

Assembly Instructions

English



Grundig SAT Systems

GSS.mux

SMCIP 401

DVB-S/S2 → DVB-S



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1 SAFETY REGULATIONS AND NOTES



- This device is subject to the provisions of protection class II .
- Do not operate the device without equipotential bonding!
- The standards EN/DIN EN 50083 resp. IEC/EN/DIN EN 60728 must be observed.
- Observe the relevant standards, regulations and guidelines on the installation and operation of antenna systems.
- Observe the relevant VDE regulations.
- Do not perform installation and service work during thunderstorms.



- Assembly, installation and servicing should be carried out by authorised electricians.
- Switch off the operating voltage of the system before beginning with assembly or service work or pull out the mains plug.
- Install the system so it will not be able to vibrate...
 - in a dust-free, dry environment
 - in such a manner that it is protected from moisture, fumes, splashing water and dampness
 - somewhere protected from direct sunlight
 - not within the immediate vicinity of heat sources
 - in an ambient temperature of 0 °C to +40 °C. In case of the formation of condensation wait until the system is completely dried.
- Ensure that the device is adequately ventilated.
Do not cover the ventilation slots.
- Do not install the device in cabinets or recesses which are not ventilated.
- Do not place any vessels containing liquids on the device.
- Do not place anything on the device which could initiate fires (e.g. candles).
- Due to the risk of fires caused by lightning strikes, we recommend that all mechanical parts (e.g. distributor, equipotential bonding rail, etc.) be mounted on a non-combustible base. Wood panelling, wooden beams, plastic covered panels and plastic panels are all examples of combustible bases.
- Avoid short circuits
- No liability is accepted for any damage caused by faulty connections or inappropriate handling.
- **Test the software versions of the device and update them if necessary. The current software versions can be found at "www.gss.de/en".**



Take action to prevent static discharge when working at the device!



Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2002/96/EC of the European Parliament and the European Council from January 27, 2003 which addresses old electronic and electrical devices, such devices must be disposed of at a designated collection facility. At the end of its service life, please take your device to one of these public collection facilities for proper disposal.

2 GENERAL INFORMATION

2.1 PACKING CONTENTS

- 1 SMCIP 401
- 1 Assembly instructions

2.2 MEANING OF THE SYMBOLS USED



Important note



General note



Performing works

2.3 TECHNICAL DATA

The devices meet the following EU directives:
2006/95/EC, 2004/108/EC, 2011/65/EU

The product fulfils the guidelines and standards for CE labelling (page 36).

Unless otherwise noted all values are specified as "typical".

RF input DVB-S2

Frequency range: 950 ... 2150 MHz

Level range: 60 dB μ V ... 80 dB μ V

DVB-S modes: DVB-S 1/2 , 2/3 , 3/4 , 5/6 , 7/8

DVB-S2 modes: QPSK 1/2 , 3/5 , 2/3 , 3/4 , 4/5 , 5/6 , 8/9 , 9/10

8PSK 3/5 , 2/3 , 3/4 , 5/6 , 8/9 , 9/10

16APSK 2/3 , 3/4 , 4/5 , 5/6 , 8/9 , 9/10

32APSK 3/4 , 4/5 , 5/6 , 8/9 , 9/10

Symbol rate: QPSK: 1 ... 53 MSymb/s

8PSK: 1 ... 45 MSymb/s

16APSK: 1 ... 35 MSymb/s

32APSK: 1 ... 28 MSymb/s

Maximum net data rate per tuner.....72 Mbit/s
 DiSEqC™*:..... 1.1 (16 Satellites with 4 levels, max. 60 mA)

*DiSEqC™ is a trademark of EUTELSAT

RF output DVB-S

Frequency range: 950 ... 2250 MHz

Level range: 48 dB μ V ... 95 dB μ V

(Adjustable attenuation in 47 1dB steps)

DVB-S modes: DVB-S 1/2, 2/3, 3/4, 5/6, 7/8

Symbol rate: QPSK: 1 ... 45 MSymb/s

FEC:..... 1/2, 2/3, 3/4, 5/6, 7/8

Maximum data rate. 72573 kbit/s

Rolloff:0.25

Connections

SAT inputs:..... 4 F sockets

Loop input (LNB):..... 1 F socket

SAT output: 1 F socket

Micro USB socket: for software update

Common Interface: 1 (several channels can be descrambled)

Power Supply

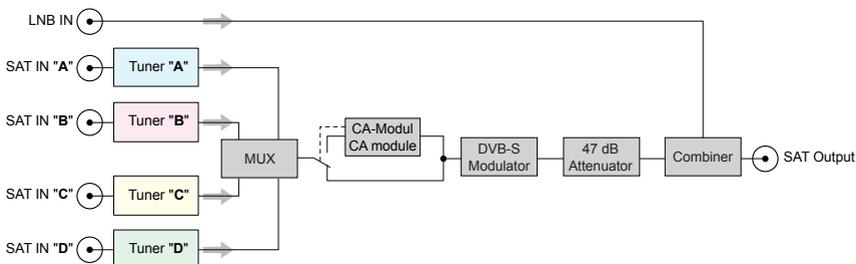
Mains voltage: 220–240V~, 50/60 Hz

2.4 DESCRIPTION

The transmodulator converts channels from up to 4 DVB-S/DVB-S2 transponders into one DVB-S transponder.

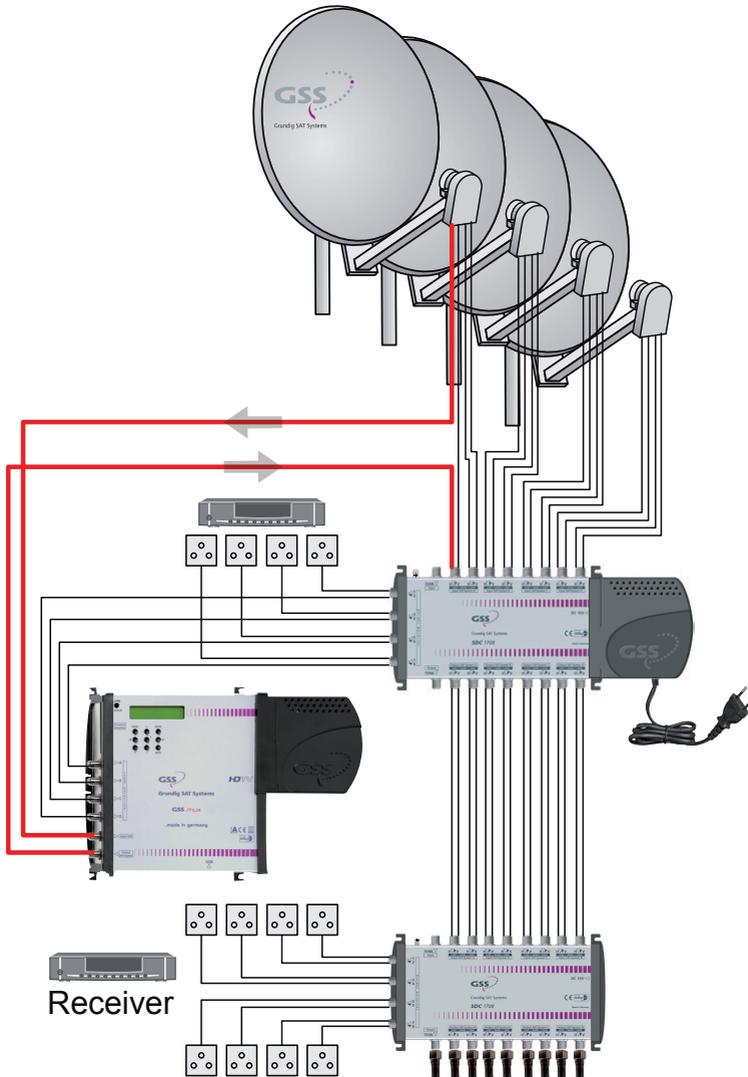
Using an adequate CA module a scrambled channel can be descrambled.

