

## Your on air advantage

Test and broadcasting equipment for TV, radio, datacasting and mobile multimedia



**ROHDE & SCHWARZ**



## Being there is everything.

● Rohde & Schwarz helps make this possible for billions of people.

Anytime a spectacular event is broadcast, technology from Rohde & Schwarz is involved. Our sophisticated and reliable sound and TV transmitters broadcast high-quality signals to households around the world. And our test and measurement equipment supplies the benchmark in many phases of the process: in the development of new receiver technologies, in the quality assurance of playout centers, in the deployment of transmitter stations and cable headends. Our T&M equipment is also a standard part of the mass production of TV receivers, no matter whether high-end HD flat screens or PC cards.

Rohde & Schwarz has occupied this market position for a long time. Our company is one of the pioneers of the broadcasting era and can claim many firsts – the first to place a VHF FM transmitter into operation in Europe, the first to install a nationwide DVB-T network, and the first to develop technology for monitoring digital TV signal quality. Even today, we remain the only single-source supplier of T&M and broadcasting equipment. Our customers from around the world include numerous network operators as well as almost all well-known CE brands or OEM suppliers. We're equally at home in the analog and digital worlds, in television and radio,

plus in cutting-edge applications such as datacasting or DVB for mobile phones. A primary factor behind our success in this area is that we work with a wide range of RF technologies and keep coming up with new and highly intriguing developments through know-how transfer.

Yet, revolutionary inventions and path-breaking innovations are not everything. We place at least as much emphasis on investment security. One proof of this is our modular, scalable systems. Another is the high reliability of our instruments. These aspects – to name just two – mean that you will always maximize your investment by choosing our technology.





### Long-term reliability

Investing in a system from Rohde & Schwarz means investing in reliability:

- ◆ Our systems minimize the risk of downtime and failure
- ◆ Life cycle costs can be calculated from the outset
- ◆ Our users receive every form of support they need
- ◆ As a leader in numerous areas of technology and a global player, we're here to stay

### Decades of innovation

The following benchmarks are symbolic of the name Rohde & Schwarz:

- ◆ First integrated DVB encoder in a modulator
- ◆ First liquid-cooled DAB transmitter
- ◆ Patented technology for power couplers
- ◆ Integration of pathbreaking technologies such as DVB-H, T-DMB or MediaFlo



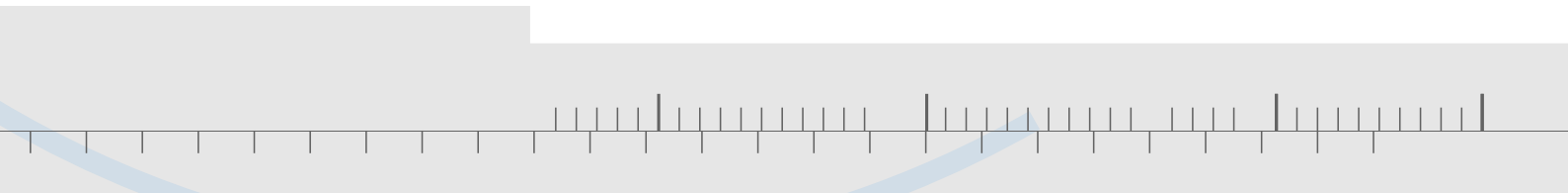
## How can you tell we've got the edge in digital TV? By the millions of households that watch it every evening.

Whether DVB, ATSC or future standards, there's no stopping digital TV. The fact that the public loves the new world of digital TV is clearly evident in countries such as Great Britain, Spain and Taiwan. And there's no better partner in implementing digital TV than Rohde & Schwarz. As the world market leader in DVB-T, we were responsible for its roll-out not only in the above countries but also in many others such as Germany, France and Italy.

That's no coincidence. As a pioneer and pacesetter, we have played a significant role in shaping the development of DVB and DAB from the beginning. While many of our competitors are just getting into the game, we already offer sophisticated products featuring high performance, ease of operation and reliability.

Moreover, we're the world's only manufacturer to also produce its own T&M equipment – ideal for ensuring smooth day-to-day operation. We can also supply a large number of units at short notice owing to our flexible, highly productive manufacturing operations and our efficient project management processes.

We also are well-prepared when it comes to implementing new additional services and business models. No matter whether you need to perform terrestrial updates of set-top boxes or transmit additional information, mobile phone TV or web content, we offer the technologies that quickly let you benefit from the newest capabilities.





## ● Looking for nationwide broadcast coverage? We make it possible – even in the most remote regions!

Ghana's government recently decided to set up nationwide broadcast coverage – no small feat for a country with significant gaps in its infrastructure. The solution had to be fast but reliable with a solid price-to-performance ratio and manageable life cycle costs. Rohde&Schwarz offered the right solution. The analog network that we installed in Ghana (an analog terrestrial network for sound and TV broadcasting, including distribution via satellite links) today reaches many millions of people throughout the country.

But Ghana is just one example. Our transmitters also provide reliable service in the icy winters of Scandinavia, in the shimmering heat of the Persian Gulf states and in the tropical rain forests of Indonesia and Brazil. This is possible because our equipment is built to work under extreme conditions. Our equipment (both analog and digital) can easily be adjusted to local conditions such as climate, ventilation demands or installation environment as well as to existing transmission structures. In addition, it features extremely low

susceptibility to interference, easy operation, low maintenance and time- and effort-saving remote control operation. The operation of our equipment also requires very little on-site staffing – a must for operators with inhospitable transmission areas.

