8. Trouble Shooting

Error 005

Meaning:	Display scratched
Reason:	transparent cover of display only
Action:	change top of housing

Error 007

Meaning:	accuracy problems with testparameter (not with check)
Reason:	wrong handling
Action:	comment with parametername

Error 008

Meaning:	Tab fixation problems
Reason:	door (flap) / lid problem
Action:	see Error 091

Error 009

Meaning:	Measurement interrupt (Microswitch problem Optomech.unit / see Error 095)
Reason:	EMI problems, Lid problems, Microswitch problems
Action:	switch instrument OFF / ON | check Measuring chamber lid | use MEASURING CHAMBER FLAP | change Optomechanical unit | use WHITE-STRIP CALIBRATION an CHECK-STRIP REMISSION

Error 010

Meaning:	magnetic reading problem
Reason:	code error / no program etc. comment if Lid
Action:	use READING MAGNETIC CODE FAIL: change Optomechanical unit → use WHITE-STRIP CALIBRATION an CHECK-STRIP REMISSION PASS: instrument o.k.

8. Trouble Shooting

Error 029

Meaning: ambient temp. too low

Reason:
1. ambient temperature too low
2. AT sensor defective

Action:
1. operate instrument at ambient temperature
2. check AT sensor
   use HEATHER-TEMPERATURES
   - check ambient temperature,
     use Temperature sensor from Service Case
   - change Optomechanical unit
     use WHITE-STRIP CALIBRATION
     and CHECK-STRIP REMISSION

Error 030

Meaning: ambient temp. too high

Reason:
1. ambient temperature too high
2. Fan obstructed
3. Fan defective
4. AT sensor defective

Action:
1. operate instrument at ambient temperature
   (no direct sunlight)
2. clean ventilation slot
   place instrument on a plane solid surface
3. see Error 004
4. check AT sensor use HEATHER-TEMPERATURES
   - check ambient temperature
     use Temperature sensor from Service Case
   - change Optomechanical unit
     use WHITE-STRIP CALIBRATION
     and CHECK-STRIP REMISSION

8. Trouble Shooting

Error 075

Meaning: electrical defect of Printer
(not Error 002)

Reason: Printer board

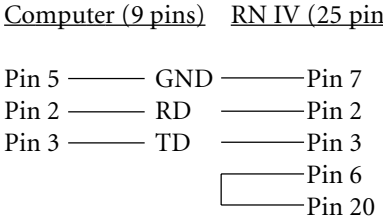
Action: change Printer board
|
change Printer with cable only
|
check Printer use PRINTER-CHECK

Error 084

Meaning: no data transfer via RS 232 C interface

Reason:
1. Reflotron not "READY"
2. no connection with external computer
3. User- Level Setup for RS 232 C wrong
4. Master board defective
5. connections defective

RS 232 C cable configuration:



Action: switch instrument "ON"
|
check connections
(see RS 232 C cable configuration)
|
check User- Level Setup
|
data transfer o.k.

FAIL	PASS
change Master board	instrument o.k.
use SERIALNUMBER	
use SET DATE/TIME	
change Internal RS 232 C cable	

8. Trouble Shooting

Error 085

Meaning:	Error during data transfer RS 232 C
Reason:	only Reflotron
Action:	switch Reflotron OFF / ON, check internal cable

Error 086

Meaning:	no display (display out of function, power LED off, no controller initialization)
Reason:	Power supply unit defect
Action:	check Mains fuse | check Fuses S2, S3 on Power supply board | check Mains switch (115V/230V AC on BU-N1 missing) | check AC socket | check DC socket (12V DC on St1 Power supply board missing) | check Transformer (18V eff on BU-N3 missing) | check Power supply board (10-35V DC on BU1 missing) | check DC/DC board (+5V on BU6 pin1 DC/DC board missing)

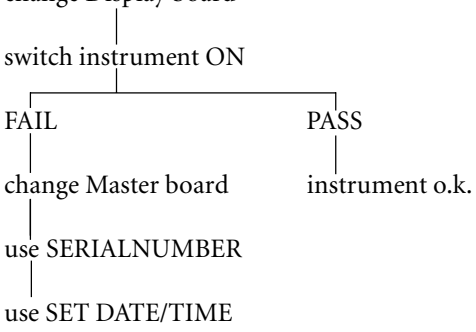
8. Trouble Shooting

Error 087

Meaning: no Display (power LED on, controller init. PASS, Fan o.k.)

Reason: Display board defective, Master board defective

Action:



Error 088

Meaning: no Display (power LED on, controller init. FAIL, Fan defective)

Reason: DC/DC board defective

Action: change DC/DC board

Error 089

Meaning:	no magnetic code	
Reason:	1.	reagent carrier inserted faulty
	2.	reagent carrier magnetic code erased, damaged
	3.	carrier has no magnetic strip
	4.	Control board defective
	5.	magnetic head misaligned
Action:	1.	insert correctly
	2.	use new reagent carrier
	3.	use program strip
	4.	check control board use VOLTAGES
	5.	change Optomechanical unit use WHITE-STRIP CALIBRATION and CHECK-STRIP REMISSION

Error 090

Meaning:	intensive dirt on Upper heater / out of calibration (Calibration and/or cleaning required. Comment values)	
Action:	-	clean Optomechanical unit (see Service Manual) use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 091

Meaning:	Lid/Door defect (Comment if part missing/broken)	
Action:	use MEASURING CHAMBER FLAP	

Error 092

Meaning:	dirt/foreign bodies Optomechanical unit (not Error 090)	
Action:	-	clean Optomechanical unit (see Service Manual) use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 093

Meaning:	bad contact between moduls
Reason:	cable defect. Comment cable
Action:	check connections

