FW Bell Gaussmeter Error Codes List

Starting with the 5000 Series, FW Bell gaussmeters have self-diagnostics built in to detect problems with the meter or probe. In most cases, if the error code pertains to the probe or Hall current (also called Ic or excitation current) or zero adjustment problems, then the probable cause is the probe. Probes are rather fragile and often get damaged resulting in an error code or message. If possible, substitute another probe to determine if the problem is with the probe or meter. In most cases (with the exception of battery replacements) if the problem is with the meter there is nothing that can be done in the field to remedy the situation and the meter must be returned to the factory for repair. Probes should be returned with the meter so that all problems may be identified and corrected.
The 8000 Series error codes are not included in this list since it displays a message on its own display along with the error code.

5000 Series: (5060, 5070 and 5080)

E100-SRAM Data Error
E200-SRAM Address Error
E001-EEPROM Communications Error
E002-Digital Potentiometer Communications Error
E003-EEPROM Data Error
E004-A/D Converter Standby Error
E005-A/D Converter Idle Error
E006-A/D Converter Calibrate Error
E007-A/D Converter Zero Error
E008-A/D Converter Start Error
E009-A/D Converter Conversion Error
E010-A/D Converter Ready Error
E011-Offset Potentiometer Error
E012-Calibration Potentiometer Error
E013-Offset Potentiometer Zero Error
E015-3rd Stage Gain Error
E016-Hall Probe High Input Resistance Error
E017-Hall Current Negative Direction Error
E018-Hall Current Positive Direction Error
E019-Hall Current Disable Error
E020-Hall Current Level Error
E021-Symmetry Potentiometer Error
E022-Course Potentiometer Error
E023-Fine Potentiometer Error
E024-Symmetry Balance Error
E025-Calibration Adjust Error
E040-Probe Memory Communications Error
E041-Probe Memory Redirection Error
E042-Probe Memory Status Error
E043-Probe Memory Data Error
E045-Probe Memory Content Error
**5100 Series:** (5170 and 5180)

E003-Meter EEPROM Error  
E040-Probe Memory Communications Error  
E043-Probe Memory Data Error  
E044-High Field Probe Present Error  
E045-Probe Memory Content Error  
E063-Offset DAC Error  
E064-Hall Current Level Error  
E066-2nd Stage Gain Error  
E067-Hall Probe High Input Resistance Error  
E098-Probe Data Timeout Error  
E099-Meter Data Timeout Error  

**6000 Series:** (Model 6010)

E001-EEPROM Communications Error  
E002-Digital Potentiometer Communications Error  
E003-EEPROM Data Error  
E004-A/D Converter Standby Error  
E005-A/D Converter Idle Error  
E006-A/D Converter Calibrate Error  
E007-A/D Converter Zero Error  
E008-A/D Converter Start Error  
E009-A/D Converter Conversion Error  
E010-A/D Converter Ready Error  
E011-Low Hall Control Current Polarity Error  
E012-Low Hall Control Current Presence Error  
E013-Low Hall Control Current Magnitude Error  
E014-Hall Rin Magnitude Error  
E015-Cal Pot Adjustment Error  
E018-Course Offset Pot Adjustment Error  
E022-2nd Stage Amplifier Gain Error  
E023-2nd Stage Amplifier Gain Error  
E030-3rd Stage Gain Adjust Error  
E031-Zero Adjust Error  
E040-Probe Memory Communications Error  
E041-Probe Memory Redirection Error
E042-Probe Memory Status Error
E043-Probe Memory Data Error
E045-Probe Memory Content Error
E046-probe Temperature Memory Redirection Error
E047-Probe Temperature Memory Content Error
E050-Input Is Too High To Null Error
E100-SRAM Data Error
E200-SRAM Address Error

