

DBA Fooler

Pulse DBA to serial data (V1.40 Firmware)

Overview :

The DBA fooler has been designed to allow the use of pulse DBAs on gaming systems that normally require a serial data stream of varying protocols. The DBA fooler counts the pulses in and then emulates the appropriate serial data stream for the game.

So far, the following Protocols and games are supported :

Protocols - ID003, ID003-WMS, ID004, MEI

BAUD Rates - 600, 1200, 2400, 9600

Games - WMS 360, 3601, 550, Blue Bird, Blue Bird NXT

Infinity

Quarter Masters QIB-5

Bally Alpha Board Sets

Pot 'O Gold (POG)

The games listed are ones that have been tested to be functional, but others that use the standard protocols should work also.

Operation :

Once the DIP Switches are set for the appropriate DBA emulation, operation is pretty straight forward. Pulses in from the DBA are counted until they time out, the value of those pulses is calculated, and the largest bill denominations that are possible are sent to the game board. The values are sent to optimize the speed of reception.

CAUTION! There are two versions of the DBA Fooler PCB, TTL and RS-232. The most common type is the TTL and you will see TTL listed in the setting info. The two boards are **NOT** interchangeable and the improper board may cause damage to the DBA Fooler, the game PCB or both. The RS-232 version is clearly marked as such. The TTL board either has no markings, or is marked TTL on the PCB. The last page has pictures of each type for positive ID.

Pin Out :

The pinout varies by emulation mode. The following are the most common IO connections.

J2 has the same functions no matter the emulation settings.

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J2	1	/Credit Pulse In
	2	Ground
	3	+5VDC Out
	4	Unused Open Collector Output
	5	Key
	6	DBA Enable Out (Open Collector Active Low)

WMS 360 / 3601 22 Pin DBA Connector

DBA Fooler type = TTL

DBA Fooler Switch Settings = SW 5,6,8 ON

Game should be set to MEI (Mars) Bill Acceptor type with any DBA jumpers set to TTL.

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	/EN Input
	4	TXD Data Out of the DBA Fooler
	5	/INT Output
	6	RXD Data Into the DBA Fooler
	7	/SEND input
	8	Not Used

A wiring harness is available to connect directly to the back plane, but if you want to connect to the existing wires the following color codes are available in most cabinets.

<u>DBA Fooler J1</u>	<u>WMS Pin/Wire Color</u>
1 (+12VDC)	
2 (GND)	
3 (/EN)	11 (360 Red/Black) (3601 Red/Green)
4 (TXD)	8 (360 Red/Orange) (3601 Red/Orange)
5 (/INT)	10 (360 Red/Brown) (3601 Red/Yellow)
6 (RXD)	
7 (/SEND)	9 (360 Red / Yellow) (3601 Red)

WMS 550 22 Pin DBA Connector (J17)

Requires DBA Follower V1.37 or better

DBA Follower type = RS-232

DBA Follower Switch Settings = SW 3,4,5 ON

Game should be set to JCM *IF* it can be set at all. JCM ID-003WMS seems to be the default for most software. ***You must use the RS-232 DBA Follower with this game.***

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	Not Used
	4	TXD Data Out of the DBA Follower
	5	Not Used
	6	RXD Data Into the DBA Follower
	7	Not Used
	8	Not Used

A wiring harness is available to connect directly to the back plane, but if you want to connect to the existing wires the following color codes are available in most cabinets. The Wiring harness is for the TTL version of the PCB **ONLY**.

<u>DBA Follower J1 RS-232</u>	<u>WMS Pin/Wire Color</u>
1 (+12VDC)	Yellow on PS
2 (GND)	Black on PS
3 (Not Used)	
4 (TXD)	4 (Red/Brown)
5 (Not Used)	
6 (RXD)	3 (Red/Black)
7 (Not Used)	
8 (Not Used)	

You may need to ground the various interlock signals that are on J17 Pins 12, 13, and 14, depending on your firmware. Pins 15 and 16 are grounds. So far, I have not been required to do so for normal operation.

