BNET Vehicular (a BSX™ Product)

Deployment and Installation Manual
FCC ID: 2AVVL0BSXR1BNETV001

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1. CHAPTER 1 - INTRODUCTION

1.1. PURPOSE OF THIS MANUAL

This manual describes the BNET Vehicular and details the operating and deployment procedures performed on the system.

1.2. ARRANGEMENT OF THIS MANUAL

This manual includes the following chapters :

Chapter 1 – Introduction

This chapter provides general information on the scope and arrangement of the manual, a list of applicable documents, general safety instructions, definition of warnings, cautions and notes.

Chapter 2 - Safety Instructions

This chapter provides safety instructions for technicians and operators of the BNET system. When working with the system, follow these safety instructions to avoid physical injury or damage to equipment.

Chapter 3 - System Description

This chapter describes the: system's purpose, main features, main subsystems including components, and block diagram.

Chapter 4 - Deployment and Operation

This chapter provides the procedures for installing the system, including specification of required personnel, tools, and materials. In addition, this chapter provides the procedures for maintenance and operational system deployment.

1.3. FCC WARNING AND NOTIFICATIONS

- Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

- This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

- To comply with FCC RE exposure regulations, personnel operating this device in a General or Uncontrolled Exposure environment should maintain a minimum separation distance of 78cm between the user and the LMR antenna

- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna,
  - Increase the separation between the equipment and receiving module,
  - Connect the equipment into an outlet on a circuit different from that to which the receiving module is connected, and/or
  - Consult the dealer or an experienced radio/TV technician for help.

  This device complies with 47 CFR § 90.203(j) (1) and is capable of operating in the analog FM mode on the nationwide public safety interoperability channels in the 450-470 MHz band, as appropriate.

1.4. WARNINGS, CAUTIONS AND NOTES

Warnings and cautions precede the text to which they apply. Notes may precede or follow applicable text, depending upon the material to be highlighted. Warnings, cautions or notes are concise statements used to emphasize important or critical data. The definitions of warning, caution and note are as follows:

WARNING

A warning highlights an essential operating or maintenance procedure, practice, condition, tatement, etc., which, if not strictly observed, could result in injury to, or death of, personnel or long term health hazards.

CAUTION

A caution highlights an essential operating or maintenance procedure, practice, condition, statement etc., which, if not strictly observed, could result in damage to, or destruction of, equipment or loss of mission effectiveness.

NOTE

A note highlights or clarifies an essential system description or operating or maintenance procedure, condition or statement.

2. CHAPTER 2 – Safety Instructions

2.1. SCOPE

This chapter provides safety instructions for technicians and operators of the BNET system. When working with the system, follow these safety instructions to avoid physical injury and damage to equipment.

2.2. GENERAL SAFETY INSTRUCTIONS

The safety instructions in this chapter are in addition to, and do not replace, the local regulations and standards that are relevant to the operation and maintenance of the BNET system.

1) In the event of injury, seek immediate medical attention.
2) Only trained personnel are permitted to perform BNET system operation and maintenance tasks, including all safety aspects. Follow the general safety instructions in this chapter and safety instructions for specific cases.

2.3. ELECTRICAL HAZARDS

The BNET Vehicular system environment exposes personnel to risk of electrocution from DC power sources:

- To avoid electricity hazards, apply the following and any other applicable safety instructions according to local regulations and standards:
- Make sure that each BNET Vehicular subsystem is properly grounded.

1) Before connecting a power cable to any BNET Vehicular system:

- Inspect all electrical connectors for damage.
- Inspect the entire length of the cable for damage, ensuring there are no exposed wires.
- Never connect or disconnect electrical connectors in a damp environment.

2) Before performing replacement or maintenance procedures on electrical and electronic systems:

- Make sure the unit is disconnected from an external power supply source.
- Post warning signs not to connect the power.

3. CHAPTER 3 – System Description

3.1. SCOPE

This chapter describes: the system purpose, main features, main subsystems including their components, and block diagram.

3.2. GENERAL DESCRIPTION

(See Figure 3-1 and Table 3-1)

The BNET is a communication system that is used to transfer and receive audio & data.

Figure 3- 1 : General Description

3.3. DETAILED DESCRIPTION

This section describes the BNET controls, indicators and connectors.

