Service Manual

Model
COP-1/96k

COAXIAL OPTICAL CONVERTER

FOSTEX

FOSTEX CORPORATION 3-2-35 Musashino, Akishima, Tokyo, Japan 196-0021
FOSTEX CORPORATION OF AMERICA 15431 Blackburn Ave., Norwalk, CA 90650, U.S.A.

© PRINTED IN JAPAN OCT. 1999 8288787000

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,

DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION:

TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION:

POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.

The lightening flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

“WARNING”

“TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.”

SAFETY INSTRUCTIONS

1. Read instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain instructions - The safety and operating instructions should be retained for future reference.
3. Heed warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.



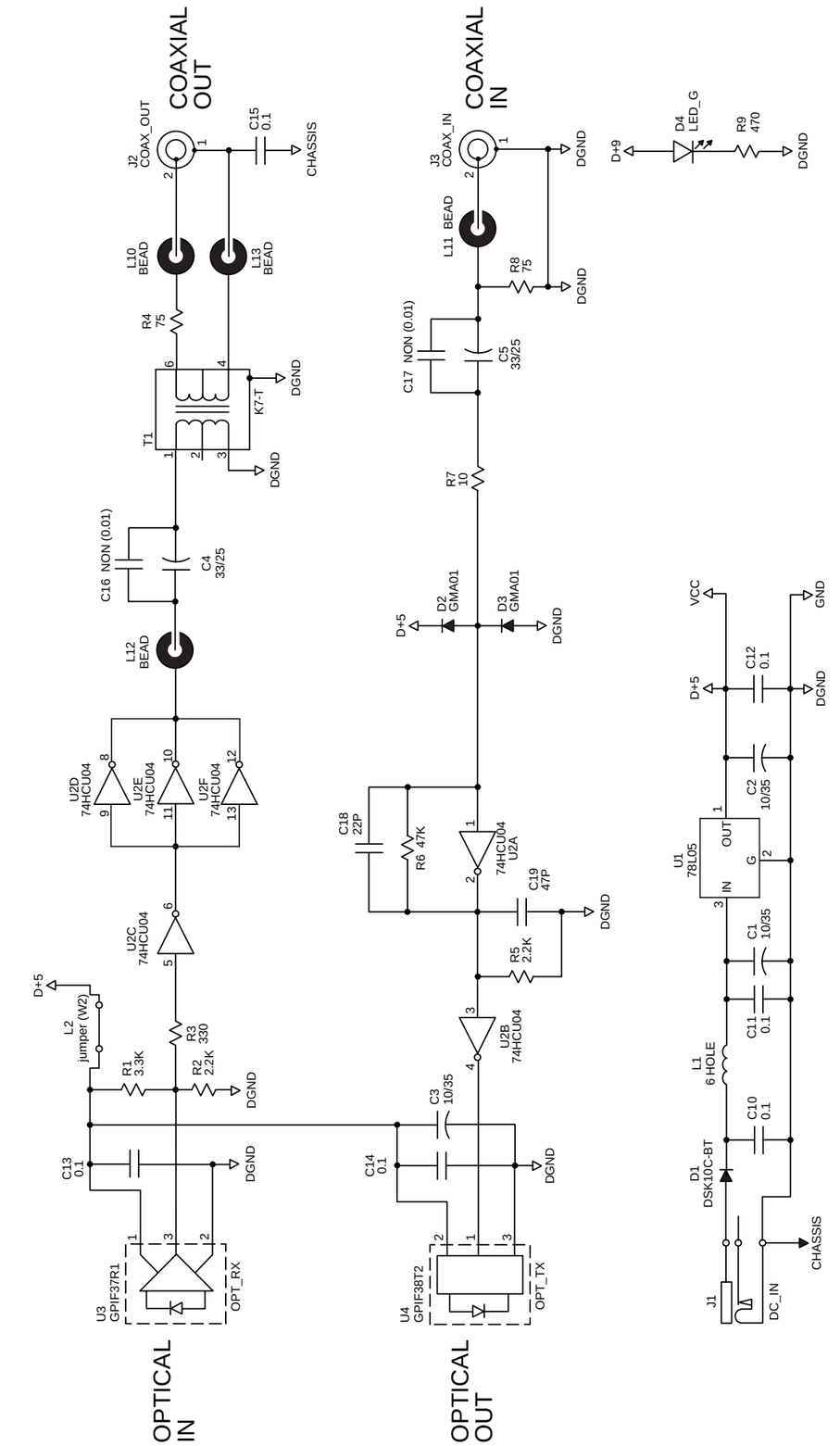
An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
14. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
16. Damage requiring Service - The appliance should be serviced by qualified service personnel when:
    A. The power supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked changed in performance; or
    E. The appliance has been dropped, or the enclosure damaged.
17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

