NBT APPLICATION NOTE
XMOD15 LEASED LINE MODEM
Suggested settings for Allen Bradley DF1 applications

The XMOD15 is a leased-line switched-carrier modem capable of multi-drop connections over 2 or 4-wire lines.

In order to connect DF1 protocol over a switched-carrier modem, the half-duplex mode with hardware handshaking must be selected.

The XMOD15 needs approximately 40ms key-up time before data is sent, in order to allow for the receiving modem to lock onto the carrier. This can be achieved by either selecting the delay in the PLC port configuration, or by adjustment of the “CTS delay” pot on the modem. A setting of 50-100ms is recommended. This would correspond with a position of “10:00” on the CTS delay pot. If the PLC port configuration is relied on for delay after RTS, the modem pot should be set to minimum (fully counter-clockwise).

In general, the default settings, which the modems are shipped with, should work well. The exception would possibly be the TX gain; if the phone lines are not conditioned, higher gain may be necessary. It is suggested progressively higher settings are tried, rather than adjusting to maximum. Output clipping can occur at maximum.