

SOHware

CableFREE NetBlaster

Operating Guide

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Introduction

CableFREE NetBlaster was one of the first IEEE 802.11 wireless standard compliant products in the industry and was designed with a “*Maximizing the Convenience of Networking*” philosophy in mind.

The CableFREE NetBlaster provides a transparent bridged connection between a wired network and a wireless network and allows your wireless stations to communicate with devices attached to your wired network. It manages the flow of data packets from the wired LAN to the wireless LAN, and vice versa. It can also be used as a relay point to extend the distance between stations.

CableFREE NetBlaster Hardware Setup

This section explains how to quickly setup the CableFREE NetBlaster for use via a wired Ethernet connection, and using the factory default settings. To setup a wireless station, refer to the ISA/PC Card User' s Guide.

- step1.** Place the CableFREE NetBlaster in a suitable location (see CableFREE NetBlaster Placement Guidelines)
- step2.** Connect the Ethernet network cable to the UTP port
- step3.** Connect the power adapter to the electricity outlet and then to the CableFREE NetBlaster DC-In port
- step4.** Turn on the CableFREE NetBlaster power switch

The CableFREE NetBlaster is now ready to communicate with the wireless stations using its factory default settings.

Planning Your Network

Infrastructure Network Types

An Infrastructure network is formed by several stations and CableFREE NetBlaster, with the stations within a set distance from the CableFREE NetBlaster. Figure 1 depicts a typical Infrastructure network topology.

There are two infrastructure network setups that are commonly used. It is a good idea to understand the possible network setups and configuration requirements before planning your wireless network.

Type 1. The simplest wireless infrastructure network is composed of one CableFREE NetBlaster and a few wireless Stations communicating via radio waves (Figure 1). This setup enables mobile stations to communicate with each other. The main benefit of this type of network is to extend the range of the network. If a cableFREE NetBlaster is placed between Station-1 and Station-2, the radio transmission distance is effectively doubled since Station-1 can talk to Station-2 through the CableFREE NetBlaster. The drawback of this configuration is that the effective bandwidth is halved since all communication is relayed by the CableFREE NetBlaster.

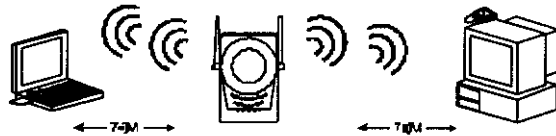


Figure 1. Simple Wireless Infrastructure Network

Type 2. The next simplest wireless network is very similar to the Type 1 network. This time the CableFREE NetBlaster is connected to a wired Ethernet network as a node. In this configuration the CableFREE NetBlaster is effectively performing as a bridge between the wired Ethernet and the wireless networks (Figure 2). Wireless users have the same access to the network resources as they would have if they were wired. This type of network is usually used to extend an existing network into a difficult to wire environment.

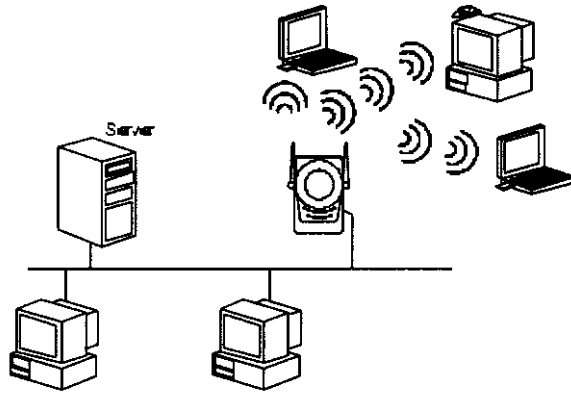


Figure 2. CableFREE NetBlaster to Wired Ethernet Bridge

Any other type of configuration is usually a mix of these commonly used types.

CableFREE NetBlaster Placement Guidelines

A characteristic of radio communication is the “interference” problem. Radio is receptive to interference. Therefore, the more interference you can avoid, the better performance you will get from wireless products. The following section describes how the CableFREE NetBlaster should be placed to reduce possible interference.

A few tips to mention that are particularly significant in a radio wave communications system:

1. Radio waves reflect or refract from buildings, walls, metal furniture, or other objects. This could result in performance degradation due to the fluctuation of the received signal
2. Microwave ovens use the 2.45 GHz frequency band. CableFREE also functions in the 2.4 ~ 2.5 GHz band, and therefore shares some of the band with microwave ovens. This means that when a nearby microwave oven is in use it may interfere with CableFREE, resulting in performance degradation on the wireless network

Placing For Performance

For the best performance, it is advisable that users follow the guidelines below in placing the product:

- Place the CableFREE NetBlaster as high as possible, in as open an area as possible
- Avoid placing the CableFREE NetBlaster close to metal objects (e.g., file cabinets, metal cubicles, .etc.)
- Keep CableFREE NetBlasters and Stations as far away as possible from microwave ovens (10 meters min. is advisable)