



# BACnet Explorer | BACmove

Version 0.0.40

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User Manual

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# 1. Presentation

BACnet Explorer bacmove for Android devices is the best way to browse BACnet networks with your Android phone or tablet. With this application, you can browse BACnet devices on the network, read and write their properties and create lists of objects for a quick and easy access. The BACnet Explorer connects directly to the BACnet/IP network from the Wi-Fi or Ethernet interface of the Android device.

The application can also register as a BACnet foreign device through the cellular network of your phone.



## 2. Features

- ✓ BACnet/IP client for Android, allows to discover and access devices on BACnet networks.
- ✓ Devices and their associates objects are automatically discovered on the network.
- ✓ Access BACnet devices on the local network (Wi-Fi).
- ✓ Allows to perform read and write operations on the property Present\_Value for objects of the following type: Binary Input, Binary Output, Binary Value, Analog Input, Analog Output, Analog Value, Multi-state Input, Multi-state Output and Multi-state Value.
- ✓ Support for write command Priority (selectable priority and NULL value).
- ✓ AtomicReadFile, download BACnet object file to the SD Card of your Android device.
- ✓ Configuration: UDP port, Device Id and Device Name, Who-Is device instance range.
- ✓ Devices can be sorted by name, instance, vendor or model.
- ✓ Objects can be sorted by name, instance or type.
- ✓ Dynamic user interface with multi-pane on devices with large screen / tablets.
- ✓ Perform quick test and control BACnet devices and panels.
- ✓ With this BACnet Discovery Tool, explore BACnet devices, objects and properties.
- ✓ BACnet MS/TP or Ethernet networks can be accessed with the help of a BACnet router.
- ✓ Almost Free BACnet Explorer. For a small amount you can browse BACnet networks from all your Android devices.

BIBB:

