

MULTI CREDIT BOARD MK3 - Application Note - SKILL TESTER
 Requires "Skill Tester Credit Board" or "Universal Credit Board".
 Compatible with previous Multi Credit "Skilltester" credit boards.

EDGE CONNECTOR PINOUT

Component Side	Solder Side
1 Move Forward button (S.T. pin 4)	
2 -	
3 Service credit switch	
4 10c coin switch input*	
5 20c coin switch input*	
6 50c coin switch input*	
7 \$1 coin switch input*	
8 \$2 coin switch input*	
9 +12 volts DC	
10 Lockout sense (S.T. pin 11)	
11 Alarm output	
12 Coin Meter output	
13 -	
14 Display Panel DATA	
15 Display panel CLOCK	
16 Credit out COM. (S.T. pin 12)	
17 -	
18 Credit out N.O. (S.T. pin 8)	
19 Power " input, 12 volts DC	
20 " " " " " " " "	
21 Ground	
22 " " " " " " " "	

*Used for non-NRI installation. See under for NRI.

NRI CONNECTOR

The 10 pin box header can be connected to the NRI G.13.0004 or G.13.1002 coin mechanisms, for 10c, 20c, 50c/NZ, \$1, \$2 and 1 TOKEN/ credit operation. Australia:- Disable the 5c channel of the NRI by means of the internal dip switch. Set sw 1 ON

ANTENNA. The optional static pickup antenna is a length of wire about 1/2 meter long. The length of the wire and its proximity to the cabinet wiring harness will determine the sensitivity of the static reset function. Operation is indicated by on-board LED.

BONUS RESET by START BUTTON. Pin 1, solder side should be connected as shown to the Move Forward button input of the Skill Tester Game Board, pin 4.

BONUS RESET by 30 Second TIMER. Connect credit board Pin 1 permanently to Ground, instead of to Move Forward button. Bonus system will reset 30 seconds after the insertion of the last coin.

COIN METER. All coin registrations are accumulated as 10 cent units on a single coin meter. Connect coin meter (+) lead to +12 volts, (-) lead to pin 12. No protection diode is needed, as one is built into the credit board.

ALARM Anti Stringing Alarm. This open collector output may be connected to a general purpose Piezo Screamer, (-) lead to pin 11, (+) lead to +12 volt supply.

DISPLAY DATA, CLOCK For optional 6 digit LED money/credit display.

DIP SWITCH SETTINGS

N = on, F = off

DIP SW	1st credit, bonus credits	DIP SW	1st credit, bonus credits
12345678		12345678	
FFFFFFF	10c=1	FFFFFFF	80c=1, \$2=3, \$5=8
FNFNFNF	20c=1	FNFNFNF	\$1=1
FFNFNF	20c=1, 40c=3	FFNFNF	\$1=1, \$2=3
FNFNFNF	20c=1, \$1=6	FNFNFNF	\$1=1, \$2=3, \$3=5
FNFNFNF	20c=1, \$1=7	FNFNFNF	\$1=1, \$2=3, \$5=8
FNFNFNF	40c=1	FNFNFNF	\$1=1, \$2=3, \$4=7
FNFNFNF	40c=1, 60c=2, 80c=3, \$1=4	FNFNFNF	\$1=1, \$2=3, \$4=7, \$5=10
FNFNFNF	40c=1, \$1=3	FNFNFNF	\$1=1, \$3=4
FNFNFNF	40c=1, \$1=3, \$2=7	FNFNFNF	\$2=1
FNFNFNF	40c=1, \$1=3, \$2=8	FNFNFNF	\$2=1, \$3=2
FNFNFNF	40c=1, \$1=3, \$2=9	FNFNFNF	\$2=1, \$3=2, \$5=4
FNFNFNF	40c=1, \$1=4	FNFNFNF	\$2=1, \$4=3
FNFNFNF	40c=1, \$1=4, \$2=9	FNFNFNF	\$2=1, \$4=3, \$5=5
FNFNFNF	40c=1, \$1=5	FNFNFNF	\$3=1
FNFNFNF	50c=1	FNFNFNF	\$3=1, \$5=2
FNFNFNF	50c=1, \$2=5	FNFNFNF	\$3=1, \$5=2, \$10=5
FNFNFNF	50c=1, \$1=3	FNFNFNF	\$4=1
FNFNFNF	50c=1, \$1=3, \$2=7	FNFNFNF	\$4=1, \$10=3
FNFNFNF	60c=1	FNFNFNF	\$4=1, \$8=3, \$12=5
FNFNFNF	60c=1, \$1=2	FNFNFNF	\$5=1
FNFNFNF	60c=1, \$1=2, \$2=5	FNFNFNF	\$5=1, \$8=2
FNFNFNF	60c=1, \$1=2, \$3=7, \$4=10	FNFNFNF	\$5=1, \$10=3
FNFNFNF	80c=1	FNFNFNF	\$5=1, \$10=3, \$15=5
FNFNFNF	80c=1, \$2=3	FNFNFNF	DISPLAY TEST

MULTI CREDIT BOARD Mk 3 - Application Note - 2 Channel Credit Board Emulation

Requires Universal Credit or 4 Channel Credit board. For new installations, follow "4 Directly substitutes for Multi Credit Mk2 "2 Channel Credit Board" in existing installations. Channel Credit" Application Note, and leave 3rd and 4th player functions un-connected.