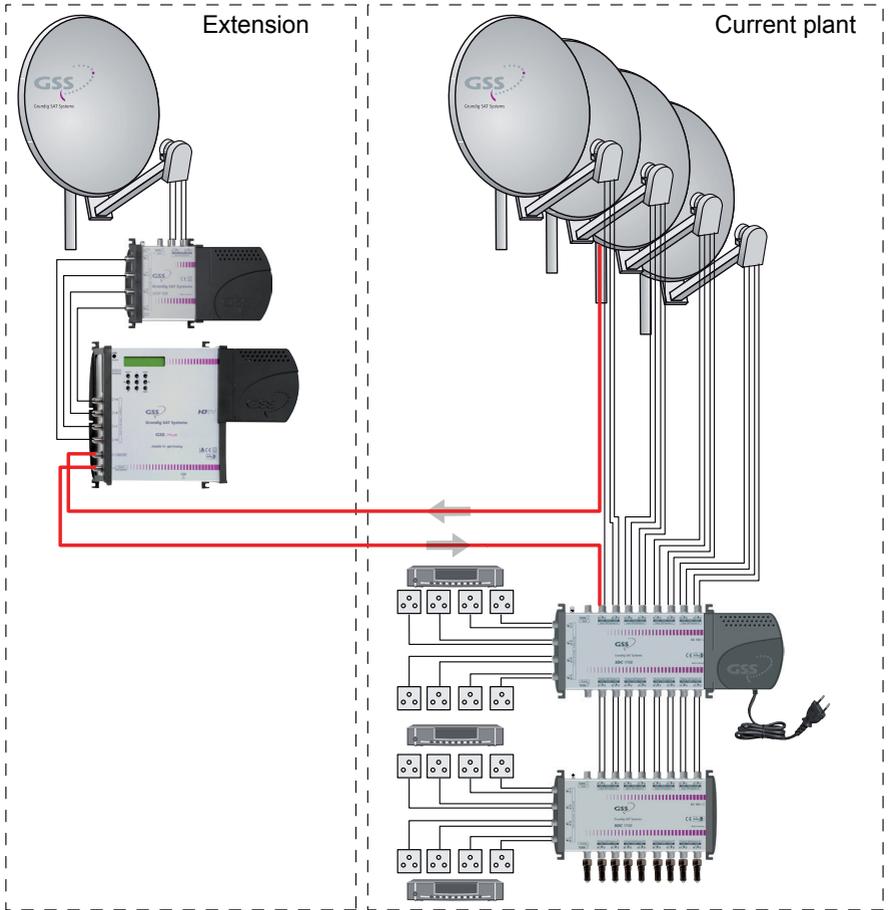
BLOCK DIAGRAM



The 4 tuners receive their input signal from the outputs of a multiswitch. If no further input is free for the converted signal at the multiswitch, the corresponding satellite band can be multiplexed with the converted signal via the LNB input and then feed into the multiswitch. There are two fields of application for the device:

DESCRAMBLING PROGRAMMES OF AN EXISTING PLANT





The converted transponder must be fed into the SAT IF range with the same frequency range.

GENERAL

As signal source the corresponding Tuner can be selected.

The letters abcd on the display provide an indication of the input signal quality:



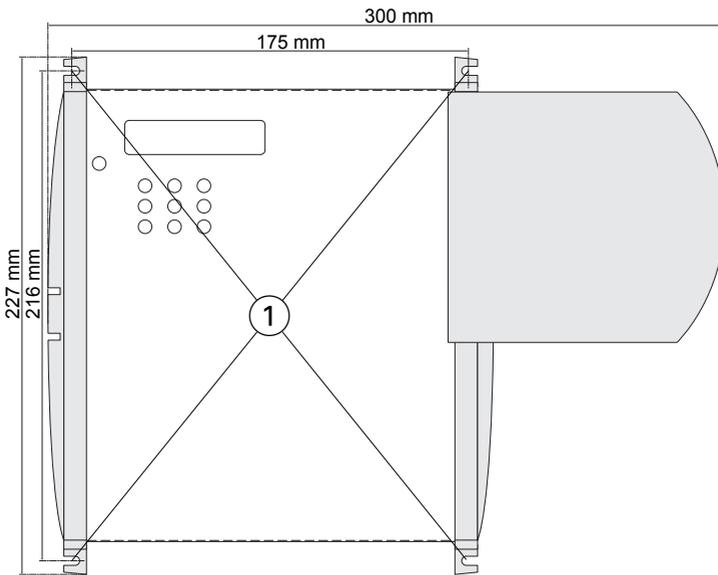
In this example tuners A, B and D have reception (capitals), tuner C has no reception (lower case).

The output signal (new transponder) can be fit in a gap of a SAT IF range. Therefore the corresponding range must be connected to the LNB input. At the RF output the SAT IF range with fit in "new" transponder is present.

3 ASSEMBLY

3.1 INSTALLING THE DEVICE

- Ensure the device is mounted so it will not be able to vibrate. Avoid, for example, mounting the device onto a lift shaft or any other wall or floor construction that vibrates in a similar way.
- Position the device so that the distance on the left side, below and above is minimum 20 cm.
- Fasten the device at the slots ①.



→ Use mounting material suitable for the wall properties.



- | | |
|-----------------------------|----------------------------|
| ① Assembling slots | ② PE connection terminal |
| ③ Display | ④ Display contrast control |
| ⑤ Operating buttons | ⑥ Slot for CA module |
| ⑦ Micro USB socket (update) | ⑧ SAT tuner inputs A...D |
| ⑨ Loop through input (LNB) | ⑩ SAT IF output |

3.3 CONNECTING THE DEVICE

POTENTIAL EQUALISATION (PE)



Equalise the potential (PE) in accordance with IEC/EN/DIN EN 60728.

