

SPECTROPHOTOMETER

MODEL: 20 GENESYS

分光光度計中文操作說明

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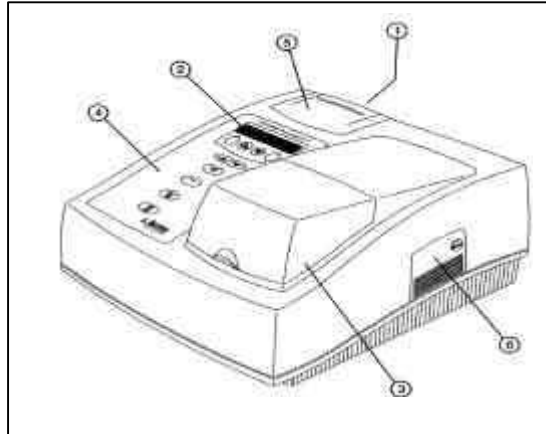


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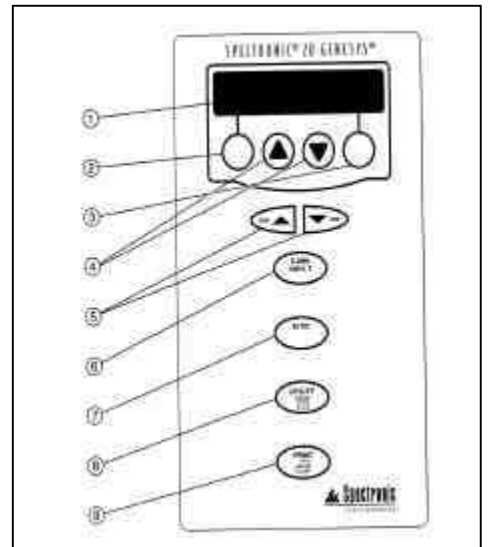
”c†y»j'œ Components

1. ON/OFF ¶}^
2. LCD^a¥ „,l
3. ...„~¤ ¥œ,n
4. §@>-“O
5. fL“ i|¿ t| ^
6. ¥œ•%ø



§@>-“O»j'œ Keyboard Layout

1. ^a¥ „,l|G 20 fr/,iA¤ f LCD^a¥
2. ¥fl` 1|iG¤ ¿„,l^a¥ ¥fl` /~iA
/¶|°< ,i¥XjB·_>'¢†M £
3. ¥fl` 2|iG¤ ¿„,l^a¥ ¥fl` /~iA
/¶|°< ¿Ø/JjB- ¢'¿~~
4. /W/U` iG¥ ¿ ¥fl ¿ '¿...¿¿Ø/J
5. “i†—¤` iG...W¥[iB· / “i†]’w
6. 0 Abs/100%T iG f °‡]’w» „f 0 Abs(100%T)
7. A/T/C` iG§|f<< iB< ‡z<< /¿¿@<< ¥fl /<<`
8. /u¤^` iG‡]’w iB¶|E`_¿¤ ¥L¥fl ¿
9. fCfL` iGfCfL^a¥ „,lW,œfi` †“G