3.3.1. BNET VEHICULAR

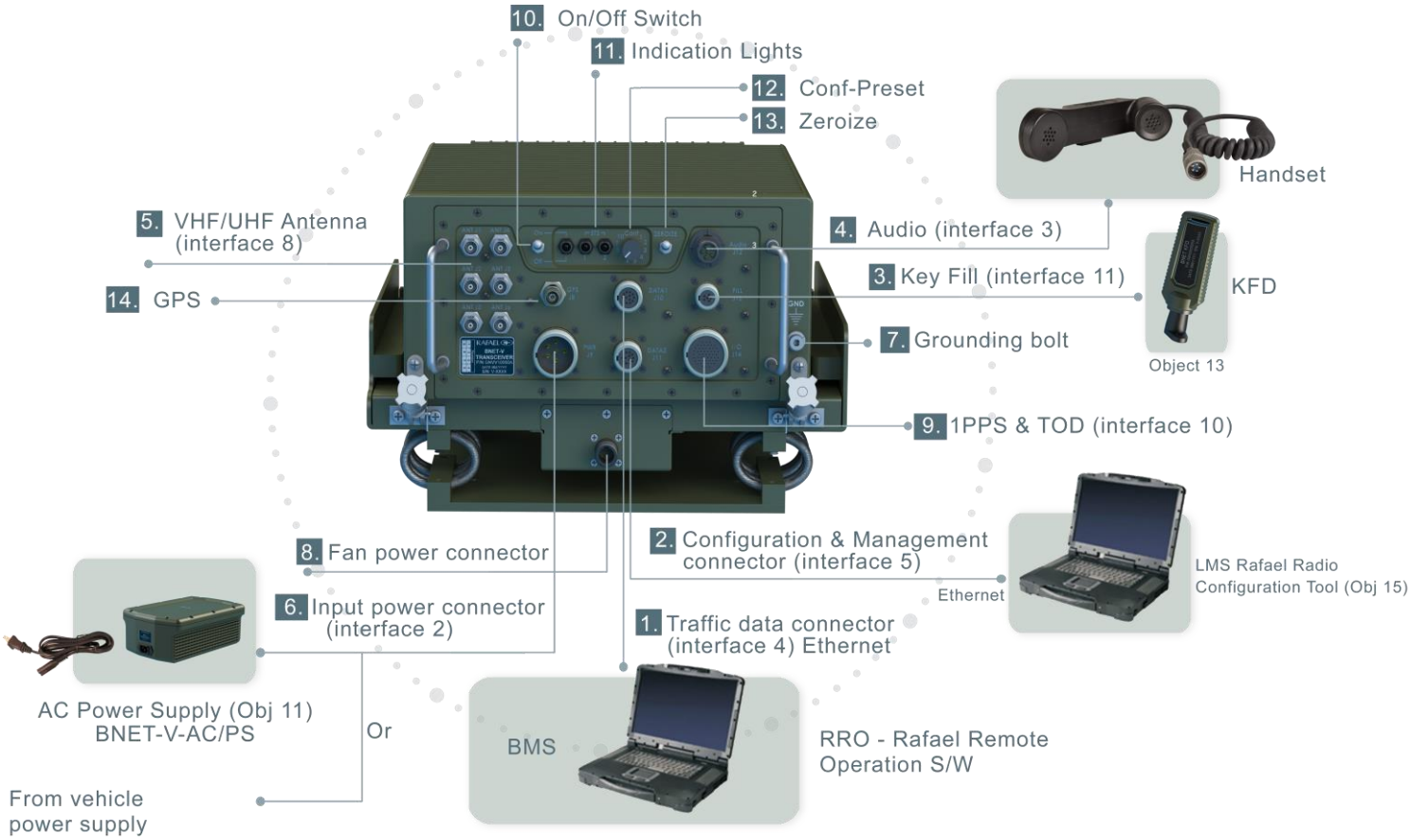


Figure 3- 2: BNET Vehicular

No.	Item/Connector	Type	Description
1.	Datal J10	Connector	Connect data cable that Transmits and receives data via Ethernet communication.
4.	Audio J12	Connector	Connect audio cable that Transfers audio signals: • Earphones out • PTT input • Speaker out
5.	ANT J2	RF connector	Connects the UHF Antenna
6.	PWR J9	Connector	Input 24 VDC power for unit operation
10.	On/Off switch	Switch	Turns on/ off the BNET
11.	Indication lights	Led	Description of the BNET from left to right**:** 1. Green light indicates if the BNET is on/ off. 2. Middle and right light are inactive in Blacksky V1.
12.	Conf-preset	Switch	Enables switching between different presets. Each preset can be are logical networks (voice groups).
13.	Zeroize	Switch	Deletes all BNET encryption key data not in use.
14.	GPS J8	RF connector	Connects the GPS Antenna

