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Summaries and Notices

Summaries

THE SWISS EARTH STATION

p. 68...84

Antenna of the Swiss Satellite Earth Station

S. K. Sarkar, Berne

This paper delineates the basic design and measurement results of the 29.6 meter parabolic antenna of the Standard Intelsat earth station at Leuk. The structural-mechanical aspects, servo and drive, antenna control, and deicing subsystems are described. The antenna is performing well and has met all specified requirements.

p. 85...90

The Transmission Characteristics of an Earth Station Antenna for Satellite Communication

P. Hügli, Berne

The figure of merit G/T characterizes the receiving system of a satellite earth station. Its theory is discussed here with reference to the antenna of the Swiss earth station at Leuk (Valais). In addition, the article describes the performance of this antenna regarding information transmission and automatic guidance.

p. 91...95

The Central Control and Supervisory System for the Telecommunication Plant

J. Wehrli, Berne

From the many functions of the central control and supervisory system, detection and control of the main parameters of the radio path are described and the collective-alarm system outlined.

p. 96...106

The Individual Carrier Transmitting and Receiving Equipment

H. Doswald and J. Wehrli, Berne

In the signal path the individual carrier transmitting and receiving equipment is located between the carrier frequency multiplex equipment on the one hand, and the high-power transmitting amplifiers and low-noise broadband receiving section respectively on the other. Its functions are signal matching, modulation, demodulation and frequency band conversion.

p. 107...112

Low-Noise Amplification

B. Humm, Berne

The author explains the necessity for low-noise amplification and outlines some important aspects of reception. He describes the principle of parametric amplification and the low-noise broadband plant installed at Leuk.

p. 113...118

The High-Power Amplifiers of the Swiss Satellite Earth Station

H. Heierli, Berne

These amplifiers increase the power of the individual transmission carriers to the levels required for radiation. They are of the travelling-wave type, operating at a frequency around 6 GHz and having 1.2 kW saturation power. The article outlines the block diagram of the high-power amplifier subsystem, the travelling-wave principle, power supply, on/off switching and supervision logic and automatic carrier changeover.

p. 119...128

The Power Plant

H. Guggisberg, Berne

At the Leuk satellite earth station, Swiss PTT's largest and most modern telecommunications power plant has been installed. This article first outlines the supply concept and the requirements of consuming equipment. It then deals with the basic functions, standardization, reliability and maintenance of power supplies before entering into details of the Leuk plant.

News Items

Posts

In 1973, **road transport service was extended to a further 110 Swiss post offices.** The system provides for transportation of mail by PTT van between a main railway terminal and the post offices of a region. It replaces collection and delivery by local rail and, apart from being independent of rigid time-tables, offers the advantage of staff economies and better use of motor vehicles.

Last year, passengers using the **Berne–Zurich-Airport postal coach service** increased by 21.4% to 80,690. The time-table provided for 8 runs a day in both directions. An additional run is scheduled for the 1974 summer period.

Public transport and **postal passenger fares** in Switzerland were **increased** on 1 February. Postal coach fares rose by 13% for individual travel and 18% for season tickets (14.5% on average), corresponding to 6.5 million francs additional revenue a year.

Telephone

The **"Ansafonette 2"** telephone responder and the **"Selectacall Ten"** automatic dialler have been approved for use in the Swiss public network. In 1973, a total of 45 certificates of approval were issued for private attachments to PTT telephones.

In January, an **automatic morning and alarm call system** for 1,692 orders came into operation at **Lucerne.** This is the 13th installation of its kind in Switzerland.

Of the 42.7 million **international call minutes from Switzerland** in September and October 1973, 36.4 million or **85.2% were dialled direct by the subscribers.** This is an increase of 6.3% over the 1972 ISD proportion.

The **Swiss satellite earth station** at Leuk (Valais) has been **in operat on** since January, providing an initial 82 circuits to the USA, 15 to Canada and 12 to Israel over Intelsat IV. These circuits were formerly routed over foreign stations.

In 1973, a **record number of telephones** were connected in Switzerland. **Main stations** increased by 117,702 to 2,284,368, and **sets** rose by 199,607 to a total of 3,604,034. On average, a main station was put into operation every 68 seconds, and a set every 40 seconds, during working hours. At the end of December the telephone density was 35.69 main stations and 56.31 sets for 100 inhabitants. The waiting list was reduced by 3540 to 23,844 subscribers over the same period.

Telegraph, Telex

On 15 January, a **2nd Zurich–Ankara telex circuit** was opened over cable, to relieve he Berne–Istanbul radio channels during peak hours.

Last year, the charge for only **1 international telex call minute in every 21,600** had to be **refunded** because of technical faults or insufficient transmission quality.

In 1973, a **record growth of 2,158 telex subscribers** (12.8%) was noted in Switzerland.

Radio, Television

In 1973, **radio broadcast receiving licences** in Switzerland rose by 45,173 to 2,003,204. **Wire-broadcast licences,** which are included in the above total, dropped by 3,892 to 416,055. **TV receiving licences** increased by 91,522 to 1,627,410. **Colour sets** went up by 220,000 to 345,518 and are now used by about 1 in every 6 viewers.

In December 1973, the Swiss Federal Council issued **new radio and television licensing regulations** covering transmission and reception as well as the installation and demonstration of equipment.