

SERIAL INTERFACE FOR TRANSFER
OF TRANSACTION DATA FROM GILBARCO CONSOLES

--- PROTOCOL SPECIFICATION ---

D00301-006

A4

part no.	DT00102-663	part name	SPEC'SERIAL I/F PROTOCOL 6shts	date	15/5/89	issue	A	page	1/6
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CONTENTS

OVERVIEW	3
OPERATING PROCEDURE	3
SPECIFICATIONS	
Interface Signals	4
Interface Handshake	4
Data Format	5
Message Format	5
Protocol Timing	6
ERROR PROCESSING	6

DQ00301-006

A4

part no.	DT00102-663	part name	SPEC SERIAL I/F PROTOCOL 6shts	date	15/5/89	issue	A	page	2/6
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OVERVIEW

This document specifies the hardware and communications protocol of the RS 232 serial I/F between a Gilbarco console e.g. T24 or T12AC and peripheral equipment for transfer of post-paid transaction data.

OPERATING PROCEDURE

The transfer is initiated at the console by the operator pressing a payment key that has been programmed to transfer data to a peripheral device. Each console provides a method of transaction completion and programming. Refer to console manuals.

If the transfer is successful the console will complete the transaction by updating its totals. The data cannot be re-transferred.

If the transfer is unsuccessful the console will NOT complete the transaction and re-attempts to transfer can be made by repeated pushing of the payment key.

DQ00301-006
A4

part no.	DT00102-663	part name	SPEC SERIAL I/F PROTOCOL 6shts.	date	15/5/89	issue	A	page	3/6
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The logo for Gilbarco, featuring the word "Gilbarco" in a bold, sans-serif font, with "AUST LTD" in smaller text underneath.

SPECIFICATIONS

Interface Signals:

The I/F uses RS232 compatible signals. The console is configured as a data terminal (DTE) type equipment.

A GILBARCO manufactured cable is provided for connection to the peripheral equipment.

Current available product cables are:

T12AC to P.O.S. terminal (model 1810) DN 04161

T24 to P.O.S. terminal (model 1810) DN 04823

T24 to P.C. (with BREEZE interface) DN 04958

Refer attached drawings.

Interface Handshake:

The console will attempt to transfer data with the following procedure;

1) Check CTS -

- if high, transfer is attempted.
- if low, fails transfer immediately.

2) If CTS high, up to 5 tries will be attempted with each try consisting of;

- transmission of data.
- wait for ACK/NAK (wait time = 40 millsec).

If ACK received, transfer is completed.

If NAK received or timeout, transfer retried up to 5 tries.

DQ0001-006 A4

part no. DT00102-663	part name SPEC SERIAL I/F PROTOCOL	date 15/5/89	issue A	page 4/6
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Data Format:

The transfer of data is from the console to peripheral equipment only, however the communications link is bi-directional to allow for ACK/NAK responses.

Each block of data will start with a start of text (STX) and end with an end of text (ETX) followed by a longitudinal checksum character (LRC). All data within the block will consist of numeric characters only.

The LRC is 1 character and is the exclusive OR of all characters in the message block, excluding STX but including ETX. It is initialised to 00 hex.

Message Format:

Transaction data		bytes	range

STX		1	02
Pump No	MSD 1st(01 to 24)	2	30 - 39
* Grade No	(1 to 8)	1	31 - 38
Cash amount	MSD 1st(\$xxx.xx)	5	30 - 39
Vol. amount	MSD 1st(xxx.xx1)	5	30 - 39
PPU	MSD 1st(xxx.xc/1)	4	30 - 39
ETX		1	03
LRC		1	00 - 7F

			20 bytes

* Grade numbers are allocated at the console to correspond to grade names which may be on-site programmed..

DQ0301-006

A4

part no.	DT00102-663	part name	SPEC'SERIAL I/F PROTOCOL 6shts	date	15/5/89	issue	A	page	5/6
----------	-------------	-----------	--------------------------------	------	---------	-------	---	------	-----

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Protocol Timing:

Baud	4800
Start bit	1
Stop bit	1
Parity	even
Data	7 bit ASCII
Type	Async.
T/round	immediate
T/out	40 millsec.
retry	5 times

where:

T/out	=	maximum time console waits for a ACK/NAK.
T/round	=	minimum time from console receiving NAK and sending STX of a retry.
	=	minimum time from peripheral equipment detecting an error or receiving the LRC character and sending ACK or NAK.

ERROR PROCESSING

The console will automatically retry up to 5 times to successfully transfer a block of data each time the PAID key is pushed and ignore the attempt if unsuccessful.

Each console provides a method of finalising a transaction if the transfer of data cannot be completed. Refer console manuals.

DQ00301-006

A4

SYM. NO.	CHANGE NO.	DATE	BY
1	A	11/07/88	
2	B	11/06/89	
3	C	11/07/89	

SYM. NO. 0104823

CUT CABLE ITEM 5 INTO 40mm LENGTHS. QTY 4 REQ'D.

POINT OF SALE

40

DUMMY PIN

CUT IN TWO

AMP

TO PIN 5 ON T24 END

CUT CABLE ITEM 6, INTO 30mm LENGTHS. QTY 3 REQ'D.

CABLE PART OF ITEM 2.

T24 CONSOLE

NOTES:

1. AT T24 CONNECTOR END FOLD 13mm (APPROX) OF BRAID BACK OVER HEATSHRINK AND CLAMP UNDER FERRULE ITEM 8 TRIM EXCESS. AT OTHER END TRIM BRAID AT CABLE INSULATION. AND PLACE IN PLASTIC BAG (ITEM 1) SUITABLY SEAL, WRITE DESCRIPTION AND PART NO. AS PER TITLE BLOCK BELOW.
2. ROLL UP CABLE ASSEMBLY
3. DO NOT STRIP WIRES MARKED 1/6
4. FERRULE (ITEM 8) MUST BE CRIMPED ONTO CABLE.

WIRING DETAILS	
COLOUR OF WIRE	25D
BLUE	25D
ORANGE	2
GREEN	3
GREY	7
YELLOW	5
BROWN	N/C
BLACK	N/C
WHITE	N/C
VIOLET	N/C
DUMMY PIN INSERTED	9
	10
	18
	25

WIRING DETAILS	
COLOUR OF WIRE	25D
BLUE	25D
ORANGE	2
GREEN	3
GREY	7
YELLOW	5
BROWN	N/C
BLACK	N/C
WHITE	N/C
VIOLET	N/C
DUMMY PIN INSERTED	9
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WIRING DETAILS	
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