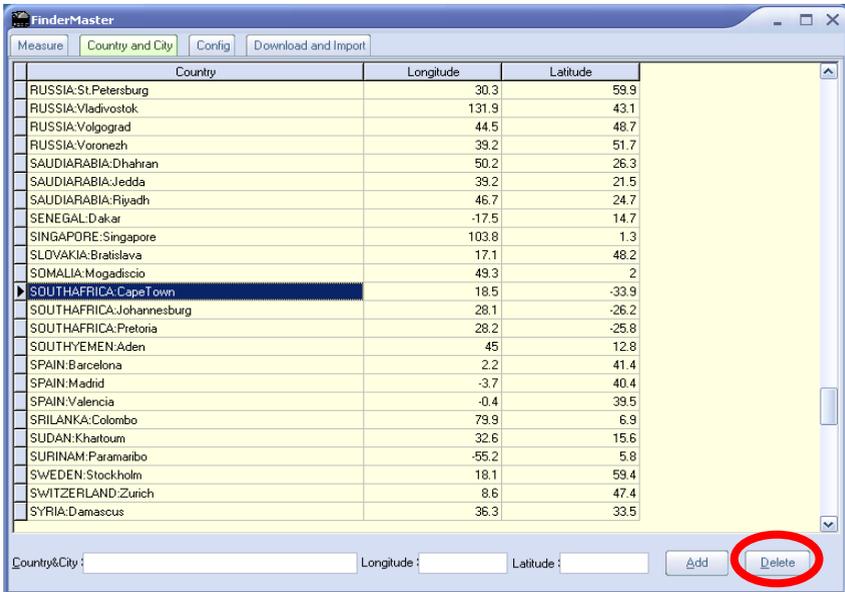


Fig. 3-10-4

Type in the longitude and latitude in the “Longitude” input box and “Latitude” input box, as shown in figure 3-10-2.

Then click the [Add] button to add the data into the data list, as shown in figure 3-10-3.

Click [Delete] to delete the current selecting data, as shown in figure 3-10-4.

c. [Config]

Click the [Config] menu to enter the [Config] item, as shown in figure 3-11.

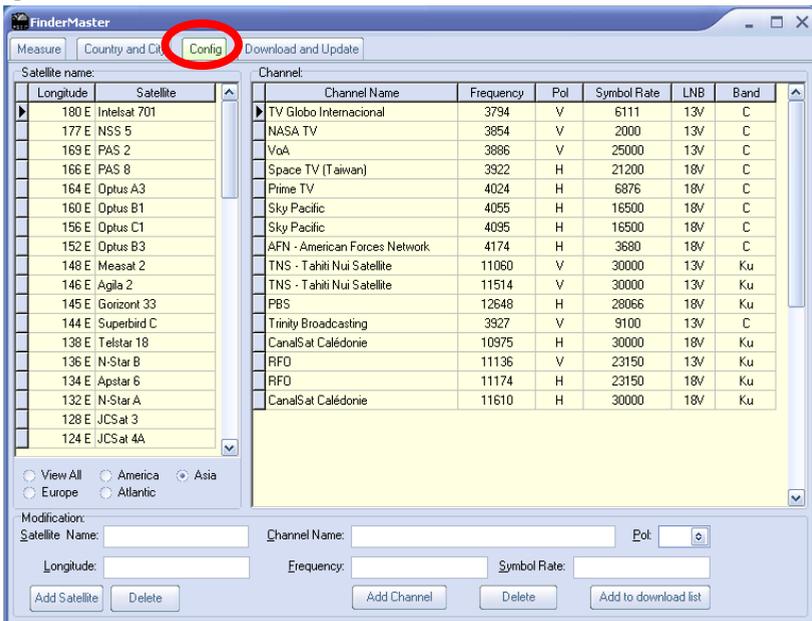


Fig. 3-11

On the left side of the “Satellite Name” table, you can add or delete the name and longitude of the satellite.

Type in the name of the satellite in the “Satellite Name” input-box, as shown in figure 3-11-1.

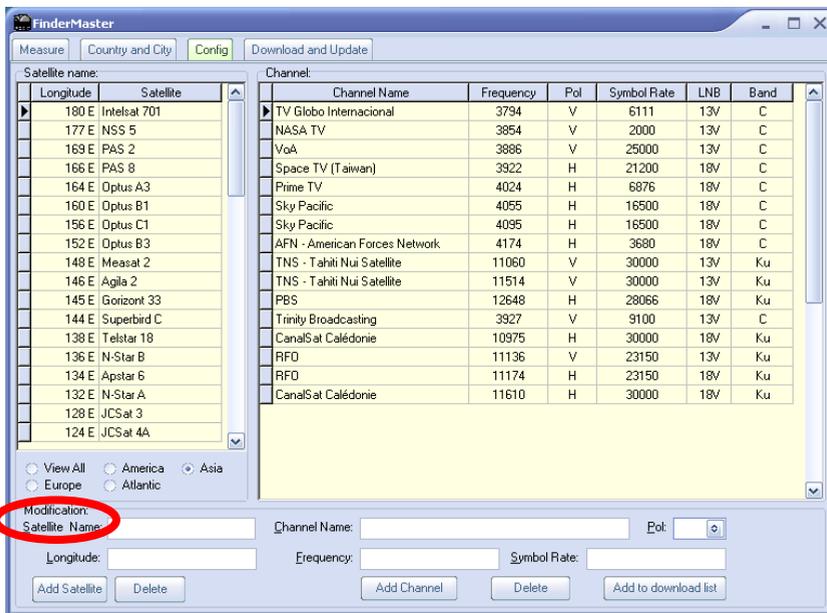


Fig. 3-11-1

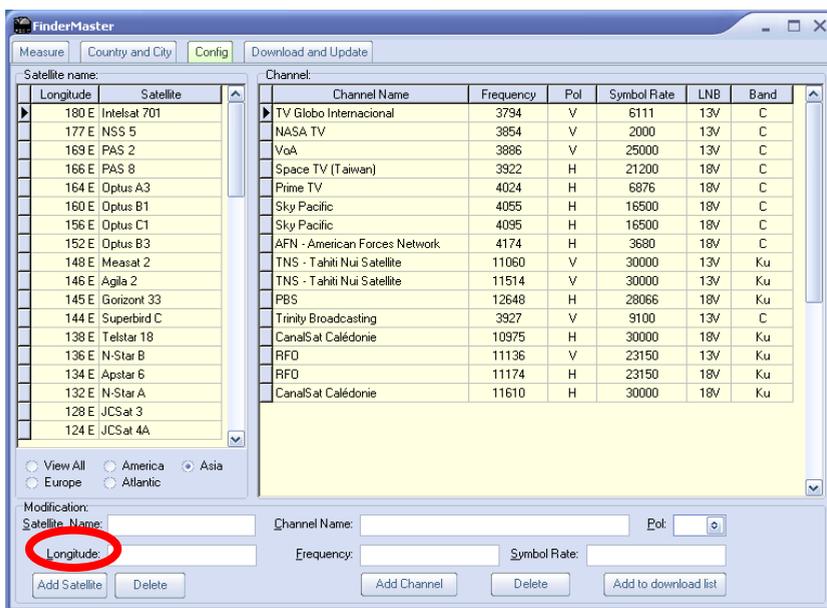


Fig. 3-11-2

Type in the longitude in the “Longitude” input-box, as shown in figure 3-11-2.

Then click the [Add Satellite] button to add data into the satellite list, as shown in figure 3-11-3.

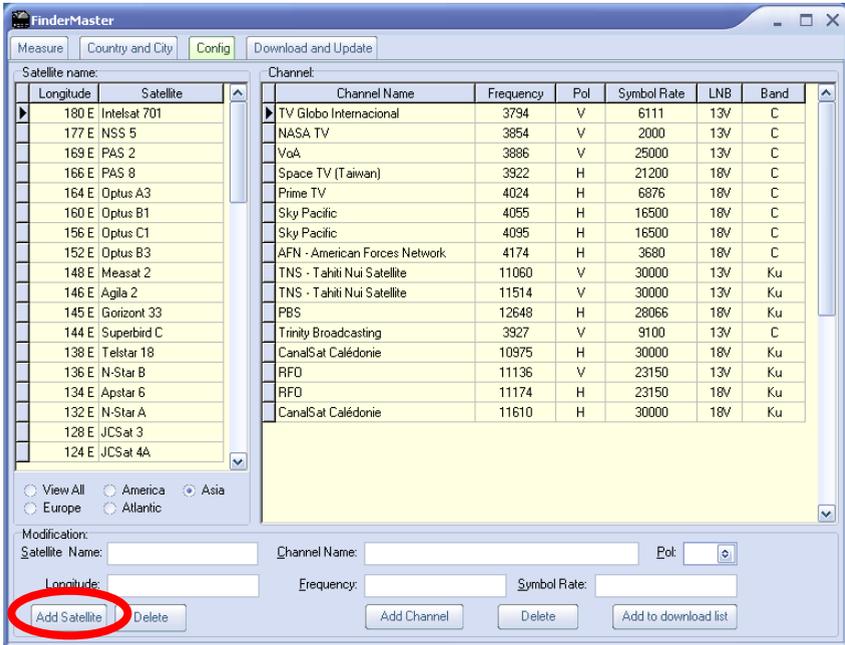


Fig. 3-11-3

Click the [Delete] button to delete the current selecting data of the satellite, as shown in figure 3-11-4.

The left satellite list box, only displays satellites which can be received locally by default. If you want to display all, please click the [View All] button, as shown in figure 3-11-5.

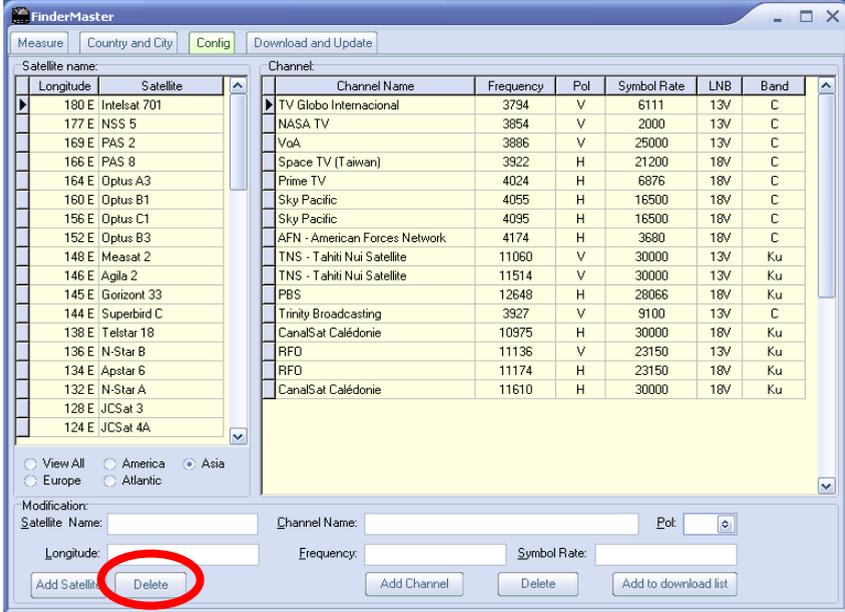


Fig. 3-11-4

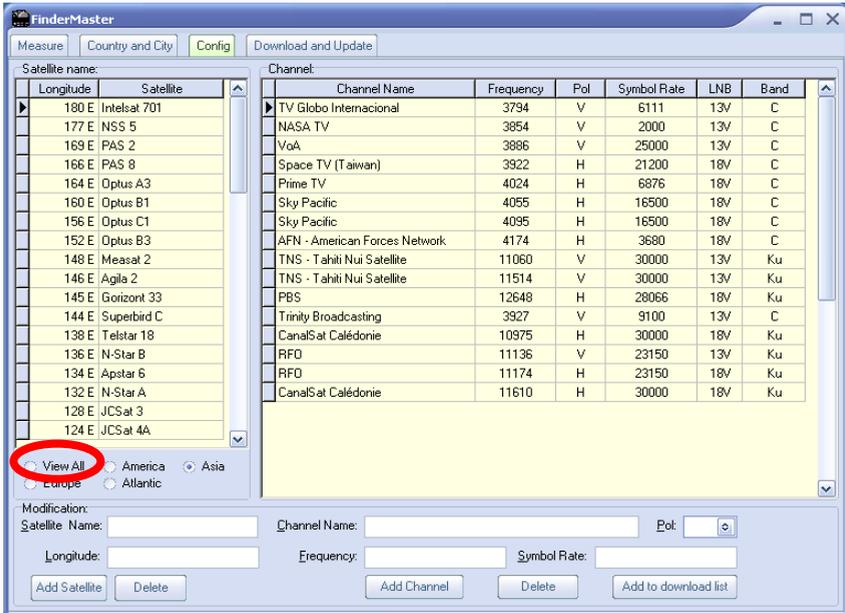


Fig. 3-11-5

After selecting a name and longitude of the satellite, all of the channel data of the current satellite will be displayed on the right “Channel” list. You can add or delete parameters of this channel. Type in the name of the channel in the “Channel Name” input-box, as shown in figure 3-11-6.

