Dial91 *iPhone* User Guide

1 About Dial91 *iPhone Edition*

Dial91 *iPhone Edition* is a SIP-based phone for the Apple iPhone™ mobile digital device, and iPod touch™ mobile digital device.

With Dial91 *iPhone Edition* (Dial91), you can use the Wi- Fi internet connection on your iPhone, or iPod touch to make and receive calls without using mobile data. In addition, with iPhone (but not with iPod touch), you can use the mobile data connection for phone calls when you are not in a Wi-Fi zone.

Standard Telephone Features

Dial91 *iPhone Edition* has all the standard telephone features, including:

- Call display and Voicemail Indicator.
- Speakerphone, Mute, and Hold.
- Call history – list of received, missed, and dialed calls.
- Call transfer.
- Audio call record.
- Three-way audio conference.
- Audio codec G.729.
- Ringtones and contact avatars.
- Support for DTMF: the ability to enter numbers to use with an auto attendant.

Advanced Features
- NAT traversal (STUN and ICE).
- Secure call signaling (TLS).
- Audio encryption (SRTP).
- Quality of Service (QoS).
- DNS SRV record lookups.
- Call quality statistics.
- Application diagnostics (logging and log files uploading).

Accessories

The following accessories are supported:

- Headset with microphone (including Bluetooth™): Dial91 *iPhone Edition* uses the ear-piece and microphone on the headset.
- Headphones (no microphone): Dial91 *iPhone Edition* uses the ear-piece on the headphone and the built-in microphone on the device.

2 Configuring

2.1 Getting Ready

1. Once you have installed Dial91 *iPhone Edition*, make sure you have set up Wi-Fi and mobile data correctly on your device:

    •   Set up Wi-Fi: from the main iPhone screen, tap Settings > Wi-Fi. Turn on the Wi-Fi field. The panel will be populated with access points. Tap to choose an access point and wait for the item to show a checkmark (indicating that you are connected).
    •   Set up mobile data (if applicable): from the main iPhone screen, tap Settings > General > Network, and turn on the Cellular Data field.

2. If you are using iOS 5 or higher, set up notifications in order to receive notification when Dial91 is in the background: from the main iPhone screen, tap Settings > Notifications. Tap Dial91 and set up the following:

    •   Notification center (if desired): On to display Dial91 notifications in the iPhone's notification center.
    •   Badge App Icon: On to display a number of notifications on the Dial91 icon.
    •   Sounds: On to enable the sound preferences you choose on Dial91. Off to disable any sound for notifications while Dial91 is in the background.
    •   View in Lock Screen: On to receive notifications when the iPhone is locked.

3. Login Information:

    •   **Username: Dial91 PIN**
    •   **Password: Dial91 PIN**

4. Tap the Dial91 icon on the iPhone.

3 Making Phone Calls

3.1 Starting and Quitting Dial91

Start Dial91. After a few seconds, the message "Phone Ready" appears. Dial91 is ready.

This message appears if you did not enable mobile data (3G/4G) and you do not have a Wi-Fi connection. Use of moble data is optional; to turn it on go to Settings > User Preferences.

3G can be used only on devices that support 3G. If your device does not support 3G, this message will never appear!

Quitting

Double -tap the Home button on the iPhone. The list of active applications appears. Long-tap the Dial91 icon until the red icon appears. Tap the red icon to close the application.
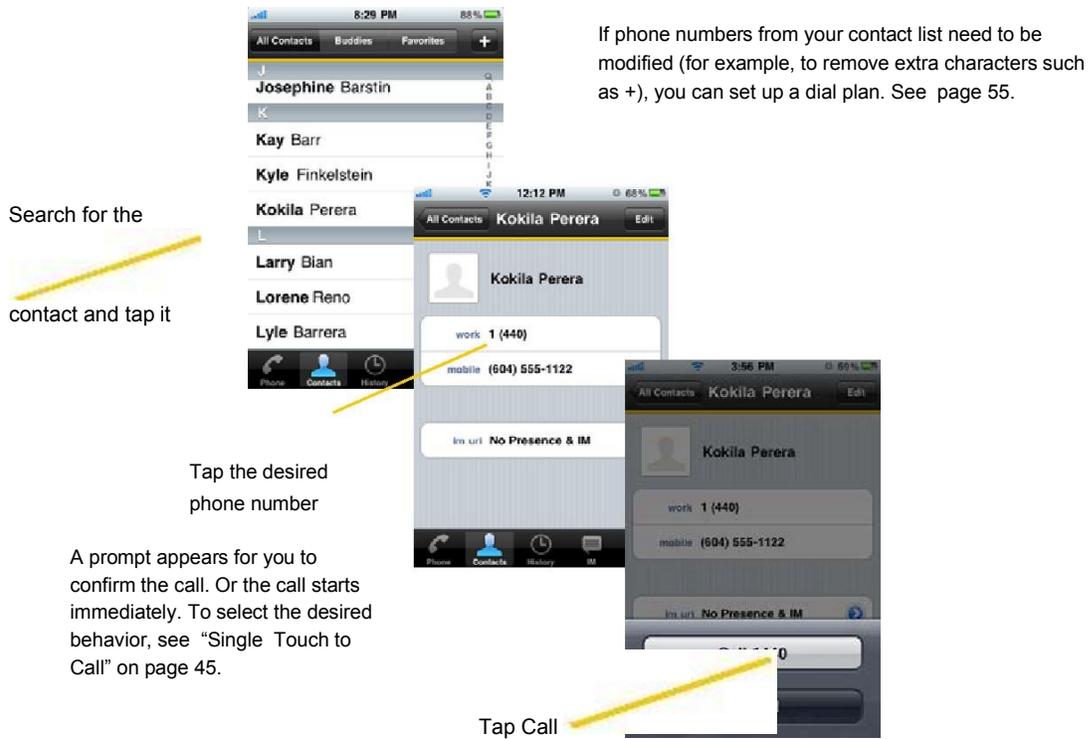
3.2 Placing a Call

Using the Dialpad

Enter the phone number ⸺

Clear the entire entry

Tap

Backspace

From the iPhone Contact List

Tap the Contacts tab at the bottom of the screen

If phone numbers from your contact list need to be modified (for example, to remove extra characters such as +), you can set up a dial plan. See page 55.

