

Bally MPU Ersatzboard *Bally MPU Replacement*

Einbauhinweise *Installation instructions*

Lese die Hinweise komplett durch, bevor Du mit dem Einbau beginnst!
Read the notes completely before you begin with the installation!



Sicherheitshinweise **Safety instructions**

Beachte diese Hinweise unbedingt! Wir haften nicht für Schäden, die auf unsachgemäßen Einbau zurückzuführen sind.

Der Einbau setzt voraus, dass Du mit der Technik und dem Aufbau Deines Flippers vertraut bist und Du zudem über eine entsprechende Ausbildung verfügst.

Du besitzt das Handbuch der Flippers mit den zugehörigen Schaltplänen und verstehst diese auch.

It is necessary to follow these instructions! We are not responsible for any damage which is due to inappropriate installation.

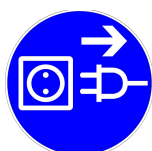
In order to install it is required that you are familiar with the technology and the construction of your pinball machine and that you have suitable training.

You own the manual of the pinball machine with the accompanying schematics and also understand them.



Vorsicht Spannung! Teile des Flippers stehen unter hoher Spannung, die gesundheitsschädlich oder gar tödlich sein kann!

Danger, high voltage! Parts of the pinball machine carry high voltage, which can be harmful to health or even deadly!



Netzstecker ziehen!

Disconnect power plug!



Schutzbrille tragen!

Wear protective glasses!



Nur für Fachleute! Der Einbau der Teile darf nur von qualifizierten Personen durchgeführt werden. Unsachgemäßer Einbau kann das Teil, den Flipper oder Personen gefährden!

Only for experts! The installation of these parts may be carried out only by certified people. Improper installation can endanger the part, the pinball machine or people!



Einbauhinweise *Installation instructions*



Sicherheitshinweise beachten! Arbeite in einer sauberen Umgebung!

Follow safety instructions! Work in a clean environment!

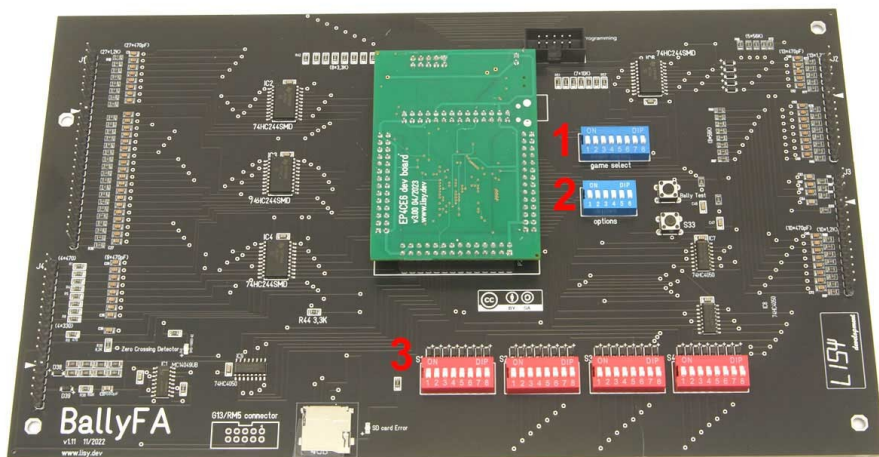
Ersetze die alte MPU durch das neue Board. Die Stecker und Befestigungslöcher sind identisch.

Replace the old MPU with the new board. The connectors and mounting holes are identical.

DIP Schalter Einstellungen *DIP switch settings*

Sämtliche DIP Schalter Einstellungen müssen stets im ausgeschalteten Zustand vorgenommen werden, damit sie dann beim nächsten Start übernommen werden.

All DIP switch settings must always be made when the device is turned off, so that they are then taken over on the next start.





Nr. 3 Flipper spezifisch / No. 3 Pinball-specific

Stelle die vier roten DIP Switches (Nr. 3) entsprechend der Vorgaben für Deinen Flipper ein. Die Angaben findest Du im Handbuch des Flippers.

Set the four red DIP switches (No. 3) according to the instructions for your pinball machine. You can find the information in the pinball's manual.

Nr. 2 Options

- Switch 1: On = Zero Cross Emulator (only for Tests)
- Switch 2: On = Save NVRAM content to EEPROM (only for Tests)
- Switch 3: Not used
- Switch 4: On = LED Antiflicker
- Switch 5: On = angeschlossenen Münzprüfer verwenden / *Use the connected coin validator*
- Switch 6: On = Reset Data in NVRAM (Highscores, ...)

