

B & K Components, Ltd.

2006

B & K Product
Reference Guide

B & K Components, Ltd.

| Audio Specifications | Preamplifiers | | Receivers | |
|-----------------------------------|--------------------------------------|----------------|--------------------------------------|--------------------------------------|
| | Reference 50 S2 | Reference 5 S2 | AVR 505 S2 | AVR 507 S2 |
| Surround Sound Processing☆ | DPLIIX/DD/DD SURR EX/DTS-ES/NEO:6 | N / A | DPLIIX/DD/DD SURR EX/DTS-ES/NEO:6 | DPLIIX/DD/DD SURR EX/DTS-ES/NEO:6 |
| Frequency Response | 5 Hz – 45 kHz | 5 Hz – 45 kHz | 5 Hz – 45 kHz | 5 Hz – 45 kHz |
| Input Sensitivity | 90 mV | 63 mV | 90 mV | 90 mV |
| Signal To Noise Ratio | 89 dB | 89 dB | 89 dB | 89 dB |
| Input Impedance | 50 k Ω | 50 k Ω | 50 k Ω | 50 k Ω |
| Output Impedance | 221 Ω | 221 Ω | 221 Ω | 221 Ω |
| Unbalanced Audio Inputs (RCA) | 7 | 6 | 7 | 7 |
| Balanced Audio Inputs (XLR) | 2 Stereo | N / A | N / A | N / A |
| Digital Inputs Optical / Coax | 5 / 6 | N / A | 5 / 6 | 5 / 6 |
| Digital Outputs Optical / Coax | 1/1 Zone A 0/1 Zone B | N / A | 1/1 Zone A 0/1 Zone B | 1/1 Zone A 0/1 Zone B |
| Unbalanced Surround Outputs (RCA) | 8 | N / A | 8 | 8 |
| Balanced Surround Outputs (XLR) | 8 | 1 Stereo | N / A | N / A |
| Analog Audio Outputs | 1 Pair – Zone B | 5 Pair | 1 Pair – Zone B | 1 Pair – Zone B |
| Analog Audio Input 5.1 | Yes | N/A | Yes | Yes |
| Number of Zones | 2 | 1 | 2 | 2 |
| Internal Tuner | Yes | Yes | Yes | Yes |
| User Presets | 40 | 40 | 40 | 40 |

| Video Specifications | Preamplifiers | | Receivers | |
|--|-------------------|-------------------|-----------------|-----------------|
| | Reference 50 S2 | Reference 5 S2 | AVR 505 S2 | AVR 507 S2 |
| Freq. Response Composite / S-Video | 20 Hz – 10 MHz | N / A | 20 Hz – 10 MHz | 20 Hz – 10 MHz |
| Freq. Response Component Video | 10 Hz – 100 MHz | N / A | 10 Hz – 100 MHz | 10 Hz – 100 MHz |
| Buffered Input / Output Impedance | 75 Ω | N / A | 75 Ω | 75 Ω |
| Composite Video Inputs / Outputs | 7 / 5 | N / A | 7 / 5 | 7 / 5 |
| S-Video Inputs / Outputs | 7 / 5 | N / A | 7 / 5 | 7 / 5 |
| Component Video Inputs / Outputs | 3 / 1 | N / A | 3 / 1 | 3 / 1 |
| Max. Input Level | 2 V P-P | N / A | 2 V P-P | 2 V P-P |
| Max. Output Level RCA & S-Video | 2 V P-P | N / A | 2 V P-P | 2 V P-P |
| Composite to S-Video Video Convergence | Yes | N / A | Yes | Yes |
| Composite to Component Video Convergence | Yes | N / A | Yes | Yes |
| S-Video to Composite Video Convergence | Yes | N / A | Yes | Yes |
| S-Video to Component Video Convergence | Yes | N / A | Yes | Yes |
| Dimensions in Inches | 17 (17 1/8) | 17 (17 1/8) | 17 (17 1/8) | 17 (17 1/8) |
| (Cutout Dimensions) | 5 13/16 (5 15/16) | 3 13/16 (3 15/16) | 7 1/2 (7 5/8) | 7 1/2 (7 5/8) |
| | 13 3/8 (14 1/2) | 9 1/2 (10 5/8) | 16 3/8 (17 1/2) | 16 3/8 (17 1/2) |
| Shipping Weight | 20 lbs. | 16 lbs. | 55 lbs. | 55 lbs. |