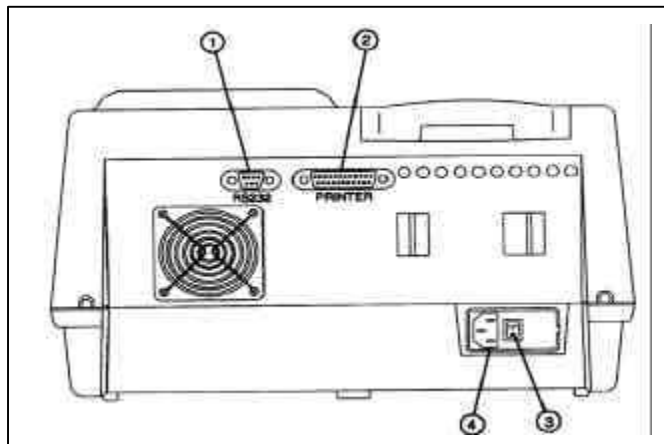


‡Wfi Specifications

- “i“%ød‡ iG 325~1100nm
- ¥œ^—» ...e|G nm
- ^> 'w < iGi 3 mA/hour ¥œ ~†
- g ¥¢ ¥œ iGi 0.1 ¢M at 340 nm and 400 nm
- “i†fA†{°` iGi 0.5 mm
- “i““%øT<< iGi 2.0 mm
- † T(@ 500 nm)Gi 1mA at 0 A and 4 mA at 2A, peak-to-peak
- ¥œ %ød‡ iG~125 ¢M;B-0.1~2.5 A iB0~1999 C
- ¥œ ““ø<< iG 0.003 A from 0.0 to 0.3 A;A1.0% from 0.301 A to 2.5 A
- ¥œ•%ø„ 'R iG¥i¤¥œ iA<ø000 /pfi
- ¥œ<]iG|200 lines/mm
- ,œfi` ¿Ø¥X iG`øf, 20 fr/†G„,l^a¥ „,lA ...—¿¿Ø¥X/¶RS232C iB Centronics
- / /o iG 30 cm (12”) W x 33 cm (13”) D x 19 cm (7”) H
- „q •%ø iG 110~240VAC; 50~60 Hz, 1.0 Amp iC

» „† ,sB~J Setting Up The Instrument

1. ' %ocfi jA%— ,<d t†<O§_» ¥ jC>Yf† ufl° jA%— □W`p ,§ > jA§ > •lf†-MH< -z
“A °jC
2. -N» „,m' ¥>'Z““fa/LjA¥B
A. ” ¥ifl »•´ -j„q/OjB„q““ ~//@□••|t£¥“ “ Wtv/§„qfi †]†~jF
B. ¥t¥~jA/£>n,m' fl»„—jB»G»kfi °Ø' -jflP _ °““fa/LjC
3. † £» „W/UjB'P† •|§<<^““fi <y†q“““ ^““<<'<“<%oLjC
4. †s- „q•%o%uf f ' » „,l>-/§„q•%o•jfiyij] A/C power connector
5. †s- „q•%o%oU/§¥t/@” ' A• “„q•%o•j fiyijC
6. ¥•¶ ON/OFF ¶^ (|= ON;AO = OFF)jC



1. RS-232C fœfC
2. fCfL □^p
3. „q•%o¶^
4. „q•%o•jfiy ij] A/C Power Connectorj^

¥~ - ,s,m†s- Connecting to external devices

- RS-232 < >- - /•¥ f □¥< RS-232 < >-/§†]†~jAfp† ” jB„q,£jBfL“ ¥jC
- fL“ - /' Centronics™ – compatible ,s,mjC

¶ Starting up the instrument

¶- „q•%o«ÆjA» „,| f °¶if /@†sfœf § ·œ, jA¥]<A†n°Ø ,·œ (checking the software revision)jB´o/ø/¥œ%o·œ, (-'l´o/†/†¥œ „) ¥jA<ø□/°§„f□jC□¥<» „«ejA%— ¥•x 30/°jC

“•NjG¶ «ejA%—%oT»{...<<~.../°“ L/@“<jC

§lf<« /< ‡z« ·œ¶¶q Absorbance and %Transmittance measurements

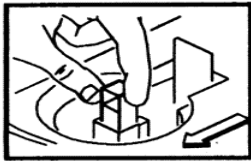
1. « A/T/C` jA¿ §lf<« (A)'< ‡z« (T)... fjjA^{-a}¶ „l/W•|^{-a}¶ ¶X' ¿ "" ... fjjC



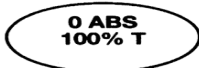
2. « nm '¿ nm ` jA¿ "i"¶jC ""•NjG«ø~ « « `•|¶[‡t"i"¶"§` jC



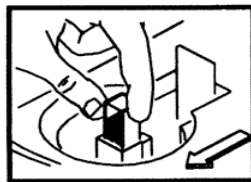
3. -N⁻¶ ...¿<~m' ...¿<~.../¶jA[¶]»\W...¿~¶ ¶œ,njC
 ""•NjG...¿<~m/Jfi jA¶œ•>-> >-fV«e>-j]fp,~%ob Y' ¶¶A¶H«K¶œfi|‡q„LjC



