OVERVIEW

Automatic Busy Redial (ABR) enables a telephone user to automatically redial a busy outside number at programmed intervals.

When an outgoing call encounters a busy tone on the external line, the user presses the function key or the Cnf/Trn button and dials an access code to register an Automatic Busy Redial in the system.

When a station calls an external party (via trunk line or private line) and the external party is busy, the Automatic Busy Redial feature has the system retry the external destination several times. This feature saves the user the need to redial.

If the registered IP telephone has an ABR function key, the function key flickers while Automatic Busy Redial is active.

Automatic Busy Redial provides the function only when the destination returns busy tone. For example, if the answer signal is received on the trunk that can monitor the answer, the destination is not busy. In this case, Automatic Busy Redial function is not provided. If Automatic Busy Redial is not activated, pressing the function key is ignored. If an access code is dialed, ROT is returned.

Recall Operation if Station is IPT or Attendant

After the ABR Detection Time passes, the system first checks that the extension station having the Automatic Busy Redial function is idle and that the line button used for registering the function is idle. The Pooled Line button need not be the same button used for making a call and may be another button of the same type. If either the station or line button is not idle, wait for the next cycle.

When the station having the Automatic Busy Redial function is idle and the line key is idle, the system first calls the external line, and if the call is successfully started, it seizes the line key and sets the station to the speaker mode (with the microphone off). The external line call is done in Senderize mode.

When the system succeeds in recalling the external line (180 Ringing or 183 Session Progress messages are received in SIP), the destination station starts to ring (recall Automatic Busy Redial). During this period, if receiving 183 Session Progress messages, all audible signals from the trunk line are heard through the speaker. If receiving 180 Ringing messages, IPT plays a local Ring Back Tone. If the handset is taken off hook or, the speaker key is pressed, or a line key is pressed during the recall, it is regarded as the recall is answered and RBT will be heard from the handset or the speaker. The Automatic Busy Redial service is then completed.

When the user manually selects another line and makes a call or answers another incoming call, the system stops the recall, releases the external line and the extension station and waits for the next cycle.

If the recall is not answered within a certain time (Recall timer for ABR), the system disconnects the external line and terminates the Automatic Busy Redial service.

When the system seizes the external line for the recall, the system uses the external calling service that was used for the first call. That is, when the system uses LCR, encounters a busy destination, and sets Automatic Busy Redial the LCR will be used for seizing the external line later. In the cases of trunks via gateway, it depends on the specification of the FXO gateway whether the same trunk line is seized or not.

If the destination answers the recall before the recall with Automatic Busy Redial is answered, the system returns no tone and continues the recall. If the destination disconnects the line before the recall times out, the system stops the recall, but the system starts calling when the next trial interval is expired. Thus, ABR service continues.

After recalling the external line, the system monitors SIP messages from the destination station and judges whether the destination is busy. If the destination is busy, the system releases the external line and the extension station and waits until the programmed time passes.

When the call is not completed by recalling the external line by the predetermined times, the system terminates the Automatic Busy Redial service. If the function key is flickering when finishing the Automatic Busy Redial service, the system turns it off but makes no other operation to display. If the recalling external line is cleared or the selectable external line is lost because the time zone is changed and the selection logic is changed or it becomes impossible to select the external line due to other reasons in IP*edge*, the system terminates Automatic Busy Redial.

The Automatic Busy Redial feature is applied when the originator directly dials the external line number. This feature is not applied when a call is connected to a destination by Call Forward and encounters a busy.

The Automatic Busy Redial feature can be registered once for each station. If another setting is made when Automatic Busy Redial has been set, the previous setting is automatically canceled. To cancel Automatic Busy Redial, press the function key or dial the reset access code. If the recall has been started or continued when Automatic Busy Redial is canceled, the system stops the operation, releases the external line and extension station, and terminates Automatic Busy Redial.

Automatic Busy Redial   Automatic Busy Redial (ABR) enables a telephone user to automatically redial a busy outside number multiple times at programmed intervals. Each station may only have one call registered with ABR at any time.

Automatic Busy Redial

After reaching a busy outside number, you can activate Automatic Busy Redial so that the system automatically redials the number at regular intervals. The system repeats the redial until the destination is no longer busy. Check with your System Administrator to see if this feature is set up for your telephone.

Automatic Busy Redial is not attempted while your station is busy, but continues to time-out. The system inserts a pause (P) on your LCD before redialing the number.

Activate Automatic Busy Redial

1. When you reach a busy number, press **Auto Busy Redial** or **Cnf/Trn** + **#441**. The LED flashes red. You hear a confirmation tone.

