

Spaun at 40 years

Moving into the new decade with many new products

Alexander Wiese

Well, actually, the title isn't quite correct; the company Spaun doesn't celebrate its 40th anniversary until 2009. But Spaun is so full of energy and is getting ready to introduce a wide range of new products in their anniversary year that we simply couldn't wait to find out about this company's long history.

Almost every TELE-satellite reader will associate the name Spaun with high-quality satellite distribution components. "Quality made in Germany" is their motto; Spaun's mission in life is to make sure that the quality of their products is always kept at the highest level.

But more on that later. Let's take a closer look at Spaun itself: they are a company that can be found in extreme southwestern Germany. The founder of the company, that today has nearly 100 employees, is Friedrich Spaun. He explained to us how it all started: "It all began for me on my kitchen table in 1969." Back then FM radio in Germany was just starting to transmit in stereo. It quickly became clear that many of the radios in use were not getting enough of an antenna signal - an amplifier was needed that would raise the signal-to-noise ratio. "I constructed an amplifier board that was installed in the indoor antennas supplied by a large manu-

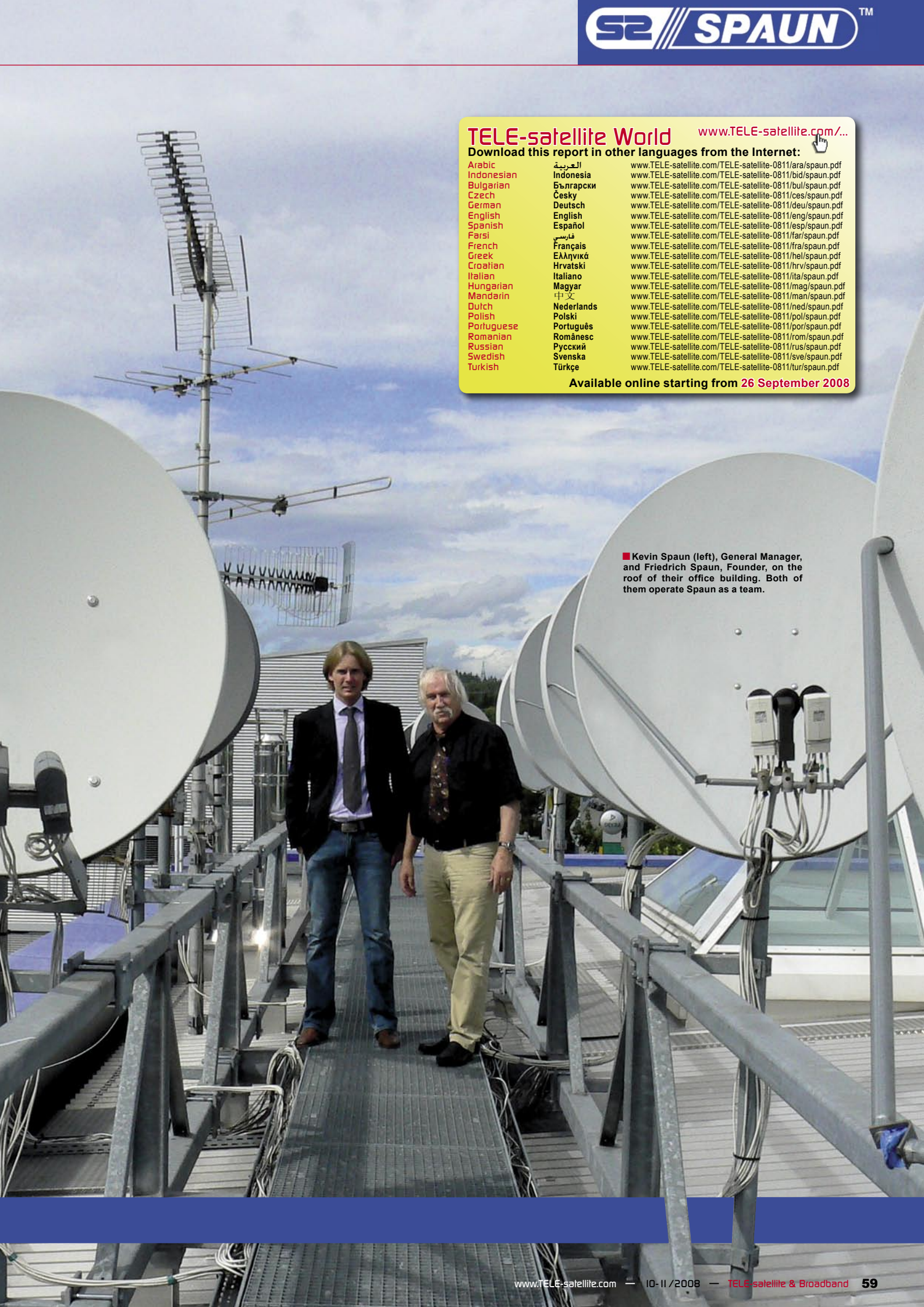
facturer", remembers Friedrich Spaun. It was the start of his one-man company.