4. « 0 ABS/100%T ` jA‡]w⁻¶ ...¿<~< 0 ABS(100%T)jC



5. ¶œ¶X⁻¶ •>†G...¿<~jAæ/J» ·œ¶¶q/§...¿<~' ...¿<~... //ACD^{-a}¶ „l H§Y^{-a}¶ ·œ¶¶q>¶ jC



¿@« ·œ¶¶qj]¶i§Q¶¿«Y...~'c...—•†Gj^

I. §Q¶¿«Y... Concentration measurements using a factor

1. « A/T/C` jA¿ ¿@« (C)... fjjA^{-a}¶ „l/W•|^{-a}¶ ¶X' ¿ "" ... fjjC



2. « nm '¿ nm ` jA¿ "i"¶jC ""•NjG«ø~ « « `•|¶[‡t"i"¶"§` jC



3. « /U Factor ¶fl ` jA§Q¶¿/W/U` '¿ ¶H‡]w«Y...~ jAfA«Accept ¶fl ` %T»{jC



Setting absorbance and %transmittance

- Press **F10** to set absorbance and %transmittance.
- Press **W/U** to set absorbance.
- Press **W/U** to set %transmittance.
- Press **Set A** to set absorbance, **Set % T** to set %transmittance, ...



Printing your results

Press **F10** to print results. Press **W/U** to print results. Press **Print** to print results. Press **Utilities/Printer Setup** to print results.



Using the utility function

Press **F10** to use the utility function. Press **W/U** to use the utility function. Press **Utility** to use the utility function.



Concentration units

- Press **F10** to set concentration units.
- Press **W/U** to set concentration units.
- Press **Change** to set concentration units.
- Press **fA** to set concentration units.
- Press **Accept** to set concentration units.
- Press **fA** to set concentration units.
- Press **PRINT** to set concentration units.



Language

- Press **F10** to set language.
- Press **Change** to set language.
- Press **W/U** to set language.
- Press **Accept** to set language.

RS232 ...



Utility/Utility/Utility RS232 ...

- Baud rate – 300, 600, 1200, 2400, 4800, 9600, 19200;C
- Data bits – 8 ' 7;C
- Parity – off, even, odd;C
- Handshake – off, CTS/RTS, XON/XOFF;C
- Terminator – CR, LF, CR/LF;C

□B~J;G

- ◆ « Change ¥\fl` ¶i/J RS232 ...`¿ ¶ i;C
- ◆ « /W/U` '¿ iA~a¥ AfX"" ...`~";C
- ◆ « Accept %oT»{iA'¿« Esc ,t¥X Change ¥ ¿ i;C
- ◆ □ /WfC□B~JiA~~` ¶]w□ ¥L ...`i;C

“•N;G

¥i« PRINT` iAfCfL RS232 ...`¶]w;C

,, fl" Paper Feed



Utility/Utility/Utility iA-Nfl",/JfL" '¿¶fl"«e¶i;C

- « Feed ¥\fl` iAfL" ""fl"-N@f,t` /@f i;C
- « Esc h¥X Utility ¥ ¿ i;C

fL" ¶]w Printer setup



Utility/Utility/Utility iA¿ fCfL,¿fi~¿Ø¥X""fi f;¿¿ fL" i;C

- « Change iA¿ fL" /¿fCfL,¿fi~¿Ø¥X""fi f;¿¿ i;C
- « /W/U` '¿ iA~a¥ fL" OFF, Internal, Parallel, Serial (fp¥D /"StfL" iA«h¿ InternaljFfp¥~– □`pfifL" iA%o—¿ Parallel);C
- « Accept %oT»{i;C
- « /W/U` '¿ iA~a¥ ,¿fi~¿Ø¥X""fi f;¿¿ (fCfL"i" Print WL - Yes/No, fCfL¿ f Print Units - Yes/No, /p...`l Decimal Point - . or ,);C
- « Accept %oT»{,¿fi~¿Ø¥X""fi f;¿¿« Esc f^□ □ ¥L Utility ¥ ¿ i;C