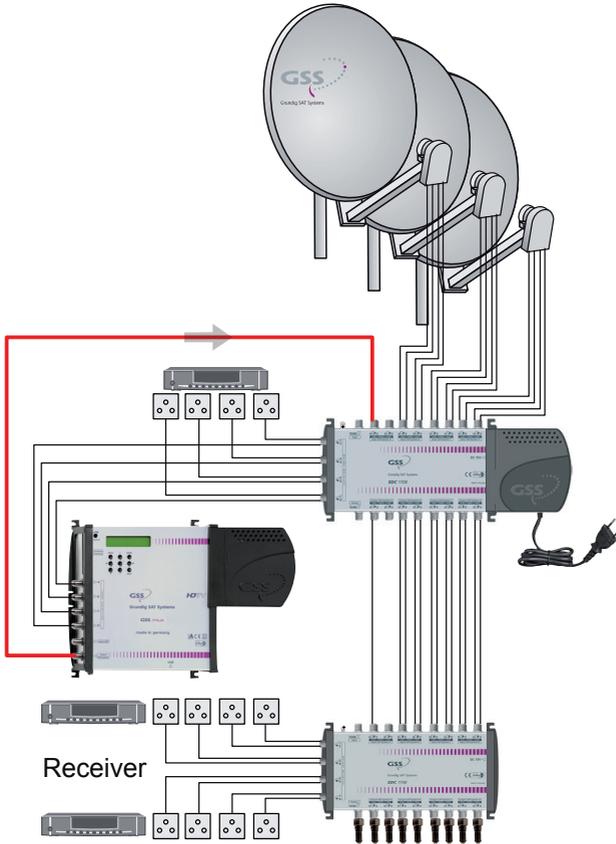
- Connect the PE connection terminal ② to a PE rail (supplied by customer) using a PE wire (Cu 4 mm² - 6 mm²).

SAT IF CONNECTIONS

- Connect the SAT IF inputs ⑧ to the outputs of a multiswitch.

IF A FREE INPUT IS AVAILABLE AT THE MULTISWITCH:

- Connect the SAT IF output (10) to a free input of the multiswitch.
- Connect the device to the mains power supply.



IF NO FREE INPUT IS AVAILABLE AT THE MULTISWITCH:

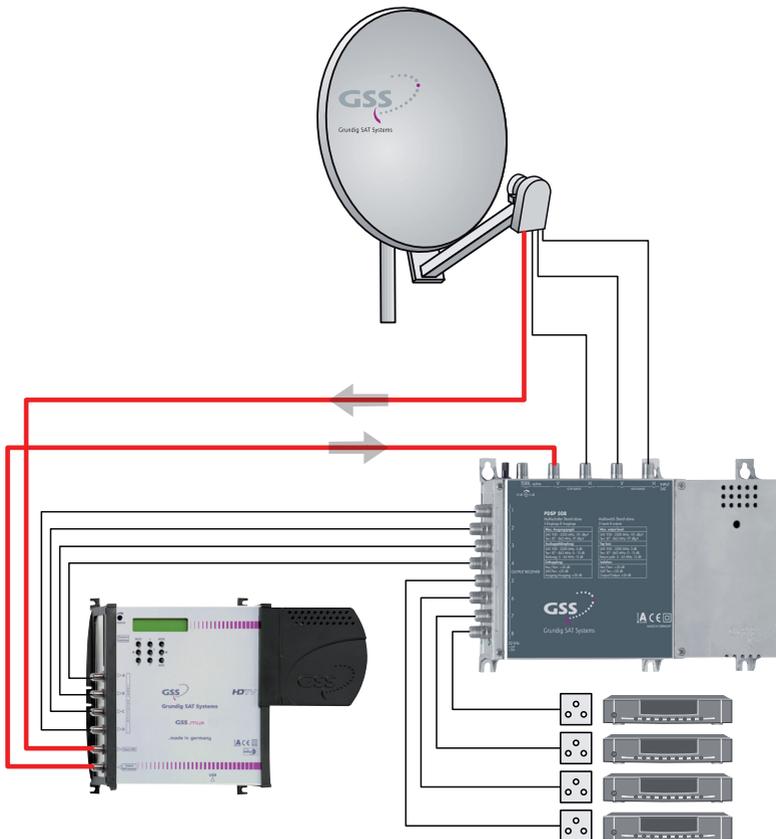
—> In this case the new transponder should work at a unused frequency.

- Remove the connection cable of the multiswitch input, **via which the frequency range (low or high band) is connected, in which the converted transponder works** and connect it to the LNB input (9) of the device.

—> If you would like to integrate the device to an existing plant, now first you should connect it to the mains and perform all settings (page 21). Therefore especially observe the notes on frequency setting (page 19) and level setting (page 20).

- **If the programming is finished** connect the SAT IF output (10) to the now free input of the multiswitch.

—> The converted transponder will be output at the SAT IF output together with the SAT IF range, which is fed in to the LNB input and then fed in again to the multiswitch.



- Connect the device to the mains power supply.

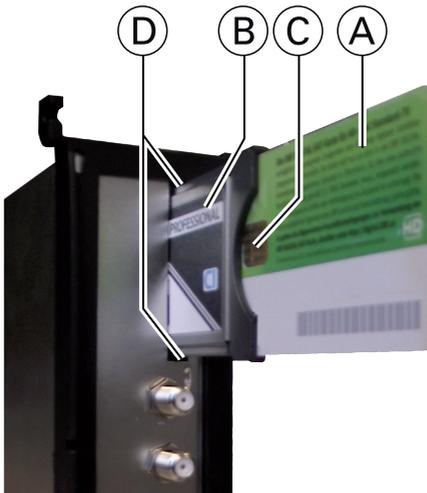
3.4 RETROFITTING A CA MODULE

The device is equipped with a common interface. It allows you to connect a CA module for various scrambling systems and service providers. Scrambled channels can only be descrambled with a CA module suitable for the scrambling system and the corresponding smart card. The smart card contains all the information for authorisation, descrambling and subscription.



Caution

- Any changes made by programme providers to the structures in the programme data might impair or even prevent this function.
- When working with the CA module, please read the corresponding operating manual from the respective provider.
- Insert the smart card into the CA module so that the chip (C) on the smart card (A) faces the thicker side (top) of the CA module (B).
- Insert the CA module into the slot (D) with the top side of the CA module facing the rear side of the device.
- Push the CA module without canting into the guide rails of the CA slot (D) and contact it to the common interface.



SOFTWARE QUERY

When the device is switched on, the two-line LC display shows the software version.

