

Bally Midway 7533 DAC Failures

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SUBJECT

Premature failure of the 7533 DAC's on the sound boards. During extensive research on the sound board's Digital to Analog converter circuit, we have discovered a transient condition which may result in premature failure of this part.

CAUSE

This condition is due to overstressed metallization related to pin 1 on this chip. The situation occurs on power-down when the

Vcc begins to fall and reaches about 1.5 volts. At this time, the voltage on pin 1 exceeds Vcc for a fraction of a second. The DAC is not designed to withstand this condition.

CURE

Remove the 47uF capacitor connected to pin 1 of this chip. This will eliminate the transient condition on the circuit, and testing indicates that this removal has no negative effect on the overall operation of the circuit.

To remove the correct capacitor use the following guide.

Board Series	Item	Board Name	Remove Capacitor
A084-91863	1.	Sounds Good (Video)	C122
A084-91671	2.	Cheap Squeak Deluxe (Video)	C122
A084-91671	3.	Artificial Artist (Video)	C122
A084-91779	4.	Turbo Cheap Squeak (Video)	C12
A084-91855	5.	T.C.S. Pinball (Pinball)	C30
A084-91864	6.	Sounds Deluxe (Pinball)	C12

The following games use one or more of the sound boards identified by their item numbers:

Pinballs	Videos
Black Belt (5.)	Demo Derby (4.)
City Slicker (5.)	Max R.P.M. (4.)
Dungeons & Dragons (6.)	Power Drive (1.)
Escape from the Lost World (6.)	Rampage (1.)
Hardbody (5.)	Sarge (4.)
Heavy Metal (6.)	Spy Hunter (2.)
Motordome (5.)	Spy Hunter II (1.& 4.)
Party Animal (6.)	Star Guards (1.)
Special Force (6.)	Xenophobe (1.)
Strange Science (5.)	Zwackery (3.)