SPAUN SMS 17089 NF Multiswitch

True plug-and-play device

When you install a multiswitch, it is often necessary to add additional amplifiers. That's because every switch introduces loss of at least a couple of decibels. However, there are devices that integrate in one case both: amplifiers and the multiswitch. One of such devices is SMS 17089 NF of German manufacturer SPAUN Electronic.

When you take a closer look at the switch, it becomes evident that the built-in amplifiers are just one of the nice features it offers. Although, basically the multiswitch is dedicated to cooperate with 4 Quatro LNB's (16 inputs in total), you may also use here twin LNB's or even regular universal LNB's. All you have to do is to set the remote power switch (on the top cover) to proper position. Moreover, you can also set SMS 17089 NF to cut off the power of unused LNB's to preserve energy. For example, if all viewers watch the channels from satellite A, the LNB's for satellites B, C and D can be switched off. A multicolored LED signals the status of the switch as well as the DC error state. The unit automatically switches off when it detects a short-circuit. SMS 17089 NF is controlled by DiSEqC commands (starting from DiSEqC 1.0).

SMS 17089 NF has 8 receiver outputs, what is a pretty high number. If this is still too few for you, there are 16 trunkline outputs to which you can connect another cascadable multiswitch: SMK 17089 F, SMK 17129 F or SMK 17169 F and get additional 8, 12 or even 16 receiver outputs respectively. Unfortunately, the cascadable devices are still in preparation, so we were not able to test them in cooperation with the basic model.

A look at the parameters reveals other interesting features. The signal at the receiver outputs is more or less at the same level as the signal incoming from LNB's (-3…+4 dB). Thanks to that, you do not need to care about any additional amplifiers. Just connect the LNB's and get the correct signal at the receiver outputs. Also, the trunk output gain is chosen wisely (+16…+20 dB). It means that after connecting a cascadable multiswitch (SMK 17xxx F), you will get on its outputs strong enough signals without any additional amplifiers. SMS/SMK family is really a plug-and-play solution!

Code	Freq.	Pol.	Code	Freq.	Pol.
s1	10719	V	**s7**	10722	H
s2	11280	V	**s8**	11224	H
s3	11662	V	**s9**	11642	H
s4	11727	V	**s10**	11681	H
s5	12111	V	**s11**	12092	H
s6	12713	V	**s12**	12735	H

Table 1. Test signals.

Of course, we had to check if the promised values are really delivered. The first test was to verify the signal level at the receiver outputs and trunkline outputs for the different input frequency. **Table 1** shows the frequency and polarization of the signal we used for taking measurements.

Figure 1 shows the results. As you can see, the signal at the receiver output is almost exactly as specified (i.e.: -3…+4 dB). Also the trunkline output is as promised (+16…20 dB) – even slightly better for some frequencies. The above measurements were done for 3 receiver outputs. Additionally we measured all 8 outputs for one input frequency. The results are presented in **figure 2.** The spread of 2 dB is a quite acceptable value. In practice, it means that there is no significant difference to which output you connect your receiver. On all outputs, the signal strength and quality should be almost the same.

To be sure that the multiswitch does not introduce too much of its own noise to the signal, we took signal-to-noise measurements before and after the SMS 17089 NF. **Table 2** shows the results.

Although there is some deterioration of the signal, it is defi-

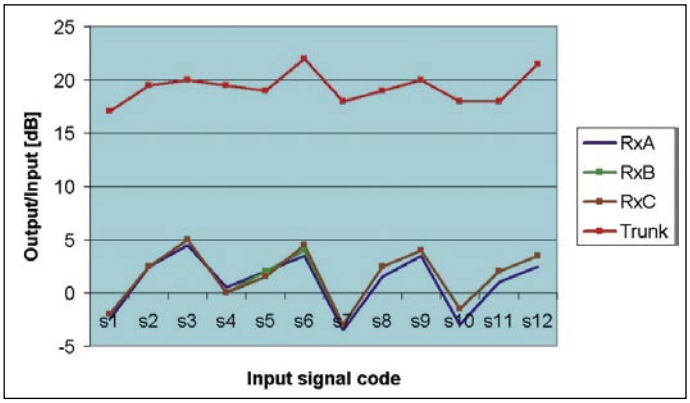

Figure 1. Trunkline Gain and Tap Gain.

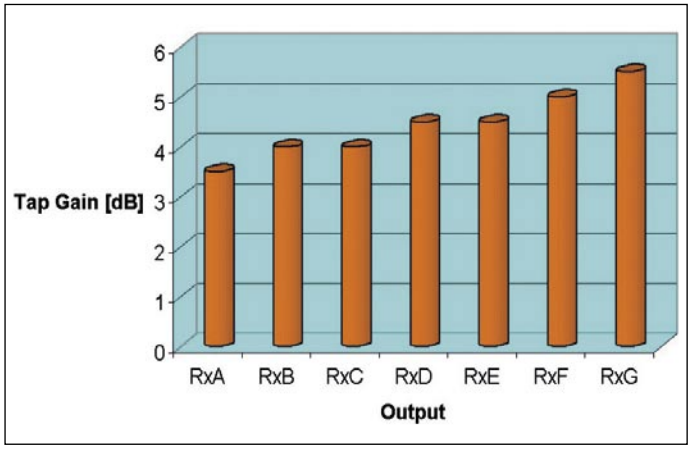

Figure 2.

nitely not too much. We must remember that the signal is already amplified thanks to the built-in amplifiers and we do not have to add any additional devices (read: sources of noise). Of course, when dealing with multiswitches, it is always a good idea to use one size larger dish than you would normally use for a simple LNB + receiver configuration.

Expert conclusion

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SMS 17089 NF is very easy to install – it does not require any additional amplifiers. Its technical parameters meet or even slightly exceed the specification.

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None

TECHNIC DATA

Manufacturer	SPAUN Electronic, Byk-Gulden-Str. 22, D-78224 Singen, Germany
Internet	http://www.spaun.de
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Fax	+49-7731-64202
Model	SMS 17089 NF
Description	Mutliswitch with embedded power supply
Inputs	16 satellite + 1 terrestrial
Receiver outputs	8
Cascade outputs	16+1
Input frequency	950-2200 MHz (Sat.) and 5-862 MHz (Terr.)
IF tap gain	-3…+4 dB
IF input attenuation adjustment range	0 … 10dB
IF pass-through gain	+16…+20 dB
Terrestrial tap loss	20…23 dB
Terrestrial pass-through loss	5 dB
Isolation between satellite inputs	> 30 dB
Isolation between satellite and terrestrial inputs	> 32 dB
Current drawn from receiver	25 mA
Remote power supply	1200 mA per LNB (300 mA per jack)
Power supply	100-240 V / 50-60 Hz 54W max
Operating temperature range	-20… + 50° C/dry indoor use

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Input	9,9	0,7
RxA	8,9	1,8
RxB	8,9	2,1
RxC	8,9	2
Trunk	8,7	3

Table 2.