EDGE CONNECTOR PINOUT

DIP SWITCH SETTINGS

N = on, F = off

Comp Side	Solder Side	DIP SW	1st credit, bonus credits	DIP SW	1st credit, bonus credits
1	Player 1 Take credit switch	12345678	10c=1	12345678	80c=1, \$2=3, \$5=8
2	Service credit switch input	FFFFFNN	20c=1	FFNFNNN	\$1=1
3	10c coin switch input	FFNFNNN	20c=1, 40c=3	FFNFNNN	\$1=1, \$2=3
4	20c coin switch input	FFNFNNN	20c=1, \$1=6	FFNFNNN	\$1=1, \$2=3, \$3=5
5	Player 2 Take credit switch	FFNFNNN	20c=1, \$1=7	FFNFNNN	\$1=1, \$2=3, \$5=8
6	\$1 coin switch input	FFNFNNN	40c=1, 60c=2, 80c=3, \$1=4	FFNFNNN	\$1=1, \$2=3, \$4=7
7	\$2 coin switch input	FFNFNNN	40c=1, \$1=3	FFNFNNN	\$1=1, \$2=3, \$4=7, \$5=10
8	Antenna	FFNFNNN	40c=1, \$1=3, \$2=7	FFNFNNN	\$2=1
9	Reset Out	FFNFNNN	40c=1, \$1=3, \$2=8	FFNFNNN	\$2=1, \$3=2
10	Coin Meter output	FFNFNNN	40c=1, \$1=3, \$2=9	FFNFNNN	\$2=1, \$3=2, \$5=4
11	Credit Output Player 1	FFNFNNN	40c=1, \$1=4	FFNFNNN	\$2=1, \$4=3
12	Display Panel DATA	FFNFNNN	40c=1, \$1=4, \$2=9	FFNFNNN	\$2=1, \$4=3, \$5=5
13	Display Panel CLOCK	FFNFNNN	40c=1, \$1=4, \$2=10	FFNFNNN	\$3=1
14	Ground	FFNFNNN	40c=1, \$1=5	FFNFNNN	\$3=1, \$5=2
15	Power input, 8 to 15 volts DC	FFNFNNN	50c=1	FFNFNNN	\$3=1, \$5=2, \$10=5
16	Ground	FFNFNNN	50c=1, \$2=5	FFNFNNN	\$3=1, \$5=2, \$8=4, \$10=6
17	Ground	FFNFNNN	50c=1, \$1=3	FFNFNNN	\$4=1
18	Ground	FFNFNNN	50c=1, \$1=3, \$2=7	FFNFNNN	\$4=1, \$10=3
19	Ground	FFNFNNN	60c=1	FFNFNNN	\$4=1, \$8=3, \$12=5
20	Ground	FFNFNNN	60c=1, \$1=2	FFNFNNN	\$5=1
21	Ground	FFNFNNN	60c=1, \$1=2, \$2=5	FFNFNNN	\$5=1, \$8=2
22	Ground	FFNFNNN	60c=1, \$1=2, \$3=7, \$4=10	FFNFNNN	\$5=1, \$10=3
		FFNFNNN	80c=1	FFNFNNN	\$5=1, \$10=3, \$15=5
		FFNFNNN	80c=1, \$2=3	FFNFNNN	DISPLAY TEST

The 10 pin box header may be connected to the NRI G.13.0004 or G.13.1002 coin mechanisms. For 10c, 20c, \$1, \$2 and 1 TOKEN/ 1 credit operation. Disable the 5c channel of the NRI by means of the internal dip switch. Set switch 1 ON

OPERATION The Take Credit lamps both flash when credit is established, and the optional display panel shows the value of coins inserted and the current credit available to be taken. Each time a Take Credit button is pressed, one credit pulse is sent via the Credit Output to the respective Player 1 or 2 coin input of the game. The game should be set for 1 coin-1 game. The credit lamps remain lit without flashing as long as un-used credit remains. Once the required credit has been established in the game, the game is started by pressing the normal start buttons.

LAMP DRIVER. Capable of driving to GND the return circuit of 2x 12volt lamps inside the 2x Take Credit buttons.

