APPENDIX H

: USER'S MANUAL

KIMIN

TV Link Loader
User's Manual

TV Link Loader
User's Manual

TVLink
Loader

POWER   CHARGE

MODE   UP   RS—232

SEND   ENTER   DC 9V

RECEIVE   DOWN   ON
                        OFF

! Attention for Safety

'Attention for Safety' is to prevent accident and danger beforehand using product safety and right.
Two or three main point in place that keep necessarily and can see alway

Warning

* When violated lower part item, serious injury or death can happen.

✓ In case this product wet in water, do not put in could apply heat place to dry.
   Can explode or be responsible for transformation or breakdown.

✓ Do not use in place that temperature is high or there is moisture.
   Whether wet because of rain or spill drinking water and so on, in if use be responsible for battery explosion
   or be responsible for breakdown can.

✓ When wild wind, thunder, lightning strike extremely, control use of product,
   and unplug supply cord and charger.
   Can wound serious injury by lightning strike, and fire can break out.

✓ Disjoint product voluntarily, or do not shock.

✓ Power cord is not reflected, and do not use charge Adapter when part that inserts concert is loose.

✓ Do to put heavy thing on power cord or is not spread.

✓ Do not stare infrared rays window directly at infrared rays communication.
   There is danger of eyesight damage.

➢ After avoid shock and impact, and extract when nonuse or when is absent power cord, keep in safe place.

➢ Do not drop or strike or shake product extremely.

➢ When wild wind, thunder, lightning strike extremely, control use of product, and unplug together supply cord and charger.

➢ Disjoint product voluntarily, or do not shock.

➢ Place that there are much dusts avoids setup, and do supply cord so that do not approximate to heating appliances.

➢ After is charged when nonuse battery and leave many long hours, keep at normal temperature.

➢ In case of use again battery after leaving alone many long hours, have better use after charge perfectly.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

The equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does not cause harmful interference to raio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures;

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

Caution

Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

➤ Contents

1 Intro

Function of This Product

Thank for buying TV Link Loader.
This product has following function.

Remote Control Function
: Achieve channel and volume Up, Down of general remote control and function of OK button.

Channel Information Storage Function
: Can do channel information of TV to do storage on TV Link Loader interior.

Channel Information Transfer Facility
: Can transmit channel information of TV that is stored to TV Link Loader on other TV.

* Use extent is limitative in other TV product that product that see is exclusive use special procurements mounting of LG Electronics commercial LCD TV.
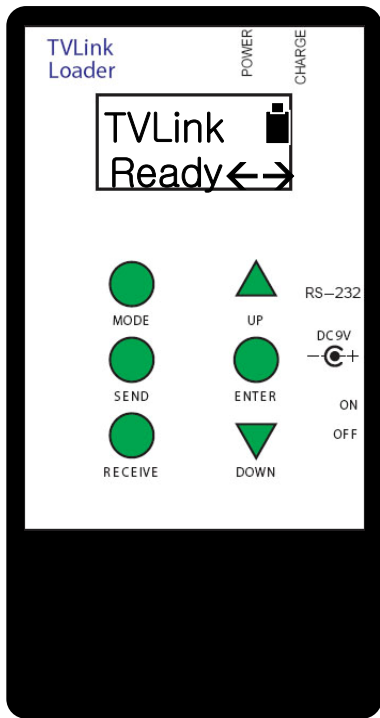
2 Each button function explanation

MODE	MODE Button	It is when enter by TV INSTALLATION MENU and button that select Up, mode of Down button.
SEND	Send Button	It is button to transmit channel information that is stored in TV Link Loader by TV through infrared-ray communication.
RECEIVE	Receive Button	It is button to store channel information of TV by TV Link Loader through RS232 communication.
UP	Up Button	It is button that act Channel Up of general remote control according to mode, Volume Up role.
ENTER	Enter Button	Enter to Password Mode, and it is button that act as enter of general remote control.
DOWN	Down Button	It is button that act Channel Down of general remote control according to mode, Volume Down role.

