ARETE
mobile

Application Note
AN1006-02, 2013-12-26
Test Audio Communication

Notice

Registered Trademark

AR∃TE
mobile

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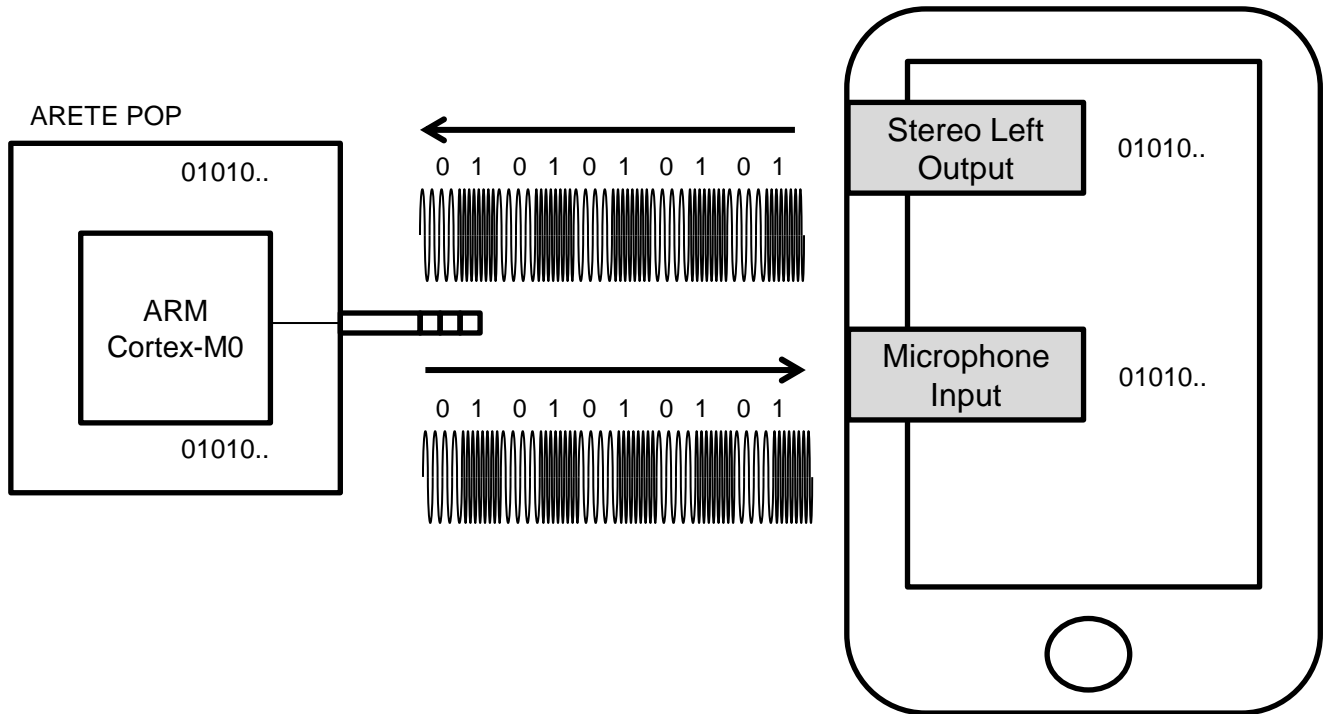
Revision History

Version	Date	Changes
00	2013-07-23	Initial released
02	2013-12-26	Address changed Revision history added

ARETE POP used audio interface to communicate with smart phone. ARETE POP is converting binary bit stream to audio wave to transmit data to smart phone vice versa. Some Android smart phone limit microphone input to remove noise from voice. In case some Aroid phone noise remover removes ARETE POP data that makes a failure at connecting ARETE POP to Android Smartphone.

ARETE POP

01010..

ARM
Cortex-M0

01010..

0 1 0 1 0 1 0 1 0 1

0 1 0 1 0 1 0 1 0 1

Stereo Left
Output

01010..

Microphone
Input

01010..

