PC-DNC FAQs

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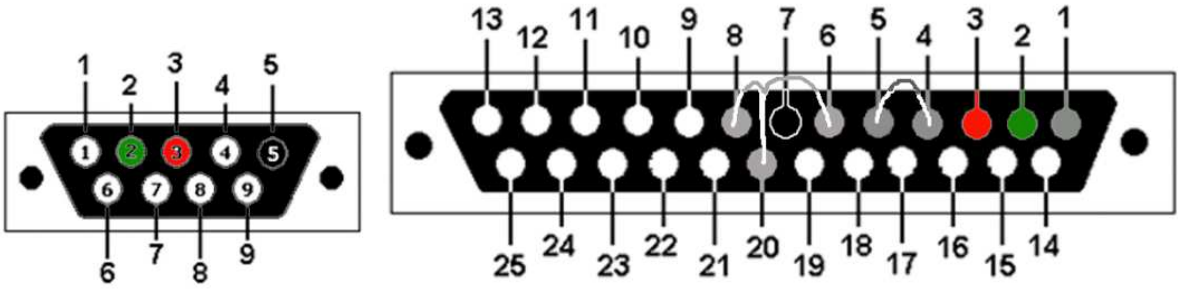
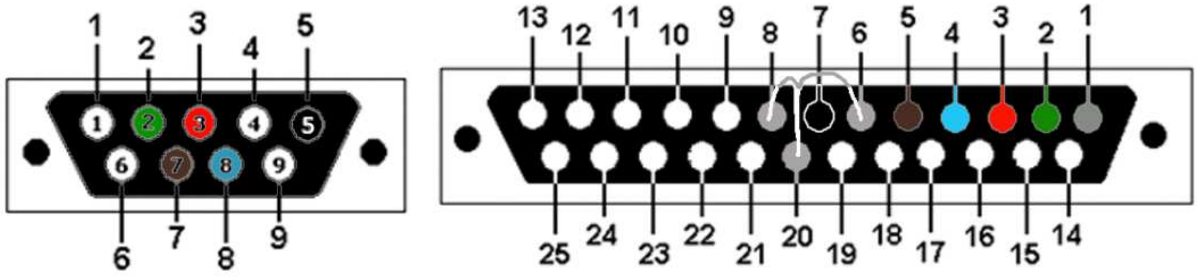
Pinout 1: No Handshake

Jumper?	DB-9 PC (Female)	Wire	DB-25 CNC (Male)	Jumper?
	(Disconnected)	**Shield**	1	
	2 (Receive Data)	**Green**	2 (Transmit Data)	
	3 (Transmit Data)	**Red**	3 (Receive Data)	
	5 (Signal Ground)	**Black**	7 (Signal Ground)	
			4 (RTS) 5 (CTS)	JUMPER
			6 (DSR) 8 (DCD) 20 (DTR)	JUMPER



Pinout 2: Partial Handshake (RTS/CTS Only)

Jumper?	DB-9 PC	Wire	DB-25 CNC	Jumper?
	(Disconnected)	**Shield**	1	
	2 (Receive Data)	**Green**	2 (Transmit Data)	
	3 (Transmit Data)	**Red**	3 (Receive Data)	
	5 (Signal Ground)	**Black**	7 (Signal Ground)	
	7 (RTS)	**Brown**	5 (CTS)	
	8 (CTS)	**Blue**	4 (RTS)	
			6 (DSR) 8 (DCD) 20 (DTR)	JUMPER



Suburban Machinery Software, Inc.
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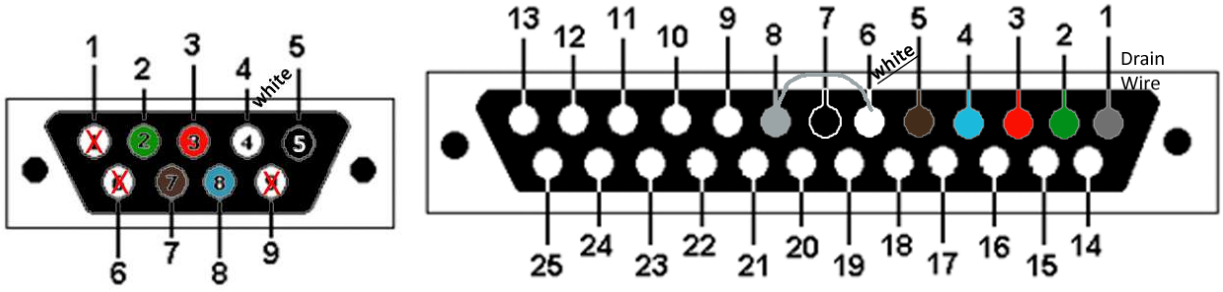
Pinout 3A: Full Handshake (RTS/CTS & DTR)