2. Hang up or press **Spkr**. The system redials five to 20 times, every 30 to 180 seconds (depending on system programming). Your telephone receives a ring tone when Automatic Busy Redial dials the number and it is available. The extension and Spkr LEDs flash green.

3. Lift the handset or press **Spkr** and wait for the party to answer. If you do not pick up the handset or press **Spkr** within recall timeout (five to 60 seconds) after a connection is made, you hear a muted ring for another 30 seconds, then the call disconnects.

Cancel Automatic Busy Redial

Press **Auto Busy Redial** or extension + **#442**.

IPT/Attendant Console

After a certain time passes, the system first checks that the extension station having the Automatic Busy Redial function is idle and the line key used for registering the function is idle. The Station Loop key or the Pooled Line Key need not be the same key used for making a call and can be another key of the same type. If either the station or the line key is not idle, wait for the next cycle.

When the station having the Automatic Busy Redial function is idle and the line key is idle, the system first seizes the line key, sets the station to the speaker mode (with the microphone off) and retries to call the external line. The external line call is done in Cut-through mode and the dial tone from the destination and DTMF tone is heard through the speaker (Cut-through mode may not be set in ISDN).

When the system succeeds in recalling the external line (the destination busy tone is not detected for a certain time after sending the dial digits in the analog mode, or ALERT message is received in ISDN), the destination station starts to ring (recall Automatic Busy Redial). During this period, all audible signals from the trunk line are heard through the speaker. If the handset is taken off hook or the speaker is pressed during the recall, it is regarded as the recall is answered and RBT will be heard from the handset or the speaker. The Automatic Busy Redial service is then completed.

When the user manually selects another line and makes a call or answers another incoming call, the system stops the recall, releases the external

line and the extension station and waits for the next cycle. When the line key receiving the Automatic Busy Redial service or the speaker key is pressed while hearing the trunk line tone with Automatic Busy Redial but the recall is not started, the same operation as when the recall is answered occurs. That is, the timer is cancelled, the Automatic Busy Redial service is terminated and the calling is continued in the speaker mode.

If the recall is not answered within a certain time, the system disconnects the external line and terminates the Automatic Busy Redial service.

Recall When Station is a Standard Telephone
After a certain time passes, the system first checks that the extension having the Automatic Busy Redial function is idle and its DN is not being used by other stations by Multiple Appearance or other features. The system will reserve the DN and retry to call the external line. The system can make a call from that DN but cannot accept an incoming call from the others. If the telephone is taken Off-Hook during the DN reservation or the IPT/Attendant Console attempts to make a call using the DN key, the system cancels the DN reservation, stops the external line recalling, and waits for the next cycle.

When the system succeeds in recalling the external line it will call back the extension station (recall of Automatic Busy Redial). If the handset is taken Off-Hook during the recall, it is regarded as the recall is answered and Ring Back Tone (RBT) is heard from the handset. The Automatic Busy Redial service is then completed.

If the destination does not go Off-Hook and answers the recall within a certain time, the system disconnects the external line and terminates the Automatic Busy Redial service.

When the system seizes the external line for the recall, it uses the external calling service that was used for the first call. That is, when the system uses LCR, encounters a busy destination and sets Automatic Busy Redial, the LCR will be used for seizing the external line later.

If the destination answers the recall before the recall with Automatic Busy Redial is answered, the system returns no tone and continues the recall. If the destination disconnects the line before the recall times out, the system stops the recall and finishes the Automatic Busy Redial service.

Since recalling the external line, the system monitors the busy tone from the destination station and judges whether the destination is busy. If the destination is busy, the system releases the external line and the extension station and waits until a certain time passes. If the busy tone is not detected during this period, the system starts to recall.

When the call is not completed by recalling the external line by the predetermined times, the system terminates the Automatic Busy Redial service. If the function key is flickering when finishing the Auto Busy Redial service, the system turns it off but makes no other operation to display. If the recalling external line is cleared or the selectable external line is lost because the time zone is changed and the selection logic is

changed or it becomes impossible to select the external line due to other reasons in IP*edge*, the system terminates Automatic Busy Redial.

The Automatic Busy Redial feature is applied when the originator directly dials the external line number. This feature is not applied when a call is connected to the unintended destination by Call Forward and encounters a busy.

Automatic Busy Redial Cancel
The Automatic Busy Redial feature can be registered once for each extension station. If another setting is made when Automatic Busy Redial has already been set, the previous setting is automatically cancelled. To cancel Automatic Busy Redial, press the function key or dial the reset access code. If the recall has been started or continued when Automatic Busy Redial is cancelled, the system stops the operation, releases the external line and extension station, and terminates Automatic Busy Redial.