7000 Series: (7010 and 7030)

{" NO RESPONSE WAS RECEIVED FROM THE " /* Error 01 */
" ANALOG CONTROLLER DURING FIRMWARE ",
" DOWNLOAD \\n"},

{" COMMUNICATIONS ERROR WITH THE " /* Error 02 */
" ANALOG CONTROLLER DURING FIRMWARE ",
" DOWNLOAD \\n"},

{" NO ACKNOWLEDGEMENT WAS RECEIVED " /* Error 03 */
" FROM THE ANALOG CONTROLLER DURING ",
" FIRMWARE DOWNLOAD \\n"},

{" NEGATIVE ACKNOWLEDGEMENT WAS " /* Error 04 */
" RECEIVED FROM THE ANALOG CONTROLLER",
" DURING FIRMWARE DOWNLOAD \\n"},

{" THE ANALOG CONTROLLER'S INPUT " /* Error 05 */
" REGISTER IS NOT READY TO ",
" ACCEPT DATA \\n"},

{" ERROR WHILE READING 9000-SERIES " /* Error 06 */
" PROBE CORRECTION DATA ",
" \\n"},

{" ERROR WHILE READING 7000-SERIES " /* Error 07 */
" PROBE CORRECTION DATA ",
" \\n"},

{" ERROR WHILE READING 7000-SERIES " /* Error 08 */
" PROBE REDIRECTION DATA ",
" \\n"},

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" ERROR WHILE READING THE EVENT ", /* Error 09 */
" STATUS FROM THE ANALOG CONTROLLER ",
" \
",
" ERROR WHILE ATTEMPTING TO ", /* Error 10 */
" PROGRAM AN I/O EXPANDER ON AN ",
" ANALOG CARD \
",
" THE ANALOG CONTROLLER'S RESPONSE ", /* Error 11 */
" TO A COMMAND WAS INCORRECT ",
" \
",
" ERROR WHILE ATTEMPTING TO PROGRAM ", /* Error 12 */
" THE LED CONTROLLER ON THE KEYPAD ",
" \
",
" ERROR WHILE ATTEMPTING TO PROGRAM ", /* Error 13 */
" THE ANALOG CONTROLLER'S ",
" INTERNAL DAC \
",
" ERROR WHILE ATTEMPTING TO PROGRAM ", /* Error 14 */
" THE ANALOG CONTROLLER'S ",
" INTERNAL ADC \
",
" ERROR WHILE ATTEMPTING TO READ ", /* Error 15 */
" THE ZERO CROSSING COUNTS FROM THE ",
" ANALOG CONTROLLER \
",
" ERROR WHILE ATTEMPTING TO PROGRAM ", /* Error 16 */
" THE COMMAND REGISTER IN THE ",
" HIGH-RES ADC \
",
" ERROR WHILE ATTEMPTING TO PROGRAM ", /* Error 17 */
" THE OFFSET REGISTER IN THE ",
" HIGH-RES ADC \
",
" ERROR WHILE ATTEMPTING TO PROGRAM ", /* Error 18 */
" THE FULL SCALE REGISTER IN THE ",
" HIGH-RES ADC \
",
" ERROR WHILE ATTEMPTING TO READ THE", /* Error 19 */
" DATA REGISTER FROM THE ",
" HIGH-RES ADC \
",
" THE ANALOG CONTROLLER FAILED TO ", /* Error 20 */
" ECHO DATA AS EXPECTED ",
" 
"n"},

{" " ERROR WHILE PROGRAMMING THE ", /* Error 21 */
" ANALOG CONTROLLER TO AUTOMATICALLY",
" MONITOR THE HIGH-RES ADC'S 
"n"},

{" " ERROR WHILE READING THE INTERNAL ", /* Error 22 */
" TEMPERATURE SENSOR ",
" 
"n"},

{" " ERROR WHILE PROGRAMMING THE ", /* Error 23 */
" ANALOG CONTROLLER TO AUTOMATICALLY",
" MONITOR THE PEAK-VALLEY DETECTORS 
"n"},

