

Unicable™ II Programmer

IDLU-PROG01-00000-OPP
Item: 5273

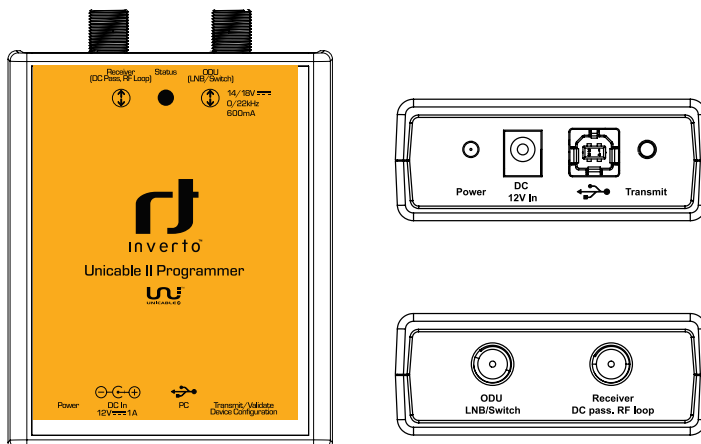
Installation & User Guide

Thank you for purchasing Inverto's advanced Unicable II programmer. Before installing and using the programmer, please read the following instructions and recommendations. We suggest that you keep this guide for future use.

1. Warranty

This Unicable II programmer is designed for use with satellite television installations. The warranty does not apply for products used for other purposes other than those specified herein. The user/installer shall be responsible for any damage incurred as a result of not using the product according to the instructions in this manual.

2. Overview



Connections

- ODU (LNB/Switch) Connect the Unicable II ODU device (LNB or Multiswitch output port) Loop-through
- Receiver (DC Pass, RF Loop)
- DC In Connect 12V AC/DC adapter
- PC Connect USB cable to PC

Buttons

- Transmit/Validate - Short press (<1s) transmits a stored configuration to the ODU
- Device Configuration - Long press (>1s) reads the configuration from ODU and compares with a configuration stored in the programmer. If both configurations are identical the Status LED will turn green (only supported for ODU products: Item 5235, 5156, 5294)

LEDs

- Power - Red if the programmer is powered from USB
- Status - Orange if the programmer is powered from 12V
- Yellow (blinking) while the programmer is busy
- Green if the configuration stored in programmer and configuration read from the ODU are identical

3. Installation

Before connecting the Unicable II Programmer device to the PC, please follow the below steps for installation of the PC software and driver.

- Download the Unicable_II_Programmer.msi software from: <http://www.inverto.tv/support> to your PC
- Start the installation by double click on Unicable_II_Programmer.msi
- Follow the instruction on the screen
- After installation you will find an Unicable II Programmer icon on the desktop.

After installing the PC software, connect the Unicable II Programmer to the PC using the USB cable.

Windows will ask for the driver, if the programmer is used for the first time on this PC. Select to manually install the driver and select it from the program folder of the PC software (for example: C:\Program Files\Inverto\Unicable II Programmer\driver).

If Windows does not ask for the driver, please go to the Device Manager (Control Panel -> System -> Device Manager) and install the driver manually.

