PREVENTATIVE MAINTENANCE OF SMALL SYSTEMS

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Organization of scheduled preventative maintenance and operating practices minimize trouble calls. Prior to convicting subscribers of non-education of cable T.V. the knowledge of service offered and its quality must be understood from manager to installer level first.

Technical personnel are constantly haunted by the acceptable viewing and reliability of their system. Keeping this quality through scheduled maintenance of processing and distribution equipment, proper installs, effective service call response/evaluation and continuing education can result in a reliable system.

The proficiency and congeniality of manage ment, marketing and engineering will reflect customer appreciation of the product they are purchasing.

Preventative maintenance and operating practices of a cable system regardless of size are as effective as the general practices governing the operation and self discipline of individual employees.

Discipline is the controlled behavior resulting from training intended to produce a specific pattern. This pattern refers to the activities related in the prevention of customer complaints and to the extension of the useful life of the cable equipment.

The knowledge of service offered, its quality, must be understood from manager to installer level prior to convicting subscribers of non-education of cable T.V.

Both aspects are important benefits gained from adherence to operating guidelines of a system. Resulting in less down time and better system performance.

Preventative maintenance is not confined to engineering alone. Management and marketing are also affected. Operating practices may not be appropriate to each individual and area of operations, but the two do interreact.

"The absence or neglect of a system maintenance program will result in an increase in subscriber complaints. Undetected minor problems and defective system components that do not cause outages or serious signal degradation accumulate, unless they are attended to, and "weaken" the system so that eventually a minor problem causes catastrophic failure or serious signal degradation. A well-maintained system will not normally result in subscriber dissatisfaction. For an example, a system with several dB reserve above the perceptable noise and distortion levels can often experience failure of the automatic slope/gain function in one amplifier without effect upon subscriber satisfaction. Good system maintenance requires the detection and repair of this failure, however, to prevent a second failure from causing complaints. Periodic verification and maintenance of the "performance reserve" will also prevent such minor (non-catastrophic) failures from causing subscriber complaint.

Perhaps an even more significant benefit of a good system maintenance program is the extension of the system's useful life. Premature replacement of cable and electronic equipment due to lack of proper maintenance is commonly accepted as "unavoidable" in many CATV systems. The cable does not "wear out"..poor system maintenance practices allow it to become unuseable from preventable causes. Improperly formed expansion loops result in cracked sheath, center conductor pull-out, etc.; badly installed connectors and fittings permit moisture to penetrate the dielectric; inadequate clearance from trees and other obstructions permit physical damage. These circumstances are, of course, preventable, detectable, and correctable.

Electronic equipment, and in particular amplifiers, are also often prematurely replaced. The major reason for amplifier replacement has been directly, or indirect ly, related to the physical condition of the housing. In particular, the failure to properly seal the housing lid against moisture has been the most frequent cause of amplifier loss."

Headend maintenance requires regular attention to the antennas, tower, buildings and processing equipment in the same manner as the distribution system. Headend output levels should regularly be measured including all visual and aural carriers, pilot carriers, etc., and compared with the headend log to verify normal operation.

The accuracy and reliability of mechanical devices and instruments also require periodic monitoring and servicing as reccomended by the manufacturer.

Strict adherence of maintenance activities are considered necessary for the preservation of the company's property value, and also for the reliability and quality of subscriber service to gain and retain those subscribers! [1]

Quality service is marketable and marketing is also governed by general practices. Marketing comprehension of the systems technical capabilities and sales must not excelerate to the point that the technical support from sale to install and service becomes uncontrollable. A substantial time lag from sale to service degrades the community relations proportionally; just as unacceptable service to existing customers can.

Correlation of managerial, technical and marketing inputs to maintain an efficient operation is the discipline involved to ascertain the nature of customers problems and conducting them to concerned personnel or scheduling work requirements at appropriate times. Also familiarization with cable terminology to give information to callers, prepare reports, logs and correspondence in an appropriate manner must have its guidelines as the previous areas of operation.

The need for effective operating practices and maintenance programs; combined with the proficiency and congeniality of manage ment, marketing and engineering; will reflect in profits and customer appreciation of the product they are purchasing.

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1. System maintenance practice 5-3, March, 1979. Norwalk Cable TV Construction, Norwalk, CT.