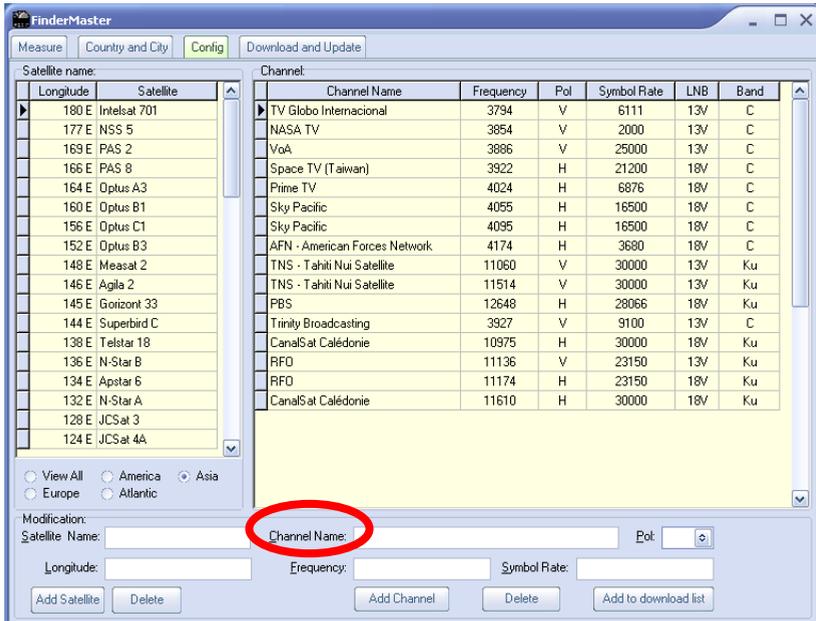


Fig. 3-11-6

Select the direction of polarization angle in the “Pol” drop-down box (H or V) , as shown in figure 3-11-7. Type in the downstream frequency in the “Frequency” input-box, as shown in figure 3-11-8.

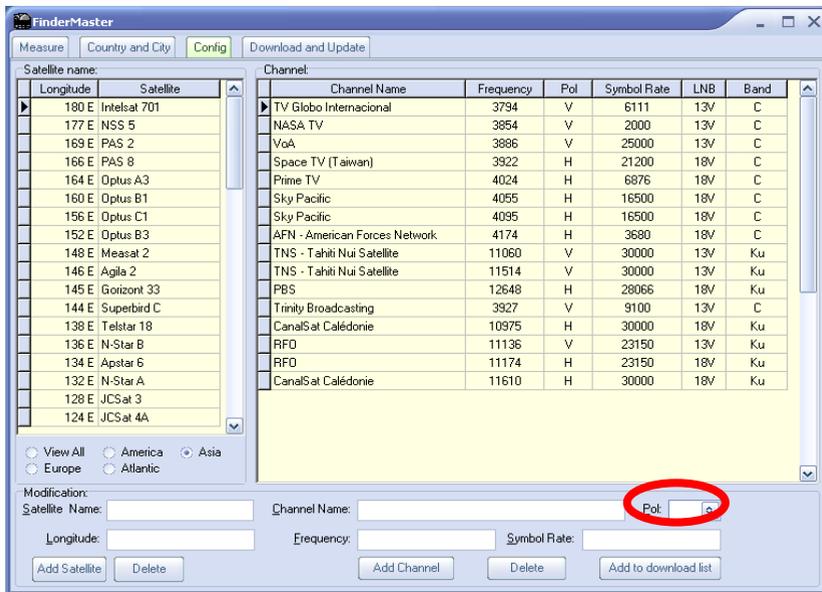


Fig. 3-11-7

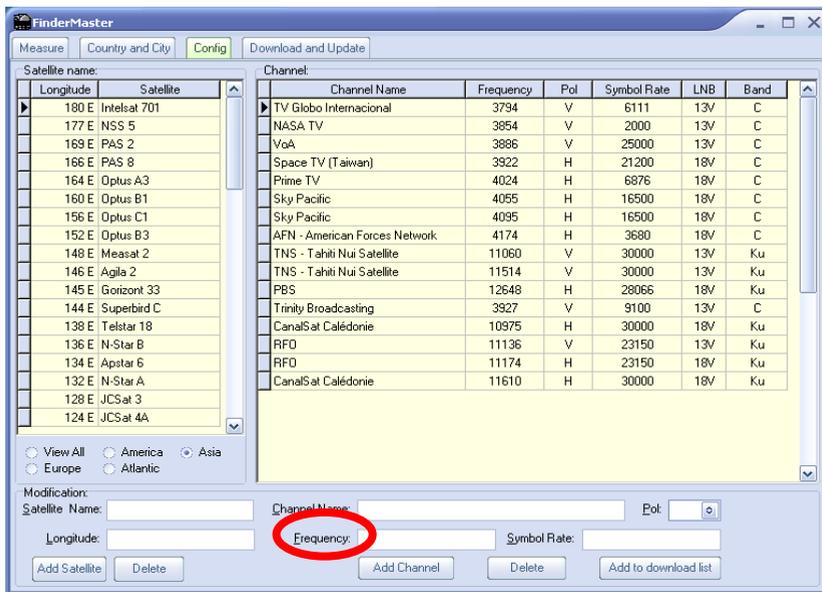


Fig. 3-11-8

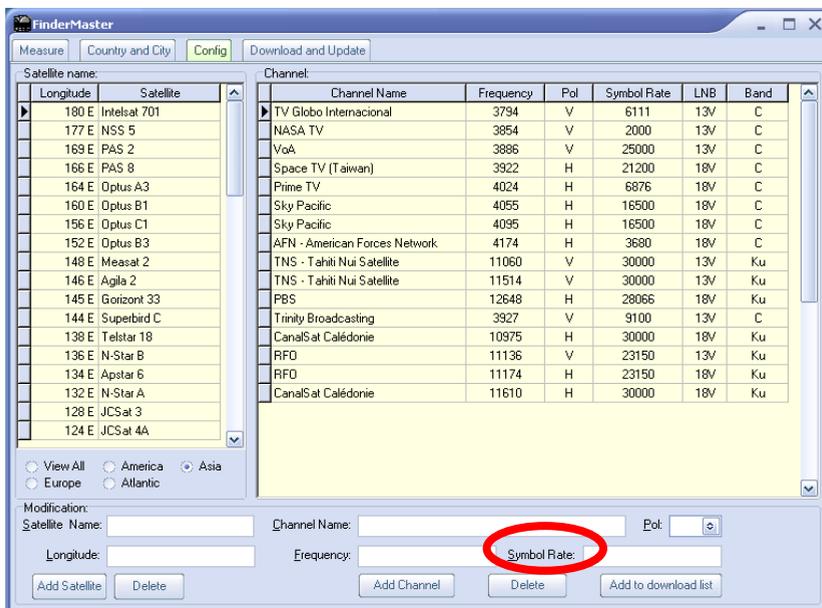


Fig. 3-11-9

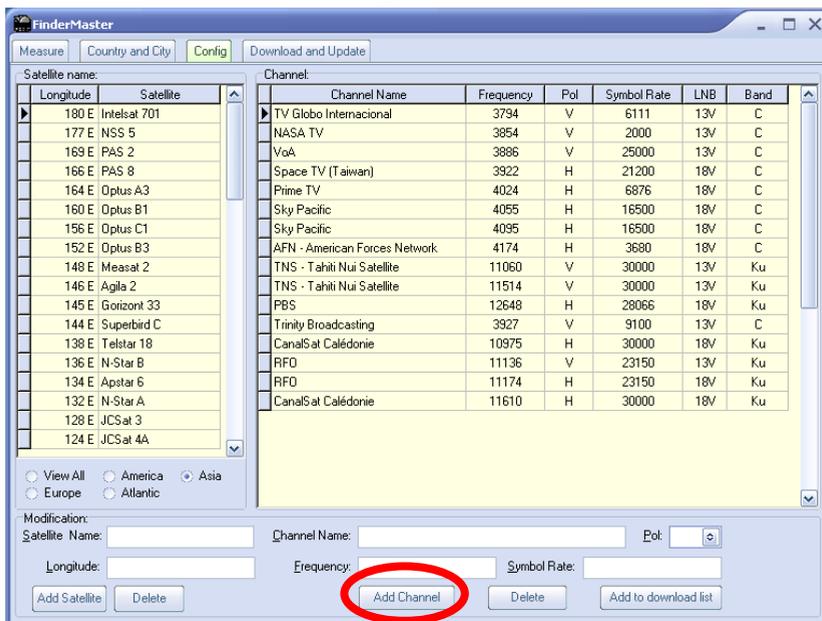


Fig. 3-11-10

Type in the symbol rate in the “Symbol Rate” input-box, as shown in figure 3-11-9.

Click the [Add Channel] button to add data into the channel list, as shown in figure 3-11-10.

Clicking the [Delete] button will delete the current selected channel data, as shown in figure 3-11-11.

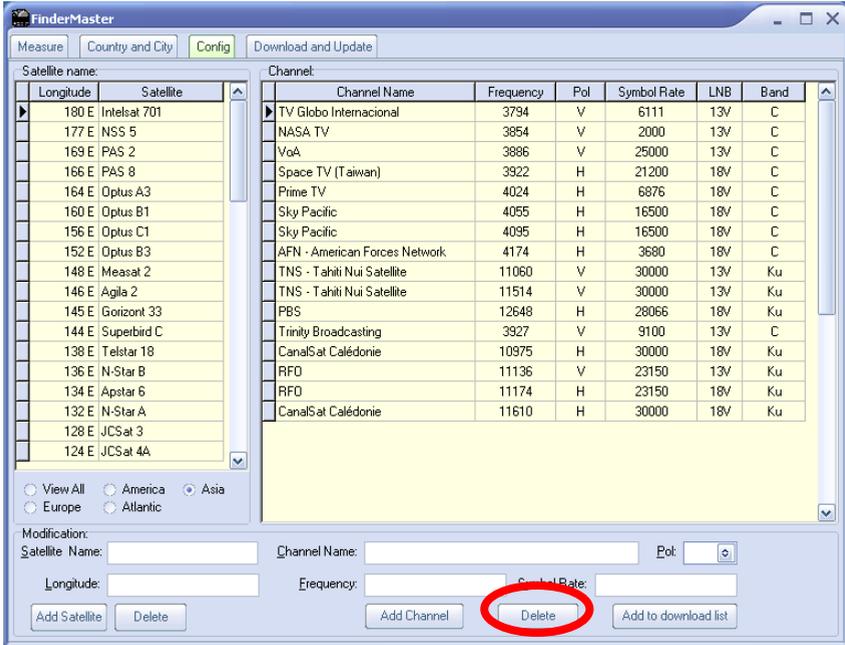


Fig. 3-11-11

Click any data in the Channel list, the [Add to download list] menu will appear, as shown in figure 3-12. Click it and an “Add to download list” dialog box will appear. Click the [OK] button to add this data into the download list, as shown in figure 3-13.

