

# NEC

# DSX

## Broadvox SIP Trunk Setup

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**1 Overview**

The DSX is compatible with Broadvox GO! SIP Trunking. This setup guide summarizes the account information you will receive from Broadvox and provides step-by-step instructions on how to program that information into the DSX.

You can set up SIP trunks as standard loop start lines or DID lines. All the feature available with other types of loop start and DID lines are also available with Broadvox SIP trunk lines. For details on the features available with loop start and DID lines, refer to the on-line DSX Software Manual at: [http://www.necdsx.com/docs/dita/dsx\\_v3\\_complete/index.html](http://www.necdsx.com/docs/dita/dsx_v3_complete/index.html)

Note: DSX does not currently support T.38 fax and multiple host names.

**2 Method 1: Broadvox Static Setup**

To set up your GO! SIP Trunking account, contact Broadvox at <http://www.broadvox.com>. Once your account is set up they will provide you with the following service information:

**Table 1: Broadvox Static Method Account Information**

| Option   | Description   |
|----------|---|
| Hostname | The Hostname is the SIP registration domain for your Broadvox SIP trunks. When your SIP trunks initially register they use this domain. |
| DID(s)   | These are the telephone numbers that users will dial to reach you over your Broadvox SIP trunks.  |

**2.1 System Router Setup**

**2.1.1 NAT and SIP**

In the router to which the DSX is connected, enable NAT and disable all special SIP management features (such as SIP ALG). **The DSX router must have a fixed public WAN IP address to use Broadvox Static Method.**

**2.1.2 Port Forwarding**

Forward UDP ports 5060 and 1024 through 1200 to the DSX system's IP address.

**2.2 DSX Setup**

**2.2.1 Software Level**

3.31.57 or higher.

**2.2.2 DSX WAN IP Address**

*1104-09: WAN IP*

Enter the WAN IP address of the router to which the DSX system is connected.

**2.2.3 Assign SIP Lines**

*1231-01: IP Lines*

The first DSX SIP line is the first line beyond the last assigned line. Each SIP line uses an IP resource (licensed VoIP port) in DSX. The maximum number of VoIP licenses is 8 in DSX-40 and 16 in DSX-80/160.

Example with DSX-40:

- The first SIP line in a DSX-40 without a COIU expansion card is line 5. Available SIP line numbers are 6-12.
- With the COIU expansion card installed, the first SIP line is line 9. Available SIP line numbers are 9-16.
- DSX-40 supports a maximum of 8 VoIP licenses. When the total number of licenses are in use, only Peer-to-Peer calls are available.

Example with DSX-80/160:

- The first SIP line in a DSX-80/160 with a single 8COIU card is line 9. Available SIP lines are 9-17.
- The last line number in DSX-80/160 is 64. In a system with an 8COIU and two T1/PRI cards, this will limit the available number of SIP lines.
- DSX-80/160 supports a maximum of 16 VoIP licenses. When the total number of licenses are in use, only Peer-to-Peer calls are available.

*1232-01: IP Line Provider Number*

Assign each SIP line in DSX to a provider number (1 or 2). DSX supports up to two providers simultaneously.

Example: If Broadvox is your only SIP trunk provider, assign all the SIP lines designated in 1231-01 to provider 1.

*1232-02: IP Line Username*

*1232-03: IP Line Password*

These options are not used with Broadvox SIP trunks using the Static Method.

#### 2.2.4 Select the SIP Trunk Provider Type

*1831-01: Provider Number*

Select the provider number you want to set up. This selection corresponds to the provider number you assigned to the SIP lines in *1232-01*.

Example: If Broadvox is your only SIP trunk provider, and you have chosen provider 1 in *1232-01*, select provider 1 for this option also.

*1831-02: Provider Type*

Dial 03 or press line key 4 to choose *Broadvox* as the type for the provider selected in 1831-01.

*1831-03: Provider Name*

The provider name is an optional 18-character entry that describes the provider. Enter any name you like – the entry does not affect provider setup or registration.

*1831-04: Profile*

Select the VoIP profile that the system will use when connecting to the SIP trunk provider. The entry you make here corresponds to the profiles set up in programs 1811-1815. **Choose profile 4.**

#### 2.2.5 Set Up the SIP Trunk Registration

*1832-01: Provider IP Registration*

Select the provider number you want to set up (see 1831-01) and enter the Table 2 *Hostname* entry as it was provided to you by Broadvox. This option uses the text entry method. You should select a host from the list of servers in your geographical location provided by Broadvox. **Do not** select *fs.broadvox.net*.

*1832-02: Registration Type*

Choose the IP line registration type. For the Broadvox static method, choose *00: None*.

*1832-03: Account Username*

*1832-04: Account Password*

*1832-05: Proxy*

*1832-06: SIP Type or Service (ToS)*

*1832-07: RTP Type of Service (ToS)*

These options are not used with Broadvox SIP trunks using the Static Method.