DS-RP-A

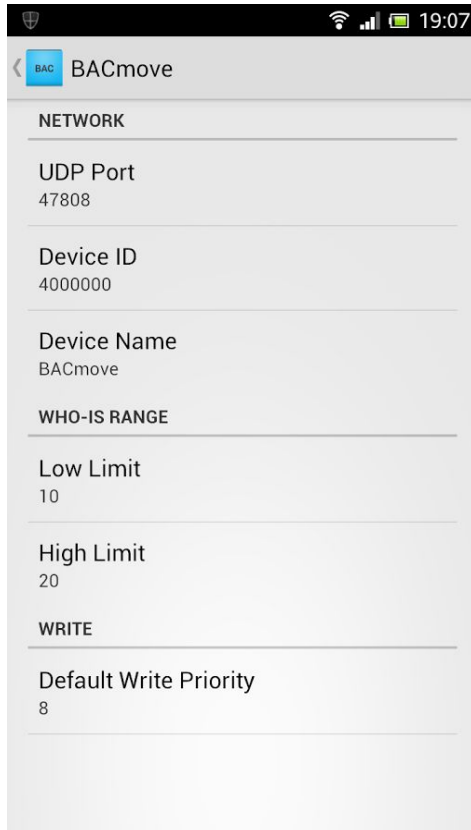
DS-RP-B

DM-DDB-A

DM-DDB-B

DS-WP-A

## 3. Configuration



19:07

BAC BACmove

**NETWORK**

UDP Port  
47808

Device ID  
4000000

Device Name  
BACmove

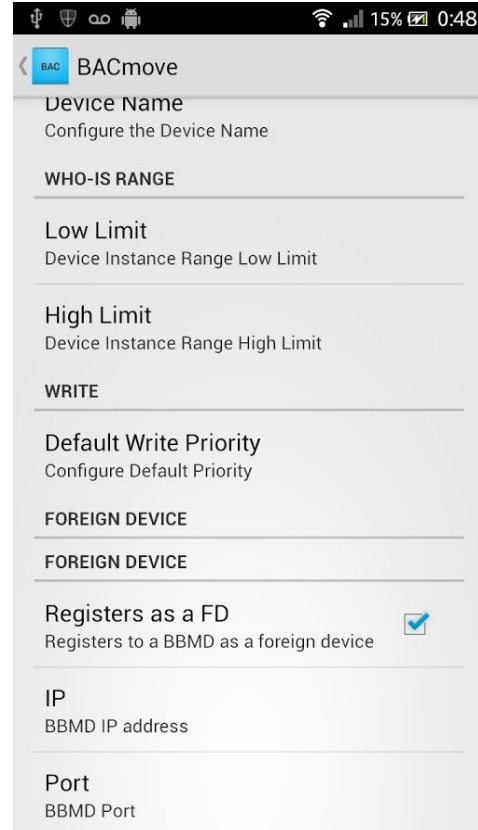
**WHO-IS RANGE**

Low Limit  
10

High Limit  
20

**WRITE**

Default Write Priority  
8



15% 0:48

BAC BACmove

Device Name  
Configure the Device Name

**WHO-IS RANGE**

Low Limit  
Device Instance Range Low Limit

High Limit  
Device Instance Range High Limit

**WRITE**

Default Write Priority  
Configure Default Priority

**FOREIGN DEVICE**

FOREIGN DEVICE

Registers as a FD   
Registers to a BBMD as a foreign device

IP  
BBMD IP address

Port  
BBMD Port

### 3.1. Network

#### 3.1.1. UDP Port

The BACnet/IP port, default value is 47808.

#### 3.1.2. Device ID

The instance number used by the device object of the application.

#### 3.1.3. Device Name

The name of the device object of the application.

## 3.2. Who-Is Range

### 3.2.1. Low Limit

The minimum instance number to use in the ranged Who-Is.

### 3.2.2. High Limit

The maximum instance number to use in the ranged Who-Is.

## 3.3. Write

### 3.3.1. Default Write Priority

The default priority for the BACnet WriteProperty service.

## 3.4. Foreign Device

This configuration allows to configure the application as a BACnet Foreign Device.

### 3.4.1. Registers as a Foreign Device

Check this option to register as a foreign device using the following configuration.

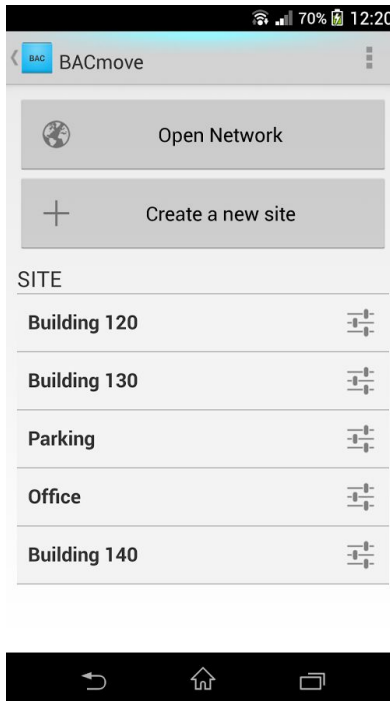
### 3.4.2. IP

IP address of the BACnet/IP Broadcast Management Device (BBMD).

### 3.4.3. Port

BACnet/IP port of the BACnet/IP Broadcast Management Device (BBMD).

## 4. Site



It is possible to have multiple network configurations or to use the general configuration.

### 4.1. Open Network

Start the BACnet communication with the general configuration.

### 4.2. Create a new site

Create a new network configuration.