PROGRAMMING

Class of Service
1. Click on **System > Class of Service**.
2. Select the server from the dropdown.
3. COS Number - Select the COS Number.
4. Place a check mark to the right of ABR to enable the feature. Default is enabled.
5. Reset to Default sets all values to factory defaults.
6. Click on the **Save** icon or click **Apply To** if you want to copy the changes to multiple servers or other classes of service.

System Timer
1. Click on **System > System Timer**.
2. Select the Server from the dropdown.
3. Assign the ABR (Automatic Busy Redial) Detection time.
4. Click on the **Save** icon.

Station Assignment
1. Click on **Station > Station Assignment**.
2. Select the Server from the dropdown.
3. Check the Station.
4. Click on the **Edit** icon.
5. Select the **Timer tab**.
6. Assign the Automatic Busy Redial data.
7. Click on the **Save** icon.

Assign an ABR Key to a Station
1. Click on **Station > Station Assignment**.
2. Check the Station to be programmed.
3. Click on the **Edit** icon.
4. Select the **Key tab**.
5. Right-click the key to be programmed. This will highlight the key and pop-up a screen with button types.
6. Select **Features > Automatic Busy Redial**.
7. Click on the **Save** icon.

Automatic Busy Redial Retry Count
1. Click on **Station > Station Assignment**.
2. Check the Station to be programmed.
3. Click on the **Edit** icon.
4. Select the **Timer tab**.
5. Select the Automatic Busy Redial Retry Count, Retry Interval, and Recall Timer for the station.
6. Click on the **Save** icon.

| Public Numbering Plan | **Note:** Redial may not send all digits if this program is not correct. |

1. Click on **System > Public Numbering Plan**.

2. Select the Server from the dropdown.

3. Click New to add an identifying Digits pattern.

4. Enter the dial pattern where N is 2~9, X is 0~9, and 1~9 indicate a number which must match. You will also need the number of digits the user will dial.

5. To modify an existing pattern, check the box to the left of the pattern, then click on the **Edit** icon.

6. Change the number of digits from 1~54 digits in length.

7. Click on the **Save** icon. You should receive confirmation the data was saved.

| Program a GCO Key | **How to program a GCO Key for an individual DID on SIP trunks** |

Note: This allows multiple appearances for an incoming number. This is not the procedure for multiple appearances of a trunk group, which is usually for outgoing calls.

Part 1

1. Click on **Trunk > Trunk Group**.

2. Select the server from the dropdown.

3. Double-click an existing outgoing or incoming group.
OR:
Click create and select both incoming and outgoing.

4. Click on **OK**

Note: Do not assign a Pooled Line Number to the DID. If you want to assign a GCO Key for an entire group see "How to program GCO Keys to an ILG or OLG for SIP trunks."

Part 2

1. Click on **Trunk > Full SIP Trunking**.

2. Select the server from the dropdown.

Note: You can create a new channel group or use an existing one.

3. Click on **New** icon.

4. Select the channel group number.

5. Select the number of SIP trunk channels.

Note: Skip to the next step if using a pre-existing channel group.

6. Select the **Service Definition tab**.

7. Click on **New** icon.

Note: The Registration mode will be Client. The OLG and ILG will be those created in Part 1. The Effective Channel Number will be the number of incoming and outgoing simultaneous calls you want to allow for this service. If the customer would like to restrict the

number of calls (such as for a tenant leasing 6 channels of a SIP Channel group) assign 6.

Note: A channel group can support multiple service definition indexes.

8. Assign the Domain Name, SIP server, and advanced settings as required by your SIP provider.

9. Click on **Trunk > SIP Trunking**.

10. Select the **Service Assignment tab**.

11. Click on **New** icon.

12. In the popup, select the SIP Trunk Channel Group from step 3 and the service Number 1 ~ 128 (usually the next available service number is supplied), and the Service Definition Index created in step 4.

13. Select the **Service URI tab**.

14. Select the Service Definition Index created in step 4. The SIP URI number will be the next available but can range from 1 ~1000. Assign the SIP URI number (This is the received digits or billing number assigned by the SIP carrier).

The SIP provider determines the SIP URI User Name and Password as well as the SIP URI Attribution.

Part 3

1. Click on **Trunk > DID**.

2. Select the IP*edge* Server from the dropdown.

3. Click on **New** icon:
   - Enter the ILG from Part 1, step 3.
   - Assign the DID number which should be the URI number from Part 2, step 9.
   - Assign the destination for the DID to ring for Day1, Day2, and Night service by setting Dialing Digits and the Prime DN, Phantom DN, Multiple Call group, etc.