“•N;G

¥i« PRINT` iAfCfL' ¶]w"" ,¿fi~¿Ø¥Xfi f;¿¿ i;C

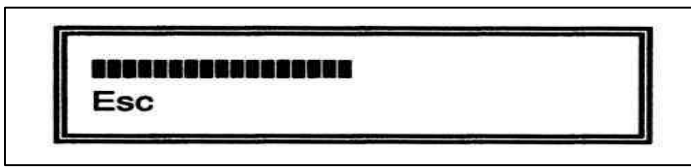
¥œ•%•%• a Lamp alignment



Utility/Utility/Utility iA \$U¥œ•%•""%• a;C

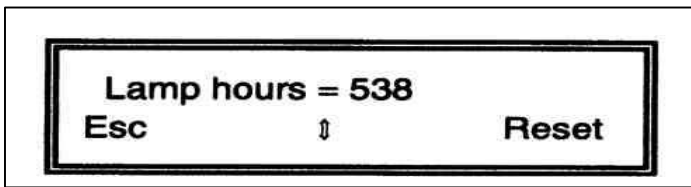
- « Align ¥\fl` iA~a¥ ¥œ•%•fl ¶q,,~" (fp,,~' ¥)i;C
- □ «O i\$¿,, ,iA%• a¥œ•%•iA~a¥fl ¶q,,~" f ¿/i;C

- « Esc h¥X¥œ•%•%•% a¥ ¿ jC
- fA« Esc ,i¥X Utility ¥ ¿ jA'¿« /W/U` '¿ ¿ ¢ ¥L¥fl jC



¥œ•%• §@fi ... **Hours of lamp operation** 

- ¥i¤¥¿ Utility/u¤ª` jAª¥ ¥œ•%•¤¥¿/§`fi ... jC
- ¿ f„¥fl fi jAª¥ „/W•ª¥ ¥œ•%•w¤¥¿/§`fi ... jC
 - ...s¥œ•%•fi jA¥i« /U Reset ¥fl ` jA¤ §@fi ... ~k„s jC
 - « Confirm ¥fl ` %•T»{jC
 - fA« Esc ,i¥X Utility ¥ ¿ jA'¿« /W/U` '¿ ¿ ¢ ¥L¥fl jC



- 'i“{‡]’w **Initial wavelength** 

- ¥i¤¥¿ Utility/u¤ª` jA‡]’w„q•%•¶}- fi /§- 'i“{‡]’w jC
- ¿ f„¥fl fi jA¿ ^„iª¥ ¥ «e„q•%•- °«Æ““- 'i“{‡]’w jC
 - « Change ¥fl ` jA¶i/J“i“{‡]’w j] power-on wavelength
 - « /W/U` '¿ jA‡]’w“i“{‡]’w jC
 - « Accept %•T»{jAfA«Esc ,i¥X Change ¥ ¿ jC

`nT—¤ **Beeper Control** 

- ¥i¤¥¿ Utility/u¤ª` jA¿ ^ ‡¿¿Ø»~ §@fi ' o¥“““T> jC
- « Change ¥fl ` jA¶i/JT> —¤ ¥fl jA¥i%• T> '¿ R> j] on '¿ off
 - « Esc ,i¥X Utility ¥ ¿ jA'¿« /W/U` '¿ jA¶if ¢ ¥L¥fl ‡]’w jC

« 'R“¿”A¥fl **Standby** 

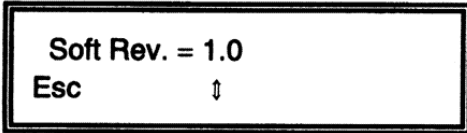
- ¥i¤¥¿ Utility/u¤ª` jAfb' ‡]’w“fi ¶i/”jA» „,Y L¥ f §@fi jAf ^^ ‡¿¥œ•%•jC
- ¥i¿ jG OFFjB30jB60jB90jB120jB150 '¿ 180/” jC
- « Change ¥fl ` jA§ - « 'Rfi ¶i jC
 - « /W/U` '¿ jA¿ AfX““« 'Rfi ¶i jC

