ENVIRONMENTAL/RELIABILITY ENGINEERING

TEST REPORT

ESD EVALUATION OF THE 7800, 2100 & CX-24

ENGINEERING RELEASED

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Title: ESD EVALUATION OF THE
7800, 2100 & CX-24

Proline Controller

Component

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The 7800 console, 6532 IC, fails at an "ESD" level of 25KV applied to port 1 or port 2 with the controllers inserted. An acceptable solution is to add 12 Volt zener diodes, C062081, to Rev. 7.0 P.C.B. as shown in figure 1.

![Figure 1](image)

Further, the 7800 console, 6532 IC, fails at an "ESD" level of 20KV applied to the seams of controller 1 or controller 2. Two acceptable solutions are needed and identified as follows:

1. **7800 Console:**
   
   Provide the basic "ESD" protection for the console ports, by adding the zeners as identified in figure 1. (Dan Schwinn of GCC was notified 3/15/84 by FAX, ref. C024673-159, that the additional zeners are required for "ESD" protection.)

2. **CX-24 Proline Controller:**
   
   Eliminate the source of the ESD to the console, proline controller seams, by providing an isolated ground discharge path through a ferride bead in the controller. The new (3/16/84) controller P.C.B. with minor updates, ground isolation, will eliminate the "ESD" source to the console.
The 2100 console, 6532 IC, fails @ an "ESD" level of 25KV applied to the seams of the proline controller 1 or controller 2. Two acceptable solutions are needed and identified as follows:

1. **CX-24 Proline Controller** (Long term - following the use of the existing 200,000 P.C.B.)
   
   Eliminate the "ESD" source to the console by updating the P.C.B. to provide an isolated ground discharge path through a ferride bead. (Same as previously discussed.)

2. **CX-24 Proline Controller** (Short term - exhaust the existing 200,000 P.C.B. stock.)

   Provide a continuous metal strip along the inside seams and around the bottom mounting post. Ensure that the metal strip extends beyond the P.C.B. and is flush against the seams.

GS/pw

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