SOFTWARE UPDATE

The operating software of the device can be updated via the micro USB socket using a PC and the software "BE-Flash". You can find the current operating software, the software "**BE-Flash**" and the current assembly instructions on the website "www.gss.de/en".

- Unpack the downloaded ".zip file", which contains the new device software and the "BE-Flash" application.
- Open the device manager of the PC.



- Note down the already existing USB Serial Ports (e.g. COM3).
- Connect the Micro USB socket via a commercially available USB cable with the PC.

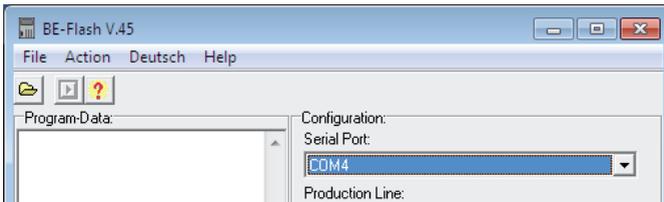
—> Windows installs the necessary driver automatically. This can take several minutes. Do not disconnect the USB connection during installation!

- Use the device manager to identify the COM port, which is assigned to the SMCIP401.

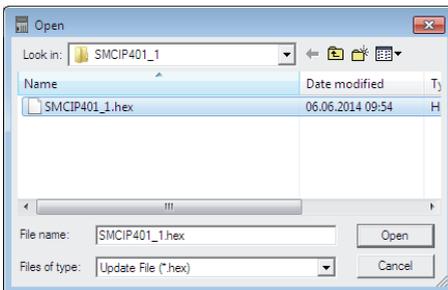


→ In this example – the new added port COM4.

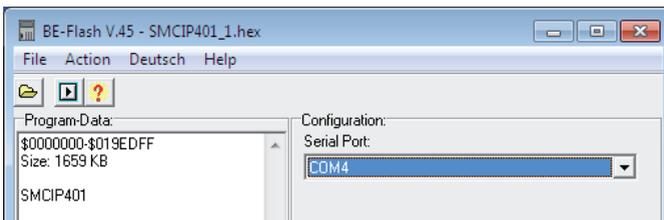
- Start the "BE-Flash" application (BEflash.exe) and select the corresponding interface (COM port).



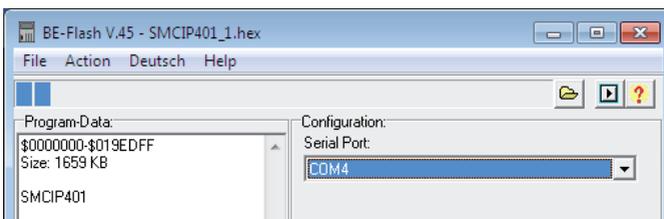
- Click on button ,



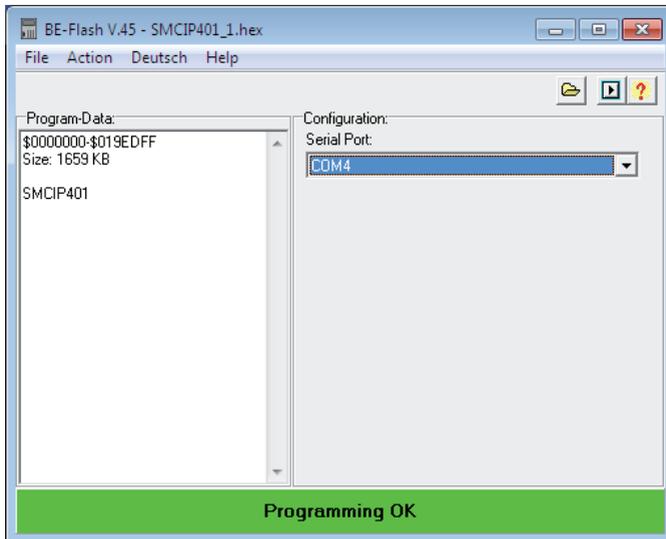
- Select the .hex file you had unpacked before and click on button .



- Click on button .

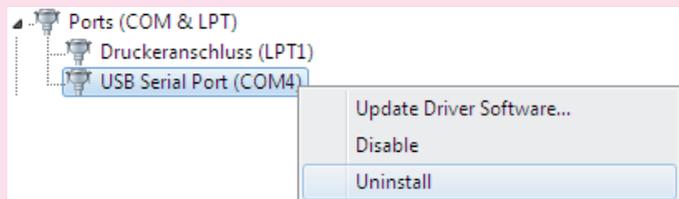


—> The update progress is displayed.



- Close the "BE-Flash" application.
- **Uninstall the COM port driver from the device manager after the update is finished successfully!**

—> Active the COM port driver (in this example COM4).
Select in menu **Action** or via the context menu



the menu item **Uninstall**.

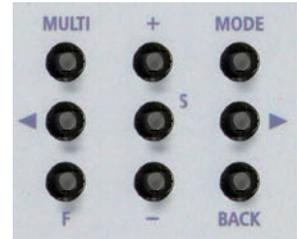
- Disconnect the USB connection.

4 THE CONTROL PANEL AT A GLANCE

4.1 CONTROL PANEL

The key pad on the device is used to scroll through the menu step-by-step:

MODE	scrolls forward through the menus
BACK	scrolls backward through the menus
< / >	select parameters/submenus
+ / -	set values, initiate actions
MULTI	selects presets
S	saves all entries
F	"function"



4.2 MENU ITEMS

Programme the cassette using the buttons on the control unit of the device. The two-line display of the control unit then shows the menus. The parameters and functions to be set are underlined.

Select the following main menu items:

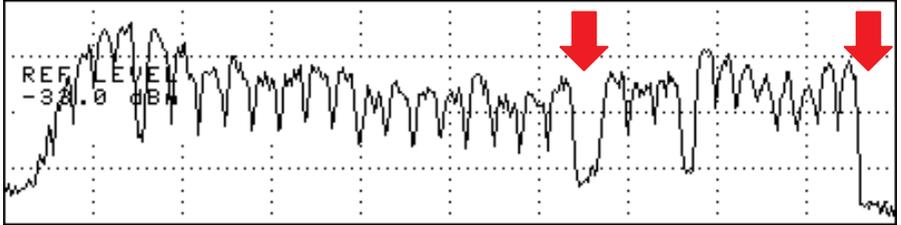
- Output – level:
 - Output frequency
 - Symbol rate, FEC
- Input:
 - LNB oscillator frequency, DiSEqC
 - Input symbol rate
 - Input frequency
 - Station selection
- Data rate
- TS/ONID
- PCR
- CA mode
- CA module
- Factory reset

5 PROGRAMMING

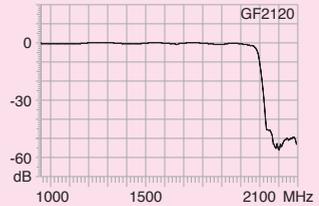
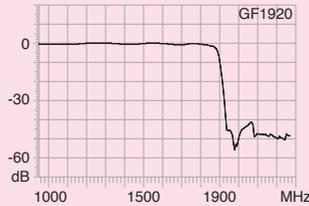
5.1 NOTES ON FREQUENCY SETTING



If you fit in the "new" transponder to an existing SAT IF range, you have to set the output frequency **to a gap** (or the beginning/end) of the spectrum.



