

Verteiler :

Herzog (UP)
Geo Service (AG, WP)
Geo Wien (PE)

PT Jena (DS, WM)
Geo Arnhem (KL)

Beschreibung „Einbau der Robotic-Option“

Nachfolgend die Beschreibung betreffend des Einbaus der Robotic-Option.

Hardwarevoraussetzung :

1. Tastatur mit MAP-Platine Revision **D** !
2. Seitendeckel mit Telemetrie
3. Tracker
4. Modifikation (laut TM / 9503 A) auf der MAP-D !
5. Ext. Telemetrie und Verbindungskabel zur CU

Softwarevoraussetzung :

1. Programmversion ~~632-0104~~ für die Tastatur
 2. Programmversion ~~628-0300~~ für die Totalstation
 3. Softwareoption „Search Control“ muß vorhanden sein
 4. SST Version 1.76 und 1.71
 5. Programm „textload“ und „textcheck“ sowie neue Texte, Labels und Infos in englisch und deutsch
- 632-02.02
628-03.02*

Beschreibung :

1. Tastaturen 603 und 604 mit der Seriennummer 10001 bis 10200 haben ab Werk noch eine MAP-Platine Revision C eingebaut. Diese Tastaturen müssen auf jeden Fall ausgetauscht werden bzw. die MAP Platine Revision C gegen eine MAP-Platine Revision **D** ausgetauscht werden. Bei Tastaturen mit einer Seriennummer größer 10200 können MAP-Platinen Revision **C** oder **D** eingebaut sein. Um ganz sicher zu sein, muß auf jeden Fall die Tastatur geöffnet und die Revision überprüft werden. Hierbei ist die Modifikation TM / 9503 A zu überprüfen, gegebenenfalls durchzuführen. Danach wird die Programmversion 632-0104 in die Tastatur eingespielt.

... / 2

Bitte sicherstellen, daß die Softwareoption „Search Control“ installiert ist.

Bevor die Tastatur mit den Daten initialisiert wird, müssen die neuen Texte, Infos und Labels in englisch in Euer angegebenes Text-Subdirectory kopiert werden:

6320104i.map, 6320104t.map und 6320104l.map.

Es müssen immer die englischen Texte, Labels und Infos beim Initialisieren mit eingespielt werden. Wird dies nicht getan, ist die Tastatur fehlerhaft initialisiert worden und kann alle erdenklichen Fehlersymptome aufweisen.

Um deutsche Texte, Infos und Labels einzuspielen :

- 1.1 Eine Subdirectory anlegen für das „Textload“- und „Textcheck“-Programm.

Die Programme sowie die deutschen Texte, Infos und Labels in die „Sub-D.“ kopieren:

6320104t.ger
6320104l.ger
6320104i.ger

- 1.2 Das Programm „textload“ starten. COM-Port angeben, Tastatur anschließen und einschalten. In der Zeile „Infotext filename :“ die Endung „.ger“ eingeben (für german) und nachfolgende Zeilen mit „Enter“ am PC bestätigen! Danach werden die deutschen Texte, Labels und Infos in die Tastatur initialisiert. Dann im Menü „6“ und „6“, die Sprache auf „GE“ stellen und fertig.

Den „Factorybackup“ nicht vergessen durchzuführen! (006)

2. Bevor die Telemetrie in die Totalstation eingebaut wird, bitte die Reichweite des Distanzmeßteils notieren. (Beim Einschalten erscheint die Angabe im Display.)

Die Telemetrie einbauen und die Programmversion 628-0300 in die Totalstation einspielen.

Totalstation mit den Gerätedaten initialisieren.

Wenn man mit SST die Totalstationkonstanten initialisieren möchte, muß man immer die PGUP-Taste und nicht die ESC-Taste drücken.

Wenn man die ESC-Taste drückt, wird das GDM mit einem Batteriedatum im falschen Format initialisiert.

ex.

PVX Batteriedatum

= L83 = 940101

... / 3

Zuerst die Totalstation ausschalten, danach wird erst in SST die RAC-Platine mit „A“ (für aktiv) angezeigt.

Mit dem Label 99 auf der PVX-Platine wird die Reichweite der Totalstation festgelegt. Mit der SST-Version 1.76 kommt es häufig vor, daß in diesem Label nach dem initialisierten eine „3“ steht. Im SST-Programm werden für Label 99 folgende Möglichkeiten angegeben :

- | | |
|-----------------------|-------------------------------|
| 0 = SR (short range) | → im Display erscheint nichts |
| 1 = LR (long range) | → im Display erscheint 2400 m |
| 2 = MR (middle range) | → im Display erscheint 1800 m |

3. Um dieses Label zu ändern, muß die SST Version 1.71 benutzt werden. In dieser Version ist das Label 99 nicht geschützt.

Das Label ändern und speichern !

4. Probleme mit der SST-Version 1.76

- Label 99 auf PVX wird auf „3“ gesetzt.
- Beim Kommunikationsaufbau SST und Tastatur oder GDM können folgende Meldungen auftreten :
 - * „No device“
 - * „Die Seriennummer wird nicht oder falsch angezeigt“ (diesen Fall ignorieren und fortfahren)
 - * Tastatur oder GDM nicht abschalten und erneut versuchen die Kommunikation aufzunehmen.

5. Bitte beachten :

- 5.1 Batteriedatum im GDM (Label 83 auf PVX-Platine) auf das richtige Format überprüfen
- 5.2 GDM-Konstanten im GDM überprüfen. Manchmal fehlt die Konstante nach dem initialisieren („Dist Unit“ Label 209)

Solltet Ihr zur o.g. Beschreibung weitere Fragen haben stehe ich Euch gerne zur Verfügung.
Meine Telefonnummer (06151)708 144.

Mit freundlichen Grüßen

GEOTRONICS GmbH
Darmstadt



i. A. Friedrich Malina
- Servicetechniker -

Anlage :
Diskette SST 1.71; 1.76
Programmversionen & Konstanten
Beschreibung für SST 1.76
Textload-Programm

Darmstadt, den 19.04.1995

S E R V I C E K U R S

System 600

* Trackereinbau

* Wiederholung

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Service Software



S Y S T E M 600

vorbereitende Arbeiten

1. - überprüfen, ob die Daten für die CU und das GDM vorhanden sind !
(evt. auch Konfig.-Nr. ...)

2. - SRV alle Modifikationen !
TM / 9408 A oder TM~~9~~409 A

-- > einziger Unterschied :

SRV Rev. D = R 49 = Ja + R 27

SRV Rev. C = R 49 = Nein + R 27

Prom 571 123 602 04-00

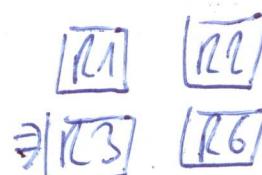
(Abgleich der Servoknobs durchführen !) \Rightarrow erst an Schluss

3. - Wenn das GDM eine PVX Rev. C enthält, muß eine

PVX Rev. D 04 eingebaut werden !

R 3 = Lötbrücke = 0 Ω

(Falls Rev. < 04 dann modifizieren)



4. CU --> MAP

Hex - load --> 632 - 01.01 einspielen }
CU neu initialisieren ... } SST



TECHNICAL MEMO

September 1994
GEOTRONICS AB
Technical Support Dept.
Danderyd, SWEDEN
TM/ 9408A

Instrument type:

Geodimeter System 600 Instruments;
Information regarding serialnumbers will be distributed separately.

Subject:

Modification of SRV-board (571 203 040), rev. D00
Upgrading of SRV- program, 571 123 602 - 04.00

Changes 571 123 602 - 02.00 => - 04.00, described in TI/ 9418A

Description:

Calibration values for the servos can be "randomized" when the Instrument is switched off/on => Resulting in erratic positioning. Positioning diff. 0-60cc, => an error of 0-9 mm / 100m.

Remedy:

- 1) Replace the Prom (IC13) to valid revision;
Always use special tool to take the prom out of the socket!!!
- 2) Remove resistor R 49 => see diagram;
- 3) Connect a jumper across the two pin holes;
- 4) Make a calibration of the servos, see SST program;
- 5) Remove jumper;

Mark the board rev. D00/05. incl.TM/ 9409A



TECHNICAL MEMO

September 1994
GEOTRONICS AB
Technical Support Dept.
Danderyd, SWEDEN
TM/ 9409A

Instrument type:

Geodimeter System 600 Instruments

Subject:

Modification of SRV- board (571 203 040), rev. C and D00

Must be done at the next service occation.

↓
IC 13

Description:

Ensure correct allocation of the memory (IC18) ,

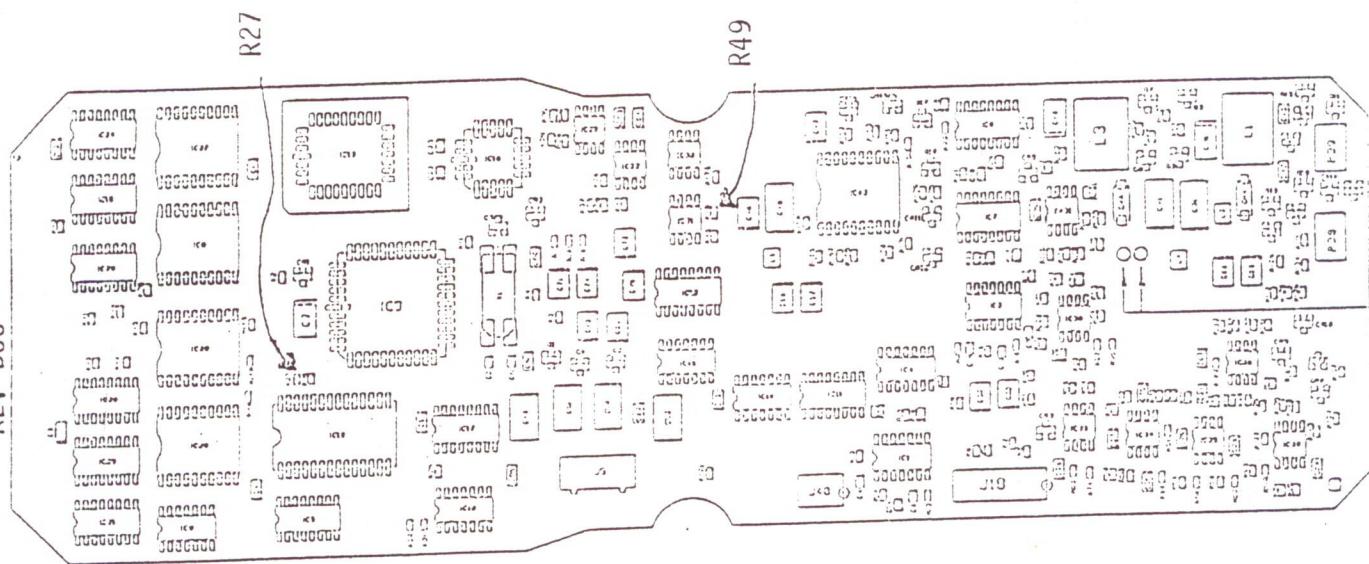
Remedy:

Remove resistor R 27 => see diagram, R 26 must be mounted only.

