Call Processing

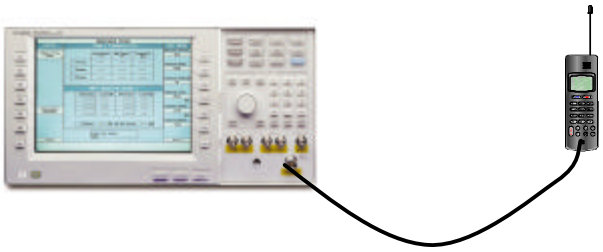
- Uses the 8960 to communicate with a phone
- Exercises circuitry not covered by a parametric verification
  - Demodulation down converter receiver path
  - Protocol and measurement interrupts
    - Protocol Processor
    - Real time interface

The Call Processing with a Phone test insures that the 8960 can originate, connect, and measure calls to and from a GSM phone.

There are no specifications associated with this test. The test collects performance data from the phone. If the same phone is used with each 8960 tested the results should match from unit to unit.

Currently the test is done in a manual mode. Current plans are to automate the test as part of the Instrument Support Tool Box.

Call Processing

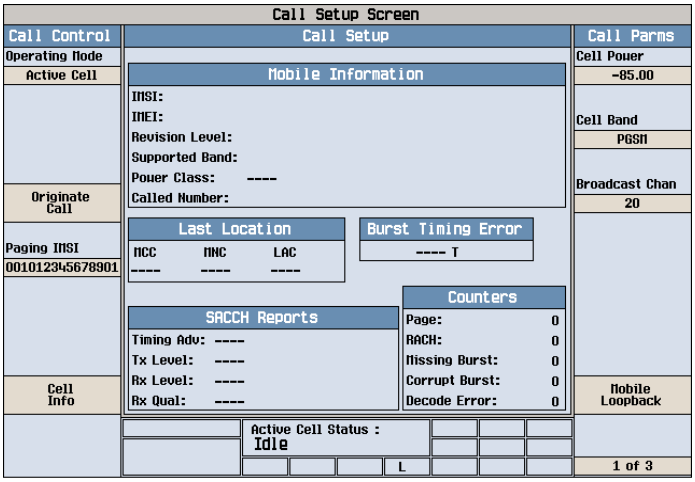


Connect the Phone to the 8960

Begin by connecting the phone to the 8960. The phone has an antenna RF In/Out connector which must be connected to the 8960 RF In/Out connector. The GSM phone should be supplied with the RF Interface cable.

Call Processing

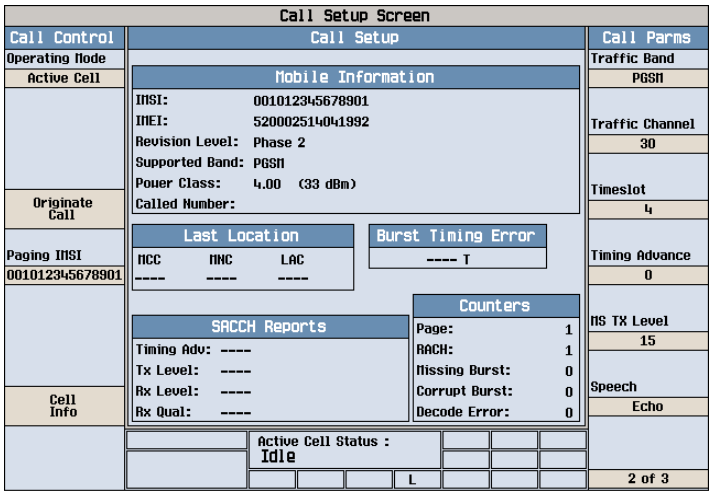
Preset



Begin the test procedure by resetting the instrument. Press the blue ‘SHIFT’ button then the RESET button.

Call Processing

Mobile Station Call Origination

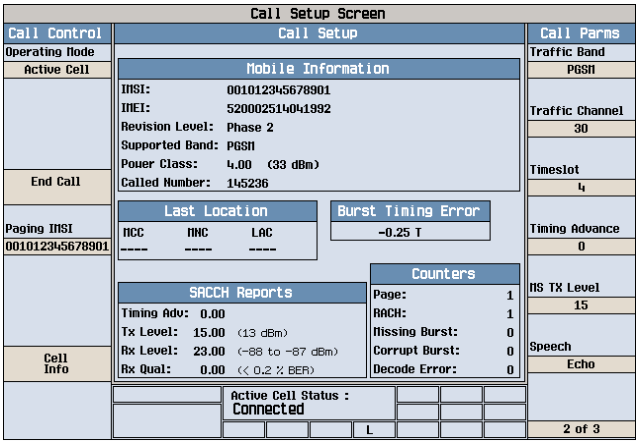


Do a Mobile Station Call Origination:

Select screen 2 of 3. On the phone enter several numbers and press the ‘Send’ or ‘Yes’ button.