ANTENNA. The optional static pickup antenna is a length of wire about 1/2 meter long. The length of the wire and its proximity to the cabinet wiring harness will determine the sensitivity of the static reset function. Operation is indicated by the on-board LED.

RESET OUT. This is an open collector, active low output which may be connected to the game board RESET input. If the game board is not provided with a reset input, a PCB technician could add the input to your game board, via an unused edge connector pin.

COIN METER. All coin registrations are accumulated as 10 cent units on a single coin meter. Connect coin meter (+) lead to +12 volts, (-) lead to pin 12. A protection diode is not necessary, it is built into the credit board.

DISPLAY DATA, CLOCK For optional 6 digit LED money/credit display or 2 digit credit display.

Requires Universal Credit or 4 Channel Credit Board

Used to allow 2, 3 or 4 Player Games single coin entry, shared credit.

EDGE CONNECTOR

Comp Side Solder Side

Comp Side	Solder Side	DIP SW	1st credit, bonus credits	DIP SW	1st credit, bonus credits
P3 Credit switch	P1 Credit switch	12345678		12345678	
P4 Credit switch	P2 Credit switch	10C=1		80C=1, \$2=3, \$5=8	
	Service credit switch	10C=1		10C=1	
	10c coin switch input *	20C=1		20C=1	
	20c coin switch input *	40C=1, 40C=3		40C=1, \$2=3	
	50c coin switch input *	20C=1, \$1=6		20C=1, \$2=3, \$3=5	
	\$1 coin switch input *	20C=1, \$1=7		20C=1, \$2=3, \$5=8	
	\$2 coin switch input *	40C=1, 60C=2, 80C=3, \$1=4		40C=1, \$2=3, \$4=7, \$5=10	
Credit Lamp output	Alarm output	40C=1, \$1=3		40C=1, \$3=4	
	Coin Meter output	40C=1, \$1=3, \$2=7		40C=1, \$2=1, \$3=2	
	P1 Credit Out	40C=1, \$1=3, \$2=8		40C=1, \$3=2, \$5=4	
P3 Credit Out	Display Panel DATA	40C=1, \$1=3, \$2=9		40C=1, \$4=3	
P4 Credit Out	Display Panel CLOCK	40C=1, \$1=4		40C=1, \$4=3	
Ext NRI lock out (Gnd)		40C=1, \$1=4, \$2=9		40C=1, \$4=3, \$5=5	
		40C=1, \$1=4, \$2=10		40C=1, \$5=2	
		50C=1, \$1=5		40C=1, \$5=2, \$10=5	
Power input, 12 volts	Power input, 12 volts	50C=1, \$2=5		40C=1, \$5=2, \$10=6	
"	"	50C=1, \$1=3		40C=1, \$4=1	
Ground	Ground	50C=1, \$1=3, \$2=7		40C=1, \$10=3	
		60C=1		40C=1, \$8=3, \$12=5	
		60C=1, \$1=2		40C=1, \$5=1	
		60C=1, \$1=2, \$2=5		40C=1, \$8=2	
		60C=1, \$1=2, \$3=7, \$4=10		40C=1, \$10=3	
		80C=1		40C=1, \$10=3, \$15=5	
		80C=1, \$2=3		DISPLAY TEST	

*Used for non-NRI installation. See under for NRI.

NRI CONNECTOR

The 10 pin box header may be connected to the NRI G.13.0004 or G.13.1002 coin mechanisms, for 10c, 20c, NZ 50c, \$1, \$2 and 1 Token/credit operation. Australia - disable the 5c channel of the NRI by means of the internal DIP switch. Set switch 1 ON

OPERATION. After credit is gained, LAMP flashes, DISPLAY shows total value of coins in \$-c and the current credit. Each press of a player Credit button sends one credit to that player's Credit Output. Lamp stops flashing and remains lit until all credit is taken.

ANTENNA. The optional static pickup antenna is a length of wire about 1/2 meter long. The length of the wire and its proximity to the cabinet wiring harness will determine the sensitivity of the static reset function. Operation is indicated by the on-board LED.

SPARK RESET OUT. This is an open collector, active low output which may be connected to the game board RESET input. If the game board has no reset input, a PCB technician could add the input to your game board, via an unused edge connector pin.

COIN METER. All coin registrations are accumulated as 10 cent units on a single coin meter. Connect coin meter between 12 volts and Coin Meter Output (SI2). No diode is needed, the credit board contains an internal protection diode.

ALARM Anti Stringing Alarm, triggered if coin switch closed > 150ms. This open collector output may be connected to a general purpose Piezo Screamer, (-) lead to pin S11, (+) lead to +12 volt supply. Alternatively it may be connected to a game board RESET input, so that stringing causes game to immediately reset, and stay reset for 10 seconds.

DISPLAY DATA, CLOCK For optional 6 digit LED money/credit display or 2 digit credit display.