In 1972 his little company was so successful that he was able to hire his first employees. "In 1974 real production of multi-range amplifiers and passive distributors was started", Friedrich Spaun recalls. Of course back then these were components for terrestrial television and Spaun was only an OEM manufacturer for other German firms. In 1980 supply line amplifiers for cable TV were added to the mix.

Thus far production took place in a rented house, but that all changed in 1988: "That's when we built our production facility in Singen that we still work out of today and were also at the same time a pioneer", comments Friedrich Spaun as he shows us the outside walls made of aluminum: "For many years we were a reference point for the manufacturer of these walls."

■ A look at the office building of company Spaun in Singen in southwestern Germany. Behind the building to the right can be found the production facilities for Spaun's multi-switches.





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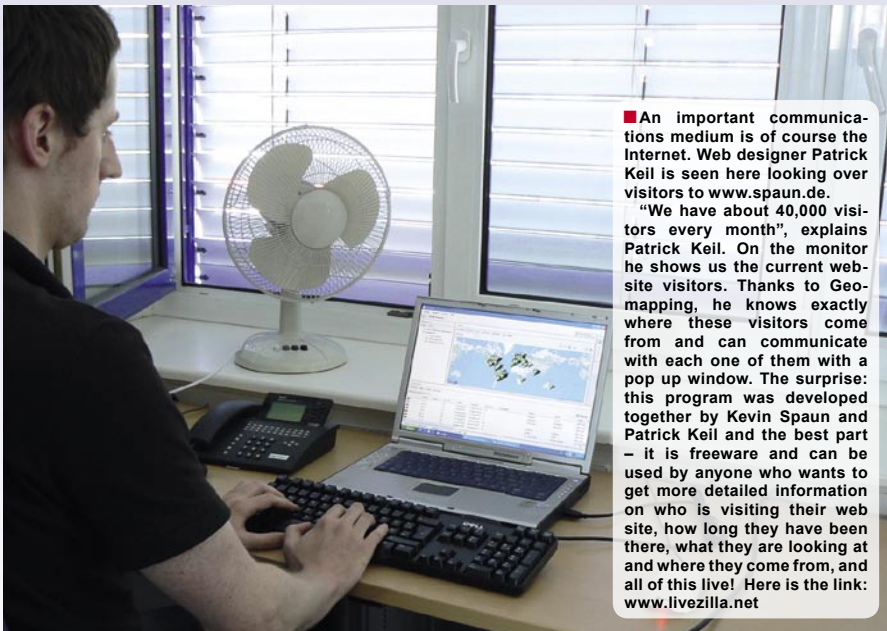
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Available online starting from 26 September 2008

■ Kevin Spaun (left), General Manager, and Friedrich Spaun, Founder, on the roof of their office building. Both of them operate Spaun as a team.



■ A customer has a problem. Steffen Kuck is Technical Support Manager and helps Spaun's customers daily from 8AM to 12PM and from 1PM to 5PM. One of his tools is the SatcoDX CD-ROM with its worldwide satellite data.



■ An important communications medium is of course the Internet. Web designer Patrick Keil is seen here looking over visitors to www.spaun.de.

"We have about 40,000 visitors every month", explains Patrick Keil. On the monitor he shows us the current web-site visitors. Thanks to Geo-mapping, he knows exactly where these visitors come from and can communicate with each one of them with a pop up window. The surprise: this program was developed together by Kevin Spaun and Patrick Keil and the best part - it is freeware and can be used by anyone who wants to get more detailed information on who is visiting their web site, how long they have been there, what they are looking at and where they come from, and all of this live! Here is the link: www.livezilla.net

He then explained how Spaun ended up with their company colors: "Those are the colors of the building walls, blue and silver, and we decided to incorporate these colors into our corporate identity."