After selecting a record, click the [Add to download list] button at the bottom right corner of the screen or double click any piece of data and an “Add to download list” dialog box will appear as well. To add data follow the way mentioned above.

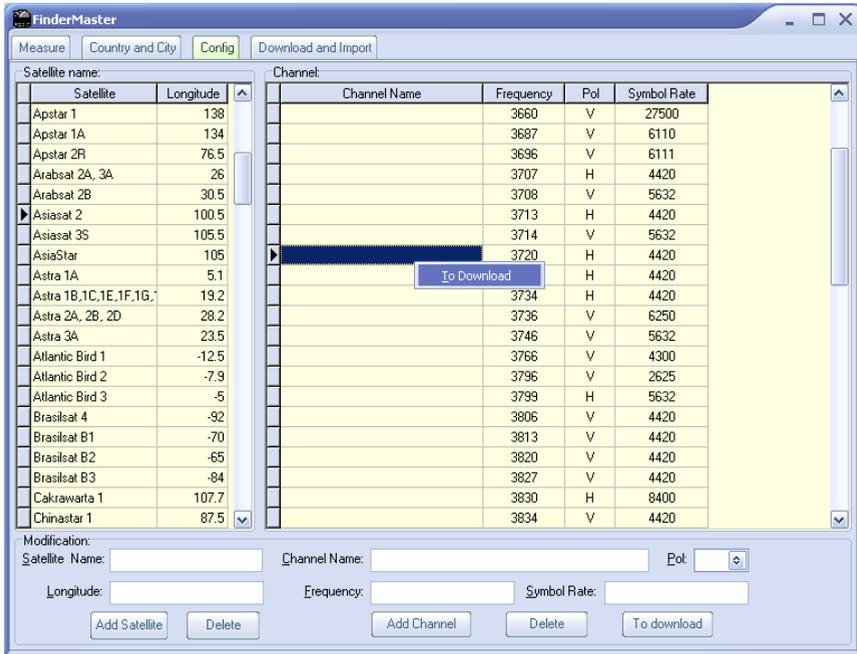


Fig. 3-12

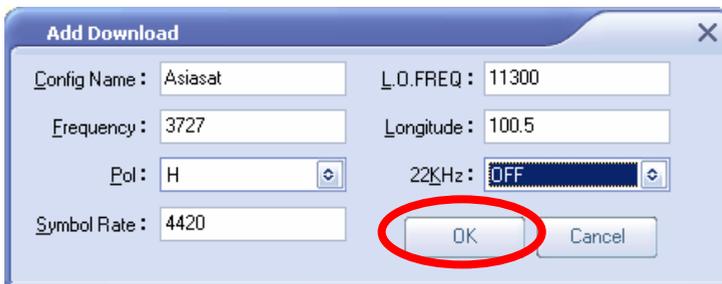


Fig. 3-13

d. [Download and Update]

Click the [Download and Update] menu to enter the [Download and Update] item, as shown in figure 3-14.

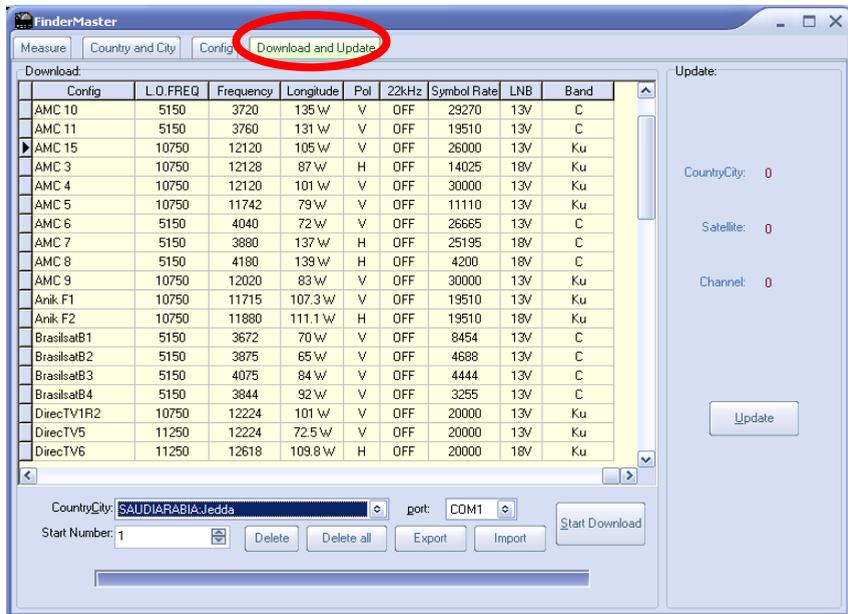


Fig. 3-14

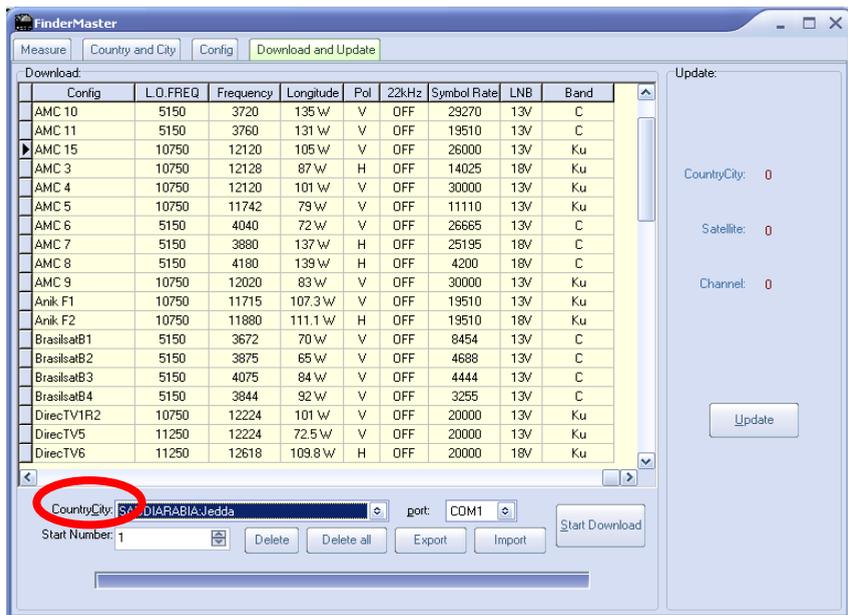


Fig. 3-14-1

Select location in the “Country & City” drop-down box, as shown in figure 3-14-1.

Select the start number in the “Start Number” drop-down box, as shown in figure 3-14-2. (The start number is the configuration record serial number of the satellite finder. That means to input data from which number unit).

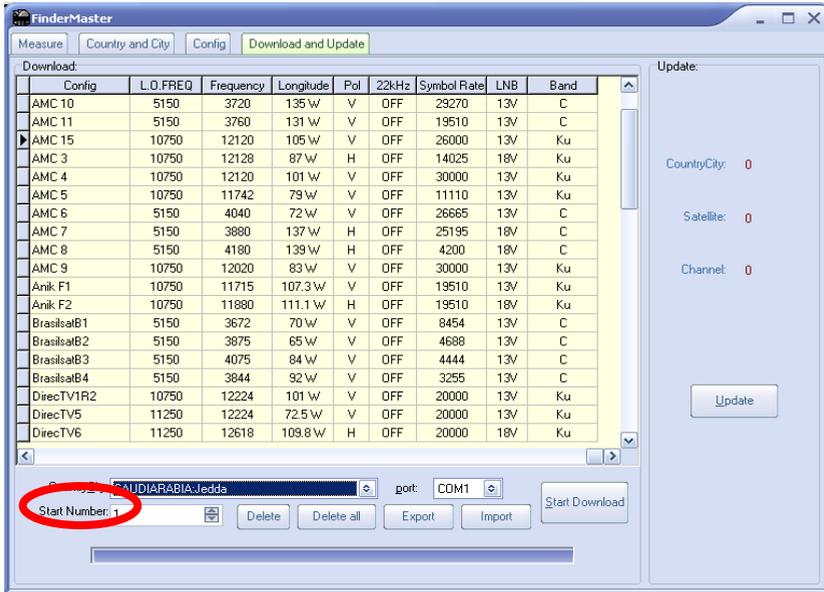


Fig. 3-14-2

Select the serial port in the “Port” drop-down box , as shown in figure 3-14-3(it should be the serial port which connect with the PC).

Click the [Start Download] button to start the download, as shown in figure 3-14-4.