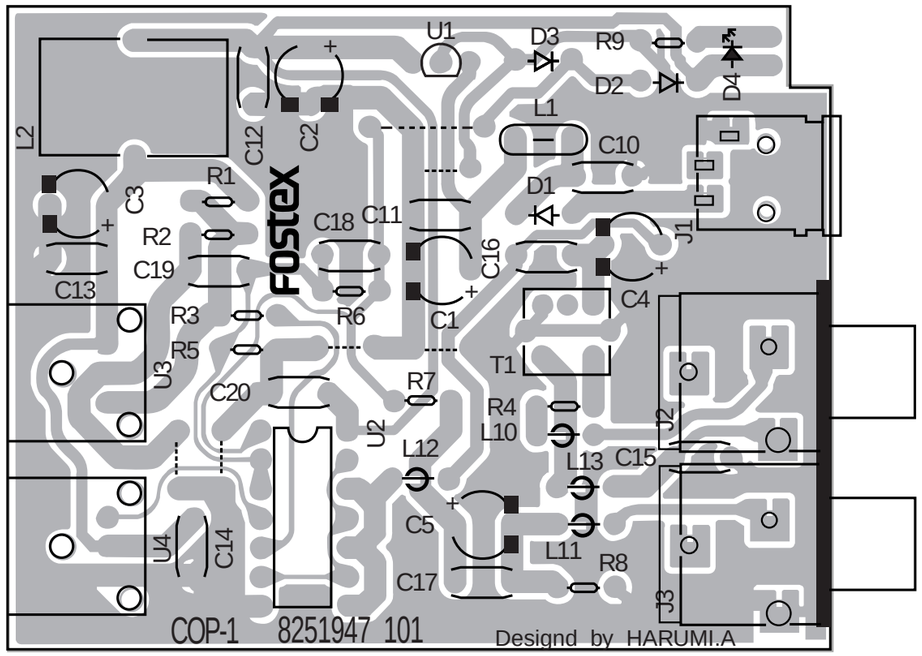
COP-1/96k

4. CIRCUIT & BLOCK DIAGRAMS

● **COP-1/96k PCB**



● COP-1/96k PCB Pattern drawing



● COP-1/96k Parts List

• COP-1 PCB assy

Ref. No.	Part No.	Description
	8274 0310 00	PCB Assy, COP-1/96k
	8251 9471 01	Plain PCB, COP-1/96k

ICs

Ref. No.	Part No.	Description
U001	8236 0220 00	92, AN, regulator, NJM78L05A
U002	8236 0074 01	DIP, DG, CMOS, 74HCU04
U003	8245 5530 10	Connector, opt, GPIF37R1
U004	8245 5520 10	Connector, opt, GPIF38T2

DIODEs

Ref. No.	Part No.	Description
D001	8234 0162 02	V, DSK10C
D002, 003	8234 0085 00	VF, GMA01-FY1, F5
D004	8234 0201 00	Opt., V, LED, grn, GL3KG8

RESISTORs

Ref. No.	Part No.	Description
R001	8230 0563 32	HF, carbon, 1/4W, 3.3kΩ, 5%, F5
R002	8230 0562 22	HF, carbon, 1/4W, 2.2kΩ, 5%, F5
R003	8230 0563 31	HF, carbon, 1/4W, 330Ω, 5%, F5
R004	8230 0567 50	HF, carbon, 1/4W, 75Ω, 5%, F5
R005	8230 0562 22	HF, carbon, 1/4W, 2.2kΩ, 5%, F5
R006	8230 0564 73	HF, carbon, 1/4W, 47kΩ, 5%, F5
R007	8230 0561 00	HF, carbon, 1/4W, 10Ω, 5%, F5
R008	8230 0567 50	HF, carbon, 1/4W, 75Ω, 5%, F5
R009	8230 0564 71	HF, carbon, 1/4W, 470Ω, 5%, F5

CAPACITORs

ALU = Electrolytic type
CER = Ceramic type

Ref. No.	Part No.	Description
C001~003	8232 0971 06	V, ALU, 35V, 10µF, 20%, SME-VB
C004, 005	8232 0953 36	V, ALU, 25V, 33µF, 20 %, SME-VB
C010~015	8232 8041 04	V, CER, 25V, 0.1µF, +80-20 %, YF
C016, 017		N/A
C018	8232 0502 20	V, CER, 50V, 22pF, 5%, SL
C019	8232 0504 70	V, CER, 50V, 47pF, 5%, SL
C020	8232 8041 04	V, CER, 25V, 0.1µF, +80-20 %, YF

MISCELLANEOUS

Ref. No.	Part No.	Description
Y201	8276 8730 02	Tube, UL, black, 1, L05
E201	8276 0020 02	Wire, jumper, F5
E202	8276 0020 04	Wire, jumper, F10
J001	8245 5440 00	Connector, jack, DC inlet, YKB31-0014
J002, 003	8245 2460 10	Connector, PL, jack, RCA, 1P, EMI, WP371
L001	8242 1350 01	Filter, EMI, 6 hole
L002	8276 0020 04	Wire, jumper, F10
L010~013	8242 1860 13	Filer, T, EMI, LFW7B-M3R2T
T001	8242 2350 00	Transformer, digital out, K7-T

TABLE OF CONTENTS

1. SPECIFICATIONS 4
2. CONTROLS, INDICATORS AND CONNECTORS 4
3. EXPLODED VIEW, PCB ASSEMBLY AND PARTS LIST 5
4. CIRCUIT & BLOCK DIAGRAMS 7

NOTES

* Parts List and circuit diagrams are given in this manual to assist the service technician in maintaining the Model COP-1/96k.