Table 3- 1: BNET Vehicular

3.3.2. HANDSET

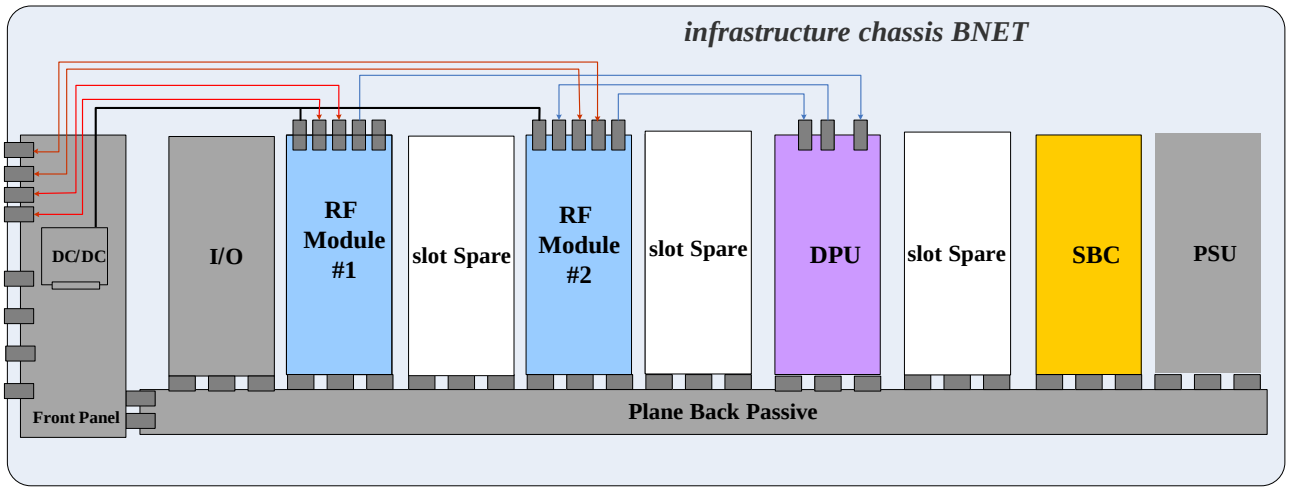
Figure 3- 3: Handset

No.	Item/Connector	Type	Description
1.	PTT	Button	Enables transmission by pressing and holding. NOTE: When the button is not pressed the BNET is in reception mode. Pressing the button provides the PTT control of the audio system.
2.	Speaker	---	Enables sound output.
3.	Audio connector	Connector	Connects the Handset
4.	Microphone	---	Enables Sound Input

Table 3- 2: Handset

3.3.3. FUNCTIONAL DESCRIPTION

General block diagram and chasis of the BNET Vehicular.



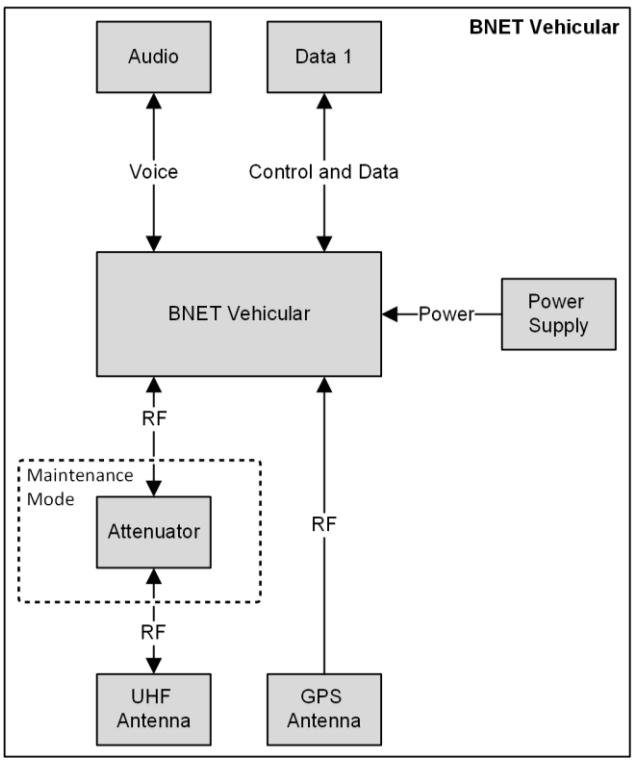


Figure 3- 4: General Block Diagram

4. CHAPTER 4 – Deployment and Operation

4.1. SCOPE

This chapter provides the procedures for maintenance and operational system deployment. In addition, this chapter provides the procedures for system deployment, including specification of required personnel, tools, and materials.

