

# satlook Nit Color USA Manual

---



## Owner's Manual

Thank You for purchasing a Emitor AB **satlook** NIT **Color**-instrument.

This manual covers the operation and maintenance of the Emitor AB **satlook** NIT **Color**-instrument.

All information in this publication is based on the latest product information available at the time of printing.

Emitor AB reserves the right to make changes at any time without notice and without incurring any obligation.

No part of this publication may be reproduced without written permission.

This manual should be considered a permanent part of the instrument and should remain with it if it is resold.

If a problem should arise, or if You have any questions about the instrument, consult an authorized Emitor AB dealer.

### **! Notice !**

**Operating a satlook NIT Color-instrument requires special skills. Please read this Owner's Manual thoroughly before operating the instrument.**

<u><b>Contents:</b></u>	<u><b>Page:</b></u>
<b>I. Description.</b>	2
<b>II. Operation.</b>	3
<b>A. Unpacking.</b>	<b>3</b>
<b>B. Connection.</b>	<b>3</b>
C. Tuning knob	3
D. Information	4
E. Remote control	4
<b>III. Functions:</b>	5
1. Digital picture. (Free to air)	5
2. Analogue TV-mode	8
3. Digital measurement.	11
4. Full spectrum – Max zoom in.	14
5. X-pol.	14
6. DiSEqC-control	14
7. Setup.	14
8. Beeper.	15
9. Special.	15
10. Memory.	18
<b>IV. Maintenance.</b>	19
<b>V. Technical specification.</b>	20

## 1. Description:

The Emitter **satlook NIT Color** is a Swedish designed Spectrum-analyzer and SAT-TV instrument. The SATLOOK Digital was engineered for the precision alignment and adjustment of satellite-dishes. This instrument was designed for the professional when accurate and precise information is needed.

With ease of operation through powerful processor technology - there's no need for a lot of unnecessary buttons and knobs. The basic functions are easy to access and only take minutes to learn.

Many functions can be controlled by the enclosed Remote control.

A 5" 16:9 color LCD –display is provided which shows either normal “Free to air” SAT-TV-channel (analog or digital DVB-S), the frequency spectrum 950-2150 MHz (or parts thereof) alt. Digital data. Menus/help-displays are shown on the LCD-screen (64x128) beside the monitor.

**“Free to air” Digital (DVB-S, QPSK) and Analog SAT-TV channels can be tuned in and viewed upon** (Multistandard Video –PAL, NTSC and SECAM).

Audio frequencies between 5.5 – 8.5 MHz may be listened to.

The Spectrum function spans the frequency band 920-2150 MHz.

The spectrum can be expanded (zoom in) for correct adjustment of polarization (“cross-polarization”).

The instrument has high resolution for accuracy. It presents measured data  $\pm 2$  dB (at around 20 C).

Frequency tuning is done with the main knob in 1 MHz steps with the frequency displayed either on the monitor or on the LCD.

**satlook NIT Color** presents, under a sub menu, digital information like BER (bit error rate), constellation-diagram (QPSK) and S/N (signal/noise ratio) for both DVB-S (DISH and others) and DSS (DIRECTV) formats.

**satlook NIT Color** can also identify a found satellite and present the satellite-provider with its orbital-position (and in some cases name).

NIT stands for NETWORK INFORMATION TABLE which is part of the DVB-standard that almost all TV-satellites transmit.

The NIT contain information about the Satellite and TV/Radio-channels.

**satlook NIT Color** can very easily identify a Satellite as it can readout the NIT information.

Switching between TV, Spectrum, and Digital-modes is achieved with a push of a button on the side of the instrument.

Numerous memory-positions, spectrum-pictures, and certain frequencies can be saved (both analog and digital transponders).

Saved spectrum –positions can be mixed simultaneously with an actual reading for easy satellite-identification and control of signal-levels.

Measurements on group of channels may be done; with up to 10 frequencies at the same time.

They can be individually programmed with 13V or 18V, 22 kHz on or off.

The polarization of the LNB is switchable 13V/18V and the Hi-Lo band with 22 kHz-tone.

The instrument features circuitry -protection to prevent short-circuits during connection of the LNB.

The DiSEqC-function controls all DiSEqC-accessories (like switches and LNB's). The function is easily implemented and very flexible to use. The **satlook NIT Color** can also run DiSEqC-actuators.

The **satlook NIT Color** is powered by a built- in, rechargeable Li-Ion battery. The battery is recharged from the external battery charger or the car-adaptor.

Battery-status is shown on top of the LCD-display (in shape of a battery).

Very light and flexible; the **satlook NIT Color** weighs less than 3kg including the battery and the carrying-case.

## II. Operation:

### A. Unpacking.

Start with unpacking the instrument and check that the following items are included:

