



**INSTALLATION AND OPERATION
LEVEL 1
AUTOMATIC A/B SWITCHES
T1,TB8,RJ,BNC&DS3 SERIES**

SCOPE OF THIS DOCUMENT

This document covers the following models:

- | | | | | | |
|----------|------------|-------------|---------------|----------|-----------|
| K-AB-T1 | K-AB-T1-R | K-AB-BNC | K-AB-BNC-R | | |
| K-AB-TB8 | K-AB-TB8-R | K-AB-HZ-BNC | K-AB-HZ-BNC-R | | |
| K-AB-RJ6 | K-AB-RJ6-R | K-AB-RJ8 | K-AB-RJ8-R | K-AB-DS3 | K-AB-DS3R |

For the purposes of clarity, all above models are referred to as "K-AB-T1".

Card Nest

K-AB-R-12 Universal 12 position card nest for all K-AB-T1 cards above and all other K-AB cards.

GENERAL DESCRIPTION

Dataprobe's Relay Controlled A/B Switches, (K-AB-T1) permits automatic, remote or manual switching of a Common line between two circuits, A or B. Multiple relays are used to switch the following circuit types:

- T1: 15 Pin D Subminiature Connectors; Transmit Pair, Receive Pair and Shield Ground Pair.
- RJ6: 6 Position, 6 Wire Modular Jacks; All leads switched. Supports RJ11, RJ11C.
- RJ8: 8 Position, 8 Wire Modular Jacks; All leads switched. Supports RJ48C, RJ48S, RJ45 and all 8 position modular jack specifications.
- TB8: 8 Wire Miniature Clamping Screw Terminals.
- BNC: BNC Type Co-Axial Connector, Female.
- HZ-BNC: Hi- frequency module, BNC Type Co-Axial Connector, Female - 50 or 75 ohm
- DS3: Same as above but with special Dual BNC Module, individual transmit and receive circuits 45 Mhz .

When the relays are in the relaxed position, the Common Port is connected to Port A (Position A). When a selected external control signals is supplied, the relays are energized and the Common Port is connected to Port B (Position B). The K-AB-T1 returns to the A Position when the de-energize conditions are met.

REF: MMANUALSK1\KABT1-DS3_V011010D

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Input Selection

The K-AB is designed to be operated by an externally supplied control signal. The following control signals can be used to operate the K-AB. Install the jumpers as shown to configure the K-AB.

Control Lead	Logic Required	Jumper E1	Jumper E2	Jumper E3
* Contact	Close=B Open=A	Out	Contact	LO
RS-232	Low=B High=A	Out	EIA/TTL	LO
RS-232	High=B Low=A	Out	EIA/TTL	HI
TTL	Low=B High=A	In	EIA/TTL	LO

*Factory Default

Gang Switching

An additional setting enables the K-AB card to be used in a multi-circuit gang (simultaneous) switching arrangement. When used in this manner, one master card controls one or more slave cards. Jumper E4 sets the master or slave nature of the card.

No Jumper = Independent	Use any Control Input, as above
Master = Card Is Master	Use any Control Input, as above
Slave = Card Is Slave	Set for Contact Closure

Only one card in each card nest can be set as Master.

A front panel three position switch allows Automatic or Manual Control. In the AUTO position, the K-AB switches on the selected Control Signals. In the Manual A or B Position, these controls are locked out and the relays assume the selected position.

INSTALLATION AND CONFIGURATION

Connect External Control Source

Standalone models use a nine pin D Subminiature female connector to access the externally supplied signals. Dataprobe supplies a mating connector kit to assist in fabrication of the proper control cable.

Rack Mounted cards have Control leads terminate on 50 pin Telco connectors on the rear of the K-AB-R-12 nest. See Appendix A for 9 Pin and Telco Connector Pinouts.

The K-AB-T1 is often used in conjunction with other Dataprobe remote switch controlling equipment:

- MultiPal: Multi-Switch Control via Tone dial telephone.
- CodePal: Multi-Switch Control with ASCII Commands.
- Call Director: Dial Line Sharing device with Switch Control capabilities.