4. Assign a GCO Key Group to the DID.

5. Optional: Assign a VM ID and Name to appear on display phones when the DID rings.

Assign a GCO key   To Assign a GCO key to a station:

1. Click on **Station > Station Assignment**.

2. Check the Station to be programmed.

3. Click on the **Edit** icon.

4. Select the **Key tab**.

5. Right-click the key to be programmed. This will highlight the key and pop-up a screen with button types.

6. Select **CO Line > GCO**.

7. Fill in the GCO Number and Index and the ringing type and tone.

8. Click OK.

9. Repeat for each additional index number to appear on the station. If the customer requires 4 appearances for proper call management, then assign 4 GCO keys with indexes 1 ~ 4.

10. Click on the **Save** icon.

Program a Pooled Line Key

How to program a Pooled Line Key to an ILG or OLG for IPedge Net trunks:

Note: This allows a single appearance of a trunk group per station.

Part 1

1. Click on **Trunk > Trunk Group**.

2. Select the server from the dropdown.

3. Double-click an existing outgoing or incoming group.
   OR
   Click create and select both incoming and outgoing.

4. Click OK.

5. Assign a Pooled Key Number 1 ~ 220. 0 is the default.

Part 2

1. Click on **Trunk > Full IP*edge* Net**.

2. Select the server from the dropdown

Note: You can create a new channel group or use an existing one.

3. Click New:
   - Select the channel group number.
   - Assign the ILG and OLG created in Part 1.
   - Assign the number of IP*edge* Net channels.

Assign a Pooled Line Key to a Station

1. Click on **Station > Station Assignment**.

2. Check the Station to be programmed.

3. Click on the **Edit** icon.

4. Select the **Key tab**.

5. Right-click the key to be programmed. This will highlight the key and pop-up a screen with button types.

6. Select **CO Line > Pooled Line Group**.

7. Fill in the Pooled Line Group Number, the ringing type, and tone.

8. Click OK.

9. Click on the **Save** icon.

Program a Pooled Loop Key
for DID

How to program a Pooled Loop Key for an individual DID on SIP trunks:

Note: This allows an administrator to view an indication of all trunks busy.

Part 1

1. Click on **Trunk > Trunk Group**.
2. Select the server from the dropdown.
3. Double-click an existing outgoing or incoming group.
   OR
   Click create and select both incoming and outgoing.
4. Click OK.

Note: Do not assign a pooled line number. If you want to assign a Pooled Line Number for the entire group, see "How to program a Pooled Loop Key to an ILG or OLG for SIP Trunks."

Part 2

1. Click on **Trunk > Full SIP Trunking**.
2. Select the server from the dropdown.

Note: You can create a new channel group or use an existing one.

3. Click on **New** icon:
   • Select the channel group number and number of SIP trunk channels.
   • Or skip to the next step if using a pre-existing channel group.
4. Select the **Service Definition tab**.
5. Click on **New** icon.

Note: The Registration mode will be Client, The OLG and ILG will be those created in part 1. The Effective Channel Number will be the number of incoming and outgoing simultaneous calls you want to allow for this service.

6. If the customer is requesting a single appearance for a fax machine which should get a busy on a second call then enter 1, for a company leasing 6 channels of a SIP Channel group assign 6, etc.

Note: A channel group can support multiple service definition indexes.

7. Assign the Domain Name, SIP server and advanced settings as required by your SIP provider.
8. Click on **Trunk > SIP Trunking**.
9. Select the **Service Assignment tab**.
10. Click on **New** icon.
11. In the popup, select the SIP Trunk Channel Group from step 3 and the service Number 1 ~ 128 (usually the next available service number will be supplied), and the Service Definition Index created in step 4.

12. Select the **Service URI tab**. Select the Service Definition Index created in step 4. The SIP URI number will be the next available but can range from 1 ~1000. Assign the SIP URI number (This is the received digits or billing number assigned by the SIP carrier).

Note: The SIP provider determines the SIP URI User Name and Password, as well as the SIP URI Attribution.

Part 3

1. Click on Trunk > DID.

2. Select the IP*edge* Server from the dropdown.

3. Click on **New** icon.

   - Enter the ILG from Part 1 step 3.

   - Assign the DID number which should be the URI number from Part 2 step 9.

   - Assign the destination for the DID to ring for Day1, Day2, and Night service by setting Dialing Digits and the Prime DN, Phantom DN, Multiple Call group, etc.