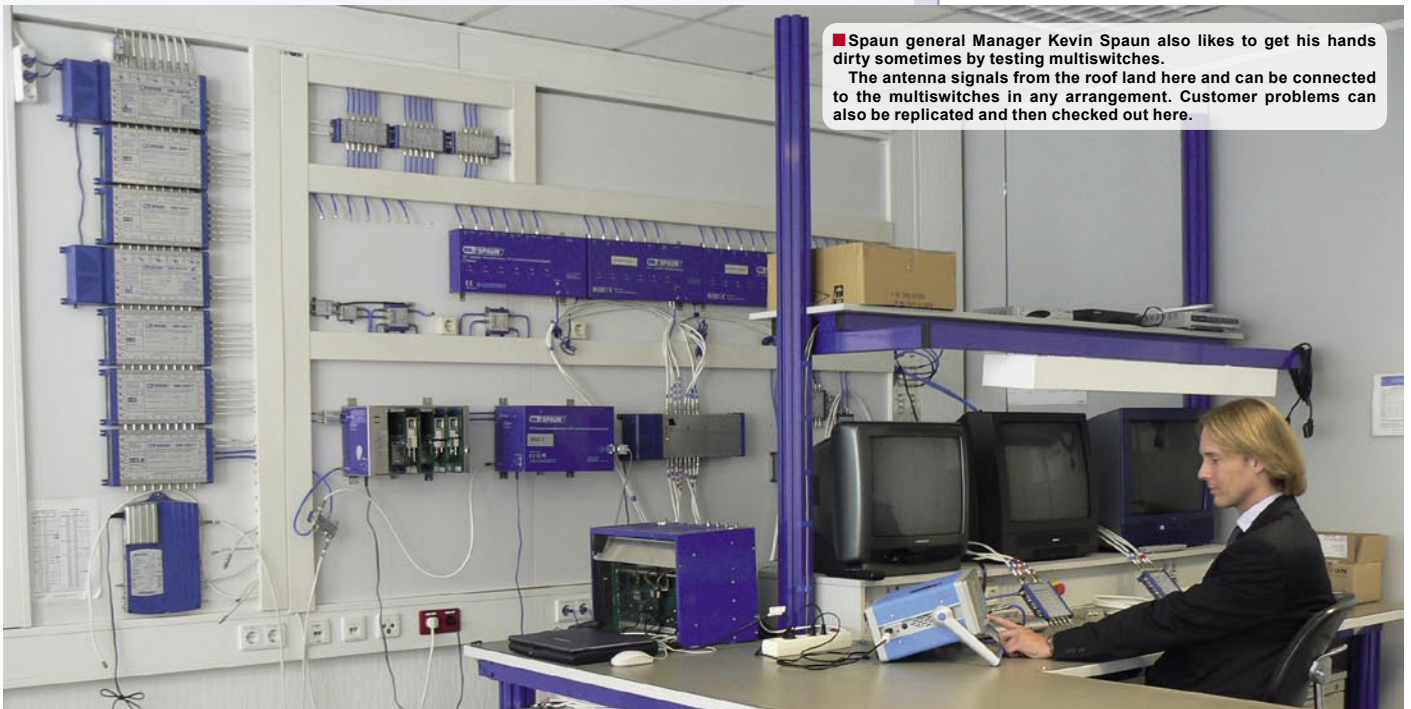
Spaun has only existed as a stand-alone brand name since 1991. That was after the fall of the Berlin Wall. Up to that point Spaun only delivered their products to West Germany; there was no real thought of exporting products. The new market in eastern Germany brought with it so many new opportunities that Friedrich Spaun finally decided: "We are now going to distribute products under our own brand name!"

In 1993 his first successful product was a multiswitch for two satellites and one terrestrial TV input followed soon after by four and eight satellite input models. These products were quickly exported to neighboring countries. Today 50 % of their products are exported of which 30 % are shipped to EU countries with 20 % ending up outside of Europe. Total sales for Spaun range between 12 and 15 million Euros each year.

