

# How to Connect a KG-84A to a Cisco Serial Interface

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## Introduction

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## Introduction

This document contains configuration information on connecting KG-84A cables to Sun serial ports and Cisco gateways using Codex LSI 24/24 and Avanti 2200 Series synchronous modems.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

The information in this document is based on the software and hardware versions below:

- KG-84A cables
- Avanti 2200 Series synchronous modems

### Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

## Cables

This section describes the cables necessary to connect the KG-84A to the Cisco or the Sun serial ports using the Codex modem. The Cisco port is running a synchronous connection, and the Sun port is asynchronous.

### Red Cable

RS 232 Side		KG Side (Red J3 Connector) Female	
Pin	Name		Pin #

1	Frame Ground		2
2	TD	----->	17
3	RD	<-----	6
4	RTS	----->	11
5	CTS	<-----	19
6	DSR	<-----	51
7	Signal Ground		1 + 9 + 18 + 46
8	DCD	<-----	40
20	DTR	----->	38
The following two are needed for the synchronous cable (KG to Cisco):			
15	Tx Clk		15
17	Rx Clk		20

#### Notes:

- The KG-84A uses differential inputs for many of the signals. It is imperative that pins 9, 18, and 46 be tied to pin 1 on the KG connector (as shown above). Pins 9, 18, and 46 are the (unused) other side of certain signals. Also, do not connect pins 7, 22, 41, or 53 on the KG side. These are differential amplifier *outputs* and should be left open-circuited.
- Do not cable the 15-15 and 17-20 connections for the asynchronous link between the KG and the Sun serial ports.

## Black Cable

RS 232 Side		KG Side (Black J2 Connector) Female	
Pin	Name		Pin #
1	Frame Ground		2
2	TD	<-----	15
3	RD	----->	13
4	RTS	<-----	29
5	CTS	----->	27
6	DSR	----->	51
7	Signal Ground		1+12+28+35+53+22+20+30+18
8	DCD	----->	34
20	DTR	<-----	17
Clocks for synchronous operation:			
15	Tx Clk	----->	21
17	Rx Clk	----->	19
24	Ext TC	<-----	32

# KG84A/Avanti Working Configuration

This section has a summary of a working cable/configuration for connecting a KG-84A and an Avanti modem to form a synchronous link. The configurations and cables have been demonstrated to work when connecting two Sun serial ports according to the diagram below. The link information below is for a synchronous circuit.

Sun <==> KG-84A <==> Avanti Modem <==> Avanti Modem <==> KG-84A <==> Sun

RS-232C		Red Side, KG-84A
1		2
Tx	2	17
Rx	3	6
RTS	4	11
CTS	5	19
DSR	6	51
Gnd	7	1-9-18-46
DCD	8	40
TxC	15	15
RxC	17	20
DTR	20	38

RS-232C		Red Side, KG-84A
1		2
Tx	2	15
Rx	3	13
RTS	4	29
CTS	5	27
DSR	6	51
Gnd	7	1-12-20
DCD	8	34
RxC	17	19
DTR	20	17
	24	32

The front panel settings on the KG-84A are as follows (to decode switch settings, refer to KG84A documentation or the inside front panel on the unit):

Parameter	Setting
Clock	1 – on one side

	2 – on other side
Data Mode	2
Data Rate, Rx	B4 (change to appropriate value)
Data Rate, Rx	B4 (change to appropriate value)
Step Pulse Intvl	1, +0
Intfc (Interface)	1
Sync. Mode	5
Tty Mode	1
Data Length	Sync (change to appropriate value)
Comm Mode	1

The Avanti modems have a series of dip switches inside the cabinet. Refer to the modem documentation for details of each option. Some of these options are essential for proper operation of the synchronous link; others may be varied to suit the individual need. These switches are configured as follows:

Switch	Setting
S5	HD On (not RTS setting)
S6	CC Int TC
S7	2 (match speed to KG and Sun settings)
S8	Power Level = -30 kb (switch 6, may be set differently) CTS Delay = 0 (switch 4)
S9	Med. Range (These settings may be different for other applications) Low 4W
Equalizer jumper: In	

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## Related Information

- [Technical Support – Cisco Systems](#)
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