—> To ensure that an existing gap will not be occupied by the satellite operator, you can cut the upper end of the frequency spectrum in order to generate your own gap by using a filter to the LNB input (9). Our filters lower the frequency spectrum from 1920 MHz ("GF1920") resp. 2120 MHz ("GF2120") on to -30 dB.



- Feed the SAT IF range, in which you would like to insert the "new" transponder, into the device via LNB input (9).
- Connect a SAT IF spectrum measurement device to output (10).
- Graph the spectrum which is present at the device output (10) with a measuring instrument and adjust the output frequency of the "new" transponder to the gap.

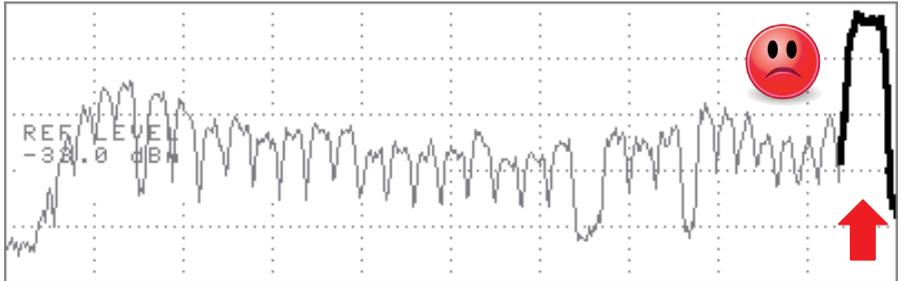
—> In order to get the receiving frequency which must be set, you have to add the corresponding LNB oscillator frequency (e.g. 9750 MHz low band, 10600 MHz high band) to the SAT IF frequency of the transponder.

5.2 NOTES ON LEVEL SETTING

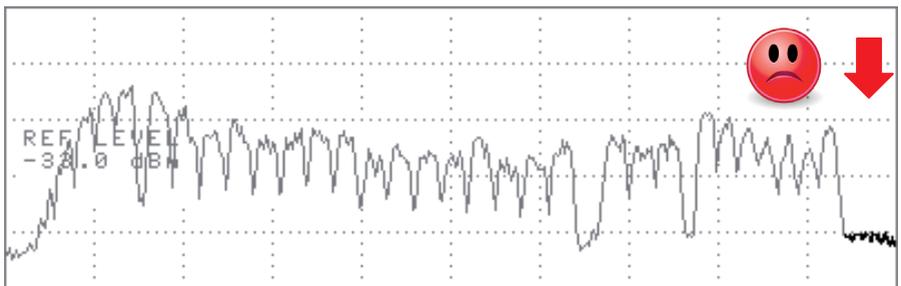


Equalize the output level of the device (menu "OUTPUT") to the levels of the other transponders, in order not to overdrive downstreamed multiswitches/ amplifiers.