But the story doesn't end there. You can also rely on us when you need a partner to handle turnkey projects.



### Wise investment

Broadcasting equipment from Rohde & Schwarz is a solid investment:

- ◆ Our systems and instruments are manufactured in Germany under stringent quality criteria
- ◆ They provide exceptional reliability and have a long life span
- ◆ Our systems are modular in design and can be continuously upgraded to the latest standards
- ◆ They can be upgraded from analog to digital at any time in a cost-effective manner

### Innovation has many faces

Rohde & Schwarz is continuously optimizing its equipment and systems on many fronts:

- ◆ By strongly focusing on practical criteria such as space requirements, power consumption, efficiency, reliable continuous operation, etc
- ◆ By implementing cost-effective innovative technologies for signal processing, amplifiers and cooling
- ◆ By integrating the latest network management interfaces
- ◆ By developing additional applications or cost advantages





Are you sure your broadcasting equipment is running smoothly?

● **With our T&M equipment, there's no question.**

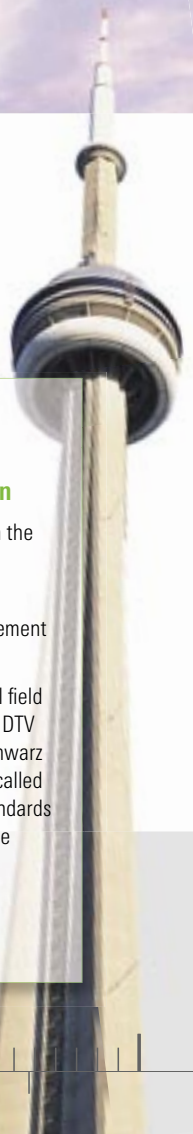
Anyone who broadcasts digital TV – regardless of the method used – needs reliable T&M equipment. This equipment must supply relevant operating information exactly when you need it, no matter whether you're broadcasting via satellite, antenna or cable.

Rohde & Schwarz already supports numerous digital network operators with a broad portfolio of sophisticated T&M equipment ranging from TV baseband generators and TV test transmitters to test receivers and TV signal analyzers. Our systems can be easily integrated into existing monitoring systems and are valuable tools both in distribution

and service. They offer not only exceptional operating reliability and extremely high precision but also a large number of measurement parameters, which ensure comprehensive control functions and access to all relevant data.

These outstanding monitoring capabilities are complemented by valuable analysis functions. They permit rapid response and eliminate effort-consuming troubleshooting, thus saving time and money. And our T&M equipment pays off even more when large numbers of channels are involved.





### Exceptional system reliability

Technology from Rohde & Schwarz is an ideal investment:

- ◆ Our systems are scalable, and they retain their value
- ◆ They can easily be adapted to new requirements and to almost any application. For example, the new Broadcast Test System R&S®SFU can be upgraded to new TV standards simply by installing a software update.
- ◆ Our quality meets the highest international standards
- ◆ A strong worldwide service network offers full support

### Innovation through cooperation

Rohde & Schwarz is closely involved in the definition of worldwide standards:

- ◆ For example, we contributed to the development of the DVB-T Measurement Guidelines ETSI 101 290
- ◆ We regularly participate in national field trials to help find the most suitable DTV standard. For example, Rohde & Schwarz experts and know-how have been called upon to help select national TV standards in the USA, Brazil, China and Europe





### Maximum availability

To minimize downtime during problems or upgrades, Rohde & Schwarz takes a systematic approach:

- ◆ Flexible platform concept
- ◆ Multistandard compatibility
- ◆ Well-planned maintenance concept
- ◆ Short-notice calibration service

### Staying abreast of new developments

Rohde & Schwarz stays in contact with numerous technology and R&D centers around the world:

- ◆ This enables us to integrate new developments into our T&M instruments at an early stage
- ◆ T&M equipment from Rohde & Schwarz contributes to advancements in the DVB standard and related measuring equipment at the Technical University in Braunschweig
- ◆ We collaborate with the German Broadcast Technology Institute (IRT) on the introduction of DAB and DVB-T
- ◆ We cooperate with renowned R&D and university institutes around the world



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## Is your equipment facing strong competition? We help make sure it comes out ahead.

No matter whether your developers and finishers are producing modulators, encoders, receivers or increasingly powerful set-top boxes, they would face insurmountable challenges without our excellent T&M equipment. In particular, the fast innovation cycle in digital technology necessitates T&M concepts that are as flexible as they are precise.

That's why more and more manufacturers of home entertainment electronics are relying on TV signal generators or TV signal analyzers from Rohde&Schwarz. For example, our equipment is needed in the production of tuners and RF modulators, or as a complete solution for receiver tests. Our instruments not only contain the full scope of know-how that we offer in this area as a technology leader. They were also designed to support every major world standard, and they can quickly be configured to meet new challenges. This is made possible by well-planned platform con-

cepts. For example, you can migrate from the DVB-S standard to the more powerful DVB-S2 standard without investing in a new base unit: You merely need to install a software option. Your investment retains its value far into the future – a significant advantage. Shared options such as channel transmission simulators, for example, only need to be purchased once. This allows you to implement the same instrument in a wide variety of production setups, thus reducing time-to-market for new products and eliminating production switchover.



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