- « Accept %T»{iC
- fA« /W/U` 'c` ç` □ ¥L¥fl jA'c« Esc ,i¥X Utility ¥ ç` jC

±n`Ø“¥» **Software revision**

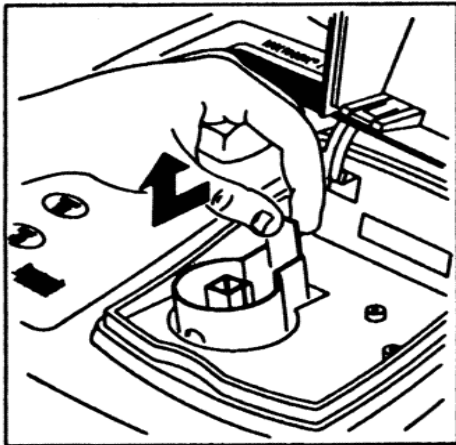


¥i¥¥c Utility/u□a` jA¶j/J Software revision ¥fl jA<d` ±n`Ø“¥»jC
 « Esc ,i¥X Utility ¥ ç` jA'c« /W/U` 'c` ç` □ ¥L¥fl jC



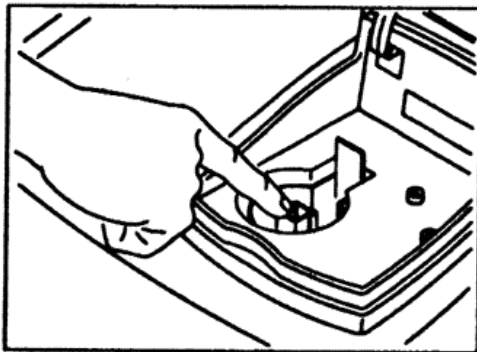
...«~... † ¥X **Removing the cell holder**

□c□c§ f ...«~... § ” ""/§ jAfV«e/fV/W' _jA§Y¥i□ce¥X jC



...«~... fw, **Installing the cell holder**

-N...«~... fV/U £jA“%□ ¥¥□ ...«~... ¥d”g«£ /@`n%T,,CE¥df «ÆjA§Yfw, f¥¥jC





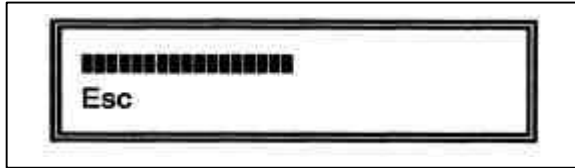
§K¥ / « “%- ~†”N•s“”¥œ•%ojC

- 6. -N•s“”¥œ•%.'††j“”’ø< ¥X- ,}·j/J¥œ•%·ijyA^%T,,CE-N¥œ•%fV/U £¤/§¤¤cT'wf jC
- 7. >Y¥œ•%o/Wf†¥ f « fl jA%-—¥<X†n fitb“”¥<»·»· ¿<†jC
- 8. %o a¥œ•%o'T'wfiyjA»· £¥k/£“...u'fi]fp,~ , #3A-N» „W“”T'wfiCEj]fp,~ , #4i^„· ¥œ•%o'T'wfiy/W“” , †/ jC
- 9. »»·fa~ °¥œ•%o'T'wfiyf ¥¿%oT“”f ,m;A- /W« - `† v;Af /£>n§„¥ `CE” jC



¥œ•%o¤¥¿fi jA... « «D-‘ “jC

- 10. -N» „·j/J A• “”„q•%·ijyA^ - °„q•%ojC
 “•N;G·Y¶} «Æ;A¥X†{¿ø»~ Tfi§j} initialization error†A«h^ †<„q•%o¤-N·j Y' /UjA´
 °%o a`†· 1/4 Ø;AfA>«•s¶} jC
- 11. « Utility ` ¶i/J utility ¥fl jC
- 12. « “%o¤ Lamp Alignment ¥X†{jC
- 13. « Align ¥fl ` jA^a¥ ¥œ•%ofl ¶q„jC