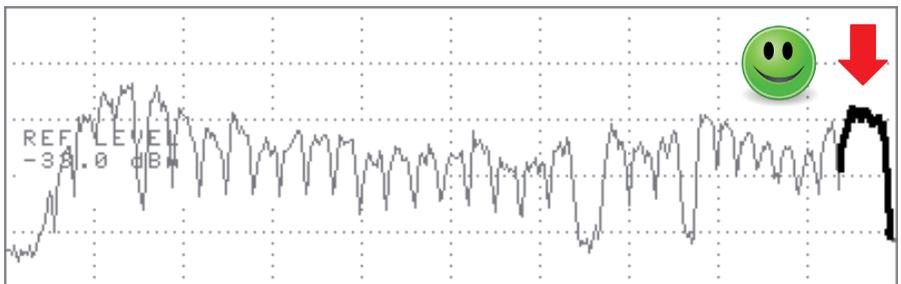
LEVEL TOO HIGH



LEVEL TOO LOW

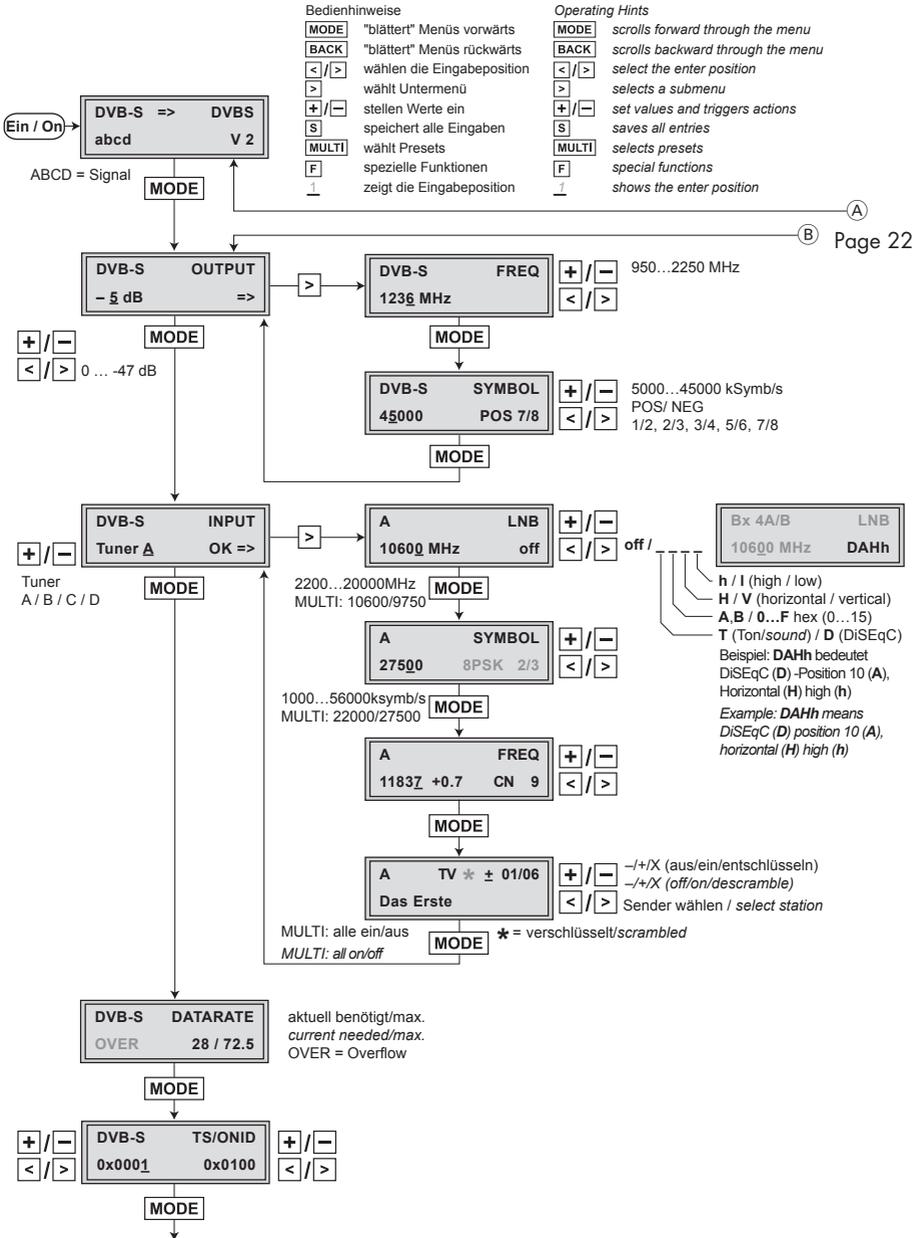


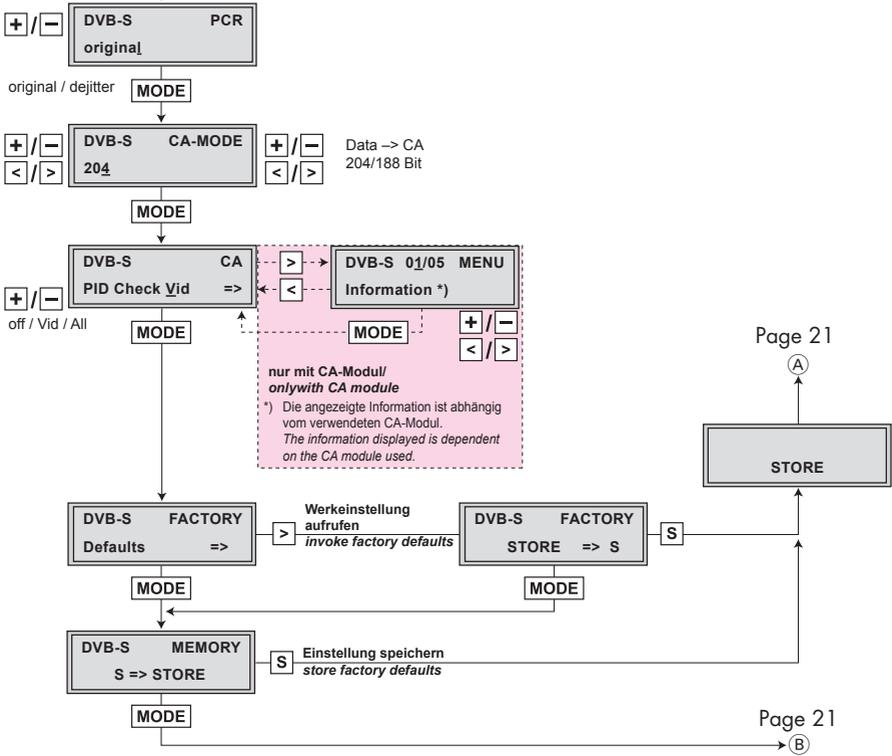
THUS, THE LEVEL MUST BE ADJUSTED



- Graph the spectrum which is present at the device output (10) with a measuring instrument and equalize the output level of the "new" transponder to the spectrum.

5.3 PROGRAMMING PROCEDURE





- Pressing the **MODE** button for longer than 2 seconds cancels the programming procedure. This takes you back to the "Status menu" from any menu. Any entries that have not been saved are reset to the previous settings.
- Entries in the menus can be saved by pressing the **S** key. You are taken back to the "Selecting the cassette" menu item.
- The cursor position for settings is shown by "_".

- Switch on the device (connect the mains plug to a mains socket).

STATUS MENU

- The display shows the software version (e.g. V 2).

DVB-S =>	DVBS
abcd	V 2

The letters abcd on the display provide an indication whether tuners A...D are locked to input signals:

DVB-S =>	DVBS
ABcD	V 2

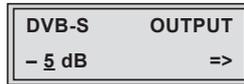
- In this example ...
 - ... the tuner A,B and D have locked an input signal / a transponder,
 - ... tuner C has **not** locked an input signal.
- Input signal locked => capitals
Input signal not locked => lower case

- Press the **MODE** button.

- The "Output parameter" – "**OUTPUT**" menu is activated.

OUTPUT PARAMETER, LEVEL

In this menu you adjust the output level of the modulator and you have access to the submenus for the modulator configuration.



- Using buttons +/- adjust the desired level (0dB ... -47dB).

—> Therefore observe page 20.

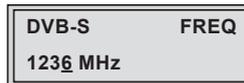
—> In order to skip the "output parameter" settings press button MODE. The "input parameter" menu – "INPUT" is activated (page 26).

- Press the > button.

—> The "modulator frequency" submenu – "FREQ" is activated.

MODULATOR FREQUENCY (SAT IF)

In this menu you adjust the output frequency of the modulator.



- Using buttons </> to select the cursor position for the frequency setting.
- Using buttons +/- to adjust the desired frequency (950 MHz ... 2250 MHz).

—> Therefore observe page 19.

—> You must add the corresponding LNB oscillator frequency (e.g. 9750 MHz low band, 10600 MHz high band) to the SAT IF frequency, in order to get the receiving frequency, which must be set at a receiver.

- Press the **MODE** button.

—> The "Output symbol rate" submenu – "SYMBOL" is activated.

OUTPUT SYMBOL RATE, SPECTRAL POSITION, CODE RATE (FEC)

In this menu you can set the symbol rate, the Spectral position and the code rate of the output signal.

—> Modulation schemes such as QPSK transmit multiple bits simultaneously. These are referred to as symbols. In addition to the user data flow which transmits video and audio information, error correction bits are transferred. The FEC number states the ratio of user bits to the complete transmitted bits.

DVB-S	SYMBOL
45000	POS 7/8

Symbol rate:

- Use the </> buttons to position the cursor under the digit of the displayed symbol rate (5000...45000 kSymb/s).
- Press +/- to set the respective digit of the symbol rate.
- Repeat the procedure by the quantity of the digits to be set.

Spectral position – inverting the user signal

For exceptional cases and "older" digital receivers, the spectral position of the user signal can be inverted "NEG". The default setting is "POS".

- Use </> to place the cursor under "POS".
- Use +/- to set the spectral position to "NEG".