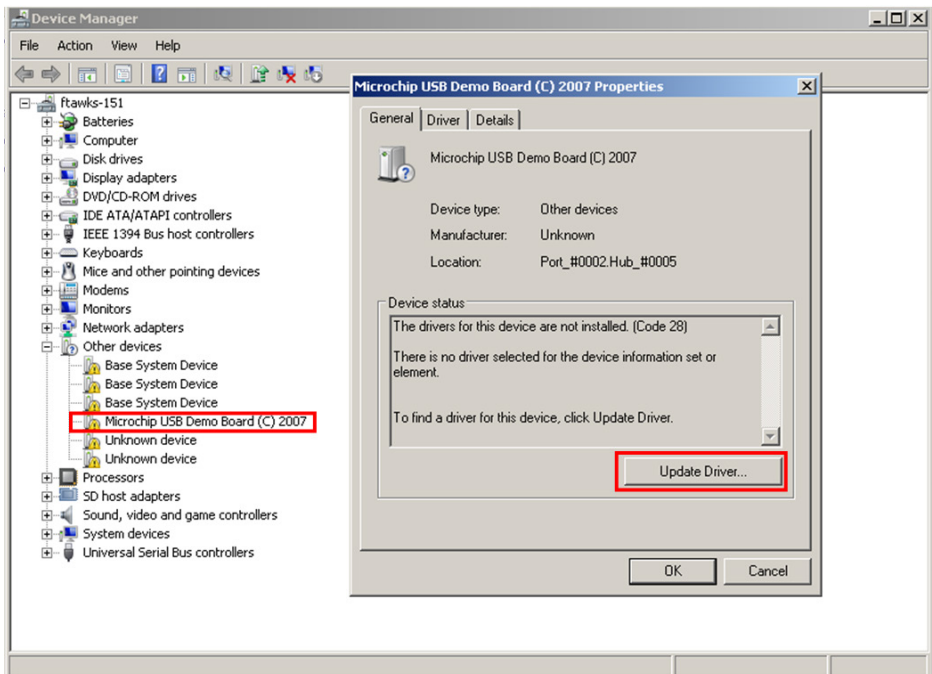


Figure 1: Driver installation

Note: If you are facing any problems during the installation, please refer to the troubleshooting.

4. Connect the Programmer & start the PC Software

- Connect the 12V AC/DC adapter to the power input of the programmer
- Connect the programmer to the PC using the USB cable
- Start the PC software with a double click on the Unicable II Programmer icon on the desktop

If the programmer was not detected you will see a notification at startup. In this case please make sure that the programmer is powered, connected correctly to the PC and that the driver has been installed, then restart the Unicable II Programmer PC software.

5. Create/Edit a configuration for a Unicable II Switch/LNB

There are two ways to change the configuration of an Unicable II device that is connected to the Unicable II Programmer:

Create a new Configuration

Select "Task" -> "Create a configuration" if you want to start a new configuration from scratch

Edit an existing configuration

Select "Task" -> "Edit a configuration" and then select whether you want to load a previous configuration from a file, to load the current configuration of the connected Unicable II device or to load the configuration that is currently stored in the Unicable II Programmer

Depending on your Unicable II device you can choose between different configurations in the setup tab:

Unicable

The output of the device will be Unicable mode with user bands accessible according to EN50494 and/or EN50607 standard (see 6).

Unicable (Independent Output)

This option is available for switches with two outputs. Each output can have an independent Unicable configuration. For example you can setup 2 x 16 user bands and the outputs behave like two independent Unicable II Switches with 16 user bands each.

Unicable (Shared Output)

This option is available for switches with two outputs. In this setup you can access the configured user bands from both ports. This option is useful to split the Unicable output to two different locations without using a splitter.

Unicable + Legacy

This option is available for switches with two outputs. One output will be Unicable, while the other output is working in Legacy (Universal) mode.

Static

The output of the device is static, means that you can configure a fixed transponder – user band mapping (see 7).

Static + Legacy

This option is available for switches with two outputs. On output will work in static mode (see 7), while the other output is working in Legacy (Universal) mode.

Satellite Position

It is possible to connect (chain) the outputs of multiple LNBs or multiswitches together with RF combiners and setup each device to provide the signal from a different satellite position.

For example you can configure one LNB for satellite A and a second one for satellite B. If the STB now requests a channel from satellite A the first LNB will enable the user band while the seconds LNB will disable the user band. If the STB requests a channel from satellite B, the first LNB will deactivate the user band and the seconds LNB will provide the user band.

Quattro LNB Input (1 Satellite)

The Unicable II switch will be setup to receive a Quattro LNB signal on its inputs.

It is possible connect (chain) the outputs of multiple switches together with RF combiners and setup each of the switches to provide the signal from a different satellite position.

For example you can configure one switch for satellite A and a second one for satellite B. If the STB now requests a channel from satellite A the first switch will enable the user band while the seconds switch will disable the user band. If the STB requests a channel from satellite B, the first switch will deactivate the user band and the seconds switch will provide the user band.

Wideband LNB input (2 Satellites)

The Unicable II switch will be setup to receive wideband signals on its inputs from 2 different satellite positions.

It is also possible connect (chain) the outputs of two switches together with a RF combiner and setup one switch to provide the signal from satellite A and B and the seconds one from satellite C and D. It means that if a STB request a channel from satellite A or B, the first switch will enable the user band and the seconds switch will disable the user band. If the STB then request a channel from satellite C or D, the first switch will deactivate the user band and the seconds switch will provide the user band.

Additional options on certain devices:

Legacy at Startup

By activating this option you can configure the device to output a legacy (Universal) signal at startup. After sending an Unicable command the device will switch to Unicable mode.

This option is useful for LNBs if you want to use an antenna meter that does not support Unicable standards to align the dish.