Search for the

contact and tap it

Tap the desired
phone number

A prompt appears for you to confirm the call. Or the call starts immediately. To select the desired behavior, see "Single Touch to Call" on page 45.

Tap Call

The "**network quality issues**" Message

This message appears if there is network congestion or a poor quality Wi-Fi signal. Try moving closer to your Wi-Fi access point.
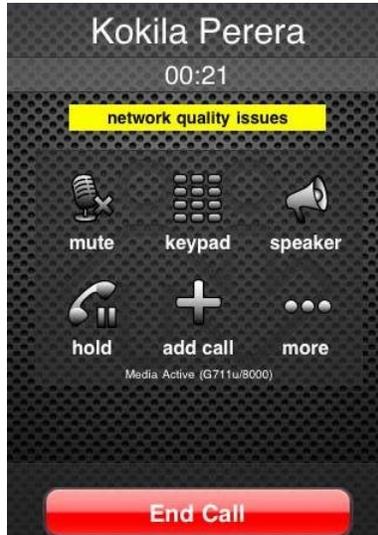
3.4 Handling One Established Call

Mute or unmute

Hold or release hold

Place a second phone call

Tap to show a keypad in order to enter numbers, for example, when choosing menu items such as "enter 1 for customer support"

Speakerphone or other audio output options (if connected)

Tap to record (page 16) or transfer this call (page 19)

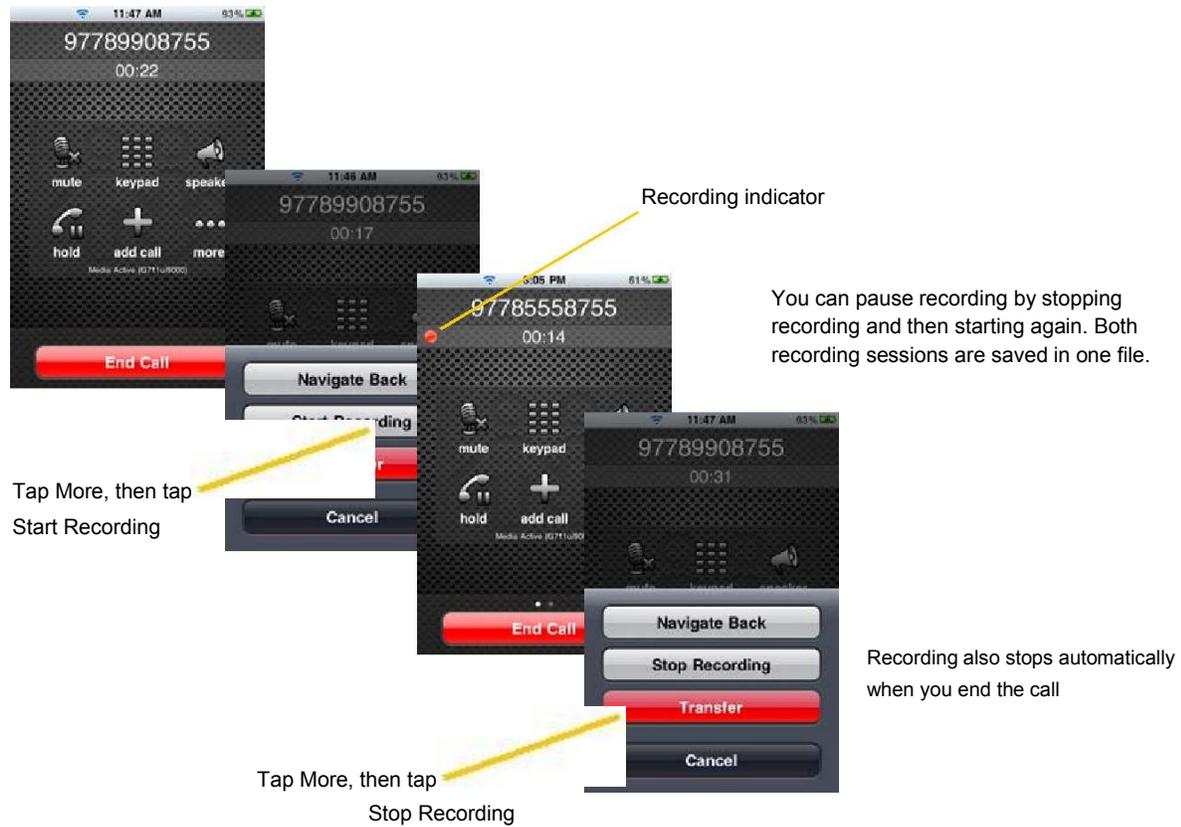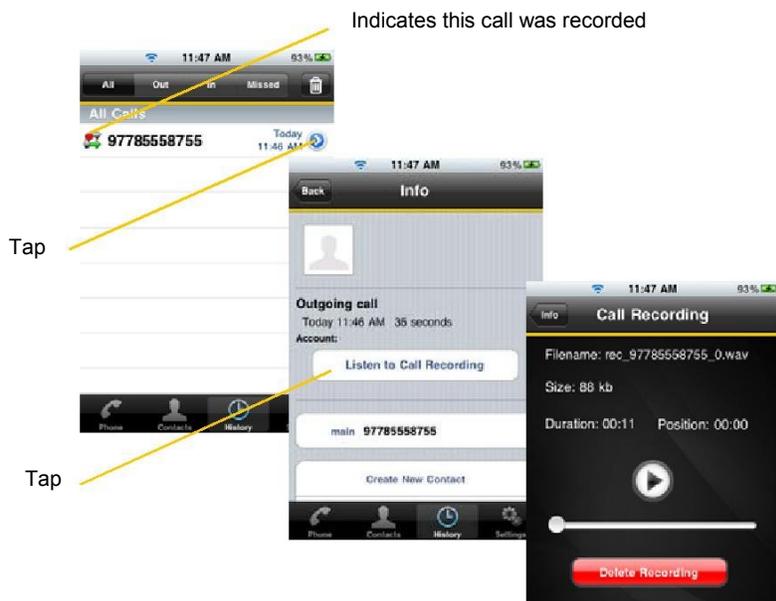## Handling a Dial91 Call and a Native Call

