

Errata for “User’s Manual for *dataTaker* DT800 data logger”

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(UM0068A2-ERA3)

This document details errors, omissions and changes to **Revision A2** of the DT800 User’s Manual. To determine the revision number of your copy, check the document code printed on the title page. This will be of the form **UM-0068-xx**, where **xx** is the revision number.

If you have an earlier revision of the manual (**A0** or **A1**) then we recommend that you obtain the current revision, which is applicable to DT800s running the currently released firmware (Version 4.00 and later). Revision A2 of the User’s Manual is available (PDF format) for free download from the dataTaker web site, or a printed copy may be ordered.

Page(s)	Errata Description
17	In the example program, the ALARM2 line should read: ALARM2(4TT>110.0)3DSO,1CV”Over temp” {[RB5S]}
22	Delete the entry in the table for ‘C’ (program change) record types. These are not included in logged data.
22	Delete the entry in the table for ‘B’ (burst) record types. Burst data are returned as ‘D’ records. Two new data record index entries have been defined for burst data: 6 = burst complete, 7 = burst timeout.
25	PC Card slot does not support modem cards.
29	Currently the Attention LED only lights if SATTN or 2WARN=1 commands are issued. The various alarm conditions listed (eg log full, internal temperature limit exceeded) are not implemented.
35	Mounting hole diameter is 5.2mm Recess around mounting hole diameter (ie. max screw head diameter) is 13.5mm Depth of recess (ie. max screw head height) is 5.0mm
43	In section “Always trying to sleep” under “Sleep Conditions” the bullet point: “The DT800’s Host RS232 port RI (Ring Indicator) line has been asserted within the last 30 seconds” is invalid. The RI signal is ignored.
43	In section “Low-Power Operation”: the DT800 may also be awoken if its serial sensor port receives a character or CTS changes to active.
43	In the example, [LOGON] should be {[LOGON]}
46	In the section “Trigger on external event”, for edge triggering the minimum pulse width is approx 16ms. This also applies to the software only counter channels C9-C16 (see page 157).
52	The default value of the “m” (number of background measurements) parameter for the ,FAST modifier is 10, not 2
52	The “ADC_frequency” parameter passed to the ,FAST modifier is actually in Hz (unlike P60, which is in kHz) so the maximum (and default) is 100000, not 100.
52	The default value of the “mains frequency” parameter for the ,FAST modifier is 0, not 1000 (0 means sample at the specified clock rate without regard to mains frequency)
54	Valid range of “speed” parameter for burst schedule is 50 Hz to 100000 Hz
57	Note that the burst mode analog trigger level is approximate and may differ slightly from the measured value on the trigger channel. For example, if you set 1VNC(LEVEL>500) then the actual trigger value (as evidenced by the captured 1VNC values) may actually be, say, 525mV instead of 500mV.

60,61,96	“actionProcesses” in DO/IF/ALARM cannot return values for channels. For example ALARM(1V>100){[2V]} will sample 2V whenever 1V is greater than 100mV, however the value will not be returned. This is because the channel is sampled in the same schedule as the alarm is defined in and as such cannot be returned conditionally as variable length data records are not supported by the logger.
63	In the example in “Number of fundamental samples per reading”, the actual measurement order for a V channel is Vdiff, Vdiff, Vzero+, Vzero-.
63	Note that a VNC channel type do not auto range. That is, it has a default channel option of GL20V.
64	BGV requires 8 fundamental samples, not 4 as shown.
64	Maximum resistance value is 10M ohm, although accuracy is not guaranteed above 10k ohm.
65, 70	For RTD/thermistor channel types (R, PT385, PT392, NI, CU and YSxx) the P channel option specifies the power excitation level in uW, not mW. The default channel options for PT385 should therefore be listed as (100, P7000) not (100,P7), and similarly for the other channel types.
66	The AS channel type uses 1 fundamental sample, not 4.
66	For the C channel type the page reference should be page 157, not page 154.
66, 154	Digital State Outputs: there are various inconsistencies and errors in relations to the behaviour and nature of the outputs. The following statements clarify the situation: <ul style="list-style-type: none"> • Outputs are pulled up to +3.3V (not 5V) and the value of the pull-up resistor is 47k Ohms not 15k Ohms. • The default state of outputs is ON (high) • The inputs are only usable when outputs are ON (high) • When controlling an external relay etc. the output should be configured to sink current (as per diagram on page 184), hence to turn the relay on you need to do 1DSO=0.
69	Delete the last sentence in System Timers section, about the timer being set to 0 if set to an out of range value.
69	10SV also returns 0 for RX schedule
70, 85	Multiple Reports: The presence of statistical options for a channel does <i>not</i> require the presence of statistical options in every channel list.
71	Input termination: default is “U” for all channel types
72	The default excitation levels (ie. if just I or V or P is specified) are not shown. The values are I = 1mA, V=5000mV, P=5000uW.
73	For the “Tn” channel option see page 91 for a description of the formula that is used for thermistor scaling.
74	Rainflow channel option should appear below the configuration line.
80	“Alarms”, “Events”, “Ini” and “Temp” directories are <i>not</i> created on the memory card.
83	For U[from][to], “from” and “to” should be specified as date,time or date (not time,date)
85	The NUM channel option appends “(Num)” to the units
87	In the table describing the function of the rainflow variables, the horizontal dividing line should be under d-7, not above it.
91	Note that a maximum of six polynomial coefficients can be entered
98	If an alarm is true then DSO is 0 (low/active); if alarm is false then DSO is 1 (high).
96-98	digitalAction can also be a CV, eg. ALARM(..)1CV,2DS is valid. If the alarm is TRUE then the channel variable (CV) will be set to 1 (TRUE), if the alarm is FALSE then the CV will be set to 0 (FALSE).