Dataprobe can supply interconnect cables for any application

MANUAL CONTROL

A front panel three position switch allows Automatic or Manual Control. In the AUTO position, the K-AB switches on the selected Control Signal. In the Manual A or B Position, these controls are locked out and the relays assume the selected position.

Status Indication

Two front panel LED's indicate switch status. Remote alarms or displays can be controlled by the K-AB status signals, form C relay contacts. Status contacts are connected on the 9 pin (standalone) or 50 pin (rack) connectors. See Appendix A for connector pin assignments.

SPECIFICATIONS

T1 Versions: Three 15 pin D Subminiature, Female Connectors, Rear Panel/Card Edge

Pins switched:

- 1 TD Tip
- 9 TD Ring
- 11 RD Ring
- 3 RD Tip
- 2 Shield
- 4 Shield

TB8 Versions: Three, 8 position miniature clamping screw terminal blocks. Recessed on Card. Enclosed in Standalone.

RJ8 Versions: Three 8 position 8 wire RJ type Modular jacks, Rear Panel/Card Edge. All 8 leads switched. Supports RJ48S, RJ48C Specifications.

BNC Versions

BNC Type Co-Axial Conectors, Female.

HZ-BNC

Hi-frequency module, BNC Type Co-Axial Connector, Female - 50 or 75 ohm

DS3

Same as above but with special Dual BNC Module, individual transmit and receive circuits 45 Mhz .

Indicators

Two Red LEDs indicate Switch status A or B. LED's are driven by extra relay contacts.

Relays

Standard Coil Sealed Telephone relays. Gold clad contacts. Maximum Contact Current: 2 Amps @ 30 VDC Special BNC module: Hi Freq. 45 Mhz, 55db Isolation

Stand Alone Enclosure	Height....2.75"	Width.....8.00"
	Depth.....6.25"	Weight....1.20 lbs.
	Power Source; UL Approved Wall Mounted Power Supply. 115 VAC 60 Hz	
	External Control and Status Interface;	
	9 pin D Subminiature, Female	

Rack Mounted

Standard 19" equipment Cabinet Mount, 8.75" high.

Card Nest

Model K-AB-R-12 Accepts up to 12 cards per nest. Includes power supply for 115 VAC 60Hz. External Relay Controls and Status Contacts Via Two 50 Pin Telco Connectors, Female

Control Circuits

EIA RS-232/V.35, External: Standard EIA RS-232C Maximum Input + 30 VDC TTL, External: Maximum Input +5.5 VDC

Status Signals

Contacts Form C, 2A @ 30 VDC. Not protected, Use proper external suppression.

APPENDIX A

K-AB-T1 EXTERNAL CONTROL/STATUS CONNECTORS:

STANDALONE, 9 PIN D SUBMINIATURE, FEMALE

Pin # Designation

- 1 EIA Control Voltage High (+VDC = Position B)
- 2 Control Reference Ground
- 3 Not Used
- 4 **Contact / Open Collector To Ground EIA/TTL Low = B Position ***
- 5 Not Used
- 6 Status Contact (N/O)
- 7 Status Contact Common
- 8 Status Contact (N/C)
- 9 Not Used

K-AB-R-12 CARD NEST EXTERNAL CONTROL CONNECTOR PIN OUT

J1 CONTROL

CARD SLOT:	1	2	3	4	5	6	7	8	9	10	11	12
Contact / Open Collect. 1	3	5	7	9	11	13	15	17	19	21	23	
Control Ground	26	28	30	32	34	36	38	40	42	44	46	48
Voltage High	2	4	6	8	10	12	14	16	18	20	22	24
No Connection	27	29	31	33	35	37	39	41	43	45	47	49

TELCO PIN NUMBERS

EXTERNAL STATUS PIN OUTS

J2 STATUS

CARD SLOT:	1	2	3	4	5	6	7	8	9	10	11	12
Status Relay Common 1	3	5	7	9	11	13	15	17	19	21	23	
Status Relay N/C	26	28	30	32	34	36	38	40	42	44	46	48
Status Relay N/O	2	4	6	8	10	12	14	16	18	20	22	24
No Connection	27	29	31	33	35	37	39	41	43	45	47	49