Tap to return to the native call. The Dial91 will be put on hold

Although there are two calls, only one is a Dial91 call. So you could start another Dial91 call.

3.5 Recording Calls

Recording indicator

You can pause recording by stopping recording and then starting again. Both recording sessions are saved in one file.

Tap More, then tap
Start Recording

Recording also stops automatically when you end the call

Tap More, then tap
Stop Recording

Listen to the recording on the History screen.

Indicates this call was recorded

Tap

Tap

You can also manage the recording in iTunes®. Select your device, click the Apps tab at the top of the screen, scroll down to file sharing, then click the Dial91 icon in the Apps panel. The recordings appear in the Dial91 Documents panel.

3.6 Placing a Second Dial91 Call

Using the Dialpad

Place the call on hold, if desired

Tap Add Call

Dial the number of the second person and tap Call

Or tap here to go back to the

When the call connects, the first call is put on hold. You are now speaking to the second person.

To switch to the other person, tap Swap Calls

From the iPhone Contact List

Or tap here to go back to the

Place the call on hold, if desired

Tap Add Call

Tap Contacts

Search for the person and tap the phone number

Tap Call

When the call connects, the first call is put on hold. You are now speaking to the second person.

To switch to the other person, tap Swap Calls

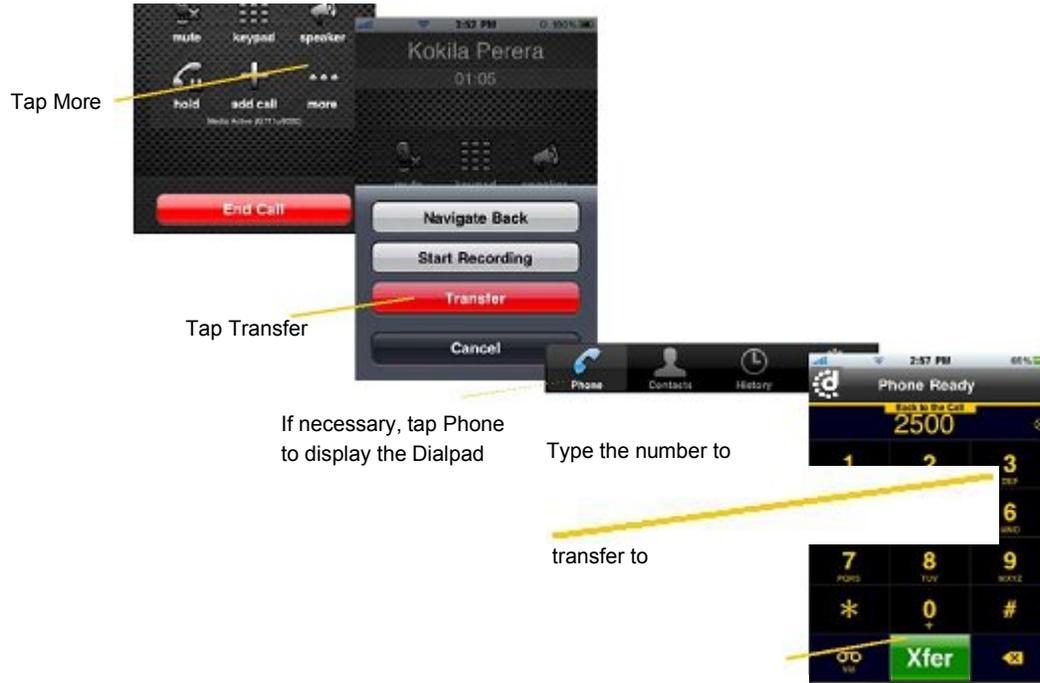# 3.7 Handling Two Established Calls

Handling Two Dial91 Calls

To switch to the other
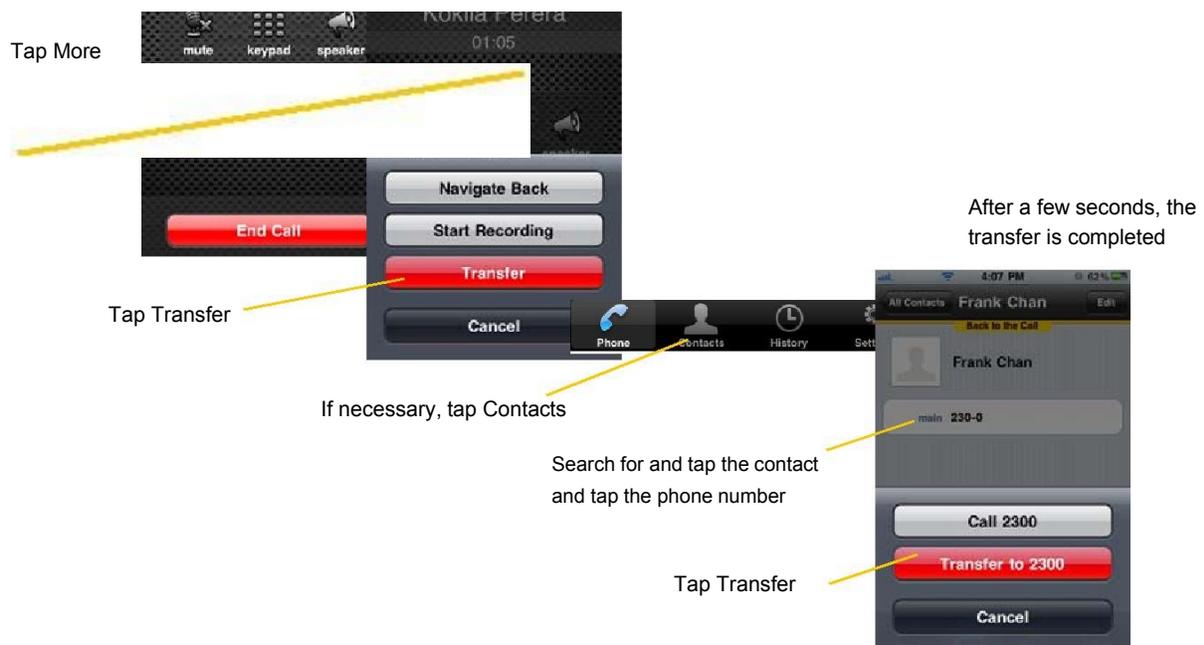person, tap Swap Calls