3 To charge, to turn on Power

TVLink Loader

POWER   CHARGE

TVLink
Ready ← →

MODE   UP   RS-232

SEND   ENTER   DC 9V
                          ON
RECEIVE   DOWN   OFF

DC 9V
Adapter

If charge

Connect 9V DC Adapter in marked position

that is ─Ⓒ+ DC 9V and insert to 220V AC concert.

If turn on power supply

Connect 9V DC Adapter in marked position

that is ─Ⓒ+ DC 9V and insert to 220V AC concert.

And that is ON OFF , do marked place's switch by ON.

After power on

✓Confirm that phrase called "TV Link" in LCD original idea first line and "Ready" in second line is marked.
✓Confirm that battery residual quantity on the right top portion and arrow on right lower column are marked.
✓When connected Adapter all, confirm since light is lighted in 'Power'.
✓When connected Adapter all, battery does not pack, confirm whether light is lighted in 'Charge'.

4 STANDBY Mode

TVLink
Loader

POWER CHARGE

TVLink
Standby

MODE   UP   RS-232

SEND   ENTER   DC 9V

RECEIVE   DOWN   ON
                        OFF

What is 'STANDBY'

When power supply enters, is situation that do not act other thing to minimize consumption of current. "Standby" is marked in second line of LCD.

If get into 'STANDBY' state

Turn on power supply and in case there is no any manufacturing for 30 seconds, get into 'Standby' state. Also, get into 'Standby' state to when there is no any manufacturing after channel information transmission or for after click button 20 seconds.

If escape in 'STANDBY' state

Press 'Receive' button, or turn on again while put out power supply.
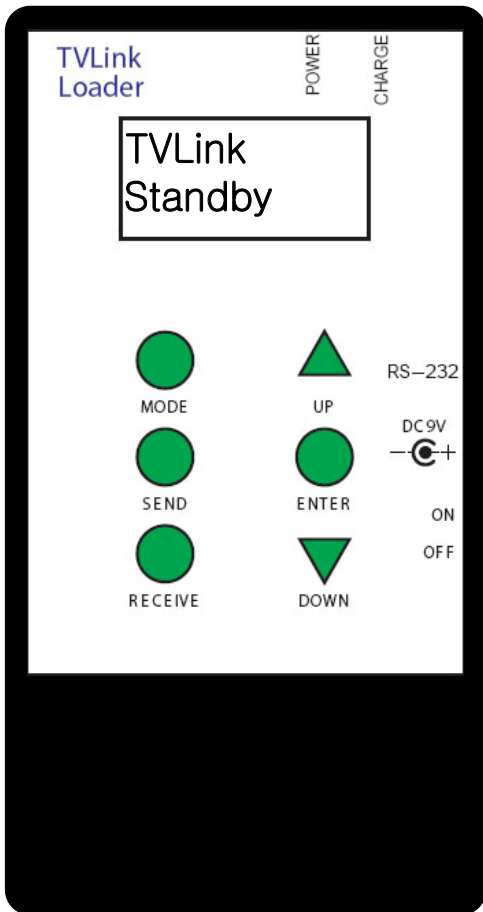
5 Installation Menu Log-in

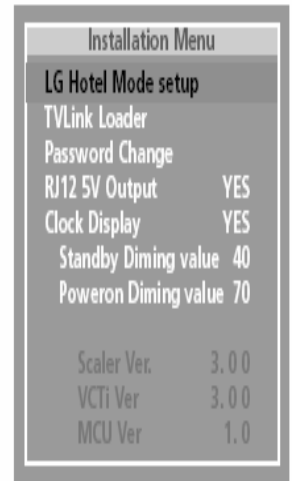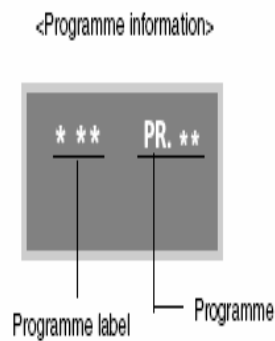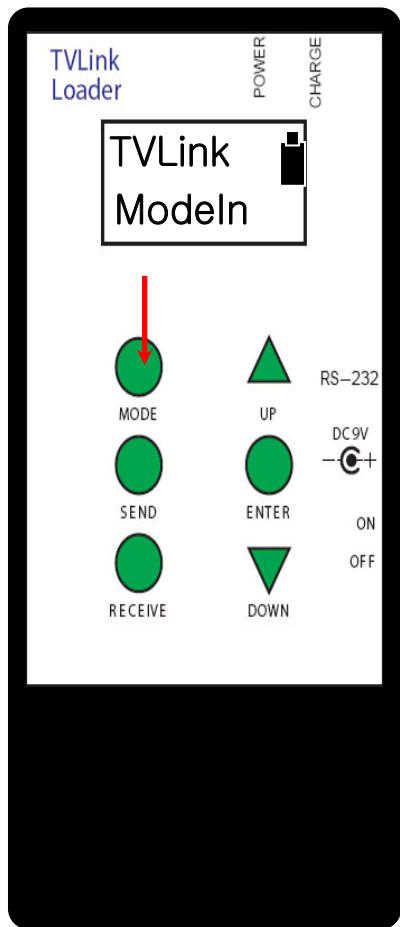### If come to Installation Menu

