

E.SHOW TW+

Single-Source LED - Perfect whites & brilliant colors

3CH CCT

3CH RGB

6CH RGB

9CH RGB / Default Mode

11CH RGB

14CH RGB

6CH DIRECT

12CH DIRECT

13CH DIRECT

20CH DIRECT

3CH HSI

10CH HSI

3 CH CCT MODE (Factory Calibrated) - 8bit

Ch.	Function	Value	Setting	
1	Dimmer	000-255	0 - 100%	
2	CTC	000 - 004	5600K	
		005-226	2000K-6500K (please see detailed CTC chart)	
		182-182	5600K	
		226-226	6500K	
		227-255	6621K-10.000K (please see detailed CTC chart)	
3	Tint	0	no function	Tint channel active in CCT mode
		001-127	Magenta ⊕ Neutral	
		128-128	Neutral	
		129-255	Neutral ⊕ Green	

3 CH - RGB MODE (Factory Calibrated Mode) - 8bit

Ch.	Function	Value	Setting
1	Red	000-255	0 - 100%
2	Green	000-255	0 - 100%
3	Blue	000-255	0 - 100%

6 CH - RGB MODE (Factory Calibrated) - 16bit

Ch.	Function	Value	Setting
1	Red	000-255	0 - 100%
2	Red Fine	000-255	0 - 100%
3	Green	000-255	0 - 100%
4	Green Fine	000-255	0 - 100%
5	Blue	000-255	0 - 100%
6	Blue Fine	000-255	0 - 100%

9 CH - RGB (Factory Calibrated Mode) - 8bit / Default Mode

Ch.	Function	Value	Setting	
1	Dimmer	000-255	0 - 100%	
2	Shutter	000 - 019	Shutter close	
		020 - 024	Shutter open	
		025 - 064	Strobe 1 (fast ⊕ slow)	
		065 - 069	Shutter open	
		070 - 084	Strobe 2: opening pulse (fast ⊕ slow)	
		085 - 089	Shutter open	
		090 - 104	Strobe 3: closing pulse (fast ⊕ slow)	
		105 - 109	Shutter open	
		110 - 124	Strobe 4: random strobe (fast ⊕ slow)	
		125 - 129	Shutter open	
		130 - 144	Strobe 5: random opening pulse (fast ⊕ slow)	
		145 - 149	Shutter open	
		150 - 164	Strobe 6: random closing pulse (fast ⊕ slow)	
		165 - 169	Shutter open	
		170 - 184	Strobe 7: burst pulse (fast ⊕ slow)	
		185 - 189	Shutter open	
		190 - 204	Strobe 8: random burst pulse (fast ⊕ slow)	
		205 - 209	Shutter open	
		210 - 224	Strobe 9: sine wave (fast ⊕ slow)	
		225 - 229	Shutter open	
		230 - 244	Strobe 10: burst (fast ⊕ slow)	
		245 - 255	Shutter open	
3	Red	000-255	0 - 100%	RGB fade to 100% = CTC
4	Green	000-255	0 - 100%	
5	Blue	000-255	0 - 100%	
6	CTC (affects RGB)	000 - 004	5600K	
		005-226	2000K-6500K (please see detailed CTC chart)	
		182-182	5600K	
		226-226	6500K	
		227-255	6621K-10.000K (please see detailed CTC chart)	
7	Tint (affects CTC, RGB)	0	no function	only available at "High" CRI mode
		001-127	Magenta ⊕ Neutral	
		128-128	Neutral	
		129-255	Neutral ⊕ Green	
8	Color Macro (override RGB, CTC)		(please see detailed color macro chart)	
9	Color Macro Crossfade (Transition Time between Color Macros)	000 - 005	no function	
		006-105	0,1s - 10s (0,1s steps)	
		106-214	11s - 119s (1s steps)	
		215-244	2m - 4m50s (10s steps)	
		245-255	5m - 15m (1m steps)	