Another cause of failure is plug type. The ARETE POP has a common headset plug. A headset plug has four rings used for left audio output, right audio output, ground and micro phone input. Both left audio output and microphone rings are used for transferring data while right audio output ring is used for powering ARETE POP. iPhone style (CTIA type) plug is widely used. However, some smart phone uses OMTP type headset plug.
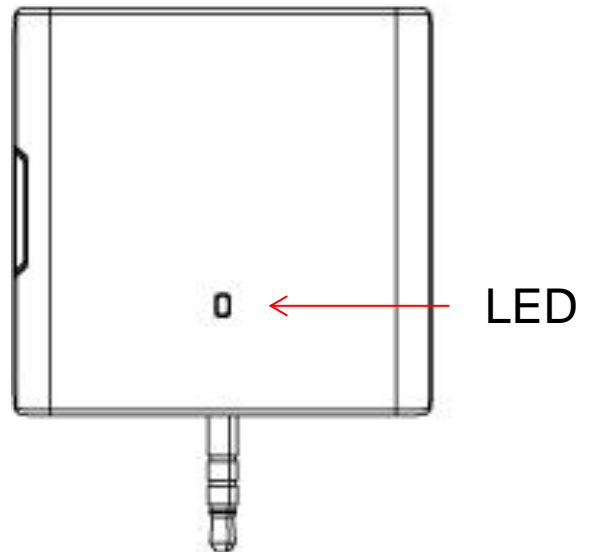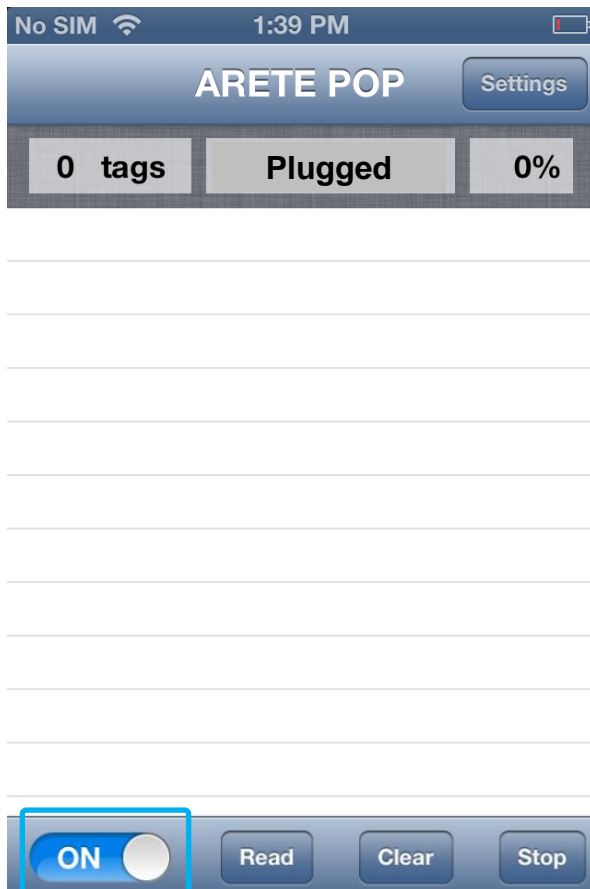
CTIA
(iPhone Style)

MIC   GND   RIGHT   LEFT

OMTP

GND   MIC   RIGHT   LEFT
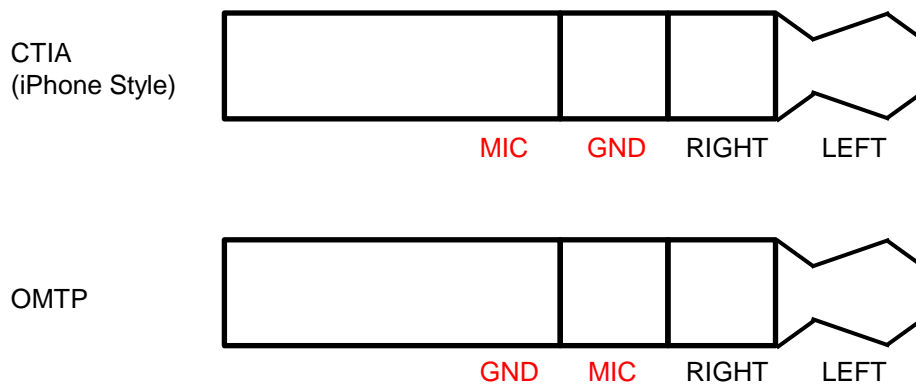
When you use ARETE POP, the first thing to do is starting App. Next, insert ARETE POP to smart phone. Then, check message on App.

| Symptoms	• **Unplugged** still appears when inserting ARETE POP
Possible causes	• ARETE POP is not fully inserted. Insert ARETE POP fully.
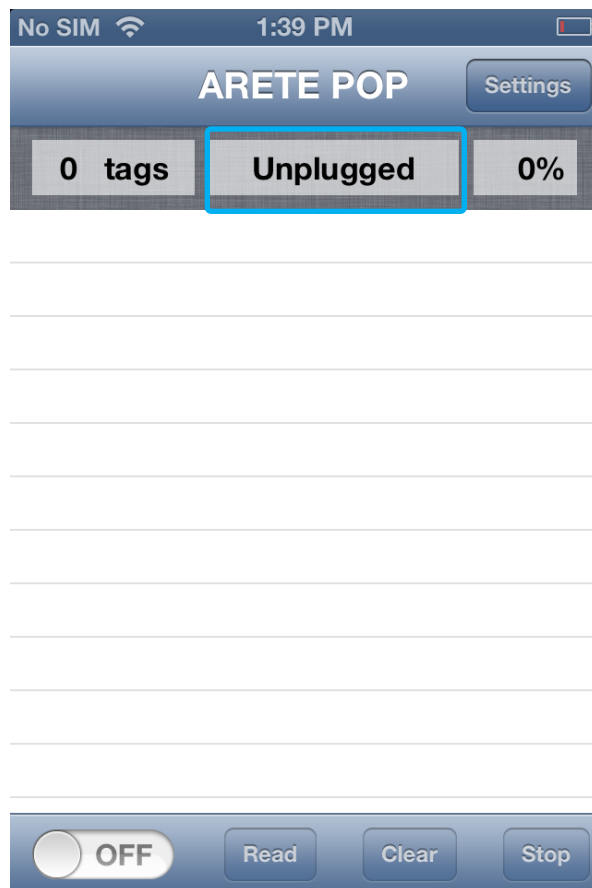
After **Plugged** appears, volume up to 100%. Next, switch button to **ON.** Then, check LED on ARETE POP.