- 14. ¤¥¿ Phillips-head `†· _/‰o a`†fiCE (fp„~ , #5)jA“%o¤ ¥œ•%ofl ¶q„~“”„§¿¤ „F†/j”jC
- 15. -” « -`† v;] thumbscrew¶
- 16. « ¤ f, Esc f^¤ ...—•`a¥ „l
- 17. fp» >n;A¥i>« •s`k„s¥œ•%o¤¥¿/§`fi ...jC
- 18. « A/T/C ` ¿ < †z« “Transmittance”... f; jC
- 19. « 0 Abs/100%T;A » „k„s“%o¤ ^a¥ „l¥X†{ 100%T;C
- 20. ¥¿`†· _/fb¥œ•%o†»” /W/U•L‰o jA“•N^a¥ „l‰o a`f †/¿Ø¥X“”† ¤/£f jC
- 21. ><<—†~ 20/¿ 21 ¤B~J;A†o/@¤B~J¥i·/ -æf;ifi¶ °jC
- 22. ^ /W¥œ•%o“ø;A¤^fb¤¥¿ «e;A„w... ¥œ•%of30/~jC

§ 4.1.1 Changing the fuse

«O I • f ' » „>l«Æ'''„q•%o† ¥ ‡BjC

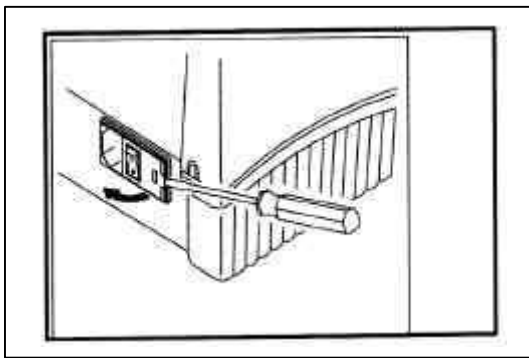


§ 4.1.1 „/§«O I • jA» -~¥„fP” ^ jBfP ¥fl'''«O I • jC«~¥„ IEC ...
 • 5x20mm jA Type F fuse jA2.5A jA250VAC jA1500A interrupt rating
 [Littlefuse #216025] jC

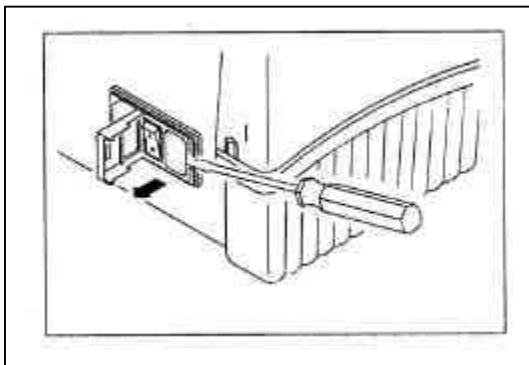


>Y«O I • /@“%o¿N’_jA“ ¥ ¥D /”/¥ifl o¥~Y>«''' ^DjC%o— □/W'M
 § > `p, jC

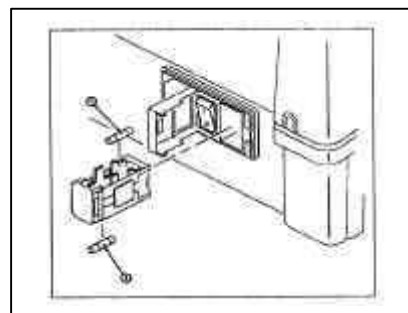
1. ^ ‡„q•%o□^~N·j Y' ¥XjC
2. † °» „f ‡ □/£f jA¥H«K¶}— » „>l«Æ'''„q•%o† ¥ “øjC
3. † ¶}„q•%o%oUjC
4. □¥/ @fr _l'æ/J„q•%o† ¥ “ø'''... /jAfv¥~§ ¶} (fp„%ob Y' ¥)jC



5. □¥/ @fr _l† ¥X«O I • fiy (fp„' ¥)jC



6. ^P¶}□^† ¶}□ ^ '''«O I • jC
7. „/J•s«O I • jA%o—%oT„Æf'f «O I • fiy jC
8. 'æf^«O I • »\jC
9. ·jf^„q•%o%oUjC
10. fb» „>l‡j jA·j/W A• „q•%o·jfiy□^¶}— „q•%ojC