### 4.3. Site

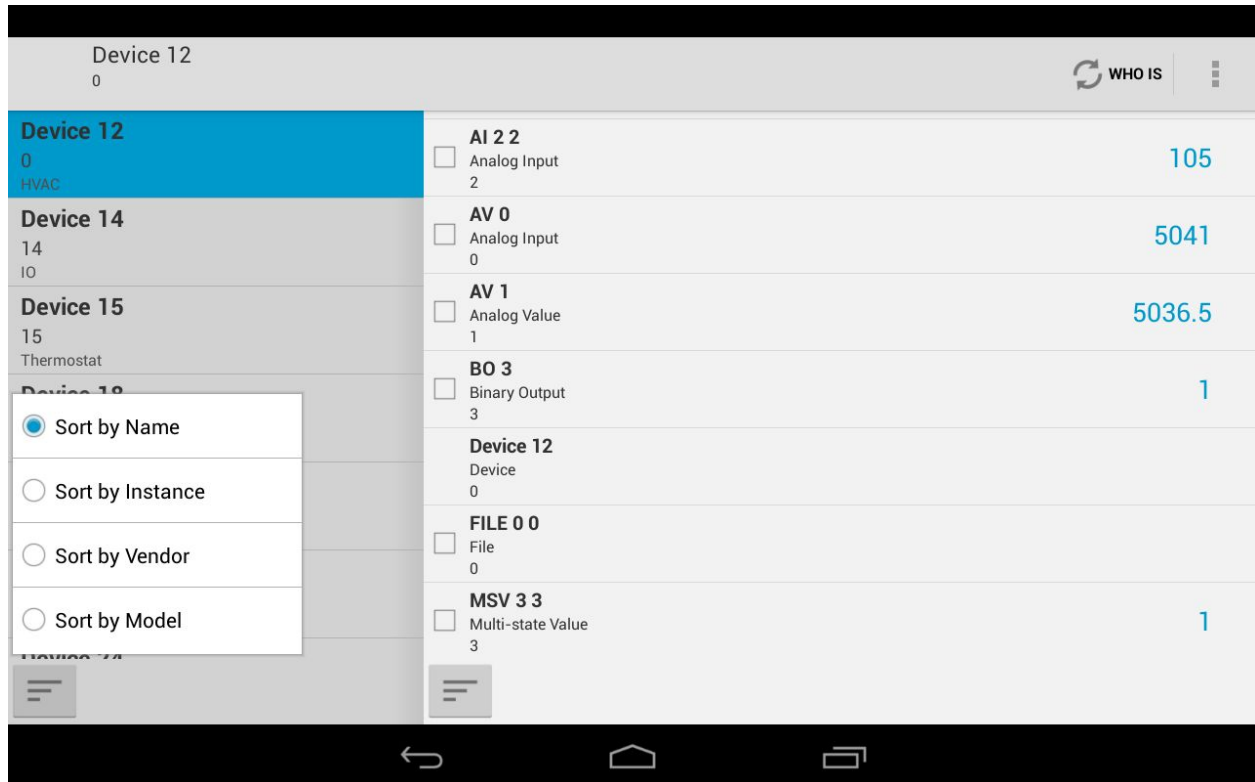
List of the sites.

### 4.4. Configuration button

Open the configuration for a site.



## 5. Devices List



This window allows to discover and to display the BACnet devices on the network.

### 5.1. Who-Is

Press this button to send a ranged Who-Is with the configured range.

When BACnet devices answer with I-Am they are added to the devices list.

