



industrial/wireless/performance

APPLICATION BULLETIN

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Microwave Data Systems Inc., 175 Science Parkway, Rochester NY 14620 USA
Phone +1-585-241-5510, Fax +1-585-242-8369

MDS 900 MHz MAS Preventive Maintenance

INTRODUCTION

The purpose of preventive maintenance is to identify and correct system performance degradation before partial or total system failure can occur. Most elements of the design of MDS MAS radio equipment are not subject to degradation over time. However, aging of frequency controlling elements and damage due to transient ESD (such as nearby lightning strikes) may cause degradation prior to total failure.

IMPLEMENTING THE APPLICATION

1. At installation:

For each remote, measure, and record at a minimum:

- a. Power output
- b. Tx frequency
- c. Received signal level from master

For the master, measure and record:

- a. Power out for each transmitter
- b. Tx frequency for each transmitter
- c. Receiver sensitivity and distortion for each

receiver

An acceptable substitute for all above items is the output from MDS Smart diagnostics system. This provides all data necessary for later comparison. If diagnostics are used it is mandatory to first verify the calibration of the diagnostics at the master. Please note that, although accurate enough for preventative measures, remedial or corrective measures should always be performed with the aid of a calibrated service monitor except in emergency situations.

2. Preventive maintenance measurements are simply the comparison of the original system parameters with current system parameters. The maximum recommended interval for these comparisons is 1 year, with the exception of the master item b and c, which should be

performed at the first 6 months, second 6 months and 1 year thereafter.

3. Use of MDS Smart diagnostic systems is highly recommended as it provides a convenient, timesaving way to perform these tasks and the intervals may be shortened without expending field resources. In this case it makes sense to shorten the interval to 1 month or less. If MDS diagnostics are utilized, the diagnostic alignment should be verified on an annual interval using a calibrated accurate service monitor.

For more information, contact MDS Technical Services at techsupport@microwavedata.com, or by phone at +1-585-241-5510.
