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## AUDIO/VIDEO 9-1-1

Tech Bulletin: SB-AV9-1-1  
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- A. DeoxIT® Products 1, 2, 3.
- B. Applicator Notes
- C. Connector Maintenance - general
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- H. Potentiometer Maintenance
- I. Difference between 5% and 100% products

### **A. The DeoxIT® Products, 1-2-3:**

- 1 - Apply DeoxIT® D-Series, contact cleaner to clean/rejuvenate surface,
- 2 - Apply DeoxIT® Gold G-Series, for maximum performance & protection - indoor applications,
- 3 - Apply DeoxIT® Shield S-Series, for maximum protection - outdoor or severe environments.
- 4 - Apply DeoxIT® Fader F-Series, for conductive plastics and carbon-based controls, only.

### **B. APPLICATOR NOTES: Which Applicators should I use?**

#### **SPRAYS:**

- 1. Use when the part is hard to reach (inside a potentiometer) or easy to reach and overspray is not a concern (wire with connector at end - RCA, XLR, etc.). You can always spray DeoxIT® onto a lint-free swab or cloth and then apply to connection.

#### **WHICH SPRAY DO I USE: Visit <http://store.caig.com/s.nl/it.l/id.66/f>**

- 2. Two types of sprays are available, "flushing action" (flammable - slow evaporating solvent) and "quick dry" (non-flammable - fast dry solvent). Use the flushing action sprays when there is other surface contamination on the connections (dust, dirt, grease) and plastic compatibility is critical. Use the "quick dry" sprays when non-flammability is important and no dripping is required.

a) *Flushing action* Part Nos.: D5S-6, G5S-6, S5S-6, F5S-H6

b) *Quick Dry* Part Nos.: DN5S-6N, DN5MS-15, GN5S-6N, GN5MS-15, SN5S-6N, SN5MS-15, FN5MS-H15.

#### **LIQUIDS:**

- 3. Use DeoxIT® liquids (100% and 5%) when precise application of products are to be used.
- 4. Use the 5% liquids when wiping off excess is NOT an option.
- 5. Pick the best applicator for your application. Brush applicators are good for most audio/video connections. Pens are recommended for connectors that require a bit of scrubbing or open contacts. Wipes are recommended for edge connectors and audio/video connections. Needle applicators are recommended for accessing hard to reach areas.

6. Reminder: when using 100% solutions, wipe off excess after applying final coating.
7. Applicators will be recommended at the end of each section. Others can be viewed and selected at [www.caig.com](http://www.caig.com)

### **C. Connector Maintenance (RCA, XLR, BNC, DVI, COAX, etc.) - general purpose**

**PRODUCT NOTE:** If the part is used or in service, assume it's oxidized. Always, first use DeoxIT® D-Series.

#### ***Metal surfaces:***

1. Apply DeoxIT® D-Series contact cleaner to metal contact/connector surface. When connectors contain surface particles (dust, dirt, etc.) along with oxidation, use DeoxIT® spray with flushing solvent (#D5S-6). When the surface is free from most surface particles, use DeoxIT® without a flushing solvent (#DN5S-6N, #DN5MS-15).
2. Operate device to help displace contaminants from contact surface.
3. Repeat Step "1".
4. If surface is heavily oxidized, leaving DeoxIT® D-Series contact cleaner on overnight, is recommended.
5. The next day remove the contaminants lifted by DeoxIT® with lint free swab, cloth on accessible surfaces or repeat Step 1 to displace contaminants from contact surface. Process may need to be repeated if surface is heavily oxidized. When surface is clean, no residue on the cloth, finish with a couple short bursts of DeoxIT® D-Series.
6. **For extended protection:** After surface is clean, apply DeoxIT® Gold G-Series for indoor applications or DeoxIT® Shield S-Series for outdoor applications.

#### ***Plated metal surfaces and gold surfaces - used or in service (i.e. gold or other precious metal):***

7. Follow the above procedure (Metal surfaces) to clean metal surface. Then finish with DeoxIT® Gold G-Series to protect surfaces. Maintain thereafter with DeoxIT® Gold.
8. When connectors contain surface particles (dust, dirt, etc.) along with oxidation, use DeoxIT® Gold G-Series spray with flushing solvent (#G5S-6 Spray). When the surface is free from most surface particles, use DeoxIT® Gold spray without flushing solvent (#GN5S-6N, #GN5MS-15, #G100S-2).

