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Summaries

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State of the Art of Digital Music Transmission

R. Mury, Berne

The article gives the main coding techniques used for high-quality sound signals. First, the various coding schemes using instantaneous and quasi-instantaneous compression are introduced. Next, the main characteristics of these quantizing laws are compared, emphasizing their practical advantages and drawbacks. The problem of protection against transmission errors is treated by presenting some information on the distribution of errors and describing the various measures intended to reduce their subjective effects when decoding. Compatibility with telephony is touched upon. In conclusion, a system based on an instantaneous compression law is proposed in which one high-quality programme channel occupies six voice channels in the 2048 kbit/s PCM primary multiplex. The advantages resulting from this compatibility with telephony in the case of a transmission mixed with voice and data are briefly examined.

p. 384...390

Pull-in Duct System for PTT-Cable in the Gotthard and Seelisberg Motorway Tunnels

P. Grossniklaus, Berne

The article illustrates some of the problems of planning and building cable links through the Alps. After an initial project for use of the Gotthard rail tunnel had been abandoned for railway engineering reasons, a new route along Motorway No 2 was worked out. A description of this is given along with details of construction and materials used in the Gotthard and Seelisberg tunnels.

p. 391...407

Architectural Physics, its Application and Relation to Man

J.-D. Vital, Berne

Architectural physics is a very important element of modern building technique, especially for novel constructions. Architectural physics blends human comfort factors into the design of every building part. The relationships of building elements to physical parameters are

manifold and complex. The dimensioning of a part of a structure as well as the building process are schematically illustrated from the point of view the archi-

tectural physicist. The article is an attempt to introduce the nonspecialist to the vast and high-responsibility area of architectural physics.

News Items

Posts

Over the next five years the PTT will be purchasing **100 new coaches for the Postal Passenger Service**. The new model is based on the Saurer IV-HU chassis and replaces the IV-U alpine coaches which have been in service for the last 15 years. Compared with its predecessor it has a more powerful engine (184 kW/250 hp) and increased seating capacity (45 instead of only 38).

Telephone

Street maps showing the **nearest telephone kiosks** have been put up in the public call boxes of Vevey, Montreux and Lausanne.

Five **1+1 microwave telephony systems** have been equipped with new, **0.5 μ s baseband changeover switches**. All wideband FM installations on fixed radio relay links now meet the requirements of data communication.

The new three-digit **emergency number 144, Ambulance**, was introduced in the network groups of Berne (031) and Baden (056) on 1 September.

From 1 December customers will be able to dial the **national television programmes over No 165**.

Subscribers on the **waiting-list** dropped by 311 to 4823 in the first half of this year.

One of Switzerland's first **wireless telephones** was installed at the **Konkordia mountain hut** (2870 m) in the Jungfrau region 30 years ago, on 17 August 1948.

An agreement on the erection of a **second antenna at Leuk satellite earth station** has been signed with Nippon Electric Co, the chief contractor. Work

started at the end of August, and the installation is to be operational by the end of 1979.

Telegraph, Telex

Leased circuits rose by 97 (120) to 2254 at the end of June. Teleprinter channels accounted for 37.9 pc, and voice circuits for 62.1 pc. Modems increased to 8188, of which 39.6 pc were used in the public switched telephone network and 60.4 pc on leased lines.

Telex service to the kingdom of Tonga became available at the beginning of July.

On 11 July the PTT began testing with simulated traffic the system it will be using to provide a public message switching service.

Miscellaneous

A **television translator** each for the German and Italian-language national programmes came into operation at **Orvin, Couvet and La Sagne** on 4 July.

Violent thunderstorms raging over Switzerland at the end of July/beginning of August disrupted telecommunication services in several parts of the country, mainly the northeast, the Grisons and Ticino. Compared with the extent of damage generally, that to telecommunication plant was relatively small, however, thanks not least to the high quality of cables.

In the first six months of 1978, **postal business was up by 2.3 pc and telecommunication business by 2.9 pc** on the same period of last year.

The **PTT's 1979 budget**, based on the assumption of a 2.2 pc increase in the volume of business and an only moderate rise in the cost of living, shows a profit of 285 million francs.