Code rate (FEC):

—> During a transmission data can be lost or changed. To recover this data redundancy is added to the signal to be transmitted (forward error correction – FEC). The factor of the quantity of redundancy contained in the bits transmitted is called code rate.

Using the setting "C7/8" you can get the highest output data rate at lowest error correction.

- Use </> to place the cursor under "7/8".
- Use +/- to set the required code rate ("1/2", "2/3", "3/4", "5/6", "7/8").
- Press the **MODE** button.

—> Return to the "output parameter" main menu – "OUTPUT".

- Press the **MODE** button.

—> The "input parameter" menu – "**INPUT**" is activated.

INPUT PARAMETER

In this menu you select the tuner for which you would like to do the input settings in the related submenus.

DVB-S	INPUT
Tuner <u>A</u>	OK =>

—> In order to skip the input parameter settings, press button **MODE**. The "output data rate" menu is activated (page 31).
 —> "OK" indicates a present input signal.

- Using the buttons **+/-** to select the desired tuner ("A"..."D").
- Press the **>** button.

—> The "LNB oscillator frequency, control voltage" – "**LNB**" submenu is activated.

LNB OSCILLATOR FREQUENCY / CONTROL VOLTAGE

In this menu set the oscillator frequency of the LNB used and, if necessary, a LNB control voltage.

A	LNB
1060 <u>0</u> MHz	off

LNB oscillator frequency:

- Using button **MULTI** you can toggle the customary standard values 9750/10600 MHz.
- For deviating values use the buttons **</>** to position the cursor under the digit to be set for the displayed oscillator frequency.
- Press the **+/-** buttons to enter the corresponding digit of the oscillator frequency of the LNB used.
- Repeat the procedure by the quantity of the digits to be set.

DiSEqC commands:

- In order to set a DiSEqC command, position the cursor under "off" using button >.
- Using buttons +/- to select the desired control voltage.
"abcd" are place-holders for the following setting options:

A	LNB
10600 MHz	abcd

Place-holder	Value	Description
a	_	No function
	T	Sound
	D	DiSEqC
b	_	No function
	A, B	Sound A or B
	0...F	Hexadecimal value for DiSEqC command 0...15
c:	H	Horizontal polarisation
	V	Vertical polarisation
d:	h	High-Band
	l	Low-Band

Example: **DAHh** means **DiSEqC position 10, Horizontal high**

→ **The control voltage only serves to control multiswitches and is not suitable for power supply of upstreamed components (maximum load 65mA).**

→ GSS Multiswitches must be triggered by the following DiSEqC commands:

Input group A → DiSEqC command D0

Input group B → DiSEqC command D1

Input group C → DiSEqC command D2

Input group D → DiSEqC command D3

Example: In order to trigger input group B for horizontal polarisation and high band **D1Hh** must be set.

- Press the **MODE** button.

→ The "Input symbol rate / DVB mode" submenu – "**SYMBOL**" is activated.

INPUT SYMBOL RATE

In this menu you set the symbol rate of the desired transponder in kSymb/s.

A	SYMBOL
27500	8PSK 2/3

The symbol rates of the satellite transponders can be found in the current channel table of the satellite operator, in various satellite magazines and in the Internet.

- Using button **MULTI** you can toggle the customary standard values 22000/27500 kSymb/s.
- For deviating values use the buttons **</>** to position the cursor under the digit to be set for the displayed symbol rate.
- Press the **+/-** buttons to enter the corresponding digit of the desired symbol rate.
- Repeat the procedure by the quantity of the digits to be set.

—> If an input signal is present, its DVB mode (e.g. 8PSK) and the FEC factor (e.g. 2/3) is displayed.

- Press the **MODE** button.

—> The "Input frequency" sub menu – "**FREQ**" is activated.

INPUT FREQUENCY

In this menu you set the input frequency of the desired transponder in MHz.

A	FREQ
11837 +1.8	CN 9

Once the RF receiver has synchronised to the input signal, any offset to the target frequency is displayed in MHz, e.g. "**- 1.8**".

If a question mark "?" appears in the second line of the display, there is no input signal present. In this case check the configuration of the antenna system as well as the preceding settings of the device

- Use </> to position the cursor under the digit of the frequency displayed to be set.
- Press +/- to set the respective digit of the input frequency needed.
- Repeat the procedure by the quantity of the digits to be set.
- Set the frequency offset shown in the display (e.g. "- 1.8") to less than 1 MHz (" $\pm 0.x$ ") by varying the input frequency using the +/- buttons.

Signal to noise ratio:

"CN ..." indicates the current signal to noise ratio, in order to estimate the quality of the input signal.

- Press the **MODE** button.

—> The "station selection" submenu – e.g. "TV" is activated.

OPERATION WITH A CA MODULE

In order to descramble scrambled channels a corresponding smart card is needed.

The channels to be descrambled are set in submenu "station selection".

STATION SELECTION

In this menu you select the stations (services), which shall be inserted into the "new" transponder.

Herein you select which scrambled station should be descrambled using an adequate CA module.



—> All stations from the channel strip will be read, and then displayed with name and station type.

—> If no station is found, the following message will appear in the display: "**FILTER no Service**". In this case, check the configuration of the antenna system, as well as the previously adjusted settings for the device.

→ The display shows e.g.: **A TV * + 01/06**
Das Erste

Meaning of the indicators in the example:

"A" Tuner "A"
"TV" TV channel type
" + " The currently selected station is switched on.
"01/06" The 1st of 6 stations is being displayed.
"Das Erste" Station name

Further possible terms displayed:

"RA" Radio channel type
For radio stations, the background of the screen of the connected TV or test receiver is darkened.
" - " The selected station is not included in the transport stream.
" * " The star means that the TV or radio station selected is scrambled. To enable the station, the CA module and the appropriate smart card of the station provider are required.
" X " The selected station will be descrambled.

→ If a service number (e.g. "131") appears instead of "TV" or "RA", this indicates that an unnamed station or an undefined data stream is being received.

- Use the </> buttons to call up the stations in sequential order, then use +/- to activate (indicated by " + ") or to deactivate them (indicated by " - ").

→ If a station is scrambled (indication " * "), in this menu you select whether it should be descrambled using an adequate CA module.

- Press button + twice to descramble a station (indication "X").

A TV * X ± 01/06

- Press the **MODE** button.

→ Return to the "input parameter" main menu – "INPUT".

- Press the **MODE** button.

—> The "Output data rate" – "**DATARATE**" main menu is activated.

OUTPUT DATA RATE

This menu shows the output data rate defined by the output parameter settings and the current needed output data rate in MBit/s.

DVB-S	DATARATE
OVER	28 / 72.5

28: The current needed output data rate.

72.5: Maximum output data rate (dependent on the settings of symbol rate and the FEC).