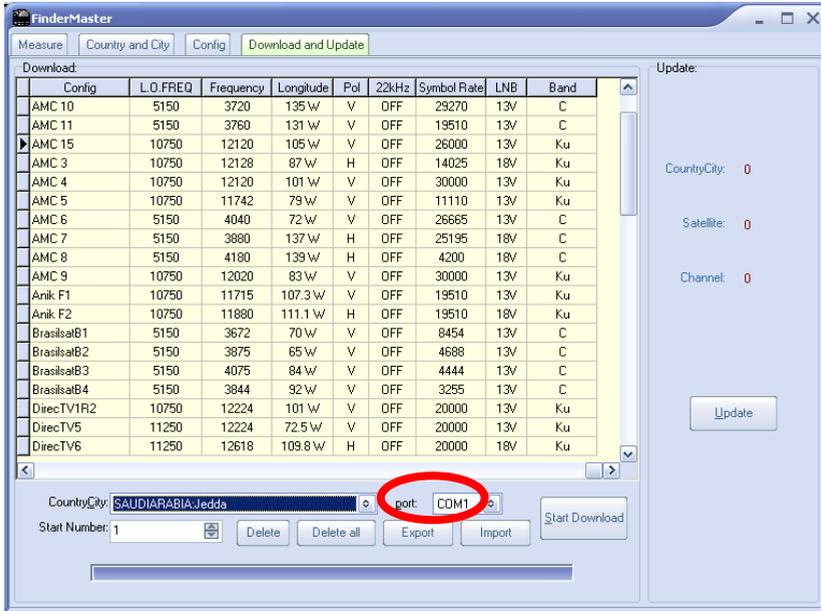


Fig. 3-14-3

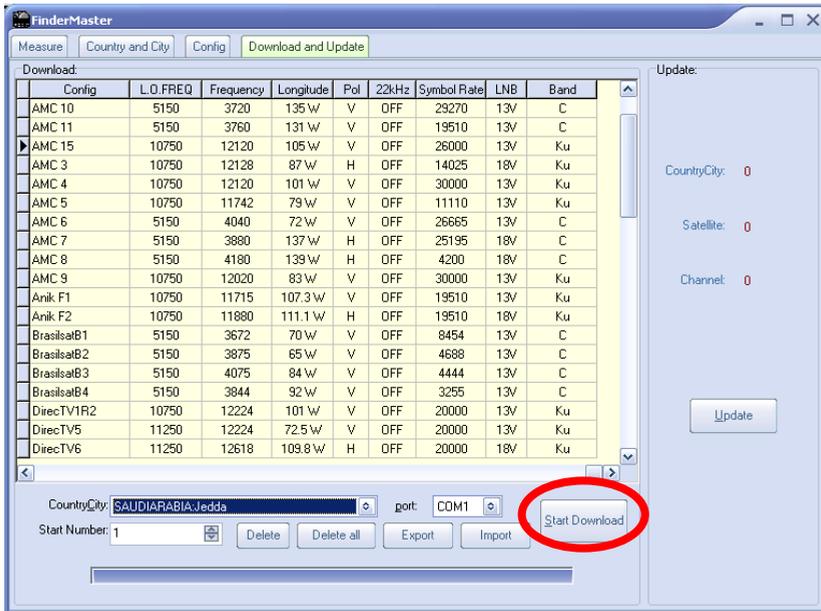


Fig. 3-14-4

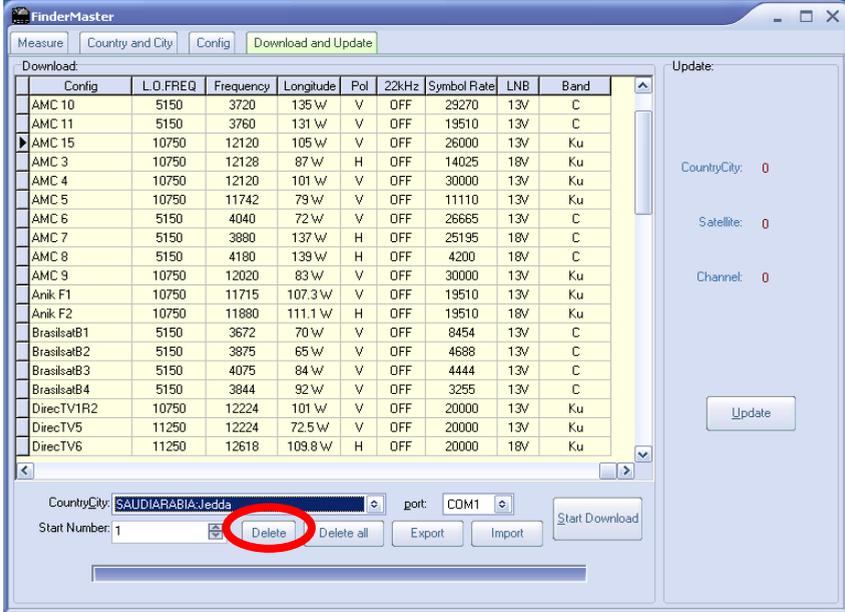


Fig. 3-14-5

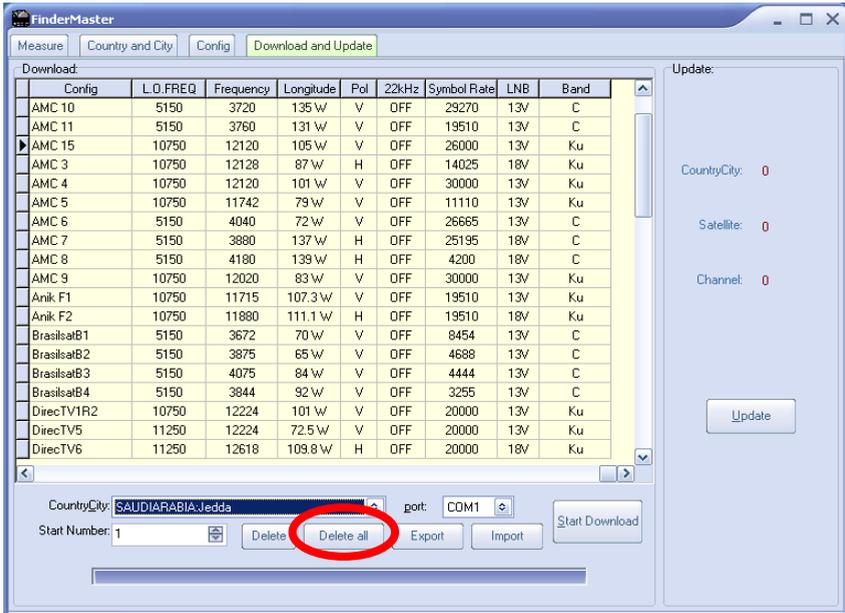


Fig. 3-14-6

Click the [Delete] button to delete the current selecting data, as shown in figure 3-14-5.

Click the [Delete all] button to delete all of the data in the download list, as shown in figure 3-14-6.

Click on [Export] to save the listed data. (as shown in figure in 3-14-7)

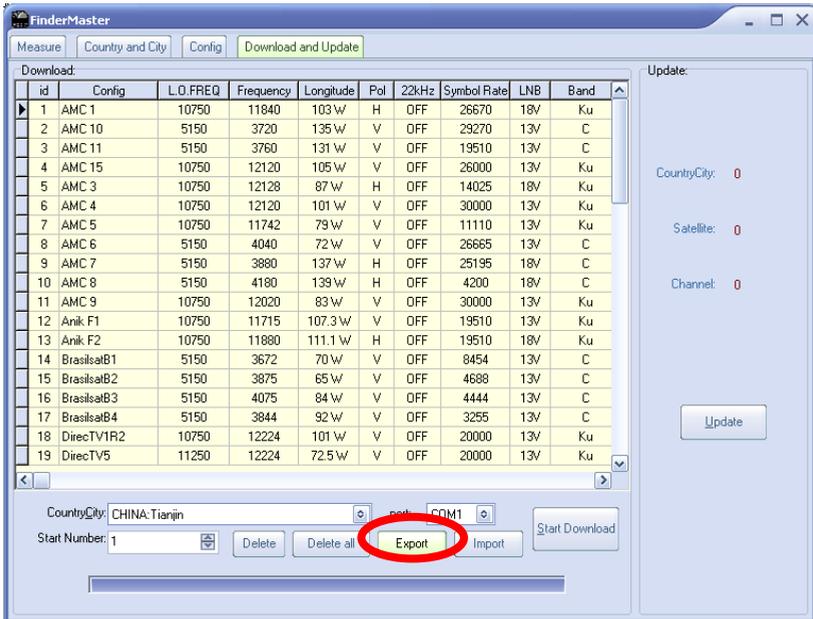


Fig. 3-14-7

Clicking on [Import] will take the saved data (suffix with .dl) into the download data. (as shown in figure 3-14-8)

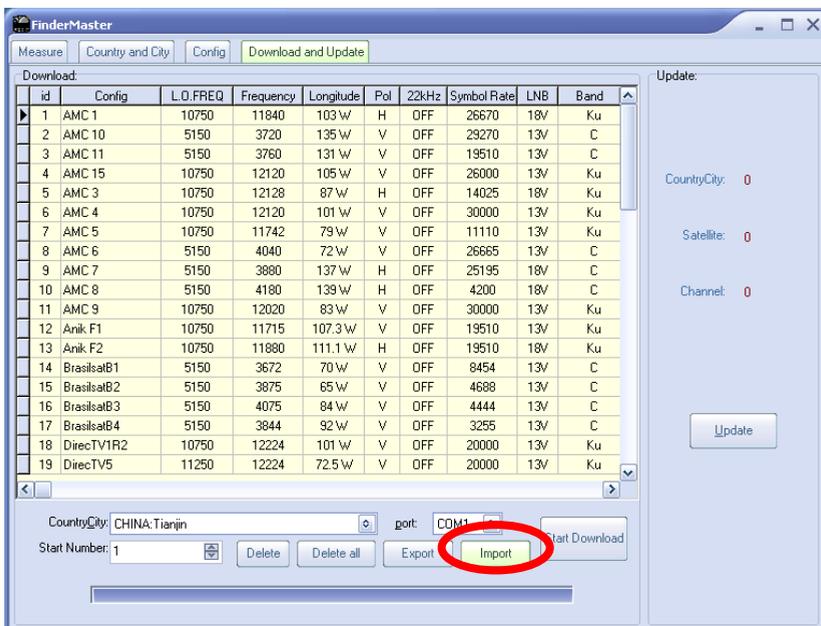


Fig. 3-14-8

When you click the [Update] button as shown in figure 3-14-9, selecting document dialog box will appear. Select update data package (*.fm) and click the [Open] button to input the new document into the library automatically.

After finishing the update, the update number of the country & city, satellite and channel will be displayed on the right of screen.

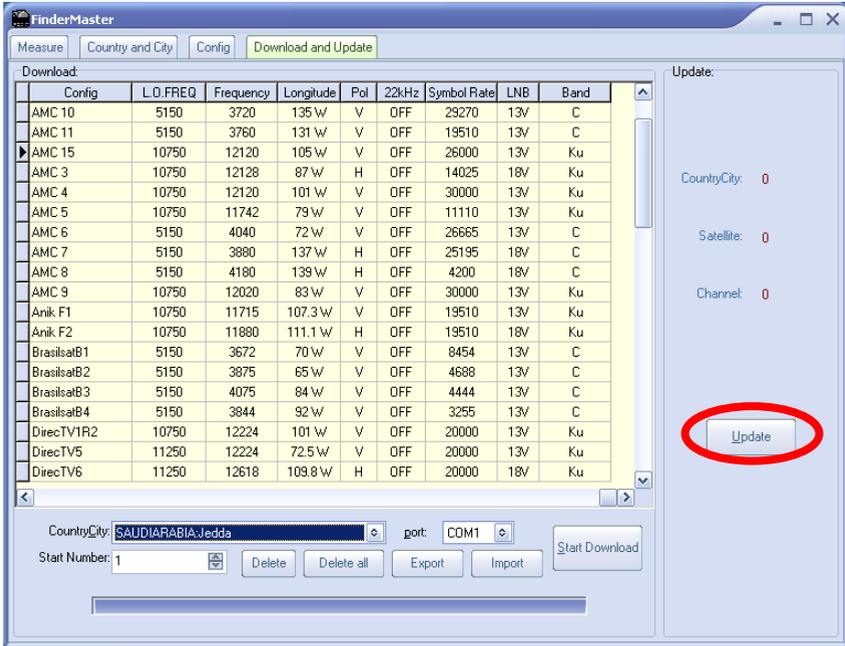


Fig. 3-14-9

Chapter Four, User case example

There are some user case examples which are in different conditions to help you understand the usage and function of finder better.

User case example 1: (Assume the meter has stored the satellite's name and relative parameters)

Location : London

Satellite's Name : Astra 28.2

Step one: Press the power key to open finder.

Step two: Setup the local longitude and latitude. We provide two

methods in this situation.

Method one: Assume local longitude and latitude has been known.

1. In main menu, press the [F2] key to select the “Config Meter” icon, as shown in figure 4-1.



Fig. 4-1

2. Press the [F4] or [ENTER] key to enter the “Config Meter” item.
3. Press the [F2] key to move [▶] point to the “Option” item.(as shown in figure 4-2)



Fig. 4-2

4. Press the [F4] or [ENTER] key to enter the “Option” item. (as shown in figure 4-3)

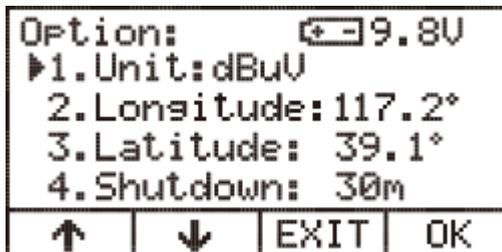


Fig. 4-3

3. Press the [F2] key to move [▶] point to the “Longitude” item.(as shown in figure 4-4)



Fig. 4-4

4. Press the [F4] or [ENTER] key to confirm. There will be an underline under the current number. And then you can type in the local longitude, as shown in figure 4-5.