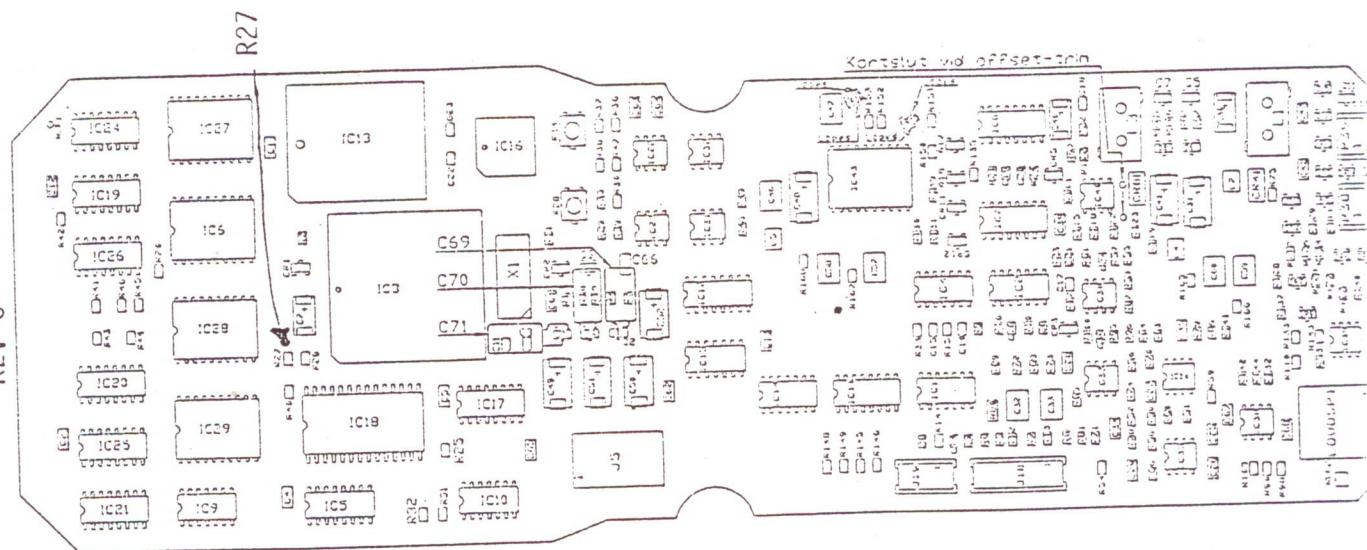
Mark the board rev. D00/05 (incl. TM/ 9408A)

Rev.C boards => no change of rev.

REV D00



REV C



HUFPP



TECHNICAL INFO

September 1994
GEOTRONICS AB
Technical Support Dept.
Danderyd, SWEDEN
TL/ 9418A

Subject:

Program 571 123 602 - 04.00 (SRV-Program)

Description:

Changes REV. - 02.00 => - 03.00 => - 04.00
(Rev. 03.00 not released)

- TRACKER-function introduced
- Improvement of systems related to the positioning performance

TECHNICAL MEMO

May 1994

GEOTRONICS AB

Technical Support Dept.

Danderyd, SWEDEN

TM/ 9405A

Instrument type Geodimeter System 600 Instruments

Subject: Modification of the PVX - board to bring down transient voltages when switching on the instrument.

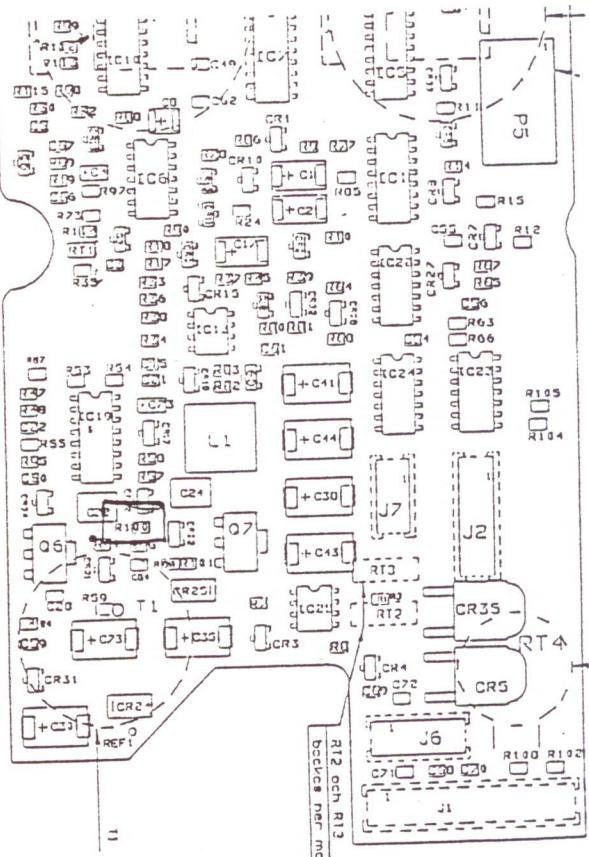
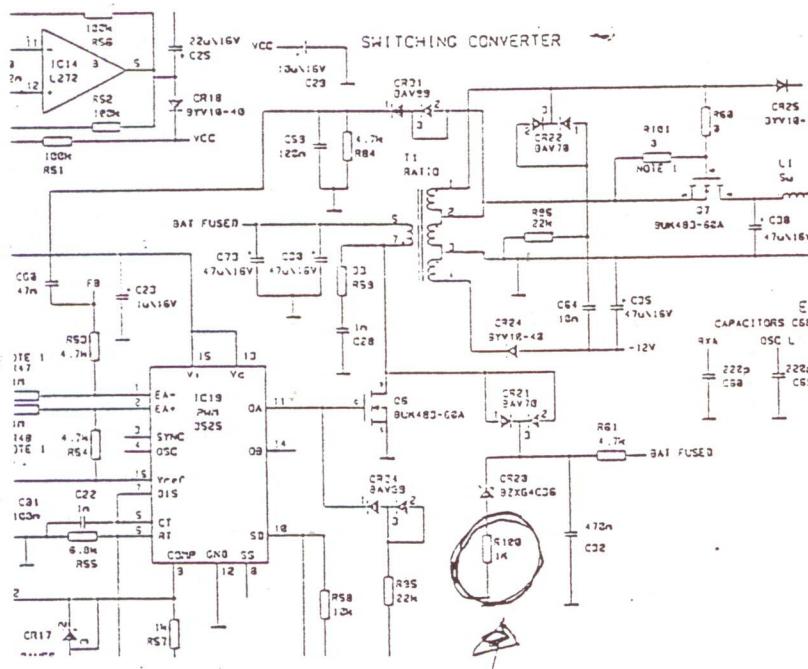
Description: Q5 and Q6 are at risk to become damaged by transients from T1 at switch on.

Replace resistor R100, 1Kohm to 22,0 ohm ==> part no: 571 806 109

Bestellen

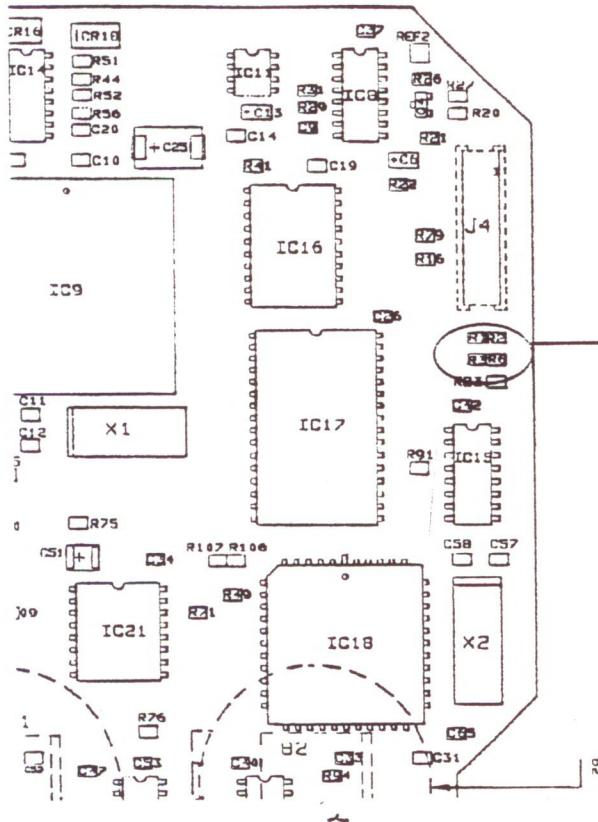
All instruments must be modified at the very next service occation!!

Components encl. Board is then marked D00/03



Mounting the resistor R3 on the PVX board.

The resistor R3 is mounted on the PVX board only when the instrument is fitted with a Tracker unit.



Add resistor R3 if the
PVX board is to be
installed in a GBM
fitted with a Tracker
unit.

Clarifying of the
placement of R3

R1 R2
R3 R6



$$R3 = \emptyset \Omega$$

S Y S T E M 600

Trackermontage

Bei der Trackermontage sind folgende Schritte zu beachten :

1. - Gehäuse des Distanzmeßteiles abmontieren.
- Kabel von DDC zu TTB entfernen.

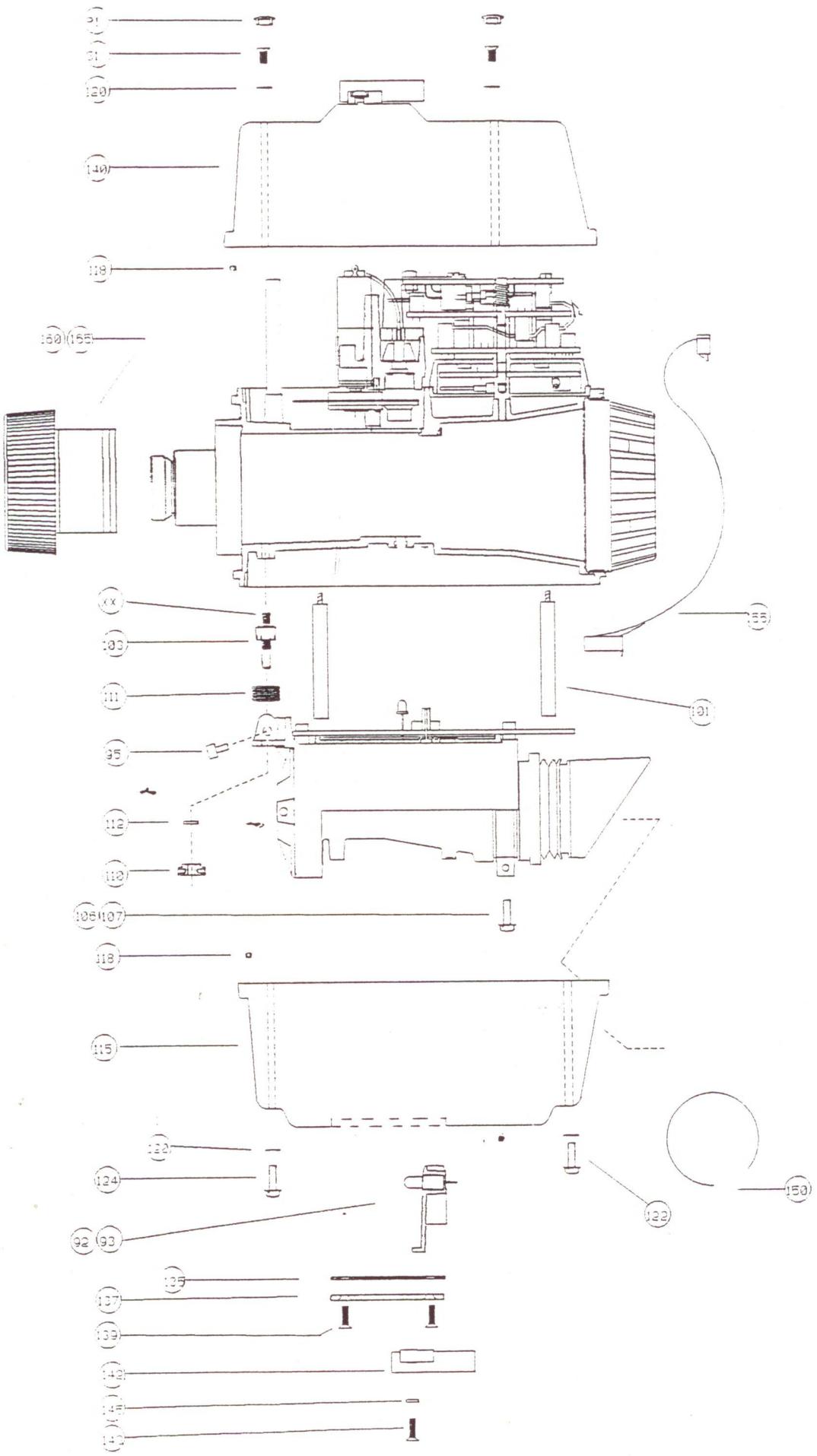
2. - Gehäuse zur Aufnahme des Akkus abschrauben.
- Die vier Schrauben aus der schwarzen Bodenplatte drehen.
- Bodenplatte abnehmen.
- Verbindungskabel abziehen und Gummipropfen rausnehmen.

3. - Kabel für den Tracker durchziehen !
* das Lösen des Massenkabels auf der PVX-Seite kann das Ganze erleichtern
* oder Kabel von oben durchziehen (Distanzmeßteil)
- Gehäuse des Distanzmeßteiles wieder montieren
- Neuen Fokussierring montieren.