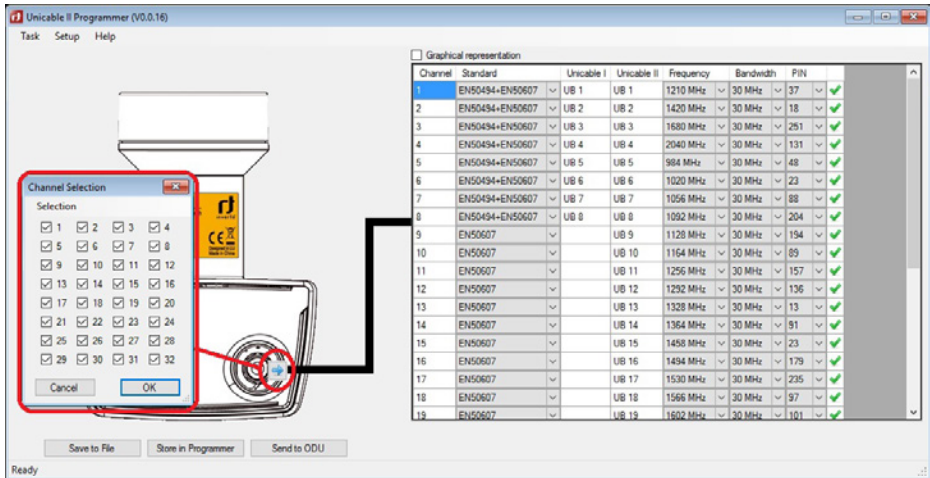
Unicable II UB numbering

If you activate this option you can change the number of the user band configured in EN50607, in case you don't want to have a continuous numbering.

6. Unicable

Depending on the device it is possible to configure up to 32 user bands for Unicable.

- Click on the arrow button near to the output of the device to select how many user bands you want to use on this output.



Channel	Standard	Unicable I	Unicable II	Frequency	Bandwidth	PIN
1	EN50494+EN50607	UB 1	UB 1	1210 MHz	30 MHz	37
2	EN50494+EN50607	UB 2	UB 2	1420 MHz	30 MHz	18
3	EN50494+EN50607	UB 3	UB 3	1630 MHz	30 MHz	251
4	EN50494+EN50607	UB 4	UB 4	2040 MHz	30 MHz	131
5	EN50494+EN50607	UB 5	UB 5	984 MHz	30 MHz	48
6	EN50494+EN50607	UB 6	UB 6	1020 MHz	30 MHz	23
7	EN50494+EN50607	UB 7	UB 7	1056 MHz	30 MHz	88
8	EN50494+EN50607	UB 8	UB 8	1092 MHz	30 MHz	204
9	EN50607		UB 9	1128 MHz	30 MHz	194
10	EN50607		UB 10	1164 MHz	30 MHz	89
11	EN50607		UB 11	1256 MHz	30 MHz	157
12	EN50607		UB 12	1292 MHz	30 MHz	136
13	EN50607		UB 13	1328 MHz	30 MHz	13
14	EN50607		UB 14	1364 MHz	30 MHz	91
15	EN50607		UB 15	1458 MHz	30 MHz	23
16	EN50607		UB 16	1494 MHz	30 MHz	179
17	EN50607		UB 17	1530 MHz	30 MHz	235
18	EN50607		UB 18	1566 MHz	30 MHz	97
19	EN50607		UB 19	1602 MHz	30 MHz	101

- For each user band you can configure

Standard

Select whether the user band should be accessible as EN50494, EN50607 or both-EN50494+EN50607

Unicable I / Unicable II

User band number for Unicable I (EN50494) and Unicable II (EN50607)

Frequency

Enter the IF frequency for the user band (the IF frequency may not overlap)

