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# **Summaries**

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# Measurement of the Screening Efficiency of Coaxial Cables at VHF by Means of the MDS Absorbing Clamp

by R. Bersier, Berne

The absorbing clamp, which has been agreed by the CISPR as a standard device for the measurement of the disturbing power of mains-operated appliances, may also be used to assess the efficiency of the screening of coaxial cables in the frequency range from 30 to 300 MHz.

For this purpose, a comparison is made between the highest level observed along the sheath of a piece of cable, connected to a well-screened source, and the highest level observed along an unscreened wire connected at the output of the same source instead of the cable.

Twenty different cables have been investigated by the clamp method, by a field method and by the standard IEC method (IEC Publication 96-1/1962). The results of all three methods show a high degree of correlation. Among other advantages, the clamp method gives more information on the real behaviour of the screen by recording a characteristic level along a length of some meters of cable.

p. 316...329

# Conversion of Existing Carrier Cable Systems to 60-Channel Operation

by A. Monney, F. Gertsch and W. Alder, Berne

The autors deal in this article with the conversion of the Berne-Lausanne balanced-pair carrier cable from 48 to 60-channel operation in the 12...252 kHz frequency range. Instead of the old-type intermediate repeater stations, transistor-operated repeaters supplied with power from the remote stations are now being used. Because of this, the cable has had to be completely re-balanced as regards distant-end cross-talk.

p. 320...337

# The Development of Power Supplies for Microwave Systems

by H. Graf and J. Langenegger, Berne

This article outlines the problems of supplying power for microwave systems. The increase in transmission capacity calls for power supplies of greater reliability. Initially, securing a continuous mains supply constituted the principal problem. Later, demands were also made on the quality of the power. Continuity and mains isolation were achieved by the use of rotary converters, subsequently replaced by inverters. Today, microwave systems are fed directly from 48 V rectifiers and batteries. In this way the main requirements, viz. operational safety (by independent feed of every h.f. channel) and ease of expansion (by use of plug-in protection modules), are met.

#### **News Items**

#### **Posts**

'Adjust Speed' has been chosen as the motto for the 1971/72 road safety campaign of the Swiss PTT. Drivers will be reminded to adjust the speed of their motor vehicles to visibility, road and traffic conditions, and to avoid driving too fast or hogging the middle of the road.

In Basle the system of cash-free payment of salaries is used more widely than in the rest of Switzerland. This is also reflected by the statistics on payments into postal cheque accounts. While total inpayments have risen by 11.5% since 1965, the increase in the Basle region was only 1.6%; the suburban offices, where holders of salary accounts call most often, are even noting declines, as customers are taking advantage of account-to-account transfers involving less work and risk than inpayments and cash handling in general.

### Telephone

The first two volumes (Berne area) of the improved second edition of the classified directory of Switzerland have been published. They seem to be viewed more favourably by the public than their predecessors.

International self-dialling has been extended to a further 17,000 Swiss subscribers, connected to the exchanges of Brig, Flawil, Kloten, Zermatt, Zurzach, and others. This service is now available to 834,000 telephone users in 130 exange areas.

In 1970, outgoing international calls totalled 145.94 million chargeable minutes, 75.1 million or 51.4% of which originated from direct dialling by subscribers.

In November and December 1970, international calls dialled direct by Swiss subscribers reached an average of 55.7%, and up to 79% in some numbering plan areas.

#### Telegraphs, Telex

On 8th March, the public telegram service with the United Kingdom was reopened after 7 weeks' interruption due to the British postal strike. As from this date, telex service via the London trunk positions has also been fully resumed.

In 1970, operating income from telex and leased telegraph lines amounted to 108.6 million Swiss francs, having for the first time exceeded 100 million francs. This sum corresponds to two thirds of the total income from telegraph services.

At the end of March, 900 leased telegraph lines and data communication circuits (106) were in operation in Switzerland. This number included 620 purely national lines (data 73) 184 European (23) and 96 overseas circuits (10).

#### Radio, Television

On 22nd March, the **Geneva radio and television building** at Boulevard Carl Vogt was heavily **damaged by fire.** In the radio section a number of studios, offices and archives, 2 control rooms and the switching centre were destroyed. The television studio was damaged mainly by water. After a short interruption, broadcasts were resumed by means of auxiliary facilities, while part of the programmes was taken over by other studios.

A 410 MHz microwave system for outside broadcasts of radio programmes has been put at the disposal of the Swiss Broadcasting Corporation. This equipment has proved to be highly suitable for covering sports and other events.

As from 1st April 1971, broadcasting hours for the TV test pattern have been extended. On weekdays, the pattern can now be received continuously from 9 am to the beginning of the evening programme.

#### Miscellaneous

The Swiss PTT Research Department has developed a **new solder of low-temperature plasticity** forwiped multiple joints for polyethyleneinsulated cables. This alloy, which contains cadmium and bismuth in addition to tin and lead, makes it possible to keep the temperature within the joint 20 degrees centigrade lower than usual during the process of application, thus eliminating the possibility of destruction of the polyethylene insulation.

From 20th April to 24th May, the Swiss PTT will be able to display their activities in 23 show-cases at the Zurich offices of the Union Bank of Switzerland.