Jumper?	DB-9 PC (Female)	Wire	DB-25 CNC (Male)	Jumper?
	(Disconnected)	**Shield**	1	
	2 (Receive Data)	**Green**	2 (Transmit Data)	
	3 (Transmit Data)	Red	3 (Receive Data)	
	5 (Signal Ground)	**Black**	7 (Signal Ground)	
	7 (RTS)	**Brown**	5 (CTS)	
	8 (CTS)	**Blue**	4 (RTS)	
	4 (DTR)	**White**	6 (DSR) 8 (DCD)	JUMPER



Pinout 3B: Full Handshake (RTS/CTS & DTR/DSR)

Jumper?	DB-9 PC	Wire	DB-25 CNC	Jumper?
	(Disconnected)	**Shield**	1	
	2 (Receive Data)	**Green**	2 (Transmit Data)	
	3 (Transmit Data)	**Red**	3 (Receive Data)	
	5 (Signal Ground)	**Black**	7 (Signal Ground)	
	7 (RTS)	**Brown**	5 (CTS)	
	8 (CTS)	**Blue**	4 (RTS)	
	4 (DTR)	**White**	6 (DSR) 8 (DCD)	JUMPER
JUMPER	1 (DCD) 6 (DSR)	**(OTHER COLOR)**	20 (DTR)	

Black Box's pre-constructed cables use Pinout 3B. WE MAKE NO DISTINCTION BETWEEN PINOUTS 3A AND 3B. In our system, we never look at pins 1 or 6 on the PC side, so it makes no difference if we use that wire or not. With our standard 6 conductor cable we don't have enough wires to connect it anyway, so we leave it out.

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Here is when it is ok to use each cable (items in yellow are functional, but "less preferred")

	PC-DNC plus or PC-DNC Editor (Wait for XON)	PC-DNC Editor (Send Now)*
Any Fanuc with RS232	1,2,3	1,2
Fanuc 30i/31i/32i (any), 0i (D or later), 16i/18i/21i (B or later) with DR Signal Off problem even though 6-8-20 jumper is present	3	NOT POSSIBLE
Yasnac MX-1/LX-1, MX-2/LX-2, MX-3/LX-3, I80, J30	1,2,3	1,2,3***
Yasnac I80 or J30 (drip feeding)	2,3	2,3***
Mazak	1,2,3	1,2,3***
Mazak (drip feeding)	2,3	2,3***
Siemens	2,3	2,3***
Haas**	1,2,3	1,2,3
Fadal**	1,2,3	1,2,3
Mitsubishi	1,2,3	1,2,3***
Mitsubishi (drip feeding)	2,3	2,3***
Brother	2,3	2,3***
Okuma	1,2,3	1,2,3***

*Remember – you can't use SEND NOW when drip feeding. This column refers only to transfer in/out of memory. When drip feeding, use Wait for XON or the DNC button in PC-DNC Editor.
** Haas and Fadal machines need only 2, 3, and 7. Pinout 1 doesn't even need the 4/5 and 6/8/20 jumpers.
*** Parameter to disable DR signal check required to use pinout 3. These devices do NOT permit the use of pinout 3 with the SEND NOW button in their default state.

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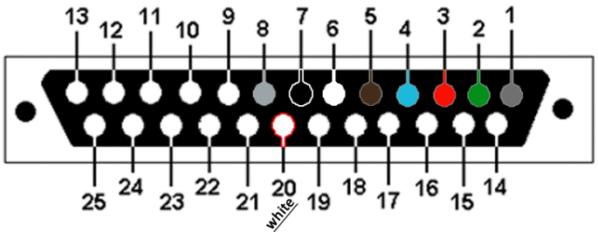
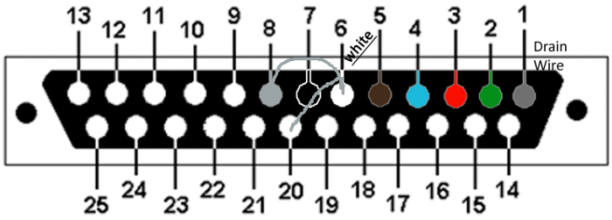
Optical Isolator Special Pigtail:

Jumper?	DB-25 Isolator	Wire	DB-25 CNC	Jumper?
	(Disconnected)	**Shield**	(Disconnected)	
	2 (Receive Data)	**Green**	2 (Transmit Data)	
	3 (Transmit Data)	**Red**	3 (Receive Data)	
	4 (RTS)	**Blue**	4 (RTS)	
	5 (CTS)	**Brown**	5 (CTS)	
	7 (Signal Ground)	**Black**	7 (Signal Ground)	
	20 (POWER IN)	**White**	6 (DSR) 8 (DCD) 20 (DTR)	JUMPER

Isolator Side (DB 25 Male)



CNC Side (DB25 Male)



Optical Isolator Cable Compatibility:

	Pinout 1	Pinout 2	Pinout 3A/B
DB25 Straight Through	***Haas Only*** - Always requires power supply	*Haas Only* – Usually ok, but sometimes requires power supply	*Haas Only*
Special Pigtail	Always requires power supply	Usually ok, but sometimes requires power supply	All Machines

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