| B & K Product Tuner Specifications | |
|------------------------------------|------------------|
| FM Section | |
| Frequency Range | 87.5 – 107.9 MHz |
| Total Harmonic Distortion | Less than 0.25% |
| Frequency Response | 20 Hz – 15 kHz |
| Capture Ratio | 2 dB |
| IHF (Usable) Sensitivity | 12 dBf |
| Mono / Stereo Sensitivity | 15 / 35 dBf |
| Alternate Channel Selectivity | 65 dB |
| Signal To Noise Ratio | 70 dB |
| Antenna Input Impedance | 75 Ω |
| AM Section | |
| Frequency Range | 520 – 1670 kHz |
| Total Harmonic Distortion | Less than 0.3% |
| IHF (Usable) Sensitivity | 28 dBf |
| Alternate Channel Selectivity | 30 dB |
| Antenna Input Impedance | 300 Ω |

Features: REF Preamplifier Processor

- Motorola 367 Processor - The latest in Motorola technology provides outstanding processing power.
- 96/24 bit A/D and 192/24 bit capable D/A Conversion - Ultra high reproduction resolution of musical details.
- Processing modes include DPLIIX, DD, DD SURR EX, DTS, NEO:6 and DTS ES
- Six coaxial and five optical inputs. Two coaxial outputs (ZA & ZB) and one optical output (ZA).
- Seven A/V inputs and each with stereo audio, composite video and S-video inputs. One SACD or DVD Audio input (assignable). Balanced and unbalanced 7.1 pre-outputs and three analog (tape) loop outputs.
- 40 preset memories allow instant system configuration recall of user settings including AM/FM stations.
- RS-232 Control and IR control - Easy control and interface of your B&K product with other system controllers.
- Selectable bass management, notch filter, crossover and slope allows for versatility and performance.

- Upgradeable – Modular design allows for State of the art today, State of the art tomorrow.
- Two-Zone operation – A complete digital & analog A/V zone (Theater Zone), plus a separate independent A/V analog second zone. Both easily integrate with B&K keypads for control of the main theater zone or the second A/V zone B.
- All B & K products sold through authorized dealers are covered by a 5 year, parts and labor factory warranty.

B & K Components, Ltd.

| Amplifier Specifications | Amplifiers | | | Receivers | |
|---|---|---|---|---|---|
| | Reference 125.2 S2 Stereo | Reference 125.7 S2 7 Channel | AV1260 12 Channel | AVR 505 S2 | AVR 507 S2 |
| Number of Channels | 2 | 7 | 12 | 5 | 7 |
| Power Rating @ 8 Ω | 125 W | 125 W | 55 W | 150 W | 150 W |
| Power Rating @ 4 Ω | 185 W | 185 W | 85 W | 185 W | 185 W |
| Pairs of Output Devices Per Channel | 2 | 2 | 1 | 3 | 3 |
| Amperage Peak to Peak | 30 | 30 | 16 | 42 | 42 |
| Dynamic Head Room | 1.2 dB | 1.2 dB | 1.0 dB | 1.2 dB | 1.2 dB |
| Frequency Response | 5 Hz to 45 kHz | 5 Hz to 45 kHz | 5 Hz to 45 kHz | 5 Hz to 45 kHz | 5 Hz to 45 kHz |
| Damping Factor (50 Hz) | 180 | 180 | 80 | 200 | 200 |
| Input Sensitivity (RCA) Unbalanced | 1.0 V | 1.0 V | .77V | N / A | N / A |
| Input Sensitivity (XLR) Balanced | 2.8 V | 2.0 V | N / A | N / A | N / A |
| Input Impedance Ω | 33.2 k | 33.2 k | 33.2 k | N / A | N / A |
| IM Distortion (SMPTE) | .09% | .09% | .09% | .09% | .09% |
| Total Harmonic Distortion | .09% | .09% | .09% | .09% | .09% |
| Slew Rate | 14 v/ μ s | 14 v/ μ s | 14 v/ μ s | 14 v/ μ s | 14 v/ μ s |
| Signal To Noise Ratio | 95 dB | 95 dB | 95 dB | 95 dB | 95 dB |
| Level Controls | N/A | N/A | Yes | N / A | N / A |
| Balanced Inputs * | Yes | Yes | N/A | N / A | N / A |
| Dimensions in Inches (Cutout Dimensions) | Width 17 (17 1/8) Height 5 13/16 (5 15/16) Depth 15 3/4 (16 1/2) | Width 17 (17 1/8) Height 5 13/16 (5 15/16) Depth 15 3/4 (16 7/8) | Width 17 (17 1/8) Height 5 13/16 (5 15/16) Depth 15 3/4 (16 5/8) | Width 17 (17 1/8) Height 7 1/2 (7 5/8) Depth 16 3/8 (17 1/2) | Width 17 (17 1/8) Height 7 1/2 (7 5/8) Depth 16 3/8 (17 1/2) |
| Shipping Weight | 31 lbs. | 43 lbs. | 43 lbs. | 54 lbs. | 54 lbs. |

