## BuddhaBrot-MT manual

Table 1: Changing layer mode, changing color table (noncycle and cycle) (ct), changing BuddhaBrot (bb) type (0=BuddhaBrot, 1=Anti-Buddhabrot, 2=Anti-Buddhabrot with some lobes cut), permutating layer color, changing info displayed in title bar

	F1	F2	F3	4	Tab	Esc
-	layer mode	noncycle ct	cycle ct	bb type	perm layer color	title bar info

## Table 2: Saving, loading, calculation thread handling, changing animation frame rate

	F9	F10	F11	F12
Shift Ctrl	save status	load status load parameters load status (threads=3)	pause calculations threads $+=3$ threads $-=3$	1 fps 10 fps 30 fps

Table 3: Writing window, tiled (T) render, full render to PNG in working directory, changing auto write mode (awm) (0=no auto write, 1=auto write based on elapsed time, 2=auto write based on number of paths plotted), changing tile size

	Backspace	\	Return	;	,
Shift	write window awm window	write render tiled awm render tiled	write render awm render	inc T width dec T width	inc T height dec T height

Table 4: Changing time between each auto PNG write  $(t_{\Delta})$ , changing number of paths plotted difference between each auto PNG write  $(Pp_{\Delta})$ 

	-	=	[	]
-	$t_{\Delta} /= 10$	$t_{\Delta} *= 10$	$Pp_{\Delta} /= 10$	$Pp_{\Delta} *= 10$

Table 5: Changing render (R) size, zooming BuddhaBrot (bb), panning window (W) in render, panning BuddhaBrot

	Page Up	Page Down	$\leftarrow$	$\rightarrow$	<b>†</b>	<b>↓</b>
Shift Ctrl Shift+Ctrl	inc R size zoom in bb	dec R size zoom out bb	$\begin{array}{c} \text{pan bb} \leftarrow 10\% \\ \text{pan W} \leftarrow 1\% \end{array}$	$\begin{array}{c} \mathrm{pan}\;\mathrm{W} \rightarrow 10\% \\ \mathrm{pan}\;\mathrm{bb} \rightarrow 10\% \\ \mathrm{pan}\;\mathrm{W} \rightarrow 1\% \\ \mathrm{pan}\;\mathrm{bb} \rightarrow 1\% \end{array}$	pan bb $\uparrow 10\%$ pan W $\uparrow 1\%$	$\begin{array}{c} \text{pan W}\downarrow 10\%\\ \text{pan bb}\downarrow 10\%\\ \text{pan W}\downarrow 1\%\\ \text{pan bb}\downarrow 1\% \end{array}$

## Table 6: Changing BuddhaBrot parameter: bailout (bail)

	1	q	a	Z
-	layer 123 bail $+= 1$	layer 1 bail $+= 1$	layer 2 bail $+= 1$	layer 3 bail $+= 1$
Shift	layer 123 bail $*= 10$	layer 1 bail *= 10	layer 2 bail *= 10	layer 3 bail $*= 10$
Ctrl	layer 123 bail $-= 1$	layer 1 bail -= 1	layer 2 bail $-= 1$	layer 3 bail $-= 1$
Shift+Ctrl	layer 123 bail $\neq$ 10	layer 1 bail $\neq 10$	layer 2 bail $\neq 10$	layer 3 bail $\neq 10$

Table 7: Changing BuddhaBrot parameter: path plot start (pps)

	0 0	•	1 (11)	
	2	W	$\mathbf{S}$	X
-	layer 123 pps $+= 1$	layer 1 pps += 1	layer 2 pps $+= 1$	layer 3 pps $+= 1$
Shift	layer 123 pps $*= 10$	layer 1 pps $*= 10$	layer 2 pps $*= 10$	layer 3 pps $*= 10$
Ctrl	layer 123 pps $-= 1$	layer 1 pps $-= 1$	layer 2 pps $-= 1$	layer 3 pps $-= 1$
Shift+Ctrl	layer 123 pps /= $10$	layer 1 pps $/=10$	layer 2 pps $/=10$	layer 3 pps $\neq 10$

1

Table 8: Changing BuddhaBrot parameter: path plot end (ppe)

