TECHNICAL INFORMATION
BULLETIN

P R O F E S S I O N A L

TITLE:	**DrivePack DPDA**	NUMBER: TB- 053
Page: 1	**Input Module Modification**	DATE: 06/08/2012

Purpose:

To notify the field of a required modification to DrivePack DPDA input modules to prevent them from rebooting while online. This modification is also required in order to operate JBL Version 5 (or higher) preset releases.

Solution Description:

Two modifications need to be made to remedy the DPDA rebooting issue.

1. Two ferrite beads must be changed on the middle board, versions **PWA 141234-5 or earlier**. Board versions **PWA 141234-6 and newer need not be modified**. They should already have the correct ferrite bead. Change **FB13** for the DSP's +1.3V supply and **FB19** for the D/A convertor's +5V supply. Instructions for this procedure are found under the "Solution Procedure" heading of this document.

2. It is also required to change **R96** on any top board version **PWA 141213-6 or earlier** from 7.68k to **10.5k**. For **PWAs 141213-7 or 141213-8**, **R96** must be changed to **9.76k**. Top board versions **PWA 141213-9 or newer need not be modified**, they should already have the correct value of 9.76k for R96. Instructions for this procedure are found under the "Solution Procedure" heading of this document.

These changes prevent the system from intermittently rebooting and emitting distortion (noise) while in use. The root cause of this issue involve extreme current draw from the DSP exhausting the regulated supply and causing increased dissipated heat.

Ferrite beads help to balance the reactance of the current flowing between DSP and regulated power supply boards (PWAs 141234 and 141213.) A balanced reactance enables the board to be more efficient and produce less heat.

The resistor change further assists managing current flow to the DSP. PWAs 141234-5 or earlier had a thinner trace coming off of the regulator that feeds the DSP. These boards require the largest value resistance to account for this thinner trace. PWAs 141213-7 and -8 have the thicker trace present but still need an increase in resistor value to clear up the majority of rebooting problems. After these changes have been made, V4 or V5 tunings can be run with minimal likelihood of difficulty.

Scope:

DPDA modules with top board **PWA-141245-5 or earlier** and middle board **PWA-141213-8 or earlier** are suspect. If no board version is indicated on the PWA, then the modification is needed.

Warranty Implications:

This is not a product recall, but rather a notice to service agencies and distributors of the potential failure. It is recommended that this procedure be performed whenever the symptom is apparent

or product is returned for repair or credit. Any U.S. authorized service agency performing this procedure should file a warranty claim according to standard/normal procedure.

Tools and Supplies:

- T-15 Torx Screwdriver
- SMT Tweezers
- Solder
- Soldering Iron

Solution Procedure

1. Remove the (2) T-15 Torx screws that hold down the top board (PWA-141213).

2. Remove the top board to access the middle board, **PWA 141234-5 or earlier**.

3. Locate FB19 & FB13 on the middle board as indicated in Fig.1 & Fig. 2. Replace FB19 & FB 13 with a higher current part (JBL part number 141686-1JBL).

4. Locate R96 on the top board as indicated in Fig.3. With **PWA 141213-6 or earlier**, replace R96 with 10.5k (Part Number 141212-5jbl). With **PWA 141213-7 or PWA 141213-8**, replace R96 with 9.76k (Part Number 141212-6jbl).