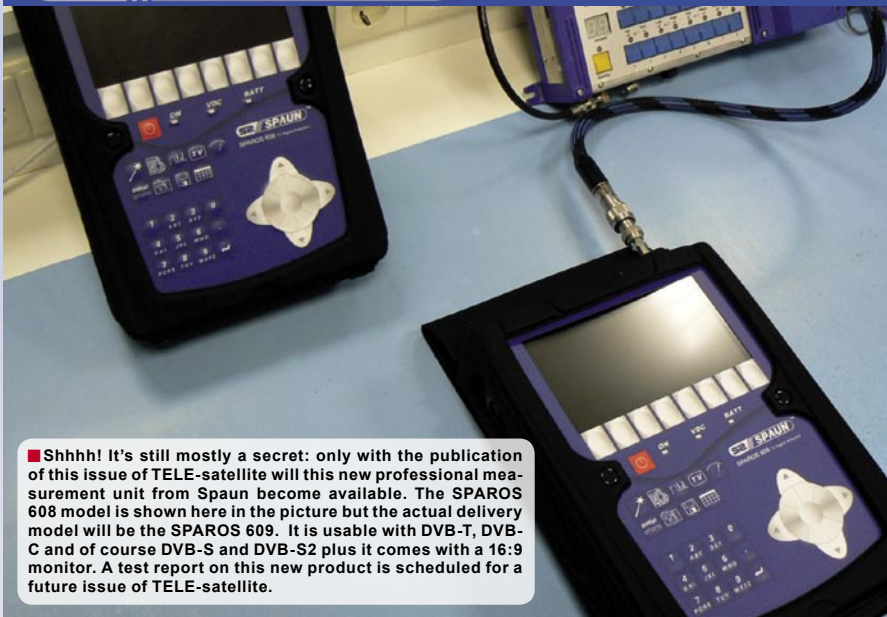
This is where Kevin Spaun comes into the picture. He took over company operations from his father Friedrich Spaun in early 2008. "But we run the company as a team", confirmed both of them at the same time.

Kevin Spaun wants to expand the export business: "At the moment we are in the process of locking in the North American market; we are looking for local distributors and also want to open our own distribution office in the USA", reveals Kevin Spaun, "we also want a stronger presence in the Middle East."

Spaun offers nearly 200 different products of which the best-selling products are, and always have been, multiswitches avail-



■ Spaun general Manager Kevin Spaun also likes to get his hands dirty sometimes by testing multiswitches. The antenna signals from the roof land here and can be connected to the multiswitches in any arrangement. Customer problems can also be replicated and then checked out here.



■ Shhhh! It's still mostly a secret: only with the publication of this issue of TELE-satellite will this new professional measurement unit from Spaun become available. The SPAROS 608 model is shown here in the picture but the actual delivery model will be the SPAROS 609. It is usable with DVB-T, DVB-C and of course DVB-S and DVB-S2 plus it comes with a 16:9 monitor. A test report on this new product is scheduled for a future issue of TELE-satellite.



■ A look in the warehouse. Shipping Manager Christoph Reichle told us, "Our stock inventory lasts about 3-4 weeks." Trucks come on a daily basis to pick up the packages and pallets for their customers.

Production of a Multiswitch



■ This is a four-layer circuit board delivered from an outside company. It is the building block for a multiswitch.

able with 5, 9 and 17 inputs with one of the inputs set aside for terrestrial signals.

Kevin Spaun is proud of his multiswitch product line: "With the Power 9 and 17 input basic units we are able to set up systems for up to 3000 users", explains Kevin Spaun, "no one else can do that." Reference customers for systems that large are, for example, the Jumeirah Beach Residence Tower in Dubai, the Nokia Development Center in Sweden, Microsoft's headquarters in Prague, Eutelsat in Paris, the Japanese Embassy in Berlin plus many, many more. Spaun multiswitches can even be found on many luxury yachts, and why not, every cabin needs to have its own satellite signal, right?

Finally, we also wanted to know about all the new products that are set to be introduced in their anniversary year. Kevin Spaun took a deep breath and began, "In the Spring of 2009 we want to introduce a fiber optic distribution system to the market." This type of system can provide service for 10,000 or more users.

This fiber optic technology will only be used in the distribution of satellite signals. Before it reaches the end user, the fiber optic signal is converted back to a standard digital signal and then routed through the multiswitches to the receivers. "This only works with a very strong laser transmitter", explains Kevin Spaun and continues by hinting at the many new artificial islands that are popping up in Dubai, "This will allow us to service an entire island."

By the time this issue reaches your hands, a new product will be released that you wouldn't expect from Spaun: a highly professional signal measurement unit. "Naturally it receives DVB-S2 signals and it also has a 16:9 monitor", explains Kevin Spaun, "even antenna installers want to watch HDTV on their measurement units", even though they should only be using it for reference.