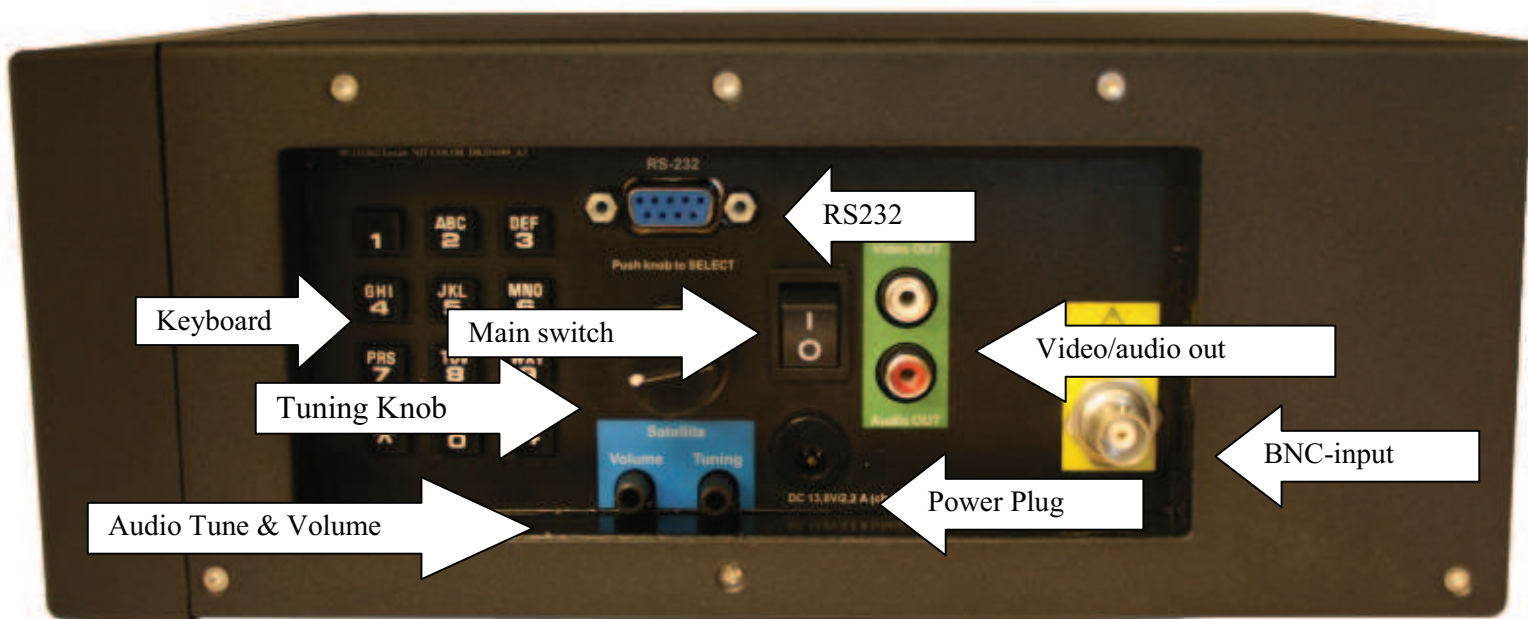
1. **satlook NIT Color** -instrument.
2. Nylon carrying case with shoulder strap.
3. Power supply 110-230vAC/13,5v DC, center pin positive.
5. Auto Adapter cord (Car charger) 12v.
6. Adapter BNC-male/F-female.

The instrument's keypad and tuning knob are shown on the picture below, these items control the **satlook NIT Color** s functions and modes.

The power-plug is used when charging the battery or running the instrument with the **satlook NIT Color** power supply.

RF-input is made via the BNC-connector and adapter plug which is provided.

The instrument also has a RS232 (computer interface) connector for software revisions.



### B. Connection:

Use the main switch to turn the instrument On and connect a signal-source via the BNC/ F-connector adapter. After a few seconds to warm-up the **satlook NIT Color** will display the frequency spectrum of 920-2200 MHz on the picture-screen and the main-menu on the LCD-display.

### C. Tuning Knob

Start by pushing the tuning knob. The text on the front panel LCD-display (upper row) will change from **FREQ** (frequency) to **SPAN** (frequency-span). Another push and the display returns to the **FREQ**-mode.

The tuning knob also handles a few important functions . It is important to learn how to use the tuning knob in order to correctly access the **satlook NIT Color** 's various functions. The functions of the tuning knob in the different modes.

### **Spectrum:**

Frequency  
Bandwidth(span)

### **Picture-mode:**

Frequency  
Memory

### **Digital-mode:**

Frequency  
Memory

When the **satlook NIT Color** is in Frequency-mode, the cursor is controlled by the tuning knob. Move the cursor up/down by turning the knob left or right.

### **D. Information:**

The cursors position (frequency), the spectrums start frequency (920 MHz), the spectrums stopfrequency (2150 MHz) and bandwidth (1231 MHz) can be read out on the monitor -screen.

The most important measured data , the dB-value, is shown in the middle of the monitor.

Measurement of the tuned frequency is continuous with the presentation being updated a couple of times per second.

### **E. Remote control**



Stand by. Not in use.

**0-9** Buttons 0-9.



Go back (previous channel). “\*” function.

**-/---** One or two digits. “#” function

**Text** Text-TV function. Not in use.



Mute .

**OPT** Tech.info. Not in use.



Programme info Not in use.

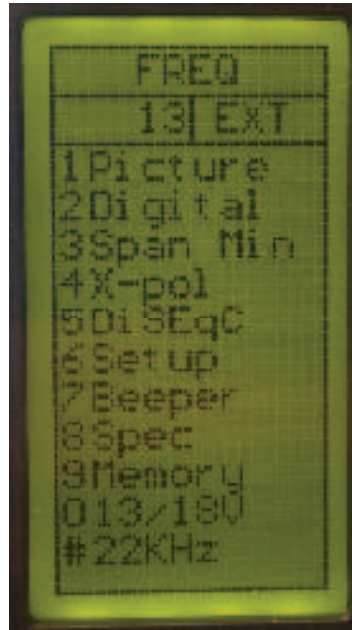
**Volume +/-** Not in use.

**P+ P-** Channel +/- Not in use.



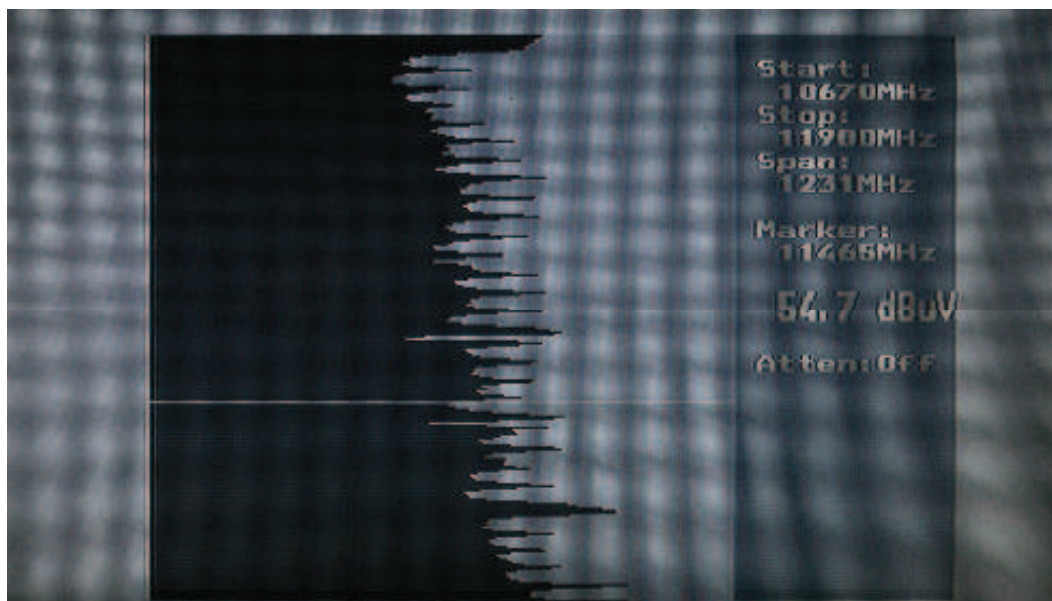
### III. Functions      MAIN MENU

When the instrument is initially powered up, you will see the following display:



#### 1. Digital Picture ("Free to air").

Start by choosing a specific frequency (digital transponder). A digital transponder is identified and characterised by the thickness of the signal as the digital transponder is thicker than an analogue transponder. As shown in the picture below there are mainly digital transponders and only a few analogue ones.