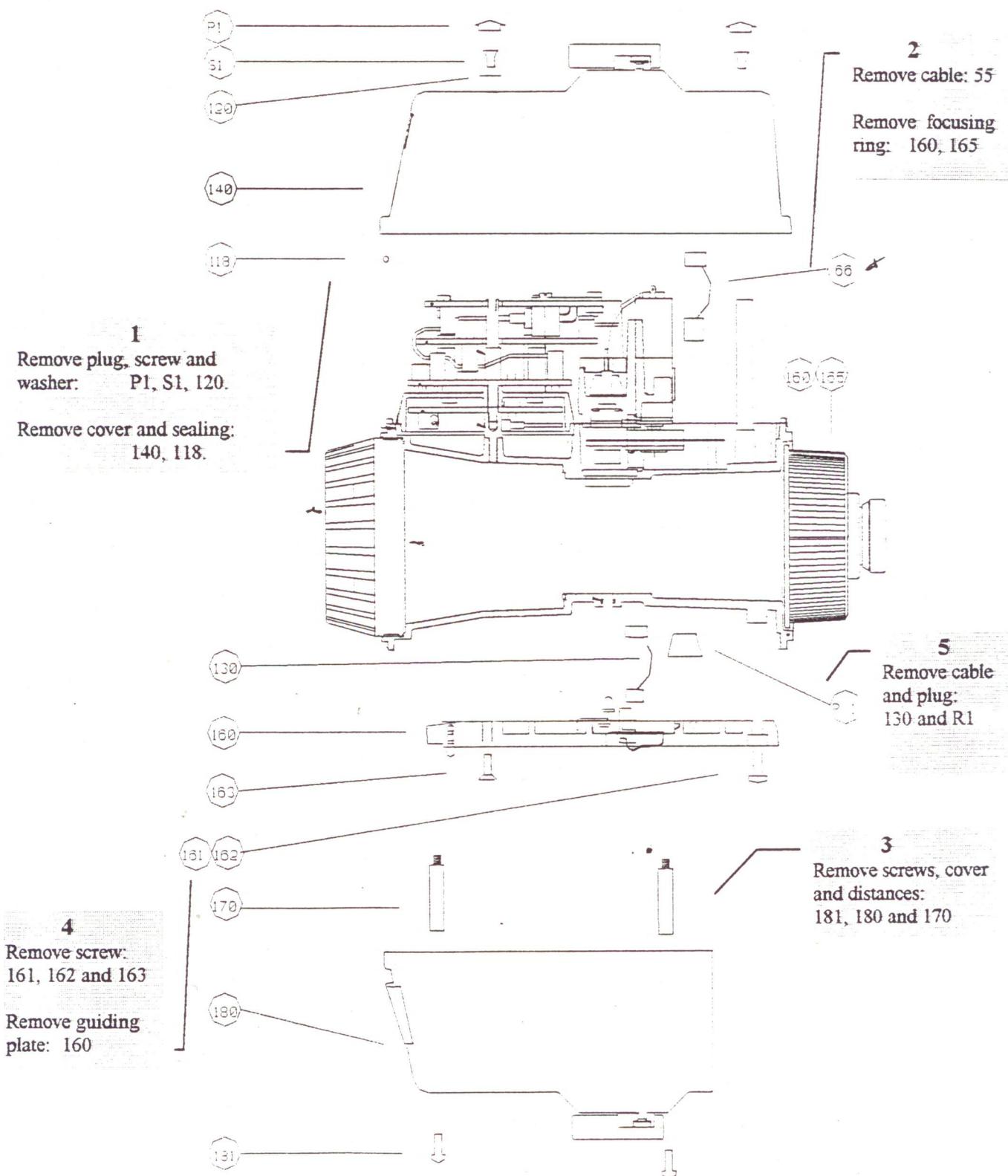
4. - Tracker montieren - bzgl. Schrauben usw.
siehe TI / 9421 A

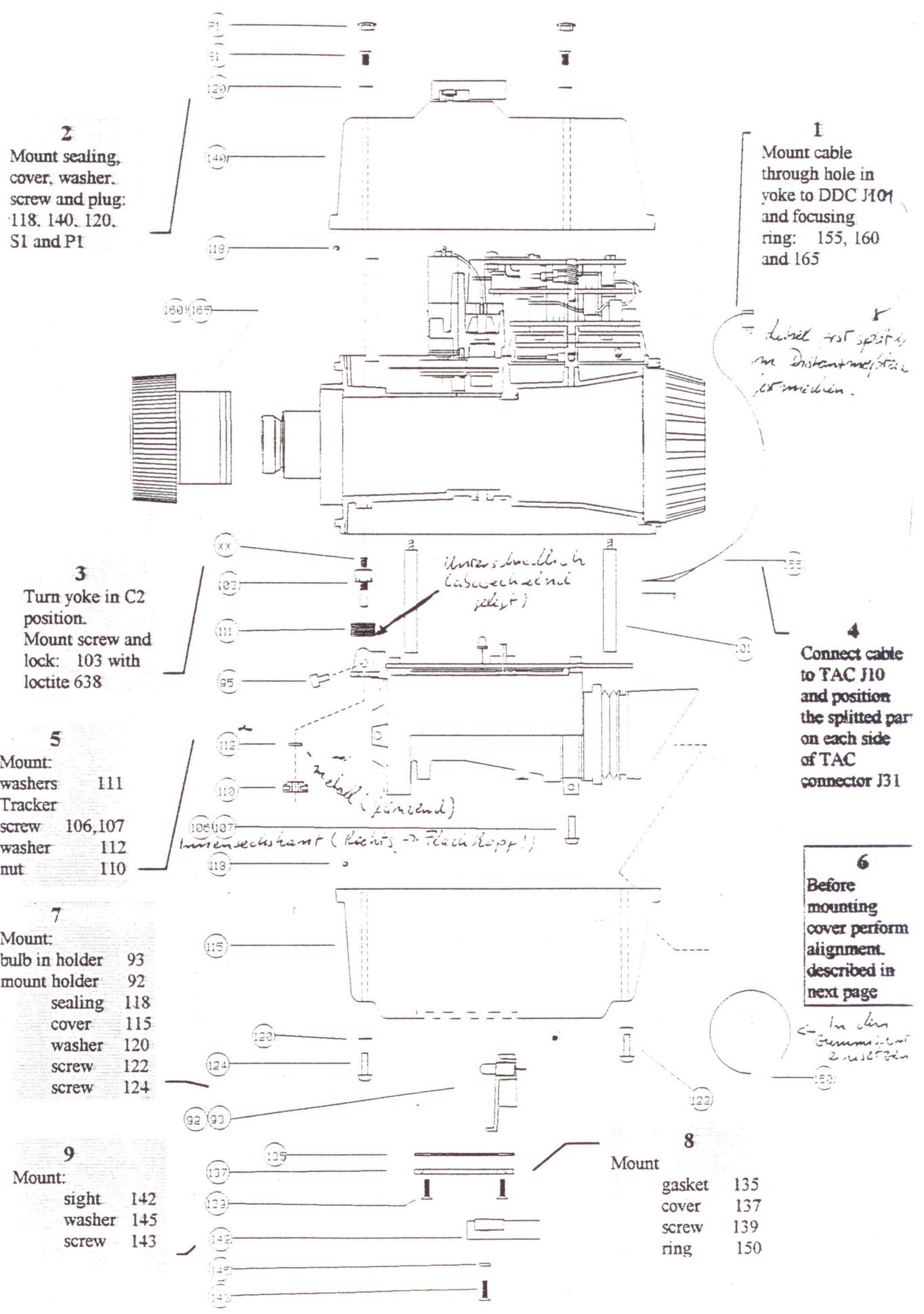
5. GDM --> **PVX**
 - Hex-load --> 628-01.00 einspielen } }
 - GDM neu initialisieren } SST

 - nach dem initialisieren, sollte im Fenster „Status of Instrument“ das TAC-board angezeigt und aktiv sein (mit Nummer !)
 - Label 83 Überprüfung und ggf. Format ändern in JJMMTT



Preperation for mounting the Tracker unit.





S Y S T E M 600

Justage und Überprüfung

1. - für die Trackerjustage ist ein RMT 600 mit Prisma und Batterien bzw. ext. Versorgung auf ca. 100 - 200 m Entfernung notwendig.

2. - nach der normalen Inbetriebnahme bis in PO / Winkelanzeige die **RPU** - Taste drücken und von Manuell auf **Auto Lock** umschalten.
 - das RMT anzielen - irgendwann wird der Tracker ansprechen und das Distanzmeßteil ausrichten.
 - Nun mit Hilfe der entsprechenden Schrauben solange justieren, bis das GDM exakt die Prismenmitte anzielt.

(siehe Blatt „Adjustment of Tracker unit“)

3. - Trackergehäuse vorsichtig montieren.

4. - Nach erneutem Anzielen durch Auto Lock sollte wieder exakt die Prismenmitte angezielt sein ...

5. - „Auto Lock“ wieder auf **Manuell** umschalten
„Trackerkalibrierung“ durchführen !

MNE --> **5** --> **3**

6. - Mit SST-Programm Tolleranzen überprüfen
Label 190 und 191

Adjustment of the Tracker unit.

The only adjustments that have to be performed is alignment of the Tracker unit and a check of the tracklight.

When the Tracker unit is mounted on the yoke proceed with alignment as follows:

1
Mount the GDM on a pillar.
Start and level the instrument.
Start the aim sequence by
pressing key 4,1,1

2
Coarse aim at the remote
target min 100m

3
Loosen the screws 1 and 2.

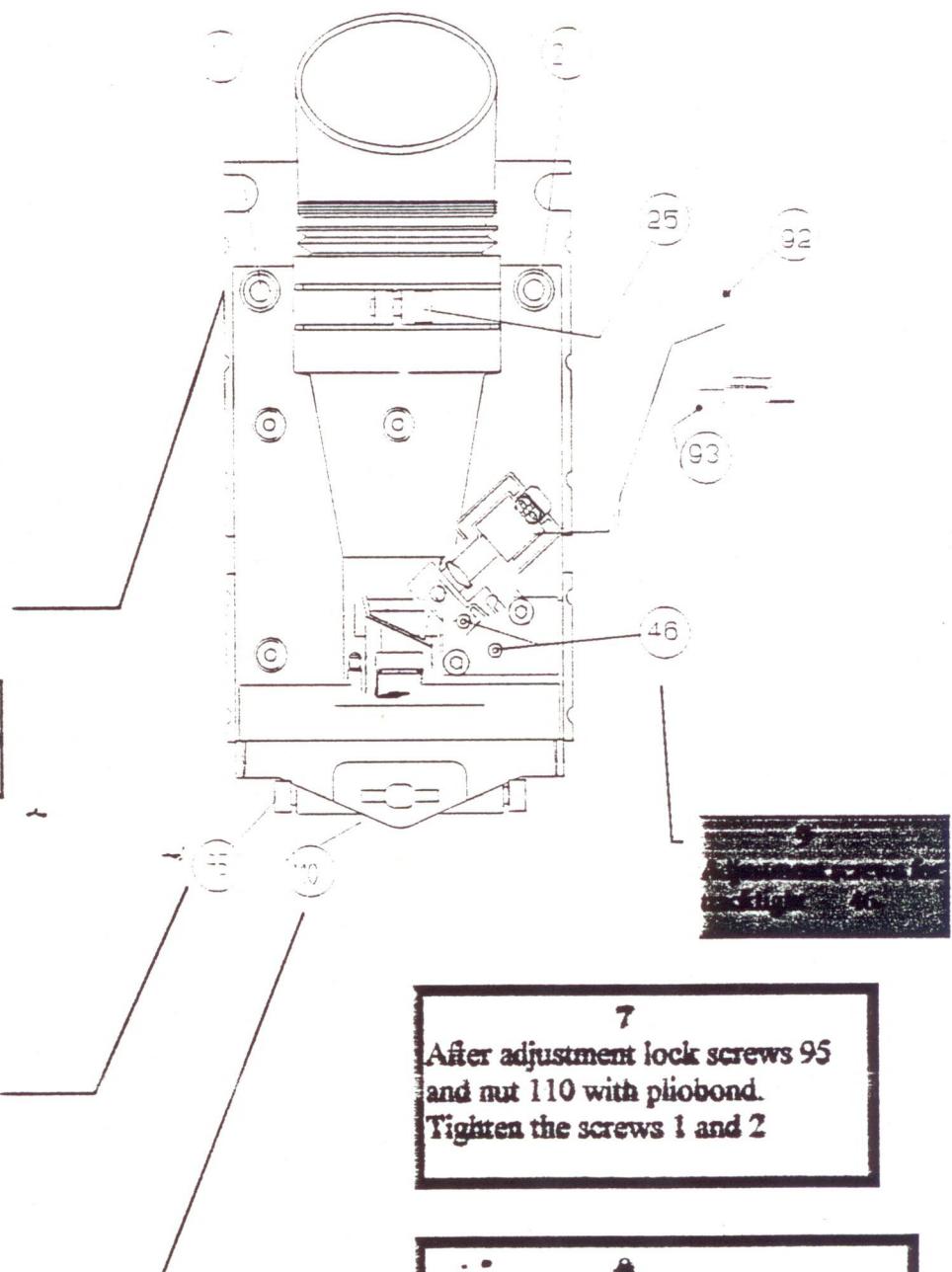
4
When the GDM has locked on to
the target start adjusting.