* The following accessories are supplied with COP-1/96k as the standard accessories.

Owner's manual	: 8288455000 (for export model)
	: 8288456000 (for domestic model)
⚠ AC adaptor AD-9A	: 8270728003 (for USA/CND)
	: 8270728006 (for EUR)
	: 8270728007 (for UK)
	: 8270728010 (for JPN)

* Following is the packing material for the Model COP-1/96k.

Carton, inner, COP-1/96k	: 8228691000
Packing, COP-1/96k	: 8228409000

CAUTION

⚠ Parts marked with this sign are safety critical components. They must always be replaced with identical components. Refer to the Fostex Parts List and ensure exact replacement.

1. SPECIFICATIONS

COAXIAL IN

Connector	RCA pin
Input impedance	75 Ω
Normal input level	0.5 Vp-p

COAXIAL OUT

Connector	RCA pin
Output impedance	75 Ω
Normal output level	0.5 Vp-p (When connecting to 75 Ω load)

OPTICAL IN

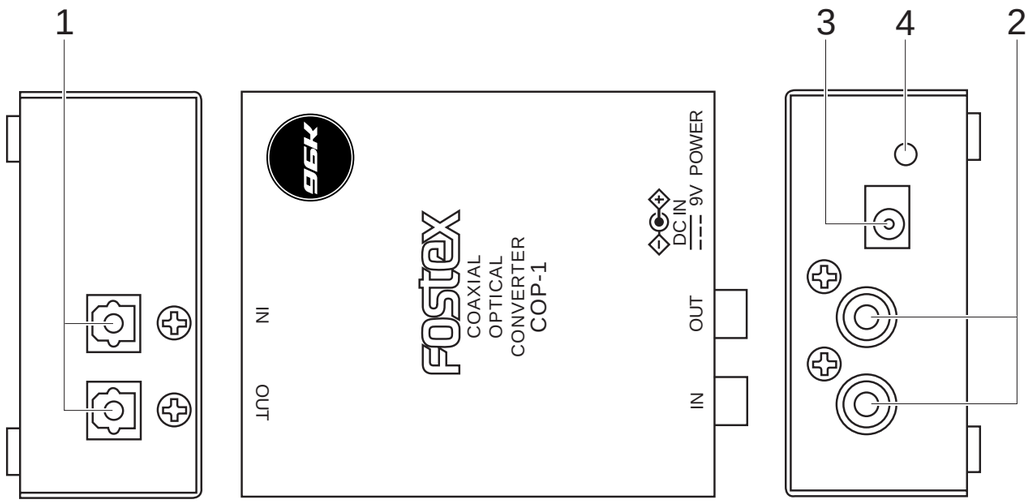
Connector	Square shape optical
Format	IEC 60958 (S/P DIF)

OPTICAL OUT

Connector	Square shape optical
Format	IEC 60958 (S/P DIF)
DC IN	9 V, 500 mA (Inner: Plus, Outer: Minus)
SAMPLING FREQUENCY	32 kHz ~ 96 kHz
DIMENSIONS	32 (H) x 70 (W) x 83 (D) mm
WEIGHT	300 g (excluding accessories)
POWER REQUIREMENT	JPN : 100 V AC USA/CND : 120 V AC UK/EUR : 230 V AC
POWER SUPPLY	Fostex AC adaptor AD-9A

Specifications and appearance are subject to change without notice for product improvement.

2. CONTROLS, INDICATORS & CONNECTORS



1. Optical input/output connector [IN/OUT]
2. Coaxial input/output connector [IN/OUT]
3. AC adaptor jack [DC IN 9V]
4. Power indicating LED [POWER]

3. EXPLODED VIEW, PCB ASSEMBLY AND PARTS LIST

● COP-1/96k OVERALL EXPLODED VIEW & PARTS LIST

Ref. No.	Part No.	Description
1	8221 1600 00	Chassis, COP-1/96k
2	8221 1611 00	Cover, COP-1/96k
3	8216 4360 00	Foot, D8, COP-1/96k
4	8274 0310 00	PCB assy, COP-1/96k
5	8207 0047 01	Plastic rivet, # 1C18
6	8274 2430 00	PCB assy, MAIN, COP-1
7	8216 6250 00	Sheet, isolation, COP-1/96k

Ref. No.	Part No.	Description
7	8270 7280 03	AC adaptor, AD-9A, USA/CND
	8270 7280 06	AC adaptor, AD-9A, EUR
	8270 7280 07	AC adaptor, AD-9A, UK
	8270 7280 10	AC adaptor, AD-9A, JPN
8	8218 7920 00	Label, 96k