Also newly available from Spaun is coaxial cable – appropriately named "Spoax". Its color? You have three guesses. No, not white. And no, not black either. If you guessed blue, you'd be right – their company colors. "With this coax cable and matching connectors, we can construct the perfect signal distribution system", reveals Kevin regarding the reason for the product palette expansion. The goal? "We want you to come to us for everything." In other words, they want to provide everything you need for the best possible satellite signal distribution.

And while we're on this subject, another innovation fits right in: price. "Without compromising quality", comments Kevin, "we are starting a new product segment at substantially lower prices."

The Premium products that have thus far been available from Spaun have been expanded in early 2008 to include Standard products. Shortly after this issue is published, the Light Class will make its debut on



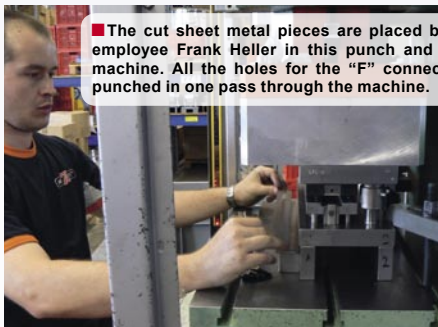
■ These automated machines install all of the components on the circuit boards.



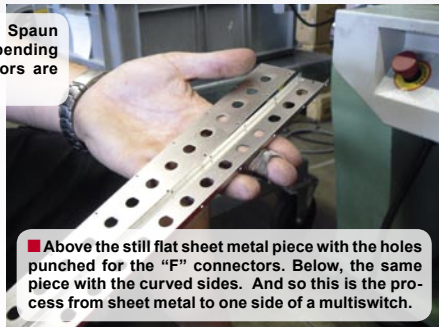
■ Spaun employee Habib Ferchichi checks a completed circuit board. "Typically only one out of 1000 boards have a problem", he explains.



■ Where does the circuit board go? In a metal case, of course. And where do these cases come from? Here from this processing machine on which is a roll of sheet metal 36mm wide and 0.7mm thick with a 0.02mm thick nickel coating. A new roll weighs roughly 100 Kg and is 400 m long.



■ The cut sheet metal pieces are placed by Spaun employee Frank Heller in this punch and bending machine. All the holes for the "F" connectors are punched in one pass through the machine.



■ Above the still flat sheet metal piece with the holes punched for the "F" connectors. Below, the same piece with the curved sides. And so this is the process from sheet metal to one side of a multiswitch.



■ This is an automated air collar manufacturing machine. Spaun employee Herbert Aichem produces roughly 800 of these collars every hour. They are used with the return channel filter.



■ The air collars are extremely small.

the market. Kevin Spaun explains the connection: "There is absolutely no difference in quality, only in what it comes with." While for example a Premium class multiswitch might come with an adjustable level control, this feature would not be available in their Standard and Light products resulting then in only two choices. "The price situation looks like this: if a Premium class product is priced at 100 %, then the Standard class item would be 75 % and a Light class choice would be 50 %", explains Kevin.

So what else is new? "A wideband switch for the US market", replies Kevin, "it uses a frequency range below (!) the standard IF band for the distribution of HDTV signals particularly those of PayTV provider DirecTV." More specifically, it means the range from 250 to 950 MHz will be used for satellite IF distribution in addition to the standard range of 950 to 2050 MHz. TELE-satellite will be taking a closer look at this innovative product that could also be interesting for other markets outside of the US, with a test report in the next issue. Patrick Schmid is responsible for these products. He belongs to the grandchildren generation of the founder Friedrich Spaun and is already an employee of the company.

Friedrich Spaun is also looking at another completely different subject, that not much thought has been given to up until now, but one that will certainly be playing a much bigger role in the future and one that TELE-satellite has been looking very closely at for the past several issues: the energy use and efficiency of the power supplies! "My son and I together are running a new company, Spaun Power", explains Friedrich Spaun as he gestures to a building on the other side of the street, "Very soon we will be starting production of switching power supplies, not only for our own use of roughly 150,000 power supplies each year, but also as an OEM product."

The ever-increasing energy shortages around the world are forcing a closer look at the efficiency of power supplies. But that's not the only reason. "The most critical component in a multiswitch is the power supply", explains Friedrich Spaun, "here we see the most failures." Friedrich Spaun is quite convinced: "a reliably functioning power supply that also uses the least amount of electricity is needed everywhere."