Error 094

Meaning:	part of housing replaced
Action:	need ID.-NO. of part, or comment if part of kit

Error 095

Meaning:	microswitch problem Optomechanical unit (bad contact/misaligned. Comment lid or retension)
Action:	- use STRIP IN/OUT and MEASURING CHAMBER FLAP

Error 096

Meaning:	Modification
Reason:	preventation
Action:	comment

Error 097

Meaning:	refurbished instrument
Reason:	leasing(loaner – no actual failure
Action:	comment

Error 098

Meaning:	maintenance only
Action:	comment

Error 099

Meaning	checked – no error (also could not duplicate)
Action:	comment

8. Trouble Shooting

Error 100

Meaning: EEPROM not rewriteable

Reason: reading/writing problems with EEPROM
Master board

Action: change Master board
|
use SERIALNUMBER
|
use SET DATE/TIME

Error 101

Meaning: Timeout controller

Reason: no response from controller to Master board for within 14 sec.

Action: check cable connection
|
change Optomechanical unit
|
CHEK OPTOMECH. UNIT

FAIL	PASS
change cable BU20 on Control board	instrument o.k.
change Master board	
use SET DATE/TIME	

Error 102

Meaning: Communication controller

Reason: incorrect response from Control board to Master board

Action: change Control board

enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit)
|
CHECK OPTOMECH. UNIT

FAIL	PASS
change Master board	instrument o.k.
use SERIALNUMER	
use SET DATE/TIME	

8. Trouble Shooting

Error 103

Meaning: stack not correct

Reason: unexpected values in the data register
(R & D routine only)

Action: change Master board
↓
use SERIALNUMER
↓
use SET DATE/TIME

Error 104

Meaning: Polynom (Remission < = 0)

Reason: Control board defective, measurement interrupt by EMI problems

Action: switch instrument OFF / ON

FAIL	PASS
change Optomechanical unit	instrument o.k.

↓
use CHECK-STRIP REMISSION
and WHITE-STRIP CALIBRATION

Error 105

Meaning: wrong path in case

Reason: R & D routine only

Action: change Master board
↓
use SERIALNUMER
↓
use SET DATE/TIME

Error 106

Meaning: float function not allowed

Reason: R & D routine only

Action: change Master board
↓
use SERIALNUMER
↓
use SET DATE/TIME

8. Trouble Shooting

Error 107

Meaning: Controller not connected

Reason: no connection between controller and Master board

Action: check cable connection BU 20 Control board

cable o.k. use CHECK OPTOMECH. UNIT

FAIL	PASS
change Control board	instrument o.k.

enter EEPROM settings use INPUT-CONTROLLER-DATA
(values labeled on Optomechanical unit)

use CONTROL-INIT

FAIL	PASS
change Master board	instrument o.k.

use SERIALNUMER

use SET DATE/TIME

Error 108

Meaning: Display stack full

Reason: R & D routine only

Action: change Master board

use SERIALNUMER

use SET DATE/TIME

Error 109

Meaning: underflow display stack

Reason: R & D routine only

Action: change Master board

use SERIALNUMER

use SET DATE/TIME

8. Trouble Shooting

Error 110

Meaning	Keyboard controller
Reason:	Keyboard controller defect
Action:	change Master board use SERIALNUMER use SET DATE/TIME

Error 111

Meaning:	Keyboard interface
Reason:	clock or data line always low or always high
Action:	check Keyboard and internal cable (Keyboard socket to Master board) unplug Keyboard switch instrument OFF / ON FAIL → internal RS 232 C cable defective PASS → Keyboard defective

Error 112

Meaning:	Display not connected (see Error 013)
Reason:	Display not connected or defect
Action:	check display connection switch instrument ON use DISPLAY-CHECK PASS → instrument o.k. FAIL → change Display board

Error 113

Meaning:	checksum EEPROM
Reason:	CRC error EEPROM master
Action:	use EE-INIT (set default values for all master data) switch instrument OFF / ON wait until instrument is ”READY”

8. Trouble Shooting

Error 114

Meaning:	checksum TSC-RAM
Reason:	CRC error RAM Real Time Clock
Action:	use RESET-TSC (set counter 0) | switch instrument OFF / ON | wait until instrument is ”READY”

Error 115

Meaning:	illegal address executed
Reason:	R & D Routine only
Action:	change Master board | use SERIALNUMER | use SET DATE/TIME

Error 116

Meaning:	checksum code space
Reason:	CRC EPROM failure in program memory
Action:	switch instrument OFF / ON | change EPROM master (from the bottom side of the instrument) | switch instrument ON | PASS → instrument o.k. FAIL → change Master board | use SERIALNUMER | use SET DATE/TIME

Error 117

Meaning: checksum data space

Reason: CRC EPROM failure data memory EPROM master

Action: switch instrument OFF / ON
↓
change EPROM master (from the bottom side of the instrument)
↓
switch instrument ON
↓
PASS → instrument o.k.

FAIL → change Master board
↓
use SERIALNUMER
↓
use SET DATE/TIME

Error 118

Meaning: system failure

Reason: failure number not in internal table

Action: update EPROM master (from the bottom side of the instrument)
↓
switch instrument ON
↓
PASS → instrument o.k.

