

## Network Management System

In a highly competitive communications market a very good quality and fast service at a reasonable price are essential for customer.

Faults and Ingress must be detected early and resolved order not to jeopardize an existing DOCSIS system. The introduction of DOCSIS 3.0 exacerbated still this problem. Disturbances and Ingress can lead to a complete blackout of a DOCSIS system. By installing of a spectrum analyzer in the headend, it is possible to check constantly the quality of the existing return path.

Over the PC surface of our newly developed software the in the cable network installed return path switches can be switched. from 0 dB to 6 dB or 40 dB attenuation. Thus in a few minutes the exact location of the disturbance source in a network can be identified and located. Thus, the service technician will be able to resolve the problem quickly. With our newly developed RKS-control software it is possible to arrange the return path

switches clearly and the signal trace corresponding of the CATV system. Thus a semi-automatic switching is possible, e.g. of -6 dB in order to locate fast faults in the return path switch.

**Our RKS control is superior in this respect to the HMS system.**

Summary and Benefits:

- rapid detection of a disturbance as well as of ingress
- simple integration of the return path switches in most amplifiers with return path modules or as a separate switch e.g. fiber-node and 8-way tap
- small size
- customized, programmable address for each device
- no signal disruption for customers during the fault location

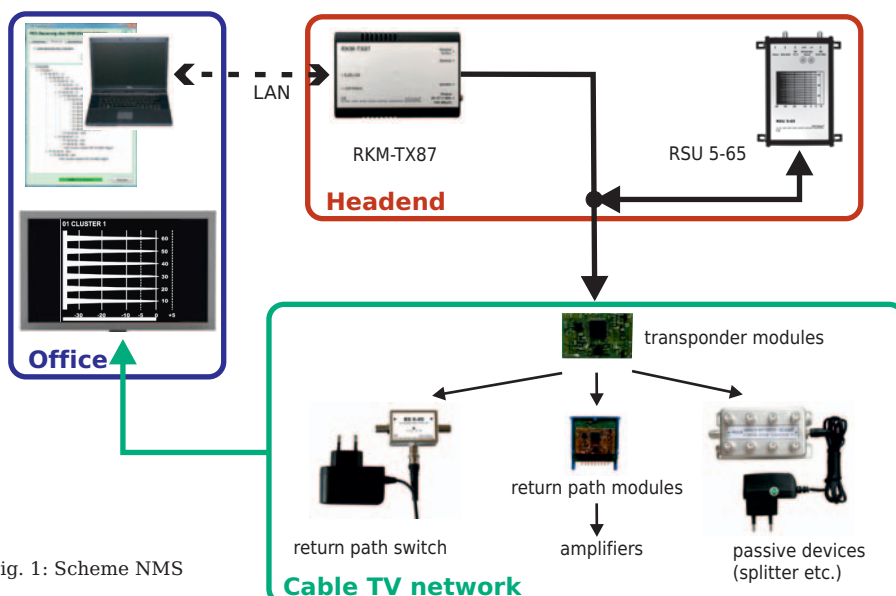


Fig. 1: Scheme NMS

## RF Level and Return path tester SPM 6R

**The handy RF level tester SPM 6R was designed for the rapid acceptance and logging of subscriber outlets of net level 4. This allows to make an immediate statement about the condition and suitability of a house distribution system**



In less than  
**10**  
seconds!

Fig. 2: SPM 6 R

- Frequency range 5-1000 MHz
- Level measuring range 40-90 dB(μV)
- Measuring accuracy ±2 dB
- Menu-assisted one-button operation
- LCD display and five 3-color LED
- Battery operation with built-in NiMH rechargeable battery 6 V/300 mAh
- Small size: 120 mm × 60 mm × 25 mm
- Lightweight at only 130 g including battery

## Return path test controller RWT-C

**The RWT-C is the central controller for the return path test system in conjunction with the SPM 6R.**



Fig. 3: RWT-C

It receives the two from the SPM 6R sent return path signals and compares them with a reference value. The result it sends modulated over a forward frequency to the SPM 6R for evaluation and display. The device is designed as a standalone unit for mounting in a 19-inch systems.

## Inexpensive network management system for cable TV networks with RKM-TX87 and RKT-M

The two basic components return path modem RKM-TX87 and the transponder module RKT-M form the network management system for cable television networks.

The return path modem RKM-TX87 has a built-in LAN interface through which it is connected very easily to the local network or the Internet. Control and evaluation of the individual functions is carried out by means of a simple, clear PC software.



Fig. 1: RKM-TX87

The transponder module RKT-M is installed with its small size in different parts of a cable TV network, such as amplifiers, splitters, taps etc. and separate return path switch (RS 6-40) (self-installation is not possible!).

With our developed, RKS control can about  $4 \times 10^9$  switches and modules individually or several be controlled simultaneously.

### Operation

The RKM-TX87 sends forward to the cable TV network on a telemetry frequency from 85 to 87.3 MHz switching commands to the one or more selected(n) Transponder-modul(s) RKT-M for attenuating of the return channel from 0 dB to 6 dB or 40 dB.

Thus disturbances can be localized better in the return path, without having to interrupt the modem operation.

## Switches for return path

With the separate return path switch RS 6-40, the return path (upstream) can be attenuated by 6 dB or 40 dB.

The RS 6-40 can be mounted at any position of the cable TV network. For power supply is to a power adapter included in the delivery.



Fig. 2: RS 6-40

Another switch is the MSS 8. It is usually installed as a splitter in house distribution. The control is also performed by the RKM-EG.

This allows among other things individual subscriber outlets to attenuate in the return path to detect a possible fault entry through unsuitable connection cable.



Fig. 3: MSS 8

In addition the installation of the transponder modules in BK amplifier is tested successfully.

Questions, so please consult with us.

The range of possible applications of the transponders is constantly expanding.

The latest information can be found on our website.

(see bottom left)

## RKS control

With the newly developed RKS control software makes it possible to arrange the return channel switches clear and according the characteristics of the cable television system. It is a semi-automatic switching, for example -6 dB, possible to quickly locate faults in the return channel.

The RKS control is superior in this respect the HMS system.

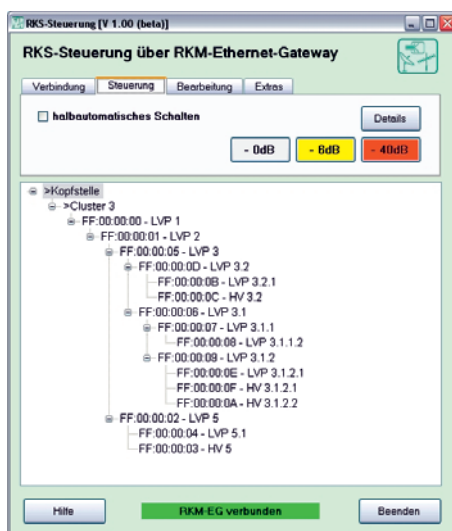


Fig. 4: Software »RKS-Steuerung«

The presented products can be found currently on our website:

[www.sat-kabel.de](http://www.sat-kabel.de)