4. Assign a Pooled Line Number for the DID.

5. Optional: Assign a VM ID and Name to appear on display phones when the DID rings.

Assign a Pooled Line Key to a Station

1. Click on **Station > Station Assignment**.

2. Check the Station to be programmed.

3. Click on the **Edit** icon.

4. Select the **Key tab**.

5. Right-click the key to be programmed. This will highlight the key and pop-up a screen with button types.

6. Select **CO Line > Pooled Line Key**.

7. Fill in the Pooled Line number and the ringing type and tone.

8. Click on **OK**.

9. Click on the **Save** icon.

Program a Pooled Loop Key for SIP

How to program a Pooled Loop Key to an ILG or OLG for SIP trunks:

Note: This allows an administrator to have a visual indication of all trunks busy.

Part 1

1. Click on **Trunk > Trunk Group**.

2. Select the server from the dropdown.

3. Double-click an existing outgoing or incoming group.
   OR
   Click create and select both incoming and outgoing.

4. Click on **OK**.

5. Assign a pooled line number 1 ~ 220. 0 is the default.

Part 2

1. Click on **Trunk > Full SIP Trunking**.

2. Select the server from the dropdown

Note: You can create a new channel group or use an existing one.

3. Click on **New** icon.

4. Select the channel group number and number of SIP trunk channels.

Note: You can skip to the next step if using a pre-existing channel group.

5. Select the **Service Definition tab**.

6. Click on **New** icon.

Note: The Registration mode will be Client, The OLG and ILG will be those created in part 1. The Effective Channel Number will be the number of incoming and outgoing simultaneous calls you want to allow for this service. If the customer is requesting a single appearance for a fax machine which should get a busy on a second call then enter 1, for a company leasing 6 channels of a SIP Channel group assign 6, etc.

Note: A channel group can support multiple service definition indexes.

7. Assign the Domain Name, SIP server and advanced settings as required by your SIP provider.

8. Click on **Trunk > SIP Trunking**.

9. Select the **Service Assignment tab**.

10. Click on **New** icon.

11. In the popup, select the SIP Trunk Channel Group from step 3 and the service Number 1 ~ 128 (usually the next available service number will be supplied), and the Service Definition Index created in step 4.

12. Select the **Service URI tab**.

13. Select the Service Definition Index created in step 4. The SIP URI number will be the next available but can range from 1 ~1000. Assign the SIP URI number (This is the received digits or billing number assigned by the SIP carrier).

The SIP provider determines the SIP URI User Name and Password, as well as the SIP URI Attribution.

Part 3

1. Click on **Trunk > DID**.

2. Select the IP*edge* Server from the drop down.

3. Click on **New** icon.

4. Enter the ILG from Part 1 step 3. Assign the DID number which should be the URI number from Part 2 step 9. Assign the destination for the DID to ring for Day1, Day2, and Night service by setting

Dialing Digits and the Prime DN, Phantom DN, Multiple Call group, etc.

Note: Do not assign a Poole Line Number to the DID. If you want to assign a pooled key for an individual DID see "How to program a Pooled Loop Key for an individual DID on SIP trunks."

5. Optional: Assign a VM ID and Name to appear on display phones when the DID rings.

Assign a Pooled Line Key to a Station:

1. Click on **Station > Station Assignment**.

2. Check the Station to be programmed.

3. Click on the **Edit** icon.

4. Select the **Key tab**.

5. Right-click the key to be programmed. This will highlight the key and pop-up a screen with button types.

6. Click on **CO Line > Pooled Line Key**.

7. Fill in the Pooled Line number and the ringing type and tone.

8. Click on **OK**.

9. Click on the **Save** icon.

Program a GCO Key for IPedge trunks

How to program a GCO Key to an ILG or OLG for IPedge Net trunks:

Note: This allows multiple appearances of a trunk group per station.

Part 1

1. Click on **Trunk > Trunk Group**.

2. Select the server from the dropdown.

3. Double-click an existing outgoing or incoming group
OR
Click create and select both incoming and outgoing.

4. Click on **OK**.

5. Assign a GCO Key Group number 1 ~ 220. 0 is the default.

Part 2

1. Click on **Trunk > Full IP*edge* Net**.

2. Select the server from the dropdown.

Note: You can create a new channel group or use an existing one.

3. Click on **New** icon.

4. Select the channel group number, assign the ILG and OLG created in part 1, and number of IPedge Net channels.

Assign a GCO Key to a Station

1. Click on **Station > Station Assignment**.

2. Check the Station to be programmed.

3. Click on the **Edit** icon.

4. Select the **Key tab**.

5. Right-click the key to be programmed. This will highlight the key and pop-up a screen with button types.

6. Click on **CO Line > GCO**.

7. Fill in the GCO Number and Index and the ringing type and tone.

8. Click on **OK**.

9. Repeat for each additional index number to appear on the station. If the customer requires 2 appearances for proper call management, then assign 4 GCO keys with indexes 1 ~ 2.