FAIL → change Master board
↓
use SERIALNUMER
↓
use SET DATE/TIME

8. Trouble Shooting

Error 119

Meaning: parameter table full

Reason: more than forty parameters stored in memory

Action: use EE-INIT (set default values for all master data)

switch instrument OFF / ON

PASS	FAIL
instrument o.k.	use PROTOCOL
	use UPLOAD CONTROLLER-DATA
	change Control board
	enter EEPROM settings
	use INPUT CONTROLLER-DATA (values labeled on Optomechanicalunit) or
	use DOWNLOAD CONTROLLER-DATA

Error 120

Meaning: wrong software version

Reason: Software master and Control board not compatible

Action: update EPROM master
(from the bottom side of the instrument)

8. Trouble Shooting

Error 121

Meaning: invalid controller data

Reason: wrong data from controller

Action:
use PROTOCOL
|
change Control board
|
enter EEPROM settings
|
use INPUT CONTROLLER-DATA
(values labeled on Optomechanical unit)

Error 122

Meaning: wrong calibration data

Reason: (R & D routine only)

Action:
use PROTOCOL
|
change Control board
|
enter EEPROM settings
|
use INPUT CONTROLLER-DATA
(values labeled on Optomechanical unit)

Error 200

Meaning: motor overload, no 12V

Reason: below minimum speed for more than 13.5 sec. e.g. motor blocked, dirt

Action:
check connections (Control board / Motor)
|
is motor blocked?

YES	NO
unlock motor	change Optomechanical unit
use CHECK OPTOMECH UNIT	use WHITE-SDTRIP CALIBRATION and CHECK-STRIP REMISSION
lock motor	

8. Trouble Shooting

Error 201

Meaning:	motor bad adjust
Reason:	positions out of range
Action:	enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) ↓ if no values available change Optomechanical unit ↓ use CHECK OPTOMECH. UNIT ↓ use CHECK-STRIP REMISSION an WHITE-STRIP CALIBRATION

Error 202

Meaning:	motor, bad position
Reason:	memory reset not followed by initialization
Action:	use CHECK OPTOMECH. UNIT

Error 203

Meaning:	motor, no adjust
Reason:	positions no adjusted
Action:	use PROTOCOL ↓ enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) ↓ if no values available change Optomechanical unit ↓ use CHECK OPTOMECH. UNIT ↓ use CHECK-STRIP REMISSION an WHITE-STRIP CALIBRATION

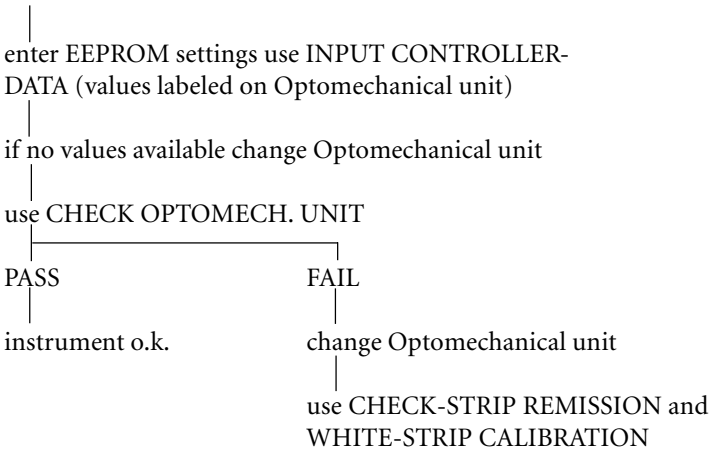
8. Trouble Shooting

Error 204

Meaning: motor comparator

Reason: during install speed control detects movement in stand still position

Action:



8. Trouble Shooting

Error 205

Meaning: motor adjust, bad values

Reason: position values out of range

Action: use PROTOCOL

↓

enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit)

↓

if no values available change Optomechanical unit

↓

use CHECK OPTOMECH. UNIT

↓

use CHECK-STRIP REMISSION an WHITE-STRIP

Error 300

Meaning: Rem conversion overflow

Reason: integration with more than 131071 counts
(hardware defect: processor, A/D-converter)

Action: use PROTOCOL

↓

use UPLOAD CONTROLLER-DATA

↓

change Control board

↓

enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or

↓

use DOWNLOAD CONTROLLER-DATA

↓

use CHECK OPTOMECH. UNIT

↓

PASS → instrument o.k.

FAIL → change Optomechanical unit

↓

use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 301

Meaning: Rem conversion no counts

Reason: integration without counts

Action:

use PROTOCOL
|
use UPLOAD CONTROLLER-DATA
|
change Control board
|
enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or
|
use DOWNLOAD CONTROLLER-DATA
|
use CHECK OPTOMECH. UNIT

PASS
|
instrument o.k.

FAIL
|
change Optomechanical unit
|
use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 302

Meaning: Rem, Uin too high

Reason: signal for amplification setting too high,
e.g. preamplifier defect, strong lightsource
on open instrument

Action:

use PROTOCOL
|
use UPLOAD CONTROLLER-DATA
|
change Control board
|
enter EEPROM settings use INPUT CONTROLLER-
DATA (values labeled on Optomechanical unit) or
|
use DOWNLOAD CONTROLLER-DATA
|
use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 303

Meaning: Rem, Uin too low, offset

Reason: signal for amplification setting too low

Action:

use PROTOCOL
|
use UPLOAD CONTROLLER-DATA
|
change Control board
|
enter EEPROM settings use INPUT CONTROLLER-
DATA (values labeled on Optomechanical unit) or
|
use DOWNLOAD CONTROLLER-DATA
|
use CHECK OPTOMECH. UNIT

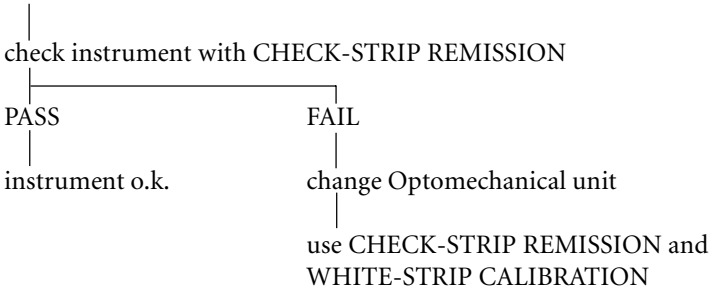
PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 304