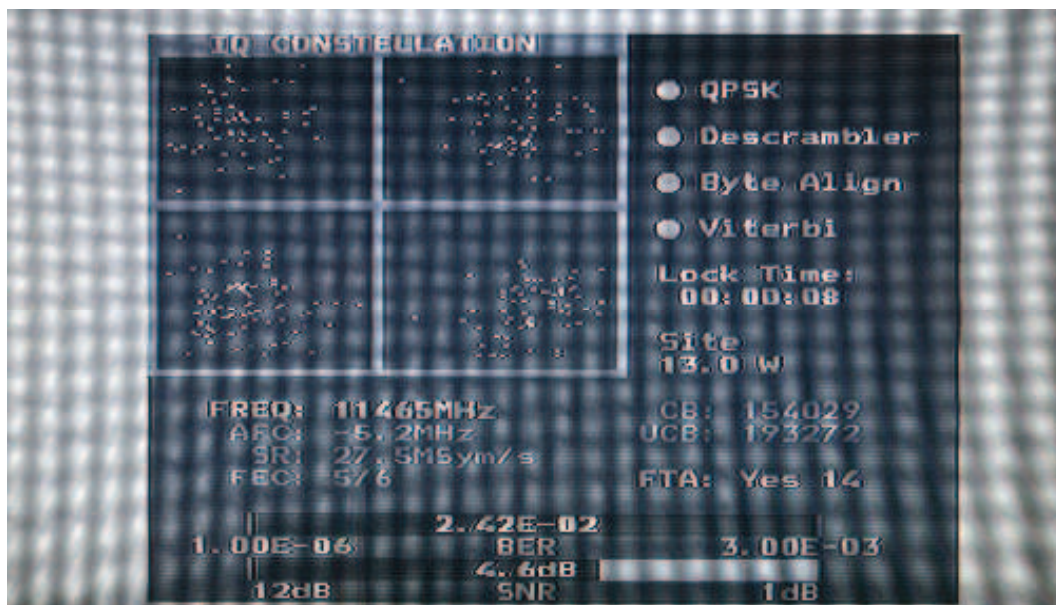




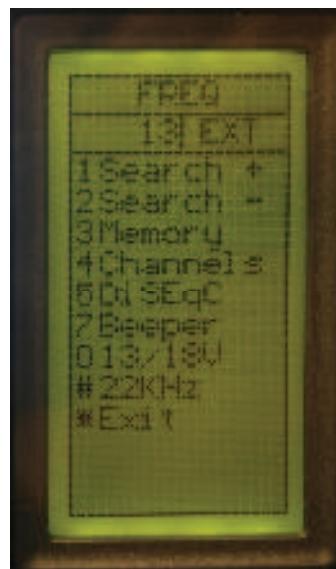
## Access the Digital TV-mode by pressing button # 2 (Digital) in the Main Menu.

- The monitor displays, in the left upper corner, the so called, constellationdiagramme (QPSK).
- To the right of it, four "lock-parameters" and a time counter (that shows the "lock-time" on a bit-stream") are shown.  
These "lock parameters" should be turned On (become white) and the clock should start counting as soon as a Digital transponder is found.

This example shows that the instrument has locked on Eutelsat 13.0 (Hotbird), 11465 MHz.



Press button nr 4 (Channels) to see what TV and Radio channels there are on the selected transponder.





The picture above shows:

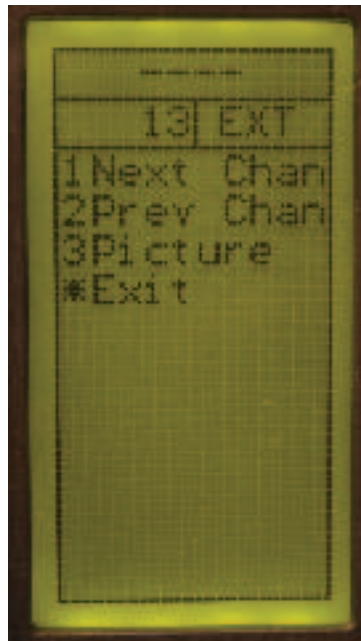
- The selected channel -in white.
- Free to air channels – in green.
- Coded channels –in red.

**Example:**



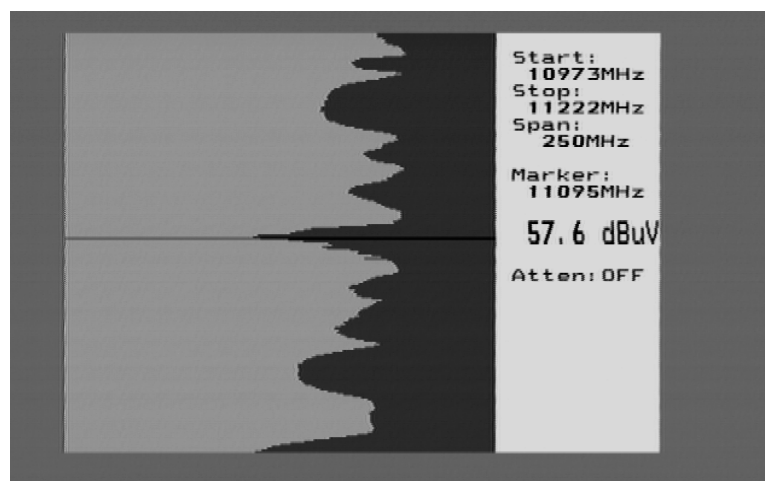


- \* Press button nr 3 (Picture) to watch the selected TV-channel
- \* Press button nr 1 (Next) to see the next “Free to air” channel on the transponder.
- \* Press button nr 2 (Prev) to go backwards in the channel-list.



