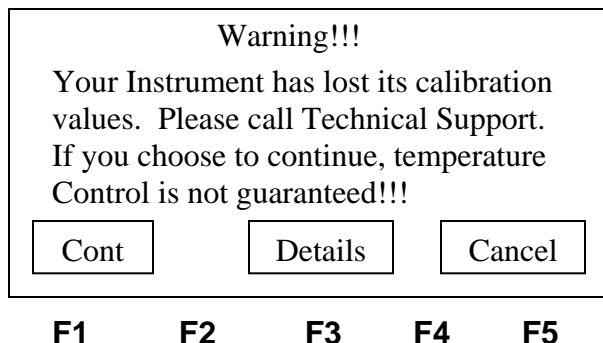# Lost Calibration Values on the GeneAmp® 9700

Calibration values can occasionally be lost from the GeneAmp® 9700 due to a variety of factors. If the calibration values have been lost, an error message will appear when attempting a run.

The following document will explain the steps required to obtain and re-enter the lost calibration values for your GeneAmp® 9700.
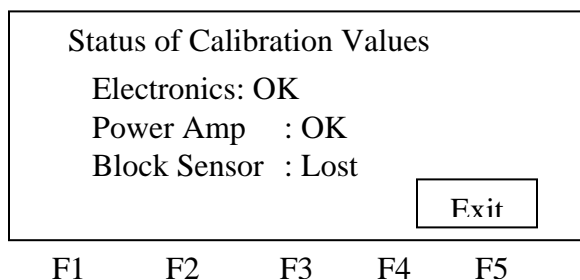
The following are directions for entering calibration values into a GeneAmp® 9700.

When calibration values have been lost an error message will be displayed.

```
                    Warning!!!
         Your Instrument has lost its calibration
         values.  Please call Technical Support.
         If you choose to continue, temperature
         Control is not guaranteed!!!
          ┌──────┐      ┌─────────┐   ┌────────┐
          │ Cont │      │ Details │   │ Cancel │
          └──────┘      └─────────┘   └────────┘
```

F1   F2   F3   F4   F5

To obtain and re-enter calibration values, perform the following procedure. Go to the "Details" display by pressing the F3 key to determine which calibration values have been lost.
.

```
         Status of Calibration Values
             Electronics: OK
             Power Amp    : OK
             Block Sensor  : Lost
                              ┌──────┐
                              │ Exit │
                              └──────┘
```

F1   F2   F3   F4   F5

The three types of calibration values that can be lost are the:
- block sensor values
- power amplifier values
- electronics values

In the example above the Block Sensor values have been lost. Once you have determined which values have been lost, you will need the serial number of both the top module and the bottom module. The top module serial can be obtained by pulling the yellow plastic lever in the back of the machine out to 90 degrees. The lever will pull out to 45 degrees easily, and then you need to pull it the rest of the way. This will allow the top to slide forward about ½ an inch. You then will flip the top module upside down and the serial number will be on the underside of the top module.

GeneAmp® 9700s with a serial number starting at xxxS905xxxxx for the top module or 805S905xxxxx for the base have the calibration values on the instrument. They can be found with the serial numbers. You should write down these values, which contain a slope and offset, before putting the instrument back together. These values will be used with the following instructions.

If the values on the calibration sticker are expressed in exponential form (ex. 2.075410e-4), convert them to decimal numbers to enter into the instrument.
                 (ex. 2.075410e-4 = .0002075410)

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When entering calibration values, the instrument is limited to 7 characters. If your calibration value has more than 7 digits, enter only the first seven.

For customers in the United States and Canada, please send and email to technical support at http://faqs.appliedbiosystems.com. Please include in the email:
   a. the serial number of the machine
   b.   your name
   c.   phone number
   d.   fax number
   e. email address
   f.   your address

Once this information is received, your calibration values will be resent to you via e-mail or Fax.

For Non- US and Canadian customers, please contact your local support group. You may find the contact info at:
http://www.appliedbiosystems.com/support/contact/internationalsupport.cfm.

Once the calibration values have been obtained, continue with the following pages for directions on entering the calibration values.

Entering Block Sensor Calibration Values on the GeneAmp® PCR System 9700

Press F4(Util)

```
08:00 AM            09/25/00            25.0°C
        GeneAmp® PCR System 9700
                  Version
   Name: TC001                   User: <<AB>>
  [Run]      [Create]     [Edit]      [Util]      [User]
   F1          F2          F3          F4          F5
```

Press F1(Diag)

```
              Utilities

   Diag      -  Instrument diagnostics
   TmCalc    -  Calculates melting temp
   Config    -  Instrument configuration
  [Diag]  [TmCalc]  [Config]   [More]    [Exit]
   F1       F2        F3        F4         F5
```

Hold down the
Stop *key and press*
F3(TempVer)

```
              Diagnostics
   Hard     -  Hardware Diagnostics
   System   -  System Performance Tests
   TempVer  -  Temperature Verification
   Upgrad   -  Firmware Upgrade
  [Hard]  [System] [TempVer] [Upgrad]  [Exit]
   F1       F2        F3        F4        F5
```

Press the down arrow
key twice to highlight
Calibrations, *then*
press F1(Run).

```
            Service Functions
   Service Info    Block Params    Final Test
   Base Serial #   Manual Ctrl     Manual TEC
   Calibrations    Port Mode       Other Diags
   Init BRAM       Stability       Log
  [Run]                                   [Exit]
   F1       F2        F3        F4        F5
```