11 CH RGB Mode (Factory Calibrated) - 8bit

Ch.	Function	Value	Setting	
1	Dimmer	000-255	0 - 100%	
2	Shutter	000 - 019	Shutter close	
		020 - 024	Shutter open	
		025 - 064	Strobe 1 (fast ⊕ slow)	
		065 - 069	Shutter open	
		070 - 084	Strobe 2: opening pulse (fast ⊕ slow)	
		085 - 089	Shutter open	
		090 - 104	Strobe 3: closing pulse (fast ⊕ slow)	
		105 - 109	Shutter open	
		110 - 124	Strobe 4: random strobe (fast ⊕ slow)	
		125 - 129	Shutter open	
		130 - 144	Strobe 5: random opening pulse (fast ⊕ slow)	
		145 - 149	Shutter open	
		150 - 164	Strobe 6: random closing pulse (fast ⊕ slow)	
		165 - 169	Shutter open	
		170 - 184	Strobe 7: burst pulse (fast ⊕ slow)	
		185 - 189	Shutter open	
		190 - 204	Strobe 8: random burst pulse (fast ⊕ slow)	
		205 - 209	Shutter open	
		210 - 224	Strobe 9: sine wave (fast ⊕ slow)	
		225 - 229	Shutter open	
		230 - 244	Strobe 10: burst (fast ⊕ slow)	
		245 - 255	Shutter open	
3	Duration (only affects to channel 2 - Strobe 1 025-064)	000-255	0 - 100%	
4	Red	000-255	0 - 100%	RGB fade to 100% = CTC
5	Green	000-255	0 - 100%	
6	Blue	000-255	0 - 100%	
7	CTC (affects RGB)	000 - 004	5600K	
		005-226	2000K-6500K (please see detailed CTC chart)	
		182-182	5600K	
		226-226	6500K	
		227-255	6621K-10.000K (please see detailed CTC chart)	
8	Tint (affects CTC, RGB)	0	no function	only available at "High" CRI mode
		001-127	Magenta ⊕ Neutral	
		128-128	Neutral	
		129-255	Neutral ⊕ Green	
9	Color Macro (override RGB, CTC)		(please see detailed color macro chart)	

10	Color Macro Crossfade (Transition Time between Color Macros)	000 - 005	no function
		006-105	0,1s - 10s (0,1s steps)
		106-214	11s - 119s (1s steps)
		215-244	2m - 4m50s (10s steps)
		245-255	5m - 15m (1m steps)
11	Device Settings (please see remark *1)	000-029	No function
		030-034	Linear Dimmer Curve (hold 3s)
		035-039	Exponential Dimmer Curve (hold 3s)
		040-044	Logarithmic Dimmer Curve (hold 3s)
		045-049	S-Curve Dimmer Curve (hold 3s)
		050-054	Dimmer Response LED (hold 1,5s)
		055-059	Dimmer Response Halogen (hold 1,5s)
		060-094	No function
		095-099	LED Frequency 800Hz (hold 3s)
		100-104	LED Frequency 1200Hz (hold 3s)
		105-109	LED Frequency 2000Hz (hold 3s)
		110-114	LED Frequency 3600Hz (hold 3s)
		115-119	LED Frequency 12kHz (hold 3s)
		120-124	LED Frequency 25kHz (hold 3s)
		125-129	No function
		130-134	Fan Auto (hold 3s)
		135-139	Fan Silent (hold 3s)
		140-144	Fan Studio (hold 3s)
		145-149	Fan Off (hold 3s)
		150-154	Fan High Power (hold 3s)
		155-159	No function
		160-164	Redshift On (hold 1,5s / affects only between 2700-3500K)
		165-169	Redshift Off (hold 1,5s)
		170-174	Normal CRI (Hold 1,5s)
		175-179	High CRI (Hold 1,5s)
		180-184	Factory Reset (hold 3s / except User Reset defaults)
		185-189	User Reset (hold 3s)
		190-255	No function
14 CH RGB Mode (Factory Calibrated) - 16bit			
Ch.	Function	Value	Setting
1	Dimmer	000-255	0 - 100%
2	Dimmer Fine	000-255	0 - 100%

