



**Model 560-5141-6
db-9 Passive Output Interface Manual**

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SECTION ONE

1. GENERAL INFORMATION

1.1. PURPOSE OF EQUIPMENT

The TrueTime Model 560-5141-6 db9 Passive Output Interface provides the output interface for a compatible front function card. The six pairs of \pm Outputs are fed directly through the backplane connector from the front function card. The output signals are distributed via 55 ohm traces to six db9 connectors at the rear panel for use in differential mode with 120 ohm balanced termination. There are two ground pins associated with each pair of \pm Outputs.

1.1.1. PHYSICAL SPECIFICATIONS

Dimensions: 0.8" w X 4.4" h X 5.0" d (2 cm X 11 cm X 13 cm)
Weight: Approximately 1/2 pound (1/4 kg)

1.1.2. ENVIRONMENTAL SPECIFICATIONS

Operating Temp: 0° to +50°C
Storage Temp: -40° to +85°C
Humidity: Up to 95% relative, non-condensing
Cooling Mode: Convection

1.1.3. POWER REQUIREMENTS

Power: None

1.1.4. FUNCTIONAL SPECIFICATIONS

1.1.4.1. OUTPUT CONNECTOR

Type: db9
Quantity: 6
Pinout:
Pin 4 & 7 GND Pin 8 -Output
Pin 3 +Output

1.1.4.2. DRC CARD COMPATIBILITY

Location: Slot 1-17 with compatible function card in front slot.
Compatibility: See Card Compatibility Matrix.

SECTION TWO

2. INSTALLATION AND OPERATION

2.1. HOT-SWAPPING

All cards, input cables and output cables are hot swappable. It is not necessary to remove chassis power during insertion or removal. The system is designed to protect against permanent effects and minimize any temporary effects of hot swapping.

2.2. REMOVAL AND INSTALLATION

CAUTION: Individual components on this card are sensitive to static discharge. Use proper static discharge procedures during removal and installation.

Refer to CARD COMPATIBILITY section prior to installing new card.

To remove card, loosen the captive retaining hardware at the top and bottom of the assembly, then firmly pull on the handle (or on any connector on rear panel adapter cards) at the bottom of the card. Slide the card free of the frame. Refer to the SETUP section for any required switch settings; or, set them identically to the card being replaced. Reinstall the card in the frame by fitting it into the card guides at the top and bottom of the frame and sliding it in slowly, avoiding contact between bottom side of card and adjacent card front panel, until it mates with the connector. Seat card firmly to avoid contact bounce. Secure the retaining screws at the top and bottom of the card assembly.

2.3. SETUP

This card has no setup requirements.

2.4. FAULT INDICATION

This card has no fault indication.

2.5. MAINTENANCE

This card has no maintenance requirements.

SECTION THREE

3. THEORY OF OPERATION

3.1. GENERAL INFORMATION

This section contains a detailed description of the circuits in the Passive Output card. These descriptions should be used in conjunction with the drawings in SECTION FOUR.

3.2. HARDWARE DESCRIPTION

The Passive Output card incorporates 6 9-pin db9 connectors. Each set of connector pins includes a complementary \pm Output pair with ground pins on either side for shielding and impedance-control within the cable.

3.3. DETAILED DESCRIPTION

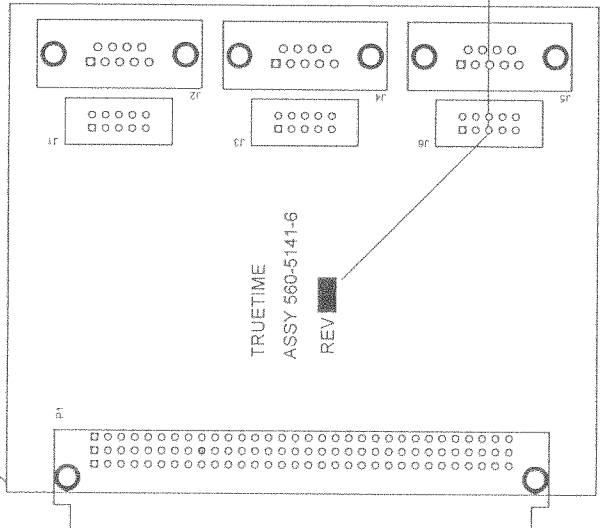
Reference drawing 560-5141-6. Each connector pin is sourced via the backplane connector from individual drivers on the front function card via 55 ohm controlled-impedance traces on the Passive Output card. The PCB traces are optimized for driving a pair of wires with 120 ohm characteristic impedance and 120 ohm balanced termination.

SECTION FOUR

4. DETAILED DRAWINGS

4.1. 560-5141-6 DETAILED DRAWINGS / BILL OF MATERIALS

NOTES: UNLESS OTHERWISE SPECIFIED
 1. RESISTORS ARE IN OHMS AND CAPACITORS ARE IN MICRO FARADS
 2. STAMP REVISION LEVEL.
 3. ASSEMBLE PER ASSEMBLY REQUIREMENTS
 DOCUMENT 421-11.



