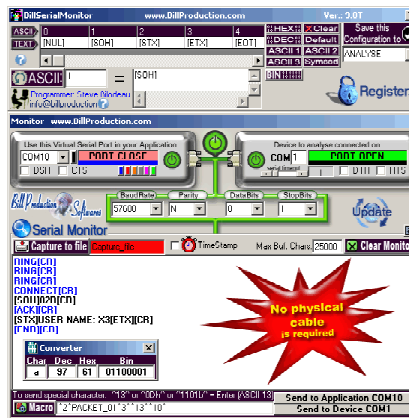




Bill Serial Port Monitor (RS-232) Version 3.0T and more

Documentation: 07/12/2006



Use this documentation with the software: **Bill Serial Monitor**

Our Internet site: <http://www.billproduction.com/>

Email: info@BillProduction.com

SOFTWARE DESCRIPTION



To monitor (bi-directional) Serial communication RS-232 between two devices **without a physical cable**, use Bill Serial Monitor. This software allows you to view, log, test, analyze and **interact** with the activity of the serial RS-232 port. To monitor the serial protocol of two different serial devices. DSR, CTS, DTR and RTS can also be controlled.

Simply the best Serial Monitor software available !

Supported Operating Systems: Windows 98,Me,2000,3000,XP,NT4



Custom Software Development

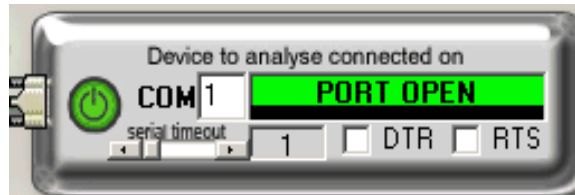
With over 15 years of experience providing Custom Software Development solutions to over 300 customers, we have refined our skills to cater to your specific business needs.

Please do not hesitate to contact us regarding any type of Software, Feature, or Customized Option.

Contact by email: info@billproduction.com



Description of the section « Device to analyse connected on »



Use this section to choose and configure the serial port where the product to analyze is physically connected.

Serial Port Number « COM » :

Use this field to choose the serial port number (*where your peripheral is connected*). If the color field is GREEN, then the COM is present and available.

Option « Serial timeout »:

*By default, this option is « 1 ». You should not need to change this option.

Option “DTR-RTS”:

You can activate or deactivate the Serial hardware handshaking by using the following options:

DTR enables the data terminal ready line.

RTS enables the request to send line.

The Stop Switch « »

Use this switch to stop communication with your physical peripheral.



Signifies that the data received by the physical peripheral will be shown.



Signifies that the data received by the physical peripheral will not be shown.

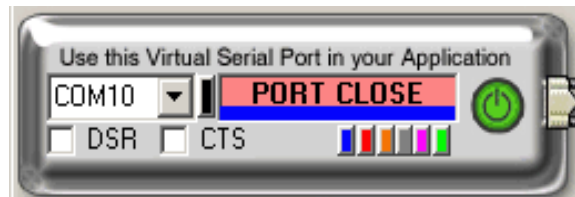
Use this section to choose and configure the serial port to which the product to analyze is physically connected.



* If your application using the virtual serial port (COM 10) changes the configuration then the above configuration will automatically change.



Description of the section « Use this Virtual Serial Port in your Application »



Use this section to choose and configure the virtual serial port that you will use in your current application.

Option « COM10 » :

Use this pull-down menu to choose the Virtual Serial Port number that you will use in your current application. You should not have to change this option.

*** Do not choose a serial port number that physically exists on your computer**

Virtual Serial Port Status : « PORT CLOSE »:

PORT CLOSE : The Virtual Serial Port has been created but has not been opened by your current application;

PORT OPEN : The Virtual Serial Port is in use and works correctly;

ERROR : The Virtual Serial Port was not created. Re-Start the computer and, if the problem persists, contact Technical Support by email.

Color selector « »:

Use these buttons to choose the color that will be used to display the data received by the Virtual Serial Port (coming from your current application).

Option “DSR-CTS”:

With the following options, you can force the hardware handshaking:

DSR : Activate the control : Data Send Ready.

CTS : Activate the control : Clear To Send.

The Stop Switch « »

Use this switch to stop communication with the Virtual Serial Port.



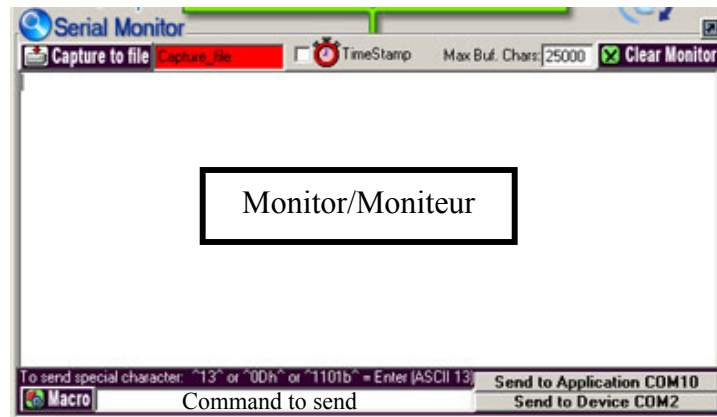
Signifies that the data received by your current application will be shown.



Signifies that the data received by your current application will not be shown.



Description of the section « Serial Monitor »



Use this section to view the bi-directional communication between your current application and the physical peripheral.

Option “Capture to file”:

With this button, you can record in a file the communication between your current application and the physical peripheral. Use the field located immediately at the right of this button to choose the name of the log file. If the color field is GREEN, then the data has been recorded.

Option “TimeStamp”:

With this switch, you can view the time in seconds between each transmission.

* Support the split seconds.

Option “Max Buf. Chars”:

Use this field to enter the maximum number of characters that will be kept in the real-time display buffer.

* This option does not affect the « Capture to file » option.

Option “Clear Monitor”:

Use this option to clear the real-time display monitor.

* This option does not affect the « Capture to file » option.

Section “Monitor-Moniteur”:

The real-time bi-directional communication will be shown in this space.

Button “Send to Application COM10”:

Use this button to send command(s) to the Virtual Serial Port (*to your current application*)

* *Before pressing this button, you must enter the data in the field «Command to send» that you want to send*

Button “Send to Device COM2”:

Use this button to send command(s) to the physical serial port where your product is connected.

* *Before pressing this button, you must enter in the field «Command to send» the data that you want to send*



Description of the section « Serial Monitor » (Continuation)



Field “Command to send”:

Use this field to define what will be sent when you click the button “Send to ...”

* To send specific ASCII characters in DECIMAL, HEXADECIMAL or BINARY format, use the following syntax:

Decimal : ^DEC_VALUE^

For example, to send an ENTER (ASCII 13) use this syntax : ^13^

Hexadecimal : ^HEX_VALUEh ^

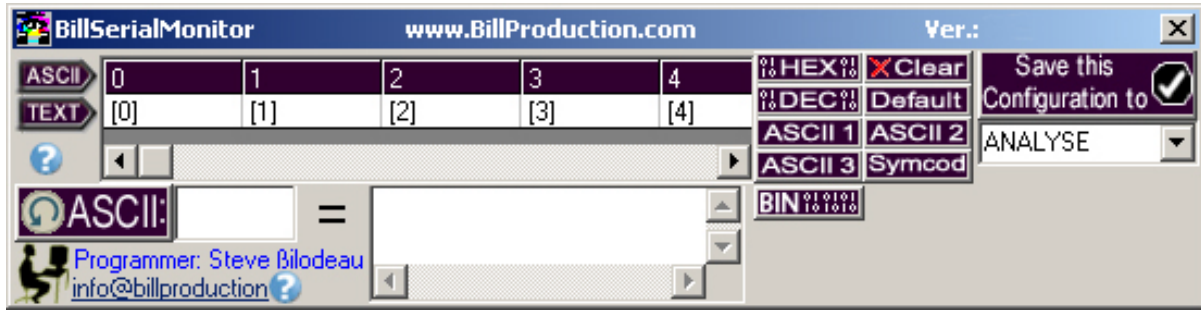
For example, to send an ENTER (ASCII 13) use this syntax : ^0Dh^

Binary : ^BIN_VALUEb^

For example, to send an ENTER (ASCII 13) use this syntax : ^1101b^



Description of the section « Display configuration »



Use this section to configure how the data in the real-time monitor will be displayed . The received data is displayed according to preset filters (*HEX, DEC, ASCII 1, ASCII 2, ASCII 3, BIN ...*) or according to your own filter.

Button “HEX” filter.

Use this button to display the data in HEXADECIMAL format ([00] to [FF])

Button “Clear” filter:

Use this button to clear the current filter.

Button “DEC” filter:

Use this button to display the data in DECIMAL format ([0] to [255])

Button “ASCII 1” filter:

Use this button to display the data in ASCII format

Button “ASCII 2” filter:

Use this button to display the data in ASCII format. The nonprintable characters will be displayed in DECimal format.

Button “ASCII 3” filter:

Use this button to display the data in ASCII format. The nonprintable characters will be displayed in HEXadecimal format.

Button “Symcod” filter:

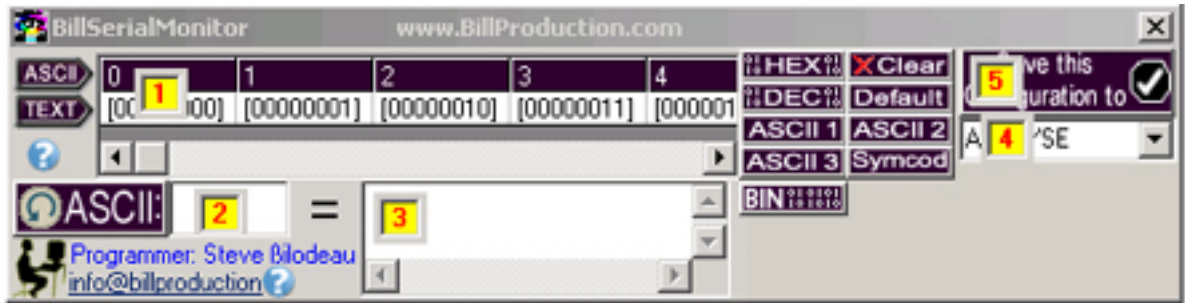
Use this button to display the data in ASCII format. The nonprintable characters will be displayed in mnemonic protocol format.

Button “BIN” filter:


Use this button to display the data in BINARY format ([00000000] à [11111111]).



Description of the section « Display configuration (Help) »









Section “To define your own display filter”:


If you wish, you can create your own display filter. Click the button  to find out how:

- At the top of the screen, the text will be displayed for each character of the ASCII table.

Step by step :

-  Select the ASCII (0 to 255) code that you wish change.
-  You can enter directly in this space the ASCII number (0 to 255) of the ASCII code to change.
-  Enter in this field the test that will be displayed for this ASCII code.
* Repeat step 1 to 3 to modify other ASCII codes.
-  To save this filter configuration, enter the desired file name in this field.
-  Press this button to save your display filter.

* To load one of your filters, use the pull-down button on the right of the field 

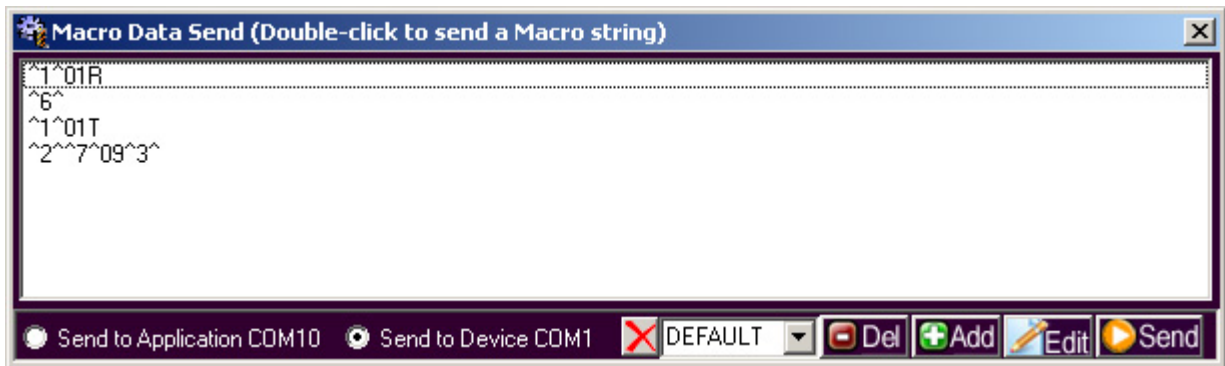
* Click the button  to open the equivalences converter tool:

Converter			
Char	Dec	Hex	Bin
A	65	41	01000001

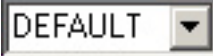
This small window converts into real time the equivalence of the value that you enter.



Description of the section « Macro commands »



Use this section to send commands to your software or directly to your physical peripheral. Perfect for testing a product or to find out the protocol of a product !

Section “” (file name configuration) :

Before adding macros commands, you must choose under which file name your macros commands configuration will be saved.

*Example : **SCALE_3352**

*Use the right pull-down button to load one of your macro configurations.

Button “”:

Use this button to erase the current macro configuration.

Button “Add”:

Use this button to add a MACRO command. A macro command can contain all the characters of the ASCII table.

* To send specific ASCII characters in DECIMAL, HEXADECIMAL or BINARY format, use the following syntax:

Decimal : ^DEC_VALUE^

Example to send a ENTER (ASCII 13) : ^13^

Hexadecimal : ^HEX_VALUEh^

Example to send a ENTER (ASCII 13) : ^0Dh^

Binary : ^BIN_VALUEb^

Example to send a ENTER (ASCII 13) : ^1101b^

* To add comments inside your macro commands, use the following syntax:

[[*YOUR COMMENT*]]

The switch “Send to Application ...” or “Send to Device ...”:

Use this switch to determine if the macro command will be sent to your application or to the physical peripheral.

Button “Send”:

Use this button to send the contents of a macro command to the application or to the physical product (according to the switch)

* You can also double click directly on the macro to send it.

ASCII TABLE from 000 to 127

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
0	00	Null	32	20	Space	64	40	@	96	60	`
1	01	Start of heading	33	21	!	65	41	A	97	61	a
2	02	Start of text	34	22	"	66	42	B	98	62	b
3	03	End of text	35	23	#	67	43	C	99	63	c
4	04	End of transmit	36	24	\$	68	44	D	100	64	d
5	05	Enquiry	37	25	%	69	45	E	101	65	e
6	06	Acknowledge	38	26	&	70	46	F	102	66	f
7	07	Audible bell	39	27	'	71	47	G	103	67	g
8	08	Backspace	40	28	(	72	48	H	104	68	h
9	09	Horizontal tab	41	29	)	73	49	I	105	69	i
10	0A	Line feed	42	2A	*	74	4A	J	106	6A	j
11	0B	Vertical tab	43	2B	+	75	4B	K	107	6B	k
12	0C	Form feed	44	2C	,	76	4C	L	108	6C	l
13	0D	Carriage return	45	2D	-	77	4D	M	109	6D	m
14	0E	Shift out	46	2E	.	78	4E	N	110	6E	n
15	0F	Shift in	47	2F	/	79	4F	O	111	6F	o
16	10	Data link escape	48	30	0	80	50	P	112	70	p
17	11	Device control 1	49	31	1	81	51	Q	113	71	q
18	12	Device control 2	50	32	2	82	52	R	114	72	r
19	13	Device control 3	51	33	3	83	53	S	115	73	s
20	14	Device control 4	52	34	4	84	54	T	116	74	t
21	15	Neg. acknowledge	53	35	5	85	55	U	117	75	u
22	16	Synchronous idle	54	36	6	86	56	V	118	76	v
23	17	End trans. block	55	37	7	87	57	W	119	77	w
24	18	Cancel	56	38	8	88	58	X	120	78	x
25	19	End of medium	57	39	9	89	59	Y	121	79	y
26	1A	Substitution	58	3A	:	90	5A	Z	122	7A	z
27	1B	Escape	59	3B	;	91	5B	[	123	7B	{
28	1C	File separator	60	3C	<	92	5C	\	124	7C	|
29	1D	Group separator	61	3D	=	93	5D	]	125	7D	}
30	1E	Record separator	62	3E	>	94	5E	^	126	7E	~
31	1F	Unit separator	63	3F	?	95	5F	_	127	7F	□

ASCII TABLE from 128 to 255

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
128	80	Ç	160	A0	á	192	C0	Ł	224	E0	α
129	81	ù	161	A1	í	193	C1	ł	225	E1	β
130	82	é	162	A2	ó	194	C2	Ť	226	E2	Γ
131	83	â	163	A3	ú	195	C3	ł	227	E3	π
132	84	à	164	A4	ñ	196	C4	—	228	E4	Σ
133	85	à	165	A5	Ñ	197	C5	†	229	E5	σ
134	86	ã	166	A6	ª	198	C6	‡	230	E6	μ
135	87	ç	167	A7	º	199	C7	‡	231	E7	τ
136	88	ê	168	A8	¿	200	C8	Ł	232	E8	φ
137	89	è	169	A9	ƒ	201	C9	Ŧ	233	E9	θ
138	8A	è	170	AA	ƒ	202	CA	Ł	234	EA	Ω
139	8B	ï	171	AB	½	203	CB	Ŧ	235	EB	δ
140	8C	î	172	AC	¼	204	CC	‡	236	EC	∞
141	8D	ì	173	AD	¡	205	CD	=	237	ED	ø
142	8E	Ä	174	AE	«	206	CE	‡	238	EE	ε
143	8F	Å	175	AF	»	207	CF	Ł	239	EF	∩
144	90	É	176	B0	⋮	208	D0	Ł	240	FO	≡
145	91	æ	177	B1	⋮	209	D1	Ŧ	241	F1	±
146	92	Æ	178	B2	■	210	D2	Ŧ	242	F2	≥
147	93	ô	179	B3	|	211	D3	Ł	243	F3	≤
148	94	ö	180	B4	†	212	D4	Ł	244	F4	[
149	95	ò	181	B5	‡	213	D5	Ŧ	245	F5]
150	96	û	182	B6	‡	214	D6	Ŧ	246	F6	÷
151	97	ù	183	B7	Ŧ	215	D7	‡	247	F7	∞
152	98	ÿ	184	B8	‡	216	D8	‡	248	F8	°
153	99	Ö	185	B9	‡	217	D9	∟	249	F9	•
154	9A	Û	186	BA	||	218	DA	Ŧ	250	FA	·
155	9B	ø	187	BB	Ŧ	219	DB	■	251	FB	√
156	9C	£	188	BC	Ł	220	DC	■	252	FC	∂
157	9D	¥	189	BD	Ł	221	DD	■	253	FD	z
158	9E	ℳ	190	BE	Ł	222	DE	■	254	FE	■
159	9F	f	191	BF	Ŧ	223	DF	■	255	FF	□



For more flexibility and/or options, please contact us.

Send your request directly to: info@BillProduction.com