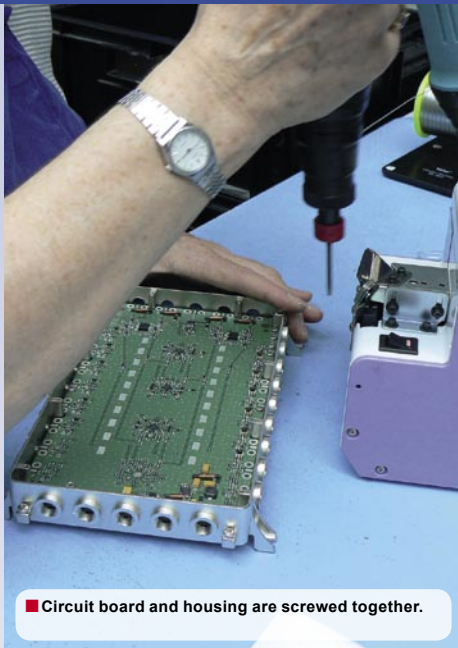
This is how Spaun, in their 40th year, is building themselves another leg to stand on while at the same time expanding their signal distribution business to include everything you could possibly need. It's a strategy that looks to be very successful and one that Friedrich Spaun confirms in his company phrase:

"Every year for me has been a successful and profitable year." All profits are reinvested in the family company so that Spaun can easily expand all on its own.

Here's to another 40 years of Spaun!



■ How do the connectors get into the housing? The "F" connectors are screwed into the punched out holes.

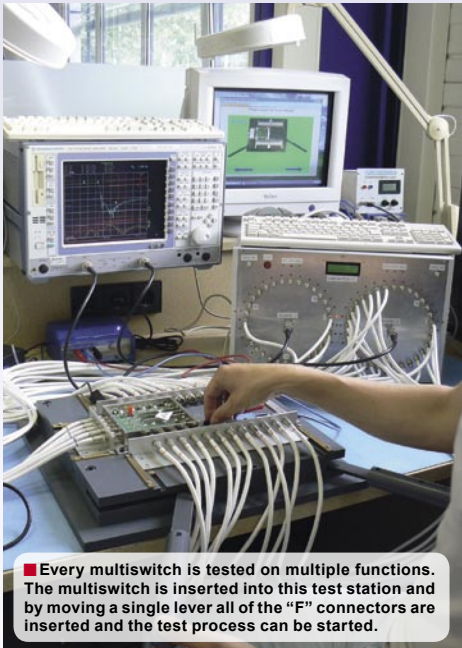


■ Circuit board and housing are screwed together.



■ To finish off the process, the lid is screwed in place. Friedrich Spaun explains: "That is a very critical point: with smaller sized housings, flexible lids can provide sufficient EMV protection. With larger housings, this level of protection can only be achieved using a large number of screws."