5
Adjust the screws 95 with
special allen key
part no: 571293 374
for horizontal movement.

Adjust so that the haircross is
in the middle of the target.

6
Adjust the nut 110
for vertical movement

Adjust so that the haircross is
in the middle of the target.



7
After adjustment lock screws 95
and nut 110 with pliobond.
Tighten the screws 1 and 2

8
Check collimation error of the
Tracker unit by performing a test
measurement.
Press MNU, S, 3. The tolerance
is 15sec. Use SST program to view.



TECHNICAL INFO

September 1994

GEOTRONICS AB

Technicak Support Dept.

Danderyd SWEDEN

TI/9421A

Instrument type: GDM System 600 instrument

Subject: Retrofit of the Tracker unit on GDM with PVX rev C boards

Description: To upgrade the instrument with a Tracker unit do as follows:

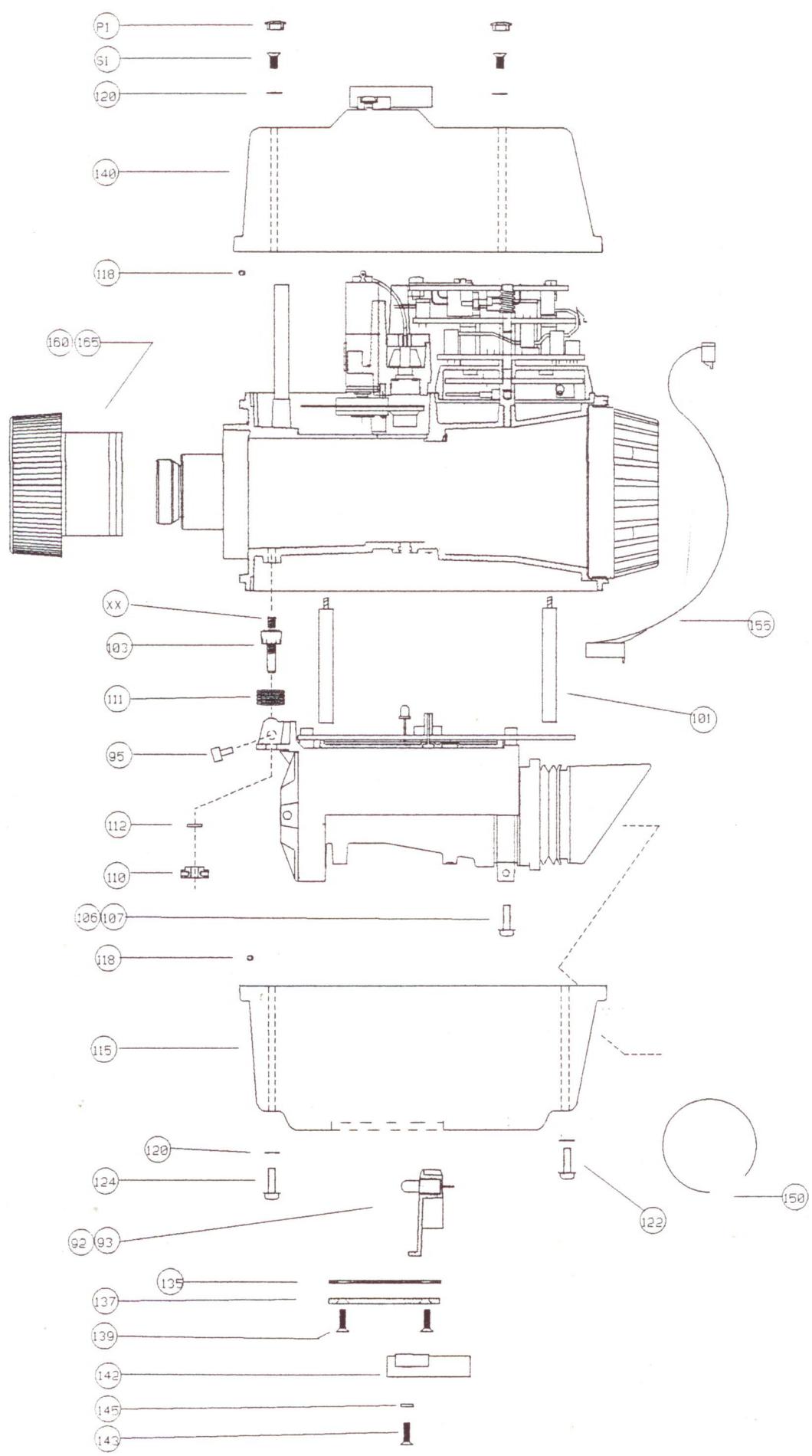
1. Upgrading of the GDM to correct board and program status.

Change the PVX board to rev D 04 !!!
Add resistor R3 571 806 000 to the PVX board 0.2 (Lötbrücke).

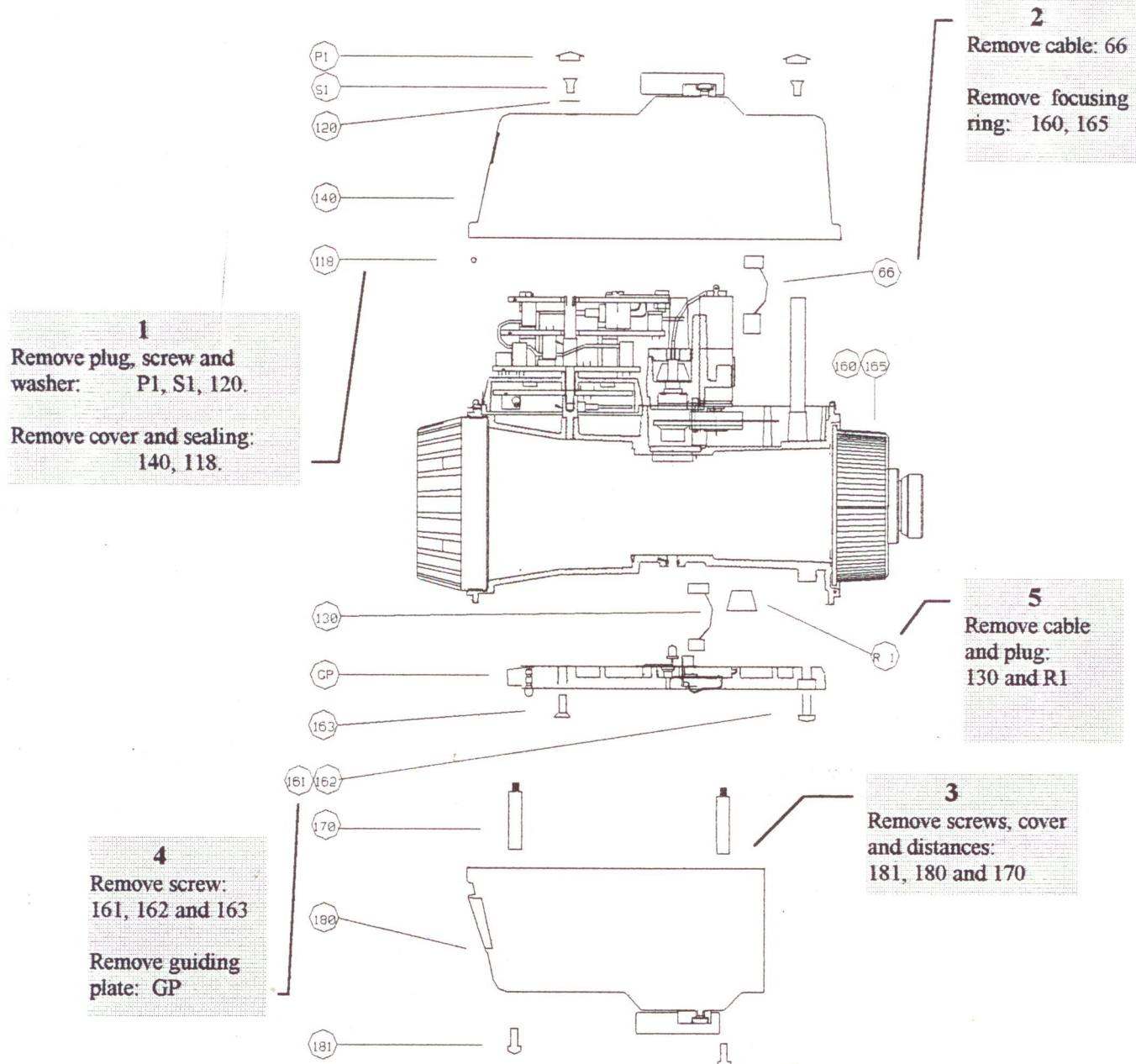
Load new program version to the PVX board 571 123 628-01.00
Load new program version to the MAP board (CU) 571 123 632-01.01
Change the PROM on the SRV board to version 55 571 123 602-04.00

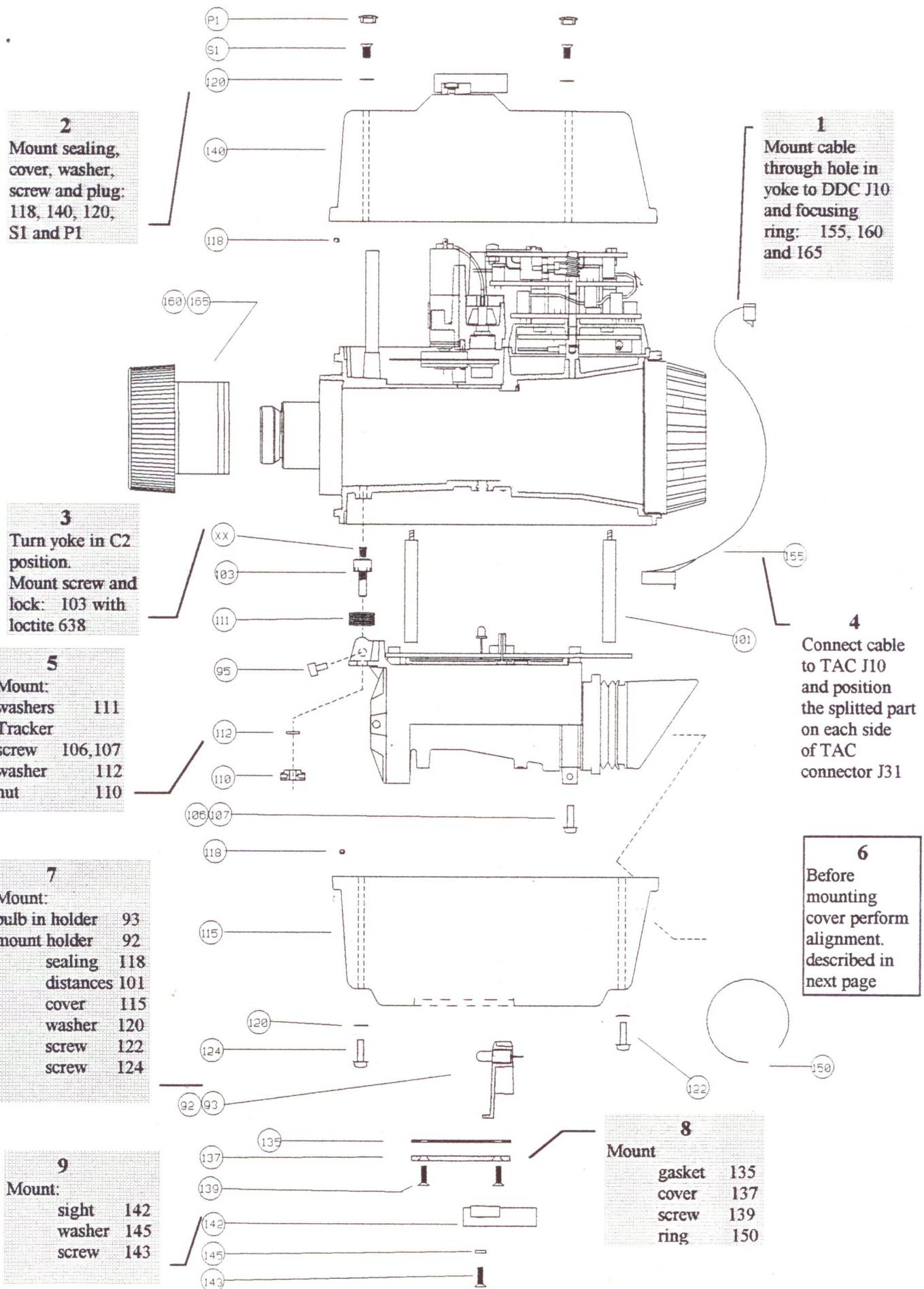
2. Mounting of the Tracker unit.

