

## Model 1045

### 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**
- **Intuitive Menu-Driven Interface**
- **Command-Driven Option Available**

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 1045 automates many of the procedures necessary to establish and maintain these links. ALE radio systems provide enhanced communications, reliability and operational simplicity.

The model 1045 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 1045 for ALE interoperability. The Model 1045 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 1045 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.



# 1045 Specifications

## Model 1045

### 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

#### Order Wire I/O:

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

#### 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: 16 Watts

### Physical

**Size:** 1.75"H x 19"W x 17" D

**Weight:** 8.5 lbs

### Environmental

#### Temperature:

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

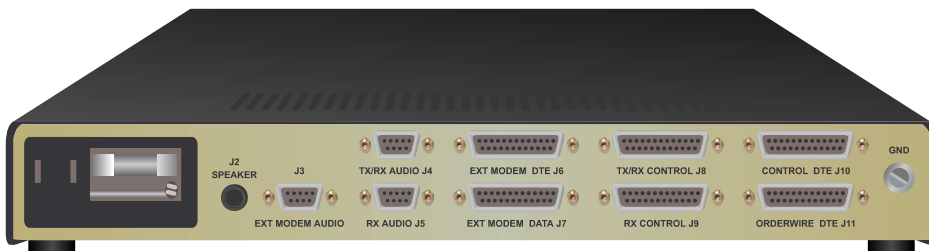
#### Humidity:

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**



Specifications subject to change without notice.

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