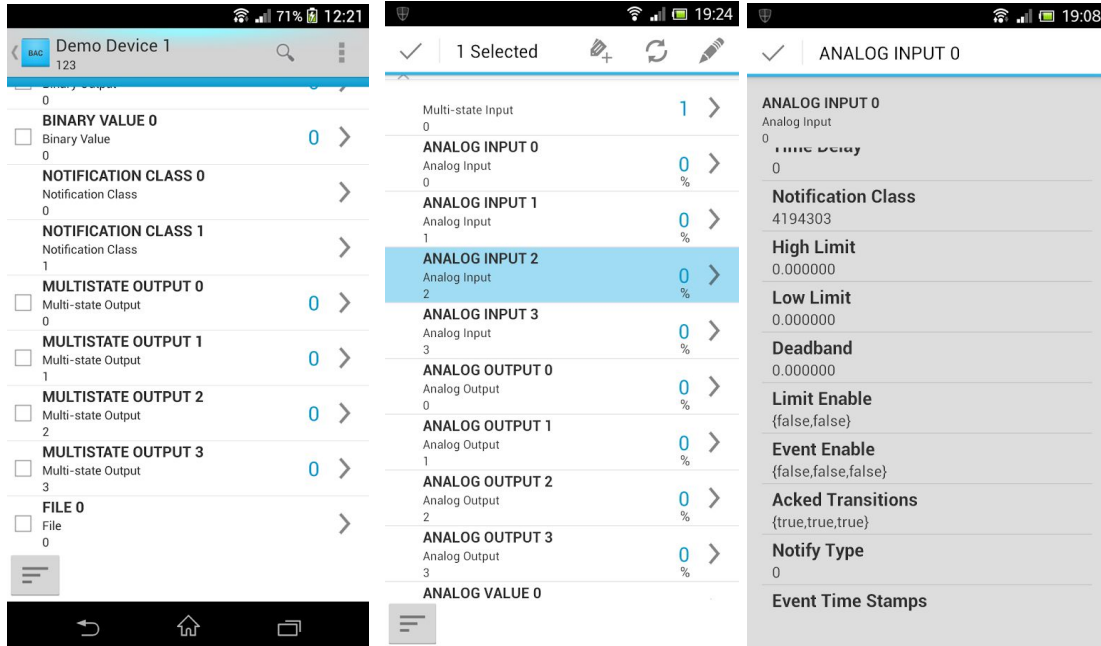
### 5.2. Devices List

This list displays the discovered BACnet devices.

### 5.3. Sort

Press the sort button to sort the devices list by name, instance number, vendor or model.

## 6. Objects List



This window displays the objects of the selected device.

### 6.1. Search

Press the search button to research an object by its name or instance number.

### 6.2. Checkbox

Press the checkbox, to enable the object contextual menu at the top.

#### 6.2.1. Add to list

Press this button to add the selected object to a list.

#### 6.2.2. Refresh

Press this button to read the current Present Value of the selected object on the network.

#### 6.2.3. Write

Press this button to modify the object Present Value.



### 6.3. Right Chevron

Press the chevron at the right of an object to display most of its properties.

### 6.4. Sort

Press this button to sort the objects.

## 7. List

List allows to access and displays side by side objects of different devices.



### 7.1. Create a list

Press this button to create a new list.

### 7.2. Remove object from the list

Slide an object to the left to remove it from the list.

## 8. List Export Format

Lists are exported in two JSON files `device.json` and `list.json`.

JSON, is a text-based open standard designed for human-readable data interchange.

More information about JSON can be found on this website: <http://www.json.org>.

Free online JSON editor: <http://www.jsoneditoronline.org>.

Those files are packaged inside a .ZIP file for easy transfer and import.

### 8.1. device.json

This file defines the BACnet devices available in the lists. The `list.json` refers to this file to identify the BACnet devices.

```
{
  "device":[
    {
      "instance":123,
      "name":"Demo-Device-1"
    },
    {
      "instance":124,
      "name":"Demo-Device-2"
    }
  ]
}
```

### 8.2. list.json

This file defines the lists and the objects present in each list.

The value *device* refers to the device index in the `device.json` file.

*property\_identifier* and *array\_index* are not used in the current version and should be 85 and -1 respectively.

*object\_type* available values:

- 0 Analog Input
- 1 Analog Output
- 2 Analog Value
- 3 Binary Input
- 4 Binary Output

5 Binary Value

13 Multi State Value

14 Multi State Output

19 Multi State Value

```
{
  "label":[
    {
      "name":"Demo-List-1",
      "entry":[
        {
          "object_type":0,
          "object_name":"ANALOG INPUT 0",
          "device":0,
          "property_identifier":85,
          "object_instance":0,
          "array_index":-1
        },
        {
          "object_type":0,
          "object_name":"ANALOG INPUT 0",
          "device":1,
          "property_identifier":85,
          "object_instance":1,
          "array_index":-1
        }
      ]
    },
    {
      "name":"Demo-List-2",
      "entry":[
        {
          "object_type":3,
          "object_name":"BINARY INPUT 0",
          "device":0,
          "property_identifier":85,
          "object_instance":0,
          "array_index":-1
        }
      ]
    }
  ]
}
```



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