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## **Planning the Martigny-Aosta coaxial cable**

A. Bollinger, Berne

Generous long-term planning is necessary to ensure smooth handling of the continually increasing international telephone traffic, for which there has been a particularly heavy demand since the introduction of ISD. The Martigny-Aosta coaxial cable is used to illustrate some basic considerations on the planning of main traffic arteries and the selection of the appropriate type of cable.

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## **Protective measures**

R. Hainfeld, Berne

The cable runs parallel to a 130/220 kV high-voltage line. The inductive interference forecast showed that the sheath protection factor of the flat-wire sheathed coaxial cable was insufficient and had to be improved by additional steel band armouring. In this way it was possible to keep the longitudinal voltage within the tolerance limits.

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## **Selection of the cable run**

P. Grossniklaus, Berne

The underground engineering department of a regional telecommunication directorate is responsible for the construction of duct systems, and for the detailed planning and laying of long-distance cables. The actual underground engineering duties include the planning, marking, staking out and measuring of cable runs, the division into splicing sections, the calculation of costs, etc. In addition, the department supervises the pulling and laying of cables, in order to ensure coordination among private contractors.

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## **Installation of the plant**

W. Fink and W. Knuchel, Berne

The Martigny-Aosta cable is the first plant in Switzerland over which, on coaxial and symmetrical lines, various carrier systems and vf circuits can be operated simultaneously. Special balancing and jointing methods have been applied with a view to achieving optimum electrical characteristics of the individual systems, and reducing mutual interference to the greatest extent possible.

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## **The 12 MHz transmission equipment**

J. Ruckstuhl, Berne

On the Aosta-Martigny coaxial cable plant, fully transistorized 12 MHz transmission equipment is being used, which includes intermediate repeaters fed from the remote stations. The author describes the terminals as well as the intermediate repeaters, briefly outlines fault location, and quotes some results of measurements on a section of the system.

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## **50 Years of Radio Suisse Ltd**

R. Bonjour, H. A. Laett, C. Wüthrich and H. Schaffer

The Marconi Radio Station Ltd Berne was founded in 1922 to establish direct communications between Switzerland and abroad. In 1928 this name was altered to Radio Suisse Ltd. 95% of the capital of this enterprise for wireless telegraphy and telephony is owned by the Swiss Confederation. Radio Suisse has two main tasks to fulfil: the operation of communications for telegraphy, telex and data with 10 European and 24 overseas countries, and the air traffic control over Switzerland and the airports of Geneva, Berne and Zurich.

The articles give a historical review of the enterprise and its problems of today and tomorrow. The future is marked by an increasing volume of information, which is to be handled even faster and to more and more sites. To solve this problem Radio Suisse last March put into service **COMputerized MESSAGE Transmission plant (COMET)**. It is an enlarged back-up system with two chains of computers by Univac and a capacity of about 21,000 telegrams per day. One of these chains is in real time service for message switching and transmission, the other is used simultaneously for data processing. **A Customer Automatic Relay and Exchange (CARE)** for further customers and their own communications requirements is in preparation and will mark another milestone.

## **News Items**

### **Posts**

On 28 May the Swiss **PTT**, in accordance with a Federal Council decision, took over from **Rhaetic Railways** the transport of **passengers, goods and postal items** on the 32-km **Bellinzona-Mesocco** section.

In March and April, **final examinations for certified postal staff** were held in nine of the eleven Swiss postal regions. For the first time, candidates also included 44 girls. Of the 178 trainees, 167 passed and received their diploma. Sixty candidates with very good marks were awarded a prize. In the remaining two regions, these examinations will be held in Autumn.

In order to draw the attention of the public to their **'Jura 1972' campaign**, **Swiss Postal Travel** ran a St. Gotthard stage-coach, drawn by five horses, on routes Neuchâtel-Le Locle, Laufen-Liestal and Gelterkinden-Aarau for three days at the beginning of June. Among the passengers invited were representatives of Radio, Television and the Press.

The Swiss PTT have recently introduced a German-made **timer** for registering the **transport and handling time as well as the method of transport of postal items**.

The device, which weighs only 730 grammes, is a vibration recorder printing on a battery-operated tape.

### **Telephone**

In January and February Swiss subscribers used **ISD facilities for 72.9% of their international calls**. The regions with the highest percentages were Zurich (73.5), Berne, Geneva, Lausanne (80 each) and Basle (87.8).

In June, **automatic frontier service** was opened between the Swiss telephone network group of **Martigny** and the Italian **Aosta valley**.

**Additional lines for frontier and long-distance calls** have been placed in service on routes **Basle-Nancy, Nancy-Basle and Colmar-Basle**.

Since May, **77 telephone circuits** (48 satellite, 26 cable and 3 shortwave) have been in operation between **Switzerland and the USA**.

### **Telegraph, Telex**

Since March an additional **100 post offices** have been **equipped with teleprinters** enabling accepting officers to send telegrams directly into the **ATECO** switching system, thus **relieving the Berne and Zurich Phonogram positions**. Another 50 post offices, bringing the total up to 420, are to be provided with this facility by the end of the year.

**Automatic telex service** with Japan has been extended to most subscribers on the **Ryukyu Islands (Okinawa)**.

**Telex calls to Jordan** can now be established **semi-automatically** via Rome.

**Nigeria** has converted telex service with Switzerland to **automatic working**.

**Thirty newspapers** are now connected to the **teletypesetting network** of the **Swiss News Agency**.

### **Radio, Television**

In May the **Lugano radio studio** was equipped with a **remote-control installation for v.h.f. transmitters I 1 and I 2**. All Swiss v.h.f. transmitters can now be operated from the Berne, Lausanne and Lugano switching centres. The performance of transmitters and programme lines is monitored automatically.

**Remote control of certain transmitters and directional aeriels** has been introduced between the Berne overseas terminal and the shortwave transmitting station at Schwarzenburg. This system helps to simplify and rationalize operations.

### **Miscellaneous**

In May, **four African trainees** from Congo Brazzaville, Rwanda and Upper Volta were given a week's training course at a **Pentaconta local exchange** in Geneva.