First, Put TV Link Loader's top portion infrared rays communications department by TV and push MODE button more than 3 seconds.
Turn TV Link Loader by TV when Installation menu is marked.
Then, Installation menu is appeared automatically.

TVLink Loader

POWER CHARGE

TVLink
Modeln

MODE   UP   RS-232

SEND   ENTER   DC 9V

RECEIVE   DOWN   ON
                          OFF

Channel
Auto programme
Manual programme
Programme edit
Favourite programme

▲▼ ◀▶ OK MENU

<Programme information>

* **   PR. **

Programme label —— Programme

Installation Menu

LG Hotel Mode setup
TVLink Loader
Password Change
RJ12 5V Output   YES
Clock Display   YES
  Standby Diming value   40
  Poweron Diming value   70

  Scaler Ver.   3.00
  VCTi Ver   3.00
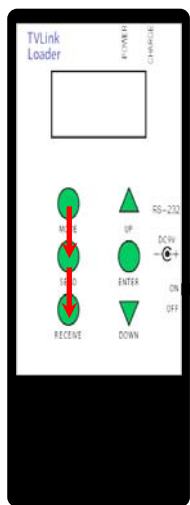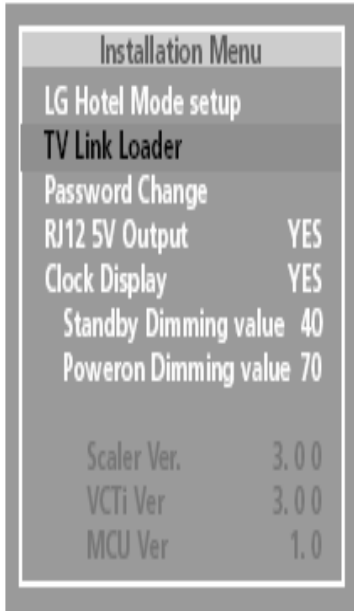 MCU Ver   1.0

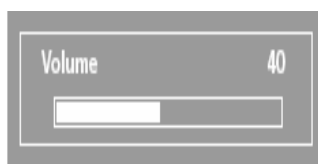### If is not come to Installation menu

Confirm whether TV Password and TV Link Loader's Password agree.
If Password is same, try again.
In case may not be so, inquire to service center.

Installation Menu

Installation Menu	
LG Hotel Mode setup	
TV Link Loader	
Password Change	
RJ12 5V Output	YES
Clock Display	YES
Standby Dimming value	40
Poweron Dimming value	70
Scaler Ver.	3.0 0
VCTi Ver	3.0 0
MCU Ver	1.0

Ready to download...

< TV OSD >

Volume 40

TVLink

PRG 40

< TV Link Loader LCD>

Button manufacturing in Installation menu

Transfer between menu changes arrow of LCD right side lower column using Mode button establish as '↕'.
Locate cursor to menu that want using Up, Down button.
Use Mode button again come to menu of do cursor addition if click Up button after establish as '↔'.