Bandwidth

Select the bandwidth for the user band

PIN

Enter the PIN code to be used for this user band

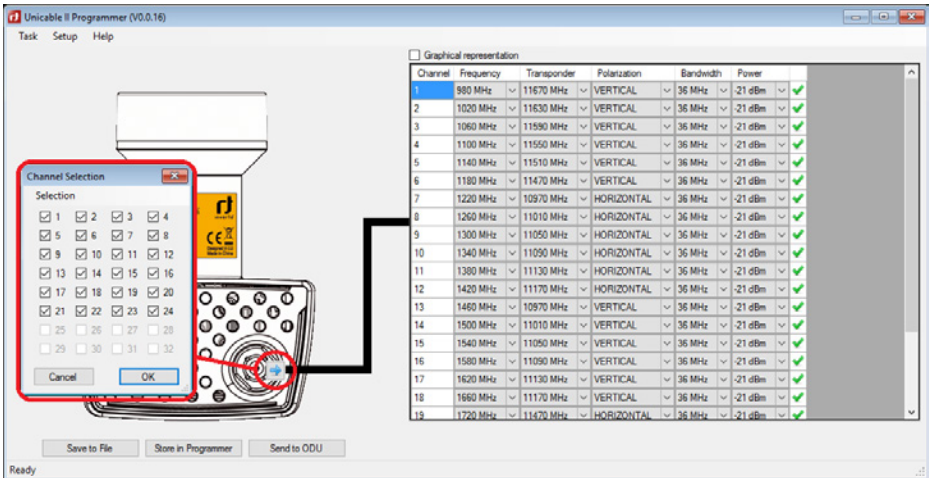
Power

On some devices you have the option to adjust the user band RF power level

7. Static

Depending on the device it is possible to configure up to 32 static user bands

- Click on the arrow button near to the output of the device to select how many static user bands you want to use on this output.



- For each user band you can configure

Frequency

Enter the IF Frequency

Transponder

Select the frequency of the transponder that should be mapped to the IF frequency

Polarization

Select the polarization of the transponder

Bandwidth

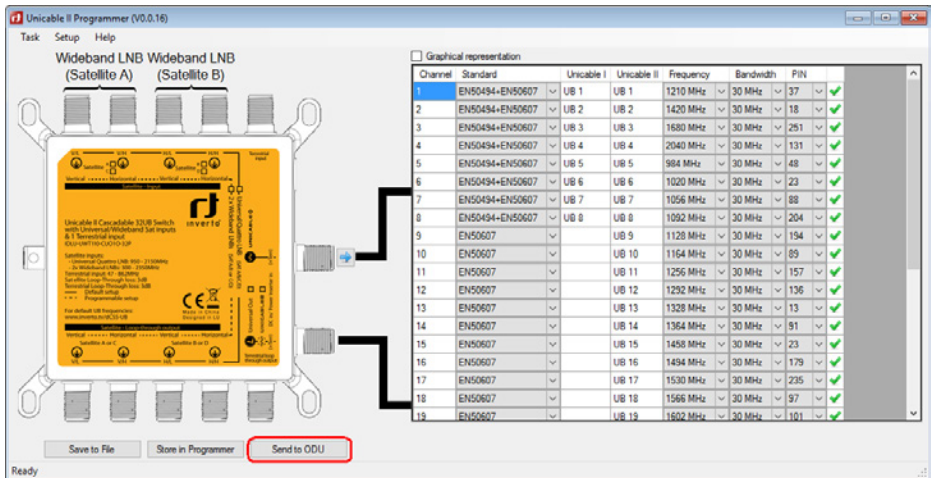
Select the bandwidth of the user band (must be equal or bigger than the bandwidth of the selected transponder)

Power

On some devices you have the option to adjust the user band RF power level

8. Upload the configuration to the Unicable II Switch/LNB

After entering your configuration you can upload it to the Unicable II device by pressing the button "Send to ODU".



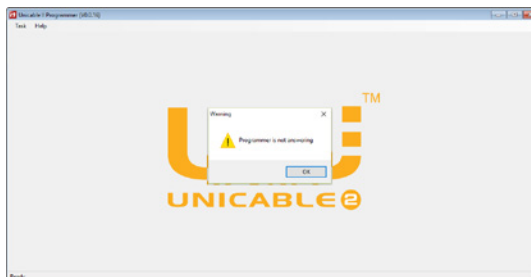
You can also store the configuration inside the programmer. This allows updating Unicable II devices without having a PC connected to the programmer by pressing the update button on the programmer.

For further use you can also save the current configuration on your PC, by clicking on "Save to File".

9. Troubleshooting

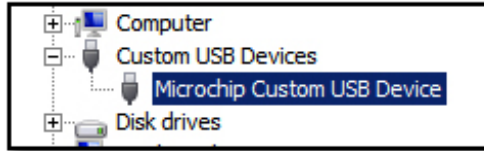
No communication between the programmer and the PC software

In case the programmer and the software are installed properly, but the software does not detect the programmer, you might see the following message.



Before you proceed, please check:

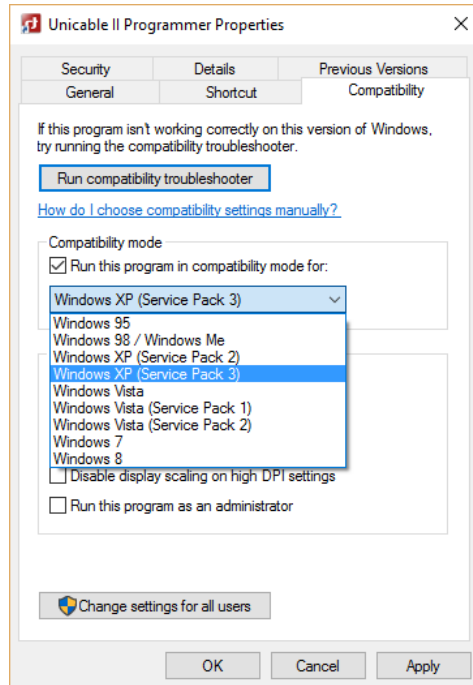
1. Is the USB cable connected to the PC and the programmer
2. Is the programmer LED - close the USB plug - on
3. Open the device manager and check that the programmer is listed as "Microchip Custom USB device"