WMS Blue Bird NXT 1.5Board (No separate IO board) 22 Pin DBA Connector
Requires DBA Follower firmware V1.30 or higher
DBA Follower type = TTL
DBA Follower Switch Settings = SW 3,4,5,6 ON

Game Should be set for JCM (ID003-WMS) Bill Acceptor Type
DBA Jumpers on CPU board should be set to TTL (***NOT RS-232***)

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	/EN input Not Used
	4	TXD Data Out of the DBA Follower
	5	/Enable Output
	6	RXD Data Into the DBA Follower
	7	Not Used
	8	Not Used

We have a wiring harness available for the Blue Bird NXT back plane, but you can wire in directly using these connections. There is no +12V available in this board's connector, you will need to wire the power lines to the appropriate connections on the power supply.

DBA Follower J1

- 1 (+12VDC)
- 2 (GND)
- 3 (/EN In)
- 4 (TXD)
- 5 (/EN Out / CTS)
- 6 (RXD)
- 7 (/SEND / RTS)
- 8

WMS NXT Backplane

- Connect to Power Supply
- Connect to Power Supply
- Not Used
- 8
- 10
- 7
- 9
- Not Used

WMS Blue Bird 18 Pin DBA Connector

Requires DBA Follower V1.30 Or better

DBA Follower type = TTL

DBA Follower Switch Settings = SW 3,4,5,6 ON

Game should be set to JCM (ID003-WMS) Bill Acceptor type.

DBV Jumpers on the Back Plane should be set to the following :

JP1 TTL

JP2 CL

JP3 TTL

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	/EN input Not Used
	4	TXD Data Out of the DBA Follower
	5	/Enable Output
	6	RXD Data Into the DBA Follower
	7	Not Used
	8	Not Used

We have a wiring harness available for the Blue Bird back plane, but you can wire in directly using these connections.

<u>DBA Follower J1</u>	<u>WMS Blue Bird DBA Pin</u>
1 (+12VDC)	12
2 (GND)	13
3 (/EN In)	Not Used
4 (TXD)	3
5 (/EN Out)	17
6 (RXD)	4
7 (/SEND)	Not Used
8	Not Used

Infinity TTL

Requires DBA Follower V1.10 or better

DBA Follower type = TTL

DBA Follower Switch Settings = SW 4,7 ON

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	Not Used
	4	TXD Data Out of the DBA Follower
	5	Not Used
	6	RXD Data Into the DBA Follower
	7	Not Used
	8	Not Used

These are the connections to the 9 Pin Molex DBA Connector

DBA Follower J1

- 1 (+12VDC)
- 2 (GND)
- 3 (/EN)
- 4 (TXD)
- 5 (/EN Out)
- 6 (RXD)
- 7 (/SEND)
- 8

Infinity DBA Connector

- 6
- 3
- Not Used
- 7
- Not Used
- 8
- Not Used
- Not Used

Quarter Masters QIB-5 Board

Requires DBA Follower V1.10 or better

DBA Follower type = TTL

DBA Follower Switch Settings = SW 5,6,8 ON

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	/EN Input
	4	TXD Data Out of the DBA Follower
	5	/INT Output
	6	RXD Data Into the DBA Follower (Not Used)
	7	/SEND input
	8	Not Used

DBA Follower J1

- 1 (+12VDC)
- 2 (GND)
- 3 (/EN)
- 4 (TXD)
- 5 (/INT)
- 6 (RXD)
- 7 (/SEND)

Quarter Masters Pin/Wire Color

- 11 Part Side (Red)
- 7 Part Side (White)
- 7 Solder Side (Blue)
- Not Used
- 5 Solder Side (Yellow)

Bally Alpha Board Sets

Requires DBA Fooler V1.31 or better

DBA Fooler type = RS-232

DBA Fooler Switch Settings = SW 3,4,5,6 ON

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	/EN input (Not Used)
	4	RS-232 TXD Data Out of the DBA Fooler
	5	RS-232 /Enable Output (Not Used)
	6	RS-232 RXD Data Into the DBA Fooler
	7	Not Used
	8	Not Used

We have a wiring harness available for the Bally Alpha back plane, but you can wire in directly using these connections.