If channel information does send-receive

When receive channel information, RS232toRJ12 cable connects TV and TV Link Loader's RS-232 necessarily.
Select TV Link Loader in Installation menu.
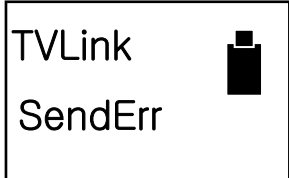Confirm "Ready to download ..." OSD at TV.
In the case of transmission, press Send button.
In the case of reception, press Receive button.
Confirm Volume OSD of TV and TV Link Loader's LCD for confirmation of progress situation.

6 To use Installation Menu

TVLink
SendErr

Channel information
cancel transmission

TVLink
RcommErr

Channel information
reception cancellation

When transmit channel information, is
canceled if click more Send button once.
When cancel, confirm "SendErr" in LCD
window.
When receive channel information, is
canceled if click more Receive button once.
When cancel, confirm "RcommErr" in LCD
window.

Channel information
at send-receive caution

When receive channel information, connect
cable necessarily.
In case "RCommErr" message is marked in
LCD window, confirm cable joint.

If come to Password Mode

Put out TV Link Loader's power supply. If turn on TV Link Loader's power supply in state that click ENTER button, is entered by Password Mode.

TVLink Loader

POWER   CHARGE

MODE

SEND

RECEIVE

UP

ENTER

DOWN

RS-232

DC9V

ON

OFF

If change Password

If click Up button in Password Mode, can change TV Link Loader's Password if develop into Password of TV convertibly and click Down button.
If click selecting, can change number using Up, Down button.
Select Password number that want and move by next time number through ENTER button.
If click ENTER button in last number, Password is changed.
Do 'Confirm' TV Password's case and transmit infrared rays data by TV, and store justly without Confirm case of TV Link Loader Password alteration.
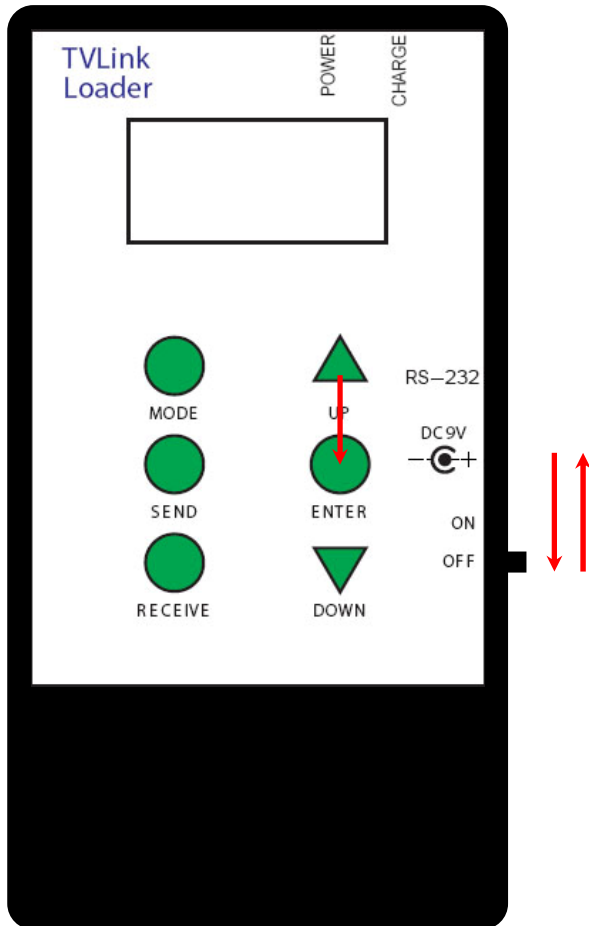
Up. TLL Dn. TV

Password Mode In

PassWord 0000

Changing Password

8 Debug Mode

Debug Mode Data Format

R/W	Program Number(2byte)	–	Program Info(2byte)	=	PLL Data (4yte)	,	ACMS Data (10byte)

Ex) R63-24=09A8,dc2503251b20

Basic Rule
- Basically, transmit 'Hex code' in 'ASCII' form.
- When is '0x63', '6' and '3' are transmitted in ASCII form.