To fix this problem, the software must be started in compatibility mode. This is an option that is available in the file properties. Select the desktop shortcut (or the EXE file itself) by right click and click "properties"



In the next step you select to run this program in WinXP SP3 compatibility mode and apply the settings.



Now the software is ready to be used.

Driver can't be installed (Win8.1 64bit or newer)

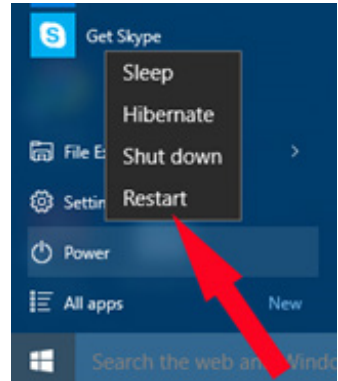
The drivers are currently not signed for Windows 8.1 or newer. During the driver installation you will be notified:

“Windows found driver software for your device but encountered an error while attempting to install it. The hash for the file is not present in the specified catalog file. The file is likely corrupt or the victim of tampering.”

In this case you need to disable the windows driver signature enforcement; this option can be setup by an advanced reboot.

To access this boot menu, proceed to the windows power menu, open the menu and hold the shift key while selecting “Restart”. Once the computer has restarted you are in the boot menu.

Choose Troubleshoot -> Advanced Options -> Startup Settings and then confirm the restart.



Finally you are able to access the startup settings and select to disable the driver signature enforcement by pressing F7 on your keyboard.



Now you can continue to install the drivers.

10. Technical parameters

Interfaces:	1x Satellite IF, F-type 1x Satellite IF loop-through out, F-type 1x USB (Type-B)
Loop-through loss:	1dB max.
Control protocols:	DiSEqC™ commands extension according to CENELEC EN50494 and/or EN50607, DiSEqC2.0.
Display and keys:	
- Activity LED	Yellow blinking: Communication activity between ODU and Programmer Green: Configuration files in ODU and Programmer are identical
- Power LED	Red: The Programmer is powered over the USB connection Orange: The Programmer is powered over the 12V DC input
- Button	Short press: Transmit a configuration file stored in the Programmer to the ODU device Long press: Download the configuration file of the ODU and compare to a file stored in the Programmer
Power consumption:	
- Programmer only:	5VDC, 50mA (can be powered over the USB interface)
- ODU power:	13V-18V, 600mA max. - powering and programming of an ODU device requires use of the supplied AC/DC adapter.
Dimensions:	107mm x 77mm x 30 (W x D x H)
AC/DC adapter:	Input voltage: 100-240VAC, 50/60Hz, 0.8A max. Output voltage: 12VDC Output current: 2A Short circuit protection: Yes Low Voltage Directive (2014/35/EU) Electromagnetic Compatibility Directive (2014/30/EU) Eco-Design Directive (2009/125/EC)

11. Safety

This product is for indoor use in moderate climates only.

This product contains no user serviceable parts. The unit should only be opened or repaired by qualified service personnel. The supplied AC/DC power adapter must be used to power this product. If the power cord becomes damaged, it must be replaced. Always refer to qualified personnel.

Install the product so the AC/DC power adapter can be unplugged from power socket immediately, in the event of a problem.

The unit should not be placed near sources of open flame. No open flame sources, such as candles, should be placed on the unit.

Make sure the local electricity network corresponds to the operating voltage of the AC/DC adapter. If the products gets into contact with liquid it must be disconnected from the main power.

When disconnecting the product don't pull the cable but the plug to prevent damage of the cable (wobbly plugs and outlets result in fire risk).

The product shall be serviced by qualified experts only.

11. Disposal

Following relevant EU directives, this device shall not be disposed of together with municipal waste. Use local waste collection and recycling systems to dispose wore out products.

*DiSEqC™ is a registered trademark of Eutelsat

*For purpose of brevity, some product descriptions in this sheet remain at platform level and may not be referred to as detailed data-sheets of the products. Inverto Digital Labs reserves the right to amend, omit or add products.

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