3	Shutter	000 - 019	Shutter close	
		020 - 024	Shutter open	
		025 - 064	Strobe 1 (fast ⊕ slow)	
		065 - 069	Shutter open	
		070 - 084	Strobe 2: opening pulse (fast ⊕ slow)	
		085 - 089	Shutter open	
		090 - 104	Strobe 3: closing pulse (fast ⊕ slow)	
		105 - 109	Shutter open	
		110 - 124	Strobe 4: random strobe (fast ⊕ slow)	
		125 - 129	Shutter open	
		130 - 144	Strobe 5: random opening pulse (fast ⊕ slow)	
		145 - 149	Shutter open	
		150 - 164	Strobe 6: random closing pulse (fast ⊕ slow)	
		165 - 169	Shutter open	
		170 - 184	Strobe 7: burst pulse (fast ⊕ slow)	
		185 - 189	Shutter open	
		190 - 204	Strobe 8: random burst pulse (fast ⊕ slow)	
		205 - 209	Shutter open	
		210 - 224	Strobe 9: sine wave (fast ⊕ slow)	
		225 - 229	Shutter open	
		230 - 244	Strobe 10: burst (fast ⊕ slow)	
		245 - 255	Shutter open	
4	Red	000-255	0 - 100%	RGBALC Fade to 100% = CTC
5	Red Fine	000-255	0 - 100%	
6	Green	000-255	0 - 100%	
7	Green Fine	000-255	0 - 100%	
8	Blue	000-255	0 - 100%	
9	Blue Fine	000-255	0 - 100%	
10	CTC (affects RGB)	000 - 004	5600K	
		005-226	2000K-6500K (please see detailed CTC chart)	
		182-182	5600K	
		226-226	6500K	
		227-255	6621K-10.000K (please see detailed CTC chart)	
11	Tint (affects CTC, RGB)	0	no function	only available at "High" CRI mode
		001-127	Magenta ⊕ Neutral	
		128-128	Neutral	
		129-255	Neutral ⊕ Green	
12	Color Macro (override RGB, CTC)		(please see detailed color macro chart)	

13	Color Macro Crossfade (Transition Time between Color Macros)	000 - 005	no function
		006-105	0,1s - 10s (0,1s steps)
		106-214	11s - 119s (1s steps)
		215-244	2m - 4m50s (10s steps)
		245-255	5m - 15m (1m steps)
14	Device Settings (please see remark *1)	000-029	No function
		030-034	Linear Dimmer Curve (hold 3s)
		035-039	Exponential Dimmer Curve (hold 3s)
		040-044	Logarithmic Dimmer Curve (hold 3s)
		045-049	S-Curve Dimmer Curve (hold 3s)
		050-054	Dimmer Response LED (hold 1,5s)
		055-059	Dimmer Response Halogen (hold 1,5s)
		060-094	No function
		095-099	LED Frequency 800Hz (hold 3s)
		100-104	LED Frequency 1200Hz (hold 3s)
		105-109	LED Frequency 2000Hz (hold 3s)
		110-114	LED Frequency 3600Hz (hold 3s)
		115-119	LED Frequency 12kHz (hold 3s)
		120-124	LED Frequency 25kHz (hold 3s)
		125-129	No function
		130-134	Fan Auto (hold 3s)
		135-139	Fan Silent (hold 3s)
		140-144	Fan Studio (hold 3s)
		145-149	Fan Off (hold 3s)
		150-154	Fan High Power (hold 3s)
		155-159	No function
		160-164	Redshift On (hold 1,5s / affects only between 2700-3500K)
		165-169	Redshift Off (hold 1,5s)
		170-174	Normal CRI (Hold 1,5s)
		175-179	High CRI (Hold 1,5s)
		180-184	Factory Reset (hold 3s / except User Reset defaults)
		185-189	User Reset (hold 3s)
		190-255	No function
6 CH - DIRECT MODE (RAW) - 8bit			
Ch.	Function	Value	Setting
1	Red	000-255	0 - 100%
2	Green	000-255	0 - 100%
3	Blue	000-255	0 - 100%
4	Amber	000-255	0 - 100%
5	Lime	000-255	0 - 100%