Symptoms	• The LED stays ON for just a second after inserting ARETE POP and then becomes OFF again.
Possible causes	• ARETE POP is discharged. Recharge the ARETE POP.

No SIM 📶   1:39 PM   🔋

ARETE POP   Settings

0 tags   **Plugged**   0%

ON ⬤   Read   Clear   Stop

← ———————— LED

After check LED indicator, check message on App.

Symptoms	• **Plugged** is still appears . • LED turns on. • **Connected** is not appears.
Possible causes	• Some smartphone Apps stuck on audio interface or crashed with ARETE POP App. Reboot your smartphone and try again. • Smart phone is not support iPhone style headset. Use OMTP to CTIA converter. • There is a failure to communicate with smartphone. To analyze audio signal, diagnostic process is needed.
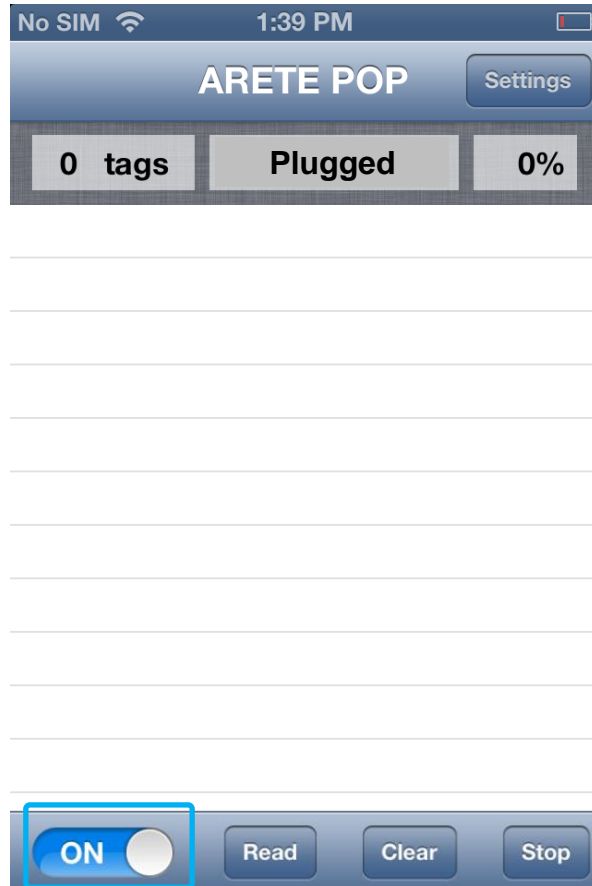
Diagnostic process is only embedded on Android App. Touch **Settings** button, then Settings views appears. Next, select **About**. Then, touch Diagnostic and wait for 100%.

After finishing diagnostic process, send log files to us. Log files are stored at sdcard0\AudioTest in your smartphone.

Desktop\your mobile phone \ sdcard0 \ AudioTest

FER_Galaxy Nexus_20130613162958.csv   Microsoft Excel
FER_Galaxy Nexus_20130614180107.csv   Microsoft Excel
LOOPBACK_500_Galaxy Nexus_2013061316364...   Microsoft Excel
LOOPBACK_1000_Galaxy Nexus_201306131636...   Microsoft Excel
LOOPBACK_5000_Galaxy Nexus_201306131636...   Microsoft Excel
LOOPBACK_10000_Galaxy Nexus_20130613163...   Microsoft Excel
LOOPBACK_20000_Galaxy Nexus_20130613163...   Microsoft Excel
TONE_002_Galaxy Nexus_20130613163651.csv   Microsoft Excel
TONE_004_Galaxy Nexus_20130613163655.csv   Microsoft Excel
TONE_006_Galaxy Nexus_20130613163658.csv   Microsoft Excel
TONE_008_Galaxy Nexus_20130613163701.csv   Microsoft Excel
TONE_010_Galaxy Nexus_20130613163704.csv   Microsoft Excel
TONE_012_Galaxy Nexus_20130613163707.csv   Microsoft Excel
TONE_014_Galaxy Nexus_20130613163710.csv   Microsoft Excel
TONE_016_Galaxy Nexus_20130613163714.csv   Microsoft Excel
TONE_018_Galaxy Nexus_20130613163717.csv   Microsoft Excel
TONE_020_Galaxy Nexus_20130613163720.csv   Microsoft Excel
TONE_022_Galaxy Nexus_20130613163723.csv   Microsoft Excel

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