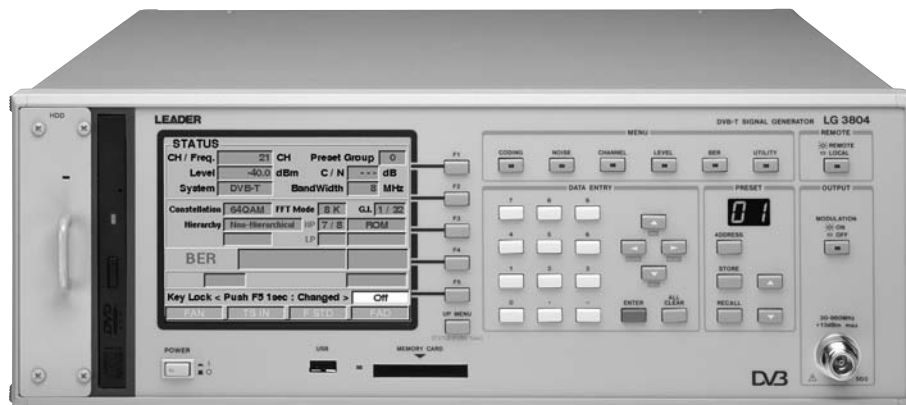


## ■ DVB-T SIGNAL GENERATOR

### ■ Model LG 3804

# DVB



Shown with option 70

## Ideal For The Production, Test and Alignment Of DVB-T Compliant Tuners And Receivers/STBs

( DVB-C, DVB-H future support )

### ■ GENERAL

Designed to address the challenges of DTV tuner testing, the LG 3804 provides all of the signal control necessary for testing the performance of DVB-T compliant tuners and receivers.

Consequently, the modulated signal covering VHF and UHF channels can be output.

Since a pseudo random signal source (PN) and BER counter are provided, the BER measurement of a TV set and tuner can be performed with this model only.

In addition to the internal TS signal, the MPEG-2 TS can be externally applied. Therefore, the receiver can be checked visually and acoustically by using the existing TS. With such versatile capabilities, overall functions of the reception system can be tested.

This basic model can expand applicable capabilities to DVB-C and DVB-H with various Options.

### ■ FEATURES

#### 1 All-in-one

This instrument features the signal generator capability and BER measurement capability in a single package. The BER function is used to measure the front-end section, the MPEG-2 TS function is used to visually check entire system. Also, such features are ideal for the production line of STB and tuners.

#### 2 Arbitrary transmission parameter settings

The transmission parameter can be arbitrary set via the front panel controls. The QVGA LCD graphically displays the setting conditions.

#### 3 MPEG-2 TS encoding/modulation in realtime

The MPEG-2 TS applied from the DVB-ASI or DVB-SPI connector can be encoded/modulated in realtime.

#### 4 100 preset conditions

Up to 100 preset conditions can be stored in the memory. Since the stored contents can be categorized into 10 groups, the preset mode is convenient for inspection applications.

### ■ OPTION

#### ● Various factory options

The following factory options are available:

- OP 70 Moving Picture Option  
By installing a HDD and DVD-ROM, a stream including HDTV content (i.e., requires large storage area) and long-time TS can be played back from the HDD.
- DVB-H / DVB-C are available by option.

# Specifications LG 3804

## Channel Coding Section

**Broadcasting system:** Digital Terrestrial (DVB-T)  
**Band Width:** 6 MHz/7 MHz/8 MHz  
**Carrier Modulation:** COFDM  
 QPSK, 16QAM, 64QAM, Hierarchical\*1  
**Convolution Coding Rate:** 1/2, 2/3, 3/4, 5/6, 7/8  
**FFT Mode:** 2K, 8K  
**Guard Interval:** 1/4, 1/8, 1/16, 1/32  
 \*1: Future Support

## RF Signal Generator Section

**Frequency**  
**Range:** 30 to 960 MHz  
**Output**  
**Range:** -100 to +13 dBm (into 50 Ω),  
 ON/OFF Selectable  
**Resolution:** 0.1 dB  
**Impedance:** 50 Ω  
**Output Connector:** N type

## Input/Output Signal Sources

### Internal Signal

**Pseudo Random Signal:** PN15/PN23  
**Still Picture Pattern:** Color bar, ramp, monoscope seamless  
 Play (\*2)  
**Screen Size:** 16:9 (HD), 4:3(SD) (\*2)  
**Sound (Tone):** 1 kHz(LR), 400 Hz(LR), 1 kHz(L)+400 Hz(R) (\*2)  
 \*2: Specifications are subject to change  
 without notice.