## 2. Analogue TV-mode.

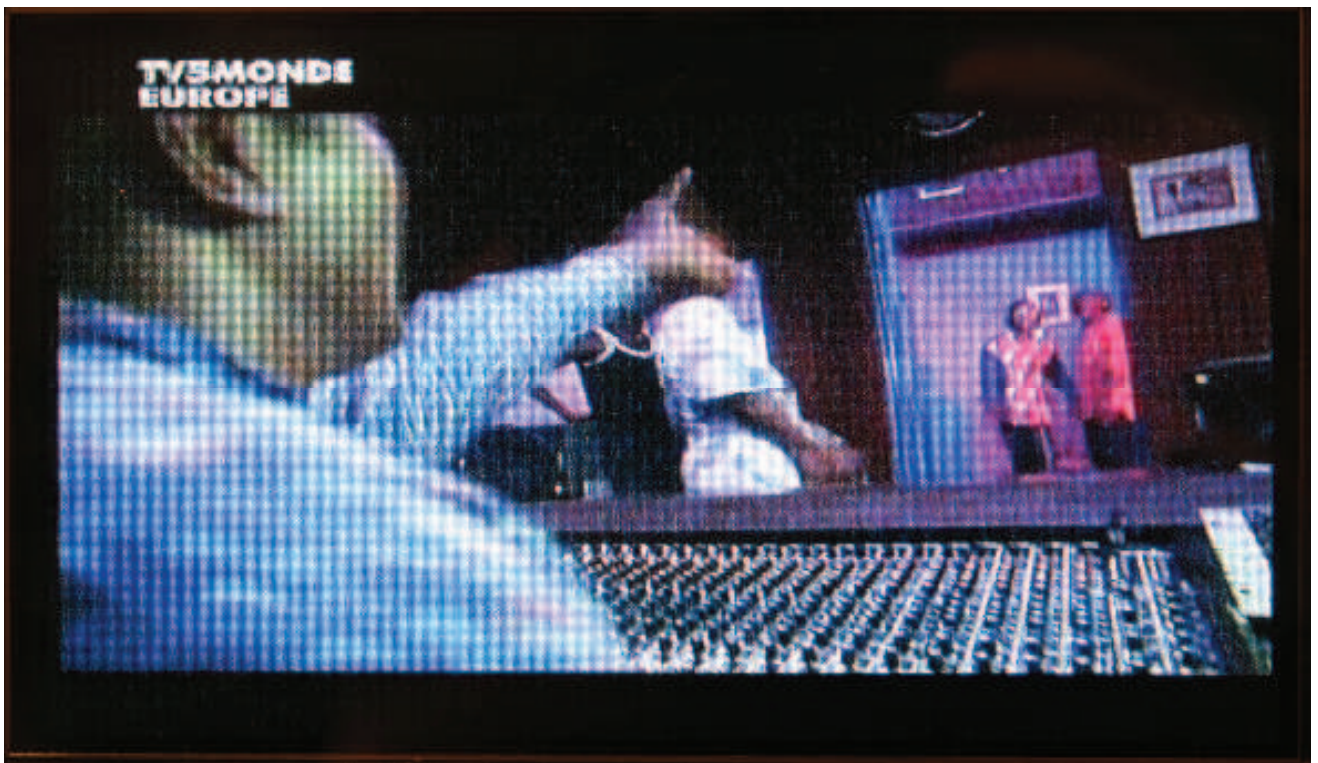
Select an analogue TV-transponder (an analogue transponder is thinner than a digital transponder, see example below).



(9)

After choosing a specific frequency; access the TV-mode by pressing button # 1 or “Picture” in the Main Menu. The tuning knob controls the frequency-position in this mode.

### Example:

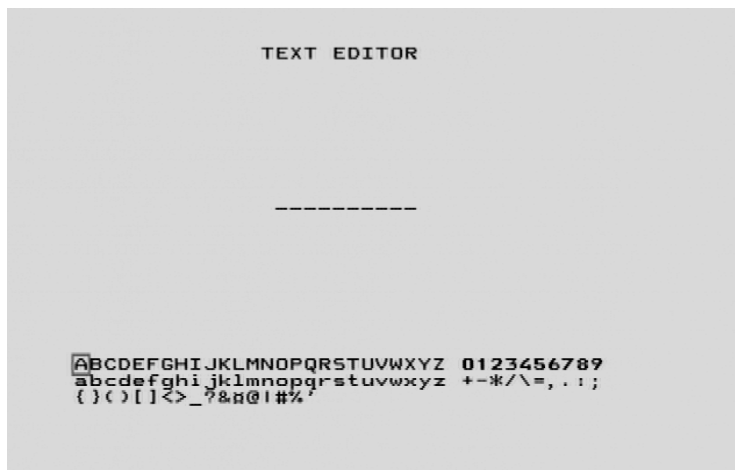


## Other functions in the analogue-picture-mode:

1. Invert                      Switch between normal video (KU-band) and inverted Video (C-band). Selected position is displayed in the LCD-display.
2. Sound                      For listening to analog audio. Audio volume and frequency (5.5 – 8.5 MHz) are adjusted with the two small knobs just under the main-knob.
3. Memory                    For storing the different analog and digital channels (frequencies).  
Tune in the "right" frequency before entering this function (ex. 1720 MHz).  
Enter the Memory function (button nr 3) and push Save (button nr 1).  
The instrument asks: -"SAVE. ARE YOU SURE ?"

Check that the Memory position is the right one (displayed at the right bottom on the LCD-display). If not, chose a new one with the knob (0-99). Free positions are named: Pos free

After selecting a position, push button nr 1 (YES).  
Notice that even the preselected 13V/18V, 22 kHz on/off will be memorized.



### Text-editor:

When the channel (frequency) is saved, the Text-editor appears on the monitor which makes it possible to enter a name for that memory-position (ex. CNN).

Use the knob to select the first letter (ex. C) and save it with the control-button. Move to the next letter (ex. N) and so on.

If a mistake is made and wrong letter is saved, simply correct by pushing button nr 1 (Delete) and the cursor will jump one position backward.