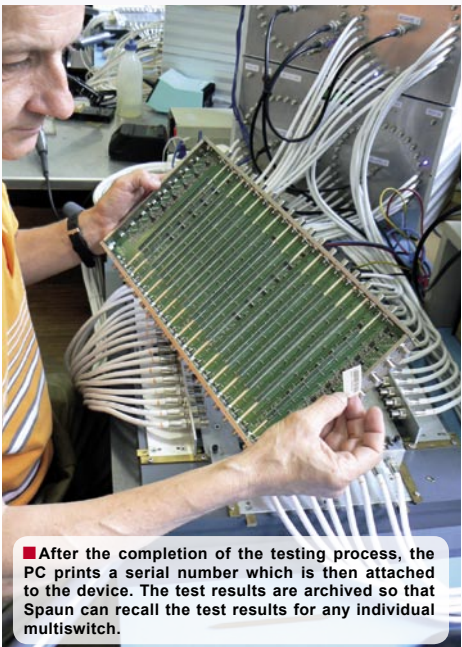
Quality to Measure



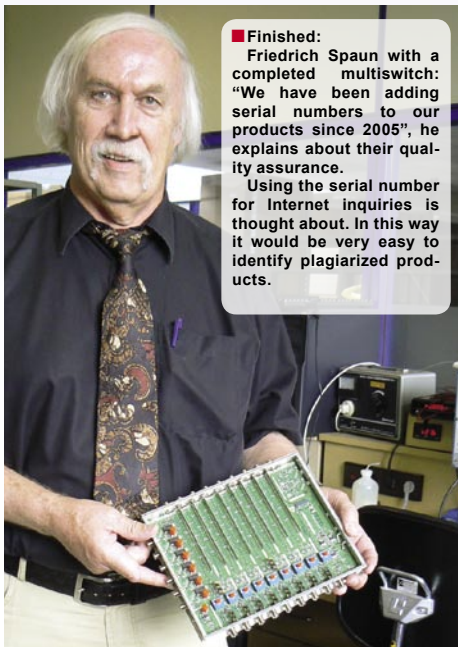
■ Every multswitch is tested on multiple functions. The multswitch is inserted into this test station and by moving a single lever all of the "F" connectors are inserted and the test process can be started.



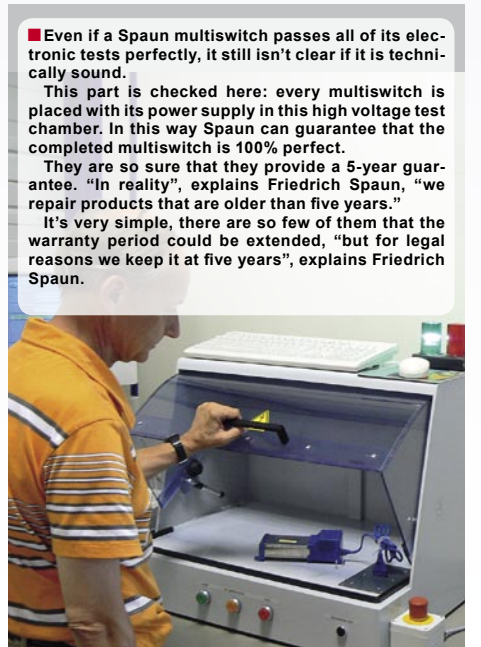
■ Spaun employee Peter Fuchs shows us the testing process on a model 17 test station, the largest of the ten test stations used by Spaun. "In the past a complete test required 50 minutes", explains Peter Fuchs, "today only three minutes is needed to automatically test every function."



■ After the completion of the testing process, the PC prints a serial number which is then attached to the device. The test results are archived so that Spaun can recall the test results for any individual multswitch.



■ Finished: Friedrich Spaun with a completed multswitch: "We have been adding serial numbers to our products since 2005", he explains about their quality assurance. Using the serial number for Internet inquiries is thought about. In this way it would be very easy to identify plagiarized products.

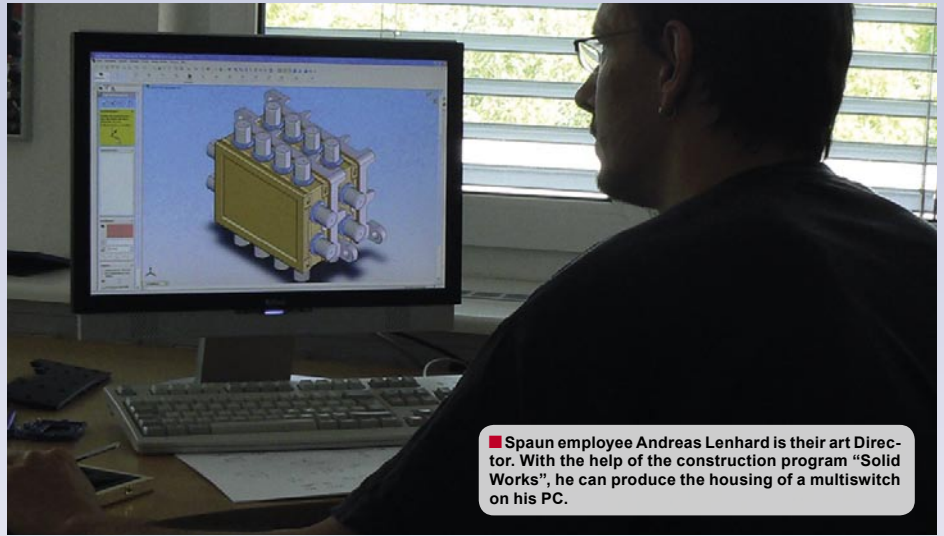


■ Even if a Spaun multswitch passes all of its electronic tests perfectly, it still isn't clear if it is technically sound. This part is checked here: every multswitch is placed with its power supply in this high voltage test chamber. In this way Spaun can guarantee that the completed multswitch is 100% perfect. They are so sure that they provide a 5-year guarantee. "In reality", explains Friedrich Spaun, "we repair products that are older than five years." It's very simple, there are so few of them that the warranty period could be extended, "but for legal reasons we keep it at five years", explains Friedrich Spaun.