**2.2.6 Assign DID Numbers to your SIP Lines**

*3101-07: Telephone Number*

For each of your SIP lines, enter a telephone number that corresponds to one of the *DID* numbers in Table 2. Each line must have a unique entry. This entry is required for both Loop Start and DID lines.

**3 Method 2: Broadvox Registration Setup**

To set up your GO! SIP Trunking account, contact Broadvox at <http://www.broadvox.com>. Once your account is set up they will provide you with the following service information:

**Table 2: Broadvox Registration Method Account Information**

| Option           | Description   |
|------------------|---|
| Hostname         | The Hostname is the SIP registration domain for your Broadvox SIP trunks. When your SIP trunks initially register they use this domain. |
| BTN and Username | This is the username that Broadvox uses to authenticate your registration.  |
| Password         | The Password is the password required with your BTN and Username.   |
| DID(s)           | These are the telephone numbers that users will dial to reach you over your Broadvox SIP trunks.  |

**3.1 System Router Setup**

**3.1.1 NAT and SIP**

In the router to which the DSX is connected, enable NAT and disable all special SIP management features (such as SIP ALG).

**3.1.2 Port Forwarding**

Forward UDP ports 5060 and 1024 through 1200 to the DSX system's IP address.

**3.2 DSX Setup**

**3.2.1 Software Level**

3.31.57 or higher.

**3.2.2 DSX WAN IP Address**

*1104-09: WAN IP*

Enter the WAN IP address of the router to which the DSX system is connected.

**3.2.3 Assign SIP Lines**

*1231-01: IP Lines*

The first DSX SIP line is the first line beyond the last assigned line. Each SIP line uses an IP

resource (licensed VoIP port) in DSX. The maximum number of VoIP licenses is 8 in DSX-40 and 16 in DSX-80/160.

Example with DSX-40:

- The first SIP line in a DSX-40 without a COIU expansion card is line 5. Available SIP line numbers are 6-12.
- With the COIU expansion card installed, the first SIP line is line 9. Available SIP line numbers are 9-16.
- DSX-40 supports a maximum of 8 VoIP licenses. When the total number of licenses are in use, only Peer-to-Peer calls are available.

Example with DSX-80/160:

- The first SIP line in a DSX-80/160 with a single 8COIU card is line 9. Available SIP lines are 9-17.
- The last line number in DSX-80/160 is 64. In a system with an 8COIU and two T1/PRI cards, this will limit the available number of SIP lines.
- DSX-80/160 supports a maximum of 16 VoIP licenses. When the total number of licenses are in use, only Peer-to-Peer calls are available.

#### *1232-01: IP Line Provider Number*

Assign each SIP line in DSX to a provider number (1 or 2). DSX supports up to two providers simultaneously.

Example: If Broadvox is your only SIP trunk provider, assign all the SIP lines designated in 1231-01 to provider 1.

#### *1232-02: IP Line Username*

#### *1232-03: IP Line Password*

These options are not used with Broadvox SIP trunks using the Registration Method.

### **3.2.4 Select the SIP Trunk Provider Type**

#### *1831-01: Provider Number*

Select the provider number you want to set up. This selection corresponds to the provider number you assigned to the SIP lines in 1232-01.

Example: If Broadvox is your only SIP trunk provider, and you have chosen provider 1 in 1232-01, select provider 1 for this option also.

#### *1831-02: Provider Type*

Dial 03 or press line key 4 to choose *Broadvox* as the type for the provider selected in 1831-01.

#### *1831-03: Provider Name*

The provider name is an optional 18-character entry that describes the provider. Enter any name you like – the entry does not affect provider setup or registration.

#### *1831-04: Profile*

Select the VoIP profile that the system will use when connecting to the SIP trunk provider. The entry you make here corresponds to the profiles set up in programs 1811-1815. **Choose profile 4.**

### **3.2.5 Set Up the SIP Trunk Registration**

#### *1832-01: Provider IP Registration*

Select the provider number you want to set up (see 1831-01) and enter the Table 2 *Hostname* entry as it was provided to you by Broadvox. This option uses the text entry method. You should select a host from the list of servers in your geographical location provided by Broadvox. **Do not** select *fs.broadvox.net*.

*1832-02: Registration Type*

Choose the IP line registration type. DSX IP lines can share the same registration (*01: Single*) or have a unique registration for each line (*02: Per Line*). For Broadvox, choose *01: Single*.

*1832-03: Account Username*

Enter the username for your Broadvox SIP trunk account. This option uses the text entry method and is the *BTN and Username* entry in Table 2.

*1832-04: Account Password*

This option is the password associated with the Account Username assigned in 1832-03. The password can be up to 24 characters long. This is the *Password* entry in Table 2.

*1832-05: Proxy**1832-06: SIP Type or Service (ToS)**1832-07: RTP Type of Service (ToS)*

These options are not used with Broadvox SIP trunks using the Registration Method.

**3.2.6 Assign DID Numbers to your SIP Lines***3101-07: Telephone Number*

For each of your SIP lines, enter a telephone number that corresponds to one of the *DID* numbers in Table 2. Each line must have a unique entry. This entry is required for both Loop Start and DID lines.