3.8 Unattended (Blind) Transfer

You can transfer the current Dial91 call to a second person without first talking to that second person.

Using the Dialpad

Tap More

Tap Transfer

If necessary, tap Phone
to display the Dialpad

Type the number to

transfer to

By Selecting a Contact

Tap Xfer

Tap More

After a few seconds, the
transfer is completed

Tap Transfer

If necessary, tap Contacts

Search for and tap the contact
and tap the phone number

Tap Transfer

3.9 Attended Transfer

You can speak to the second person first then transfer the first person to them.

You know there are two calls established because the Swap Calls button is showing.

Establish two calls (page 17)

Tap More

When ready, tap Transfer to. The live call is transfered to the on-hold call.

3.10 Conference Call

When you have two Dial91 calls established, you can merge the calls into a three-way conference call.

Establish two calls

You know there are two calls established because the Swap Calls button is showing.
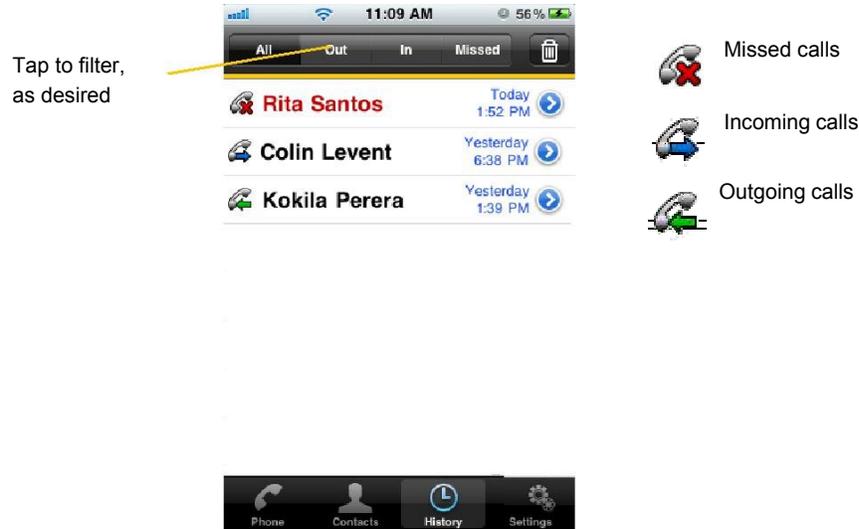
Tap Merge

The two calls are merged into a conference

If desired you can split the conference back into two calls
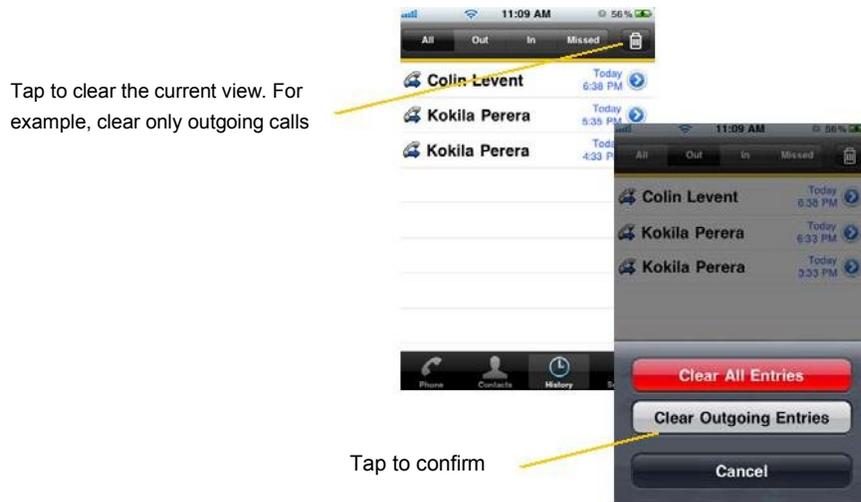
Clicking End Call ends the conference and hangs up on both calls

3.12 Call History

Tap the History icon at the bottom of the screen.

Tap to filter, as desired

Missed calls

Incoming calls

Outgoing calls

Clearing the History

Tap to clear the current view. For example, clear only outgoing calls

Clear All Entries

Clear Outgoing Entries

Cancel

Tap to confirm

Creating a Contact from History

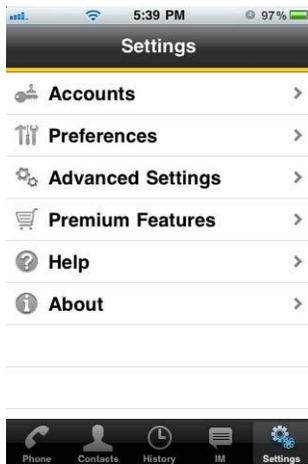You can create a contact from a history item.