Fig. 4-5

5. Press the number keys to type in the longitude directly. And then press [F4] or [ENTER] to confirm, then underline disappears.
6. Press the [F2] key to move the [▶] to point to “Latitude” item.
7. Press the [F4] or [ENTER] key to confirm. There will be an underline under the current number. And then you can type in the local latitude, as shown in figure 4-6.

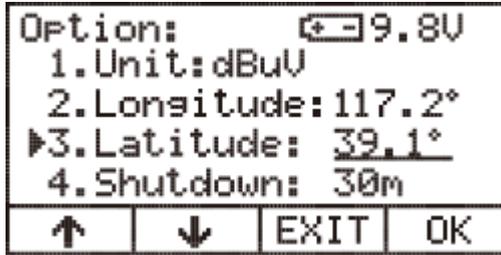


Fig. 4-6

8. Press the number keys to type in the latitude directly. And then press the [F4] or [ENTER] key to confirm, then underline disappears.

9. Press [F3] return to the main menu.

Method two: Assume local longitude and latitude has not been known. You can run “FinderMaster” which is software in the CD-ROM we provided. The detailed usage is shown as follows:

1. Install “Findermaster” on the PC.
 - a. Insert the CD-ROM.
 - b. Double click “setup” in the [Findermaster] folder, there will be an interface of installation, as shown in 4-7.

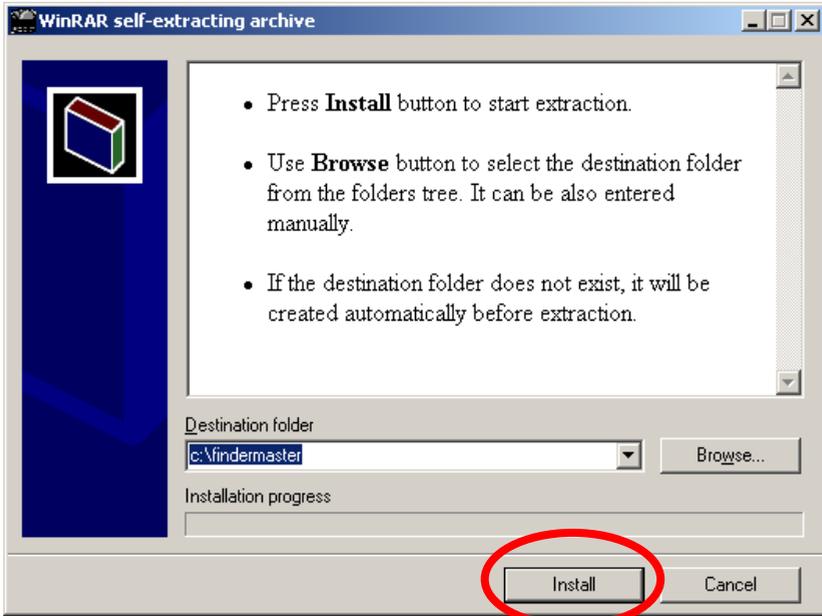


Fig. 4-7

- c. Click the [Install] button to start installation, as shown in 4-7.
- d. After installation is completed, there will be an icon on the desktop of the PC, as shown in figure 4-8.



Fig. 4-8

2. Enter into system :

Double click the [Findermaster] icon on the desktop of the PC to enter into the information system, as shown in figure 4-9.

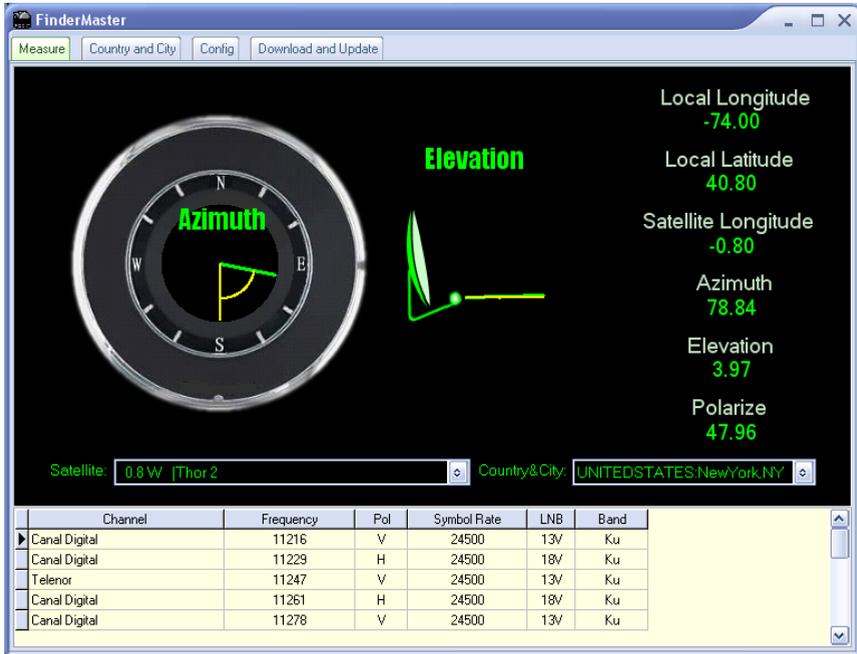


Fig. 4-9

3. Select location

Select United States: New York, NY in the drop-down box on the bottom right corner, as shown in figure 4-10.



Fig. 4-10

The New York's longitude and latitude will be displayed on the top right corner, as shown in figure 4-11.

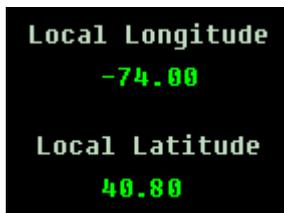


Fig. 4-11

Then you can type in the local longitude and latitude by following method one.

Assume that there are no local parameters in FinderMaster, please check it on our website. Then you can type in the local longitude and latitude by following method one.

Step three: Select satellite's name and parameters.

1. Press [F2] key to select the "Load" icon, as shown in figure 4-12.

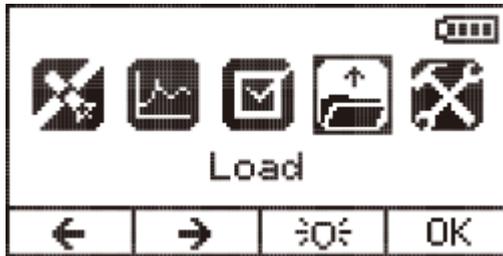


Fig. 4-12

2. Press [F4] or [ENTER] key to enter the "Load" item, as shown in 4-13.



Fig. 4-13

3. Press [F4] or [ENTER] key to enter the "Configuration" item, as shown in figure 4-14.



Fig. 4-14

4. Select the satellite's name.

Press [F1],[F2] or [▲],[▼] to select "Intelsat 5", as shown in figure 4-15.

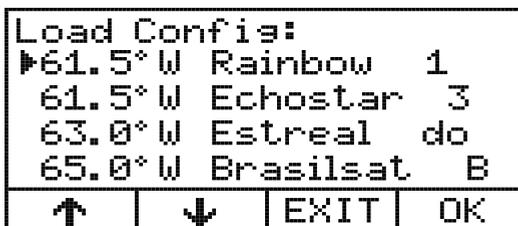


Fig. 4-15

5. Press [F4] or [ENTER] key to confirm. Its parameters will be displayed on the screen, as shown in figure 4-16.

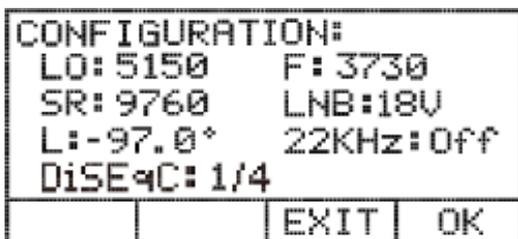


Fig. 4-16

6. Press [F4] or [ENTER] key to return to the main menu.

Step four: Align and measure

1. Select the "Finding" item in the main menu as shown in figure 4-17.



Fig. 4-17

2. Press [F4] or [ENTER] key to enter the “Finding” item, as shown in figure 4-18.

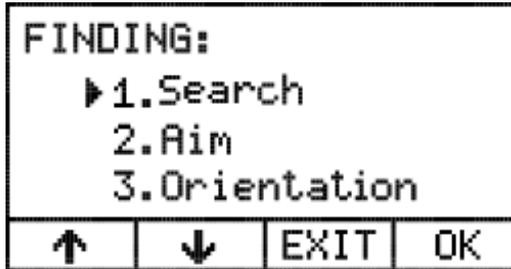


Fig. 4-18

3. Press [F2] to move [▶] point to the “Orientation” item, press [F4] or [ENTER] key to enter, as shown in figure 4-19. AZ means Azimuth, EL means Elevation and PO means Polarize. According to those parameters shown here, you can setup the satellite dish.

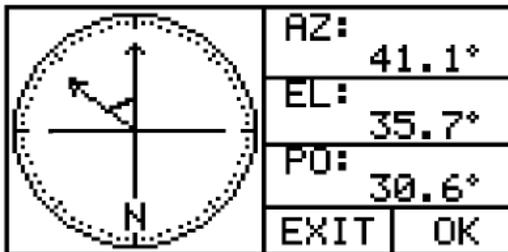


Fig. 4-19

4. Press [F4] or [ENTER] key to enter “Spectrum” item directly, as shown in figure 4-20.

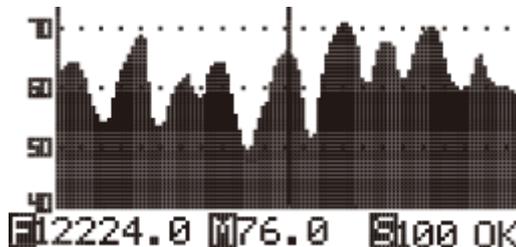


Fig. 4-20

- From here press [F4] or [ENTER] key to enter “Aim” item directly, as shown in figure 4-21. You can press F2 to turn on/turn off beep sound. Align the dish to get a maximum value of sound and ‘S’, ‘Q’ indication bar.

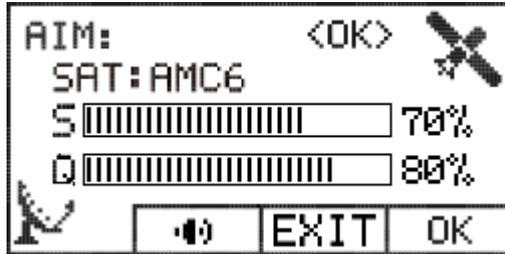


Fig. 4-21

- Press [F4] or [ENTER] key to enter the “Search” item, as shown in figure 4-22. If the dish has already been aimed to the satellite, it will display “OK” and make a beep sound to confirm.



Fig. 4-22

Step five: Save record of measurement result

- Press [F2] key to move [▶] point to the “Save” item and press [F4] or [ENTER] key to confirm, as shown in figure 4-23.

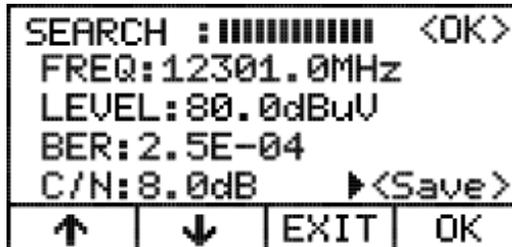


Fig. 4-23

- Press [F1],[F2] to select the record one by one or press [▼],[▲] to browse. After selecting a record, press [F4] or [ENTER] to confirm. Then type in a name for the record that is less than 12 characters. When finishing the steps above, press [F4],[ENTER] or [▶] key twice to confirm, as shown in figure 4-24.



Fig. 4-24

User case example two: (assume the finder has not setup the satellite's parameters and name.)