If the station filter is set correctly, the current needed data rate is lower than the maximum data rate. The value fluctuates, since the data rates of individual stations are dynamically modified by the broadcasters.

—> Is the current needed data rate higher than the maximum data rate "**OVER**" appears in the display. In this case correct the output parameter settings (pages 25...) or the settings of the station selection (page 29).

DVB-S	DATARATE
OVER	75 / 72.5

- Press the **MODE** button.

—> The "Transport stream ID and ORGNET-ID" – "**TS/ONID**" main menu is activated.

TRANSPORT STREAM ID AND ORGNET-ID

If a completely new, additional transponder is generated, IDs (ORGNET-IDs) must be assigned to it, in order that a station search of connected SetTopBoxes can be performed faultlessly.

DVB-S	TS/ONID
0x0001	0x0100

- Use the </> buttons to position the cursor under the digit of the hexadecimal number of the TS-ID to be set.
- Press +/- to set the respective digit of the hexadecimal number.
- Repeat the procedure by the quantity of the digits to be set.
- Using the > button place the cursor under the digit of the hexadecimal number of the ON-ID to be set.
- Press +/- to set the respective digit of the hexadecimal number.
- Repeat the procedure by the quantity of the digits to be set.

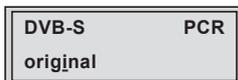
—> By pressing the < button you return to the setting of the TS-ID.

- Press the **MODE** button.

—> The "PCR-Jitter" – "**PCR**" main menu is activated.

PCR JITTER

In this menu, you can, if PCR jitter causing interference, activate a jitter reduction.



- Use the buttons +/- to activate (indicated by "**dejitter**"), resp. deactivate (indicated by "**original**") the jitter reduction.

—> The selection "dejitter" leads to significantly better jitter measurements, but may cause disruptions in older receivers.

- Press the **MODE** button.

—> The CA "CA data packets" – "**CA-MODE**" menu is activated.

CA DATA PACKETS

In this menu you can adapt the size of the data packets, which are transmitted to the CA module (depending on the CA module).



- Use **+/-** buttons to set the size of the data packets (188/204 Bit).

→ AlphaCrypt modules use 204 bit datapackets, Neotion modules 188 bit.

- Press the **MODE** button.

→ The "PID monitoring" – "**CA**" main menu is activated.

PID MONITORING

In this menu you can switch off the PID monitoring and call up a menu for the settings of the CA module (dependent on the CA module).



→ If there is no CA module inserted, this menu has no function.

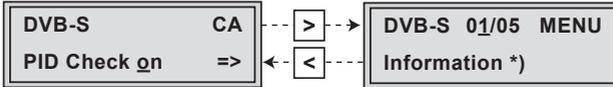
→ The factory default is video PID monitoring ("Vid"). Optionally all PIDs can be monitored.

If particular PIDs are not descrambled the CA module is reset. Additionally dropouts may occur if several stations are descrambled. To prevent this the PID monitoring can be switched off.

- Use the **+/-** buttons to select ...
 - "**off**", to switch off the PID monitoring,
 - "**Vid**", to monitor only video PIDs or
 - "**All**", to monitor all PIDs.
- Use the **>** button to activate the menu of the CA module

→ Access to this menu is only possible with installed **CA module** and inserted smart card.

The menu varies according to which CA module you are using. For this reason, please refer to the operating manual of your particular CA module. The relevant information is shown in the display of the device. This may appear as a fixed display or as scrolling text according to display capabilities.



—> The display shows e.g.: **01/05 MENU**

Meaning of the indicators:

- "01/05" The first of five menu items is activated.
- "MENU" The menu of the CA module is activated.

For the explanation of further details please use the operating instructions of the CA module used.

- Use the **+/-** buttons to activate the menu desired.
- Press the **>** button to activate the menu.
- Use the **+/-** buttons to select the function desired.
- To set the CA module use the **</>** and **+/-** buttons.

—> By pressing the **MODE** button you can cancel the settings in the menu of the CA module and are returned to the "PID monitoring" – "CA" menu.

- All settings are saved by pressing the **S** button.

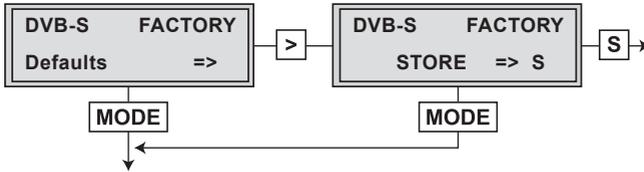
—> You will returned to the "PID monitoring" – "CA" menu.

- Press the **MODE** button.

—> The "Factory reset" – "**FACTORY Defaults**" main menu is activated.

FACTORY RESET

In this menu you can reset all settings to the factory defaults.



- Press the > button.

—> The factory defaults are invoked.
—> By pressing the **MODE** button, you will be returned to the menu item "Output settings" **without** invoking the factory defaults (page 24).

- Press the **S** button.

—> The factory defaults are saved.
The display shows "STORE"
—> Back to "Status menu" (page 23).

SAVING DATA



- All programmed data is saved by pressing the **S** button.

—> The settings are saved.
The display shows "STORE"
—> Back to "Status menu" (page 23).
—> By pressing the **MODE** button, you will be returned to the menu item "Output settings" **without** saving the settings (page 24).

Declaration of CE conformity

	Konformitätserklärung Declaration of Conformity 011/ 14	
Der Hersteller/Importeur The manufacturer/importer	GSS Grundig SAT Systems GmbH	
Anschrift / Address / Adresse	Beuthener Straße 43, D-90471 Nürnberg, Germany	
erklärt hiermit eigenverantwortlich, daß das Produkt: declare under their sole responsibility that the product:		
Bezeichnung / Name / Description	SAT – ZF - Umsetzer	
Type / Model / Type	GSS.mux SMCIP 401	
Bestell-Nr. / Order-No.	GAM 2000	
folgenden Normen entspricht: is in accordance with the following specifications:		
EN 50083-2:	2012	EN 60065: 2002
EN 50581:	2012	EN 60065 + A1: 2006
		EN 60065 + A11: 2008
		EN 60065 + A2: 2010
		EN 60065+ A12: 2011
Das Produkt erfüllt somit die Forderungen folgender EG-Richtlinien: Therefore the product fulfils the demands of the following EC-Directives:		
2006/95/EG	Richtlinie betreffend elektrische Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen Directive relating to electrical equipment designed for use within certain voltage limits	
2004/108/EG	Richtlinie über die elektromagnetische Verträglichkeit Directive relating to electromagnetic compatibility	
2011/65/EG	Richtlinie zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronik Altgeräten Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment	
Nürnberg, 15. Juli 2014	 Michael Bierschneider <i>Leiter Entwicklung</i> <i>Manager Development / Directeur Développement</i>	

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