Features: AV Receiver

- Motorola 367 Processor - The latest in Motorola technology provides outstanding processing power.
- 96/24 bit A/D and 192/24 bit capable D/A Conversion - Ultra high reproduction resolution of musical details.
- Digital inputs/output - Six coaxial and five optical inputs. Two coaxial outputs (ZA & ZB) and one optical output (ZA).
- Processing modes include DPLIIX, DD, DD SURR EX, DTS, NEO:6 and DTS ES
- Analog inputs/outputs - Seven A/V inputs and each with stereo audio, composite video and S-video inputs. One SACD or DVD Audio input (assignable). Unbalanced 7.1 pre-outputs and three analog (tape) loop outputs.
- A/V presets - 40 preset memories allow instant system configuration recall of user settings including AM/FM stations.
- Two-Zone operation - A complete digital & analog A/V zone (Theater Zone), plus a separate independent A/V analog second zone. Both easily integrate with B&K keypads for control of the main theater zone or the second A/V zone B.
- RS-232 Control and IR control - Easy control and interface of your B&K product with other system controllers.
- Selectable Bass Management, Notch Filter Crossover and Slope - Allows for system versatility and superior performance.
- Upgradeable - Modular design allows for State of the art today, State of the art tomorrow.
- All B & K products sold through authorized dealers are covered by a 5 year, parts and labor factory warranty.
- Gold-Plated Connectors and Binding Posts for improved sound with minimized signal loss and degradation.
- Class A Pre-Driver circuitry improves low-level detail for a smoother and more musical sound.
- Class AB Mosfet Output stage delivers efficient, linear power.
- Differential input stage with a current source load assures DC stability and wide bandwidth linearity.
- Use of 1% Metal Film Resistors throughout the entire active circuitry to reduce noise for greater purity of sound.
- Toroidal Transformers provide high current for superior dynamics.
- Large capacity Computer Grade Capacitors for extended low frequency control and improved dynamics.
- Short Circuit Protection provides limited short term protection from accidental shorting of output devices.
- Individual External Fuse Protection prevents damage from accidental shorting of output devices, while preserving the highest level of integrity to the original input signal.
- Built in Thermal Protection to provide limited protection under conditions when your amplifier is being over driven or inadequately ventilated.

DPLIIX: Dolby Pro Logic IIX; **DD:** Dolby Digital; **DD SURR EX:** Dolby Digital Surround EX - **DTS:** Digital Theater System; **NEO: 6:** DTS Neo 6; **DTS ES:** DTS ES Extended Surround

