



EKSELANS BY ITS

USER MANUAL

CM COMPACT 2S2 085006

2 inputs (2 tuners) transmodulator
DVB S-S2 to COFDM-QAM
2 RF output channels (flexible)

V01

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INTRODUCTION:

Description:

Transmodulator 2 inputs (2 tuners) DVB-S2 + loop. COFDM-QAM output. Output level: 95dB μ V. MER >35dB. Intelligent remultiplexing of services. 2 RF output channels (flexible). 13/18V, 22KHz and DiSEqC. Programming via PC. Power supply included.


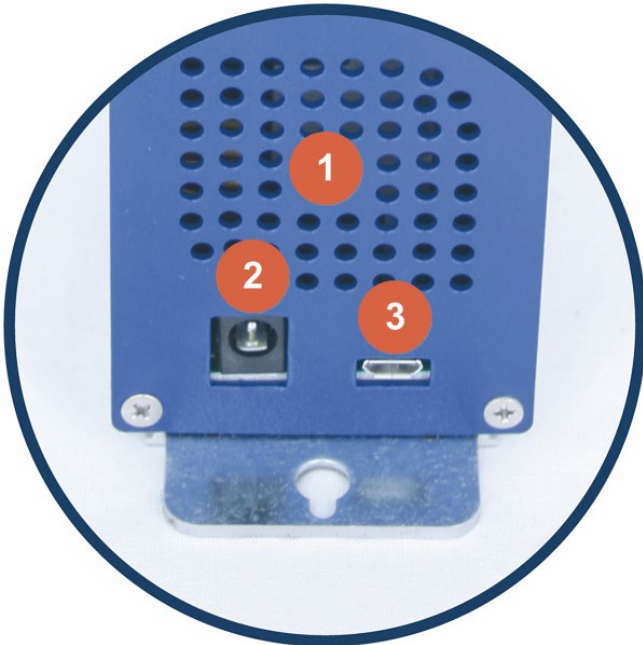
Key features:

- TWIN modules with 2 satellite inputs and 2 tuners (DVB-S/S2).
- Independent control of each input 13/18V - 22KHz - DiSEqC (A/B/C/D)
- Flexible remultiplexing of services on any output channel
- Editing NIT tables, SID remapping, and passing or deleting EMM messages and CAT tables
- 2 output channels
- Programmable QAM/COFDM output
- High output level
- Excellent output signal quality with a high MER
- LCN / LCN HD Insertion
- Programming via SW PC ("CM Management")
- Power supply and USB-USB cable included

Packaging Contents:






- CM COMPACT 2S2 Module (085006)
- FA55 Power Supply (082010)
- 2x Mounting tabs (251008)
- USB A Cable - micro-USB B (280022)

CONNECTIONS AND INTERFACES:

 <p>The image shows the front panel of the Ek CM COMPACT 2S2 module. It features a blue faceplate with several connectors and a status LED. Red callout numbers 1 through 5 are placed to the right of the corresponding components: 1 points to the top RF IN connector, 2 to the RF OUT connector, 3 to the status LED, 4 to the IN B and LOOP connectors, and 5 to the IN A and LOOP connectors. The bottom of the panel is labeled '5Vdc' and 'DATA'. The Ek logo and 'EKSELANS BY ITS' are also visible.</p>	<p>1.- RF mix input connector.</p> <p>2.-RF output connector. In this output, the MUX's generated by the module itself will be presented, <u>plus those that enter through connector number 1.</u></p> <p>3.-Status LED. It reports the status of the input and output in a sequential manner. This sequence begins with short flashes indicating the engagement status of the selected demodulators. Red: not snagged; Green: hooked. Followed by a longer flash indicating whether the modulator has started or not. Red: has not started; Green: torn off.</p> <p>4.-Input connector and loop tuner B.</p> <p>5.- Input connector and loop tuner A.</p>
 <p>The image is a circular inset showing a close-up of the ventilation board. It is a blue PCB with a grid of ventilation holes. Three red callout numbers are present: 1 points to the top ventilation area, 2 points to a power connector, and 3 points to a Micro-USB B communication port.</p>	<p>1.-Ventilation board.</p> <p>2.-Power connector.</p> <p>3.-Micro-USB B communication port to connect it to the PC.</p>