{" " ERROR WHILE PROGRAMMING THE ", /* Error 24 */
" UNCORRECTED ANALOG OUTPUT ",
" SCALING DAC 
"n"},

{" " THE ANALOG CONTROLLER DID NOT ", /* Error 25 */
" RESPOND WITH DIAGNOSTIC INFORMATION",
" AFTER A RESET 
"n"},

{" " ERROR WHILE READING OR PROGRAMMING" , /* Error 26 */
" THE CALIBRATION EEPROM ON THE ",
" ANALOG CARD 
"n"},

{" " THE ANALOG CONTROLLER'S OUTPUT ", /* Error 27 */
" REGISTER DID NOT CONTAIN DATA ",
" WHEN EXPECTED 
"n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 28 */
" NO END-OF-CONVERSION WHEN EXPECTED",
" 
"n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 29 */
" FIRST RESULT FLAG WAS NOT SET ",
" WHEN EXPECTED 
"n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 30 */
" INVALID READING WITH A 0V INPUT",
" FROM THE WAVEFORM GENERATOR 
"n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 31 */
" INVALID READING WITH A +2V INPUT",
" FROM THE WAVEFORM GENERATOR 
"n"},
" LOW-RES A-TO-D ERROR ", /* Error 32 */
" INVALID READING WITH A +4V INPUT ",
" FROM THE WAVEFORM GENERATOR 
",

" LOW-RES A-TO-D ERROR ", /* Error 33 */
" INVALID READING WITH A -2V INPUT ",
" FROM THE WAVEFORM GENERATOR 
",

" LOW-RES A-TO-D ERROR ", /* Error 34 */
" INVALID READING WITH A -4V INPUT ",
" FROM THE WAVEFORM GENERATOR 
",

" LOW-RES A-TO-D ERROR ", /* Error 35 */
" INVALID READING FROM GROUND ",
" REFERENCE SELECTED VIA LO-RES MUX\n"}

"

" THE LOW-RES A-TO-D ", /* Error 36 */
" INVALID READING FROM +2.5V ",
" REFERENCE SELECTED VIA LO-RES MUX\n"}

"

" LOW-RES A-TO-D ERROR ", /* Error 37 */
" INVALID READING FROM GROUND ",
" REFERENCE SELECTED VIA TRMS MUX \n"}

"

" LOW-RES A-TO-D ERROR ", /* Error 38 */
" INVALID READING FROM ANLGUC DAC ",
"OUTPUT OF 0V SELECTED VIA TRMS MUX\n"}

"

" LOW-RES A-TO-D ERROR ", /* Error 39 */
" INVALID READING FROM ANLGUC DAC ",
"OUTPUT OF 2V SELECTED VIA TRMS MUX\n"}

"

" LOW-RES A-TO-D ERROR ", /* Error 40 */
" INVALID READING FROM ANLGUC DAC ",
"OUTPUT OF 4V SELECTED VIA TRMS MUX\n"}

"

" LOW-RES A-TO-D ERROR ", /* Error 41 */
" INVALID READING FROM HIGH DC Ic ",
"DRIVE SIGNAL SELECTED VIA TRMS MUX\n"}

"

" LOW-RES A-TO-D ERROR ", /* Error 42 */
" INVALID READING FROM LOW DC Ic ",
"DRIVE SIGNAL SELECTED VIA TRMS MUX\n"}

"

" LOW-RES A-TO-D ERROR ", /* Error 43 */
"INVALID READING FROM HIGH AC Ic ",
"DRIVE SIGNAL SELECTED VIA TRMS MUX \n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 44 */
" INVALID READING FROM LOW AC Ic ",
"DRIVE SIGNAL SELECTED VIA TRMS MUX \n"},

{" " TRUE RMS CONVERTER ERROR ", /* Error 45 */
" INVALID READING WITH INPUT FROM ",
" THE WAVEFORM GENERATOR \n"},

{" " HIGH-RES A-TO-D ERROR ", /* Error 46 */
" INVALID READING WITH 0V INPUT ",
" FROM THE HIGH-RES MUX \n"},

{" " HIGH-RES A-TO-D ERROR ", /* Error 47 */
" INVALID READING WITH +2.5V INPUT ",
" FROM THE HIGH-RES MUX \n"},

{" " HIGH-RES A-TO-D ERROR ", /* Error 48 */
" INVALID READING FROM TRUE RMS INPUT",
" FROM THE HIGH-RES MUX \n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 49 */
" INVALID READING FROM HIGH DC Ic ",
" CAL SIGNAL SELECTED VIA TRMS MUX \n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 50 */
" INVALID READING FROM LOW DC Ic ",
" CAL SIGNAL SELECTED VIA TRMS MUX \n"},