4. Atten:                      Attenuation. Manual attenuation 15dB on/off.  
Selected position is displayed in the LCD-display.
0. 13/18V                      Selection of 13V alt. 18V. Chosed position is displayed at the top of the LCD-display.
- #. 22kHz                      22 kHz on/off. Chosed position is displayed at the top of the LCD-display.

### 3. Digital measurement.

**satlook NIT Color** can easily and very accurately measure digital transponders (MPEG-streams).

This kind of measuring is very good to do when an installation is done, to control and verify that the installation is correctly performed (fingerprint of the installation).

It is less accurate when trying to find a satellite and adjusting the cross-polarisation.

Therefore, start with finding the "right" satellite with the spectrum-function. Check and adjust the cross-polarisation with the "Max zoom in" function.

\* Test the maximum with the **X-pol function** (button nr 4 in the main menu). The instrument will measure the strength of the selected peak and then automatically "jump" to the other polarisation and measure there as well (same frequency and settings).

The difference (for ex. -7dB) is presented on the right handside of the display.

Choose a suitable transponder (put the cursor on top of a "peak") and select function 2 in the Mainmenu (Digital).

- The monitor displays, in the left upper corner, the so called, constellationsdiagramme (QPSK).
- To the right of it, four "lock-parameters" and a time counter (that shows the "lock-time" on a bit-stream") are shown. These "lock parameters" should be turned On (become white) and the clock should start counting as soon as a Digital transponder is found. If not, or if the signal "comes and goes" then the signal is very poor and/or weak. Try to adjust the dish better and/or check the setting of the LNB to improve the signal.
- The other measured data like the S/N-ratio (signal/noise ratio) och BER (bit error rate) are displayed just under the constellationdiagramme in the shape of Bar-graph's (thermometer-scales). The higher level, the better signal !

A locked frequency can look like this.



The window also displays the following Digital readout:

Freq:	The tuned in frequency.
AFC:	Automatic frequency control -the instrument automatically adjust the frequency and tells the offset frequency from center of carrier.
SR:	Symbol rate. The instrument readout, automatically, the correct symbol rate of the transmission.
FEC:	Forward Error Correction. The instrument readout, automatically, the correct FEC.
CB:	Corrected Bits –Bits that have been corrected in Viterbi. Should be as low as possible.
UCB:	Uncorrected Blocks – Blocks unable to be repaired. Value should be zero. Very small numbers of uncorrected block will result in loss of picture (mosaic).

## NIT - Network Information Table.

The word "searching" will lit on right handside of the picture as soon as a digital transponder is found. After about 5-10 seconds, if the satellite is transmitting NIT, the satellite position will appear (and in some cases the satellite name also), for ex Astra 19.2

Pressing button nr 4 "Channels" will show a list of the present TV- and Radio-channels on that certain transponder/frequency.

```

TV:   ProSiebenSat.1
      Kabel 1 Austria
      Kabel 1 Schweiz
      ProSieben Austria
      ProSieben Schweiz
      SAT.1 A

RADIO: XtraMusic
       Acid Jazz
       Beautiful Instruments
       Contemporary Jazz
       Dutch Hits
       Euro Hits
       French Hits
       German Folk
       German Hits
       German Rock
       German Schlager
       Indian Pop
       Italian Contemporary
       Modern Country
       New Age
       Opera

```

When performing Digital installations, please notice:

- The constellatondiagramme is like "a shower of hail". No signal will spread out the noise over the window. The better signal, the more concentrated and focused "hailstorms" in the windows.
- SNR. The signal/noise ratio should be as high as possible. A good signal should have at least 8.0 dB S/N-ratio.
- BER. The Bit Error Rate should be as low as possible. As the values are really small, on the other side of zero (presented as something raised to minus something), they should be as high as possible. A BER at 5.00 –05 is therefore better than 9.00 –04. A BER at 4.00 –05 is therefore better than 5.00 –05. It can be said, in general, that a signal should be at least x.xx –04 to be accepted.

### Other Digital functions:

1. Search + Automatically search for the next digital transponder higher in frequency. Searching is displayed at the bottom of the monitor.
2. Search – Automatically search for the next digital transponder lower in frequency. Searching is displayed at the bottom of the monitor.



3. Memory
- For storing **digital transponders** (digital channels - frequencies). Tune in the "right" frequency before entering this function (ex. 1650 MHz).
- Enter the Memory function (button nr 3) and push Save (button nr 1).
- The instrument asks: -"SAVE. ARE YOU SURE ?"
- Check that the Memory position is the right one (displayed at the right bottom on the monitor). If not, chose a new one with the knob (0-99). Free positions are named: Pos free
- After selecting a position, push button nr 1 (YES).  
Notice that even the preselected 13V/18V, 22 kHz on/off will be memorized.
- Load a memory-position by pushing the control-button – "Memory" will appear on top of the LCD and a memory-position will be shown in the bottom of the LCD-display. Step between the stored memory-positions with the knob.
- Text-editor:  
When the channel (frequency) is saved, the Text-editor appears on the monitor which makes it possible to enter a name for that memory-position (ex. Digital).  
Use the knob to select the first letter (ex. D) and save it with the control-button. Move to the next letter (ex. i) and so on.  
If a mistake is made and wrong letter is saved, simply correct by pushing button nr 1 (Delete) and the cursor will jump one position backward.
4. Channels
- Shows a list of the present TV- and Radio-channels on that certain transponder/frequency (if the satellite is transmitting NIT).
5. DSS - DVB
- Chose between DSS –satellites (DIRECTV) or DVB-satellites (DISH NETWORK and others).
7. Beeper
- It might be tricky to install a Sat-dish and, at the same time, try to watch the signal-level on the instrument.  
Therefore the instrument has a very useful "beeper"-function to help finding the max-strength signal. It works with a pitch tone that gets higher and higher the better the signal gets.  
**The beeper is turned on and off with button nr 7.**
0. 13/18V
- Selection of 13V alt. 18V. Chosed position is displayed at the top of the LCD-display.
- #. 22kHz
- 22 kHz on/off. Chosed position is displayed at the top of the LCD-display.

#### 4. Full spectrum - "Max zoom in" - Span Min /Span Max.

This function makes it easy to "jump" between full spectrum (920-2150 MHz) to "Max zoom in" (250 MHz bandwidth).