INSTALLATION AND CONNECTION:

General installation and connection:

<p>1.- The equipment has two tabs to fix it directly to the wall. It does not have a chassis to fix it in a RACK.</p>	
	
<p>2.- Connect the satellite signals to the inputs of the CM COMPACT 2S2 equipment.</p>	
<p>3.- </p>	<p>Important note: Pay special attention to the type of ticket. Follow the directions on the front.</p>
<p>4.- Connect the supplied power supply. Remember that it has to be 5V. 4A.</p>	
<p>5.- Install the "CM Management" software on the PC. It can be downloaded from the web www.ek.plus Software / CM Headers section. Link</p>	
<p>6.- Connect the PC to the CM COMPACT 2S2 using the supplied USB cable.</p>	
<p>7.- Run the PC programming SW.</p>	
<p>8.- </p>	<p>Important note: Connect the source to the PC <u>before running the software</u> so that the PC driver detects it correctly.</p>

PROGRAMMING SOFTWARE "CM Management":

The programming software "CM Management" allows you to program and manage the CM COMPACT 2S2. The program is only available for Windows operating system (XP version, 7 and above). Once downloaded from the website www.ek.plus, Software / CM Header, run it after previously connecting the PC to the USB port. This will ensure that the driver detects the computer.

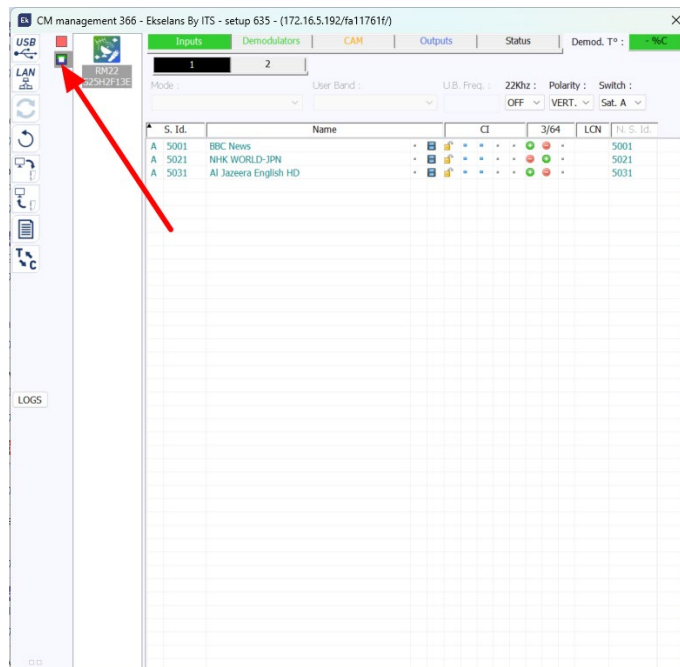
Main screen:

The appearance of the main screen of the "CM Management" software is as follows:











Always check that you have the Latest Software Version of our [WEB](http://www.ek.plus).

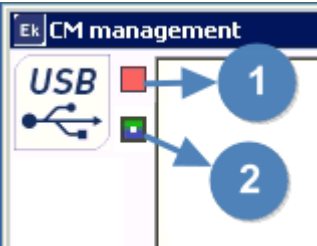
If you click on the "green and blue" square, the main configuration screen of the CM COMPACT 2S2 will appear in the "Inputs" tab:



Using the "CM Management" software, the module connected to the PC can be managed and programmed. Here's what each of the main side options does to do:

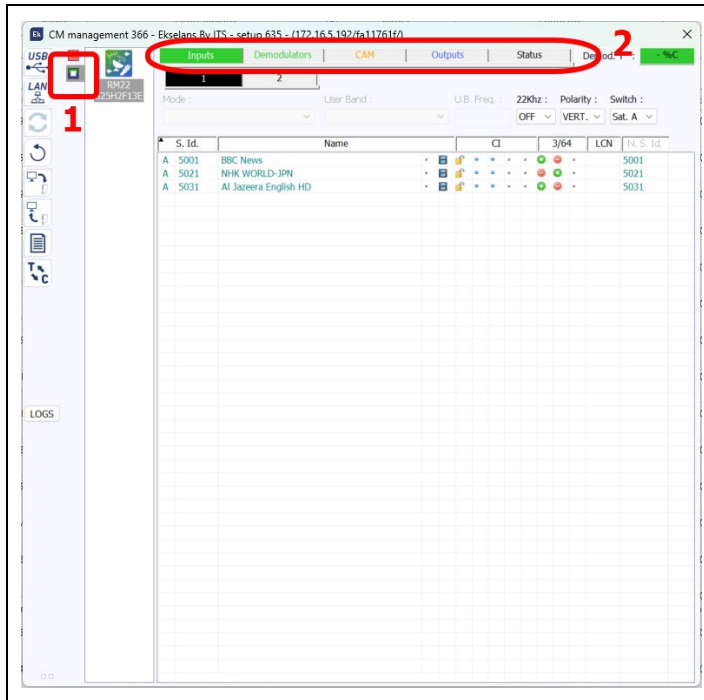
	<p>Button to connect to the module using the USB connector.</p>
	<p>Option not available for this model.</p>
	<p>Button to <u>update Firmware</u>. If any SW is available, it will be marked with a white triangle in the inner left corner. Double-clicking will change color to orange and the icon will change from gray to blue. Clicking on the icon will update the FW of the module. <u>It is recommended to update one by one by doing a power RESET at the end.</u></p>
	<p>Button for restarting the computer.</p>
	<p>This option allows you to load a previously saved programming configuration on your PC. The configuration file will have a *.dtc extension.</p>
	<p>This option allows you to save the computer's programming settings on your PC, to be later loaded by following the steps in the previous point.</p>
	<p>Data-logger button. It allows you to save the data of the computer in a single *.html file.</p>
	<p>Button that allows you to change the output of DVB-T (COFDM) modules to DVB-C (QAM).</p>

The main screen of the "CM Management" allows you to easily identify the connected module as can be seen on the following screen:

	<p>1.- Power supply and equipment manager. (Red box). 2.- Identification of the team (Green and blue square).</p>
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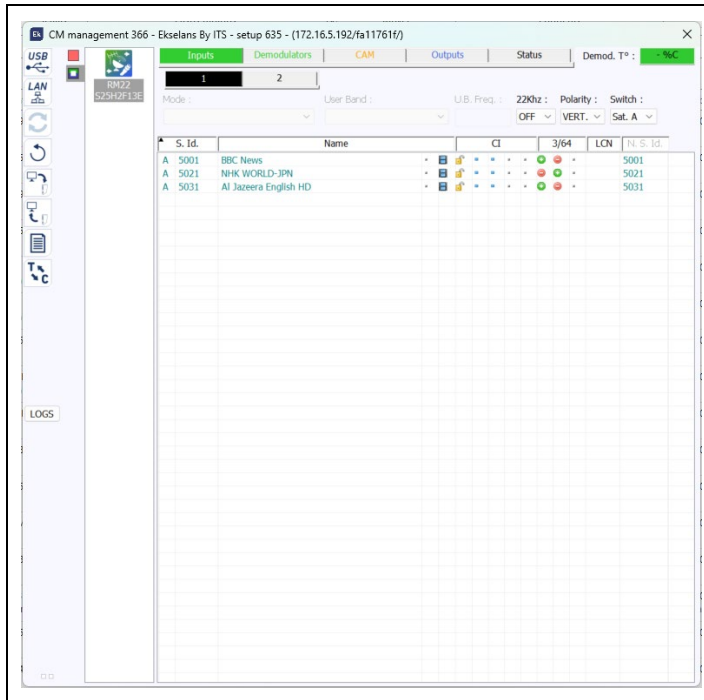
Never open the CM MANAGEMENT program twice, it will give you configuration problems.

CM COMPACT 2S2 module configuration:



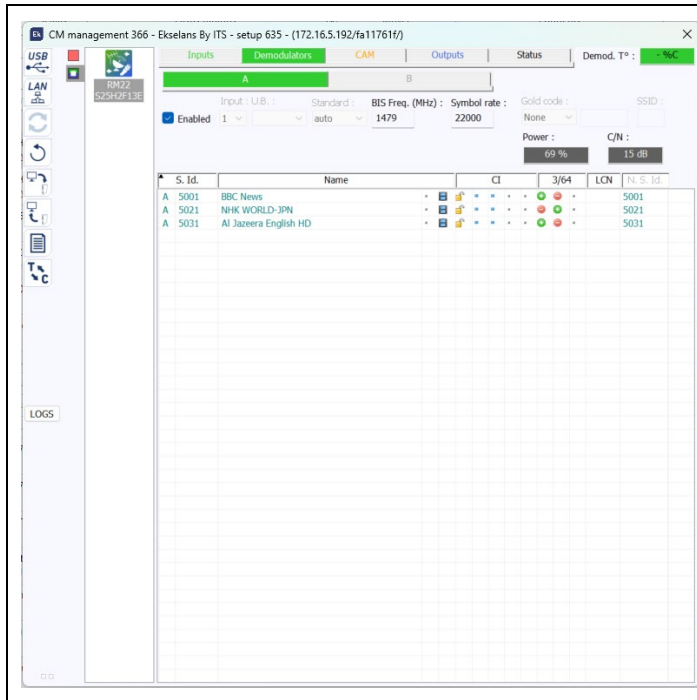
- 1.- Selected module
- 2.- Configuration tabs:
 - Inputs:** Configuration of inputs.
 - Demodulators:** Input will be enabled and frequency and SR will be introduced. This module does not support multistream.
 - CAM:** Option not available.
 - Outputs:** Setting the output modulation.
 - Status:** View the status of the equipment.

Inputs:



- This tab will allow you to configure the LNB parameters of each of the two inputs:
- Tone**
 - Polarity**
 - DiSEqC switch**
- This module does not support Unicable.
- This module does not support Multiestream.

Demodulators:



This tab will allow you to configure the parameters of the MUX to be tuned in each tuner:

Enabled: This check will enable the corresponding tuner.

BISS Freq.: Introduce MUX frequency to be demodulated in MHz

Symbol

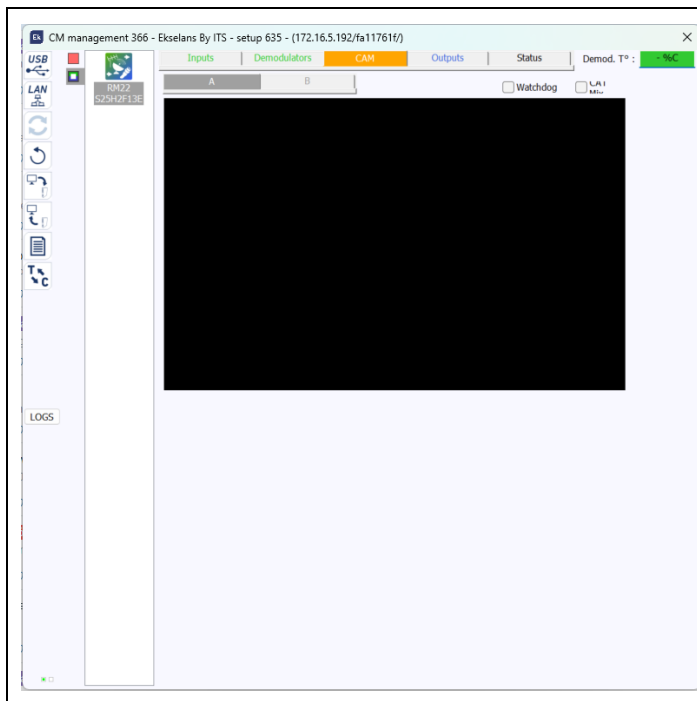
DISEqC switch

This module does not support Unicable.

This module does not support Multiestream.