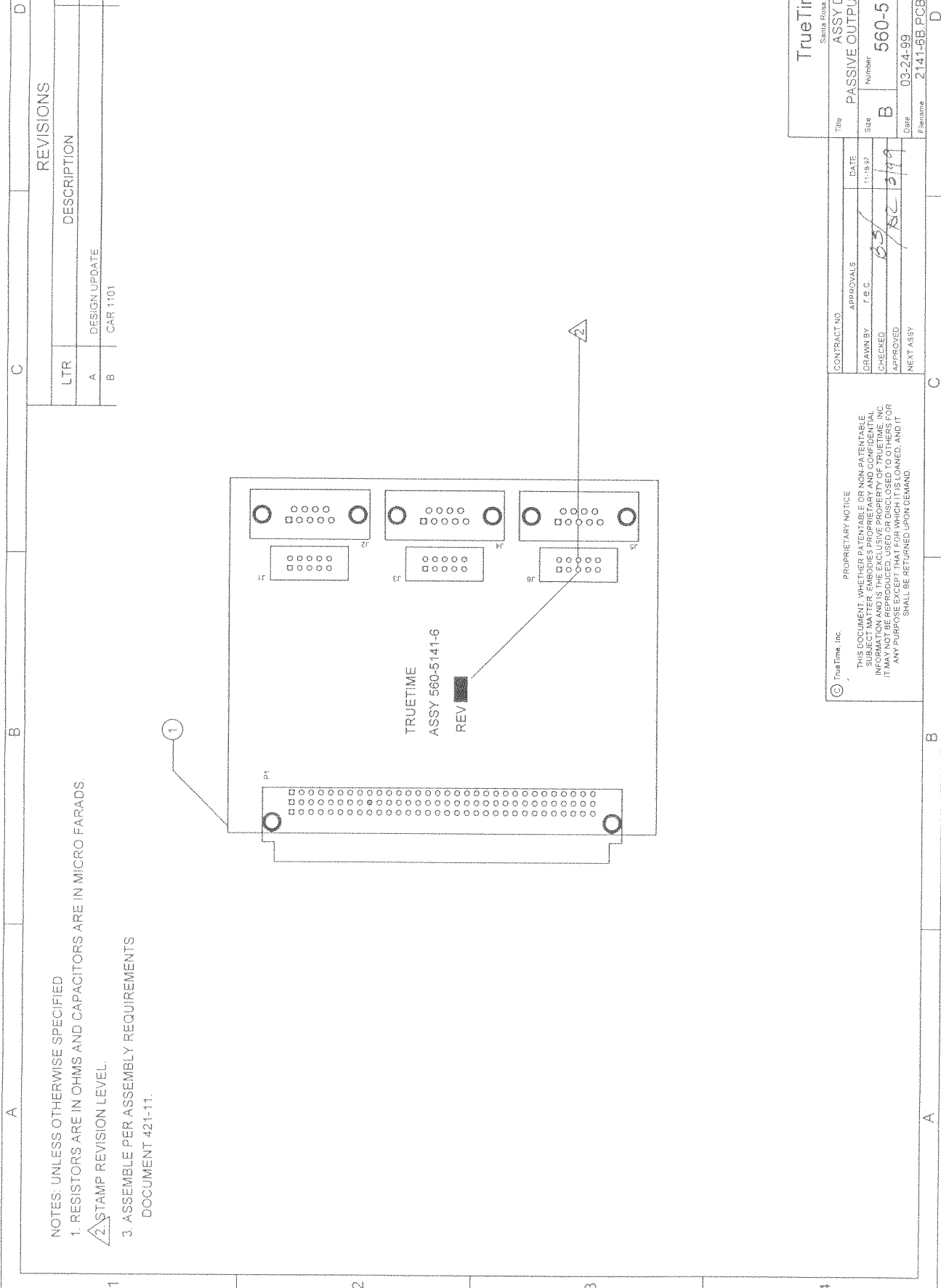
TRUETIME
 ASSY 560-5141-6
 REV

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	DESIGN UPDATE	1-27-98	
B	CAR 1101	03-24-99	B3/SC

TrueTime, Inc. Santa Rosa, California	
Title	ASSY DRAWING
Contract No.	PASSIVE OUTPUT INTERFACE, DB9
Drawn By	
Checked	B
Approved	B3/SC
Next Assy	
Size	560-5141-6
Rev	B
Date	03-24-99
Filename	2141-6B.PCB
Sheet	1 of 3