Tfi\$ Messages

• » „ oƳ“ ıø»~' ı†§-ı†{¶Hfi jA^{-a}Ƴ „ı•ƳX†{ Tfi\$-£ı jC» „Ƴııø»{ı > ıø»~ Tfi\$ıA†
/@> Tfi\$ƳX†{fi jA „/fl „B\$@ıF†~G> Tfi\$ƳX†{fi jA „fb«e/@> ıø»~ Tfi\$Ƴ...~ £«ejA
L“k~~ „B\$@ıC

Flashing Data Display ^{-a}Ƴ „ı,CEfi~ {^ {

^{-a}Ƴ „ı,CEfi~ {^ {fi jA“ Ƴ ... „~“§ıf<< ' ı < †z<< §C' ' ı “ » „“Ƴœ ‘%od† jC^{-a}Ƴ „ı|
/@“%o {^ {“%oı “ı“p~ £ıC

Lamp Failure Ƴœ•%o<G»

• ^{-a}Ƴ „ıƳX†{ “Lamp Failure”fi jA“ Ƴ Ƴœ •%o<G» jA» § ·«s““Ƴœ•%oıA\$ ·«Ƴœ•%o<ef„ Tfi\$•
/@“%oƳX†{ıC

Sample too dark ... „~/ •t

• ^{-a}Ƴ „ıƳX†{ “Sample too dark”fi jA“ Ƴ fb „s'ı'k„sfi jA... „~“§ıf<< „L “ıCƳX†{f„
Tfi\$fi •ıf†/T`n`T`n-£ı jA Tfi\$ -fld 2 < ~«ÆıA« ·ıı /@fl““^{-a}Ƴ „ııC

Sample too bright ... „~/ «G

• ^{-a}Ƴ „ıƳX†{ “Sample too bright”fi jA“ Ƴ ... „~fb „s'ı'k„sıA... „~ıı Ƴœ,nƳ•¶} ıCƳX†{
f„ Tfi\$fi •ıf†/T`n`T`n-£ı jA Tfi\$ -fld 2 < ~«ÆıA« ·ıı /@fl““^{-a}Ƴ „ııC

Key not active « ` Lfi~

• ^{-a}Ƴ „ıƳX†{ “Key not active”fi jA“ Ƴ • fi ' « “” Lfi~ıCı fpıGfb Utility Ƴ ı †/UıA
« A/T/C` jA«hf„fi L“k ıf A/T/C/§Ƴfl ıCƳX†{f„ Tfi\$fi •ıf†/T`n`T`n-£ı jA Tfi\$ -
fld 2 < ~«ÆıA« ·ıı /@fl““^{-a}Ƴ „ııC

Parity error fPf /,ıø»~

f„ Tfi\$ƳX†{fb,CEfi~q„q,£¶` ıøı » „fi jA fPf /,†]w f†ııø»~fi oƳ“ıCıƳƳ Utility ` /§
RS232 Ƴfl ı Ƴı%oT“”†]wıC

Framing error †”cıø»~

f„ Tfi\$ƳX†{fb,CEfi~q„q,£¶` ıøı » „/fi jA RS232 ... †]w/£fP' †£Ƴ“” ^DıC%o—ıƳƳ
Utility ` /§ RS232 Ƴfl ı Ƴı%oT“”†]wıC

Filter Whl Init Fail/Insufficient Energy 'o/ø† - 'l¥ç- /l ¶q/£¤

f,, Tfi\$¥X†{fi jA“ ¥ ¶} fi 'o¥œ/ø' %L _ ° o¥” ^DjA¥ifl o¥”fb¶} fi ...„«~¤ ¥œ,n¥...
^ /W' _...„«~”§lf<< „L “ ‘O•s¥œ•%o>Ł,„Wfi jC%o—^ ‡,„q•%o¤^ /U•j YjA— ' ¥œ•%o%o ¢
`‡ • 1/4 ØjA><<•s•j/W„q•%o«ÆfA><<¶} jC

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Hardware failure 13-16 w`Ø¥çfi~ 13-16

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