Call Processing

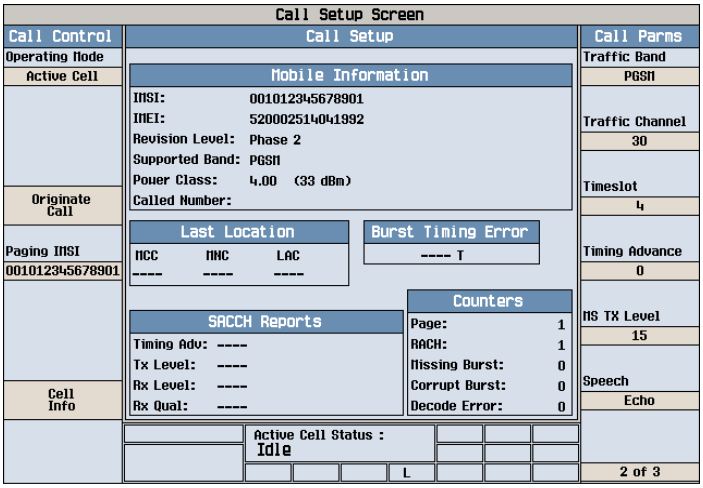
Active Call



When a call is connected the test data should appear in the ‘Burst Timing Error’ window and in the ‘SACCH Reports’ window, the ‘Active Cell Status’ window should say ‘Connected’. Disconnect the call by pressing the ‘End Call’ button on either the phone or the 8960.

Call Processing

Base Station Call Origination

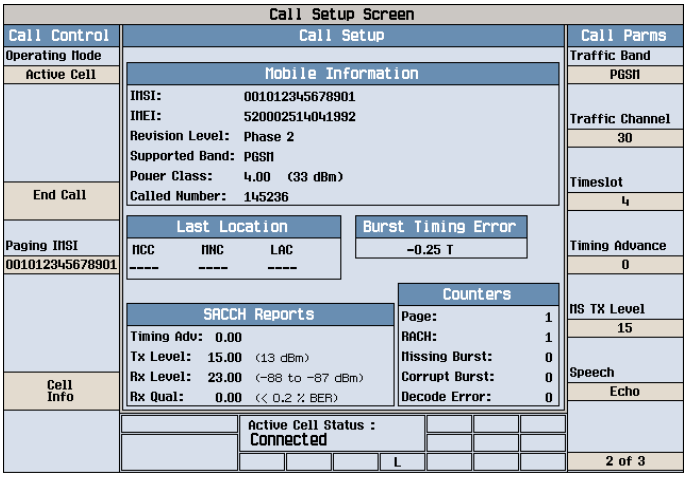


Do a Base Station Call Origination:

Select screen 2 of 3. On the 8960 press the ‘Originate Call’ button. The phone should ring, then press the ‘Send’ or ‘Yes’ button on the phone to connect the call.

Call Processing

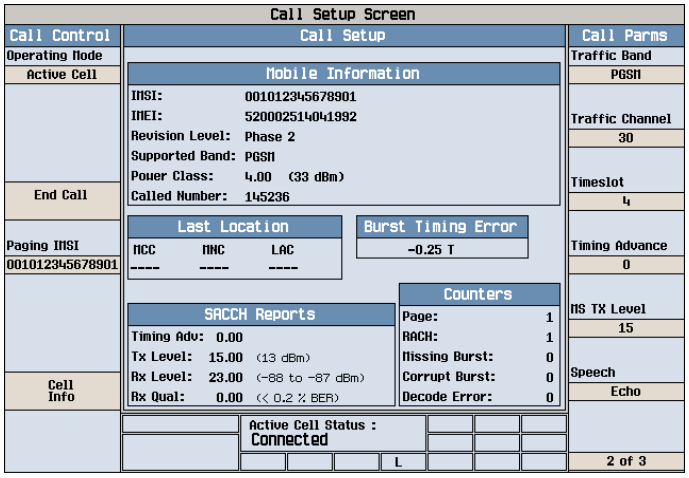
Active Call



When a call is connected the test data should appear in the ‘Burst Timing Error’ window and in the ‘SACCH Reports’ window, the ‘Active Cell Status’ window should say ‘Connected’. Do not disconnect, proceed to the next tests.

Call Processing

Handoffs



The 8960 and phone call connection must be tested for the following protocol steps:

•Traffic Channel Handover - Press the ‘Traffic Channel’ button on the 8960. Insure that the channel number can be changed and the call remains connected.

•Mobile Transmit Level Handover - Press the ‘MS TX Level’ button on the 8960. Insure that the transmit level can be set to a level between 5 and 15 and the call remains connected. The TX Level Data in the ‘SACCH Reports’ screen should change.

•Mobile Transmit Timing Advance Handover - Press the ‘Timing Advance’ button on the 8960. Insure that the timing advance number can be changed and the call remains connected.

•Mobile Transmit Timeslot Handover- Press the ‘Timeslot’ button on the 8960. Insure that the timeslot number can be set to a timeslot between 3 and 5 and the call remains connected.

•Dual Band Handoff- Press the ‘Traffic Band’ button on the 8960. Insure that the the band can be changed from ‘PGSM’ to “DCS’ bands and the call remains connected.

•Press end call on either the phone or the 8960 to disconnect and stop the test.