10. Click on the **Save** icon.

Program GCO Keys for SIP   **How to program GCO Keys to an ILG or OLG for SIP trunks:**

Note: This allows multiple appearances of a trunk group, usually for outgoing calls. This is not the procedure for multiple appearances for an incoming number.

Part 1

1. Click on **Trunk > Trunk Group**.

2. Select the server from the dropdown.

3. Double-click an existing outgoing or incoming group
    OR
    Click create and select both incoming and outgoing.

4. Click on **OK**.

5. Assign a GCO Key Group number 1 ~ 220. 0 is the default.

Part 2

1. Click on **Trunk > Full SIP Trunking**.

2. Select the server from the dropdown.

Note: You can create a new channel group or use an existing one.

3. Click on **New** icon.

4. Select the channel group number and number of SIP trunk channels, or skip to the next step if using a pre-existing channel group.

5. Select the **Service Definition tab**.

6. Click on **New** icon.

Note: The Registration mode will be Client, The OLG and ILG will be those created in part 1. The Effective Channel Number will be the number of incoming and outgoing simultaneous calls you want to allow for this service. If the customer would like to restrict the number of calls (such as for a tenant, leasing 6 channels of a SIP Channel group) assign 6.

Note: A channel group can support multiple service definition indexes.

7. Assign the Domain Name, SIP server and advanced settings as required by your SIP provider.

8. Click on **Trunk > SIP Trunking**.

9. Select the **Service Assignment tab**.

10. Click on **New** icon.

11. In the popup, select the SIP Trunk Channel Group from step 3 and the service Number 1 ~ 128 (usually the next available service number will be supplied), and the Service Definition Index created in step 4.

12. Select the **Service URI tab**.

13. Select the Service Definition Index created in step 4. The SIP URI number will be the next available but can range from 1 ~1000.

14. Assign the SIP URI number (This is the received digits or billing number assigned by the SIP carrier).

The SIP provider determines the SIP URI User Name and Password, as well as the SIP URI Attribution.

Part 3

1. Click on **Trunk > DID**.

2. Select the IPI Server from the drop down.

3. Click on **New** icon.

4. Enter the ILG from Part 1 step 3. Assign the DID number which should be the URI number from Part 2 step 9. Assign the destination for the DID to ring for Day1, Day2, and Night service by setting Dialing Digits and the Prime DN, Phantom DN, Multiple Call group, etc.

Note: Do not assign a GCO Key Group to the DID. If you want to assign a GCO Key Group for an individual DID see "How to program GCO Keys for an individual DID on SIP trunks."

5. Optional: Assign a VM ID and Name to appear on display phones when the DID rings.

Assign a GCO Key to a Station:

1. Click on **Station > Station Assignment**.

2. Check the Station to be programmed.

3. Click on the **Edit** icon.

4. Select the **Key tab**.

5. Right-click the key to be programmed. This will highlight the key and pop-up a screen with button types.

6. Select **CO Line > GCO**.

7. Fill in the GCO Number and Index and the ringing type and tone

8. Click on **OK**.

9. Repeat for each additional index number to appear on the station. If the customer requires 4 appearances for proper call management, then assign 4 GCO keys with indexes 1 ~ 4.

10. Click on the **Save** icon.

CAPACITY   N/A

AVAILABILITY   Automatic Busy Redial can be set from an IPT, SIP telephone, and
                        Attendant Console. Automatic Busy Redial can be set for an outgoing
                        trunk.

Station/Line	Descriptions
IPT	Available
Soft IPT	Available
IP Attendant	Available
SIP Trunk	ABR can be set on a SIP trunk that can return 486 Busy Here to the IP*edge* server.
IP-IP*edge* Net	Unable to set.
Trunk via FXO Gateway	You can set ABR if the connection is through an FXO gateway which can detect Busy Tone and return 486 Busy Here to the IP*edge* server.
ISDN trunk via FXO Gateway	ABR can be set if the connection is through an FXO gateway which can detect Busy Tone and return 486 Busy Here to IP*edge* server.
T1 trunk via FXO Gateway	Only FXO gateway which can detect Busy Tone and return 486 Busy Here to IP*edge* server can be trunk which ABR is set

RESTRICTION   N/A

HARDWARE   No additional hardware is necessary for this feature.