TELCO PIN NUMBERS

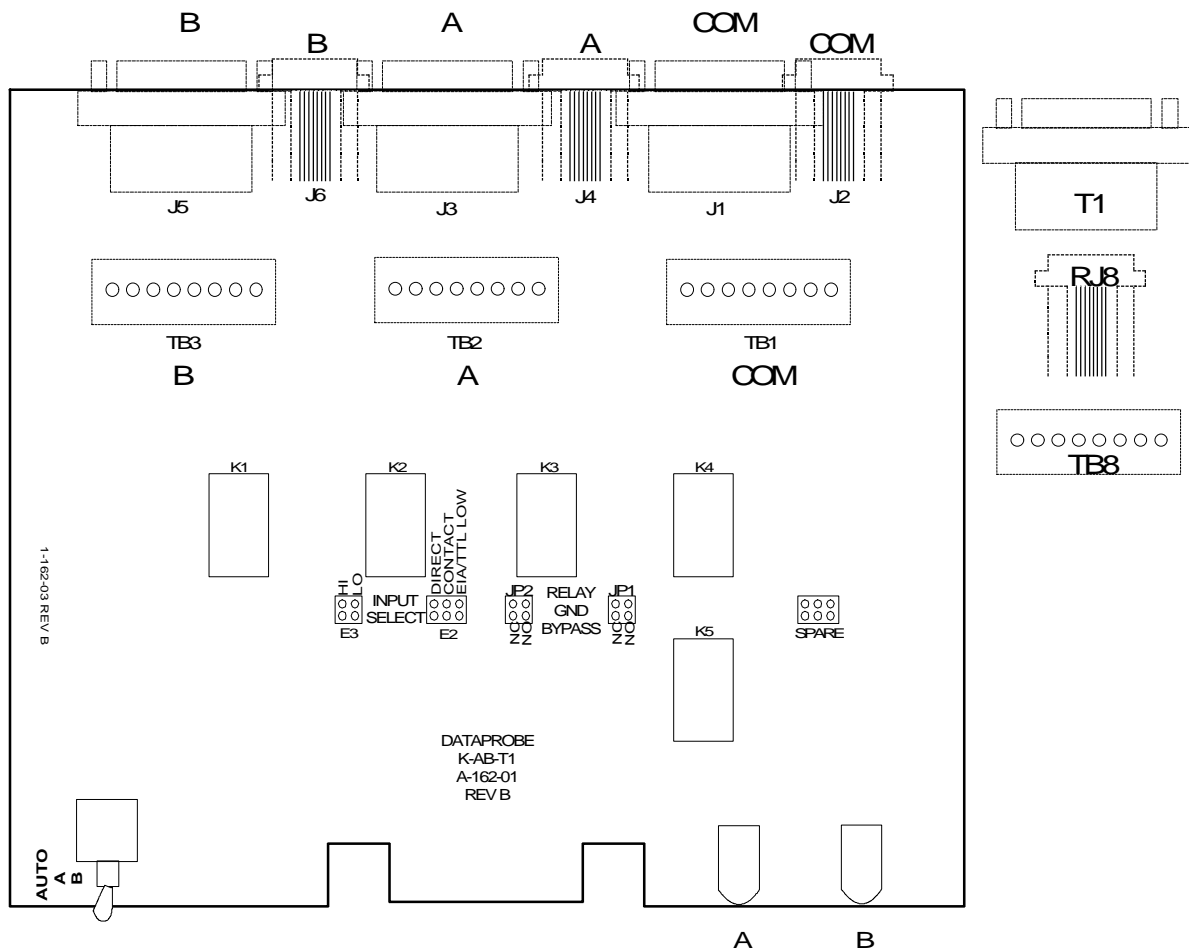
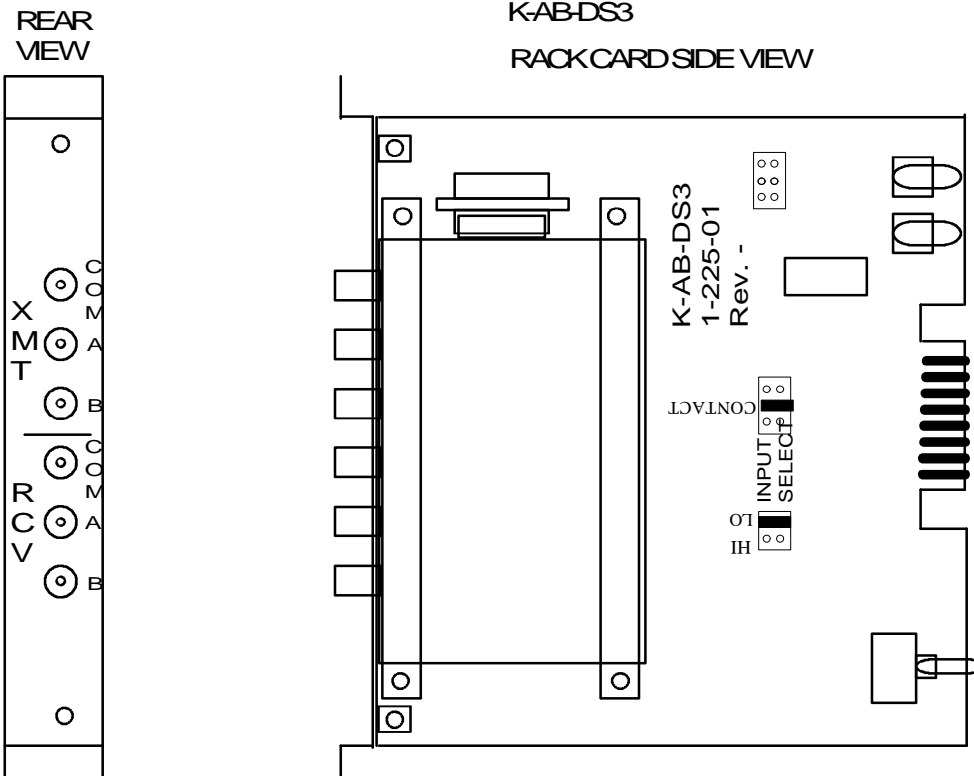