Meaning: Rem adjust, tolerance

Reason: bad calibration

Action: calibrate instrument use WHITE-STRIP CALIBRATION



Error 305

Meaning: 3nd moment, no adjust

Reason: missing wave length correction valve

Action: use PROTOCOL

enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit)

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 306

Meaning: 1st **moment, no adjust**

Reason: no adjustment

Action: use PROTOCOL

enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit)

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 307

Meaning: Rem, no adjust red

Reason: no red calibration

Action: use PROTOCOL

calibrate instrument

use WHITE-STRIP CALIBRATION

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 308

Meaning: Rem, no adjust green

Reason: no green calibration

Action:

use PROTOCOL
|
calibrate instrument
|
use WHITE-STRIP CALIBRATION
|
use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 309

Meaning: Rem, no adjust infra

Reason: no infra red calibration

Action:

use PROTOCOL
|
calibrate instrument
|
use WHITE-STRIP CALIBRATION
|
use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

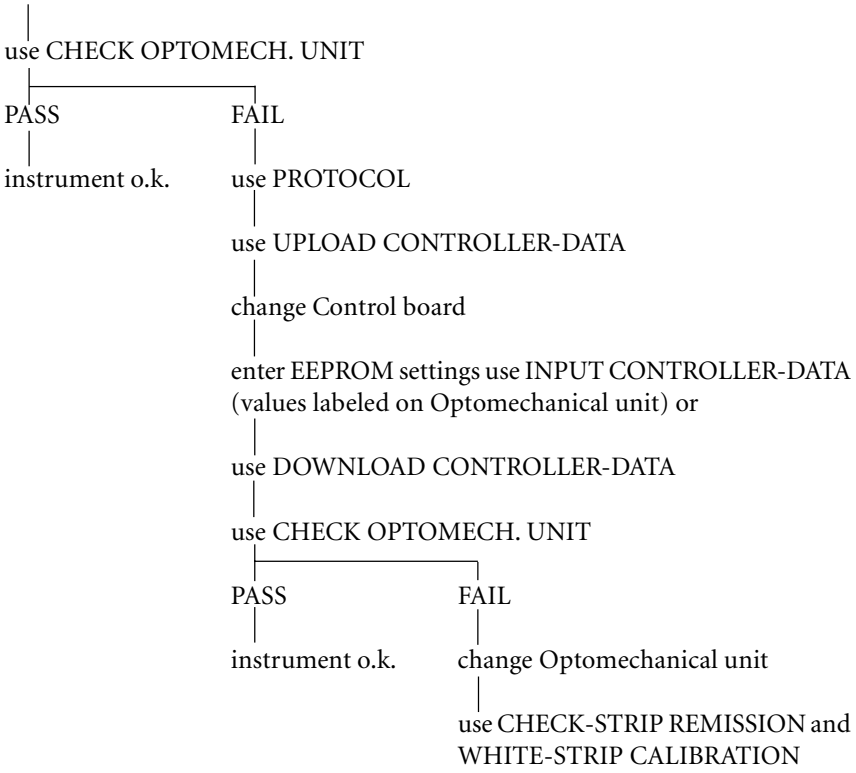
8. Trouble Shooting

Error 310

Meaning: current diode red

Reason: current LED out of range

Action: check connections

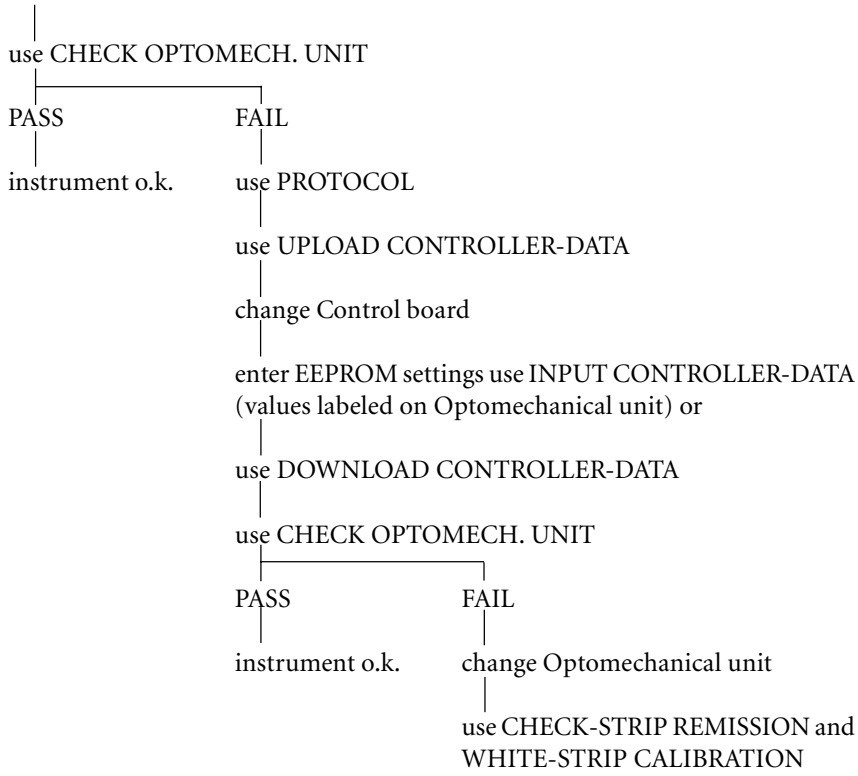


Error 311

Meaning: current diode infra

Reason: current LED out of range

Action: check connections

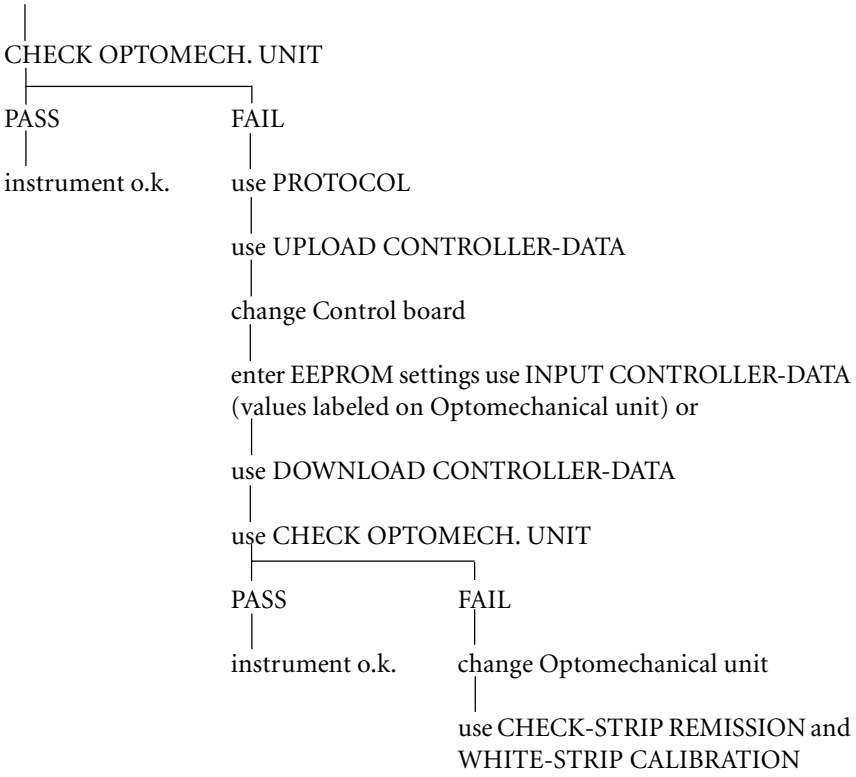


Error 312

Meaning: current diode green

Reason: current red out of range

Action: check connections

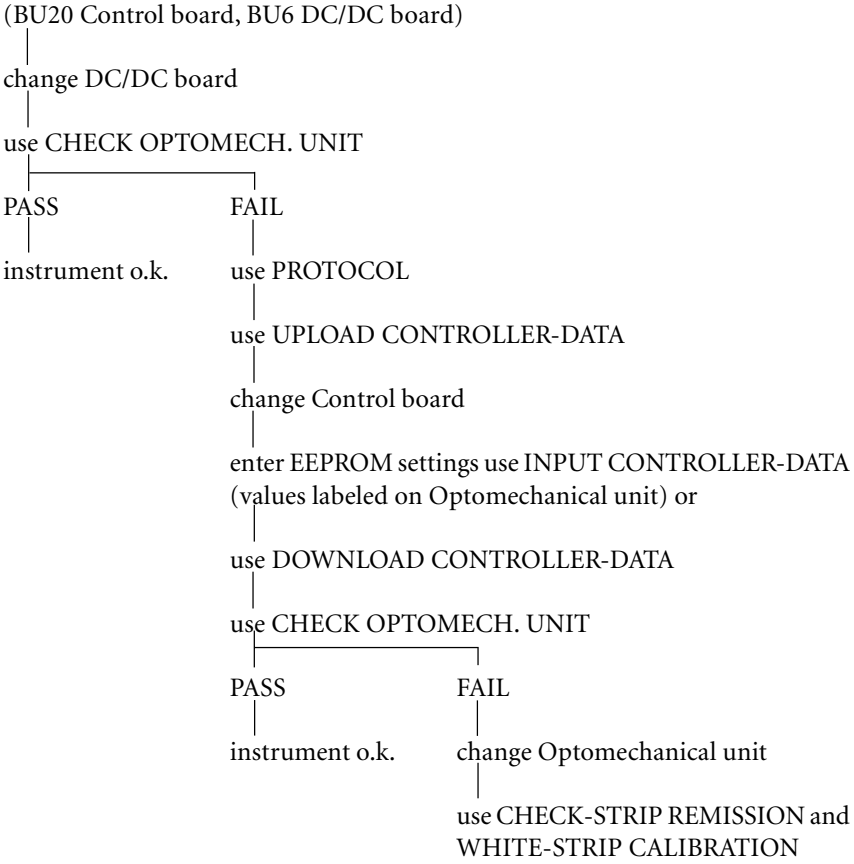


Error 313

Meaning: main synchronization (missing)

Reason: DC/DC board defective, Control board defective

Action:

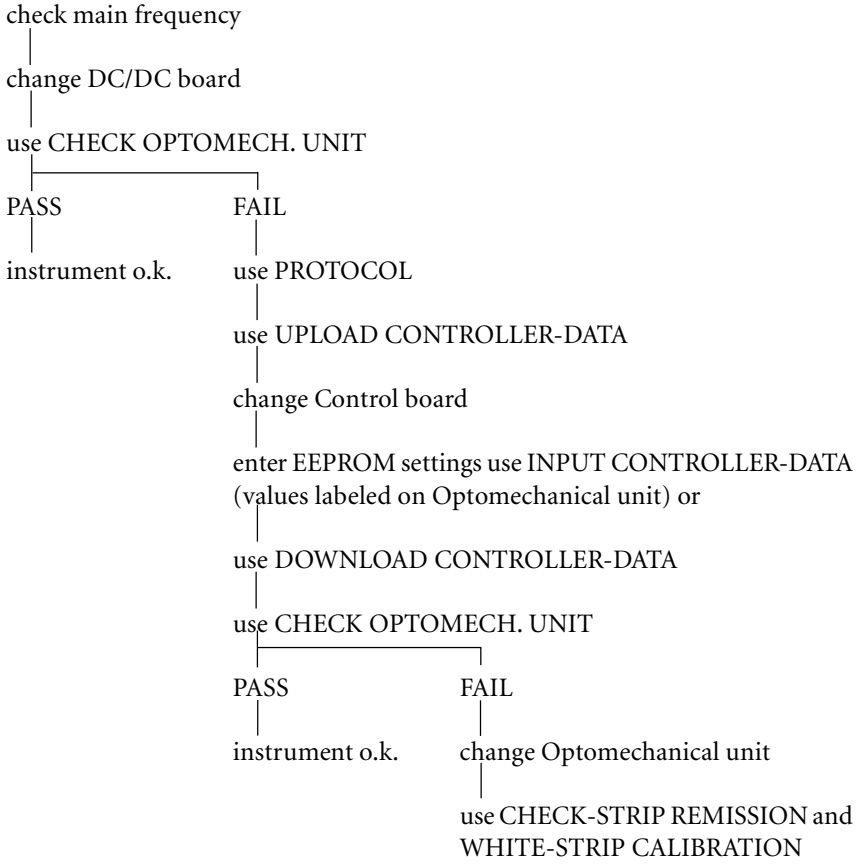


Error 314

Meaning: main frequency too high

Reason: DC/DC board defective, Control board defective,
main frequency too high

Action:

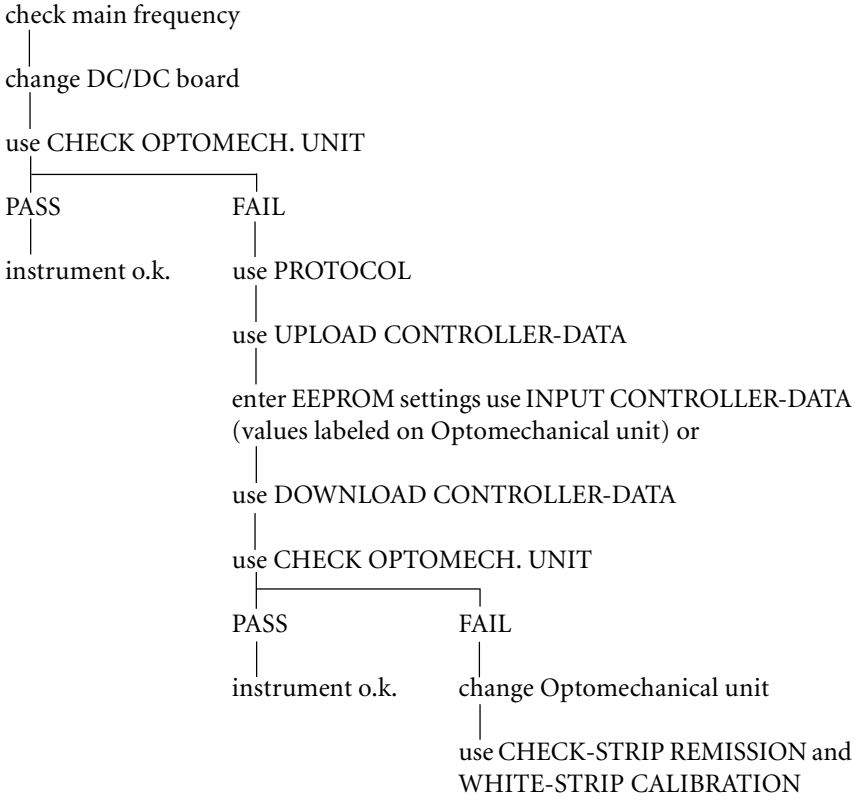


Error 315

Meaning: main frequency too low

Reason: DC/DC board defective, Control board defective

Action:



8. Trouble Shooting

Error 316

Meaning: main measurement missing

Reason: Control board defective

Action:

use PROTOCOL
|
use UPLOAD CONTROLLER-DATA
|
change Control board
|
enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or
|
use DOWNLOAD CONTROLLER-DATA
|
use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 400

Meaning: shutter not closed

Reason: no close position detected (Hardware defect)

Action:

check connections
|
use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	use PROTOCOL
	use UPLOAD CONTROLLER-DATA
	change Control board
	enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or
	use DOWNLOAD CONTROLLER-DATA
	use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 401

Meaning: shutter not open

Reason: no open position detected (Hardware defect)

Action: check connections

- use CHECK OPTOMECH. UNIT
  - PASS
    - instrument o.k.
  - FAIL
    - use PROTOCOL
      - use UPLOAD CONTROLLER-DATA
        - change Control board
          - enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or
            - use DOWNLOAD CONTROLLER-DATA
              - use CHECK OPTOMECH. UNIT
                - PASS
                  - instrument o.k.
                - FAIL
                  - change Optomechanical unit
                    - use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 402

Meaning: shutter tol., no adjust

Reason: no tolerance range for shutter remission adjusted (R & D routine only)

Action: change Optomechanical unit

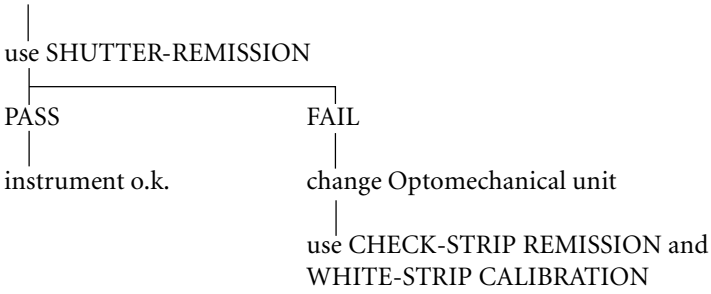
- use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 403