{" " HIGH-RES A-TO-D ERROR ", /* Error 51 */
" INVALID READING FROM HIGH DC Ic ",
"CAL SIGNAL SELECTED FROM HIRES MUX\n"},

{" " HIGH-RES A-TO-D ERROR ", /* Error 52 */
" INVALID READING FROM LOW DC Ic ",
"CAL SIGNAL SELECTED FROM HIRES MUX\n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 53 */
" INVALID READING FROM HIGH AC Ic ",
"CAL SIGNAL SELECTED VIA TRMS MUX \n"},

{" " LOW-RES A-TO-D ERROR ", /* Error 54 */
" INVALID READING FROM LOW AC Ic ",
"CAL SIGNAL SELECTED VIA TRMS MUX \n"},
LOW-RES A-TO-D ERROR *, /* Error 55 */
" INVALID READING FROM GROUNDED ",
" AMP SIGNAL SELECTED VIA TRMS MUX"

1ST STAGE AMP ERROR *, /* Error 56 */
" INVALID READING WITH HIGH LEVEL ",
" SHUNT SIGNAL SELECTED FROM XFORMER"

1ST STAGE AMP ERROR *, /* Error 57 */
" INVALID READING WITH LOW LEVEL ",
" SHUNT SIGNAL SELECTED FROM XFORMER"

2ND STAGE AMP ERROR *, /* Error 58 */
" INVALID READING WITH MID LEVEL ",
" SIGNAL SELECTED FROM 1ST STAGE 

2ND STAGE AMP ERROR *, /* Error 59 */
" INVALID READING WITH HIGH LEVEL ",
" SIGNAL SELECTED FROM 1ST STAGE 

5KHZ LOWPASS FILTER ERROR *, /* Error 60 */
" INVALID READING WITH FILTERED INPUT",
" INTO TRUE RMS CONVERTER 

500 HZ LOWPASS FILTER ERROR *, /* Error 61 */
" INVALID READING WITH FILTERED INPUT",
" INTO TRUE RMS CONVERTER 

LOW-RES A-TO-D ERROR *, /* Error 62 */
" INVALID READING FROM SYNC ",
" DEMODULATOR 

HIGH-RES A-TO-D ERROR *, /* Error 63 */
" INVALID READING FROM SYNC ",
" DEMODULATOR 

ZERO-CROSSING COUNTER CONTENTS *, /* Error 64 */
" WERE NOT CLEARED WHEN EXPECTED ",
" 

ZERO-CROSSING COUNTER CONTENTS *, /* Error 65 */
" WERE INCORRECT FOR A 5 KHZ INPUT ",
" 

