

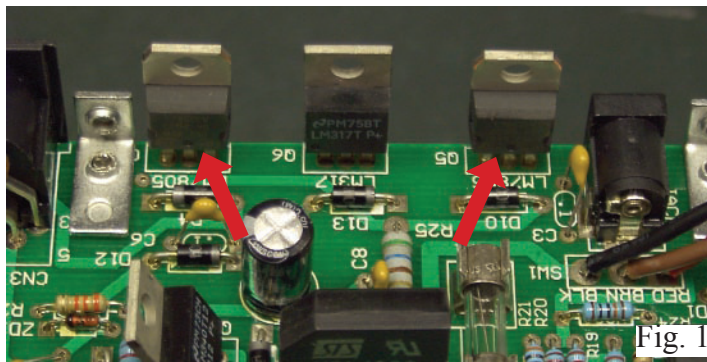
Newgy Technical Bulletin #3

Defective Voltage Regulator IC

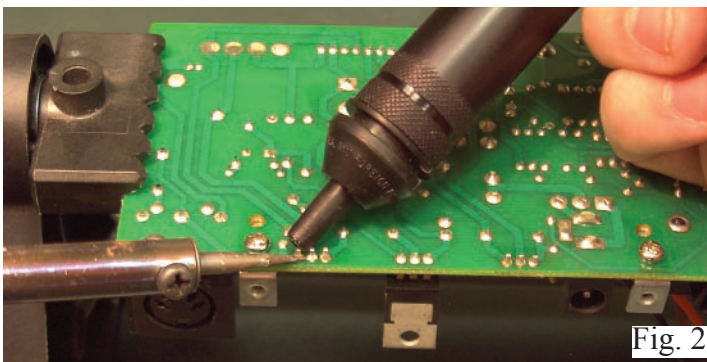
March 10, 2009

Newgy Industries has become aware of a possible defective electrical component used in the production of some Robo-Pong 1040 and 2040 control boxes manufactured between April and December of 2008. Please consult the attached list of serial numbers to determine if your unit is affected. Failure of this part renders the robot unusable. Repair requires the complete replacement of the part by a qualified service technician. Robo-Pong 540 control boxes are not affected.

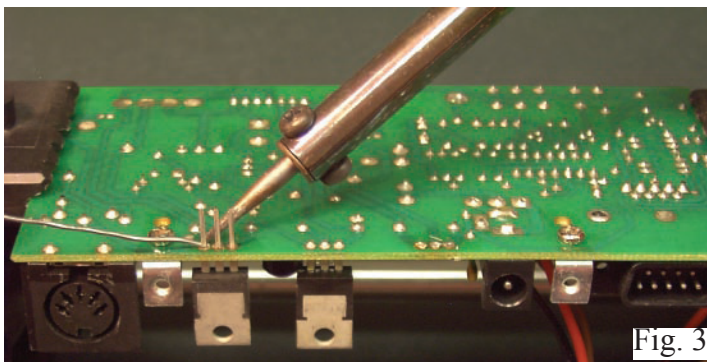
The faulty component has been identified as the voltage regulator used for controlling both the Ball Speed and Oscillation motors, Newgy part #2000-224-08. As of March 2009, the majority of failures affect only the Ball Speed channel. However both IC's should be replaced if either exhibits symptoms. A typical failure results in the channel running extremely slowly with little or no response to user control. Less common is a complete loss of all voltage to the ball speed motor. Repair consists of removing the faulty parts and replacing with functioning IC's of the same type from a different lot or manufacturer.



Parts to be replaced



Remove remaining solder



Insert new ICs, apply solder and trim excess

Repair Procedure:

1. Disassemble the control box and separate the Printed Circuit Board from the metal back plate.
2. Identify the voltage regulators to be replaced. The parts are marked 'LM7805' on the PCB and located between L shaped mounting brackets. The center IC, marked LM317 does not require replacement. See Fig. 1
3. Snip the leads of each LM7805 IC. Discard the regulator bodies and remove the remaining leads from the PCB with a soldering iron.
4. Using a vacuum type solder 'sucker', or braided solder wick, remove any solder still present in the through holes of the PCB.
5. Insert new regulators and re-solder each joint. Trim excess leads and reassemble. See Fig 3.

Caution: Regulators are heat sensitive and can be damaged by prolonged exposure to soldering temperatures. **Apply heat sparingly.**

Caution: Take care to ensure that the gray insulating pad remains between the regulators and metal back plate upon reassembly.

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Serial number ranges of robots with possibly defective voltage regulators

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If your robot's serial number is included in the attached list, and you notice any unusual behavior from either the Ball Speed or Oscillator Speed controls, we recommend that you send your Control Box in for repair. Cost of repair and return shipping is free of charge.

Send Control Box to:

Newgy Industries
Repair Dept. (TSB3)
805 Teal Drive
Gallatin, TN 37066

Serial Numbers

A080769-A081023	G080442-G080461
A081056--A081173	G080487-G080665
A081186-A081497	G080671-G080700
A081530-A081631	G080711-G080890
A081645-A082032	G080931-G081130
A082070-A082176	G081136-G081165
C080126-C080179	G081176-G081361
C080228-C080249	G081367-G081575
C080251-C080270	G081581-G081600
C080801-C080868	G081606-G081795
C081383-C081814	J080401-J080800
C082427-C082471	