### DVB-ASI Signal Input

**Input:** HP, LP  
**Input Connector:** BNC  
**Input Impedance:** 75 Ω  
**Input Level:** 0.8 Vp-p  
**Baud Rate:** 270 Mbps

### DVB-SPI Signal Input

**Input Connector:** 25-pin D-sub  
**Input Impedance:** 100 Ω differential input  
**Input Level:** LVDS  
**Input Format:** MPEG-2 TS or BER count input,  
 selectable

### ASI, SPI Input Specifications

**Input Packet Format:** 188, 204 bytes  
**Applicable Stream:** MPEG-2 TS (ISO/IEC 13818-1)

### FREQ STD Input

**Input Connector:** BNC  
**Input Impedance:** 50 Ω  
**Input Level:** 0.8 Vp-p  
**Input Frequency:** 10 MHz

### FREQ STD Output

**Output Connector:** BNC  
**Output Impedance:** 50 Ω  
**Output Frequency:** 10 MHz

### TS Out

**Output:** BNC  
**Output Impedance:** 75 Ω  
**Output Format:** MPEG-2 TS

### IF Signal Output

**Output Connector:** BNC  
**Output Impedance:** 50 Ω  
**Output Frequency:** 140 MHz

### 4-Wire Serial BER Input

**Input Connector:** BNC  
**Input Level:** LVTTTL 3.3 V  
**Input Signal:** CLOCK, DATA, VALID, SYNC

## BER Counter Section

### Input Section

**Packet Length:** 188, 204 bytes  
**Input Connector:** DVB-SPI INPUT connector and serial  
 input connector are used.

### GO/NO-GO Function

**Limit Settings:** Upper and lower limits of BER can be set.  
**GO/NO-GO Indication:** Displays GO/NO-GO on the screen.

## C/N Generator Section

**C/N Variable Range:** 0 to 40 dB  
**Setting Resolution:** 0.1 dB  
**Additional Controller:** ON/OFF, selectable

## External Interface

### Memory Card Interface

**Memory Card:** Compact flash card (CFA TYPE-I, TYPE-II)

### ETHER Interface

**Specifications:** 10BASE-T/100BASE-TX

### USB Interface

**Specifications:** USB1.1

### GPIB

**Connector:** 24-pin square connector  
**Specifications:** Conforms to ANSI/IEEE Std. 488.1-1987.

### Display

**LCD :** 5.7" QVGA (320 x 240) TFT color

## Environmental Conditions

**Operating Temperature:** 0 to 40 °C  
**Operating Humidity:** ≤ 85 % RH (without condensation)  
**Spec-Guaranteed Temperature:** 10 to 35 °C  
**Spec-Guaranteed Humidity:** ≤ 85 % RH (without condensation)  
**Operating Environment:** Indoor use  
**Operating Altitude:** Up to 2000 m  
**Overvoltage Category:** II  
**Pollution Degree:** 2

## Power Requirements:

90 to 250 VAC universal, 50/60 Hz

## Power Consumption:

150 W max.

## Dimensions, Weight:

426 (W) X 150 (H) X 450 (D) mm  
 (excluding projections), 14 kg

## Accessories:

Power cord ..... 1  
 Instruction manual ..... 1

## OPTION

### • OP70 Moving Picture Option

#### HDD

**Capacity:** 80 GB  
**DVD drive:** Slim type CD/DVD-ROM drive  
**Applicable Stream**  
**Playback format:** MPEG-2 TS (ISO/IEC 13818-1)  
**Packet Length:** 188/204 bytes

#### Playback

**Loop Playback:** Possible (not applicable to seamless)  
**Playback Range:** Begin to end specified by time length  
**Memory Playback:** Possible (ON/OFF Selectable)

### • Accessories (replaceable with OP70 Moving Picture Option)



LG 3800-U01 HDD Unit



LG 3800-U02 FMD Unit

LG 3800-U01 Hard Disc Unit (80 GB)  
 LG 3800-U02 Silicone Disc Unit (1 GB)

## ■ LG 3804 Rear Panel



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