

November 2007

TECHNICAL SERVICE BULLETIN from Pyrodigital Consultants, Inc.

FM-4 “No Response, but Fires OK” Problem

There seem to be some older FM-4's that appear to be “dead”, showing NO RESPONSE on the Field Controller, but upon testing, all circuits still Fire OK. We have found blown R11 and R12 resistors on the PCB which prevents Status Returns, thus showing up as “No Response” FM-4's.

We DO NOT believe that the problem is systemic to all FM-4's. Current Production FM-4's has newer “high anti surge” resistors installed.

Pyrodigital Consultants, Inc. does not understand why these R11 / R12 resistors fail. If you, the Customer, can identify any circumstances or specific instances where the failure occurs, please let us know.

As an accommodation to our Customers, Pyrodigital Consultants, Inc. offers several options to have these type failed FM-4's repaired.

Customer Local Repair Option;

The simplest, fastest, and lowest cost option is for the customer to have their own FM-4's repaired by a local shop qualified to work on surface mount PCB's (surface mount Printed Circuit Boards). Such qualified shops are available in virtually any major city worldwide. Pyrodigital Consultant, Inc. will provide replacement double wattage, high anti surge resistors at No Cost. Additionally the resistor part numbers are included, as the local shop may already have these inexpensive resistors in stock or be able to obtain them easily. Replacing the resistors is not difficult for a qualified shop and should not be very expensive. This Service Bulletin includes simple instructions and photographs to assist your local shop in replacing the R11 and R12 resistors. This option saves you time and shipping costs to / from Pyrodigital. Note that the R11 / R12 resistors can be changed without having to remove the PCB, but can be replaced with only the Top Cover of the FM-4 removed.

Pyrodigital Factory Repair Options;

PCB ONLY. Call us for an RMA Authorization and send the PCB ONLY (which you have removed from the FM-4) and we will replace the R11 and R12 resistors with the new double wattage, high anti surge resistors at our cost + shipping. The cost is minimal, check with us for current cost.

FM BOTTOM HOUSING WITH PCB ONLY. Call us for an RMA Authorization and send the PCB still installed in the Bottom Housing (for which you have removed the Top Cover of the FM-4) and we will replace the R11 and R12 resistors with the new double wattage, high anti surge resistors at our higher cost (due to increased labor for handling with PCB installed) + shipping.

ENTIRE COMPLETE FM-4. Call us for an RMA Authorization and send the entire complete FM-4 and we will replace the R11 and R12 resistors with the new double wattage, high anti surge resistors for our even higher cost (including cost of disassembly and reassembly of complete FM-4) + shipping. This option will, of course, additionally have the highest shipping costs and take the most time for us to repair.

CALL FIRST before shipping; Pyrodigital Consultants, Inc.; USA 831-375-9489

Normal shipping address for R11 / R12 resistor replacement on FM-4 PCB's;

PEAK CONTRACT MANUFACTURING
ATTN: Nixon Electronics / FM-4 Repair
6113 Constitution Ave.
Colorado Springs, CO 80915 USA

Notes for Customer Local Repair Shop:

Anyone with normal surface mount skills should be able to replace both resistors.

Please see included photograph for identification / location of the R11 and R12 resistors.

Just use a small screwdriver to dig out tough gel conformal coating around the parts first.