Location : New York

Satellite's name : Intelsat Americas 5

Step one: Press [power] key to open the finder.

Step two: Setup the local longitude and latitude. (Refer to example one)

Step three: Setup the satellite's parameters. We provide two methods for this situation.

Method one: You can run FinderMaster which is software in the CD-ROM we provided. The detailed usage is shown as follow:

1. Install Findermaster on PC :
 - a. Insert CD-ROM.
 - b. Double click “setup” which is in the [Findermaster] folder, there will be an interface of installation, as shown in 4-25.

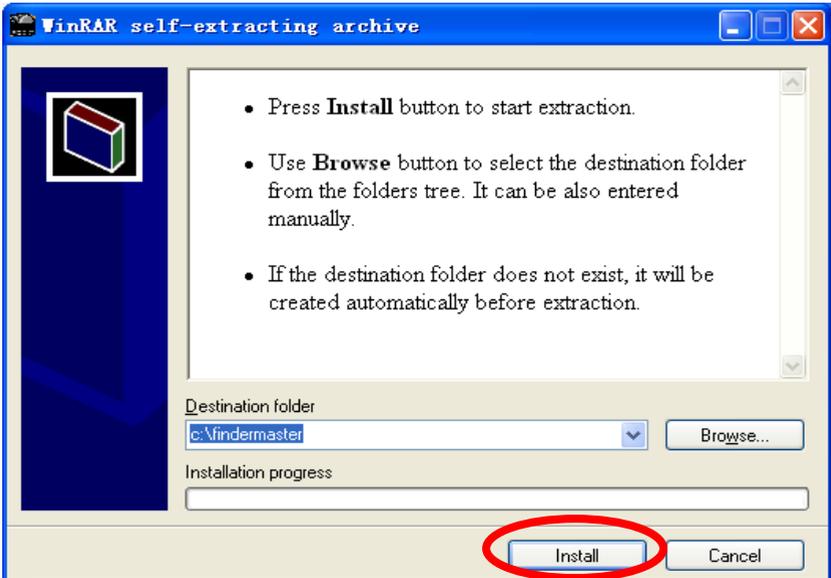


Fig. 4-25

- c. Click [Install] button to start installation.
 - d. After installation is completed, there will be an icon on the desktop of the PC, as shown in figure 4-26.



Fig. 4-26

2. Enter into the system :

Double click the [Findermaster] icon on the desktop of the PC to enter into the information system, as shown in figure 4-27.

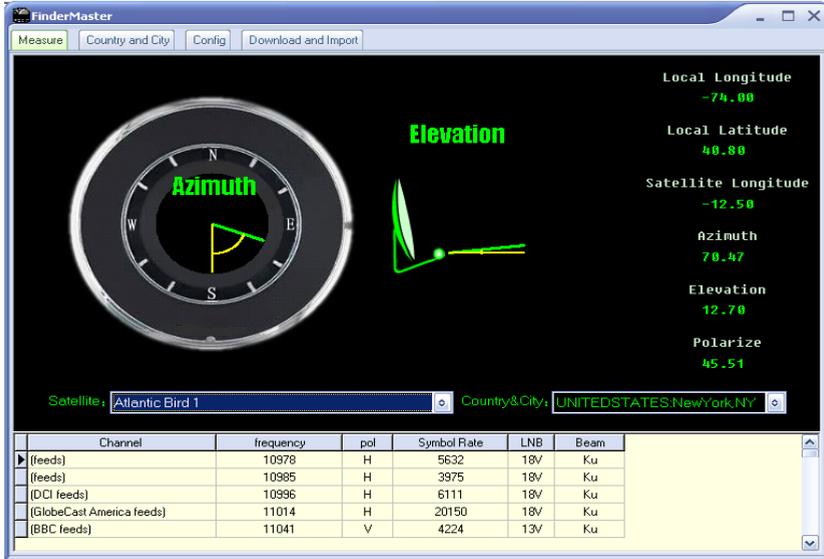


Fig. 4-27

3. Select location

Select “United States: New York,NY” in the “Country & City” drop-down box on the bottom right corner , as shown in figure 4-28.



Fig. 4-28

4. Select name of satellite

Select “Intelsat 605” in the Satellite drop-down box on the bottom left corner, as shown in figure 4-29.



Fig. 4-29

5. Select channel for the satellite that you want to align

After selecting a satellite there will be a channel list under the screen. Double click on any channel that is listed on the table, the

[Add to download list] dialog box will display on the screen, as shown in figure 4-30.

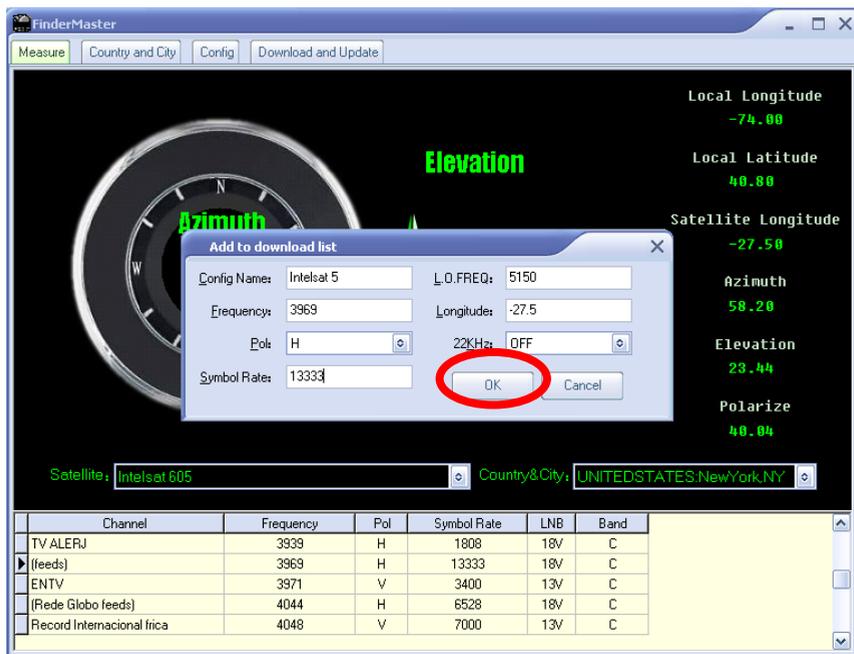


Fig. 4-30

6. Press [OK] to confirm and finish adding in a record, as shown in figure 4-30.
7. Download
 - a. Click the [Download and Update] menu, as shown in figure 4-31.

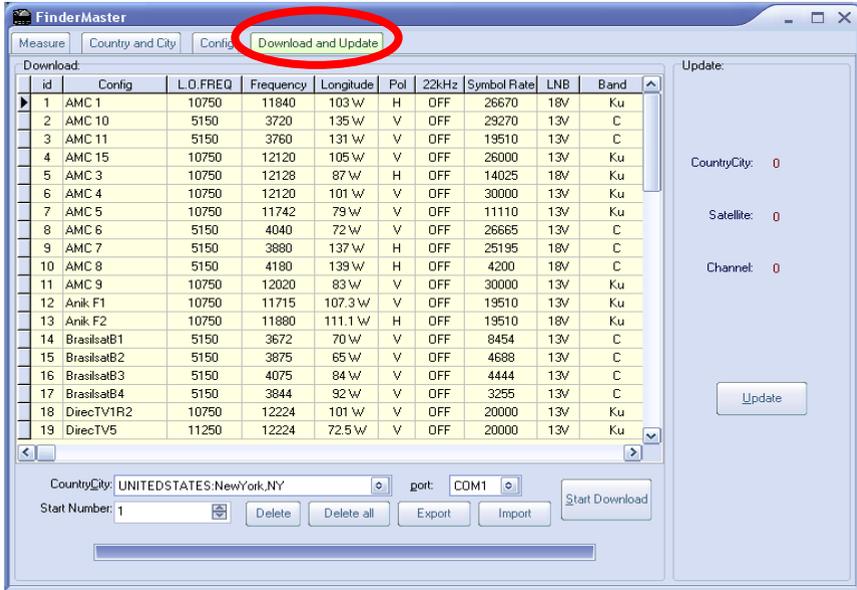


Fig. 4-31

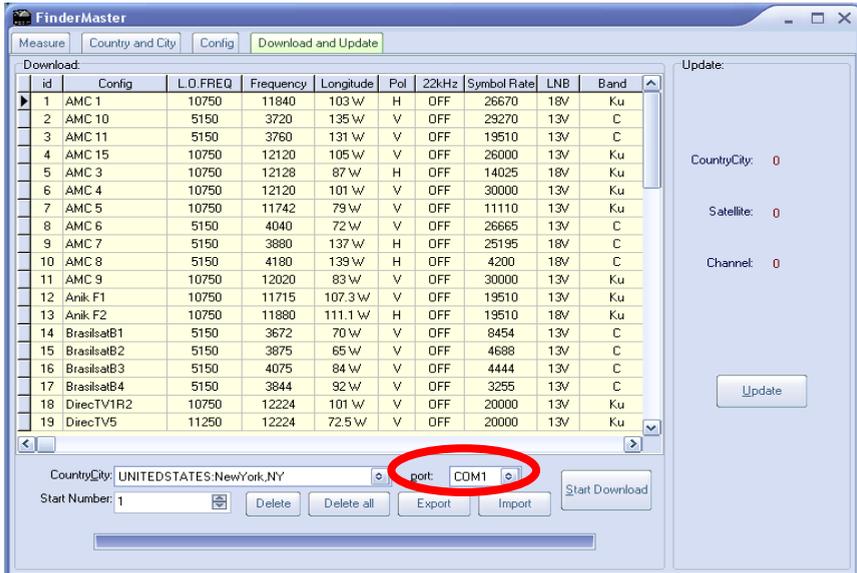


Fig. 4-32

b. Select the COM port that is used for connecting with PC. Click

the [Port] drop-down box to select the correct one, as shown in figure 4-32.

c. Connect the PC with a data cable, as shown in figure 4-33.

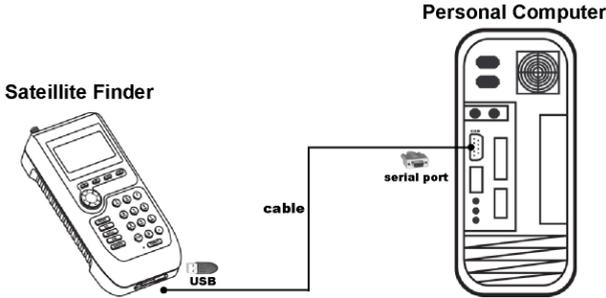


Fig. 4-33

d. Press [POWER] to turn on the finder, press [F2] to select “Config Meter”, as shown in figure 4-34.



Fig. 4-34

e. Press [F4] to enter “Config Meter” item, as shown in figure 4-35.



Fig. 4-35

f. Press [F4] to enter “Download” item, as shown in figure 4-36.



Fig. 4-36

g. Press F4 to enter the data download menu. (as shown in figure 4-37)



Fig. 4-37

h. Click [Start Download] on the PC screen to start. When the “Complete!” box appears it means that the downloading process is finished, as shown in figure 4-38. Then click [OK] to confirm. On the satellite finder press [F3] to return to the main menu.



Fig. 4-38

Method two: assuming we already know the satellite’s parameters.