Construction and Security Checks of Multiswitches



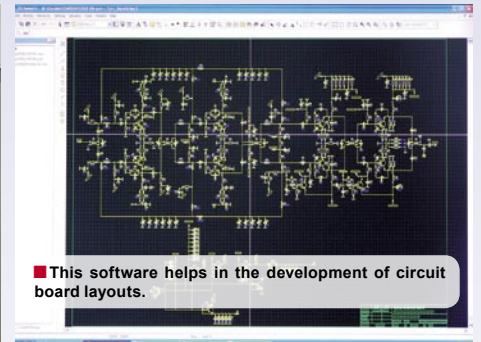
■ Completed multiswitches are also placed in this environmental chamber for testing.
 "Our specifications state that our devices are temperature tested from -20° C to +50° C", explains Friedrich Spaun, "but we naturally test from -30° C to +60° C to make absolutely sure."



■ Spaun employee Andreas Lenhard is their art Director. With the help of the construction program "Solid Works", he can produce the housing of a multiswitch on his PC.



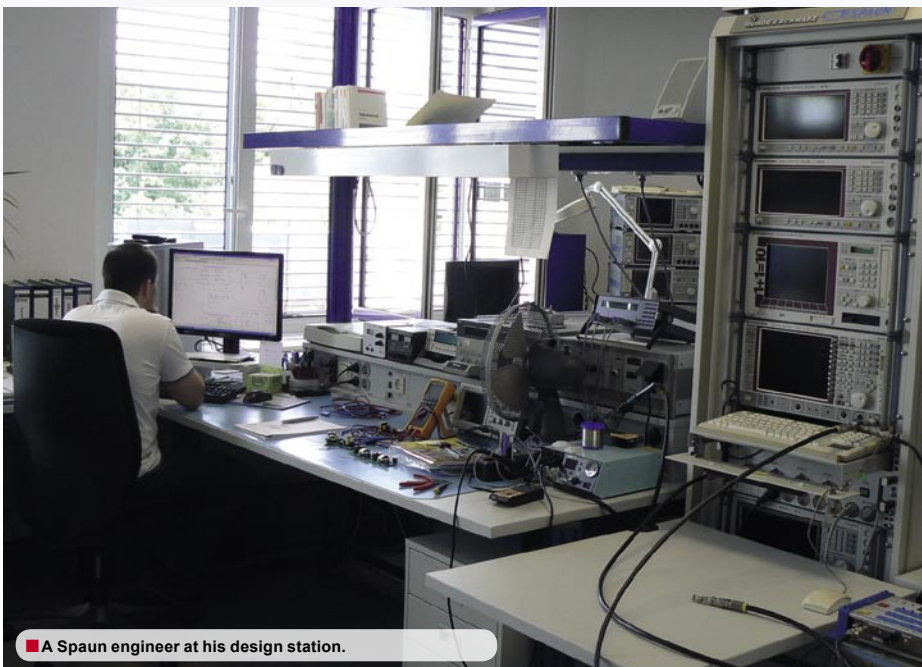
■ Without measurement units, nothing works. Here new multiswitches are developed.



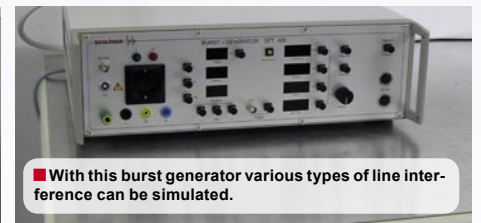
■ This software helps in the development of circuit board layouts.



■ Quality and security belong together. To guarantee that Spaun switches are truly secure, a type of lightning generator is used to simulate an electrical load.



■ A Spaun engineer at his design station.



■ With this burst generator various types of line interference can be simulated.



■ An employee places a multiswitch in the EMV test chamber. Using a five-watt wideband transmitter, the multiswitch is tested against enclosed signals in the test chamber. Or the other way around: the antenna at the narrow end of the test chamber is placed in reception mode in order to check the interference signals generated by the multiswitch. In the foreground is a conveyor belt for the measurement of interference in the 30 to 1000 MHz range.