DBA Fooler J1

- 1 (+12VDC)
- 2 (GND)
- 3 (/EN In)
- 4 (TXD)
- 5 (/EN Out)
- 6 (RXD)
- 7 (/SEND)
- 8

Bally Alpha P4 (BILL VAL. COM2)

- 1
- 2
- Not Used
- 5
- Not Used
- 4
- Not Used
- Not Used

Note : Pins 8 to 9 and 10 to 11 on P4 should be jumpered together to trick the unit into thinking the stacker is installed.. If Pin 1 of P4 does not have power applied (+12VDC), you will need to tap into one of the unused drive connectors on the power supply.

TX-VLC 8825

Requires DBA Fooler V1.36 or better

DBA Fooler type = TTL

DBA Fooler Switch Settings = SW 3,4,6 ON

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	/EN input Not Used
	4	TXD Data Out of the DBA Fooler
	5	/Enable Output
	6	RXD Data Into the DBA Fooler
	7	Not Used
	8	Not Used

DBA Fooler J1

- 1 (+12VDC)
- 2 (GND)
- 3 (/EN In)
- 4 (TXD)
- 5 (/EN Out)
- 6 (RXD)
- 7 (/SEND)
- 8

VLC 8825 J5

- Not Used
- 3
- Not Used
- 8
- Not Used
- Not Used

If the game comes up with stacker or cash door open errors short the following signals together :

J15 Pins 1&2, 5&6, and 7&8

Pot 'O Gold (POG) Boards and Compatibles

Requires DBA Fooler V1.40 or better

DBA Fooler type = TTL

DBA Fooler Switch Settings = SW 6,8 ON

Set Machine for "Serial 1" DBA Type

<u>Connector</u>	<u>Pin</u>	<u>Function</u>
J1	1	+12VDC Power In
	2	Ground Power In
	3	/EN Input
	4	TXD Data Out of the DBA Fooler
	5	/INT Output
	6	RXD Data Into the DBA Fooler (Not Used)
	7	/SEND input
	8	Not Used

DBA Fooler J1

1 (+12VDC)

2 (GND)

3 (/EN)

4 (TXD)

5 (/INT)

6 (RXD)

7 (/SEND)

POG Edge Connector

Power Supply

Power Supply

9 Solder Side

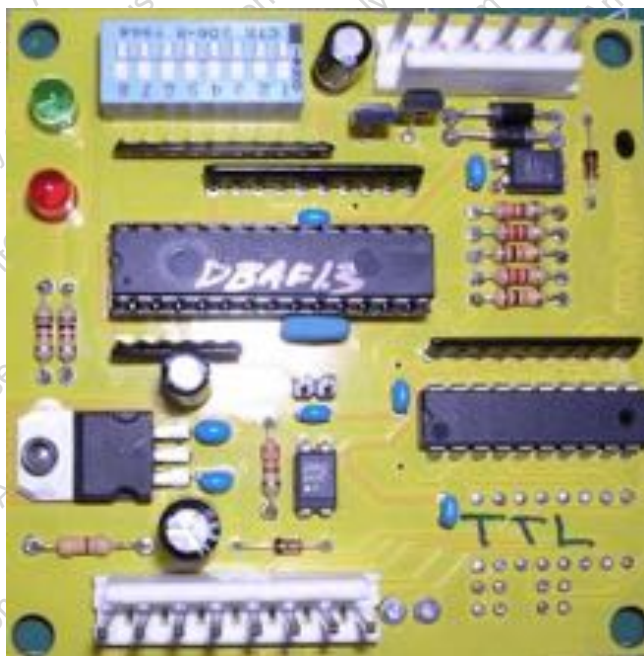
11 Solder Side

17 Component Side

Not Used

25 Solder Side

TTL Version



RS-232 Version

