



HIGHLIGHTS



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The Meteorological Information System at NHK and Its Application to Weather Forecasting

Y. Higashiyama and Y. Deguchi

In Japan, weather forecasting and meteorological information programs

for radio and television are based on data collected by the Meteorological Agency. NHK, the public broadcasting system, obtains a variety of data from the agency, including weather forecasts and information, photographs taken by weather satellite, and data collected by weather radar. NHK is responsible for broadcasting weather information with speed and accuracy by making use of this data.

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Aquacolor® Underwater Cinematography: Breaking the Available Light and Color Barriers Underwater

W. T. Biays

This article describes a new system for filming underwater. The Aqua-

color® system consists of underwater cameras with patented, state-of-the-art automatic exposure controls, unique metering, and new multiple filter systems that enable underwater cinematographers to capture, as never before, the rich and beautiful colors beneath the sea.

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bureaus of meteorology does not attempt to determine the attenuation values predicted by the various models given the available data. Telecom Australia has recently formed a quantitative comparison of their proposed semi-empirical model to five other attenuation

Satellite Ground Station Link Margin Considerations for Ku-Band Video Transmissions

R. A. Grimes

The design of satellite links at Ku-band must begin with site-specific

data, individual user availability, and signal quality requirements. This article presents an aid for the design of several major system parameter tradeoffs that must

be determined, given an accepted video transmission plan. Specifically, theoretical and experimental data published on U.S. communications satellites is combined to suggest user guidelines for arriving at practical link margin values. Once margin values are determined, a clear-sky C/N operating point can be established.

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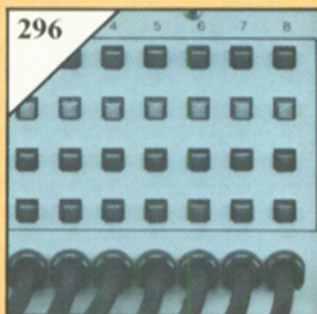
New Technology Provides Superior-Performance Plumbicon® Tubes for EFP and ENG Cameras

A. Franken

Three new Plumbicon® tubes, which are completely different from

conventional all-magnetic tubes, are discussed. The XQ4087 is an ultra-light 11mm high-stability diode gun tube based on a new electron-optical system with an accelerating-focusing lens. The XQ4187 is an 18mm version with excellent registration and low lag, weight, and power consumption. These tubes are compared with the 18mm XQ3457 magnetic-static tube incorporating magnetic focusing and electro-static deflection.

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Advances in Battery Charging for Portable Video: Low-Cost, Microcomputer-Controlled Fast Charging for Ni-Cads

D. C. Hamill and B. R. Parker

The use of a microcomputer to control a fast charger for ni-cad batteries resolves many problems and brings other benefits. This

article describes a new microcomputer-controlled fast charger that adjusts automatically to a wide range of batteries. An optional add-on sequencer completes the fast-charging system. Future developments incorporating microcomputers include chargers for silver-zinc batteries and battery-management systems. Military and industrial applications are also being explored.

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The Objectives of Lighting

E. C. Winckler

Lighting, as opposed to illumination, is defined as a combination of directional light, brightness values of the subject, and reflectance values of the surround and background. This

article compares "good" and "bad" lighting and discusses the objectives of good lighting, which include separating picture elements, modeling for dimension, creating a center of interest, and directing viewer attention. Major components — cooperation, understanding, and interdependence of the various arts and crafts — are explored, as is the question of the importance of hardware to good lighting.