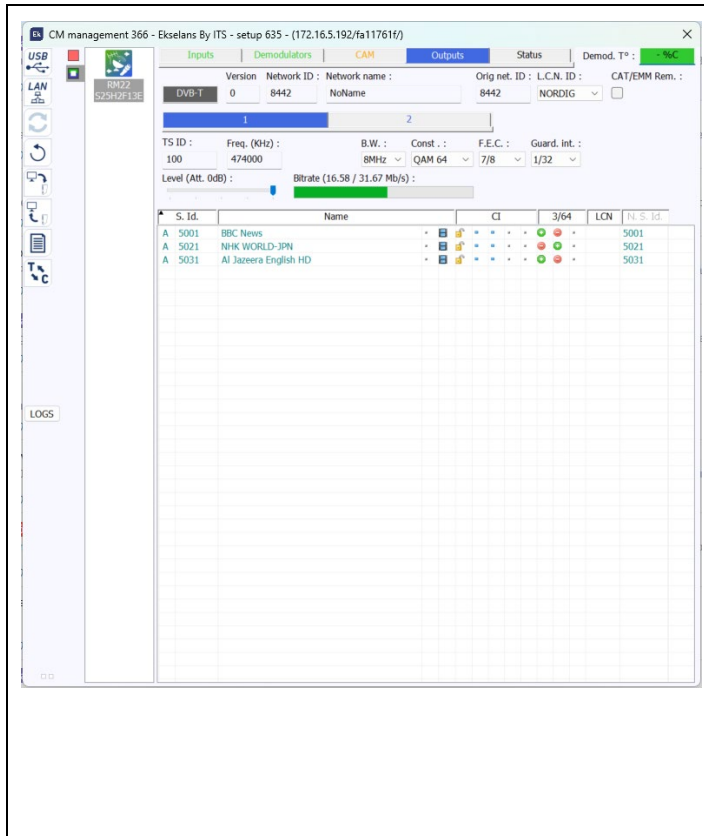
Power and C/N: will show power level and signal quality.

CAM:



This model is not IC. Not applicable.

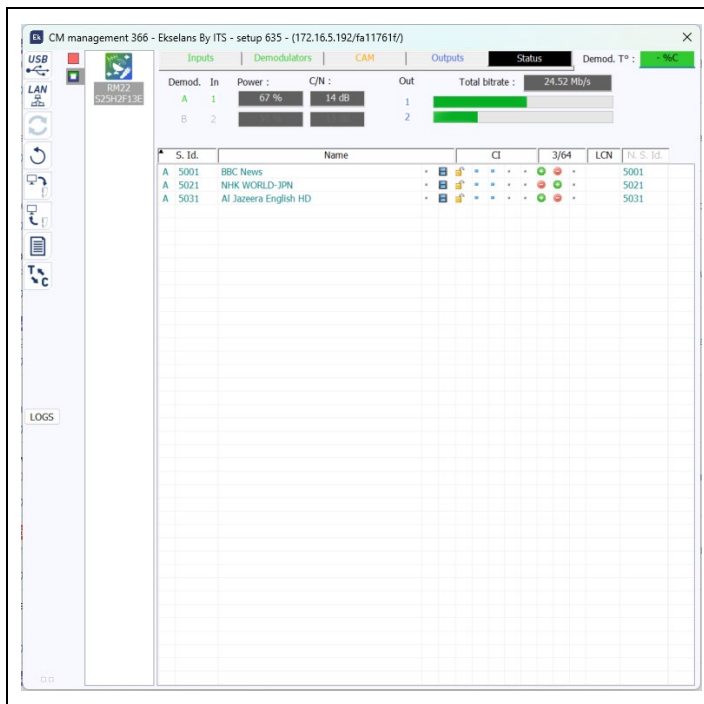
Outputs:



This tab will allow us to adjust all the parameters related to the output MUX:

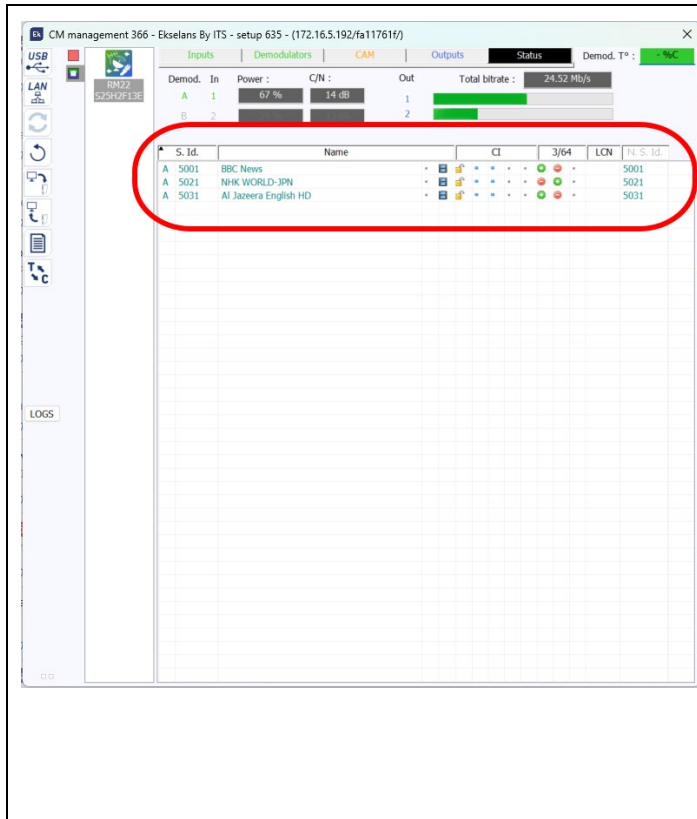
- 1.- N.I.T.: We will configure here, if necessary, the editable NIT parameters: Version, NID, Network name, LCN type.
- 2.- Select MUX1 or MUX2 and configure its TS ID, output channel (in frequency and KHz) and modulation parameters.
- 3.- We can also adjust the output power level by attenuating between 0dB and 20dB.
- 4.- We will select from the pool of services which service we want to assign to each output MUX. We will do this by clicking on the red ball that will turn green. We will be given an indication of the total flow selected at the outlet for each MUX, indicating the assigned flow over the total possible assigned flow over the total possible assigned flow according to configured modulation parameters. This should not exceed 85% of the total available unless the services have a fixed bitrate.

Status:



This tab will show us a general summary of the status of each demodulator and the output modulators.

Program Pool:



In this table will be listed all the channels, services, that correspond to the selected inputs. From here, you select the services you want to assign to each output MUX. Each service is assigned to the input tuner from which it has been tuned.

S. Id.: S.ID. (Service Identification) assigned at origin to said service.

Name: Name of the service assigned to the service at source. A symbol then appears indicating whether the service is TV or Radio, and whether it is encrypted or open.

CI.: This module does not have a PC.

OUTPUT: MODULATION: each circle corresponds to an output MUX: 1 or 2. Clicking on it changes from red to green, and assigns this service to an output MUX.

N.S.Id.: In case we need to change the Sid, here we will write the **New Sid**.

DVB-C Output Card:

In the case of DVB-C everything is the same as in DVB-T except for the modulation parameters:

- **Const.:** Select the desired output constellation: 256QAM, 128QAM, 64QAM, 16QAM.
- **Band:** Output channel bandwidth: 7MHz or 8MHz.
- **S.R.:** Enter the required value.

Whenever the modulation of the module is changed, the equipment must be restarted from power.

Advanced Settings:

LCN Function:

The transmodulator allows you to label the Transport Streams of information so that the television programs are displayed in order on the TV, in its program guide as indicated from the header. In this way, all televisions that have the LCN function will have the same content in each program number of the television. Although this function is useful in the case of hotels or cable operators, to avoid the manual reordering of programs on each television, tuning of each television is required. To assign the program number, simply double-click on the LCN column of the program to be modified and apply the number of the desired position. **Example:**

S. Id.	Name	CI	OUTPUT	LCN	N. S. Id.
A 17500	SAT.1			4	17500
A 17501	ProSieben			5	17501
A 17502	kabel eins			6	17502
A 17503	WELT			8	17503
A 17504	SAT.1 Gold			1	17504
A 17505	Pro7 MAXX			7	17505
A 17507	SAT.1 Bayern			2	17507
A 17508	SAT.1 NRW			3	17508
A 17509	kabel eins Doku			9	17509

SID and NSID parameter configuration:

Transmodulators allow SID fields to be "remapped". This functionality will allow you to change the content of a program on the TV leaving it on the same output channel of the headend module, without the need to retune the TV. To do this, it is necessary to activate the new program to be transmitted in the same NSID where the previous one was broadcast, by double-clicking on the NSID column of the program to be modified. Example:

S. Id.	Name	CI	OUTPUT	LCN	N. S. Id.
A 17500	SAT.1			4	17500
A 17501	ProSieben			5	17501
A 17502	kabel eins			6	17502
A 17503	WELT			8	17503
A 17504	SAT.1 Gold			1	17504
A 17505	Pro7 MAXX			7	17505
A 17507	SAT.1 Bayern			2	17507
A 17508	SAT.1 NRW			3	17508
A 17509	kabel eins Doku			9	17509