Retrofit details.			
Pos.	Detail	Part no.	
	PVX rev D	571 203 080	
	SRV PROM	571 123 602-04.00	
	R3 x1	571 806 000	
Tracker details.			
92	Holder	x1	571 202 103
93	Bulb	x1	571 903 122
101	Distance	x4	571 202 129
103	Screw	x1	571 202 128
106	Screw	x1	941 104 226
107	Screw	x1	571 905 569
110	Nut	x1	571 143 149
111	Washer	x8	571 903 746
112	Washer	x1	571 901 658
115	Cover	x1	571 202 104
118	Sealing	x1	571 200 564
120	Washer	x4	571 903 586
122	Screw	x2	571 903 074
124	Screw	x2	571 905 234
135	Gasket	x1	571 202 107
137	Cover	x1	571 202 106
139	Screw	x2	571 903 073
142	Sight	x1	571 180 910
143	Screw	x2	571 903 074
145	Washer	x2	944 482 124
150	Ring	x1	571 202 111
155	Cable	x1	571 207 034
160	Focus ring	x1	571 200 166
165	Grip	x1	571 200 081



Preperation for mounting the Tracker unit.





Adjustment of the Tracker unit.

The only adjustments that have to be performed is alignment of the Tracker unit and a check of the tracklight.

When the Tracker unit is mounted on the yoke proceed with alignment as follows:

1
Mount the GDM on a pillar.
Start and level the instrument.
Start the aim sequence by
pressing key 4,1,1

2
Coarse aim at the remote
target min 100m

3
Loosen the screws 1 and 2.

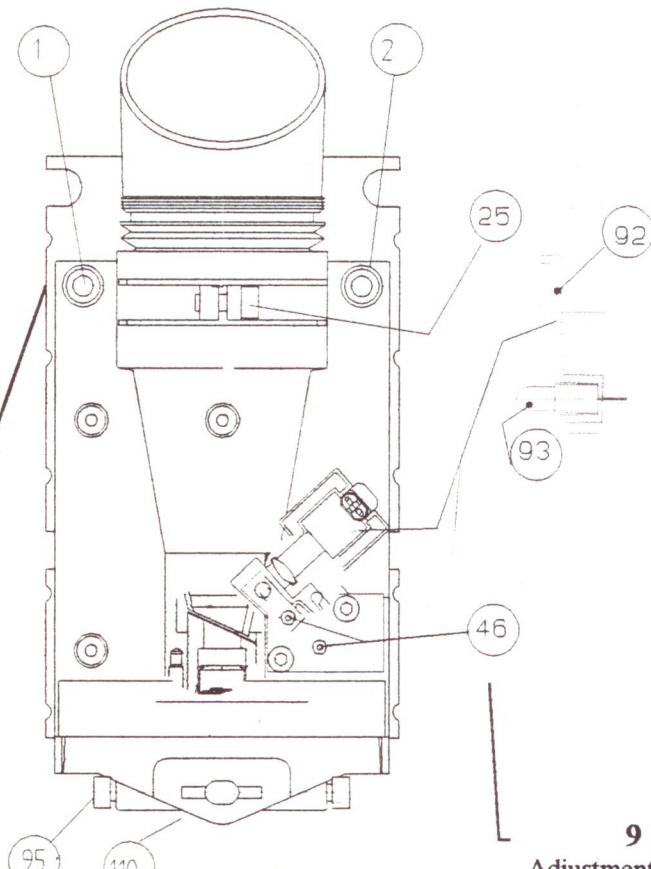
4
When the GDM has locked on to
the target start adjusting.

5
Adjust the screws 95 with
special allen key
part no: 571203 374
for horizontal movement.

Adjust so that the haircross is
in the middle of the target.

6
Adjust the nut 110
for vertical movement

Adjust so that the haircross is
in the middle of the target.



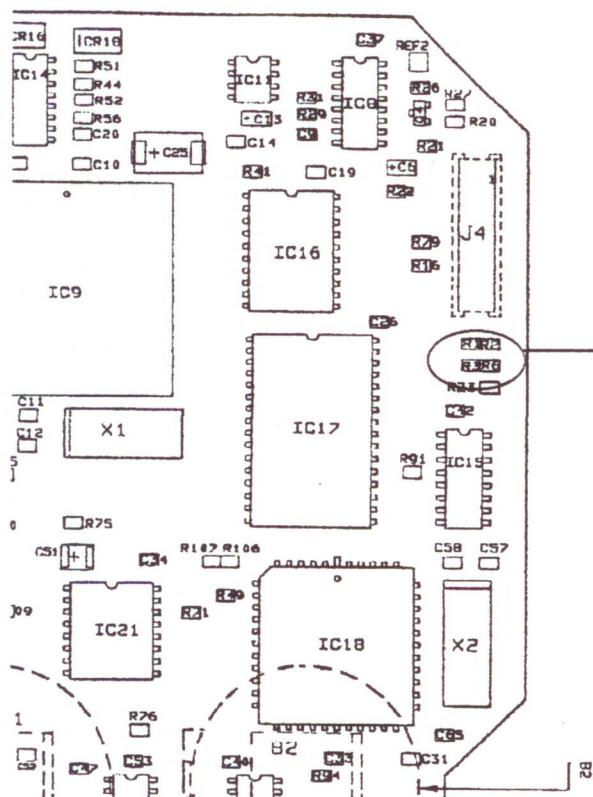
9
Adjustment screws for
tracklight 46

7
After adjustment lock screws 95
and nut 110 with pliobond.
Tighten the screws 1 and 2

8
Check collimation error of the
Tracker unit by performing a test
measurment.
Press MNU, 5, 3. The tolerance
is 15cc. Use SST program to view.

Mounting the resistor R 3 on the PVX board.

The resistor R3 is mounted on the PVX board **only** when the instrument is fitted with a Tracker unit.



Add resistor R3 if the
PVX board is to be
installed in a GDM
fitted with a Tracker
unit.

Clearifying of the
placement of R3

R1 R2
R3 R6



TECHNICAL INFO

September 1994
GEOTRONICS AB
Technical Support Dept.
Danderyd, SWEDEN
TI/9420A

INFOLISTING GDM SYSTEMS 400/500/4000/600

Error types:

- 0: Jumps to monitor for repetition of state
1: No return Infinite loop
2: Return to calling program after one second delay
3: Return to calling program after 5 beeps
4: Return to calling program
5: Return to calling program after 5 beeps and keypressed
=====

de	Typ	Description
1	3	Plum out of range
2	3	Wrong face
		Aim mode
3	3	Distance already recorded
4	3	Measure invalid
5	3	Undefined mode switch or table
6	3	Angle <15° from hor plane
7	3	UDS contains distance labels
8	3	Batt low, registration not possible
9	3	Batt low, in external unit.
10	3	No active device.
11	3	Vertical difference < 5
12		
13		
14		
15		
16		
7		
18		
19		Error occurred during transmission
20.i	3	Illegal label number
21.i	3	RS232 general error
22.i		No or wrong device connected
23.i	3	Timeout
24.i		Illegal state to execute command. (load/output)
25	3	Real time clock error
26	3	Backup battery too old
27	3	Option not installed
28.i	3	No data in buffer
29	3	Table activated, can't be altered
30.i		Syntax error
31	3	Out of range, try to step outside a file.
32	3	Not found (files or programs)
33		File / Record exists
34	3	Error in file / record separator / file creation
35.i	3	Data error

Err	Typ	Text
36	3	Memory full
37.i	3	Protocol error
38		Format error (GDT126/GDT400)
39		Overrun error
40		
41	3	Wrong type
42	3	U.D.S. Program memory full
43		Square root of neg. value
44	3	Not enough data for calculation
45.i	3	Incompatible device
46		GDM power error, radio can't switch on gdm
47	1	UDS Call stack error
48	3	Stn.database changed.
49		RPU not logged on to GDM
50	4	Memory lost to 542-02
	4	Wrong config no from 542-04
51	4	Memory lost 542-03
51	3	Checksum error
51		Error turn-off
52	1	Coarse code error
53	4	A/D overrange
54		Memory lost 582-04, 588-01
55		
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Err	Typ	Text
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		
Radio		
100		Ok, after executed radio command.
101	3	Connect, connection established.
102		Ring, another radio is calling.
103	3	No carrier, noise or no contact.
104	3	Error, command syntax error or command not executed.
105		
106		
107	3	Channel Busy or timeout sending.
108		
109		
110		
111		EEPROM error
112		EEPROM ok
113		
114		Georadio ver x.x, after radio reset
115		No Access, S register. or locked command.
116		
120		Radio error NAK
121		Radio error CAN
122		Radio not connected.
123		Timeout after radio command
124		Timeout Ack/Nak
125		
126		
127		
128		
29		
130		
131		
132		
133		
134		
135		
136		
137		Radio protocol error
138		
139		
140		
141		
142		
143		
144		
145		
146		
147		
148		
149		Radio power error
Servo		
150		OK, Servo command executed.
151	3	Overload horizontal motor.

Err	Typ	Text
152	3	Overload vertical motor.
153	3	End position switch.
154	3	Servo - Tracker communication failed.
155	3	Horizontal accuracy not reached.
156	3	Vertical accuracy not reached.
157	3	Hor & Vert accuracy not reached.
158	3	Target not found.
159	3	Ready to start new sub command.
160	3	Not valid position angle.
161	3	Target lost.
162		Syntaxerror. (Translated to 30 by panel)
163		Data error or data missing. (Translated to 35 by panel)
164		Unable to initialize. '.1'-'4' is the knob number.
165		
166	3	Unable to measure distance, no signal from prism.
167	3	Tracker collimation error > 5 c.
168	3	Tracker collimation error < 100m.
169		
dist		
170		
171	3	Subtraction or addition error.
172	3	Divide error.
173	3	Multiply error.
174	3	Signal lost close loop.
175	3	Gang error. Distance > 32 Km.
176		
177		
178		
179		
180		
181		
182		
183		
184		
185		
186		
187		
188		
189		
190		User Break (of PVX process)
191		General failure of command to alidad
192		
193		
194		
195		
196		
197	1	Not possible to allocate OR deallocate resource
198	1	Interrupts are enabled in monitor program
199.i	1	DO CASE-index to large in PLM
200	1	Case index in state tbl to large
201	1	Divide by zero
202	1	See error 218
203	1	Text not found
204	1	To many labels
205	1	Illegal vector

Err	TYP	Text
206	1	To many devices
207	1	Process queue 0 overflow
207.1	1	Process queue 1 overflow
210	1	Illegal interrupt
211	1	Monitor stack overflow
212	1	CPU stack overflow
213	1	Text string has no end mark
214		
215	3	Wrong Src_type
216	3	Wrong Dst_type
217	3	RS-buffer overflow
218.i	3	Input string overflow
219	3	Wrong parameter
Pas		
220		
221		
222		
223	3	Wrong horizontal raw data from angle detector.
224	3	Wrong vertical raw data from angle detector.
225	3	Wrong pendulum reference.
226	3	Divide error.
227	3	Process code overflow.
228	3	Wrong horizontal coarse code.
229	3	Wrong vertical coarse code.
230	3	Wrong offset
231	3	Algebra error
232	3	Automatic adjustment horizontal not possible.
233	3	Start of pendulum not possible.
234	3	Automatic adjustment vertical not possible.
?221		Timeout Servo
?222		Timeout Tracker
?224		Wrong channel
?225		Timeout Distance-meter (Coax)
235		
236		
237		
238		
239		
240		
241		
242		
243		
244		
245		
246		
247		
248		
249		
250		
251		
252		
253		
254		
255.i		Fatal error



TECHNICAL MEMO

September 1994
GEOTRONICS AB
Technical Support Dept.
Danderyd, SWEDEN
TM/ 9408A

Instrument type:

Geodimeter System 600 Instruments;
Information regarding serialnumbers will be distributed separately.

