



**Model 560-5141-3  
Twinax/Triax Passive Output Interface Manual**

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# SECTION ONE

## 1. GENERAL INFORMATION

### 1.1. PURPOSE OF EQUIPMENT

The TrueTime Model 560-5141-3 Twinax/Triax Passive Output Interface provides the output interface for a compatible front function card. The 6 pairs of  $\pm$ Outputs are fed directly through the backplane connector from the front function card. The output signals are via 6 concentric twinax/triax connectors at the rear panel for use in differential mode with balanced termination.

#### 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: TROMPETER BJ77 Concentric  
Twinax/Triax Jack  
Quantity: 6  
Pinout:  
Center Conductor: +Output  
Inner Shield: -Output  
Outer Shield: Signal/Chassis GND  
Mating Connector: TROMPETER PL75 Plug

##### 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 concentric twinax/triax connectors, each with a center conductor, inner shield and outer shield. These are intended to be used with either twinax or triax cables with impedances in the 80-120 ohm range.

#### 3.3. DETAILED DESCRIPTION

Reference drawing 560-5141-3. Each connector pin is sourced via the backplane connector from individual drivers on the front function card via controlled-impedance traces on the Passive Output card. The PCB traces are optimized for driving a pair of wires with 100 ohm characteristic impedance and 100 ohm balanced termination.