FEATURE INTERACTION

Account Codes	Class Of Service related to correctly entered Account Code or verified Account Code is used for redialing by Automatic Busy Redial feature.
Automatic Callback, Off-hook Camp On	Automatic Busy Redial can be set for the call that is originated by the camp on feature and encounters busy destination.
Automatic Line Selection	Offhook and pressing the speaker key during recall by Automatic Busy Redial is regarded as an answer to Automatic Busy Redial, even on a station set to Idle Preference by the Automatic Line Selection feature. Even before the recall by Automatic Busy Redial starts, pressing the speaker key while hearing the audible tone from the trunk line is regarded as an answer to Automatic Busy Redial.
Basic Survivability	ABR or ACB setting is canceled after switchover occurs.
Call Forward, System Call Forward	Automatic Busy Redial is not applied to the call that is transferred to the public trunk with the Call Forward (System Call Forward) feature and encounters busy destination.
Call History	If the destination is busy when a call is originated using Call History, Automatic Busy Redial feature can be invoked. Call History feature is not applied to Call Back to ABR Invoker. (Call History is not stored.)
Call Pick Up	Recall by Automatic Busy Redial cannot be picked up.
Call Transfer Immediate	Automatic Busy Redial is not applied, the [ABR] soft key is not displayed, and pressing the [ABR] button is ignored when:

- the call is transferred to a public trunk by Call Transfer Immediate.
- the transferred party is a public trunk.
- the transferred party encounters a busy destination line (this may occur when the destination call is not detected).

Call Transfer With Camp On	Automatic Busy Redial is not applied, the ABR soft key is not displayed, and pressing the ABR button is ignored if an origination call transferred to a public trunk encounters destination busy (if termination to destination cannot be detected, this can occur) after Call Transfer With Camp On is invoked.

Cancel Button	Even though the Cancel Button is pressed after Automatic Busy Redial feature is registered, Automatic Busy Redial will not be canceled. (Automatic Busy Redial registration will not be canceled.)
Class Of Service Override	• Class of Service, upgraded by the Class Of Service override feature, is applied also to the call that is originated by Automatic Busy Redial. • Override code is associated with the station. In this feature, the override code is saved for the originator because Automatic Busy Redial feature is not for other stations, but for the originator itself. And in this case, it is necessary to save override code to retry to originate the call to the destination where it is restricted in ordinary cases.
Class Of Service	Automatic Busy Redial availability to each DN is assigned by Class Of Service.
Conferencing	The conference master cannot set ABR if the conference master calls the trunk and the trunk is busy.
Consultation Hold	• IPT does not have the feature to set ABR by pressing the Cnf button and entering the feature access code while hearing a Busy Tone. • SIP compliant stations and SLT connecting to FXS gateway cannot set ABR because hooking cannot be detected while hearing a Busy Tone.
Credit Card Calling	• The Automatic Busy Redial feature can be invoked, even if the destination party is busy, by using the Credit Card Calling feature. • In the case of redialing to the public line, the credit card number used in the first call is used again.
Criterion of Busy	The system treats both station and line idle on originator as idle for the decision whether ABR originator is idle or busy.
Do Not Disturb (DND)	The Do Not Disturb feature will not affect the recall termination by Automatic Busy Redial.
Emergency Call	When an Emergency Call comes into the station while an Audible Tone from the trunk line is heard through the speaker of an IPT or an IP attendant console by the Automatic Busy Redial service or during the recall by Automatic Busy Redial, the system stops the Automatic Busy Redial service and waits for the next cycle.
Enhanced 911 (E911 Interface)	Automatic Busy Redial for Enhanced 911 is inhibited if the server is set in Hong Kong. If the feature button is pressed for Emergency origination, it is ignored. If the access code is dialed, ROT Reorder Tone is returned.

Group CO Button	GCO keys allow for an appearance of individual trunk line access to a particular channel group and may have an appearance on multiple phones allowing for proper call coverage access.
	When originating by pressing the GCO button, the Automatic Busy Redial feature will be applicable. In this case, origination for redialing to a public trunk will be made by seizing the GCO button, which is used when Automatic Busy Redial is set.
IP Phone User Mobility	If the initiator is "Logged-out" when callback of Automatic Busy Redial occurs, it is handled as if the station is busy. So when that callback is the last trial, Automatic Busy Redial is automatically cancelled, however, in other cases it waits for the next trial.
Jumping LED	The Jumping LED feature is applied when communicating with a public trunk, and the LED indication jumps to [GCO]/ [Pool] button.
LCD Shift Key	• Each feature button can be set on both the fore side and the hidden side.
	• The service using LED continues even though it is not indicated while on the hidden side.
Least Cost Routing	When Least Cost Routing is used to initiate the call, LCR will be used by Automatic Busy Redial to select an external line. In this case, the selection time zone may differ and the LCR object is not necessarily the same as the original call.
Line Group	If Line Group is seized at first origination, a public trunk will be selected for Automatic Busy Redial using the Line Group seizing process. At this time, due to different time zone selection and other reasons, the trunk used for Automatic Busy Redial origination may not be the same as the original trunk.
Lock Password	If the station is locked, after ABR registration, call origination by ABR is not made. (Note: The System does not allow setting ABR for Emergency Call.)
Make Busy	• If the ABR Invoker is Make Busy, it is considered as station busy, and retry ABR again.
	• If the public trunk is Make Busy, it is considered as a destination line busy. Retry ABR again.
Multiple Appearance	Recall by Automatic Busy Redial is indicated only to the station (ABR invoking party) that registered the feature. In-Use is indicated to other