4.2. DEPLOYMENT

This section provides the procedures for maintenance system deployment of BNET vehicular.

4.2.1. BNET VEHICULAR

This section describes the BNET vehicular deployment.

4.2.1.1. BNET Operational Deployment

When installing in vehicle- (see figure 4-1)

a. Place the BNET (1) on the BNET adapter (6).

b. Hand tighten two hooking devices (2) that attach the BNET (1) to the BNETadapter (6).

*for office installations-

c. Connect power cable to PWR J9 connector (4).

d. Connect GPS antenna cable to J8 connector (3).

e. Connect UHF antenna cable to J2 connector (5).

f. Power up the vehicular BNET according to section 4.2.2.

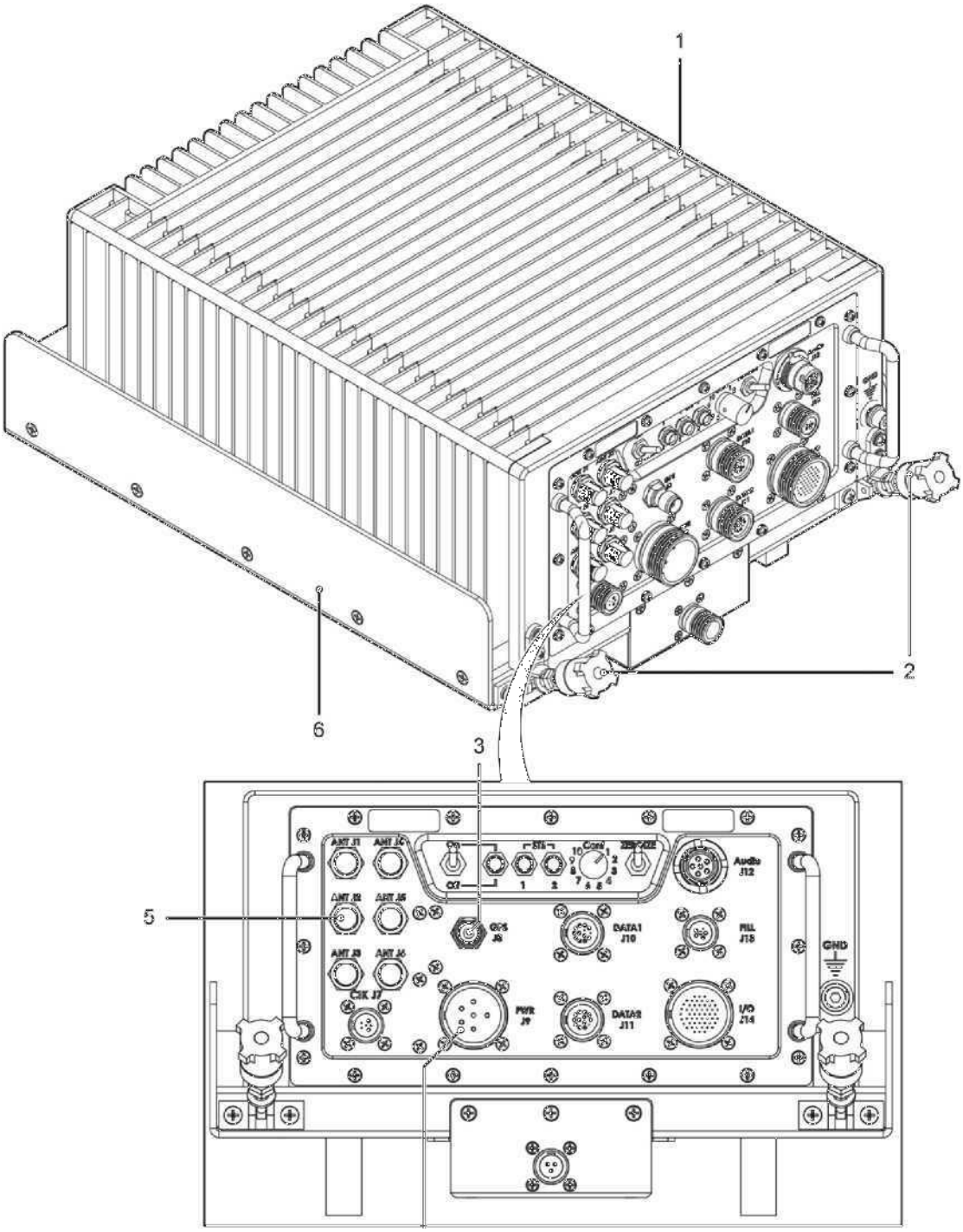
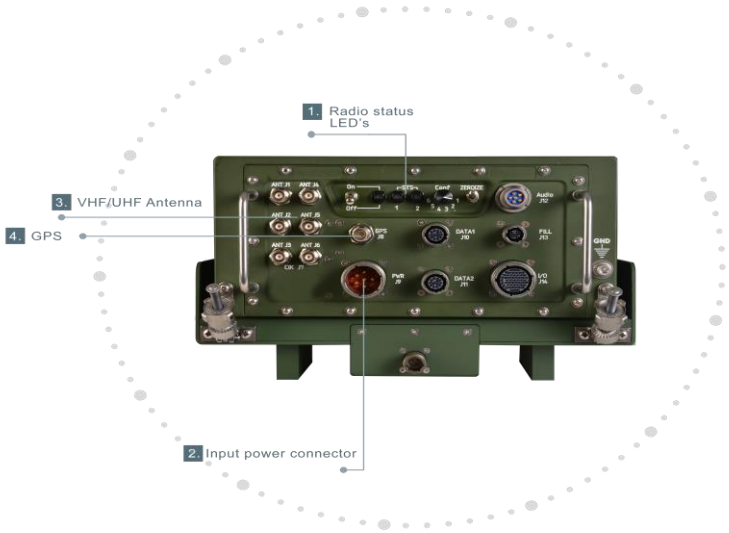