107-109	The statement that parameters P11, P31, P39, P50 and P51 are “kept during reset” is not correct.
107-110	Parameters P11, P46, P57 and P60 are sampled and stored at the time a schedule is defined. You should always set the value of these parameters prior to defining the schedule.
108	European date format (P31=1) should be DD/MM/YYYY
108	P38 range is 1-255
109	P46 range is 1-255
111	/G switch is not implemented on DT800
112	/V switch (dump event log on error reset) is not implemented on DT800.
112	/X switch is not implemented on DT800.
112	/Y switch is not implemented on DT800.
115	Profile example <code>PROFILE"HOST_PORT", "MODEM_INSTALLED"="CHECK"</code> demonstrates an obsolete profile key. Delete this example.
116-117	Delete all references to FLASHUSERINI, DELFLASHUSERINI, FLASHONRESET, DELFLASHONRESET. These commands are not necessary and will be deprecated in a future release of the firmware. All changes made to the USER.INI file are always copied directly to flash as well so there is no need to use the FLASHUSERINI command. The DELUSERINI command will delete the copy of the USER.INI in flash as well as the one held on the RAM disk. The RUNJOBONRESET will copy the ONRESET.DXC job to the FLASH as well as the RAM disk. The DELJOBONRESET will delete the ONRESET.DXC file from both FLASH and the RAM disk.
117	In the section “Setting the DT800’s Clock/Calendar”, the paragraph beginning “Of course, you can use the DT800 without setting its clock/calendar...” should be replaced with: “Time and date are maintained when the logger is switched off or reset. If the logger is switched off and the internal Memory-Backup battery (see page 42) is removed or discharged, then the date\time will be reset to 1989/01/01 00:00:00.”
122	The lines in the sample status report should be numbered 1 to 8, not 0 to 7.
131	The diagram showing modem power relay driven from digital output should have the coil connected to +12V (or an external supply) not Gd.
133	DeTransfer Version 3.27 and later includes an “Extra Timeout” field on the connection dialog which removes the need to edit the registry as described here.
136	Update footnote: “Use the command WINIPCFG for Windows 95 and 98, the command WNTIPCFG for windows NT, and the command IPCONFIG for DOS and Windows 2000 or XP.
143	TK thermocouple composition should be 2%Mn (Manganese) not 2%min
149	Analog Output terminal: Ao output voltage is set using VO channel type (see p63). Note that Ao is not available (ie. it may be set to a different voltage to that set using VO) whilst doing an analog frequency measurement (F channel type), or a level-triggered burst measurement.
152	Digital Channel Specifications: <ul style="list-style-type: none"> • For D1-D6 and D7-D8 change Specification for “Low-pass filter – active drive (for example, logic device)” from 200kHz to 20kHz. • Add specifications for D1-D6 and D7--D8 – output rise time (approx) 5ms. Output fall time (approx) 100us. • Add specification for D7-D8 – Maximum output current (open drain FET) 100mA.
152,157	Counters 9-16 are sampled at a rate of 60Hz, hence the minimum input pulse width is 16ms, and hence the max count frequency for a 50% duty cycle input is 30Hz (not

