



BAS Dealer Service Note 10/13/97

Trunk Line Communication Problems- Part II

Note: The problem described in this Service Note is not the same as that described in the 'Trunk Line Communication Problems' Service Note of 1/31/97.

Description of Problem

RSCs will occasionally not transmit response packets to the PC. The transmission failure can last anywhere from a few packets to several minutes, but most often lasts for exactly 1 minute. If it lasts less than 3 minutes, the RSC remains online and there are no apparent negative effects. If the loss lasts more than 3 minutes, the RSC will enter an 'Init' mode and remain there until communication is restored.

Extent of Problem

This problem affects all BAS Sites, all RSC types, and all EPROM versions. The severity of the problem depends on the Equipment Schedules used. This problem is dependent on the RSC whose address is one lower than the RSC with the problem. The operation of RSC 1-9 can impact RSC 1-10, etc. This problem is much more likely to occur if the preceding address is either a dual or quad Equipment Schedule using 3 point floating actuators. The problem will be apparent when reviewing the Alarm Log for the site. The 'Losing Packets' alarm message is recorded when the event occurs. In general, it can be said that sites are either severely affected or rarely affected by this problem.

Cause of Problem

The RSC is constantly searching data on the trunk line for a valid packet. It is possible for the last few bytes of an RSC's data packet to be identical to the first few bytes of the next RSC's data packet. This next RSC will correctly determine that these bytes are not actually part of its data packet and reject the data. When this happens it will also incorrectly reject one additional byte in the data stream. This additional byte happens to be the first byte of its valid data packet, causing it to consider that it has not received a valid packet. Since the RSC believes it has not received a valid packet from the PC, it will not respond.

Solution

The incoming data handling routine included in Type 3 RSC EPROMs has been re-written and is identified as version 4.3. There is no plan to modify Type 1 RSC EPROMs at this time. The EPROM must be exchanged to take advantage of the improvements. If the site is using Type 1 RSCs, or it is not practical to change out EPROMs, changes can be made to the site configuration that will significantly lessen the severity of the problem. Contact BAS for assistance.

BAS has a limited number of EPROMs available for exchange. These will be provided to Dealers upon request as availability allows. The Dealer will be invoiced at \$25/EPROM when the replacements are shipped and will be credited \$20/EPROM when the old EPROMs are returned in good condition. Any version number of 4.2 or later EPROMs will be credited the full \$25 when returned.

As an alternative, the Dealer may purchase new EPROMS and ship them to BAS. These will be programmed for \$5/EPROM and returned to the Dealer. The EPROMS required are 32kx8 UV Erasable 200 nS (or faster such as 120 nS) EPROMs. They may be purchased from several sources including Newark Electronics, 1-800-463-9275, Texas Instruments Part # TMS27C256120JL, Price - \$2.30/ea in quantities of 50.