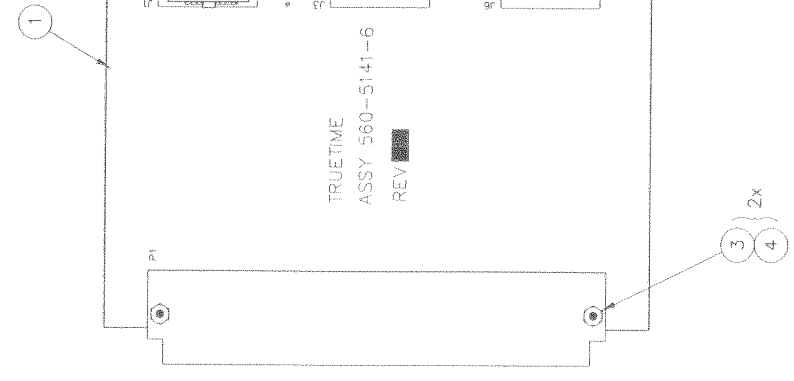
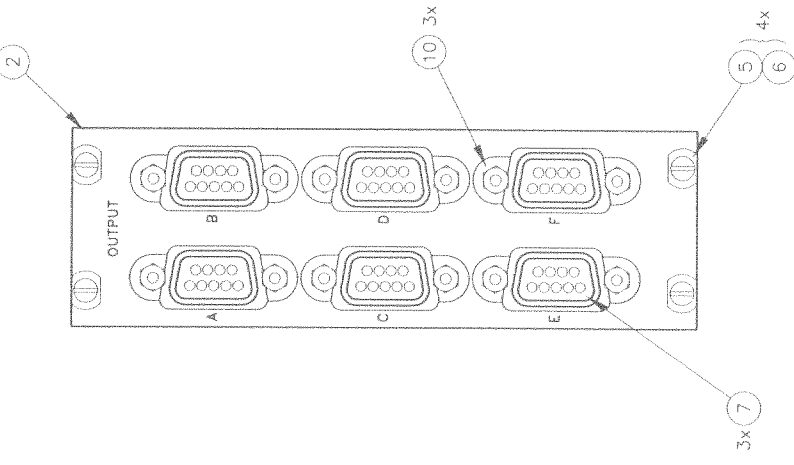
CONTRACT NO.	DATE
APPROVALS	11-18-97
DRAWN BY	r.e.c.
CHECKED	B3/SC
APPROVED	B3/SC
NEXT ASSY	

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TOP ROW VIEW

BOTTOM ROW VIEW



SIZE	CODE	IDENT NO.	DRAWING NO.	REV
B			560-5141-6	B
SCALE: NONE				SHEET 2 OF 3

FILENAME: \560\5141-6
 DATE: 03-24-99

MAX * BILL OF MATERIALS * SINGLE-LEVEL EXPLOSION BY PART IDENTIFIER W/REFERENCE

PART IDENTIFIER	DESCRIPTION 1	DESCRIPTION 2	EFF DATE	ECN #	QTY/ASSY	UOM	REV LVL	REFERENCE DESCRIPTION
560-5141-6	PASSIVE OUT INTFC,DB9	MADE FROM 560-2141-6					EA	
0000-APPROVAL	PARTS LIST APPROVAL		000000		1.0000		EA	<i>RE 3/99</i>
0000-PL	PARTS LIST REV LEVEL		000000		1.0000		EA	REV B (03-25-99)
0000-PRINT	REFERENCE PRINT		000000		1.0000		EA	560-5141-6 REV B
0000-REV	PCB REV LEVEL HERE >>>>		000000		1.0000		EA	560-2141-6 REV B
223-138	SCREW SH CH ZN M2.5X10	SCHROFF #21100-138	000000		2.0000		EA	03
223-144	NUT M2.5	SCHROFF #21100-144	000000		2.0000		EA	04
223-379	SCREW CAP NP M2.5 X 11	SCHROFF #21100-379	000000		4.0000		EA	05
223-464	SLEEVE, STAINLESS	SCHROFF 21100-660	000000		4.0000		EA	06
372-09F	CONN 9-P D-SUB RT ANG FM	SEE BOM NAV NOTES	000000		3.0000		EA	J2,4,5
372-609-003	JACK SOCKET SET OF 2	THOMAS & BETTS 609-003	000000		3.0000		EA	FOR J2,4,5
372-96RA	CONN,96-P FM DIN RT ANGLE	BERG 68353-296	000000		1.0000		EA	P1
386-010P	CONN 10-P MALE PCB	THOMAS & BETTS 609-1027	000000		3.0000		EA	J1,3,6
392-6002	CABLE ASSY MULTICODE		000000		3.0000		EA	07
560-1246	PANEL,REAR HEX DB9	FAB/SCREEN	000000		1.0000		EA	02
560-2141-6	PCB PASSIVE OUT INTFC,DB9	FAB	000000		1.0000		EA	01
LA	LABOR ASSEMBLY COST HRS		000000		0		EA	
LT	LABOR TEST COST HOURS		000000		0		EA	
OSV560-5141-6	OUTSIDE LABOR 560-5141-6	PCA	000000		1.0000		EA	