	40Hz).
158	Add the following note regarding the CT pin of the serial sensor port: “The CT pin of the serial sensor port is an input that will wake the logger out of sleep mode when external power is turned to the unit. The maximum voltage that can be applied to this input is +/-15 VDC. The Input impedance is 12 K Ohm.”
158	Flow control is not implemented on the serial sensor port. The “flowcontrol” option (NOFC, HWFC, SWFC) is ignored.
161	\e and \p are not supported as output actions. These are only supported in input strings.
161	The following describes the operation of the “width” and “precision” specifiers: Minimum field width for output An optional minimum field width, expressed as a decimal integer constant, may be specified. The constant must be a nonempty sequence of decimal digits that do not begin with a zero digit (which would be taken to be the 0 flag). If the converted value (including prefix) results in fewer characters than the specified field width, then pad characters (space or zero) are used to pad the value to the specified width. If the converted value results in more characters than the specified field width, then the field width is expanded to accommodate it without padding. Precision specification for output An optional precision specification may be used, expressed as a period followed by an optional decimal integer. The precision specification is used to control <ul style="list-style-type: none"> • the minimum number of digits to be printed for d, i, o, x, and X conversions • the number of digits to the right of the decimal point in e, E, and f conversions • the number of significant digits in the g and G conversions • the maximum number of characters to be written from a string in the s conversion. Using a CV to control width and precision The field width (or field width and precision) may also be specified by an asterisk, *, in which case the value of the first (or first and second) nCV argument specifies the width/precision. For example, the following causes the value of 2CV to be output as a floating point value. The minimum number of characters to be output is 5 (as specified by 1CV). 1CV=5 1SERIAL(“{%*f[1CV,2CV]}”)
162	The descriptions of the “text”, “\nnn” and “^char” input actions are unclear. Each character in the sequence must occur, in order, in the input data stream, but each may be preceded by any number of other characters. For example an input action of “abc” will match input data of “0ZCCaaaQQbJJJ42c”.
163	The “width” specifier indicates the <i>maximum</i> number of characters to be read for a conversion. For example, if %4d is a conversion that is being processed and the input buffer contains “102033456” then the maximum field width of 4, as specified in the conversion, means that only “1020” from the start of the input buffer will be converted.
163	The “%i” input conversion specification means interpret as hexadecimal if the number starts with “0x” or “0X”, interpret as octal if number starts with “0”, otherwise interpret as decimal.
163	Note that “%b” reads binary data (most significant byte first) without doing any input conversion. Thus %1b is equivalent to %1c. So if the input string is “123.456”:

	<ul style="list-style-type: none"> • %b would set nCV to 49 (ASCII “1”), leaving “23.456” in the receive buffer • %2b would set nCV to 12594 (49*256 + 50), leaving “3.456” in the receive buffer • %3b would set nCV to 3223859 (49*65536 + 50*256 + 51), leaving “.456” in the receive buffer <p>Note that due to the limited precision of CVs, the maximum practical width value is 3 (24 bits).</p>
163	In the example under [abc]: If the control string is %[pq3rs][1\$] and the received string is “pp3rpsab3pr” then “pp3rps” will be placed into 1\$, leaving “ab3pr” in the input buffer.
163	The scanset negation character is “~” not “^”.
164	Note that the “username~units” and “=nCV” channel options (see page 75) are also valid for the serial channel.
174	In the table under figure 117, replace “3*BGV(6W)” with “4BGV(6W)” and replace “11*BGV(6W)” with “12BGV(6W)”.
176	The statement about the bridge voltage being calculated from measured current applies to BGI not BGV
181	1LM35 will perform a 4-wire measurement. For the 3-wire connection shown, the command would be 1+LM35, not 1LM35. In the example where six LM35s are connected to a channel pair, the command to read sensor E should be 2+LM35, not 2*LM35
189	ASCII-Decimal Table, Decimal 3 in ASCII is ETX not EXT.
189	Delete entry for ASCII 98, add ^b in control column for ASCII 34 (“)