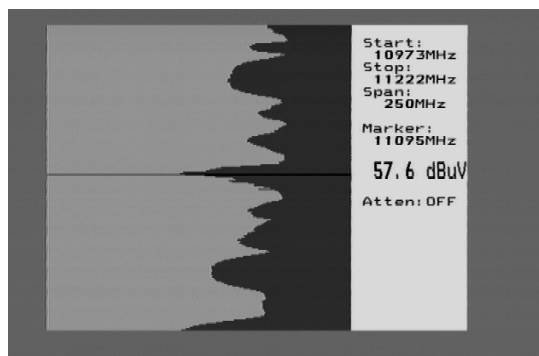
The "Max zoom in"-function is very good to use when adjusting the cross-polarisation.



- Move the cursor to any desired frequency (peak).

Push the nr 3 button (**span Min**) on the keyboard.

The instrument will "zoom in" max. at that selected frequency (250 MHz bandwidth).



Rotate the LNB so that either the Horizontal or Vertical polarisation will be in its max-position –adjusting the **cross-polarisation**.

Pressing the nr 3 button again (span Max), gets You back to "Max zoom out".

#### 5. X-pol Test the maximum Cross-pol setting with the X-pol function.

The instrument will measure the strength of the selected peak and then automatically "jump" to the other polarisation and measure there aswell (same frequency and settings).

The difference (for ex. -7dB) is presented on the right handside of the display. The function is very usefull for checking the correct setting of the LNB cross-polarisation.

#### 6. DiSEqC Chose DiSEqC command with the keypad.

Submenu 7 (SWx) shows the extended DiSEqC 1.1 commands.

Submenu 8 (Motor) shows the DiSEqC actuator-control commands (DiSEqC 1.2).

Even 13/18V and 22 kHz on/off can be adjusted in this mode.

#### 7. Setup Basic-operation setup:

1. **LNB L.O.** Select the LNBs L.O. for showing the correct LNB frequency. Default setting is button nr 9 (IF).

2. **Analog.** Chose between Normal (KU-band) or Inverted (C-band) video.

3. **Motor.** Chose the type of actuator to be used; standard DiSEqC 1.2, SatSelect or SATSCAN.
4. **Display.** submenu **units:** Select dB-presentation: dbuV, Dbm or dBmV. Under submenu LCD can contrast (level) and Backlite (on/off) be set.
5. **AutoOff.** Chose between some automatic turn-off alternatives (timer).
6. **Version.** Tells about the units serie-nr and manufactured date.
7. **Keyclick.** On or off.

**8. Beeper** It might be tricky to install a Sat-dish and, at the same time, try to watch the signal-level on the instrument. Therefore the instrument has a very useful "beeper"-function to help finding the max-strength signal. It works with a pitch tone that gets higher and higher the better the signal gets.

*The beeper is turned on and off with button nr 7.*

Notice that the function works with a narrow bandwidth (one transponder) and not with the full bandwidth.

To use the function:put the cursor on top of a selected "peak" and align the dish

**9. Spec** Special-functions. Select with button nr 8 in the Mainmenu.

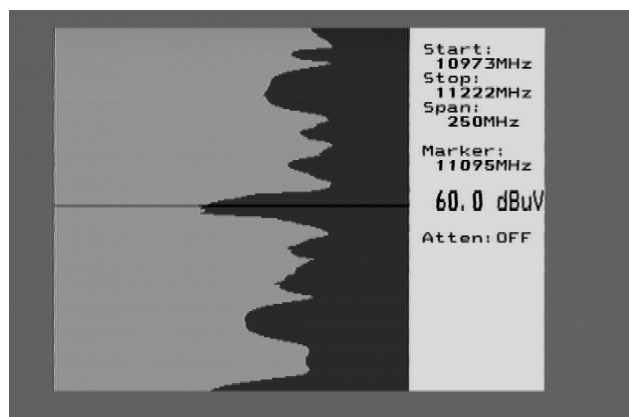
### 9.1 Max hold

Max hold is a very good function for, over a longer time period, watch a certain frequency-range. This to see how/if temporary signals/disturbances can affect the picture quality.

Adjust the frequency-bandwidth (see Function 3) and put the cursor on the frequency (peak) to watch. Chose with button nr 1 the "**Max hold**"-function. The instrument starts to sample all top-values in the shown bandwidth and only updates the presentation if there´s any new measured data with higher dB-values than the previous measured.

Turn off the function by pressing the button nr 1 again (No hold).

Measured data can be stored. Read more about the Memory-function under section 4 below.



## 9.2 Reference cursor and signal to noise ratio.

satlook NIT Color has the capability to perform measuring of the signal/noise alt. Picture-carrier/audio-carrier ratio.

The function is relatively difficult to implement fully automatic and a more simple, manual, tool is used in this instrument.

Do like this:

- \* Select function 2 Refmrkr
- \* Tune in the "right" frequency with the cursor (so it stands on the "top" of the signal to measure on).
- \* Push button nr 1 (Ref set) and a new cursor appears on top of the earlier.
- \* Turn the knob and place the cursor on another carrier or on the noise-floor.
- \* The relation between cursor nr 1 and cursor nr 2 is presented in the lower right hand corner of the picture-screen

Notice that 13/18V and 22 kHz on/off can be adjusted in this mode with the "0" resp. "#" buttons.

## 9.3 Span Min – Span Max

This function is described under "Mainmenu" section 3 above.

Push button nr 3 (**span Min**) on the keypad.

The instrument "zoom in" max. at the chosen frequency (250 MHz bandwidth).

Another push on the nr 3 button (span Max) takes the instrument back to "Max zoom out".

## 9.4 Memory

Memorypositions. Same function as described under Mainmenu section 9, below.

## 9.5 Multichannel

Channels (frequencies) that have been memorized under Mainmenu section 1 and 2 are displayed and measured at, together here.

Up to 10 channels can be measured at simultaneous.

Notice that all the channels can have individual setup of 13/18V resp. 22 kHz on/off.

The function is very useful when "scanning" a satellite and see that all parameters are right/max values received on both V/H and low/high.

**Pg down** To step down the pages. 10 pages with 10 frequencies per page can be stored (10 analog + 10 digital = 200 frequencies).

