

Model 2045

HF ALE Radio Controller

- **Programmable Radio Interface**
- **Link Quality Analysis (LQA)**
- **Scanning (2 or 5 channels per second)**
- **Selective Calling**
- **Automatic Sounding**
- **Automatic Hand-Off to an External Modem**
- **Windows GUI Interface**
- **Command-Driven Option Available**
- **Link Protection per MIL STD 188-141A (AL-0, AL-1, AI-2)**

nsgdata.com's Automatic Link Establishment (ALE) Radio Controller has changed the way HF networks operate. No longer are highly skilled operators required to establish suitable HF links as the 2045 automates many of the procedures necessary to establish and maintain these links. ALE radio systems provide enhanced communications, reliability and operational simplicity.

The model 2045 is used to provide existing radio systems with ALE performance and interoperability per FED-STD-1045 and U.S. MIL-STD-188-141A. The unit easily interfaces with any HF radio which is equipped with remote control capability.

The ALE Radio Controller automatically scans a pre-selected set of radio channels, listening for calls, and is ready to respond. The scanned channels are selectable in groups to provide flexibility in channel and network management. The scan rate can be set for 2 or 5 channels per second.

Affordable and Interoperable

The ALE Radio Controller is the nucleus of Federal standard 2045 for ALE interoperability. The Model 2045 is affordable because there is no need to buy additional radios with the unit. The unit can be used to upgrade existing radio systems to ALE and can interface many different makes and models of radios.

The ALE Radio Controller's powerful memory stores up to 10,000 sets of LQA information, 100 channel configurations, 20 self-address configurations and 100 other address configurations. The unit supports up to three modes of Order wire: Automatic Message Display, Data Text Message and Data Block Message.

The model 2045 provides maximum data handling capability and can successfully pass data over channels 10 dB under usable voice signal-to-noise levels. Hand-off to an external modem permits high-speed data transfer after a link has been established.



2045 Specifications

Model 2045

Electrical

Radio Control I/O:

EIA-RS-423, 232D, MIL-188C, or MIL-188-114A
Asynchronous 50 to 9600 bps

Control Terminal I/O:

EIA-RS-423, 232D, MIL-188C, or MIL-188-114A
Asynchronous 50 to 9600 bps
ANSI X.364 compatible

External Modem Digital I/O:

EIA-RS-423, 232D, MIL-188C, or MIL-188-114A
Direct Data Pass Through

External Modem Audio I/O:

Input/Output Impedance: 600 ohms balanced
Maximum Input: +6 dBm

Internal Modem I/O:

Input/Output Impedance: 600 ohms balanced
Output Level: Adjustable -10 to 0 dBm
Input Level: -40 to +6 dBm
Modulation: 8-Ary FSK at 125 baud

ALE Protocol:

FED-STD-1045/MIL-STD-188-141A

Power:

Source: 115/230 Vac
Dissipation: 12 Watts

Physical

Size: 1.72"H x 8.37"W x 12" D
Weight: 5 lbs

Environmental

Temperature:

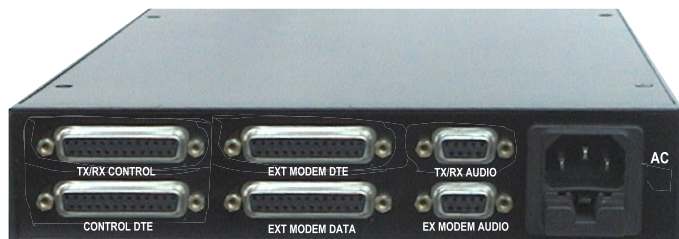
- Operating: 0 to +50 degrees C
- Storage: -40 to +75 degrees C

Humidity:

0 to 95% non-condensing

Altitude:

- Operating: 0 to 15,000 feet
- Storage: 0 to 25,000 feet



- **Reduces the skill level required to operate HF radio circuits**
- **Reduces the time required to establish an HF radio link**
- **Offers a more efficient use of the HF spectrum**
- **Allows data to be transmitted on HF channels which are unusable for voice traffic**
- **Provides FED-STD-1045 and U.S. MIL-STD-188-141A interoperability**