## **SECTION FOUR**

### **4. DETAILED DRAWINGS**

#### **4.1. 560-5141-3 DETAILED DRAWINGS / BILL OF MATERIALS**

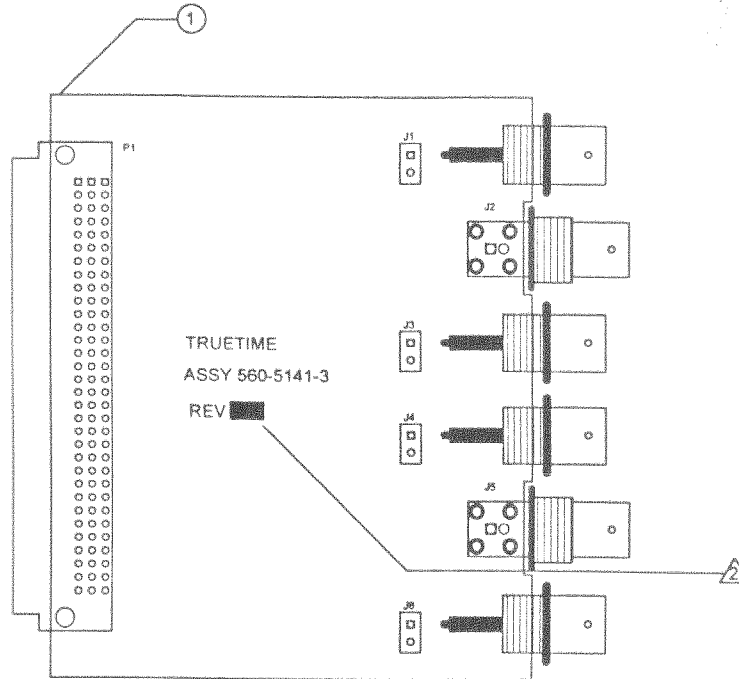
NOTES: UNLESS OTHERWISE SPECIFIED

1. RESISTORS ARE IN OHMS AND CAPACITORS ARE IN MICRO FARADS.

2. STAMP REVISION LEVEL.

3. ASSEMBLE PER ASSEMBLY REQUIREMENTS DOCUMENT 421-11.

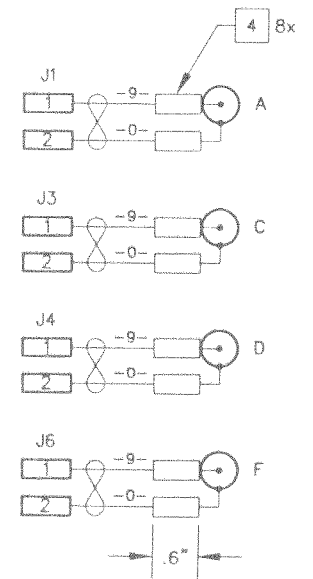
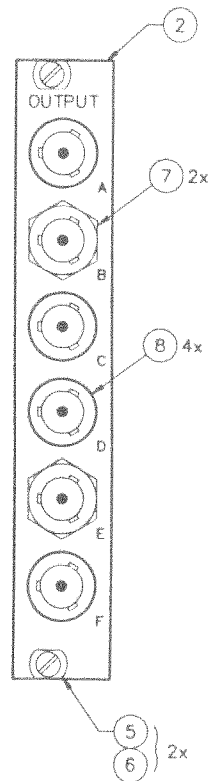
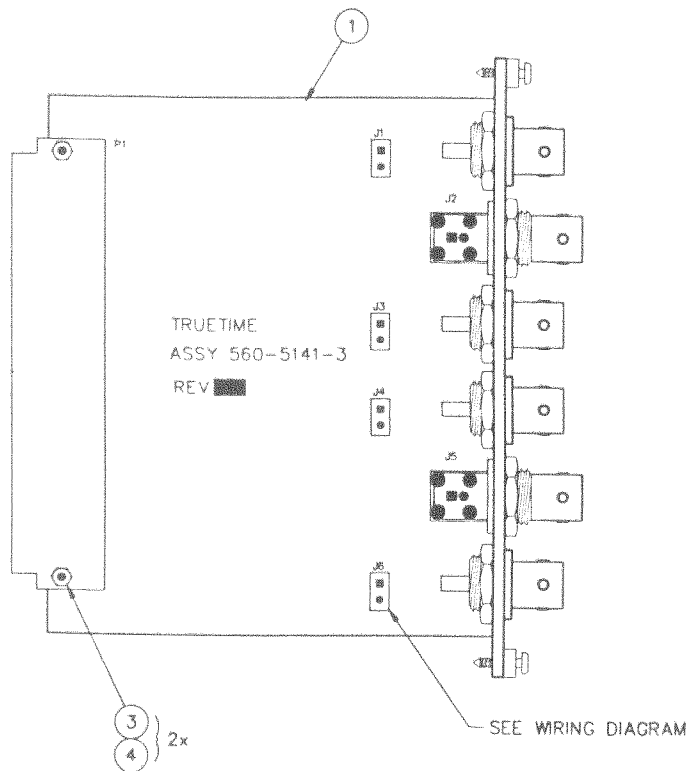
REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	DESIGN UPDATE	9-23-97	
B	ADD SHRINK TUBING TO BOM & WIRING DETAIL	4-27-98	<i>S.B.K.</i>



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CONTRACT NO.	APPROVALS	DATE
	<i>S.B.K.</i>	4/27/98
DRAWN BY	CHECKED	APPROVED
		<i>S.B.K.</i>
NEXT ASSY		

TrueTime, Inc. Santa Rosa, California		
Title ASSY DRAWING PASSIVE OUTPUT INTERFACE, TWINAX		
Size B	Number 560-5141-3	Rev B
Date 04-27-98	S.B.K.	
Filename 2141-3A.PCB	Sheet 1 of 3	



WIRING DIAGRAM

4 ADD SHRINK TUBING AS SHOWN (326-006).

NOTES: (Cont'd)

FILENAME: \560\5141-3  
DATE: 04-27-98

NEXT ASSY

<b>TrueTime</b> <small>These Custom Solutions are our Highest Priority 2835 Duke Ct. Santa Rosa, CA 95407</small>			
SIZE	CODE IDENT NO.	DRAWING NO.	REV
B		560-5141-3	B
SCALE NONE			SHEET 2 OF 3



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
560-5141-3	PASSIVE DUT INTFC TWINAX	MADE FROM 560-2141-3					EA	
0000-APPROVAL	PARTS LIST APPROVAL		0000		1.0000		EA	<u>DE 4/27/98</u>
0000-PL	PARTS LIST REV LEVEL		0000		1.0000		EA	REV B (04-27-98)
0000-PRINT	REFERENCE PRINT		0000		1.0000		EA	560-5141-3 REV B
0000-REV	PCB REV LEVEL HERE >>>>		0000		1.0000		EA	560-2141-3 REV A
223-138	SCREW SH CH ZN M2.5X10	SCHROFF #21100-138	0000		2.0000		EA	03
223-144	NUT M2.5	SCHROFF #21100-144	0000		2.0000		EA	04
223-379	SCREW CAP NP M2.5 X 11	SCHROFF #21100-379	0000		2.0000		EA	05
223-464	SLEEVE, STAINLESS	SCHROFF 21100-660	0000		2.0000		EA	06
315-022-000	WIRE 22AWG PVC INS BLK/WT	UL1429-22-7/30/21TWIST/FT	0000		0.5000	FT		SEE WIRING
326-006	SHRINK TUBING BLK 3/8 IN	PANQUIT HSTT38-48-Q	0000		0.5000	FT		SEE WIRING
372-96RA	CONN, 96-P, FM DIN RT ANGLE	BERG 68353-296	0000		1.0000		EA	P1
375-BJ77	CONN TWINAX BULKHD 3 LUG	TROMPETER BJ77	0000		4.0000		EA	08 (J1,3,4,6)
375-CBBJR79	CONN, TRIAX PC MT, RT ANG	TROMPETER CBBJR79	0000		2.0000		EA	07 (J2,5)
560-1240	PANEL, REAR TWINAX	FAB/SCREEN	0000		1.0000		EA	02
560-2141-3	PCB REAR CONN TWINAX	FAB	0000		1.0000		EA	01
LA	LABOR ASSEMBLY COST HRS		0000		0		EA	
LT	LABOR TEST COST HOURS		0000		0		EA	
DSV560-5141-3	OUTSIDE LABOR 560-5141-3	PCA	0000		1.0000		EA	