**Pg down** To step up the pages.

**Max hold** "Locks" the dB-values and will only change when higher values are received.  
Turn off the function by pressing the button again (no hold).

## **9.6 Attenuator**

Attenuation 15dB. Manuell on/off with button nr 6.  
Selected position is displayed at the right hand side of the monitor.

## **9.7 13/18V**

Adjusting of 13V alt. 18V. Selected position is displayed up to the left in the LCD-display.

## **9.8 22 kHz**

Adjusting of 22 kHz on/off. Selected position is displayed up to the left in the LCD-display.



## 10. Memory Storing spectrum-pictures.

All spectrum-pictures can be stored in the **satlook NIT Color**.

This is very useful for documentation and to use later on for recognizing/identifying of that satellites characteristic spectrum

The Mix-function helps to identify and “find the way back” to already known (and previously stored) satellites.

The function places a previous memory in the background of the spectrum.

When the “right” satellite is found it will be like “fitting a hand to a glove”

### To store measured-data, do like this:

- \* Chose the spectrum to store (i.e. exactly as displayed on the monitor) and push button nr 9 in the Mainmenu (Memory).
- \* Select "Save" button nr 2.
- \* The instrument asks: -"SAVE. ARE YOU SURE ?"
- \* Check that the Memoryposition is the right one (shown down to the right in the monitor). If not, chose one with the main-knob (Pos free: 00-99).
- \* Having select a position, press button nr 1 (YES).
- \* Notice that the setup of 13V/18V, 22 kHz on/off will be stored to.

### Text-editor:

When the spectrum is saved, the Text-editor appears on the monitor which makes it possible to enter a name for that memory-position (ex. ASTRA 1D).

Use the knob to select the first letter (ex. A) and save it with the control-button. Move to the next letter (ex. S) and so on.

If a mistake is made and wrong letter is saved, simply correct by pushing button nr 1 (Delete) and the cursor will jump one position backward.

### To collect a stored spectrum:

- \* Enter the "Memory"-function with button nr 9 in the Mainmenu.
- \* Select the spectrum to load (use the main-knob: pos 00-99 displayed down to the right in the i monitor).
- \* Load the spectrum to the monitor with button nr 1.

Notice that the function **Reference cursor**, Ref mrkr, is enabled when a stored spectrum is loaded.

### To mix a stored spectrum with an ongoing measuring, do like this:

- \* Enter the "Memory"-function with button nr 9 in the Mainmenu.
- \* Select the spectrum to load (use the main-knob: pos 00-99 displayed down to the right in the i monitor).
- \* Mix the spectrum with the ongoing measuring with button nr 4.

- Turn off the Mix-memory by pushing the nr 4 button again.

#### **IV. Maintenance.**

The instrument is equipped with a rechargeable battery and it is important that the battery is maintained.

Recharging should be done with the, enclosed car-adaptor or external power supply of 110-220v/13.5v DC, center-pin -plus and chassi -earth.

**Note, the instrument can be operated, for shorter periods of time, by the external power supply. However, the satlook NIT Color is not made for permanent operation. Contact Your dealer for more information.**

Adjustments for vertical hold, brightness and contrast are located under the instrument. Contact Your dealer for proper adjustments.

The battery needs recharging when the battery-symbol at the top of the LCD-display is empty.

Remember that a cold battery has much lower capacity than a warm one.

**satlook NIT Color** is designed for outside use in rough conditions but it should not be exposed for rain or snow as this can damage or shorten the lifetime of the instrument.

#### **Checking/charging the battery.**

As the instrument has been stored for some time before transportation it is important to check the battery-condition.

To do this turn the mainswitch On.

When starting the instrument, the LCD-color monitor and LCD-display turns On. There´s a battery symbol at the top of the LCD-display that shows the status of the battery. All black means that the battery is fully charged. If the symbol is empty it means that the battery is empty to.

If the battery needs recharging, use the power-supply attached with the instrument. A thermometer-scale (0-100%) will lit on the LCD-display as the recharging starts.

Notice. The instrument should be turned of when being recharged.

Recharging from fully discharged battery to about 98% capacity takes aprox.30 hours.

When the battery been recharged, **satlook NIT Color** is ready to be used.

## V. Technical specification.

Input frequency:	920-2150MHz, easily reduced to 250 MHz (max zoom in).
Frequency display:	Yes, IF default. All standard LNB L.O. can be setup.
Min level in,	About 35 dBuV (noiselevel).
Max level in,	About 90 dBuV.
Attenuation:	15 dB manual attenuator on/off.
Display of signallevel (analog):	dB-level on LCD and monitor. Pitch-tone on loudspeaker.
Accuracy:	$\pm 2$ dB (at +20 C)
Display of signallevel (digital):	S/N (signal/noise-ratio) BER (bit error rate) Constellationdiagram (QPSK)
Symbolrate readout:	1 – 30 Megasymbol.
Digital systems:	DSS (Directv) and DVB (Dish and others).
Satellite identification:	Yes, NIT readout (Network Information Table) according to the DVB-standard. Identifies Satellite and name of TV- and Radio-channels.
TV/Audio standard:	Multi TV/Audio (PAL, NTSC, SECAM).
KU- C-band:	Yes, selectable.
Audio bandwidth :	Adjustable between 5.5 MHz and 8.5 MHz
Input impedance:	75 Ohm, BNC-connector.
Picture-screen:	5" 16:9 TFT color display.
Menus:	On LCD 64x128 next to the monitor.
Memory:	-100 spectrum pictures can be stored with name. Stored spectrum can be mixed for easy identification of satellite. -"Maxhold"-function.
PC-connection	Yes, RS232-output
Power out:	Yes, 13-18V (can be adjusted).
22 kHz tone:	Yes, on/off.
DiSEqC	Yes, all 1.0 and 1.1. Also Toneburst on/off.
DiSEqC actuator:	Built in positioner for DiSEqC 1.2, SatScan and SatSelect.
Battery:	Li-Ion, rechargeable 12v, 3.5 amp/tim.
Operational:	About 1.5 hour on a fully charged battery.
Weight:	About 3 kg incl.battery and carrying-case.
Accessories:	Nylon carrying-case. Power-supply of 220v/13.5v, 1.7amp. Car-charger. BNC-male/F-female adapter.