Instruction
1. Read
   - A. R(Cr) : Is instruction that read all Eeprom data.
   - Ex) r(Cr)

     R00-24=09A8,2503251b20
     ⋮
     ⋮
     R63-24=09A8,2503251b20
     (00 ~ 99 to 00 ~ 63 by Hex indication)
   - A. rxxp ,rxp : x,xx = 0~63 Input address in Hex type.
   - Ex) r63(Cr)
     R63-24=09A8,2503251b20
   - Ex) r2(Cr)
     R02-24=09A8,2503251b20
2. Write
   - A. w63-24=09A8,2503251b20(Cr)
   : Is equal with data format that read except 'W' and 'P'.
     Can confirm to read after have used through instruction.

8 Debug Mode

\<Caution\>

✓ UART communication is impossible in Standby mode.

✓ Debug mode is not communication with TV but communication with terminal of PC.

✓ Standby mode execution condition

    ✓ Do confirmation possibility as "Standby" on LCD screen.

    ✓ Enter by Standby mode after 30 seconds since Power On.

    ✓ If click any button in Stand by mode, get into Ready state.

    ✓ At this point, is entered by Standby mode by automatic after 20 seconds if do not any use.

    ✓ Therefore, while put out power supply when was Standby mode turn on or desire to come by debug mode in 20 drafts after click Receive key once.

    ✓ Desire to observe as is entered in Stand by state if there is no transmission for 1 minute after come by debug mode.
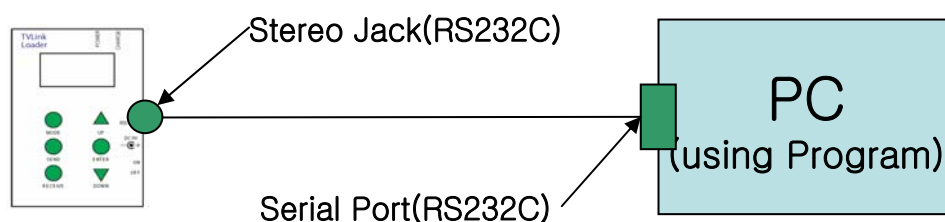
- Functions

1. To view/get Channel-Map data of a TV Link Loader.

2. To change/update Channel-Map data of a TV Link Loader.

- How to Connect

Use a RS232C(PC)-to-stereo (TV Link Loader) Jack for a connection.

Stereo Jack(RS232C)

PC
(using Program)

Serial Port(RS232C)

- The following screen is Main Screen.

Double Click To VIEW/EDIT detailed information

To set COMPORT FOR connection with TVLINK Loader

To UPLOAD DATA TO TV-Link Loader

To GET DATA From TV-Link Loader

On/off a function for changing the below Value

IF/PLL resolution/Max Channel value

To Save to a File

To Load form a File

RESULT of a last job

Exit a program.

TV-LINK_LOADER CHANNEL EDITOR.

P.No	P.Info	PLL Data	ACMS Data
00	00	0000	
01	00	0000	
02	00	0000	
03	00	0000	
04	00	0000	
05	00	0000	
06	00	0000	
07	00	0000	
08	00	0000	
09	00	0000	
10	00	0000	
11	00	0000	
12	00	0000	
13	00	0000	
14	00	0000	
15	00	0000	
16	00	0000	
17	00	0000	
18	00	0000	
19	00	0000	
20	00	0000	
21	00	0000	
22	00	0000	
23	00	0000	
24	00	0000	
25	00	0000	
26	00	0000	
27	00	0000	
28	00	0000	
29	00	0000	
30	00	0000	
31	00	0000	
32	00	0000	
33	00	0000	
34	00	0000	
35	00	0000	
36	00	0000	
37	00	0000	
38	00	0000	
39	00	0000	
40	00	0000	
41	00	0000	

[Connection Info]
BaudRate: 9600bps
StopBit : 1
Parity : None
DataLen : 8bit

COM1

PC => LOADER

LOADER => PC

Tuner Info
Change Available
IF (MHz) 38.9
PLL res 62.5
Use Ch. 100

[SAVE] File

[READ] File

Exit

PROGRAM STARTED.