stations and there is no response even if the button is pressed.

Multiple Directory Numbers	The line button of the terminating ABR calling back is selected. This is the youngest number of the idle MDN line buttons when ABR is invoked on the station with MDN buttons.
Off-hook Camp On	Automatic Busy Redial can be set for the call that is originated by the campon feature and encounters busy destination.
Outgoing Call	If the destination is busy while originating to a public trunk, the Automatic Busy Redial feature can be invoked.
Privacy/Non-privacy	While the Automatic Busy Redial feature is calling, Barge-into the call by Privacy Override is unavailable even if the line button which is a secondary of ABR invoker is In-Use state. Pressing the Privacy Release button is ignored while the ABR call is originating.
Private Networking Over IP	Because there is no way to notify ABR setting between nodes, ABR cannot be invoked to the trunk in remote node.
Pooled Line Button	Pooled Line Group buttons enable a group of trunks in a channel group to appear under one button. The ABR feature is applicable when originating by pressing the Pooled Line button. In this case, origination for redialing to a public trunk will be made by seizing the Pooled Line button, which is used when Automatic Busy Redial is set. However, when the Pooled Line button is seized, it need not always be idle. If the same Pool number assigned to the Pooled Line button is idle, that button can also be used.
Release Button	If the Release button is pressed while an ABR call is originating, the originating call is canceled. Try the ABR call again.
Release/ Answer Button	If the Release/Answer button is pressed while an ABR call is originating, the originating call is canceled. Try the ABR call again.
Ringing Assignment	Ringing Assignment is not applied to this recall. When the recall occurs, the line button rings immediately regardless of Ringing Assignment. (Actual ringing depends on the station state.)

Ring Transfer	Automatic Busy Redial is not applied, the [ABR] soft key is not displayed, and pressing the [ABR] button is ignored:

- When the call transferred to a public trunk by Ring Transfer.
- When the transferred party is a public trunk
- When the transferred party encounters a busy destination line (this may occur when the destination call is not detected).

SIP Extension	Unavailable because a SIP station cannot invoke hook flash.
SIP Trunk	If "486 Busy here" is the response to INVITE, it is provided.
Speed Dial (System/Station)	

- Even if a call is originated to public trunk using Speed Dial, Automatic Busy Redial feature can be invoked.
- Redial by Automatic Busy Redial for the originating call by System Speed Dial has a possibility of overriding Toll Restriction. For details, refer to the section of Toll Restriction Override by System Speed Dial.

Station SIP Trunk Access	If Automatic Busy Redial (ABR) is invoked for the call to the public trunk with changing FRL by Class Of Service Override feature, origination will not be restricted by Station SIP Trunk Access because the changed FRL is also applied to retry the call to a public trunk.
Through Dialing	When a call originated by the Through Dialing feature encounters a busy destination, Automatic Busy Redial is applied. If the attendant originates a Through Dialing call, check restrictions in Class Of Service for the attendant console. Automatic Busy Redial does not check restrictions.
Toll Restriction	

- Restriction, such as Toll Restriction, shall be checked in the first call and it is not checked in Automatic Busy Redial. When the restriction is allowed in the first call, it is also allowed in Automatic Busy Redial even if that communication is not allowed to the originating station.
- Once Toll Restriction is checked and allowed, the Automatic Busy Redial feature continues regardless of whether the Toll Restriction status changes during the call.

Toll Restriction Override by System Speed Dial	If a call is originated to a public trunk using System Speed Dial, Toll Restriction Override may be activated using the system specified Class Of Service.
	If Automatic Busy Redial is set to this origination with the Toll Restriction Override feature, origination will not be restricted because the system regulated Class Of Service is continuously used for redialing (re-origination) to a public trunk.

Tone First/ Voice First   Tone First/Voice First is not applied to these callbacks, which are handled as tone first.