6	Cyan	000-255	0 - 100%
12 CH - DIRECT MODE (RAW) - 16bit			
Ch.	Function	Value	Setting
1	Red	000-255	0 - 100%
2	Red Fine	000-255	0 - 100%
3	Green	000-255	0 - 100%
4	Green Fine	000-255	0 - 100%
5	Blue	000-255	0 - 100%
6	Blue Fine	000-255	0 - 100%
7	Amber	000-255	0 - 100%
8	Amber Fine	000-255	0 - 100%
9	Lime	000-255	0 - 100%
10	Lime Fine	000-255	0 - 100%
11	Cyan	000-255	0 - 100%
12	Cyan Fine	000-255	0 - 100%
13 CH - DIRECT MODE (RAW) - 8bit			
Ch.	Function	Value	Setting
1	Dimmer	000-255	0 - 100%
2	Shutter	000 - 019	Shutter close
		020 - 024	Shutter open
		025 - 064	Strobe 1 (fast ⊕ slow)
		065 - 069	Shutter open
		070 - 084	Strobe 2: opening pulse (fast ⊕ slow)
		085 - 089	Shutter open
		090 - 104	Strobe 3: closing pulse (fast ⊕ slow)
		105 - 109	Shutter open
		110 - 124	Strobe 4: random strobe (fast ⊕ slow)
		125 - 129	Shutter open
		130 - 144	Strobe 5: random opening pulse (fast ⊕ slow)
		145 - 149	Shutter open
		150 - 164	Strobe 6: random closing pulse (fast ⊕ slow)
		165 - 169	Shutter open
		170 - 184	Strobe 7: burst pulse (fast ⊕ slow)
		185 - 189	Shutter open
		190 - 204	Strobe 8: random burst pulse (fast ⊕ slow)
		205 - 209	Shutter open
		210 - 224	Strobe 9: sine wave (fast ⊕ slow)
		225 - 229	Shutter open
		230 - 244	Strobe 10: burst (fast ⊕ slow)
		245 - 255	Shutter open
3	Red	000-255	0 - 100%
4	Green	000-255	0 - 100%
RGBALC Fade to 100% = CTC			

5	Blue	000-255	0 - 100%	RGBALC Fade to 100% = CTC	
6	Amber	000-255	0 - 100%		
7	Lime	000-255	0 - 100%		
8	Cyan	000-255	0 - 100%		
9	CTC (affects RGBALC)	000 - 004	RAW		
		005-226	2000K-6500K (please see detailed CTC chart)		
		182-182	5600K		
		226-226	6500K		
		227-255	6621K-10.000K (please see detailed CTC chart)		
10	Tint (affects CTC, RGBALC)	0	no function		Tint channel active in CCT mode
		001-127	Magenta ⊕ Neutral		
		128-128	Neutral		
		129-255	Neutral ⊕ Green		
11	Color Macro (overri- de RGBALC, CTC)		(please see detailed color macro chart)		
12	Color Macro Crossfade (Transition Time between Color Macros)	000 - 005	no function		
		006-105	0,1s - 10s (0,1s steps)		
		106-214	11s - 119s (1s steps)		
		215-244	2m - 4m50s (10s steps)		
		245-255	5m - 15m (1m steps)		

13	Device Settings (please see remark *1)	000-029	No function
		030-034	Linear Dimmer Curve (hold 3s)
		035-039	Exponential Dimmer Curve (hold 3s)
		040-044	Logarithmic Dimmer Curve (hold 3s)
		045-049	S-Curve Dimmer Curve (hold 3s)
		050-054	Dimmer Response LED (hold 1,5s)
		055-059	Dimmer Response Halogen (hold 1,5s)
		060-069	No function
		070-074	RAW Mode (hold 3s)
		075-079	No function
		080-084	Factory Calibrated Mode (hold 3s)
		085-094	No function
		095-099	LED Frequency 800Hz (hold 3s)
		100-104	LED Frequency 1200Hz (hold 3s)
		105-109	LED Frequency 2000Hz (hold 3s)
		110-114	LED Frequency 3600Hz (hold 3s)
		115-119	LED Frequency 12kHz (hold 3s)
		120-124	LED Frequency 25kHz (hold 3s)
		125-129	No function
		130-134	Fan Auto (hold 3s)
		135-139	Fan Silent (hold 3s)
		140-144	Fan Studio (hold 3s)
		145-149	Fan Off (hold 3s)
13	Device Settings (please see remark *1)	150-154	Fan High Power (hold 3s)
		155-159	No function
		160-164	Redshift On (hold 1,5s / affects only between 2700-3500K)
		165-169	Redshift Off (hold 1,5s)
		170-179	No function
		180-184	Factory Reset (hold 3s / except User Reset defaults)
		185-189	User Reset (hold 3s)
		190-255	No function
20 CH - DIRECT MODE (RAW) - 16bit			
Ch.	Function	Value	Setting
1	Dimmer	000-255	0 - 100%
2	Dimmer Fine	000-255	0 - 100%