1. Press [F2] to select “Configuration”, as shown in figure 4-39.

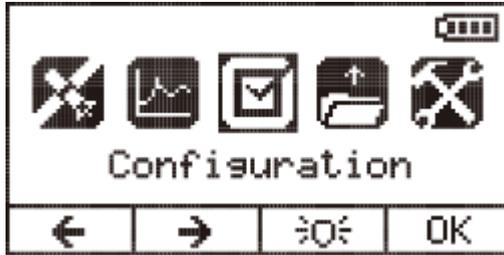


Fig. 4-39

2. Press [F4] or [ENTER] to enter the “Configuration” item, as shown in figure 4-40.



Fig. 4-40

3. Move [▶] to point to “LO”, press [F4] or [ENTER] to confirm.

There will be an underline under the number, then press the number keys to type 11300 for local oscillation frequency. Then press [F4] or [ENTER] to confirm and then underline disappears, as shown in figure 4-41.



Fig. 4-41

4. Move [▶] to point to “F”, then press [F4] or [ENTER] to confirm. There will be an underline under the number. Press the number keys to type 12301.0 for the downstream frequency, and then press [F4] or [ENTER] to confirm and then underline disappears, as shown in figure 4-42.



Fig. 4-42

5. Move [▶] to point to “SR”, then press [F4] or [ENTER] to confirm. There will be an underline under the number. Press the number keys to type 25600 for the symbol rate and then press [F4] or [ENTER] to confirm and then underline disappears, as shown in figure 4-43.

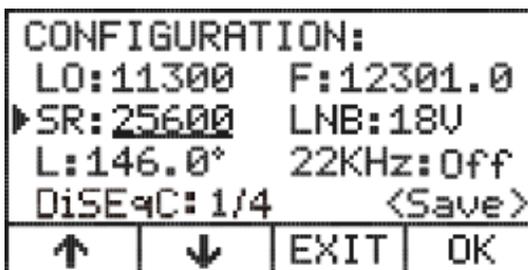


Fig. 4-43

6. Move [▶] to point to “LNB”, then press [F4] or [ENTER] to switch to 18V (horizontal polarization), as shown in figure 4-44.



Fig. 4-44

7. Move [▶] to point to “L”, press [F4] or [ENTER] to confirm. There will be an underline under the number, then press the number keys to type 146.0 ° for the satellite longitude degree. Then press [F4] or [ENTER] to confirm and then underline disappears, as shown in figure 4-45.



Fig. 4-45

8. Move [▶] to point to “22KHz”, then press [F4] or [ENTER] to switch it to “Off”, as shown in figure 4-46.



Fig. 4-46

9. Move [▶] to point to “DiSEqC”, then press [F4] or [ENTER] to

switch between 1/4, 2/4, 3/4, 4/4, 1/2, 2/2 or OFF, as shown in figure 4-47.



Fig. 4-47

Press [►] key, when the arrow is pointing at 'Save', by pressing F4 can take you to the 'Spectrum' function, then press F4 to enter 'Aim' function menu (see Fig. 4-48、 4-49、 4-50) (then you will be directly get onto step five.)

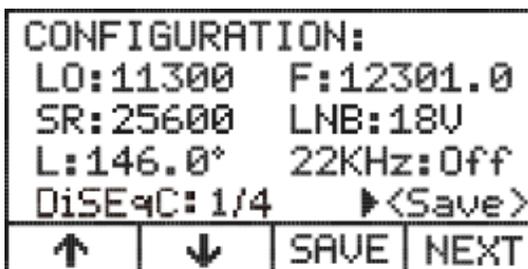


Fig. 4-48

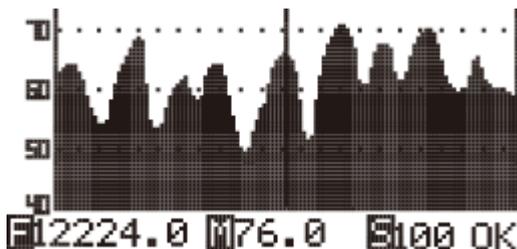


Fig. 4-49

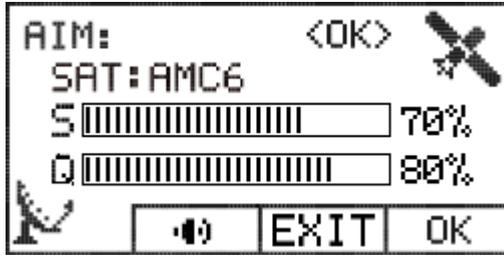


Fig. 4-50

Step four: Select satellite name and parameters.(Refer to step three of example one)

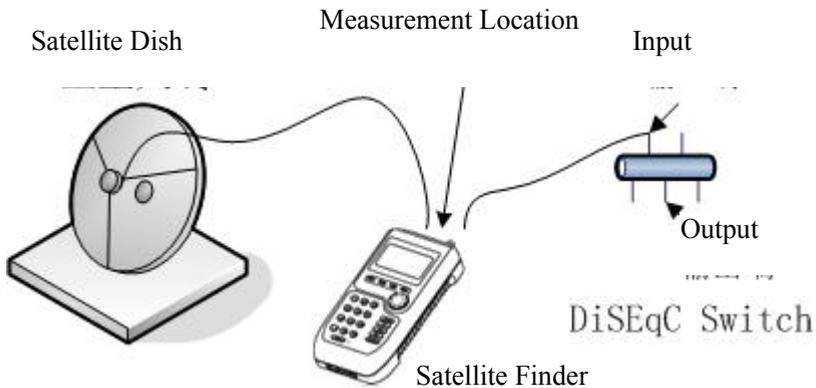
Step five: Align and measure. (refer to step four of example one)

Step six: Save the record of measurement result. (refer to step five of example one)

Chapter Five, FAQ

1. Q: After the Digital Satellite finder is plugged in DiSEqC Switch while the survey , why isn't there any signal ?

A: Make sure to do the survey before you plug the Digital Satellite Finder in the DiSEqC Switch.



2. Q: How does the Digital Satellite Finder can receive the Universal dual LNB ability to do a survey?

A: Please switch the ability of the Universal dual LNB under the Configuration function.

3. Q: What can I do when the Digital Satellite finder's parameter data has mistakes in it?

A: Because a satellite's channel data is updated every year, there is always a possibility that there are mistakes in it. Please visit the www.easysatfinder.com site upload and download the newest FinderMaster software update package, download it in the Digital Satellite Finder after updating, or go on www.lyngsat.com site find out the newest channel data and update them manually directly on your Digital Satellite Finder.

Chapter Six, Power supply

A piece of high performance built-in battery (8.4V MH-Ni battery) supplies the power to this instrument. The power supply adapter can also supply the power. We however recommend this for emergency use for short periods of time. This instrument can be used 4 hours continuously if fully charged.

Note :

1. The instrument has an automatic saving power unit. When there is no operation on the keyboard close to the time which it was set for an automatic turning off, the instrument will make three “beep” sounds. If beyond that time it will make another three “beep” sounds and then automatically shut off the instrument.
2. The instrument has an automatic battery voltage test function. Users can estimate the consumption of battery voltage by checking the “Utility” item also. It also has a lack of voltage alarm function. When the voltage of the battery is below $7.7V \pm 0.2$, it will make a “beep” sound. That could tell user needs to charge battery in time. Or else, it'll automatically turn off.
3. Please charge the battery as soon as possible with the special power supply adapter that we provided. When you use the power supply adapter, please insert its direct current plug into the DC socket which is at the bottom of the instrument and insert its other alternating current plug into the power-outlet. When the red light is on, that means the instrument is connected with the power supply adapter and is charging.
4. The instrument should be turned off while charging for the protection of the battery and instrument. The time to fully charge the battery is approximately 4 hours and no more than 5 hours while turned off. When you charge the battery for the first three times, we recommend 5 hours. When fully charged, please pull out

the power supply plug and store it carefully for the next time use.

5. The instrument can support working and charging at the same time. But we don't recommend it that way. It's only for urgent matters and working time should not pass 10 minutes.

Since the battery is specially customized for our instrument, please ensure to use it only for charging. The company will not be responsible for the repairs and will not compensate for any loss or damage caused by using other power supply adapters.

Chapter Seven, Technical Data

1. Input Frequency

Frequency range: 950~2150MHz

2. Signal Measure

Level range: -65dBm ~ -25dBm

Input resistance: 75Ω

Symbol rate: 2Msps ~ 45 Msps

3. Other

Dimension: 250×120×60(mm)

Net weight: 0.8Kg

Gross weight: 1.6Kg

Working temperature: 0°C ~ +40°C

Display: 128×64 wide-range temperature liquid crystal display.

Audio output: build-in speaker

Port: USB (default)

Switch: 22 KHz support

4. Power Supply

LNB power supply: 'H' +18V, ≤500mA; 'V' +13V , ≤500mA

DC power supply: DC8.4V chargeable battery

Power adapter input: AC110V/60Hz/220V/50Hz±10%

Power adapter output: 9.6 V DC 800mA

Working time: working hours 3~4 hours (full charge)

Charging time: more than 4 hours , less than 5 hours.

5. Accessories

Common power supply adapter or Cigarette lighter adapter : 1 piece (Note: Adapter is optional.)

RF input connector GMHF-L3/8-JK : 1 piece

Instrument bag : 1 piece

Operator's manual : 1 piece

CD-ROM : 1piece

Data cable : 1piece

CHANNEL PLAN OF EUROPE

Satellite name		Channel name	F		SR	LO
72.0°E	Intelsat 4	E TV	12506	H	2500	10600
70.5°E	Eutelsat W5	VoA	11240	V	27500	9750
68.5°E	Intelsat 7	Multichoice South Africa	10970	H	30000	9750
	Intelsat 10	Manasat	12575	V	3378	10600
66.0°E	Intelsat 704	CFI	4055	V	27500	5150
64.2°E	Intelsat 906	UBC TV	3721	V	4882	5150
62.0°E	Intelsat 902	IRIB	10973	V	27500	9750
60.0°E	Intelsat 904	Bashkir TV	11101	V	4105	9750
57.0°E	NSS 703	STAR TV	11178	V	15600	9750
56.0°E	Bonum 1	NTV Plus	12245	V	27500	10600
55.0°E	Insat 3E	DD Hissar	4000	V	4250	5150
54.8°E	Intelsat 702	@SatGate	11664	V	36170	9750
53.0°E	Express AM 22	Ukrkosmos	11096	V	6400	9750
49.0°E	Yamal 202	@ Gascom Internet	3740	L	38000	5150
45.0°E	Intelsat 12	Telly Track	11451	H	3254	9750
42.0°E	Türksat 1C	BRT 1	10968	V	4557	9750
	Türksat 2A	DigiTurk	11729	V	15555	10600
40.0°E	Express AM 1	@PlanetSky	11044	H	39999	9750
39.0°E	Hellas Sat 2	Hellas Sat	11542	H	6530	9750
38.0°E	Paksat 1	Virtual University	3411	H	13000	5150
36.0°E	Eutelsat Sesat	CaspioNet	12511	H	4340	10600
	Eutelsat W4	Poverkhnost	11727	L	27500	10600
33.0°E	Eurobird 3	@ TEUS	11513	H	30000	9750
32.9°E	Intelsat 802	Kenyan mux	11590	H	5787	9750
31.5°E	Optus A3	SES-Astra	12281	H	22000	10600
30.5°E	Arabsat 2B	Blue Nile Channel(17-23)	12582	V	4220	10600
28.5°E	Eurobird 1	Sky Digital	11222	H	27500	9750
28.2°E	Astra 2A	Sky Digital	11758	H	27500	10600
	Astra 2B	Sky Digital	11973	V	27500	10600
	Astra 2D	Sky Digital	10714	H	22000	9750
26.2°E	Badr C	Iqraa	3800	H	27500	5150