Nr. 1 Game Select

No	game select								Game	Option
	S1	S2	S3	S4	S5	S6	S7	S8		
0	off	off	off	off	off	off	off	off	FREEDOM	
1	on	off	off	off	off	off	off	off	NIGHTRIDER	
2	off	on	off	off	off	off	off	off	EVELKNIEVEL	
3	on	on	off	off	off	off	off	off	EIGHTBALL	
4	off	off	on	off	off	off	off	off	POWERPLAY	
5	on	off	on	off	off	off	off	off	MATAHARI	
6	off	on	on	off	off	off	off	off	BLACKJACK	
7	on	on	on	off	off	off	off	off	STRIKES_SPARES	
8	off	off	off	on	off	off	off	off	LOSTWORLD	
9	on	off	off	on	off	off	off	off	6MILLIONMAN	
10	off	on	off	on	off	off	off	off	PLAYBOY	
11	on	on	off	on	off	off	off	off	VOLTAN	
12	off	off	on	on	off	off	off	off	SUPERSONIC	
13	on	off	on	on	off	off	off	off	STARTREK	
14	off	on	on	on	off	off	off	off	KISS	
15	on	on	on	on	off	off	off	off	PARAGON	
16	off	off	off	off	on	off	off	off	HARLEMGLOBE	
17	on	off	off	off	on	off	off	off	DOLLYPARTON	



17	on	off	off	off	on	off	off	off	DOLLYPARTON	
18	off	on	off	off	on	off	off	off	FUTURESPA	
19	on	on	off	off	on	off	off	off	NITROGROUND	
20	off	off	on	off	on	off	off	off	SILVERBALLMANIA	
21	on	off	on	off	on	off	off	off	SPACEINVADERS	
22	off	on	on	off	on	off	off	off	ROLLINGSTONES	
23	on	on	on	off	on	off	off	off	MYSTIC	
24	off	off	off	on	on	off	off	off	HOTDOGGIN	
25	on	off	off	on	on	off	off	off	VIKING	
26	off	on	off	on	on	off	off	off	SKATEBALL	
27	on	on	off	on	on	off	off	off	FRONTIER	
28	off	off	on	on	on	off	off	off	XENON	
29	on	off	on	on	on	off	off	off	FLASHGORDON	
30	off	on	on	on	on	off	off	off	8BALLDELUXE	
31	on	on	on	on	on	off	off	off	FIREBALLII	
32	off	off	off	off	off	on	off	off	EMRYRON	
33	on	off	off	off	off	on	off	off	FATHOM	
34	off	on	off	off	off	on	off	off	MEDUSA	
35	on	on	off	off	off	on	off	off	CENTAUR	
36	off	off	on	off	off	on	off	off	ELEKTRA	
37	on	off	on	off	off	on	off	off	VECTOR	
38	off	on	on	off	off	on	off	off	MR_MRSPACMAN	
39	on	on	on	off	off	on	off	off	SPECTRUM	
40	off	off	off	on	off	on	off	off	SPEAKEASY	
41	on	off	off	on	off	on	off	off	BMX	
42	off	on	off	on	off	on	off	off	GRANDSLAM	
43	on	on	off	on	off	on	off	off	GOLDBALL	
44	off	off	on	on	off	on	off	off	XandOs	
45	on	off	on	on	off	on	off	off	SPYHUNTER	
46	off	on	on	on	off	on	off	off	KINGSOFSTEEL	
47	on	on	on	on	off	on	off	off	BLACKPYRAMID	
48	off	off	off	off	on	on	off	off	FIREBALCLASSIC	
49	on	off	off	off	on	on	off	off	CYBERNAUT	
50	off	on	off	off	on	on	off	off	NIGHTRIDER	Freeplay
51	on	on	off	off	on	on	off	off	EVELKNIEVEL	Freeplay
52	off	off	on	off	on	on	off	off	EIGHTBALL	Freeplay
53	on	off	on	off	on	on	off	off	POWERPLAY	Freeplay
54	off	on	on	off	on	on	off	off	MATAHARI	Freeplay
55	on	on	on	off	on	on	off	off	BLACKJACK	Freeplay
56	off	off	off	on	on	on	off	off	STRIKES_SPARES	Freeplay
57	on	off	off	on	on	on	off	off	LOSTWORLD	Freeplay
58	off	on	off	on	on	on	off	off	6MILLIONMAN	Freeplay
59	on	on	off	on	on	on	off	off	PLAYBOY	Freeplay