Tap the arrow icon

The account the call came

in on

Tap Create New Contact or
Add to Existing Contact

If you tap Create, the New Contact screen
appears with the number already entered.
Complete the other fields.

Or if you tap Add, the contact list appears. Tap
the contact where you want to add this
number. The contact is immediately updated.

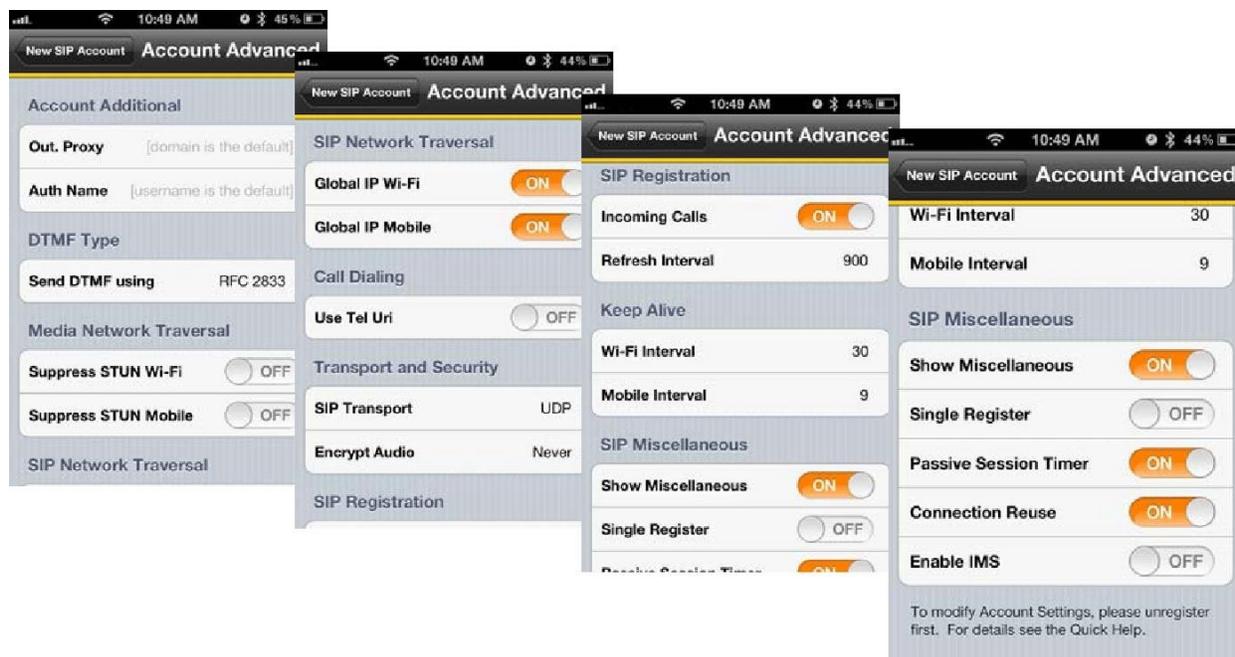# 5 Settings

Account Specific Features

Top Half of Screen   Bottom Half of the Screen

Field	Description
Enable Video	ON to make video calls on this SIP account. To use this feature, you must purchase "Video Calls", and enable video on Preferences . See page 52 for purchasing the feature.
Always Offer Video	ON to always dial a number with video offer. Whether you use the keypad, the Contacts tab, or the History tab, all the outgoing calls will offer video to the other party. The default is Off.
Auto Send Video	When On, Dial91 automatically starts sending video when you receive video calls. When Off, video does not start until you tap Send on the video screen. The default is Off.
Auto Speaker On	Usually ON. This setting applies to iPhone only. While headsets/Bluetooth are connected to Dial91, the sound always comes from headsets/Bluetooth regardless of this setting. This setting could solve a problem that audio calls are treated as video calls (thus the speaker comes on automatically). Turning this setting off allows you to hear the sound from the earpiece.
Enable IM & Presence	ON to share your online status with and send instant messages to your buddies. To use this feature, you must purchase "Presence and Messaging" from the App Store. See page 52.
Presence Agent	Turn ON only if your VoIP service provider supports this service for SIP SIMPLE.
Enable SMS	ON to send an SMS to PSTN cell phone numbers by using the SIP SIMPLE protocol. Turn ON if your VoIP service provider supports this feature. The purchase of "Presence and Messaging" is required to use this feature.

Account Advanced (SIP)

Top of Screen   Middle of Screen   Bottom of the Screen

Field	Description
Out. Proxy	If your VoIP service provider has an outbound proxy and requires that you provide that address to Dial91, enter the domain name or the IP address obtained from your provider.
Auth Name	May not be required. But if it is required, it will be provided by your VoIP service provider.
Send DTMF using	The method used for DTMF, sent when you press a number key when dealing with an auto attendant (such as "press 1 for customer service"). In-band DTMF can be sent in addition to the other two methods.
	Choose a method specified by your VoIP service provider.
Suppress STUN Wi-Fi	Allows you to control the use of STUN per account.
	• ON: No STUN is used on this particular account. This setting overwrites the STUN Wi-Fi setting under Advanced Settings (which applies to all accounts); when Suppress STUN Wi-Fi is ON, no STUN is used on this particular account even if STUN is enabled under Advanced Settings.
	• OFF (default): Dial91 decides whether to use STUN or not depending on the STUN Wi-Fi setting under Advanced Settings.
Suppress STUN Mobile	This setting has the same function as Suppress STUN Wi-Fi, but applies only when you are connected over the mobile network.
Global IP Wi-Fi	• ON (default): Dial91 will publish its public IP address at the signaling level. The public address may not work with some NATs or firewalls.
	• OFF: Dial91 will publish its private IP address at the signaling level.
	"Off" represents server-based network traversal, "On" app-based.
Global IP Mobile	This setting has the same function as Global IP Wi-Fi, but applies only when you are connected over the mobile network.
	If you set this setting to ON, you must also set Global IP Wi-Fi to ON.