< TV-Link Loader Channel Editor >

– Downloading Data from TV Link Loader

1. Make sure that it's connected between PC and TV Link Loader and "Ready-state".
2. Click [LOADER=>PC] button. The following screen will be opened, and set up
   with Default value if you want to change a value.
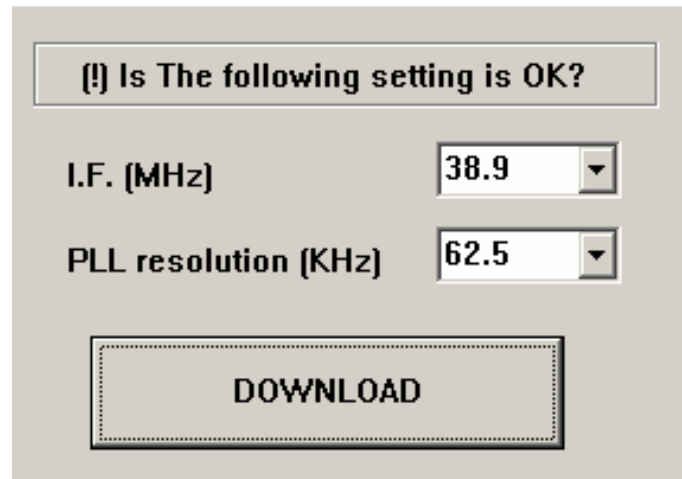
3. If Downloading is failed. Check Comport and a state of a TV Link Loader.

– Updating Data to TV Link Loader

1. Check Connection (PC–TV Link Loader) and Check "Ready-State".
2. All data in a PC program(Channel Editor) is loaded to a TV Link Loader.

– Upload/Download Problem

1. The upload/download data is possible when TV Link Loader is "Ready-State".
2. If upload/download is failed in a "Ready-State".
   Turn off and on TV Link Loader and Retry transferring.

– Save/Read File

1. Click [Save File] button to save data to the file.
2. Click [Read File] button to load data from the file.

- View/Edit Channel Detailed-information

1. You can see following Input screen, when you double-click the [P.no] section.

Write Data

Program Info

Sound System   ⊙ Stereo   ○ Dual

[BG ▼]   [MONO ▼]   ☐ Skip   ☐ Fine Tune

PLL Data

Picture Carrier Freq. (MHz)   IF   PLL resolution

[0.00]   [Chg Freq.]   [38.90 MHz]   [62.50 KHz]

Program Number (2)   Program Info (2)   PLL Data (4)

[9]   [00]   [0000]

ACMS Data (string:5)

[ ]   [Change]   [Close]

2. You can edit [Picture Carrier Value] in Editor box or the following [Channel Select Box].

3. [Channel Select Box] will be opened When You click the [Chg Freq.] Button.

Channel Select

SYSTEM [BG ▼]   ○ RF   ⊙ CABLE

CH. no. [12]

PIC. Freq (MHz) [0.00]   >>>   [238.25]

[OK]   [Cancel]

4. The range of Channel Number is 1 ~ 100.

10 Electrical standard

<Specification>

✓ Power
- ✓ Adapter Input   : AC230V~50Hz(for EU)
                                AC120V~60Hz(for US)
- ✓ Adapter Output   : DC9V, 300mA
- ✓ Battery   : DC1.2, 400mA (2/3AAA) * 5EA

✓ Use environment condition   : 0 ~ 40℃, 10 ~ 80%

✓ LCD
- ✓ Panel   : 32mm
- ✓ Need Power   : DC5V
- ✓ Kind   : 8 * 2 Character

✓ External form size   : 65W * 22H * 120D (mm)

Construction

< TV Link Loader >

< DC 9V Adapter (For EU)>

< DC 9V Adapter (For US)>

< Program CD >

< User's Manual >

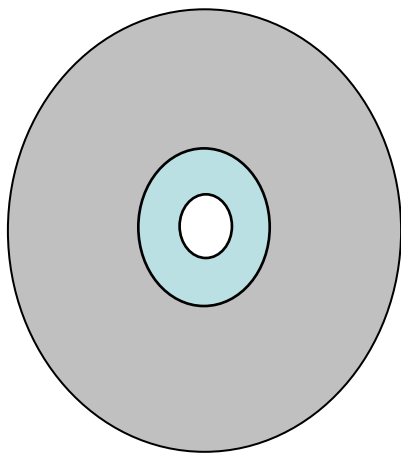< RS232toRJ12 Cable >