THE PEAK LIMIT DETECTOR REPORTED *, /* Error 66 */
" AN OVER-LIMIT CONDITION WHEN "
" NON EXISTED. \n",

{" "THE PEAK LIMIT DETECTOR DID NOT " / Error 67 */
" REPORT AN OVER-LIMIT CONDITION "
" WHEN ONE EXISTED. \n"},

{" "THE VALLEY LIMIT DETECTOR REPORTED " / Error 68 */
" AN OVER-LIMIT CONDITION WHEN "
" NON EXISTED. \n"},

{" "THE VALLEY LIMIT DETECTOR DID NOT " / Error 69 */
" REPORT AN OVER-LIMIT CONDITION "
" WHEN ONE EXISTED. \n"},

{" " THE PEAK EVENT DETECTOR DID NOT " / Error 70 */
" CLEAR WHEN COMMANDED. "
" \n"},

{" " THE PEAK EVENT DETECTOR DID NOT " / Error 71 */
" INDICATE AN EVENT HAD OCCURRED "
" \n"},

{" " THE VALLEY EVENT DETECTOR DID NOT " / Error 72 */
" CLEAR WHEN COMMANDED. "
" \n"},

{" " THE VALLEY EVENT DETECTOR DID NOT " / Error 73 */
" INDICATE AN EVENT HAD OCCURRED "
" \n"},

{" " THE ANALOG CONTROLLER REPORTED A " / Error 74 */
" DIAGNOSTIC ERROR AFTER RESET "
" \n"},

{" " THE 9000-SERIES HALL PROBE DOES " / Error 75 */
" NOT CONTAIN VALID CALIBRATION "
" INFORMATION \n"},

{" " THE ATTACHED HALL PROBE DOES " / Error 76 */
" NOT APPEAR TO HAVE A MEMORY "
" DEVICE INSTALLED \n"},

{" " THE CRC VALUE OF THE PROBE'S " / Error 77 */
" CALIBRATION DATA DOES NOT MATCH "
" THE VALUE STORED IN THE PROBE \n"},
"THE CRC VALUE OF THE PROBE'S TEMPERATURE DATA DOES NOT MATCH THE VALUE STORED IN THE PROBE.

"THE CRC VALUE OF THE ANALOG CALIBRATION DATA DOES NOT MATCH THE VALUE STORED ON THE CARD.

"INVALID READING FROM SYNC DEMODULATOR WITH SYNC PULSE SHIFTED 180 DEGREES.

"THE REAL TIME CLOCK MAY HAVE LOST TIME AND DATE INFORMATION DUE TO A LOW BATTERY CONDITION.

"THE INTERNAL TEMPERATURE OF THE INSTRUMENT IS TOO LOW OR HIGH TO MAINTAIN SPECIFICATIONS.

"THIS ERROR MESSAGE SHOULD NEVER APPEAR.

"THE I2C BUS DEVICE DID NOT ACKNOWLEDGE A COMMUNICATIONS SEQUENCE.

"A CRC ERROR OCCURRED DURING THE RECEPTION OF THE REDIRECTION INFO FROM A 7000-SERIES PROBE.

"A CRC ERROR OCCURRED DURING THE RECEPTION OF THE CALIBRATION INFO FROM A 7000-SERIES PROBE.

"THE PROBE'S MEMORY DEVICE DID NOT RESPOND TO A REQUEST FOR COMMUNICATIONS.

"THE COMMAND ISSUED TO THE ANALOG CONTROLLER WAS NOT RECOGNIZED AS A VALID COMMAND.