Field	Description
Use Tel URI	Change this value only if advised to do so by your VoIP service provider. • ON: Prefix SIP URIs with tel:// • OFF (default): Prefix SIP URIs with sip://
SIP Transport	Tap to display the choices. Contact your VoIP service provider to identify the types of transport that are supported. • UDP and TCP do not support signal encryption. • TLS does support signal encryption. If TLS is selected, a given call will be encrypted if the other person also uses TLS. You may also need to install a certificate on your iPhone; speak to your VoIP service provider.
Encrypt Audio	If the transport is set to TLS, you can encrypt a phone call at the media (audio) level: • Never: Audio is not encrypted. • If Possible: On a given call, audio will be encrypted if the other person supports and is also using audio encryption. If not, audio will not be encrypted. • Always: Audio will always be encrypted. The call will fail if the other person cannot accept encrypted calls.
Incoming Calls	Typically ON, in order to receive calls. If OFF, you will not be able to receive calls using Dial91.
Refresh Interval	The timer interval between Dial91's attempts to register in order to refresh the account registration. This value is placed in the "Expires" header field of the SIP REGISTER message. Change this value only if advised to do so by your VoIP service provider.
Keep Alive - Wi-Fi Interval	A "keep alive" message is a mechanism for maintaining a "pinhole" through your firewall so that the account registration is maintained. The interval specifies how often the message is sent (in seconds). If you are experiencing problems (for example, accounts become unregistered when using a Wi-Fi connection), try setting this interval to a lower number such as 20.
Keep Alive - Mobile Interval	Same as above, except the interval applies to registrations made over the mobile data network, which can be made on an iPhone (but not an iPod) when you are not in a Wi-Fi zone.
Single Register	Applies only if Global IP is ON. Only choose ON if advised by your VoIP service provider. • ON: Dial91 will register using a single register request. • OFF (default): Dial91 will register using an unregister and a register.

Passive Session Timer	Controls the use of session timers on SIP accounts. The session timer is used to determine if the call is still active. Only choose Off if advised by your VoIP service provider.
	• ON (default): Dial91 will not use session timers in any session, except it is explicitly required by
	   the remote party.
	• OFF: Dial91 will use session timers in all sessions whenever the remote party supports and uses
	   it.

Connection Reuse	• ON: Dial91 uses existing connections by including an "ob" parameter in a header as defined in RFC5626. • OFF: Dial91 does not reuse existing connections. Changing this setting might solve problems with dropping or holding calls. The default is On.
Enable IMS	When ON, Dial91 supports the IP Multimedia Subsystem. The default is Off. Subject to VoIP service provider. Only choose ON if advised by your VoIP service provider.

5.2 Preferences

Top of the Screen

Middle of the Screen

Middle of the Screen

Middle of the Screen (Messaging)

Bottom of the Screen (Video)

Field	Description
Use When Available	Appears only on iPhone. • ON: When a Wi-Fi connection is not available, Dial91 uses mobile data for messaging and voice mail notifications. You will also have a choice to allow VoIP calls or not. (See below) • OFF: When a Wi-Fi connection is not available, you will get no messages or notification. Allow VoIP Calls is OFF; you will not be able to place or receive calls either.

Field	Description

Allow VoIP Calls	Appears only on iPhone. Use When Available must be ON to use this setting.
	• ON: When a Wi-Fi connection is not available, Dial91 will attempt to place calls using
	   the mobile data channel. Data charges with your mobile carrier will apply. If you turn
	   this setting on, we recommend you purchase the G.729 codec (page 52) because it
	   provides better audio quality on mobile data calls (3G/4G).
	• OFF: When a Wi-Fi connection is not available, you will not be able to place or
	   receive calls.

Run In Background	• ON: If using UDP for transport (page 41). • OFF: If using TCP or TLS for transport. This setting lets you receive calls when Dial91 is running in background and your transport is UDP. Turning this setting on decreases battery life. But if it is turned off, you will not be able to receive calls if you are using UDP. If you are using TCP or TLS, there is no need to turn this setting on.
Play Ringtone	ON to hear the ringtone.
Vibrate	ON to vibrate when you receive a call.
Alert Answer	Controls the behavior of the incoming VoIP call prompt (when Dial91 is in the background): • ON: You can immediately answer the incoming call. • OFF: You can view the incoming call screen, and then choose either answer or decline the call.
Alert Missed	Controls the behavior of the missed call prompt (when you receive a call when Dial91 is in the background): • ON: A Missed Call alert appears on the native iPhone screen. • OFF: No alert appears.
Contact Image	ON to display the image of your contact while receiving or making calls.
Ringtone	The ringtone for incoming calls.
Custom Image	The background image that appears when you are on a call. Swipe the image to delete.
Custom Colors	You can change the color of various parts of the screen. This setting includes a Reset button, so you can easily return to the defaults.
Single Touch to Call	ON: When making a call from Contacts or History, the call will be placed as soon as you tap a phone number. If SMS and/or video is enabled, you will see a prompt to choose an option. OFF: When you tap the phone number, a prompt appears. When you tap that prompt, the call will be placed.
Show URI Domain	ON: The phone number displayed for an incoming, outgoing or established call will include the domain name (for example, 1234@myVoipProvider.com). OFF (default): The domain name is not included in the display.
Forward Calls	ON to send all incoming calls to a specific number. So long as Dial91 is enabled and registered and Run In Background (above) is ON, incoming calls will be forwarded to this phone number.
To Number	The number to forward calls to, when Forward Calls is ON.
Enable IM & Presence	The Messaging section appears after you purchase the "Presence and Messaging" feature. ON (default) to allow your Dial91 to be used for sending instant messages and sharing online status with your buddies. To use this service, you also need to enable the feature on the Account screen. If OFF, all the SIP and XMPP accounts on your Dial91 will never be used for presence and messaging.