26.0°E	Badr 3	Arabsat	11747	V	27500	10600
	Badr 4	MBC	11919	H	27500	10060
25.8°E	Eurobird 2	Site 1 Network	11075	H	27500	9750
23.5°E	Astra 1D	@AstraNet	10862	H	22000	9750
	Astra 3A	Bund TV	11515	H	27500	9750
21.6°E	Eutelsat W6	CFI Peco Pro	11534	V	29950	9750
19.2°E	Astra 1F	Premiere	11720	H	27500	10600
	Astra 1G	MTV Networks	11739	V	27500	10600
	Astra 1H	ARD Digital	11836	H	27500	10600
	Astra 1KR	Bibel TV	10832	H	22000	9750
	Astra 2C	SES-Astra	12168	V	27500	10600
16.0°E	Eutelsat W2	DigitAlb	11092	V	32000	9750
13.0°E	Hot Bird 2	British Telecom	11727	V	27500	10600
	Hot Bird 6	TPS	10834	V	27500	9750
	Hot Bird 7A	TPS	10911	V	27500	9750
	Hot Bird 8	IRIB	12437	H	27500	10600
10.0°E	Eutelsat W1	APTN London	12629	V	5632	10600
7.0°E	Eutelsat W3A	TVP	11175	V	27500	9750
5.0°E	Sirius 3	Viasat	11785	V	27500	10600
4.8°E	Sirius 2	Pro TV	12456	H	27500	10600
4.6°E	Astra 1C	SES-Astra	10936	V	22000	9750

CHANNEL PLAN OF ASIA

Satellite name		Channel name	F	SR	LO
180.0°E	Intelsat 701	CanalSat Caledonie	10975 H	30000	9750
177.0°W	NSS 5	AFN-America	3977 H	28000	5150
169.0°E	Intelsat 2	Telstra	12281 V	27500	11300
166.0°E	Intelsat 8	SelecTV	12286 H	28800	11300
160.0°E	Optus D1	Sky TV	12394 H	22500	11300
156.0°E	Optus C1	Austar	12305 H	30000	11300
154.0°E	JCSAT 2A	S-Net	12688 H	21096	11300
152.0°E	Optus B3	Optus Communications	12407 V	30000	11300
150.0°E	JCSAT R	World Mate	12534 H	4340	11300
148.0°E	Measat 2	A-Sky-Net	11602 H	41500	9750
146.0°E	Agila 2	Dream Satellite TV	12301 H	25600	11300
144.0°E	Superbird C	Sound Planet	12508 V	21096	11300
140.0°E	Express AM 3	NVK Sakha	11104 V	5787	9750
138.0°E	Telstar 18	D-Sky	12302 V	30000	11300
136.0°E	N-Star B	@ Mega Wave Pro	12530 V	4468	11300
134.0°E	Apstar 6	Nei Monggol TV	3758 H	8400	5150
128.0°E	JCSAT 3A	Sky PerfecTV	12268 V	21096	11300
124.0°E	JCSAT 4A	JC-HITS	12298 V	21096	11300
122.2°E	AsiaSat 4	Skywave TV	11727 R	24440	10750
120.0°E	Thaicom 1A	CTN (Cambodia)	3854 V	5926	5150
116.0°E	Koreasat 3	SkyLife	11747 L	21300	10750
113.0°E	Palapa C2	Global TV(Indonesia)	11472 H	28125	9750
	Koreasat 5	ETN-TV 2	12290 H	25844	11300
110.5°E	Sinosat 1	CBTV Sat	12320 V	41530	11300
110.0°E	N-Sat 110	Sky PerfecTV 110	12331 R	28860	11300
	BSAT 2A	BS Digital	11727 V	28860	10750
108.2°E	AAP 1	SuperSun	12531 V	26667	11300
108.0°E	Telkom 1	TelkomVision	3460 H	28000	5150
105.5°E	AsiaSat 3S	Shaanxi TV	3813 V	4420	5150
103.0°E	Express A2	Perviy kanal SNG	3925 V	4883	5150
100.5°E	AsiaSat 2	Reuters World News	3905 H	4000	5150

		Service			
95.0°E	NSS 6	Dish TV	11037 H	40700	9750
93.5°E	Insat 3A	DD Shimla	3932 V	6250	5150
91.5°E	Measat 1	Astro	10982 V	30000	9750
	Measat 3	RTM 1	3893 V	3254	5150
90.0°E	Yamal 201	Oblastnoj Kanal	3603 V	4285	5150
88.0°E	ST 1	Chungwa Telecom	12642 H	24000	11300
87.5°E	ChinaStar 1	Myawady TV	3734 H	5925	5150
83.0°E	Insat 2E	Jain TV	3438 V	2950	5150
	Insat 3B	Mana TV	11558 V	13328	9750
	Insat 4A	Sangeet Bangla	3925 H	13000	5150
80.0°E	Express AM 2	Enisey Region	10973 V	4444	9750
78.5°E	Thaicom 5	Nepal TV	3432 V	6667	5150
	Thaicom 2	Thai TV Color Channel 3	4052 H	4551	5150
76.5°E	Telstar 10	C-Sky-Net	12278 V	22425	11300
75.0°E	ABS 1	GeoTelecom Satellite Services	12518 V	22000	11300
74.0°E	Insat 3C	Doordarshan	3756 H	14063	5150
	Edusat	Kamet(Mon-Sat 14:00-16.10 IST)	10953 H	1700	9750

CHANNEL PLAN OF ATLANTIC

Satellite name		Channel name	F	SR	LO
0.8°W	Thor 3	Focus Sat	11727 V	28000	10750
	Thor 2	Canal Digital	11216 V	24500	9750
1.0°W	Intelsat 10-02	@ AMS	11093 H	19191	9750
4.0°W	Amos 2	Yes	10722 V	27500	9750
	Amos 1	Yes	10972 V	27500	9750
5.0°W	Atlantic Bird 3	France TV	11591 V	20000	9750
7.0°W	Nilesat 102	Alkawthar	11919 H	27500	10750
	Nilesat 101	ERTU	11747 V	27500	10750
7.2°W	Atlantic Bird 4	Nilesat	12360 H	27500	11300
8.0°W	Atlantic Bird 2	KabelKiosk	10972 V	27500	9750
11.0°W	Express A3	RSCC	3675 R	29623	5150
12.5°W	Atlantic Bird 1	NTV Hayat	11143 H	5063	9750
15.0°W	Telstar 12	DMC	11124 H	18386	9750
18.0°W	Intelsat 901	NBA TV	10975 V	14571	9750
22.0°W	NSS 7	CanalSat Horizons	10986 V	30000	9750
24.5°W	Intelsat 905	AlArabiya	3729 V	13333	5150
27.5°W	Intelsat 907	Five	11665 V	13020	9750
30.0°W	Hispasat 1D	Retevisión	12149 V	27500	10750
	Hispasat 1C	Retevisión	11731 H	28126	10750
31.5°W	Intelsat 801	CanalSat Caraibes	10979 H	30000	9750
34.5°W	Intelsat 903	MCA Nigeria	3878 H	16300	5150
37.5°W	Telstar 11	Maharishi Open University US	12113 H	1180	10750
	AMC 12	Unitel	3868 V	6666	5150

40.5°W	NSS 806	@ EasyBand	11921 H	35000	10750
43.0°W	Intelsat 6B	Sky Brazil	10722 V	30000	9750
43.1°W	Intelsat 3R	Televisa Networks	12584 V	27500	11300
45.0°W	Intelsat 1R	@ Divona	11496 V	7593	9750
50.0°W	Intelsat 705	AIT International	3871 V	4340	5150
53.0°W	Intelsat 707	TV Senado (Chile)	11875 V	2344	10750
55.5°W	Intelsat 805	XHTVL - Canal 9 (Villahermosa)	3431 H	3500	5150
58.0°W	Intelsat 9	British Telecom	11477 H	26463	9750
61.0°W	Amazonas	DTCOM	11095 H	30000	9750

CHANNEL PLAN OF AMERICA

Satellite Name		Channel name	F		SR	LO
61.5°W	EchoStar 3	DISH Network	12239	L	21500	11250
	Rainbow 1	DISH Network	12224	R	21500	11250
63.0°W	Estrela do Sul 1	CPC	11887	H	4800	10750
65.0°W	Brasilsat B2	TV Tibagi	3847	V	4444	5150
70.0°W	Brasilsat B4	TV Alterosa	3672	V	8454	5150
71.8°W	Nahuel 1	Red Intercable	11710	V	12000	10750
72.0°W	AMC 6	NASA TV	4040	V	26665	5150
72.5°W	DirecTV 1	DirecTV USA	12239	H	20000	11250
74.0°W	SBS 6	Ohio News Now	11741	H	6616	10750
79.0°W	AMC 5	Utah Education Network	11742	V	11110	10750
82.0°W	Nimiq 2	Bell ExpressVu	12224	R	20000	11250
83.0°W	AMC 9	@ HughesNet	12060	V	30000	10750
84.0°W	Brasilsat B3	CNT Rede	4075	V	4444	5150
87.0°W	AMC 3	PBS	12180	H	30000	10750
89.0°W	Galaxy 28	TecSat	11720	H	29975	10750
91.0°W	Galaxy 11	Primedia Workplace Learning	12060	V	26700	10750
	Nimiq 1	Bell ExpressVu	12224	R	20000	11250
92.0°W	Brasilsat B4	TV Rio Negro	3844	V	3255	5150
93.0°W	Galaxy 26	Azteca	12076	V	8681	10750
95.0°W	Galaxy 3C	DirecTV Brazil	12157	L	20000	10750
97.0°W	Galaxy 25	GlobeCast World TV	11789	V	28125	10750
99.0°W	Galaxy 16	HITS	11780	V	19510	10750
101.0°W	DirecTV 1R/4S	DirecTV USA	12224	R	20000	11250
	/8 AMC 4	Home2US	12120	V	30000	10750
103.0°W	AMC 1	NBC	11840	H	26670	10750

105.0°W	AMC 15	DISH Network	11740	V	26000	10750
107.3°W	Anik F1R	Star Choice	11715	V	19510	10750
109.8°W	DirecTV 5	DirecTV USA	12618	H	20000	11250
110.0°W	EchoStar 8	DISH Network	12224	R	20000	11250
110.0°W	EchoStar 10	DISH Network	12268	L	20000	11250
111.1°W	Anik F2	Star Choice	11880	H	19510	10750
113.0°W	SatMex 6	TV Azteca Noreste	3784	H	8789	5150
114.9°W	Solidaridad 2	Edusat	3720	V	27000	5150
116.8°W	SatMex 5	Televisa Networks	3940	H	28125	5150
118.8°W	AMC16	DISH Network	11720	V	26000	10750
119.0°W	EchoStar 7	DISH Network	12224	R	20000	11250
	DirecTV 7S	DirecTV USA	12530	L	20000	11250
121.0°W	EchoStar 9/ Galaxy 23	TVW	3719	H	3000	5150
123.0°W	Galaxy 10R	Equity Broadcasting	11720	V	27692	10750
125.0°W	Galaxy 14	Music Choice	3895	V	19510	5150
127.0°W	Galaxy 13/Horizons 1	Pi TV	11720	H	26800	10750
129.0°W	EchoStar 5	DISH Network	12224	V	21500	11250
	Galaxy 27	@ StarBand	12100	H	30000	10750
131.0°W	AMC 11	In Demand	3760	V	19510	5150
133.0°W	Galaxy 15	HBO The Works	4060	V	29270	5150
135.0°W	AMC 10	Scripps	3720	V	29270	5150
137.0°W	AMC 7	Anchorage mux	3760	H	25195	5150
139.0°W	AMC 8	ARCS	4046	H	4200	5150
148.0°W	EchoStar 1	DISH Network	12224	R	20000	11250
	EchoStar 2	DISH Network	12239	L	20000	11250

Note: The channel plan will be updated any time and is only for reference. If you want the latest channel plan please refer to www.easysatfinder.com.