Figure 4- 1: BNET Operational Deployment

4.2.1.2. BNET Maintenance Deployment



a. Install power cable connector on PWR J9 connector (2).

b. Connect GPS antenna connector to J8 connector (1).

c. Connect attenuator (if needed) to the UHF antenna.

d. Power up the power supply and the BNET vehicular according to section 4.2.2

e. Connect UHF antenna connector to J2 connector (3).

4.2.2. BNET VEHICULAR POWER UP

To power up the BNET Vehicular, perform the following steps:

a. Turn on power supply that provide 24v

NOTE

Make sure that the voltage indication indicates 24v ± 6V Dc (1).

Make sure that the current indication indicates 10A± 3A (3).

NOTE

If voltage indication does not indicate 24v, turn the Rotary control (2) to the required position.

b. Power up the BNET Vehicular by setting the switch to on (1). Result: Green light appears (2).

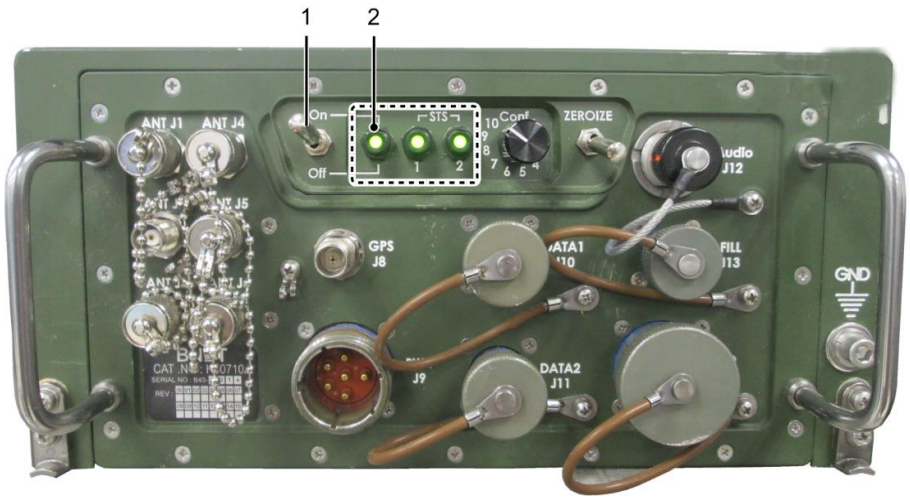


Figure 4- 2: BNET Vehicular

4.2.3. BNET VEHICULAR POWER DOWN

a. Power down the BNET Vehicular by setting the switch to off (1).

b. Make sure that the green light is off (2).

4.3. SETUP AND OPERATION

This section provides describes the setup and operation of the BNET

4.3.1. Radio programming

The BNET radio comes preprogrammed from the manufacturer on the required operational frequencies.

Operating frequencies can only be modified by Rafael (the manufacturer), or properly trained service or maintenance personnel utilizing proprietary software.

The customer is responsible for ensuring that only properly trained personnel have access to the installed radios and the programming software.