Field	Description
Enable SMS	ON to allow your Dial91 to be used for sending SMS. To use this feature, you also need to enable SMS on your SIP account. If OFF (default), all the SIP accounts on your Dial91 will never be used for sending SMS.
View Style	Choose a view of the instant message screen. Plain or Bubbles (default).
Alert Sound	ON to play a ringtone when you receive a new message.
Alert Vibration	ON to vibrate when you receive a new message.
Alert Text Tone	The ringtone for incoming messages.
Enable Video	ON to make video calls on Dial91. Appears only after the "Video Calls" feature is purchased. See page 52.
Send Landscape	When ON, your video will be forcibly sent in the landscape orientation. This is a compatibility mode for older devices that cannot render video in the portrait orientation. Use as an exception. The default is "Off".
Video Quality	• Automatic: Recommended. Let Dial91 select the best quality to use in a given situation. • Lower (QCIF): Quarter Common Intermediate Format uses 176 horizontal pixels and 144 vertical lines. QCIF transfers one fourth the amount of data; therefore it consumes less memory than CIF. • Higher (CIF): Common Intermediate Format uses 352 horizontal pixels and 288 vertical lines. • Extra High Decode (CIF): Choose this setting when the other party requires a different version of CIF (H.264 Baseline level 1.3), for example, Cisco hard phones.

5.3 Advanced Settings

Top of Screen   Middle of Screen   Bottom of Screen

i   If you make changes to the fields identified by a ▼, you must tap the Apply Changes button at the bottom of the screen or restart Dial91.

Field	Description
Network Traversal Strategy	Tap to display the choices; see below.
Use VPN If Active	If you are using Dial91 with a VPN connection to your network, set this field to ON, to force Dial91 to select the VPN network interface. If you are not using a VPN, set to OFF (default). Only set this field to ON if you are using a VPN connection, otherwise the wrong network interface may be selected, resulting in registration problems.
Voice Activity Detection	• ON: audio is not transmitted when no one is speaking. Turning this feature on may reduce bandwidth usage. • OFF (default): audio is transmitted when no one is speaking.
Noise Reduction Tx	Noise Reduction. When ON, Dial91 attempts to reduce background noise on audio you are transmitting (sending to the other person). Not used on iPhone 4 and 4S. The default is OFF.
Noise Reduction Rx	Noise Reduction. When ON, Dial91 attempts to reduce background noise on audio you are receiving from the other person. The default is OFF.
Quality of Service	If desired, ask your VoIP service provider if QoS is supported. QoS (Quality of Service) can allow your phone calls to be given a higher priority on the network. The default is OFF.
RTP Port Start	Change this value only if advised to do so by your VoIP service provider. This indicates the start of the ports range used for RTP and RTCP sessions. The range is 100 ports wide. The range is not observed if ICE is used. The default is 4000.
Audio Codecs Selection	Tap to display more information about these two fields. See page 50.
Video Codecs Selection	Appears after the Video Calls premium feature is purchased. See page 51.

Field	Description

Verify TLS Cert	Applies only if you use TLS as the transport.
	• ON (default): Dial91 attempts to verify the certificate, sent by the SIP server, to see if it
	   is trusted. For the certificate to be trusted, a corresponding CA certificate, provided by
	   your VoIP provider, must be installed on your device (using the iPhone Configuration
	   Utility for example).
	• OFF: Dial91 accepts the certificate without attempting to verify it.

Support RPort	• On: the outgoing INVITE message will have an RPort parameter inside the Via
	   header, which indicates that Dial91 supports RFC 3581. If the server also supports RFC
	   3581, the server should respond with the RPort parameter set to the incoming public
	   IP port and the received parameter set to the public IP address. This is the default
	   behavior in previous Dial91 versions.
	• Off: Dial91 does not have the RPort parameter in the Via header.

Support PRACK	• On: Dial91 advertises that it supports "100rel" and allows PRACK, as defined in RFC
	   3262. The outgoing INVITE message will have "100rel" in the Supported header and
	   "PRACK" in the Allow header. This is the default behavior in previous Dial91
	   versions.
	• Off: Dial91 will not advertise these features; there will be no "100rel" in the Supported
	   header.

Verbose Logging	Leave this setting OFF unless customer support instructs you to turn it ON in order to troubleshoot a problem you are having on your device. See page 53.
Send Log	Tap to upload the current log to customer support. See page 53.
Call Statistics	To show detailed information about the current/last call. For example, the number of packets lost.

Network Traversal Strategy

Select a profile:

• Default Configuration: STUN ON, ICE OFF, DNS SRV ON.

  Dial91 will use the STUN server at stun.Dial91.com to discover the public address of your device. It will present that public address for SIP signaling and when negotiating media routing.

• Application Managed: STUN ON, ICE ON, DNS SRV ON.

  Dial91 will use the STUN server at stun.Dial91.com to discover the public address of your device. It will present your public address for SIP signaling and both your public and private addresses when negotiating media routing.

• Server Managed: STUN OFF, ICE OFF, DNS SRV ON.

  Dial91 will present your device's private address for SIP signaling and when negotiating media routing. Choose this option if your VoIP service provider advises you that it has implemented a network-hosted NAT traversal (or far-end NAT traversal) technology such as a session border controller (SBC), media proxy or RTP relay.

• User Specified: Set the settings as desired.