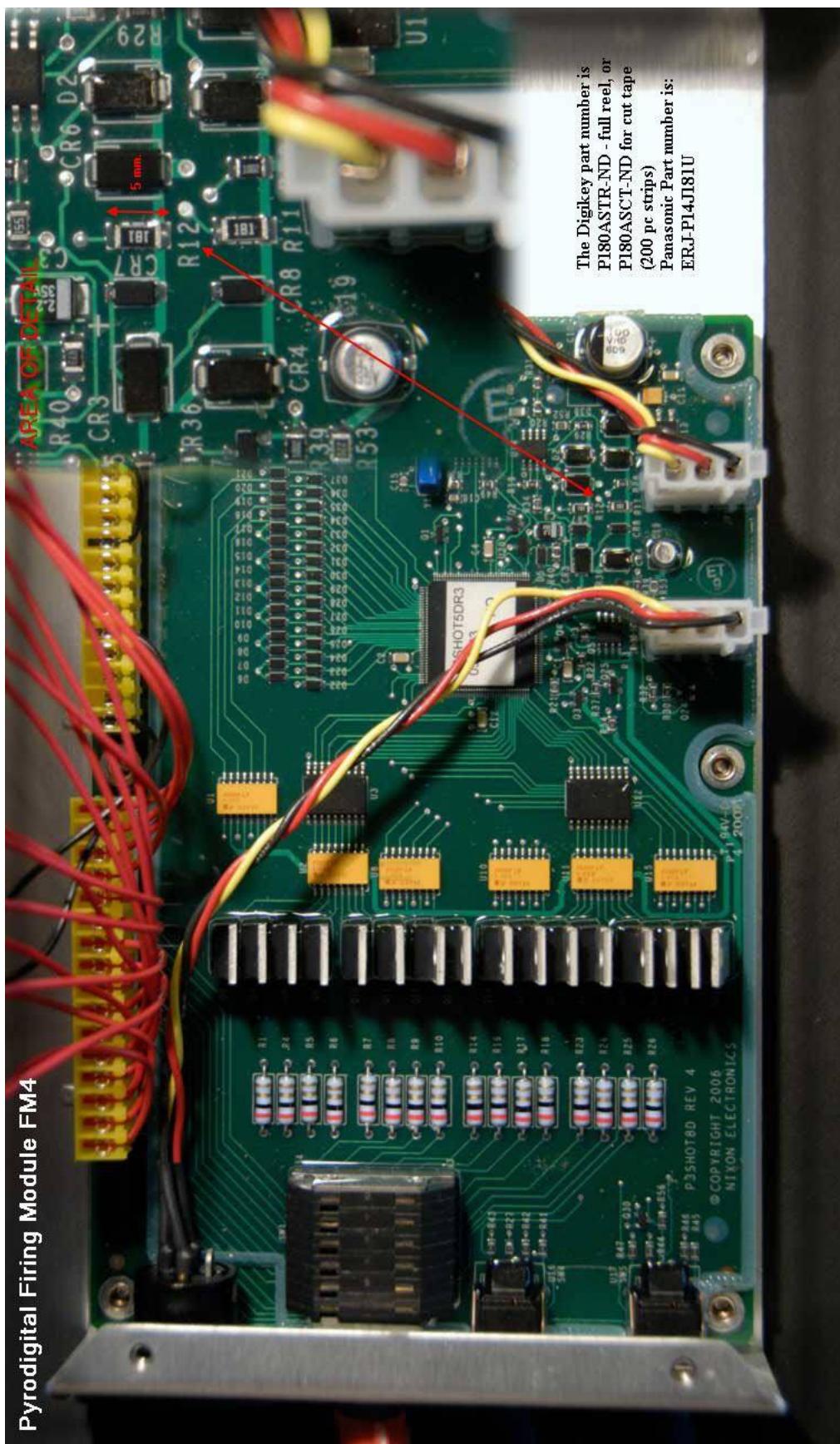
For the R11 & R12 resistors, the Digikey part number is P180ASTR-ND - full reel, or P180ASCT-ND for cut tape (200 pc strips)

<http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail?name=P180ASCT-ND>

The Panasonic Part number is ERJ-P14J181U

Pyrodigital Consultants, Inc. can provide these parts at NO COST. After replacing both the R11 and R12 resistors, test the PCB for function if possible.

Re-seal the PCB around the resistors with an Electronic Grade RTV Sealer. If you don't have, or can't find, an Electronic Grade RTV Sealer, check with Pyrodigital Consultants, Inc. for suggested Part Number / Supplier / Availability.



Pyrodigital Firing Module FM4