Subject:

Modification of SRV-board (571 203 040), rev. D00
Upgrading of SRV- program, 571 123 602 - 04.00

Changes 571 123 602 - 02.00 => - 04.00, described in TI/ 9418A

Description:

Calibration values for the servos can be "randomized" when the Instrument is switched off/on => Resulting in erratic positioning. Positioning diff. 0-60cc, => an error of 0-9 mm / 100m.

Remedy:

- 1) Replace the Prom (IC13) to valid revision;
Always use special tool to take the prom out of the socket!!!
- 2) Remove resistor R 49 => see diagram;
- 3) Connect a jumper across the two pin holes;
- 4) Make a calibration of the servos, see SST program;
- 5) Remove jumper;

Mark the board rev. D00/05. incl.TM/ 9409A



TECHNICAL MEMO

September 1994
GEOTRONICS AB
Technical Support Dept.
Danderyd, SWEDEN
TM/ 9409A

Instrument type: Geodimeter System 600 Instruments

Subject: Modification of SRV- board (571 203 040), rev. C and D00

Must be done at the next service occation.

↓
ic 13

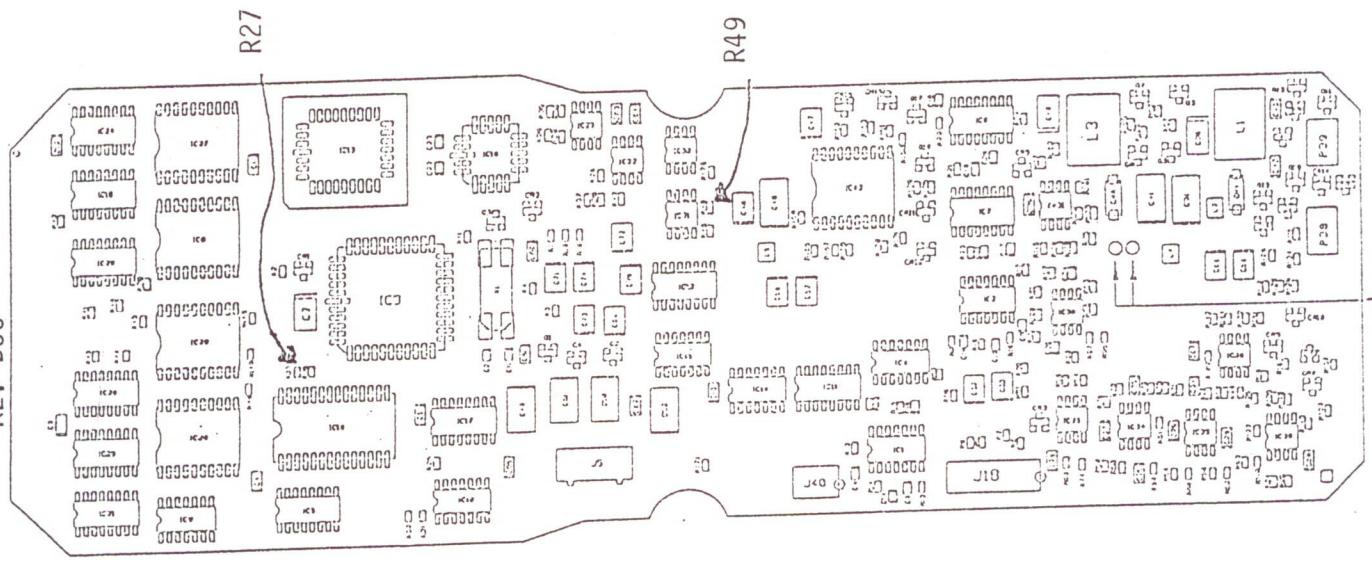
Description: Ensure correct allocation of the memory (IC18) ,

Remedy: Remove resistor R 27 => see diagram, R 26 must be mounted only.

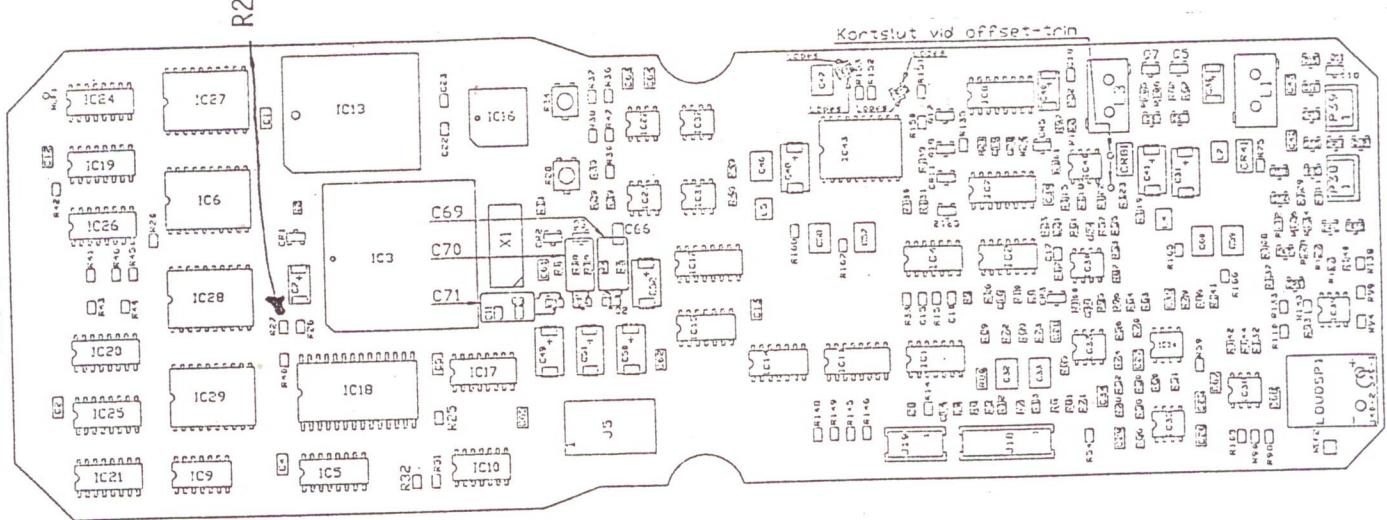
Mark the board rev. D00/05 (incl. TM/ 9408A)

Rev.C boards => no change of rev.

REV D00



REV C



JUMPER

Labels in MAP:

No	Label	Typ		Use	Extraction	Source	Used in	Store
0	Info		A	General purpose	Entry	MAP		MAP
1	Data (I_Data)		A	General purpose	Entry	MAP		MAP
2	Stn		A	Station number	Entry	MAP		MAP
3	IH	L	N	Instrument height	Entry, same as 35	MAP		MAP
4	Pcode		A	Point code	Entry, same as 36	MAP		MAP
5	Pno		A	Point number	Entry	MAP		MAP
6	SH	L	N	Signal height	Entry	MAP		MAP
7	HA (Hz)	A	N	Horizontal angle C1	Measured	POA	MAP	
8	VA (V)	A	N	Vertical angle C1	Measured	POA	MAP	
9	SD	L	N	Slope distance	Measured length + [20]	DDC	MAP	
10	DHT	L	N	Difference height	See note 1	MAP		
11	HD	L	N	Horizontal distance	See note 2	MAP		
12	Square		N	Area of an surface	Result from P25	MAP		MAP
13	Volume		N	Volume	Result from P25	MAP		MAP
14	Grade		N	Percent of grade	See note 7	MAP		
15	Area		A	Area file	Entry	MAP		MAP
16	dH (Hor_Diff)	A	N	Hor. diff. angie	([17]-[7] ± 200)/2	MAP		
17	HAII (Hz2)	A	N	Horizontal angle C2	Measured	MAP		
18	VAI (V2)	A	N	Vertical angle C2	Measured	MAP		
19	dV (Vert_Diff)	A	N	Vertical diff. angle	(400°-[18]-[8])/2	MAP		
20	Offset (Slope_Offset)	L	N	Slope dist offset	Entry	MAP		
21	HAref (Hz_ref)	A	N	Hor. ref. angle	Entry	MAP	POA	
22	Comp (Plume)		F	Compensator on/off	Entry	MAP	POA	
23	Units (Env_Stat)		N	Status of units set	Updated from system	MAP		
24	HA (Hz1)	A	N	Hor. ang C1 in DBAR	Measured	MAP		
25	VA (V1)	A	N	Vert. ang C1 in DBAR	Measured	MAP		
26	SVA	A	N	Setout vert. angle	Entry, see note 5	MAP		
27	SHA	A	N	Setout hor.angle	Entry, see note 3 & 5	MAP		
28	SHD	L	N	Setout hor length	Entry, see note 3	MAP		
29	SHT	L	N	Setout height	Entry	MAP		
30	PPM		N	Atmospheric corr.	Entry or MNU, see note 4	MAP	DDC	
31	BM_Ele		N		Reserved for GST	MAP		
32								
33	PrismC		N	Prisma constant	Entry or MNU	MAP	MAP	
34								
35			N					
36	PHT		N	Profile height	Entry or area file (P39)	MAP	MAP	
37	N (XA)	L	N	North co-ordinate	Entry & [37]+[47]@	MAP		
38	E (YA)	L	N	East co-ordinate	Entry & [38]+[48]@	MAP		
39	ELE (ZA)	L	N	Height co-ordinate	Entry & [39]+[49]@	MAP		
40	dN (X_Diff)	L	N	Co-ordinate diff	[37]-[67]	MAP		

41	dE (Y_Diff)	L	N	Co-ordinate diff	[38]-[68]	MAP		
42	dELE (Z_Diff)	L	N	Height diff	[39]-[29]	MAP		
43	Utm_sc		N	Scale factor for HD	Entry	MAP		
44	Slope (SlopeIncl)		N	Slope inclination	Entry	MAP		
45	dHA (H_Diff)	A	N	Reserved				
46	S_dev		N	Standard deviation	Result of calculation	MAP		
47	Nr (XR)	L	N	Rel. North co-ord.	$\cos [7]*[11]$	MAP		
48	Er (YR)	L	N	Rel. East co-ord.	$\sin [7]*[11]$	MAP		
49	VD (ZR)	L	N	Vertical distance	[10]+[3]-[6]-ROEPreset	MAP		
50	Job no		A	Job file number	Entry	MAP		
51	Date		A	System date	Entry & system clock	MAP		
52	Time		A	System time	Entry & system clock	MAP		
53	Oper		A	Operator name	Entry	MAP		
54	Proj		A	Project name	Entry	MAP		
55	Inst_no_PVX		N	Intr serial number	From PVX	PVX	MAP	MAP
56	temp		N	Temperature	Entry, see note 4	MAP		
57	Blank (Blankline_dum y)		N	Empty row in UDS		MAP		
58	Ea rad	L	N	Reserved				
59	Refrac		N	Reserved				
60	Shot ID		A	Shot identity	For GST	MAP		
61	Activ		A	Activity code	For GST	MAP		
62	Refobj		A	Reference object	Entry	MAP		
63	Diam	L	N	Reserved				
64	Radius	L	N	Radius	Entry	MAP		
65	Geom		A	Geometry	For GST (Plot)	MAP		
66	Figure		A	Figure	For GST (Plot)	MAP		
67	SON (SOX)	L	N	Setout North co-ordinate	Entry, see note 3	MAP		
68	SOE (SOY)	L	N	Setout East co-ordinate	Entry, see note 3	MAP		
69	SHT (SOZ)	L	N	Setout Height	Entry, see note 3	MAP		
70								
71					* Use label 29 instead			
72	Radofs	L	N	Abscissa	$[28]*\cos[77]-[11]$	MAP		
73	RT.ofs	L	N	Ordinate	$-1*([28]*\sin[77])$	MAP		
74	Press		N	Air pressure	Entry, see note 4	MAP		
75	dHT (SO_DHT)	L	N	d height TRK	[29]-[39]	MAP		
76	dHD (SO_HD)	L	N	d hor. dist TRK	[28]-[11]	MAP		
77	dHA (SO_HA)	A	N	d hor. angle TRK	[27]-[7]	MAP		
78	COM (UART_Ctrl)		A	Serial communication parameter	Entry, Stop,Parity,Length,Baud	MAP		
79	End (Endbyte)			UDS special or EOT	Entry, see note 6	MAP		
80	Sect (Section)		N	Section	Entry or calculated (P29)	MAP	MAP	
81	A-prm (Aparam)		N	A-parameter (Roadline)	From area file (P29)	MAP	MAP	
82	SecInc (SectInc)		N	Section interval (Roadline)	Entry or area file (P29)	MAP	MAP	