3	Shutter	000 - 019	Shutter close	
		020 - 024	Shutter open	
		025 - 064	Strobe 1 (fast ⊕ slow)	
		065 - 069	Shutter open	
		070 - 084	Strobe 2: opening pulse (fast ⊕ slow)	
		085 - 089	Shutter open	
		090 - 104	Strobe 3: closing pulse (fast ⊕ slow)	
		105 - 109	Shutter open	
		110 - 124	Strobe 4: random strobe (fast ⊕ slow)	
		125 - 129	Shutter open	
		130 - 144	Strobe 5: random opening pulse (fast ⊕ slow)	
		145 - 149	Shutter open	
		150 - 164	Strobe 6: random closing pulse (fast ⊕ slow)	
		165 - 169	Shutter open	
		170 - 184	Strobe 7: burst pulse (fast ⊕ slow)	
		185 - 189	Shutter open	
		190 - 204	Strobe 8: random burst pulse (fast ⊕ slow)	
		205 - 209	Shutter open	
		210 - 224	Strobe 9: sine wave (fast ⊕ slow)	
		225 - 229	Shutter open	
		230 - 244	Strobe 10: burst (fast ⊕ slow)	
		245 - 255	Shutter open	
4	Red	000-255	0 - 100%	RGBALC Fade to 100% = CTC
5	Red Fine	000-255	0 - 100%	
6	Green	000-255	0 - 100%	
7	Green Fine	000-255	0 - 100%	
8	Blue	000-255	0 - 100%	
9	Blue Fine	000-255	0 - 100%	
10	Amber	000-255	0 - 100%	
11	Amber Fine	000-255	0 - 100%	
12	Lime	000-255	0 - 100%	
13	Lime Fine	000-255	0 - 100%	
14	Cyan	000-255	0 - 100%	
15	Cyan Fine	000-255	0 - 100%	
16	CTC (affects RGBALC)	000 - 004	RAW	
		005-226	2000K-6500K (please see detailed CTC chart)	
		182-182	5600K	
		226-226	6500K	
		227-255	6621K-10.000K (please see detailed CTC chart)	
17	Tint (affects CTC, RGBALC)	0	no function	Tint channel active in CCT mode
		001-127	Magenta ⊕ Neutral	
		128-128	Neutral	
		129-255	Neutral ⊕ Green	

18	Color Macro (override RGBALC, CTC)		(please see detailed color macro chart)
19	Color Macro Crossfade (Transition Time between Color Macros)	000 - 005	no function
		006-105	0,1s - 10s (0,1s steps)
		106-214	11s - 119s (1s steps)
		215-244	2m - 4m50s (10s steps)
		245-255	5m - 15m (1m steps)
20	Device Settings (please see remark *1)	000-029	No function
		030-034	Linear Dimmer Curve (hold 3s)
		035-039	Exponential Dimmer Curve (hold 3s)
		040-044	Logarithmic Dimmer Curve (hold 3s)
		045-049	S-Curve Dimmer Curve (hold 3s)
		050-054	Dimmer Response LED (hold 1,5s)
		055-059	Dimmer Response Halogen (hold 1,5s)
		060-069	No function
		070-074	RAW Mode (hold 3s)
		075-079	No function
		080-084	Factory Calibrated Mode (hold 3s)
		085-094	No function
		095-099	LED Frequency 800Hz (hold 3s)
		100-104	LED Frequency 1200Hz (hold 3s)
		105-109	LED Frequency 2000Hz (hold 3s)
		110-114	LED Frequency 3600Hz (hold 3s)
		115-119	LED Frequency 12kHz (hold 3s)
		120-124	LED Frequency 25kHz (hold 3s)
		125-129	No function
		130-134	Fan Auto (hold 3s)
		135-139	Fan Silent (hold 3s)
20	Device Settings (please see remark *1)	140-144	Fan Studio (hold 3s)
		145-149	Fan Off (hold 3s)
		150-154	Fan High Power (hold 3s)
		155-159	No function
		160-164	Redshift On (hold 1,5s / affects only between 2700-3500K)
		165-169	Redshift Off (hold 1,5s)
		170-179	No function
		180-184	Factory Reset (hold 3s / except User Reset defaults)
		185-189	User Reset (hold 3s)
		190-255	No function
3 CH - HSI MODE (Factory Calibrated) - 8bit			
Ch.	Function	Value	Setting
1	Dimmer	000-255	0 - 100%

