**Options for Quick Recovery from loss of Heartbeat on ZFM**

1. Reboot ZFM (always do this first to see if Heartbeat returns)
2. Disconnect as many ZFA Modules as possible and see if Heartbeat returns
   1. If it returns – then one of those disconnected Modules or cables is bad
   2. If it does not – continue to step 3
3. Whichever of the following is easiest/quickest to try:
   1. Turn off power and replace the SD with a functional SD
      1. if Heartbeat returns {AND #1 was tried} – there was a problem with the previous SD or its “fit” retry the old SD in case it was a “fit” issue
         1. if still no good, replace or re-image the SD
         2. If the old one now works, consider replacing the ZFM as the SD holder may be questionable
      2. if Heartbeat {after 1 minute} does not return – replace the ZFM (this only applies if no ZFA Modules are connected)
   2. Power the ZFM unit w/no ZFA Modules attached (whether done as mounted, or removed to a test stand, or un-mounted and connected directly to the power supply)
      1. if no Heartbeat {after 1 minute} – then problem with SD or “fit” of SD
      2. if Heartbeat returns, then ZFM is good and there is a problem w/ZFA network (either bad ZFA Module or cabling connection between them – need to follow procedure for discovering bad Modules/cable connections).