

DOF to DOFLinx Device and Port assignments – Version 8.12

This guide is designed to help you understand the relationship between DOF settings and DOFLinx configuration. If you just have DOF installed for the drivers (ie using on a MAME cabinet), then you do not need a DOF setup so this is probably not relevant.

So, you have setup DOF and now want to translate those toys for use in DOFLinx. It is fairly easy once you get the hang of it.

Everywhere in DOFLinx the assignment of a toy needs a four digit assignment in the form of D000, where D is the device number and 000 is the output. For example, to setup the Left Flipper the line in the DOFLinx.INI configuration file will be:

LINK_LF=

For the parameter order and details see the full guide for each different line. In all cases, the first item will be the device/port. For my cabinet the line looks like:

LINK_LF=2017,50,5000,255

In the DOF Config Tool you setup each output controller you have and assign the toys. Each type of controller starts numbering from 1. So, if you have two LEDWiz and a Pinscape you will have LEDWiz #1, LedWiz #2 and Pinscape #1. You can see this in the screen shots below for my cabinet configuration.

The screenshot shows the DOF Config Tool interface. At the top, there is a dropdown menu labeled 'Device:' with the selected option 'Ledwiz 1 - directoutputconfigini'. Below this, there is a grid of 32 ports, each with a dropdown menu for assignment. The ports are arranged in two columns of 16. The first column (Port 1 to Port 16) has the following assignments: Extra Ball, Start Button, Coin, Exit, Coin, Coin, (empty), (empty), (empty), RGB Undercab Complex (highlighted in red), (empty), (empty), (empty), (empty), Shaker, Gear. The second column (Port 17 to Port 32) has the following assignments: Flipper Left, Slingshot Left, (empty), (empty), (empty), (empty), (empty), (empty), Kicker, Flipper Right, Slingshot Right, 10 Bumper Middle Left, 10 Bumper Middle Center, 10 Bumper Middle Right, 10 Bumper Back Left, 10 Bumper Back Center, 10 Bumper Back Right.

Port	Assignment	Port	Assignment
Port 1	Extra Ball	Port 17	Flipper Left
Port 2	Start Button	Port 18	Slingshot Left
Port 3	Coin	Port 19	(empty)
Port 4	Exit	Port 20	(empty)
Port 5	Coin	Port 21	(empty)
Port 6	Coin	Port 22	(empty)
Port 7	(empty)	Port 23	(empty)
Port 8	(empty)	Port 24	Kicker
Port 9	RGB Undercab Complex	Port 25	Flipper Right
Port 10	(empty)	Port 26	Slingshot Right
Port 11	(empty)	Port 27	10 Bumper Middle Left
Port 12	(empty)	Port 28	10 Bumper Middle Center
Port 13	(empty)	Port 29	10 Bumper Middle Right
Port 14	(empty)	Port 30	10 Bumper Back Left
Port 15	Shaker	Port 31	10 Bumper Back Center
Port 16	Gear	Port 32	10 Bumper Back Right

Device: **Ledwiz 2 - directoutputconfigini2**

Port 1	Strobe	Port 17	Beacon
Port 2		Port 18	5 Flasher Outside Left
Port 3		Port 19	
Port 4		Port 20	
Port 5		Port 21	5 Flasher Left
Port 6		Port 22	
Port 7		Port 23	
Port 8		Port 24	5 Flasher Center
Port 9	Shell Bell Small	Port 25	
Port 10	Chime Unit High Tone	Port 26	
Port 11	Chime Unit Mid Tone	Port 27	5 Flasher Right
Port 12	Chime Unit Low Tone	Port 28	
Port 13		Port 29	
Port 14		Port 30	5 Flasher Outside Right
Port 15		Port 31	
Port 16		Port 32	

Device: **Pinscape 1 - directoutputconfigini51**

Port 1		Port 34	
Port 2		Port 35	
Port 3		Port 36	
Port 4		Port 37	
Port 5		Port 38	
Port 6		Port 39	
Port 7		Port 40	

Device: **WS2811 1 - directoutputconfigini30**

Port 1	Combo1	Port 130	
Port 2		Port 131	
Port 3		Port 132	
Port 4	Combo3	Port 133	
Port 5		Port 134	
Port 6		Port 135	
Port 7		Port 136	
Port 8		Port 137	
Port 9		Port 138	
Port 10	Combo2	Port 139	
Port 11		Port 140	
Port 12		Port 141	

For DOFLinx the controller devices start being numbered at #1 and continue from there. This is with the exception of a Teensy / wemos controller used for addressable LEDs, that is not assigned a controller ID # by DOFLinx as you never link directly to the addressable LED toys.

The numbering for devices in DOFLinx starts with Pinscape Controllers, then LEDWiz, and works through all the other supported controllers. The easiest way to get the device numbers is to just look at DOFLinx's log screen / file.

```
26-Mar-20 17:14:10.803 - DOFLinx for Pinball Emulators - DOFLinx by DDH69
26-Mar-20 17:14:10.816 - Starting up - version 7.13
26-Mar-20 17:14:10.938 - For support come and visit the community here http://www.vpforums.org/index.php?showforum=104
26-Mar-20 17:14:10.949 - Pre-Reading DOFLinx.INI startup config file details
26-Mar-20 17:14:11.399 - DOFLinx device: 1 Initializing as Pinscape #1 with name=Pinscape Controller
26-Mar-20 17:14:11.432 - DOFLinx device:1 Pinscape setup with 24 outputs
26-Mar-20 17:14:11.457 - Reading DOFLinx.INI startup config file details
26-Mar-20 17:14:11.467 - Reading DirectOutputConfig file named c:\DirectOutput\config\directoutputconfig.ini
```