	3	e	d	c
-	layer 123 ppe $+= 1$	layer 1 ppe $+= 1$	layer 2 ppe $+= 1$	layer 3 ppe $+= 1$
Shift	layer 123 ppe $*= 10$	layer 1 ppe $*= 10$	layer 2 ppe $*= 10$	layer 3 ppe $*= 10$
Ctrl	layer 123 ppe $-= 1$	layer 1 ppe $-= 1$	layer 2 ppe $-= 1$	layer 3 ppe $-= 1$
Shift+Ctrl	layer 123 ppe $/=10$	layer 1 ppe $\neq 10$	layer 2 ppe $\neq 10$	layer 3 ppe $/=10$

Table 9: Changing BuddhaBrot parameter: path minimum n\_inf (minn)

	4	r	f	v
-	layer 123 minn += 1	layer 1 minn += 1	layer 2 minn += 1	layer 3 minn += 1
Shift	layer 123 minn $*= 10$	layer 1 minn $*= 10$	layer $2 \min *= 10$	layer $3 \min *= 10$
Ctrl	layer 123 minn $-= 1$	layer 1 minn -= 1	layer 2 minn $-= 1$	layer $3 \min -= 1$
Shift+Ctrl	layer 123 minn $\neq$ 10	layer 1 minn $\neq$ 10	layer 2 minn $\neq 10$	layer 3 minn $/= 10$

Table 10: Changing coloring method (cm) (0=rank-order mapping, 1=histogram mapping), changing coloring sum function (csf) (0=none, 1=log)

	5	t	g	b
-	layer $123~\mathrm{cm}$	layer 1 cm	layer 2 cm	layer 3 cm
Shift	layer 123 csf	layer 1 csf	layer 2 csf	layer 3 csf

Table 11: Changing coloring sum function parameter1 (csfp1)

	6	У	h	n
-	layer 123 csfp1 += 1	layer 1 csfp1 += 1	layer 2 csfp1 += 1	layer 3 csfp1 += 1
Shift	layer 123 csfp1 *= 10	layer 1 csfp1 *= 10	layer 2 csfp1 *= 10	layer 3 csfp1 *= 10
Ctrl	layer 123 csfp1 $-= 1$	layer 1 csfp1 $-= 1$	layer $2 \operatorname{csfp} 1 -= 1$	layer 3 csfp1 -= 1
Shift+Ctrl	layer 123 csfp1 $\neq$ 10	layer 1 csfp1 $\neq$ 10	layer 2 csfp1 $\neq$ 10	layer 3 csfp1 $/= 10$

Table 12: Changing scale factor of index in color table (ct\_f)

	u	J	m
Shift layer 123	3  ct.f += 0.1  layer 1 ct.f += 3  ct.f -= 0.1  layer 1 ct.f -= 3  ct.f = 1.0  layer 1 ct.f = 1.	0.1 layer 2 ct_f $-= 0.1$	

Table 13: Changing color table offset (ct\_o)

	8	i	k	,
Shift Ctrl	layer 123 ct_o += 1 layer 123 ct_o += 10 layer 123 ct_o = 0	$\begin{array}{l} \text{layer 1 ct\_o} += 1 \\ \text{layer 1 ct\_o} += 10 \\ \text{layer 1 ct\_o} = 0 \end{array}$	$\begin{array}{l} \text{layer 2 ct\_o } += 1 \\ \text{layer 2 ct\_o } += 10 \\ \text{layer 2 ct\_o } = 0 \end{array}$	layer 3 ct_o $+= 1$ layer 3 ct_o $+= 10$ layer 3 ct_o $= 0$

Table 14: Changing color table cycle speed (ct\_v)

	9	O	1			
Shift Ctrl	layer 123 ct_v += 1 layer 123 ct_v -= 1 layer 123 ct_v = 0	$\begin{array}{c} \text{layer 1 ct\_v} += 1 \\ \text{layer 1 ct\_v} -= 1 \\ \text{layer 1 ct\_v} = 0 \end{array}$	$\begin{array}{c} \text{layer 2 ct\_v} += 1 \\ \text{layer 2 ct\_v} -= 1 \\ \text{layer 2 ct\_v} = 0 \end{array}$	layer $3 \text{ ct_v} += 1$ layer $3 \text{ ct_v} -= 1$ layer $3 \text{ ct_v} = 0$		