#### ***Plated metal and gold surfaces - new or with no visible oxidation on the surface:***

9. Apply DeoxIT® Gold G-Series to contact/connector surface. When using 100% solution, wipe off excess. Maintain thereafter with DeoxIT® Gold.

#### **NOTES:**

*After applying DeoxIT® D-Series and DeoxIT® Gold G-Series, you may notice immediately or over the next several days a green or black coloration on connector surface. This represents dissolved oxides. Repeat cleaning process above and then apply DeoxIT® Gold G-Series for indoor applications OR DeoxIT® Shield S-Series for outdoor applications.*

#### **Recommended Applicators:**

##### **Spray Part No.'s:**

*(Nonflammable, non drip - quick dry, safe on plastics. Over 150 sprays per can)*

DeoxIT® D-Series, **Part No.** DN5MS-15 (14 g), **Part No.** DN5S-6N (163 g)

DeoxIT® Gold G-Series, **Part No.** GN5MS-15 (14 g), **Part No.** GN5S-6N (163 g).

*(Briefly flammable, until solvent evaporates, flushing action - slow dry.)*

DeoxIT® D-Series, **Part No. D5S-6**, 142 g.

DeoxIT® Gold G-Series, **Part No. G5S-6**, 142 g.

### **Non spray applicators**

DeoxIT® D-Series, precision needle, 25 ml.

**Part No. D100L-25C**

DeoxIT® Gold G-Series, precision needle, 25 ml.

**Part No. G100L-25C**

DeoxIT® D-Series, brush bottle, 7.4 ml.

**Part No. D100L-2DB**

DeoxIT® Gold G-Series, brush bottle, 7.4 ml.

**Part No. G100L-2DB**

Other applicators available, visit; <http://www.caig.com>

## **D. Connector Maintenance (RCA, XLR, BNC, DVI, COAX, etc.) -**

### **High-end audio and video components - where signal quality is critical.**

*High-end audio and video equipment requires maximum protection on the connections. Over time, even on gold plated connections, signal degradation occurs. DeoxIT® Gold Gx3 is a unique conditioning solution that improves signal quality, dynamic range and provides long-lasting protection on audio and video connections.*

#### ***Directions: Using the DeoxIT® Gold Gx3 brush applicator, Part No. Gx3-7ML***

1. Apply DeoxIT® Gold Gx3 to both the male and female metal contact/connector surfaces using the brush applicator.
2. Wipe off excess with a clean lint-free swab or cloth.

#### ***NOTES:***

*After applying DeoxIT® Gold Gx3 Series, you may notice immediately or over the next several days a green or black coloration on connector surface. This represents dissolved oxides. Repeat cleaning process above and then apply DeoxIT® Gold Gx3 Series for indoor applications OR DeoxIT® Shield S-Series for outdoor applications.*

### **Recommended Applicators:**

#### **Non spray applicators**

DeoxIT® Gold Gx3 Series, brush bottle, 7.4 ml.

**Part No. Gx3-7ML**

## **E. Connector Maintenance (all metal electrical connections) - outdoor and severe environments.**

**PRODUCT NOTE:** If the part is used or in service, assume it's oxidized. Always, first use DeoxIT® D-Series. Outdoor connections and ones exposed to severe environments require additional protection.

#### ***Metal surfaces:***

1. Apply DeoxIT® D-Series contact cleaner to metal contact/connector surface. When connectors contain surface particles (dust, dirt, etc.) along with oxidation, use DeoxIT® spray with flushing solvent (#D5S-6). When the surface is free from most surface particles, use DeoxIT® without a flushing solvent (#DN5S-6N, #DN5MS-15).
2. Operate device to help displace contaminants from contact surface.

3. Repeat Step "1".
4. If surface is heavily oxidized, leaving DeoxIT® D-Series contact cleaner on overnight is recommended.
5. The next day remove the contaminants lifted by DeoxIT® with lint free swab or cloth on accessible surfaces or repeat Step 1 to displace contaminants from contact surface. Process may need to be repeated if surface is heavily oxidized. When surface is clean, no residue on the cloth, finish with a couple short bursts of DeoxIT® Shield S-Series.
6. **For extended protection:** After surface is clean, applying DeoxIT® Shield S-Series will provide long lasting protection on the metal surfaces.