.83	CL_ofs (RL_Ofs)	N	Center line offset	Entry or calculated (P29)	MAP	MAP	
84		A	Reserved				
85		A	Reserved				
86		A	Reserved				
87		A	Reserved				
88	Profile	A	Name on a road profile	Entry or area file (P39)	MAP	MAP	
89	PCoeff	A	Parabel coefficient	Entry or areofile (P39)	MAP	MAP	
90		A	General purpose				
91		A	General purpose				
92		A	General purpose				
93		A	General purpose				
94		A	General purpose				
95		A	General purpose				
96		A	General purpose				
97		A	General purpose				
98		A	General purpose				
99		A	General purpose				
100		A	General purpose				
101		A	General purpose				
102		A	General purpose				
103		A	General purpose				
104		A	General purpose				
105		A	General purpose				
106		A	General purpose				
107		A	General purpose				
108		A	General purpose				
109		A	General purpose				
110			General purpose				
111			General purpose				
112			General purpose				
113			General purpose				
114			General purpose				
115			General purpose				
116			General purpose				
117			General purpose				
118			General purpose				
119			General purpose				
120			General purpose				
121			General purpose				
122			General purpose				
123			General purpose				
124			General purpose				
125			General purpose				
126			General purpose				
127	Un_Lock	N	Unlock high labels		SST	MAP	MAP

						GDS		
128	Flagreg3		N			MAP	MAP	MAP
129	Flagreg4		N			MAP	MAP	MAP
130*	Con_Set		N	Display-contrast index		MAP	MAP	MAP
131	III_Set		N	Display illumination setting				
132	Flagreg7		N			MAP	MAP	MAP
133	Flagreg8		N			MAP	MAP	MAP
134	Initmode		N	Initiate value for overlay C		MAP	MAP	
135	III_on		N	Display ill on/off		MAP	MAP	MAP
136	Check		N	Checksum for error 51		SST	MAP	
137	Disp_Tab		N	Display table		MAP	MAP	
138	Reticle_On			Reticle on/off		MAP	DDC	
139	X_Plum		N					
140	Y_Plum		N					
141	Out_Tab		N	Output table		MAP	MAP	
142	Vol_Set		N	Volume setting		MAP	PVX	MAP
143								
144								
145								
146								
147								
148								
149	Max_Label		N	Number of digits in user labels		MAP	MAP	MAP
150								
151								
152	GModel_Str		A	GDM model number string		PVX	MAP	
153	Configno		A	Option number		SST GDS	MAP	MAP
154								
155	MModel		A	CU model		SST GDS	MAP	MAP
156	Owner		A	Owner of CU		SST GDS	MAP	MAP
157	GModel		A	Alidad Model		SST GDS	MAP	
158	Flagreg9		N			MAP	MAP	MAP
159	Flagreg16		N			MAP	MAP	MAP
160	Flagreg11		N			MAP	MAP	MAP
161	Flagreg12		N			MAP	MAP	MAP
162	Flagreg13		N			MAP	MAP	MAP
163	Flagreg14		N			MAP	MAP	MAP
164	Flagreg15		N			MAP	MAP	MAP
165	Hor_Ang		N	168 from POA in GON!		MAP	MAP	
166	Vert_Ang		N	169 from POA in GON!		MAP	MAP	
167								
168	Hor		N	168 Converted?		MAP	MAP	

169	Vert		N	169 Converted?		MAP	MAP	
170								
171								
172								
173								
174								
175	Hor_Pos		N	Hor angle for positioning	Entry from label 27	MAP	MAP	
176	Vert_Pos		N	Vert angle for positioning	Entry from label 26	MAP	MAP	
177								
178								
179								
180								
181								
182								
183	Ver_no_PVX		A	Version number PVX		PVX	MAP	PVX
184	Old_ShutDown_code		N			MAP	MAP	MAP
185	Fs_Weight		N	Weight factor for free station		MAP	MAP	
186								
187	Language		N	Language	Delivery department	GDS	MAP	MAP
188	Configno_2		A	Option number		SST GDS	MAP	MAP
189	Text_show		N					
190	Plume		F		No program (se F22)	MAP	MAP	MAP
191	SigIntTab		N			POA		
192	Stn_Info		BYT	Stn flags (copy!)	Received when logon PVX	MAP/ PVX	MAP	MAP/ PVX
193	Stn_date		A	Date for station establishment	Received when logon PVX	MAP/ PVX	MAP	MAP/ PVX
194	Stn_time		A	Time for station establishment	Received when logon PVX	MAP/ PVX	MAP	MAP/ PVX
195	X_stn		F	Station X-coord	Received when logon PVX	MAP/ PVX	MAP	MAP/ PVX
196	Y_stn		F	Station Y-coord	Received when logon PVX	MAP/ PVX	MAP	MAP/ PVX
197	Z_stn		F	Station Z-coord	Received when logon PVX	MAP/ PVX	MAP	MAP/ PVX
198	Ang_Ref		F	Angle to ref. obj.	Received when logon PVX	MAP/ PVX	MAP	MAP/ MAP
199	Dev_Cmd		A	Command-string to device.				
200	Linktime		A	Linktime for MAP		MAP	MAP/ PVX	MAP
201	Ver_No		A	Version number for MAP		MAP	MAP	MAP
202	Preset	A	N	Hor angle preset	Received when logon PVX	PVX	MAP	MAP
203	XRefObj		N	Ref.obj. X-coord				
204	YRefObj		N	Ref.obj. Y-coord				
205	Batt_Date		A	Installation date for backup battery		SST GDS	MAP	MAP
206	ZRefObj		N	Ref.obj Z-coord				
207	Hd_refobj		N	Hor.dist. station to ref.obj.				

208	MapModel		A	Panel model number	Factory set	SST GDS	MAP	MAP
209	PVXModel			Alidad model number	PVX	SST GDS	MAP	PVX
210	KollH_RPU	L	N	Horizontal tracker collimation		PVX	PVX	MAP
211	KollV_RPU	L	N	Vertikal tracker collimation		PVX	PVX	MAP
212	Ovl_A		N	Overlay register		MAP	MAP	
213	Int_Instno		N	Prod-no. MAP	MAP	SST GDS		MAP
214	lmem_RAM		A	Hardware-amount of RAM (Text)		MAP	MAP	MAP
215								
216	Mills_pTurn		N	Scale factor for mills		GPS GSS	MAP	MAP
217	KollH	L	N	Horisontal kollimation error		PVX	PVX	
218	KollV	L	N	Vertical kollimation error		PVX	PVX	
219	Kipp	L	N	Kipp error		PVX	PVX	
220	Kbd_Ack							
221	Drift		N	Run time (seconds)		MAP	SST GDS	MAP
222	Plume_Stat		N	Reflection of real plume-info.		PVX	MAP	MAP
223	Read_DWORD			Used to read HEXLOADER Id-Code				
224	Ovl_B		N	Program overlay		MAP	MAP	
225	Flagreg0		N			MAP	MAP	MAP
226	Flagreg1		N			MAP	MAP	MAP
227	Flagreg2		N			MAP	MAP	MAP
228	Dummy_Len		N	Dummy length type				
229	Dummy_Ang		N	Dummy angle type				
230	InstDev		N	Installed instrument devices.		PVX	MAP	MAP
231	ActiveDev		N	Active instrument devices.		PVX	MAP	MAP
232	Panel_Session		N	Panel session number		MAP	MAP	MAP
233	Alidad_Session		N	Alidad session number	Received when logon PVX	PVX	MAP	MAP
234	LinkTimePVX		A	Link time for PVX	Received when logon PVX	PVX	MAP	MAP
235	Inst_No_PVX		A					
236	InitDev		N	Initiated instrument devices.	Received when logon PVX	PVX	MAP	MAP
237	Old_Session		N	Latest panel-session.		MAP	MAP	MAP
238	REV_Stat		N	MAP revision	Resistors on PC-board, received from hexloader	HEX	MAP	MAP
239	GDM_Class		A	GDM accuracy	Received when logon PVX	PVX	MAP	MAP
240								
241								
242								
243								
244								
245								
246								
247	RA_Trace (RadioCmd)		A	Radio command (for debug)		MAP	MAP	

248	Link_Time		A	Linkdate for satellites 248=<unit>		MAP	MAP	
249								
250	Trace			Trace label		MAP	MAP	MAP
251								
252	MemOut		N	Address.number of bytes to output		MAP	SST GDS	
253								
254	State		N	Infolabel(commands,errorcodes etc)		MAP	MAP	
255								

Labels in PVX

Nr.	Labeltyp	R/W	Option	Attribut	Anm.
8	-	AUTO	(uppläst)		S/N: 8=0, no signal, 8=1, signal
10	-	AUTO	(uppläst)		Bat_low: 10=1,
11	-	AUTO	(uppläst)		A/M: 11=0 short key press 11=1 long key press ,
12	-	AUTO	(uppläst)		Off: 12=1 OFF
13	-	AUTO/R	(uppläst)	R	Battery status: 0..5
20	FLT1	RW	(uppläst)	NS	Offset slope distance
21	FLT2RAD	RW	(uppläst)	R	Horizontal reference angle
40	STRING	RW	(uppläst)	NR	
41	STRING	RW	(uppläst)	NR	
42	STRING	RW	(uppläst)	NR	
43	STRING	RW	(uppläst)	NR	
44	STRING	RW	(uppläst)	NR	
45	STRING	RW	(uppläst)	NR	
46	STRING	RW	(uppläst)	NR	
47	STRING	RW	(uppläst)	NR	
48	STRING	RW	(uppläst)	NR	
49	STRING	RW	(uppläst)	NR	
50	float	RW	(uppläst)	NR	
51	float	RW	(uppläst)	NR	
52	BYTE	RW	(uppläst)	NR	
53	STRING	RW	(uppläst)	NR	
54	STRING	RW	(uppläst)	NR	
60	FLOAT	RW	(uppläst)	RS	presure
61	FLOAT	RW	(uppläst)	RS	Temperature
79	BYTE	RW	(uppläst)	RS	EOT-character base unit connector, standard 62 decimal ('>')
80	BYTE	RW	(uppläst)	RS	End character for commands in base unit connector
81	STRING	RW	(uppläst)	NS	Time/date at switch on
82	STRING	RW	(uppläst)	NS	Time/date at switch off
83	STRING	RW	(uppläst)	PS	Date for installation of backupbatteri
100	WORD	RW	(uppläst)	PS	GDM model code
101	STRING	RW	(uppläst)	PS	GDM production number
102	FUNC	W	(uppläst)		102=0 off audiosignal, 102=1 on audiosignal
103	FUNC	RW	(uppläst)		103=<volume>, volume=0..99
104	FUNC	R	(uppläst)		
105	FUNC	R	(uppläst)		
106	FUNC	R	(uppläst)		
107	FUNC	W	(uppläst)		"107=1" offr voltage in alidad
108	FUNC	W	(uppläst)		"108=1" off RADIO voltage
109	STRING	RW	(uppläst)	PS	GDM model number
110	STRING	R	(uppläst)	S	
111	STRING	RW	(uppläst)	PS	GDM serial number