You can see that there is one output device, a Pinscape, with 24 outputs. This means that your toys can be connected to D=1 and OOO=001 to 024 in the format DOOO. So if your Right Flipper is connected to the Pinscape port #9 then your would use DOOO = 1009. The parameter line in your DOFLinx.ini would look something like:

LINK_RF=1009,50,5000,255

For my cabinet my DOFLinx log looks like this:

```
19-May-20 13:55:10.817 - Starting up - version 7.13 Beta 1
19-May-20 13:55:10.817 - For support come and visit the community here http://www.vpforums.org/index.php?showforum=104
19-May-20 13:55:10.832 - Pre-Reading DOFLinx.INI startup config file details
19-May-20 13:55:14.001 - DOFLinx device: 1 Initializing as Pinscape #1 with name=Pinscape Controller
19-May-20 13:55:14.001 - DOFLinx device:1 Pinscape setup with 22 outputs
19-May-20 13:55:14.001 - DOFLinx device: 2 Initializing as LEDWiz #1 with ID=1
19-May-20 13:55:14.001 - DOFLinx device:2 LEDWiz setup with 32 outputs
19-May-20 13:55:14.001 - DOFLinx device: 3 Initializing as LEDWiz #2 with ID=0
19-May-20 13:55:14.001 - DOFLinx device:3 LEDWiz setup with 32 outputs
19-May-20 13:55:14.017 - Reading DOFLinx.INI startup config file details
19-May-20 13:55:14.017 - Reading DirectOutputConfig file named c:\DirectOutput\config\directoutputconfig.ini
```

This means that for my pinball cabinet the devices in DOFLinx are:

Device #1 Pinscape

Device #2 = LEDWiz #1

Device #3 = LEDWiz #2

I can possibly have toys connected to D=1, 2 or 3. For the LEDWiz with 32 outputs OOO can be 001 to 032 inclusive. For the Pinscape OO can be 001 to 022. This gives 101-122, 201-232, 301-332 as valid outputs for my toys.

Do remember of course that RGB toys are specified by their RED port. So if you have RGB lighting connected to device #2 ports 9, 10, 11 for RED, GREEN and BLUE the RGB_OUTPUT= DOOO will be 2009, the RED port.

This means the translation from my DOF Configuration Tool setup to DOFLinx is (I only wrote enough numbers on there in lime green to show the pattern, I'm sure the rest is quite obvious):

Device: Ledwiz 1 - directoutputconfig.ini			
Port 1	Extra Ball	2001	▼
Port 2	Start Button	2002	▼
Port 3	Coin	2003	▼
Port 4	Exit		▼
Port 5	Coin	2005	▼
Port 6	Coin		▼
Port 7			▼
Port 8			▼
Port 9	RGB Undercab Complex	2009	▼
Port 10			▼
Port 11			▼
Port 12			▼
Port 13			▼
Port 14			▼
Port 15	Shaker		▼
Port 16	Gear		▼
Port 17	Flipper Left	2017	▼
Port 18	Slingshot Left	2018	▼
Port 19			▼
Port 20			▼
Port 21			▼
Port 22			▼
Port 23			▼
Port 24	Knocker	2024	▼
Port 25	Flipper Right		▼
Port 26	Slingshot Right		▼
Port 27	10 Bumper Middle Left		▼
Port 28	10 Bumper Middle Center		▼
Port 29	10 Bumper Middle Right		▼
Port 30	10 Bumper Back Left	2030	▼
Port 31	10 Bumper Back Center		▼
Port 32	10 Bumper Back Right		▼

Device:
Ledwiz 2 - directoutputconfigini2

Port 1	Strobe 3001	Port 17	Beacon
Port 2		Port 18	5 Flasher Outside Left 3018
Port 3		Port 19	
Port 4		Port 20	
Port 5		Port 21	5 Flasher Left 3021
Port 6		Port 22	
Port 7		Port 23	
Port 8		Port 24	5 Flasher Center
Port 9	Shell Bell Small 3009	Port 25	
Port 10	Chime Unit High Tone	Port 26	
Port 11	Chime Unit Mid Tone	Port 27	5 Flasher Right
Port 12	Chime Unit Low Tone	Port 28	
Port 13		Port 29	
Port 14		Port 30	5 Flasher Outside Right
Port 15		Port 31	
Port 16		Port 32	

Below is the main toy definition section of my current cabinet file.

LINK_LF=2017,50,5000,255
LINK_RF=2025,50,5000,255
LINK_LS=2018,50,500,255
LINK_RS=2026,50,500,255
LINK_ML=2027,50,500,255
LINK_MC=2028,50,500,255
LINK_MR=2029,50,500,255
LINK_BL=2030,50,500,255
LINK_BC=2031,50,500,255
LINK_BR=2032,50,500,255
LINK_SH=2015,1000,5000,255
LINK_GR=2016,750,10000,255
LINK_KN=2024,120,500,255
LINK_BE=2019,50,60,255
LINK_C1=3005,50,60,255
LINK_C2=3006,50,60,255
LINK_C3=3007,50,60,255
LINK_SR=3001,ON,0,255|
LINK_BK=3017,ON,0,255
LINK_FLOL=3018
LINK_FLIL=3021
LINK_FLCN=3024,3002
LINK_FLIR=3027
LINK_FLOR=3030