***Metal surfaces subject to severe weathering (i.e. wind, rain, etc.):***

7. Under exposure to the elements a physical barrier may also be required to protect the metal connections.
8. After the surfaces have been treated with DeoxIT® Shield S-Series, an application of a grease maybe required. Select one of the DeoxIT® Grease if a longer lasting treatment is required. Visit for more information: <http://store.caig.com/s.nl/sc.2/category.185/f>

**Recommended Applicators:**

**Spray Part No.'s:**

*(Nonflammable, non drip - quick dry, safe on plastics. Over 150 sprays per can)*

DeoxIT® D-Series, **Part No.** DN5MS-15 (14 g), **Part No.** DN5S-6N (163 g)

DeoxIT® Shield S-Series, **Part No.** SN5MS-15 (14 g), **Part No.** SN5S-6N (163 g).

*(Briefly flammable, until solvent evaporates, flushing action - slow dry.*

DeoxIT® D-Series, **Part No.** D5S-6, 142 g.

DeoxIT® Shield S-Series, **Part No.** S5S-6, 142 g.

**Non spray applicators**

DeoxIT® D-Series, precision needle, 25 ml.

**Part No.** D100L-25C

DeoxIT® Shield S-Series, precision needle, 25 ml.

**Part No.** S100L-25C

DeoxIT® D-Series, brush bottle, 7.4 ml.

**Part No.** D100L-2DB

DeoxIT® Shield S-Series, brush bottle, 7.4 ml.

**Part No.** S100L-2DB

**Other applicators available, visit; <http://www.caig.com>**

**F. Vacuum Tube Maintenance**

***Vacuum tubes generally operate at elevated temperatures. This requires a different approach to clean and protect the connector surfaces.***

1. **First clean the surfaces.** Apply DeoxIT® D-Series contact cleaner **100%** to metal pins and sockets using a small foam lint-free swab. If you have DeoxIT® D-Series Spray, spray some onto tip of foam swab and apply to tube pins/socket. If you have DeoxIT® D-Series liquid, place small amount onto the tip of foam swab, then apply to tube pins/socket.
2. If surface is heavily oxidized, leaving DeoxIT® contact cleaner on overnight, is recommended.
3. The next day remove contaminants lifted by DeoxIT® with lint free swab or cloth on accessible surfaces Process may need to be repeated if surface is heavily oxidized. Surface is clean when no residue is present on the cloth.
4. **Now that the surfaces are clean we need to protect them.** Apply DeoxIT® Gold GxL sparingly to pins and socket with lint-free swab. Remove excess with clean swab.

## **NOTES:**

DeoxIT® D-Series does not necessarily remove any superficial discoloration (black tarnish) caused by oxidation or burn-in to the tube pins. This will, in no way adversely affect the performance of the equipment. DeoxIT® D-Series and DeoxIT® Gold G-Series improves conductivity irregardless of this discoloration.

## **Recommended Applicators:**

### **Non spray 100% applicators**

DeoxIT® D-Series, precision needle, 25 ml	<b>Part No.</b> D100L-25C
DeoxIT® Gold G-Series, precision needle, 25 ml	<b>Part No.</b> G100L-25C
DeoxIT® Gold Gx-Series, precision needle, 25 ml	<b>Part No.</b> GX100L-25C
DeoxIT® D-Series, brush bottle, 7.4 ml	<b>Part No.</b> D100L-2DB
DeoxIT® Gold G-Series, brush bottle, 7.4 ml	<b>Part No.</b> G100L-2DB
DeoxIT® Gold Gx-Series, brush bottle, 7.4 ml	<b>Part No.</b> GX100L-2DB

**Other applicators available, visit; <http://www.caig.com>**

## **Recommended Lint-Free Part Nos:**

### **Swabs:**

**Part No.** SWP-25: 1/4 x 3/4 x 4-1/2", qty 25. (Additional count sizes available).

**Part No.** SWPX-25: 1/8 x 1/2 x 2-3/4", qty 25. (Additional count sizes available).

### **Cloths:**

**Part No.** LFC-C/50: Cotton, qty 50. (Additional count sizes available).

**Part No.** LFC-P/50: Polypropylene, qty 50. (Additional count sizes available).

## **G. Fader Maintenance**

*The following guidelines have been established based on the experience and feedback of technical professionals, end users and our own years of testing and evaluation:*

### ***Routine Maintenance - general wear and tear:***

1. Apply 1-2 bursts/drops of DeoxIT® Fader F-Series **100%** to fader.
2. Manually operate faders 5-10 times to displace surface contaminants and distribute lubrication. It may be necessary to repeat this step the following day, depending on condition of fader.

**Faders that have had drinks spilled on them are treated a bit differently:**

### ***Emergency Maintenance - drink spills, excessive dirt and moisture:***

1. Apply 1-2 bursts of DeoxIT® Fader F-Series **5%** solution to contact surface.
2. Manually operate faders 5-10 times to remove/displace surface contaminants.
3. Apply 1-2 bursts/drops of DeoxIT® Fader F-Series **100%** solution to cleaned surface and manually operate the fader 5-10 times to replace lubrication necessary for proper function. It may be necessary to repeat this step the following day, depending on condition of fader.

### ***Faders that require a thicker lubricant with more tactile feel:***

1. Certain faders require more/thicker formula to get a tactile feel to them. This requires a grease to be inserted into the fader.
2. Once the fader has been treated, above, apply DeoxIT® FaderGrease into the surface area.

3. Operate the fader to distribute the grease and get the feel you require.

**NOTES:**

*If the drink spill does not involve the entire board, it is not necessary to treat the entire board with the three-step process. Normally, we suggest removing any excess 100% product, wherever possible. In this case, we have accomplished this process through mechanical action.*

**Recommended Applicators:**

DeoxIT® Fader F-Series, 100% Spray, 57 g.	<b>Part No.</b> F100S-L2
DeoxIT® Fader F-Series, 100% Liquid, 25 ml	<b>Part No.</b> F100L-L25C
DeoxIT® Fader F-Series, 5% Spray, 142 g.	<b>Part No.</b> F5S-H6
DeoxIT® Fader Grease, jar, 28 g	<b>Part No.</b> DFG-213-1
DeoxIT® Fader Grease, syringe, 8 g	<b>Part No.</b> DFG-213-8G
<b>Other applicators available, visit; <a href="http://www.caig.com">http://www.caig.com</a></b>	

**H. Potentiometer Maintenance**

*The following guidelines have been established based on the experience and feedback of technical professionals, end users and our own years of testing and evaluation:*

**Sealed pots:**

1. Found in newer equipment, may be difficult to restore, and should probably be replaced.
2. Occasionally if the pots are not totally sealed, you may be able to treat it in an ultrasonic cleaner using a 10% solution of DeoxIT® D-Series. Contact a CAIG representative for specific recommendations and instructions. Call 858 / 486-8388.

**Unsealed pots:**

Rotary pots respond best to DeoxIT® D-Series 100% spray (Part No. D100S-2) or 100% liquid (Part No. D100L), depending on how they're mounted.

**Recommended Maintenance:**

1. Apply 1-2 bursts/drops DeoxIT® D-Series 100% solution.
2. Manually operate pots 5-10 times to displace the surface contaminants and distribute DeoxIT®.
3. Reapply DeoxIT®.
4. It may be necessary to repeat this step the following day, depending on the condition of pot.

**NOTES:** *Normally, we suggest removing any excess 100% product, wherever possible. In this case, we have accomplished this process through mechanical action.*

**Recommended Applicators:**

DeoxIT® D-Series, 100% spray, metered valve, 57 g	<b>Part No.</b> D100S-2
DeoxIT® D-Series, precision needle, 25 ml	<b>Part No.</b> D100L-25C
DeoxIT® D-Series, oiler pen, 6 ml	<b>Part No.</b> D100L-P6C
<b>Other applicators available, visit; <a href="http://www.caig.com">http://www.caig.com</a></b>	

## **G. The Difference Between the 5% and 100% Products**

The following excerpt from the Tech Info Questions and Answers sheet addresses this quite well.

“Use the 5% spray or liquid to apply a thin coating of our products. Remember only a small amount is required on surface for maximum performance. The 5% solutions will ensure that only small amounts will remain on the surface. The solvent will also assist in flushing away loose dust, dirt, grease and other contamination.”

### **To summarize:**

1. The 5% solution has a carrier solvent, but after the solvent evaporates, what remains is 100% product.
  2. Original 5% formula provides flushing action, but the 100% does not.
  3. Two 5% spray versions are available.
    - a) Original formula: Flushing action, slow drying, flammable until solvent evaporates. Evaporation rate depends on ambient temperature, approx. 5 to 60 minutes for complete evaporation. 100% solution remains on surface.  
*Example: Part Nos. D5S-6, G5S-6, F5S-H6*
    - b) Nonflammable formula: No flushing action, quick drying. Solvent evaporates almost immediately. 100% solution remains on surface.  
*Example: Part Nos. DN5MS-15, DN5S-6N, GN5MS-15, GN5S-6N, FN5MS-H15*
  4. Always wipe excess 100% solution with clean lint-free cloth or swab. Please refer to Fader Maintenance and Potentiometer Maintenance instructions for the exception to this advisory.
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