Replacing a Dual Fan Unit on the GQAM Modulator

Overview

Introduction

The GQAM modulator (GQAM) has three dual fan units on the side panel. Each of these units contains two fan rotors. You must replace the entire dual fan unit if one of the fan rotors should fail. The fan units are designed to be "hot swappable," meaning that you do not necessarily have to power down the GQAM to replace a fan unit that has failed.

Important: In order to hot swap a dual fan unit, you must have the following:

- Sufficient length in all cords and cables so you can slide the device forward in the rack far enough to fully access the dual fan units on the side panel

- The ability to externally support the GQAM with a cart or table or with the assistance of another person

Note: If you do not have sufficient length in all cords and cables, you will have to disconnect all cords and cables and completely remove the GQAM from the rack to replace a dual fan unit that has failed.

Read this instruction sheet to learn how to replace a dual fan unit on the GQAM.

When Can I Perform This Procedure?

If you cannot hot swap the dual fan unit, you need to replace the fan unit during a maintenance window. This is necessary because you will have to power off and disconnect the GQAM to replace the fan unit, thereby temporarily disrupting all broadcast services configured and provisioned on this GQAM.

Important: Schedule the maintenance window to replace the fan as soon as possible to avoid damage to the GQAM.

Audience

This instruction sheet is written for system operators of the Digital Broadband Delivery System (DBDS), Digital Network Control System (DNCS) operators, and Cisco® Services engineers.

Document Version

This is the third formal release of this document.

Replace the Fan

Introduction

This section provides the procedure for replacing a dual fan unit on the GQAM by either hot swapping the fan unit, or by powering off, disconnecting, and removing the GQAM completely from the rack.

Replacing the Fan

⚠️ **WARNING:**

Avoid damage to this product! Replace the dual fan unit only with a genuine replacement fan unit from Cisco. Contact your Cisco Customer Service Representative to order replacement fan units.

To replace a fan on the GQAM, complete these steps.

1   Are the cables connected to the GQAM back panel long enough to allow you to slide the GQAM forward in the rack sufficiently to access the GQAM side panel where the fan units are located?

   ■ If **yes**, carefully remove the screws that secure the GQAM in the rack, and carefully slide the GQAM forward in the rack until you can access the fan units. Then, go to step 5.

   ⚠️ **CAUTION:**

   You must be able to externally support the GQAM with a cart or table or with the assistance of another person when you slide the chassis forward in the rack.

   ■ If **no**, go to step 2.

2   If you cannot slide the GQAM forward in the rack because some or all of the cables in the rack are not long enough to allow access to the fan, wait to replace the fan until you have a maintenance window. Then, choose one of the following options:

   ■ If *some* of the cables are not long enough, you must power off the GQAM and disconnect any cables that are not long enough.

   ■ If *all* of your cables are too short, you must power off the GQAM and disconnect all the cables, including the power cable.

3   Remove the screws that secure the GQAM in the rack. Then, remove the GQAM completely from the rack to replace the fan unit. Go to step 4.

4   After removing the GQAM, place it carefully on a sturdy flat surface.

5   Carefully remove the two screws that secure the 9-pin connector to the side panel and place them in a safe location nearby.

   Note: For a detailed illustration, see *Fan Unit Replacement Diagram* (on page 5).

6   Carefully remove the two screws and the two sleeves that secure the fan unit to the side panel and place them in a safe location nearby.

   Important: The sleeves are loose and are not connected to the fan. Be careful not to drop them.

7   Remove the non-functioning fan unit and carefully disconnect the 9-pin connector. Set this fan unit aside for safe disposal later.

8   Hold the new fan unit in place on the side panel of the GQAM so that the rotor with three fan blades is visible.

   Note: For proper alignment and orientation, see *Fan Unit Replacement Diagram* (on page 5).

9   Place the sleeves in the proper location on the fan (as shown in the diagram), insert the screws through the sleeves, and then carefully tighten the screws that secure the fan to the side panel.

   Important: Do not over tighten or cross thread the screws.

10   Carefully insert the 9-pin connector into the 9-pin socket, and then replace and carefully tighten the screws that secure the 9-pin connector to the side panel.

   Important: Do not over tighten or cross thread the screws.

11   Did you have to remove the GQAM completely from the rack?

   ■ If **yes**, go to step 13.
   ■ If **no**, go to step 12.

12   Replace the GQAM into its original position in the rack and secure it in the rack using the original screws. Then, go to step 14.

13   Replace the GQAM into its original position in the rack, secure it in the rack using the original screws, reconnect all cables, reconnect the power cord, and then power on the GQAM.
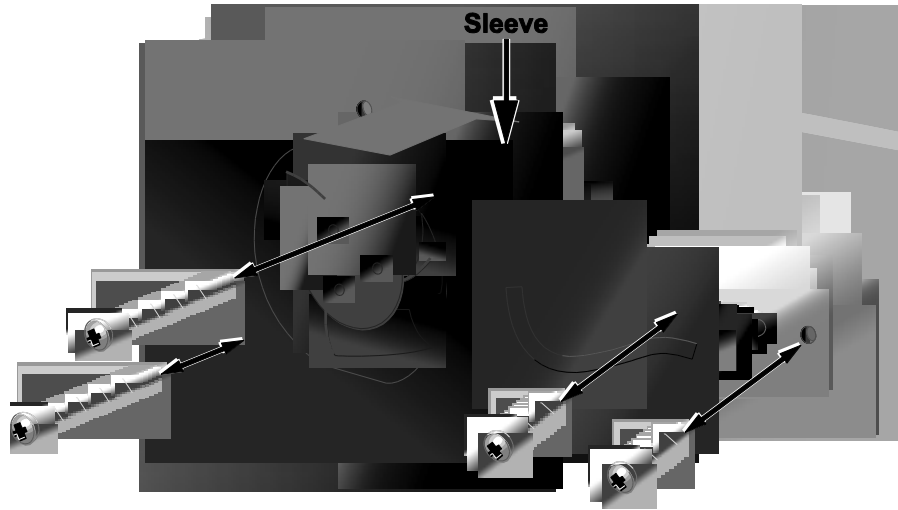
14   Does the new fan unit operate properly?

   ■ If **yes**, you have completed this procedure.
   ■ If **no**, contact Cisco Services for assistance.

Fan Unit Replacement Diagram

The following diagram illustrates how to replace the fan unit on the side panel of the GQAM.

Sleeve

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For Information

If You Have Questions

If you have technical questions, call Cisco Services for assistance. Follow the menu options to speak with a service engineer.

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