"THE ANALOG CONTROLLER RECEIVED A
"COMMAND BEFORE A PREVIOUS COMMAND ",
"HAD BEEN COMPLETED \n"},

{" " THE COMMAND ISSUED TO THE ANALOG ", /* Error 0x0107 */
"CONTROLLER CONTAINED AN INVALID ",
"ARGUMENT \n"},

{" " THE COMMAND ISSUED TO THE ANALOG ", /* Error 0x0108 */
"CONTROLLER DID NOT SPECIFY A ",
"PROBE CHANNEL \n"},

{" " THE HIGH-RES ADC WAS NOT READY WITH", /* Error 0x0109 */
"DATA WHEN EXPECTED ",
"\n"},

{" " NO DIAGNOSTIC ERRORS REPORTED ", /* Error 0x010A */
"BY THE ANALOG CONTROLLER ",
"\n"},

{" " THERE WAS A COMM ERROR WITH ", /* Error 0x010B */
"THE PORT-0 I/O EXPANDER FOR ",
"CHANNEL-2 \n"},

{" " THERE WAS A COMM ERROR WITH ", /* Error 0x010C */
"THE PORT-1 I/O EXPANDER FOR ",
"CHANNEL-2 \n"},

{" " THERE WAS A COMM ERROR WITH ", /* Error 0x010D */
"THE PORT-2 I/O EXPANDER FOR ",
"CHANNEL-2 \n"},

{" " THERE WAS A COMM ERROR WITH ", /* Error 0x010E */
"THE PORT-3 I/O EXPANDER FOR ",
"CHANNEL-2 \n"},

{" " THERE WAS A COMM ERROR WITH ", /* Error 0x010F */
"THE PORT-0 I/O EXPANDER FOR ",
"CHANNEL-1 \n"},

{" " THERE WAS A COMM ERROR WITH ", /* Error 0x0110 */
"THE PORT-1 I/O EXPANDER FOR ",
"CHANNEL-1 \n"},

{" " THERE WAS A COMM ERROR WITH ", /* Error 0x0111 */
"THE PORT-2 I/O EXPANDER FOR ",
"CHANNEL-1 \n"},
THERE WAS A COMM ERROR WITH THE PORT-3 I/O EXPANDER FOR CHANNEL-1

THERE WAS A COMM ERROR WITH THE PORT-0 I/O EXPANDER FOR CHANNEL-3

THIS ERROR MESSAGE SHOULD NEVER APPEAR (0x0114)

THERE WAS A COMM ERROR WITH THE PORT-1 I/O EXPANDER FOR CHANNEL-3

THERE WAS A COMM ERROR WITH THE PORT-2 I/O EXPANDER FOR CHANNEL-3

THERE WAS A COMMUNICATIONS ERROR WITH THE KEYPAD LED DRIVER

THERE WAS A COMMUNICATIONS ERROR WITH THE PCB TEMPERATURE SENSOR

THE HIGH RESOLUTION ADC FOR CHANNEL-2 IS NOT READY

THE HIGH RESOLUTION ADC FOR CHANNEL-1 IS NOT READY

THE HIGH RESOLUTION ADC FOR CHANNEL-3 IS NOT READY

THE COMMAND REGISTER IN THE

/* Error 0x0112 */
/* Error 0x0113 */
/* Error 0x0114 */
/* Error 0x0115 */
/* Error 0x0116 */
/* Error 0x0117 */
/* Error 0x0118 */
/* Error 0x0119 */
/* Error 0x011A */
/* Error 0x011B */
/* Error 0x011C */
/* Error 0x011D */
"HIGH RESOLUTION ADC FOR CHANNEL-2",
"CONTAINS INCORRECT DATA \n",

{"" THIS ERROR MESSAGE SHOULD ", /* Error 0x011E */
"NEVER APPEAR ",
"(0x011E) \n"},

{"" THE COMMAND REGISTER IN THE ", /* Error 0x011F */
"HIGH RESOLUTION ADC FOR CHANNEL-1",
"CONTAINS INCORRECT DATA \n"},

{"" THE COMMAND REGISTER IN THE ", /* Error 0x0120 */
"HIGH RESOLUTION ADC FOR CHANNEL-3",
"CONTAINS INCORRECT DATA \n"},

{"" THE OFFSET REGISTER IN THE ", /* Error 0x0121 */
"HIGH RESOLUTION ADC FOR CHANNEL-2",
"CONTAINS INCORRECT DATA \n"},

{"" THE OFFSET REGISTER IN THE ", /* Error 0x0122 */
"HIGH RESOLUTION ADC FOR CHANNEL-1",
"CONTAINS INCORRECT DATA \n"},

{"" THE OFFSET REGISTER IN THE ", /* Error 0x0123 */
"HIGH RESOLUTION ADC FOR CHANNEL-3",
"CONTAINS INCORRECT DATA \n"},

{"" THERE WAS A COMM ERROR WITH ", /* Error 0x0124 */
"THE CALIBRATION EEPROM FOR 
"CHANNEL-2 \n"},

{"" THERE WAS A COMM ERROR WITH ", /* Error 0x0125 */
"THE CALIBRATION EEPROM FOR 
"CHANNEL-1 \n"},

{"" THERE WAS A COMM ERROR WITH ", /* Error 0x0126 */
"THE CALIBRATION EEPROM FOR 
"CHANNEL-3 \n"},