5. Reassemble the input module and test/confirm proper operation.

   Caution: Be careful when inserting the male pins into J1 and aligning connectors J5 and J9, make sure they are properly aligned!
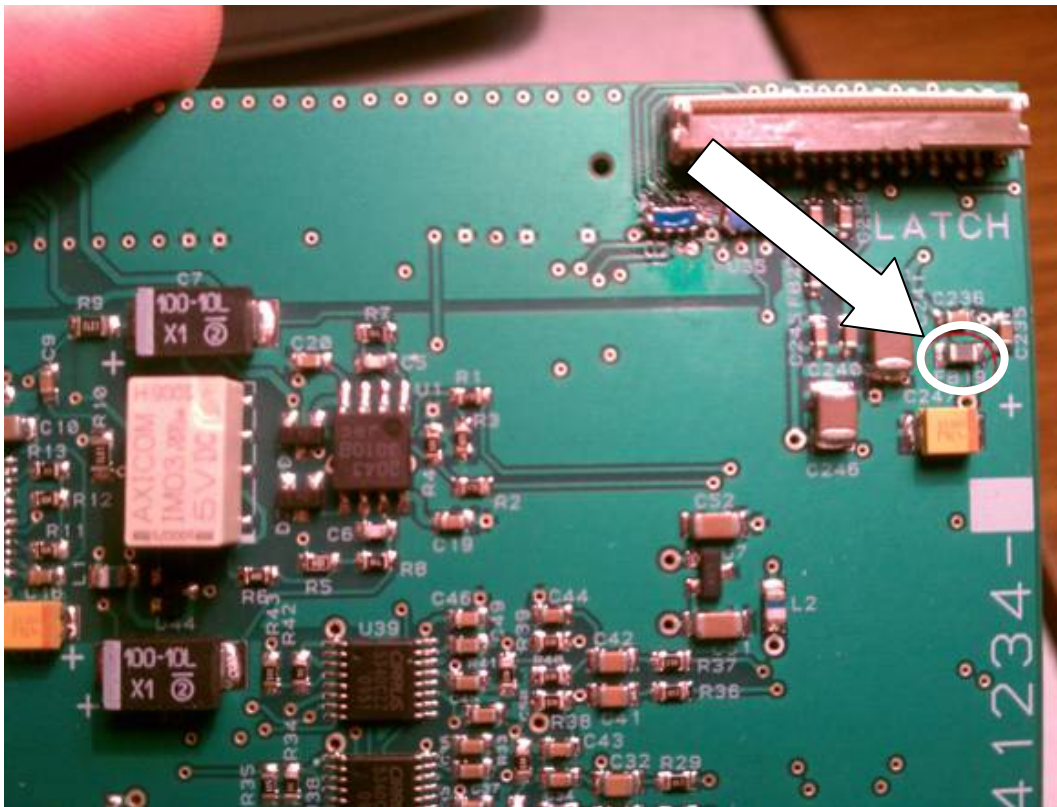
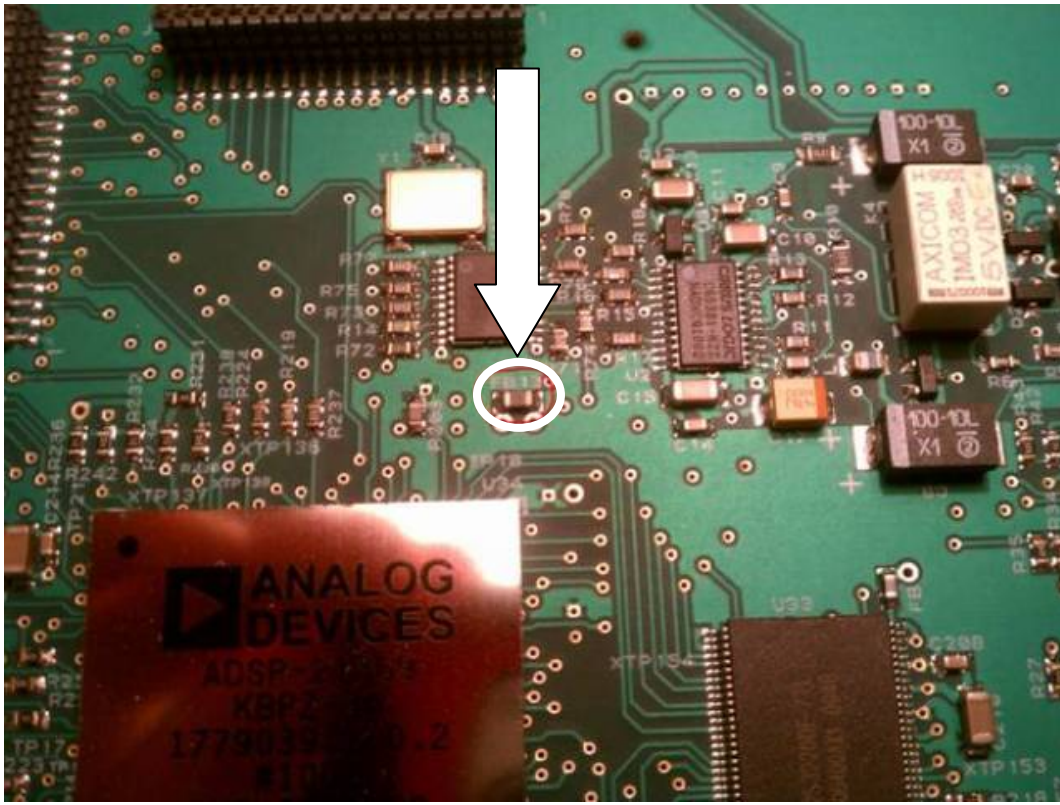## Fig.1 Location of FB19 on middle board

Fig.2 Location of <u>FB13</u> on middle board

Fig.3 Location of <u>R96</u> on top board