

Adjustment: DCFM	HP8648A/B/C/D	YO4HFU – v1.0
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Overview

This document describes the procedure to calibrate the DC FM of the HP8648 series signal generators by GPIB, following the procedure specified in the HP8648 Operating and Service Guide Manual.

Reference Instructions

DCFM (All 8648A/B/C/D)

Description

This adjustment is used to calibrate the DC FM. Make sure that nothing is connected to the MOD INPUT/OUTPUT connector on the DUT.

Required Test Equipment

- None

Procedure

Figure 7-24. DCFM Test Setup



1. Connect the equipment as shown above.
2. Preset all of the equipment.
3. Follow the instructions as they are displayed on the PC.

GPIB sequence according to Agilent Service Support Software

```
SERV:PRODUCTION:PUP
*IDN?
Hewlett-Packard, HP8648B, 3847A02762, B.04.09
FREQ 100.0000000000 MHZ
POWER:ATT:AUTO 1
*IDN?
Hewlett-Packard, HP8648B, 3847A02762, B.04.09
POWER:AMPL -136.0000000000
AM:STATE 0
FM:STATE 0
PM:STATE 0
OUTPUT 1
AM:STATE 0
PM:STATE 0
FM:STATE 1
FM:SOURCE EXT
FM:EXT:COUP DC
```

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```
*IDN?
Hewlett-Packard, HP8648B, 3847A02762, B.04.09
POWER:AMPL 0.0000000000
OUTPUT 1
CAL:DCFM
```

```
==DCFM HKUP passed==
```

```
SERV:PRODUCTION:PUP
SERV:PRODUCTION:PUP
```

```
===DCFM_CAL passed===
```

```
*IDN?
Hewlett-Packard, HP8648B, 3847A02762, B.04.09
FREQ 100.0000000000 MHZ
POWER:ATT:AUTO 1
*IDN?
Hewlett-Packard, HP8648B, 3847A02762, B.04.09
POWER:AMPL -136.0000000000
AM:STATE 0
FM:STATE 0
PM:STATE 0
OUTPUT 1
```

Procedure Overview

1. Initial Hookup Summary

Set the HP8648 generator to 100 MHz, FM, external DC coupled, RF output ON, 0 dBm. Make sure that nothing is connected to MOD INPUT/OUTPUT connector.

2. Run DCFM routine

It is a simple command:
CAL:DCFM

3. Reboot

Reboot HP8648:
SERV:PRODUCTION:PUP

Remarks

The DCFM calibration is just an internal routine, does not involve to access HP8648's EEPROM.

Once executed, the instrument automatically eliminates any dc offset associated with the FM path while in DCFM mode, offset that could affect the carrier frequency.

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The HP8648 does not provide any confirmation indicating whether the adjustment was successfully executed.

Same DCFM calibration can be executed from the front panel:

Press “EXT DC” while the instrument is already in external dc mode and the FM is on, then the instrument will perform a dc FM calibration. The calibration takes approximately one second. During the calibration the following message appears on the display: “017 DCFM calibration in progress”.

73's de Robert YO4HFU