Select F2(Block)

```
              Calibrations
   Elect     -  Electronics calibration
   Block     -  Block Sensor calibration
   PwrAmp    -  Power Amplifier calibration
   Print     -  Print the Base calibration
  [Elect]  [Block]  [PwrAmp]  [Print]   [Exit]
   F1       F2        F3        F4        F5
```

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*Enter the new calibration values. When complete, Press F1(Accept). Press F5(Exit) **four** times to return to the main menu.*

```
          Block Sensor Calibration

    Resist      Temp °C      Slope        Offset
   1098.319     30.720     +x.xxxxxx    -xxx.xxxx

  [Accept]    [Calib]     [+/-]   [Defalt] [Cancel]
    F1          F2         F3       F4       F5
```

Entering Electronics Calibration Values for the GeneAmp® PCR System 9700

Press F4(Util)

```
08:00 AM            09/25/00            25.0°C
          GeneAmp® PCR System 9700
                  Version
    Name: TC001                 User: <<AB>>
  [Run]    [Create]   [Edit]    [Util]    [User]
   F1        F2        F3        F4        F5
```

Press F1(Diag)

```
                 Utilities

  Diag    - Instrument diagnostics
  TmCalc  - Calculates melting temp
  Config  - Instrument configuration
  [Diag] [TmCalc] [Config]  [More]   [Exit]
   F1      F2       F3        F4       F5
```

*Hold down the **Stop** key and press F3(TempVer)*

```
                 Diagnostics
  Hard     - Hardware Diagnostics
  System   - System Performance Tests
  TempVer  - Temperature Verification
  Upgrad   - Firmware Upgrade
  [Hard] [System] [TempVer] [Upgrad] [Exit]

   F1      F2        F3        F4      F5
```

*Press the down arrow key twice to highlight **Calibrations,** then press F1(Run).*

```
              Service Functions
  Service Info   Block Params   Final Test
  Base Serial #  Manual Ctrl    Manual TEC
  Calibrations   Port Mode      Other Diags
  Init BRAM      Stability      Log
  [Run]                               [Exit]
   F1      F2        F3        F4       F5
```

Select F1(Elect)

```
                Calibrations
  Elect    - Electronics calibration
  Block    - Block Sensor calibration
  PwrAmp   - Power Amplifier calibration
  Print    - Print the Base calibration
  [Elect] [Block] [PwrAmp]  [Print]  [Exit]

   F1      F2        F3        F4      F5
```

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Enter the new calibration values. When complete, Press F1(Accept). Press F5(Exit) **four** *times to return to the main menu.*

```
               Electronics Calibration
           Resistance      Slope       Offset
  Block    1103.124     +x.xxxxxx    +xxxx.xxx
  Hsink    9531.847     +x.xxxe-xx   +x.xxxe-xx
  Cover    2070.292     +x.xxxe-xx   +x.xxxe-xx
  [Accept]    [Calib]    [+/-]    [Defalt] [Cancel]
    F1         F2         F3        F4       F5
```

Entering Power Amplifier Calibration Values on the GeneAmp® PCR System 9700

Press F4(Util)

```
  08:00 AM            09/25/00            25.0°C
           GeneAmp® PCR System 9700
                    Version
     Name: TC001              User: <<AB>>
  [Run]      [Create]   [Edit]    [Util]    [User]
    F1         F2         F3        F4        F5
```

Press F1(Diag)

```
                   Utilities
    Diag     -  Instrument diagnostics
    TmCalc   -  Calculates melting temp
    Config   -  Instrument configuration
  [Diag]  [TmCalc]  [Config]   [More]    [Exit]
    F1       F2        F3        F4        F5
```

Hold down the **Stop** *key and press F3(TempVer)*

```
                   Diagnostics
   Hard       -  Hardware Diagnostics
   System     -  System Performance Tests
   TempVer    -  Temperature Verification
   Upgrad     -  Firmware Upgrade
  [Hard]   [System]  [TempVer]  [Upgrad]   [Exit]
    F1        F2        F3         F4        F5
```

Press the down arrow key twice to highlight **Calibrations,** *then press F1(Run).*

```
                 Service Functions
   Service Info    Block Params    Final Test
   Base Serial #   Manual Ctrl     Manual TEC
   Calibrations    Port Mode       Other Diags
   Init BRAM       Stability       Log
  [Run]                                     [Exit]
    F1        F2        F3        F4        F5
```

Select F3(PwrAmp)

```
                 Calibrations
   Elect      -  Electronics calibration
   Block      -  Block Sensor calibration
   PwrAmp     -  Power Amplifier calibration
   Print      -  Print the Base calibration
  [Elect]   [Block]   [PwrAmp]   [Print]   [Exit]
    F1        F2        F3         F4        F5
```

*Enter the new calibration values. When complete, Press F1(Accept). Press F5(Exit) **four** times to return to the main menu.*

```
Iset   Imeas    +Set  +1.143e+02  +2.078s+03
+10    +10.3    -Set  +1.029e+02  +2.071e+03
 +5     5.2     0Set  +1.097e+02  +2.093e+03
 -5    -5.0
-10    -9.7                        Ver  B
[Accept]    [More]      [+/-]    [Defalt]  [Cancel]
  F1          F2          F3        F4        F5
```

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