60	off	off	on	on	on	on	off	off	VOLTAN	Freeplay
61	on	off	on	on	on	on	off	off	SUPERSONIC	Freeplay
62	off	on	on	on	on	on	off	off	STARTREK	Freeplay
63	on	on	on	on	on	on	off	off	KISS	Freeplay
64	off	off	off	off	off	off	on	off	PARAGON	Freeplay
65	on	off	off	off	off	off	on	off	HARLEMGLOBE	Freeplay
66	off	on	off	off	off	off	on	off	DOLLYPARTON	Freeplay
67	on	on	off	off	off	off	on	off	FUTURESPA	Freeplay
68	off	off	on	off	off	off	on	off	NITROGROUND	Freeplay
69	on	off	on	off	off	off	on	off	SILVERBALLMANIA	Freeplay
70	off	on	on	off	off	off	on	off	SPACEINVADERS	Freeplay
71	on	on	on	off	off	off	on	off	ROLLINGSTONES	Freeplay
72	off	off	off	on	off	off	on	off	MYSTIC	Freeplay
73	on	off	off	on	off	off	on	off	HOTDOGGIN	Freeplay
74	off	on	off	on	off	off	on	off	VIKING	Freeplay
75	on	on	off	on	off	off	on	off	SKATEBALL	Freeplay
76	off	off	on	on	off	off	on	off	FRONTIER	Freeplay
77	on	off	on	on	off	off	on	off	XENON	Freeplay
78	off	on	on	on	off	off	on	off	FLASHGORDON	Freeplay
79	on	on	on	on	off	off	on	off	8BALLDELUXE	Freeplay
80	off	off	off	off	on	off	on	off	FIREBALLII	Freeplay
81	on	off	off	off	on	off	on	off	EMRYRON	Freeplay
82	off	on	off	off	on	off	on	off	FATHOM	Freeplay
83	on	on	off	off	on	off	on	off	MEDUSA	Freeplay
84	off	off	on	off	on	off	on	off	CENTAUR	Freeplay
85	on	off	on	off	on	off	on	off	ELEKTRA	Freeplay
86	off	on	on	off	on	off	on	off	VECTOR	Freeplay
87	on	on	on	off	on	off	on	off	MR_MRSPACMAN	Freeplay
88	off	off	off	on	on	off	on	off	SPECTRUM	Freeplay
89	on	off	off	on	on	off	on	off	SPEAKEASY	Freeplay
90	off	on	off	on	on	off	on	off	BMX	Freeplay
91	on	on	off	on	on	off	on	off	GOLDBALL	Freeplay
92	off	off	on	on	on	off	on	off	XandOs	Freeplay
93	on	off	on	on	on	off	on	off	SPYHUNTER	Freeplay
94	off	on	on	on	on	off	on	off	KINGSOFSTEEL	Freeplay
95	on	on	on	on	on	off	on	off	BLACKPYRAMID	Freeplay
96	off	off	off	off	off	on	on	off	FIREBALCLASSIC	Freeplay
97	on	off	off	off	off	on	on	off	CYBERNAUT	Freeplay
98	off	on	off	off	off	on	on	off	6MILLIONMAN	6digit option
99	on	on	off	off	off	on	on	off	PLAYBOY	6digit option
100	off	off	on	off	off	on	on	off	VOLTAN	6digit option
101	on	off	on	off	off	on	on	off	SUPERSONIC	6digit option
102	off	on	on	off	off	on	on	off	STARTREK	6digit option
103	on	on	on	off	off	on	on	off	KISS	6digit option
104	off	off	off	on	off	on	on	off	PARAGON	6digit option



105	on	off	off	on	off	on	on	off	HARLEMGLOBE	6digit option
106	off	on	off	on	off	on	on	off	DOLLYPARTON	6digit option
107	on	on	off	on	off	on	on	off	FUTURESPA	6digit option
108	off	off	on	on	off	on	on	off	NITROGROUND	6digit option
109	on	off	on	on	off	on	on	off	SILVERBALLMANIA	6digit option
110	off	on	on	on	off	on	on	off	SPACEINVADERS	6digit option
111	on	on	on	on	off	on	on	off	ROLLINGSTONES	6digit option
112	off	off	off	off	on	on	on	off	MYSTIC	6digit option
113	on	off	off	off	on	on	on	off	HOTDOGGIN	6digit option
114	off	on	off	off	on	on	on	off	VIKING	6digit option
115	on	on	off	off	on	on	on	off	XENON	Special
116	off	off	on	off	on	on	on	off	EMBRYON	Special
117	on	off	on	off	on	on	on	off	VECTOR	Special
118	off	on	on	off	on	on	on	off	FATHOM	Special
119	on	on	on	off	on	on	on	off	NITROGROUND	Special w. Sirene Patch
120	off	off	off	on	on	on	on	off	not used	
121	on	off	off	on	on	on	on	off	not used	
122	off	on	off	on	on	on	on	off	not used	
123	on	on	off	on	on	on	on	off	not used	
124	off	off	on	on	on	on	on	off	not used	
125	on	off	on	on	on	on	on	off	not used	
126	off	on	on	on	on	on	on	off	not used	
127	on	on	on	on	on	on	on	off	not used	

Nachdem alle Einstellungen vorgenommen wurden, kann der Flipper eingeschaltet werden und ist nach ein paar Sekunden spielbereit. Mit etwas Geduld und Erfahrung sollte der Einbau des Boards kein allzu großes Problem sein.

Vielen Dank für den Kauf und viel Spaß wünscht

Dein Pinballcenter Team

After all settings have been made, the pinball machine can be turned on and will be ready to play after a few seconds. With some patience and experience, the installation of the board should not be too much of a problem.

Thank you for your purchase and have fun!

Your Pinballcenter Team

Weitere Informationen und Dokumentationen

Further information and documentation

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<https://www.lisy.dev>