Nr	Labeltyp	R/W	Option	Attribut	Anm.
112	FUNC	R	(upplåst)		Function code for PVX-board
113	STRING	R	(upplåst)	S	Version number for PVX program
114	WORD	RW	(upplåst)	R N S	
115	WORD	RW	(upplåst)	N S	
116	WORD	RW	(upplåst)	N S	
118	FUNC	R	(upplåst)		
119	FUNC	W	(upplåst)		
120	FUNC	RW	(upplåst)	S	Timeout for S/N (seconds)
121	FUNC	RW	(upplåst)	S	Timeout for RS232 (seconds)
122	FUNC	RW	(upplåst)	S	Timeout for RS GEO (seconds)
123	FUNC	RW	(upplåst)	S	
124	FUNC	RW	(upplåst)	P	
130	STRING	RW	(upplåst)	P	Serial number horizontal sensor
131	STRING	RW	(upplåst)	P	Serial number vertical sensor
132	STRING	RW	(upplåst)	P	Serial number distance meater
133	STRING	RW	(upplåst)	P	Serial number pendel
134	STRING	RW	(upplåst)	P	Serial number servo
135	STRING	RW	(upplåst)	P	Serial number tracker
136	STRING	RW	(upplåst)	P	Serial number radio
137	STRING	RW	(upplåst)	P	Serial number angle unit
140	BYTE	RW	(upplåst)	S	
150	FUNC	W	(upplåst)	R	
151	BYTE	RW	(upplåst)	P	1=one axis plumb, 2=two axis plumb
152	FUNC	W	(upplåst)	R	
154	FUNC	W	(upplåst)		
160	FUNC	RW	(upplåst)		
161	FUNC	RW	(upplåst)	R	
162	FUNC	W	(upplåst)		
163	FUNC	W	(upplåst)	R	
164	STRING	RW	(upplåst)	PS	configuration code
165	WORD	R	(upplåst)	RS	
187	FLT1	RW	(upplåst)	NS	Prism constant
200	FUNC	RW	(upplåst)		Knob-label
201	FUNC	R	(upplåst)	R	Boot-program versions number
202	FUNC	R	(upplåst)	R	
210	BYTE	RW	(upplåst)	P	
211	WORD	RW	(upplåst)	P	
212	BYTE	RW	(upplåst)	P	
213	WORD	RW	(upplåst)	P	
214	BYTE	RW	(upplåst)	P	
215	FUNC	RW	(upplåst)	P	
240	FUNC	RW	(upplåst)		240=0 GDM-mode off, 240=1 GDM-mode on
255	BYTE	RW	(upplåst)	P	

Labels in POA

	Labeltyp	R/W	Option	Attribut	Anm.
22	FUNC	W	OPT1	N	Comp ON/Off
100	STRING	R	OPT1		
102	FLT2RAD	W	OPT1	I N R S	Preset horizontal angle
103	FLT2RAD	W	OPT1	I P S	Vertical index error
104	FLT2	W	OPT1	I P S	Plumb gain in X-channel
106	FLT2	W	OPT1	I P S	Plumb gain in Y-channel
107	FLT2	AUTO	OPT1	I N R S	Plumb offset in X-channel after calibration
108	FLT2	AUTO	OPT1	I N R S	Plumb offset in Y-channel after calibration
109	FLT2	W	OPT1	I P S	
110	BYTE	W	OPT1	I N R S	Number of measurements in mean value calc.
111	FLT2RAD	W	OPT1	I N R S	Angle tolerance at mean value calc.
113	BYTE	AUTO	OPT1		HOR coarse code
114	BYTE	AUTO	OPT1		VERT coarse code
115	LONGINT	AUTO	OPT1		cos HOR
116	LONGINT	AUTO	OPT1		sin HOR
117	LONGINT	AUTO	OPT1		cos VERT
118	LONGINT	AUTO	OPT1		sin VERT
119	LONGINT	AUTO	OPT1		A/D offset voltage
120	INT	AUTO	OPT1		Plumb reference
121	FLT2	W	OPT1	I P S	
122	INT	AUTO	OPT1		Plumb pulses in X-led
123	INT	AUTO	OPT1		Plumb pulses in Y-led
138	FLT2	W	OPT1	I P S	Plumb tolerance mean value calc.
139	FLT2	AUTO	OPT1		
140	FLT2	AUTO	OPT1		
145	FREE	LO	OPT1	I P S	Correction constants HOR
146	BYTE	W	OPT1	I P S	
147	FREE	LO	OPT1	I P S	Correction constants VERT
148	BYTE	W	OPT1	I P S	
157	FUNC	W	OPT1	I	
165	FLT2RAD	AUTO	OPT1		HOR angle
166	FLT2RAD	AUTO	OPT1		VERT angle
167	BYTE	W	OPT1	I P S	Number of measurements PLUM
168	FLT2RAD	AUTO	OPT1		HOR angle singel
169	FLT2RAD	AUTO	OPT1		VERT angle singel
179	STRING	R	OPT1		Program version
183	FLT2RAD	W	OPT1	I N R S	Permanent collimation error
184	INT	AUTO	OPT1		External voltage (pulses)
186	BYTE	R	OPT1		
210	FLT2RAD	W	OPT1	I N R S	Horizontal collimation error
211	FLT2RAD	W	OPT1	I N R S	Vertical collimation error
212	FLT2RAD	W	OPT1	I N R S	Tilt axis error

	Labeltyp	R/W	Option	Attribut	Anm.
213	WORD	W	OPT1		
214	FLT2RAD	W	OPT1	I P S	End limit switch, lower limit.
215	FLT2RAD	W	OPT1	I P S	End limit switch, upper limit.
216	FLT2	RW	OPT1	P S	Plumb overrange limit (error 1)
217	FLT2	RW	OPT1	P S	Plumb offset limit (pendelinit)
218	FLT2	RW	OPT1	P S	Plumb difference (pendelinit)
219	FLT2	RW	OPT1	P S	Plumb resolution in fine mode
220	FLT2	RW	OPT1	P S	Plumb resolution in coarse mode
221	FLT2	RW	OPT1	P S	
250	STRING	W	OPT1		
253	BYTE	W	OPT1		

Labels in DDC:

Nr.	Labletyp	R/W	Option	Attribut	Anm.
8	BOOL	AUTO	OPT1		S/N-flagga: "8=0": ingen signal, "8=1": signal
9	FLT1	AUTO/R	OPT1		SD
30	INTEGER	RW	OPT1	I NS	PPM
100	STRING	R	OPT1	R	
102	BYTE	W	OPT1	I R	Flags1
103	BYTE	W	OPT1	R	CalBatF2
104	BYTE	W	OPT1	R	MeasBatF2
105	BYTE	W	OPT1	R	MFperBatch
106	BYTE	W	OPT1	R	CalTimer
107	BYTE	W	OPT1	R	Frekvens
108	BYTE	W	OPT1	R	DefDelay
109	BYTE	W	OPT1	R	RecovTimer
110	BYTE	W	OPT1	R	CalBatF1F3
111	BYTE	W	OPT1	R	MeasBatF1F3
112	FREE	LO	OPT1	I P S	SinAmpl, 5 bytes
113	FREE	LO	OPT1	I P S	CosAmpl, 5 bytes
114	BYTE	W	OPT1		Flags2
182	STRING	R	OPT1		Versionsno:
202	FLT1	AUTO	OPT1		F1Cal
203	FLT1	AUTO	OPT1		F1Meas
204	FLT1	AUTO	OPT1		F2Cal
205	FLT1	AUTO	OPT1		F2Meas
206	FLT1	AUTO	OPT1		F3Cal
207	FLT1	AUTO	OPT1		F3Meas
209	FLT1	RW	OPT1	I P S	GK1 (geodimeter constant)
250	STRING	W	OPT1		
253	BYTE	W	OPT1		

	Typ	R/W	Option	Attribut	Note.
7	FLT2RAD	R	-	-	Horizontal angle
8	FLT2RAD	R	-	-	Vertical angle
9	FLT1	R	-	-	SD (if dist meas have been done)
13	BYTE	R	-	-	Batteri status: 0..5
21	FLT2RAD	RW	-	N	Horizontell referens angle
30	INTEGER	RW	-	N	PPM-value
55	STRING	R	-	-	Serie no: alidad
79	BYTE	RW	-	N	End character, standard '>'
90-99	STRING	RW	-	N	User defined
102	FLT2RAD	RW	-	N	Preset of horizontal angle (A,102)
123	FUNC	W	-	-	Error beep: 123=<antal pip>
127	FUNC	RW	-	-	
142	FUNC	RW	-	-	Audio volume: WG,142=<vol>, <vol> = 0..99
150	STRING	RW	-	N	Switch on time: WG,150=YYMMDD HH.MM
151	STRING	RW	-	N	Switch off time: WG,151=YYMMDD HH.MM
152	FUNC	W	-	-	Switch off, WG,152=1 slänger av
157	STRING	R	-	-	Modell code GDM
179	STRING	R	-	-	ANGLE version no:
180	STRING	R	-	-	SERVO version no:
181	STRING	R	-	-	TRACKER version no:
182	STRING	R	-	-	DIST version no:
201	STRING	R	-	-	PVX version no:
238	BYTE	R	-	-	Functions code PVX-board

Labels in SRV

Nr.	Typ	R/W	Option	Attribut	Anm.
72	FLT1	W	OPT1		Horizontal angle, real value
86	FLT1	W	OPT1		Vertical angle, real value
100	STRING	R	OPT1		
101	BYTE	RW	OPT1	I P S	'Powersave'
102	FREE	LO	OPT1	I P S	Servo constants, 39 bytes (ConstTab)
103	BYTE	RW	OPT1	I P S	'Powersave starttime'
104	FLT1	W	OPT1		Horizontal angle, expected value
105	FREE	LO	OPT1	I P S	
106	FREE	LO	OPT1	I P S	
107	FREE	LO	OPT1	I P S	
108	FREE	LO	OPT1	I P S	
109	FREE	LO	OPT1	I P S	
110	FLT1	RW	OPT1	N S	Sector limit left
111	FLT1	RW	OPT1	N S	Sector limit right
112	FLT1	RW	OPT1	N S	Relativ sector (+/-)
113	BYTE	RW	OPT1	N S	
114	BYTE	W	OPT1		Status of end limit switch (from ANGLE)
115	FLT1	W	OPT1	I P S	Lower limit angle, end limit switch
116	FLT1	W	OPT1	I P S	Upper limit angle, end limit switch
118	FLT1	W	OPT1		Vertical angle, expected value
120	FUNC	RW	OPT1	I R S	Knob-label (13 bytes)
180	STRING	R	OPT1		
250	STRING	W	OPT1		
253	BYTE	W	OPT1		

Labels in TAC

Nr.	Labeltyp	R/W	Option	Attribut	Anm.
173	FREE	AUTO	OPT1		
174	FREE	AUTO	OPT1		
181	STRING	R	OPT1		Version number
182	STRING	R	OPT1		
251	STRING	W	OPT1		
254	BYTE	W	OPT1		Label request

Oct., 1994

SERVICE SOFTWARE
SERVICE SOFTWARE TOOLS (SST).
Part no : 571.600.350
Version : 1.72

GEOTRONICS AB
R&D Dept.
DANDERYD, Sweden
SST/9403A

INSTALLING

Insert the installing diskette (in A: or B:).
Change to source drive (A: or B:).
Execute: INSTALL.
Follow the installing program instructions.

SST, ver. 1.72.

Programs: SST
ERRLOG
CMP
PMU
LADD
MAPFILE
NEWID

Datafiles: MODELX.REF
STD.DSM
ZER.DSM
IA0999.DSM
6120102D.MAP
6320100D.MAP
6320101D.MAP

All files will be installed via the INSTALL program.
The *.dsm-datafiles are put under c:\sst\dist. If you are using
another directory for distance correction files, copy the *.dsm-files
to this directory!

New in SST.EXE, 1.72 :

1. An error in autocorrection of battery date format in SST, 1.71, corrected. Symtom was: When the meny pointer, in the "Constants ..." - enter-mený, moved past battery date (label V83), the decimal point in plumb gain X (label A104) was erroneously removed.
2. Changed all screen "POA"-messages to "PAC".
3. Possibility to Read/Write Tracker and Radio labels added.