2	Hue	000-255	0° (RED) Thru 360°
3	Saturation	000-255	0 - 100%
10 CH - HSI Mode (Factory Calibrated) - 16bit			
Ch.	Function	Value	Setting
1	Dimmer	000-255	0 - 100%
2	Dimmer Fine	000-255	0 - 100%
3	Shutter	000 - 019	Shutter close
		020 - 024	Shutter open
		025 - 064	Strobe 1 (fast ⊕ slow)
		065 - 069	Shutter open
		070 - 084	Strobe 2: opening pulse (fast ⊕ slow)
		085 - 089	Shutter open
		090 - 104	Strobe 3: closing pulse (fast ⊕ slow)
		105 - 109	Shutter open
		110 - 124	Strobe 4: random strobe (fast ⊕ slow)
		125 - 129	Shutter open
		130 - 144	Strobe 5: random opening pulse (fast ⊕ slow)
		145 - 149	Shutter open
		150 - 164	Strobe 6: random closing pulse (fast ⊕ slow)
		165 - 169	Shutter open
		170 - 184	Strobe 7: burst pulse (fast ⊕ slow)
		185 - 189	Shutter open
		190 - 204	Strobe 8: random burst pulse (fast ⊕ slow)
		205 - 209	Shutter open
		210 - 224	Strobe 9: sine wave (fast ⊕ slow)
		225 - 229	Shutter open
		230 - 244	Strobe 10: burst (fast ⊕ slow)
		245 - 255	Shutter open
4	Hue	000-255	0° (RED) Thru 360°
5	Saturation	000-255	0 - 100% (CTC ⊕ HUE)
6	CTC (affects HUE, Saturation)	000 - 004	5600K
		005-226	2000K-6500K (please see detailed CTC chart)
		182-182	5600K
		226-226	6500K
		227-255	6621K-10.000K (please see detailed CTC chart)
7	Tint (affects CTC, HUE, Saturation)	0	no function
		001-127	Magenta ⊕ Neutral
		128-128	Neutral
		129-255	Neutral ⊕ Green
8	Color Macro (override HUE, Saturation, CTC)		(please see detailed color macro chart)

Tint channel active
in CCT mode

9	Color Macro Crossfade (Transition Time between Color Macros)	000 - 005	no function	only available at "High" CRI mode
		006-105	0,1s - 10s (0,1s steps)	
		106-214	11s - 119s (1s steps)	
		215-244	2m - 4m50s (10s steps)	
		245-255	5m - 15m (1m steps)	
10	Device Settings (please see remark *1)	000-029	No function	
		030-034	Linear Dimmer Curve (hold 3s)	
		035-039	Exponential Dimmer Curve (hold 3s)	
		040-044	Logarithmic Dimmer Curve (hold 3s)	
		045-049	S-Curve Dimmer Curve (hold 3s)	
		050-054	Dimmer Response LED (hold 1,5s)	
		055-059	Dimmer Response Halogen (hold 1,5s)	
		060-094	No function	
		095-099	LED Frequency 800Hz (hold 3s)	
		100-104	LED Frequency 1200Hz (hold 3s)	
		105-109	LED Frequency 2000Hz (hold 3s)	
		110-114	LED Frequency 3600Hz (hold 3s)	
		115-119	LED Frequency 12kHz (hold 3s)	
		120-124	LED Frequency 25kHz (hold 3s)	
		125-129	No function	
		130-134	Fan Auto (hold 3s)	
		135-139	Fan Silent (hold 3s)	
		140-144	Fan Studio (hold 3s)	
		145-149	Fan Off (hold 3s)	
		150-154	Fan High Power (hold 3s)	
10	Device Settings (please see remark *1)	155-159	No function	
		160-164	Redshift On (Hold 1,5s / affects only between 2700-3500K)	
		165-169	Redshift Off (hold 1,5s)	
		170-174	Normal CRI (Hold 1,5s)	
		175-179	High CRI (Hold 1,5s)	
		180-184	Factory Reset (hold 3s / except User Reset defaults)	
		185-189	User Reset (hold 3s)	
		190-255	No function	
Remark *1 - After adjustments please set the value back to 000 to avoid any disturbance by endless function call.				

