

EXPANSION CABLE Version A (standard)

(red wire is 1)	func	(arduino)	(GVG J2)
1	Br	22	20
2	D4	23	10
3	D3	24	19
4	Dw	25	9
5	Lw	26	18
6	D5	27	8
7	D2	28	17
8	Ac	29	7
9	D1	30	16
10	D6	31	6
11	D0	32	15
12	Ar	33	5
13	W3	34	14
14	D7	35	4
15	W2	36	13
16	TALLY 10	37	n/c
17	W1	38	12
18	TALLY 9	39	n/c
19	W0	40	11
20	GPIO0	41	n/c
21	TALLY 1	42	n/c
22	TALLY 2	43	n/c
23	TALLY 3	44	n/c
24	TALLY 4	45	n/c
25	TALLY 5	46	n/c
26	TALLY 6	47	n/c
27	TALLY 7	48	n/c
28	TALLY 8	49	n/c
29	SPI: MISO	50	n/c
30	SPI: MOSI	51	n/c
31	SPI: SCK	52	n/c
32	SPI: SS	53	n/c
33	GND	54	n/c
34	GND	55	n/c
35	n/c	n/c	n/c
36	n/c	n/c	n/c

This ribbon cable is used when no *Serial Option* or *Extended Tally* is installed.

The original cable had the Controller connector in the centre, the GVG J2 at one end and the opposite end unterminated for *user specific* connections (eg GPIO and Tallies 1 to 10).

The revised cable had the GVG J2 connector at the centre and the Controller connector at one end with the opposite end unterminated

The 34 pin IDC connector does not connect to the first 2 pins (p20, p21) of the 36 pin Controller board and connects via a 34 pin male to male adaptor.

(36 pin IDC connector are not available)

EXPANSION CABLE Version B (peripheral)

(red wire is 1)	func	(arduino)	(GVG J2)	DB 37
1 *	+5v	20	n/c	1
2 *	+5v	21	n/c	20
3	Br	22	20	2
4	D4	23	10	21
5	D3	24	19	3
6	Dw	25	9	22
7	Lw	26	18	4
8	D5	27	8	23
9	D2	28	17	5
10	Ac	29	7	24
11	D1	30	16	6
12	D6	31	6	25
13	D0	32	15	7
14	Ar	33	5	26
15	W3	34	14	8
16	D7	35	4	27
17	W2	36	13	9
18	TALLY 10	37	n/c	28
19	W1	38	12	10
20	TALLY 9	39	n/c	29
21	W0	40	11	11
22	GPIO0	41	n/c	30
23	TALLY 1	42	n/c	12
24	TALLY 2	43	n/c	31
25	TALLY 3	44	n/c	13
26	TALLY 4	45	n/c	32
27	TALLY 5	46	n/c	14
28	TALLY 6	47	n/c	33
29	TALLY 7	48	n/c	15
30	TALLY 8	49	n/c	34
31	SPI: MISO	50	n/c	16
32	SPI: MOSI	51	n/c	35
33	SPI: SCK	52	n/c	17
34	SPI: SS	53	n/c	36
35	GND	54	n/c	18
36	GND	55	n/c	37
37	n/c	n/c	n/c	19

This ribbon cable is used when a *Serial Option* or *Extended Tally* is installed.

It has the GVG J2 connector at the centre with the Controller connector at one end and the opposite end terminated on a 37 pin 'D' female connector.

As 36 pin IDC connector are not available, p20, p21 (+5v) have their own special connector. This allows both 5 volts and ground available on the DB 37 connector to power external devices.

The wires with the * marked are connected to a separate 2 pin SIL female connector.