Meaning: shutter rem., no adjust

Reason: no shutter remission value in memory

Action: repeat shutter remission adjustment use SHUTTER-REMISSION



8. Trouble Shooting

Error 404

Meaning: shutter, bad remission

Reason: bad shutter remission indicates also dirt in sphere

Action: clean Upper heater from inside (see Service Manual)

use SHUTTER OPEN/CLOSE

use SHUTTER-REMISSION

PASS	FAIL
	use WHITE-STRIP CALIBRATION
instrument o.k.	change Optomechanical unit

Error 405

Meaning: shutter not allowed

Reason: no shutter movement allowed between inserting and measuring position

Action: move transporter to allowed position

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP RESMISSION and WHITE-STRIP CALIBRATION

Error 406

Meaning: shutter, LS bad signal

Reason: signal difference between shutter open and shutter close too small (< 1V) (adjustment problem possible)

Action: use SHUTTER OPEN/CLOSE

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 501

Meaning: code motor overload

Reason: magnetic code reading too slow, 12V missing or motor blocked

Action: see Error 200

Error 502

Meaning: code result undefined

Reason: (R & D routine only)

Action: change Optomechanical unit
↓
use CHECK OPTOMECH. UNIT
↓
CHECK-STRIP REMISSION and
WHITE-STRIP CALIBRATION

Error 600

Meaning: WKAL, no adjust

Reason: adjust missing

Action: enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit)
↓
use CHECK OPTOMECH. UNIT
↓
PASS → instrument o.k.
FAIL → change Optomechanical unit
↓
use CHECK-STRIP REMISSION and
WHITE-STRIP CALIBRATION

Error 601

Meaning: WKAL, memory space

Reason: no memory space available

Action: enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit)
↓
use CHECK OPTOMECH. UNIT
↓
PASS → instrument o.k.
FAIL → change Optomechanical unit
↓
use CHECK-STRIP REMISSION and
WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 602

Meaning: WKAL, not in use

Reason: no adjust values available

Action: enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit)

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 700

Meaning: heater top, timeout

Reason: internal communication problem with Upper heater

Action: check connections

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 701

Meaning: heater top, SYN

Reason: internal communication problem with Upper heater

Action: change Optomechanical unit

use CHECK OPTOMECH. UNIT

use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 702

Meaning:	heater top, ACK
Reason:	internal communication problem with Upper heater
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 703

Meaning:	heater top, ENQ
Reason:	internal communication problem with Upper heater
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 704

Meaning:	heater top, CRC, adjust
Reason:	after heating correcting data transmission wrong checksum in Control board memory
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 705

Meaning:	heater top, checksum
Reason:	wrong checksum EEPROM Upper heater
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 706

Meaning:	heater top, bad adjust
Reason:	heating not calibrated (R & D routine only)
Action:	change Optomechanical unit ↓ use CHECK OPTOMECH. UNIT ↓ use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 707

Meaning:	heater top, selftest
Reason:	selftest routine: sensor, heat. element, PWM, EEPROM, failed
Action:	change Optomechanical unit ↓ use CHECK OPTOMECH. UNIT ↓ use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 709

Meaning:	heater top, initializing
Reason:	EMI problems
Action:	switch instrument OFF/ON ↓ use CHECK OPTOMECH. UNIT PASS → instrument o.k. FAIL → change Optomechanical unit ↓ use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 710

Meaning: heater top, function

Reason: performed selftest failed (see Error 707)

Action: switch instrument OFF/ON
↓
change Optomechanical unit
↓
use CHECK OPTOMECH. UNIT
↓
use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 800

Meaning: heater bottom, timeout

Reason: internal communication problem with Lower heater

Action: check connections
↓
use CHECK OPTOMECH. UNIT

PASS	FAIL
↓	↓
instrument o.k.	change Optomechanical unit
	↓
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 801

Meaning: heater bottom, SYN

Reason: internal communication problem with Lower heater

Action: change Optomechanical unit
↓
use CHECK OPTOMECH. UNIT
↓
use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 802

Meaning:	heater bottom, ACK
Reason:	internal communication problem with Lower heater
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 803

Meaning:	heater bottom, ENQ
Reason:	internal communication problem with Lower heater
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 804

Meaning:	heater bottom, CRC, adjust
Reason:	after heating correcting data transm. wrong checksum in Control board
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 805

Meaning:	heater bottom, checksum
Reason:	wrong checksum EEPROM Lower heater
Action:	change Optomechanical unit | use CHECK OPTOMECH. UNIT | use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 806

Meaning: heater bottom, bad adjust

Reason: heating not calibrated (R & D routine only)

Action: change Optomechanical unit
↓
use CHECK OPTOMECH. UNIT
↓
use CHECK-STRIP REMISSION and
WHITE-STRIP CALIBRATION

Error 807

Meaning: heater bottom, selftest

Reason: selftest routine: sensor, heat. element, PWM, RAM,
EEPROM failed

Action: change Optomechanical unit
↓
use CHECK OPTOMECH. UNIT
↓
use CHECK-STRIP REMISSION and
WHITE-STRIP CALIBRATION

Error 808

Meaning: heater bottom, initializing

Reason: EMI problems

Action: switch instrument OFF/ON
↓
use CHECK OPTOMECH. UNIT

PASS	FAIL
↓	↓
instrument o.k.	change Optomechanical unit
	↓
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

8. Trouble Shooting

Error 809

Meaning: heater bottom, function

Reason: performed selftest failed (see Error 807)

Action:

switch instrument OFF/ON

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 900

Meaning: no -5V (-5V incorrect)

