



B A S Dealer Service Note 1/31/97

Trunk Line Communication Problems

Description of Problem

RSCs will occasionally not transmit response packets to the PC. This occurs more frequently on Type 3 RSCs than on Type 1 RSCs. The frequency of packet loss is entirely random and averages 1/70 transmissions on Type 3 RSCs and 1/500 transmissions on Type 1 RSCs.

Extent of Problem

This problem affects all BAS Sites. The severity of the problem depends on the type of RSC used and the Equipment Schedules used. If the packet loss occurs during nightly initialization of 3 point floating actuators, actuator positioning could be incorrect until the next initialization. The following list shows the possible combinations in order of severity:

1. Type 3 RSCs using 3 point floating actuators. These should be upgraded as soon as possible.
2. All other Type 3 RSCs. These should be upgraded when convenient.
3. Type 1 RSCs using 3 point floating actuators. These should be upgraded if problems are experienced.
4. All other Type 1 RSCs. It is not necessary to upgrade these RSCs.

Cause of Problem

The RSC must maintain several timers for various on-board time sensitive functions. No other instructions can be processed while the timers are updated. The length of time necessary to service the timers would occasionally cause a character in the receive buffer to be overwritten by a new incoming character before the previous character could be saved. The incomplete data packet would be rejected by the RSC and the RSC would not respond. The Type 3 RSCs have added several time sensitive features making the problem much more apparent than in Type 1 RSCs.

Solution

The timer service instructions have been extensively re-written. The average packet loss rate has been increased to greater than 1/10,000 transmissions. The EPROM must be exchanged to take advantage of the improvements.

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.

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.

When requesting updated EPROMS from BAS, specify the version number:

1. 3.3a for all Type 1 RSCs.
2. 4.0g for all Type 3 RSCs using any version 4.0 EPROM.
3. 4.2a for all Type 3 RSCs using any version 4.1 EPROM.