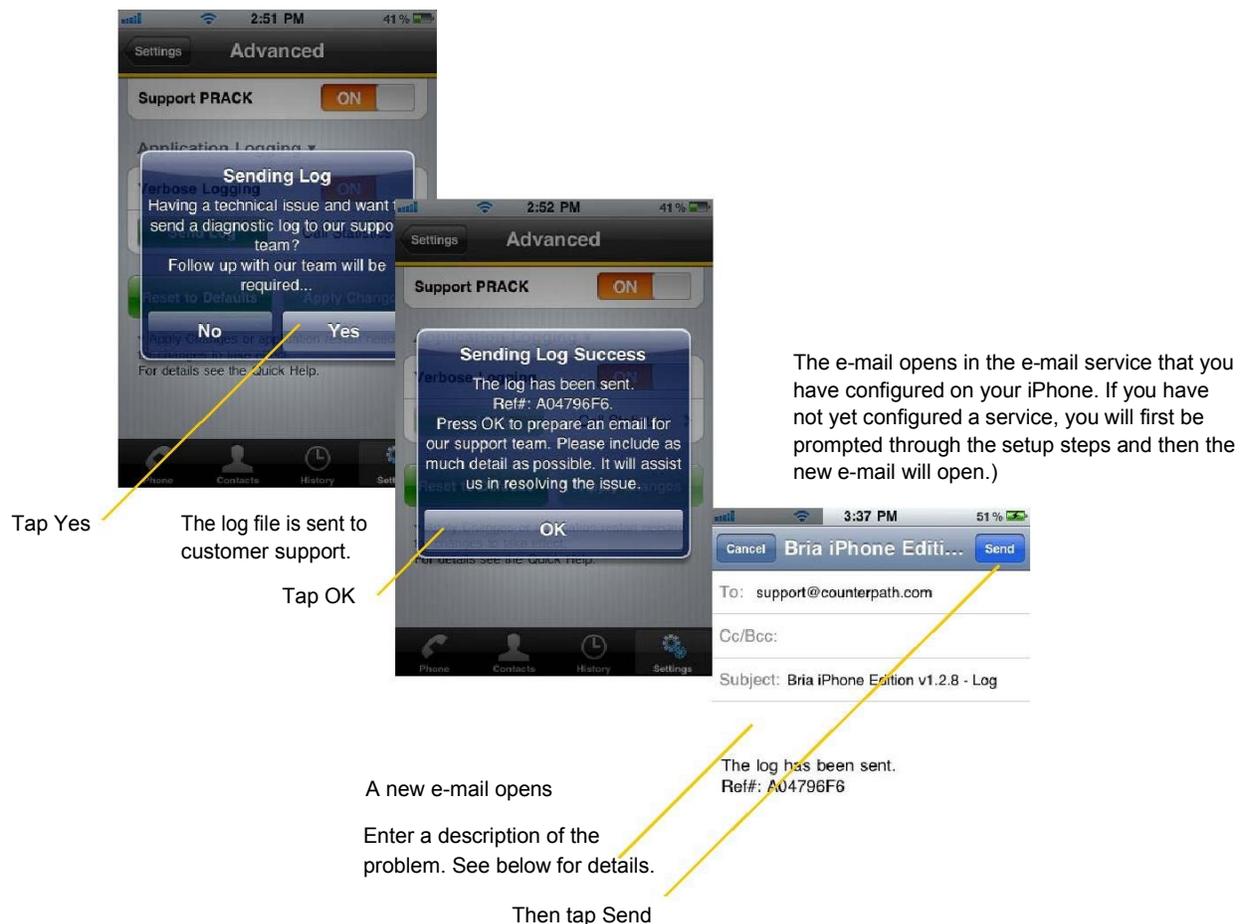| Field	Description
DNS SRV	• ON: Dial91 will use DNS SRV to discover the network addresses for your VoIP service provider's VoIP-related services such as a STUN server, if any. • OFF: Dial91 will not use DNS SRV for discovery. Only turn this setting off if your system administrator advises you to do so.
STUN Server	Used only if STUN is ON. The default is stun.Dial91.com. You can specify a different STUN server if your VoIP provider advises you to do so.
STUN Wi-Fi	• ON: Dial91 will use a STUN server to discover your public IP address. • OFF: Dial91 does not discover your public IP address. Therefore, only the private IP address will be used. Typically, Global IP should be set to OFF.
STUN Mobile	This setting has the same function as STUN Wi-Fi, but applies only when you are connected over the mobile network.
ICE Wi-Fi	ICE is involved only in media routing (it is not involved in SIP signaling). • ON: Dial91 will use ICE to discover addresses for media packets. ICE provides a good guarantee of two-way audio. However, to use ICE successfully, both endpoints in a call must use ICE and specifically must use draft 19 of the ICE standard. • OFF: Try turning ICE off if you are not using iPhone behind a firewall or NAT.
ICE Mobile	This setting has the same function as ICE Wi-Fi, but applies only when you are connected over the mobile network.

A Troubleshooting

Using Dial91 Diagnostics

If you have a problem with Dial91, customer support may ask you to turn on diagnostics to capture information.

1. Go to Settings > Advanced Settings. If Verbose Logging is OFF, turn it to ON and tap Apply Changes.

2. Reproduce the problem. When done, go to Settings > Advanced Settings again. Tap Send Log. A prompt appears.

The e-mail opens in the e-mail service that you have configured on your iPhone. If you have not yet configured a service, you will first be prompted through the setup steps and then the new e-mail will open.)

Tap Yes

The log file is sent to customer support.

Tap OK

A new e-mail opens

Enter a description of the problem. See below for details.

Then tap Send

The log has been sent.
Ref#: A04796F6

3. The description of the problem could include the following:

    *   What you were doing when the problem occurred.
    *   Your Apple device and model.
    *   Any recent changes you have made to your setup of Dial91.
    *   Whether you are in your "home" Wi-Fi zone (your normal Wi-Fi zone) or a different Wi-Fi zone.

- Whether you normally have 3G/4G enabled on your device and in Dial91.

4. When done, turn off Verbose Logging. Tap Apply Changes.