FIGURE 1
K-AB-T1/RJ/TB
COMPONENT LAYOUT

K-AB-DS3

RACK CARD SIDE VIEW



TECHNICAL SUPPORT, RETURNS and WARRANTY

Dataprobe Technical Support is available 8:30AM to 5:30PM ET to assist you in the installation and operation of this product. To obtain Technical Support call our Tech Support Hotline at 201-967- 8788, or Email us at tech@dataprobe.com. Please have the following information available when you call:

- Model of Product
- Serial Number
- Date of Purchase
- Name of Seller (if other than Dataprobe)

If you purchased this product through an **Authorized Dataprobe Reseller**, you should contact them first, as they may have information about the application that can more quickly answer your questions.

WARRANTY

Seller warrants this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship for a period of One Year from the date of initial purchase. If the product should prove defective within that period, Seller will repair or replace the product, at its sole discretion.

Service under this Warranty is obtained by shipping the product (with all charges prepaid) to the address below. Seller will pay return shipping charges. Call Dataprobe Technical Service at (201) 967-8788 to receive a Return Materials Authorization (RMA) Number prior to sending any equipment back for repair. Include all cables, power supplies and proof of purchase with shipment.

THIS WARRANTY DOES NOT APPLY TO NORMAL WEAR OR TO DAMAGE RESULTING FROM ACCIDENT, MISUSE, ABUSE OR NEGLIGENCE. SELLER MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY EXPRESSLY SET FORTH HEREIN. EXCEPT TO THE EXTENT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES, INCLUDING ALL WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR ANY PURPOSE ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE; AND THIS WARRANTY EXPRESSLY EXCLUDES ALL INCIDENTAL AND CONSEQUENTIAL DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from jurisdictions to jurisdiction.

WARNING: The individual user should take care to determine prior to use whether this device is suitable, adequate or safe for the use intended. Since individual applications are subject to great variation, the manufacturer makes no representation or warranty as to the suitability of fitness for any specific application.

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