Reason: during initialization no internal -5V on Control board

Action:

use PROTOCOL

use UPLOAD CONTROLLER-DATA

change Control board

enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or

use DOWNLOAD CONTROLLER-DATA

use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

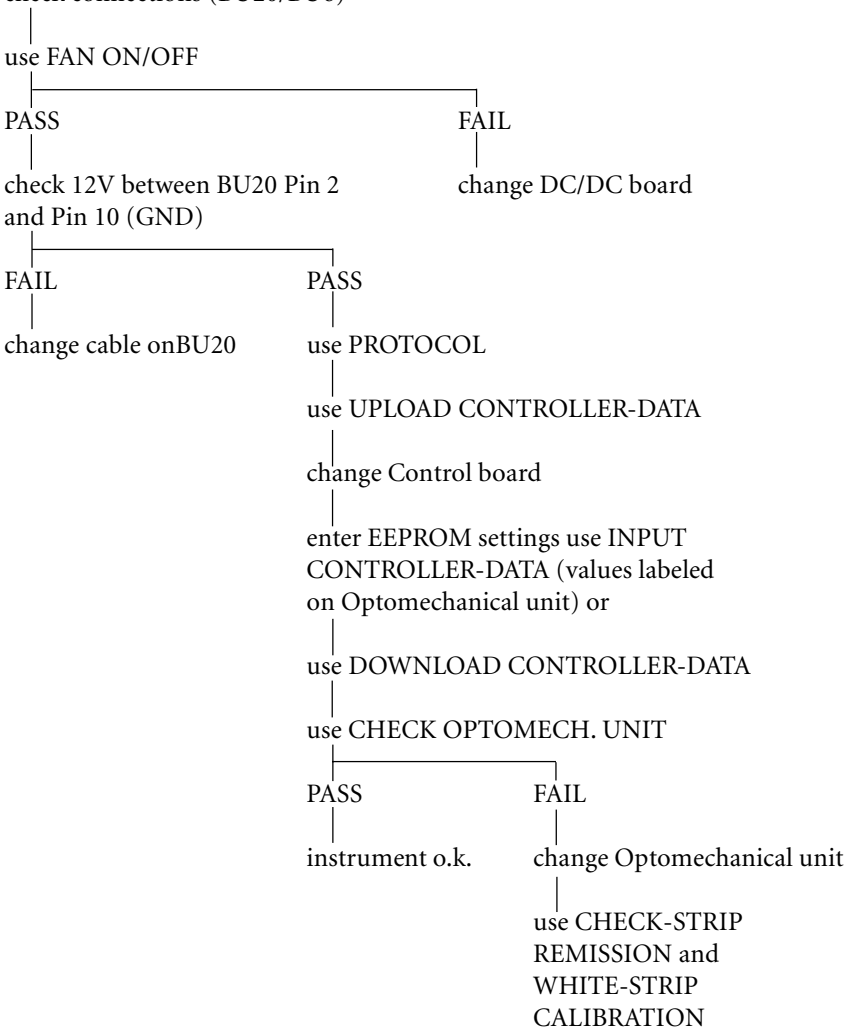
8. Trouble Shooting

Error 901

Meaning: no +12V

Reason: +12V not in the range of +/- 10%

Action:



Error 902

Meaning: series #, no adjust

Reason: serial No of Optomech. unit not in EEPROM

Action: enter serialnumber use INPUT CONTROLLER_DATA

8. Trouble Shooting

Error 903

Meaning: EEPROM, no ACK

Reason: internal communication problem

Action:

use PROTOCOL
|
use UPLOAD CONTROLLER-DATA
|
change Control board
|
enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or
|
use DOWNLOAD CONTROLLER-DATA
|
use CHECK OPTOMECH. UNIT

PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 904

Meaning: EEPROM, no CRC

Reason: CRC check failed

Action:

use PROTOCOL
|
use UPLOAD CONTROLLER-DATA
|
change Control board
|
enter EEPROM settings use INPUT CONTROLLER-DATA (values labeled on Optomechanical unit) or
|
use DOWNLOAD CONTROLLER-DATA
|
use CHECK OPTOMECH. UNIT

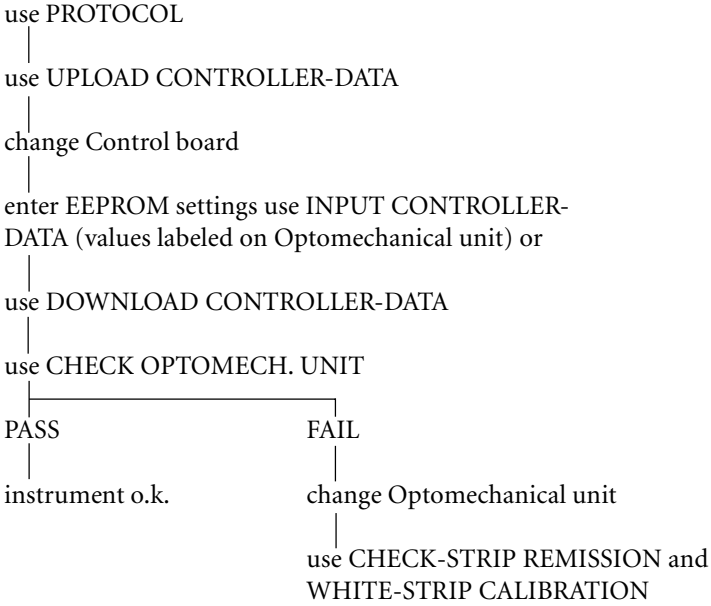
PASS	FAIL
instrument o.k.	change Optomechanical unit
	use CHECK-STRIP REMISSION and WHITE-STRIP CALIBRATION

Error 905

Meaning: Log.nat. from 0

Reason: failure trough calculation
(R & D routine only)

Action:



Error 906

Meaning: SQR from -/0

Reason: SQR from negative number
(R & D routine only)

Action: