

APPENDIX

DIGITAL ANNOUNCER INSTALLATION AND OPERATION
(FOR USE WITH MODEL 213300, 213400, OR
213500 DIGITAL ANNOUNCERS)

Insert in manual after SECTION 756-0223-400, Model 213300 Digital Announcer Maintenance

GROUNDING AND NOISE CONSIDERATIONS

1.01 In some situations a Digital Announcer may randomly show an alarm condition (AL-0 or AL-2) or play back distorted or garbled messages even though the unit is installed and wired in strict accordance with the procedures outlined in this publication. In many cases, the cause of these faults can be traced to interference generated by the other electrical equipment which is operated in proximity to the Announcer. If the source of this disturbance can be located and controlled, the Digital Announcer can operate in a normal manner.

1.02 Electrical noise is defined as a random disturbance or unwanted signal which tends to obscure the desired signal. Electromechanical devices such as relays and stepper switches will often generate electrical noise which can adversely affect the proper operation of electronic equipment. This noise is usually present in the form of transient voltage spikes (short duration, high energy pulses). These spikes are both random and rapid in nature, so they frequently cannot be detected by standard voltmeters; however, more sensitive instruments such as logic analyzers and wide band oscilloscopes will verify their presence. Older telephone offices are particularly likely to have high levels of noise which can cause electronic equipment to malfunction.

1.03 Because electrical noise is a variable, there is no universal cure for it. In general, when the coordinated ground points such as equipment mounting frames, power sources, cold water pipes, building steel, etc., are installed

and maintained in accordance with local telephone grounding and local electrical wiring codes, the grounding system's resistance can be held below the minimum recommended value and noise will not be a problem. Inadequate, improper, or deteriorated ground connections will make noise very difficult to contain or control.

1.04 The Digital Announcer's noise tolerance levels can frequently be raised to an acceptable level through the use of noise suppression components and special grounding techniques. Kits containing the suppression devices and the instructions for their installation are available from the manufacturer upon request; please contact Northern Telecom Inc., Cook Electric Division, Field Service Department for assistance.

1.05 References

National Electrical Code
Article 250

Canadian Electrical Code
C 22.1

Local Telephone Company
Grounding Practices

For additional information, contact:

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Cook Electric Division
6201 Oakton Street
Morton Grove, Illinois 60053
Telephone (312)-967-6600
Telex 72-4472
TWX 910-223-3654
Cable "Cookpro"