Sjöviksbacken 14  
117 43 Stockholm  
Sweden  
[www.emitor.se](http://www.emitor.se)



## PC-software for Emitter satlook NIT Color

Attached with the satlook NIT Color comes a PC-software which handle the transferring of files (memory-positions) from satlook NIT Color to a computer (PC).

### Installation:

The programme can be used by all computers operated with Windows (min. Win 95).

It is easily installed from the enclosed CD (or downloaded from [www.emitor.se](http://www.emitor.se))

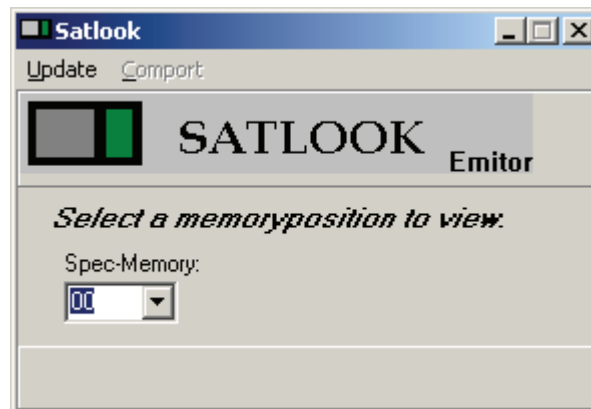
- **Place the file SATLOOK.EXE in a directory of your choice.**  
(Might be on Your desktop).
- **Done !**

### Operation:

The satlook NIT Color must be connected with the computer in order for the programme to work. This is because the computer (and software) continuously communicate with the satlook NIT Color and scan's the satlook NIT Color 's memory-positions.

To transfer data from the satlook NIT Color to a computer, do like this:

- Connect the satlook NIT Color to the computer with the enclosed PC-cable to any free com-port. (the cable is a strait male-female 9-pin dsub).
- The software will thereafter find which com-port the satlook NIT Color is connected to automatically.
- Turn the satlook NIT Color On.
- Double-click on SATLOOK.EXE.
- The below "icon" will appear on the PC-monitor.



- NOTICE ! The PC-software will not run if the communication between the PC and the satlook NIT Color SATLOOK Digital doesn't work.
- If a problem occur, check the connection and try again.

There are two menus in the satlook NIT Color SATLOOK Digital -programme upper left hand corner:

**Update:** is used for updating the memory-list if you have saved a new pectrum after starting the programme.

**Comport:** is used if connection failed and You want to try connecting again without restarting the programme.

### Getting memory-positions:

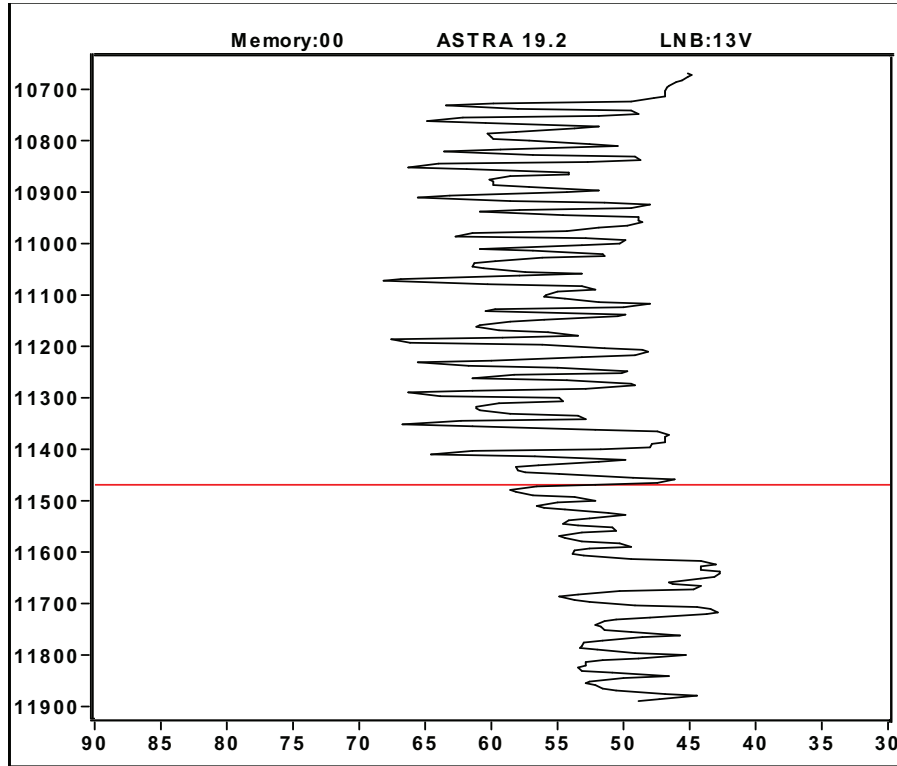
As shown above there are a list of the memories where You can select one for viewing. If the list is empty You have to save a spectrum-memory in the **satlook NIT Color Satlook**.

- Mark with help of the PC-mouse the memory-position You want to transfer to the PC, for ex: Spec-Memory 01.
- The memory-position is transfered and the result can be viewed on the PC-monitor.
- The picture can be viewed more in detail with the **zoom in** function. This is done by pushing down the “shift”-button and at the same time draw a “box” with the PC-mouse around the area to enlarge.
- To **zoom out**, simply push down the “shift”-button and “clic” with the PC-mouse in the enlarged area.

### Print-outs/documentation:

- There are three menus in the View-window’s upper left hand orner: **Copy, View** and **Help**.
- Push **Copy** and the picture is being copied to clipboard.
- **View** lets You change the look of the window.
- **Help** gives You a brief description of how to zoom and pan.
- Without closing the **satlook NIT Color SATLOOK Digital** programme, start another programme, a suitable word-processing programme (like Word) and open a new document.
- Push the **paste**-button and the picture (memory-position) is inserted to the document.
- The picture below shows such an example.





- The **satlook** NIT **Color** SATLOOK Digital -programme makes it very easy to transfer memory-positions to a PC and make good looking - very professional documentation.
- After finishing work, close the programme and don't forget to turn the **satlook** NIT **Color** SATLOOK Digital off.

---

Emitor AB  
Sjöviksbacken 14  
117 43 Stockholm  
Sweden  
[www.emitor.se](http://www.emitor.se)

Ver 1.0