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| Amplifier Specifications | Amplifiers | | | |
|---|--|---|---|---|
| | Reference 200.1 S2 Mono | Reference 200.2 S2 Stereo | Reference 200.5 S2 5 Channel | Reference 200.7 S2 7 Channel |
| Number of Channels | 1 | 2 | 5 | 7 |
| Power Rating @ 8 Ω | 250 W | 225 W | 200 W | 200 W |
| Power Rating @ 4 Ω | 425 W | 375 W | 375 W | 375 W |
| Pairs of Output Devices Per Channel | 10 | 5 | 5 | 5 |
| Amperage (Amps P-P) | 150 | 75 | 75 | 75 |
| Dynamic Head Room | 1.4 dB | 1.2 dB | 1.2 dB | 1.2 dB |
| Frequency Response | 5 Hz to 45 kHz | 5 Hz to 45 kHz | 5 Hz to 45 kHz | 5 Hz to 45 kHz |
| Damping Factor (50Hz) | 750 | 450 | 450 | 450 |
| Input Sensitivity (RCA) Unbalanced | 1.4 V | 1.4 V | 1.4 V | 1.4 V |
| Input Sensitivity (XLR) Balanced | 2.8 V | 2.8 V | 2.8 V | 2.8 V |
| Input Impedance Ω | 33.2 k | 33.2 k | 33.2 k | 33.2 k |
| IM Distortion (SMPTE) | .09% | .09% | .09% | .09% |
| Total Harmonic Distortion | .09% | .09% | .09% | .09% |
| Slew Rate | 14 v/ μ s | 14 v/ μ s | 14 v/ μ s | 14 v/ μ s |
| Signal To Noise Ratio | 95 dB | 95 dB | 95 dB | 95 dB |
| Level Controls | N/A | N/A | N/A | N/A |
| Balanced Inputs ** | Yes | Yes | Yes | Yes |
| Dimensions in Inches Width (Cutout Dimensions) Height Depth | 17 (17 1/8) 5 13/16 (5 15/16) 15 3/4 | 17 (17 1/8) 5 13/16 (5 15/16) 15 3/4 (16 7/8) | 17 (17 1/8) 7 7/16 (7 9/16) 19 1/2 (20 5/8) | 17 (17 1/8) 7 7/16 (7 9/16) 19 1/2 (20 5/8) |
| Shipping Weight | 42 lbs. | 42 lbs. | 74 lbs. | 76 lbs. |

Features: Amplifiers

- Gold-Plated Connectors for improved sound with minimized signal loss and degradation.
- Five way Gold-Plated binding posts for speaker connections.
- Balanced Inputs deliver the quietest and most accurate signal path between your preamp and amplifier.
- Class A Pre-Driver circuitry improves low-level detail for a smoother and more musical sound.
- Class AB Mosfet Output stage delivers efficient, linear power.
- Differential input stage with a current source load assures DC stability and wide bandwidth linearity.
- Use of 1% Metal Film Resistors in the entire active circuitry to reduce noise for greater purity of sound.
- Use of Toroidal Transformers to provide high current for superior dynamics.
- Large capacity Computer Grade Capacitors for extended low frequency control and improved dynamics.
- Capability to operate at full power with a square wave input signal.
- All Power Ratings are measured from 20 Hz to 20 kHz.
- Short Circuit Protection provides limited short term protection from accidental shorting of output devices.
- Individual External Fuse Protection prevents damage from accidental shorting of output devices, while preserving the highest level of integrity to the original signal possible.
- Built in Thermal Protection to provide limited protection under conditions when your amplifier is being over driven or inadequately ventilated.
- Level controls standard on AV1260, balance inputs are not available.
- Level controls are not an option for amplifiers that have balanced inputs.
- All amplifiers are designed to be easily integrated to a whole house install as well as a second zone application.
- All amplifiers can be externally controlled via a 12VDC trigger, supplied by all B & K preamplifiers and receivers. Daisy chaining amplifiers is also an available feature.
- B & K products are available in 17" standard black or silver and 19" rack mount black or silver.
- All B & K products sold through authorized dealers are covered by a 5 year, parts and labor factory warranty.
- Balanced Input pin configuration: **Pin 1** = ground, **Pin 2** = input (+) and **Pin 3** = input (–)

User manuals, system design plans, templates, spec sheets, appendices, examples, software (BKcSuite), and updates are available at the B & K website <http://www.bkcomp.com>, and on the BKcSuite installation CD-ROM.

B & K Components, Ltd.

Multi – Zone Receivers

| Specifications | CT602 | CT300 | CT600 |
|--|---|---|---|
| Number of Zones | 6 Stereo / 12 Mono | 3 Stereo / 6 Mono | 6 Stereo / 12 Mono |
| AM/ FM Tuners | 2 | 1 | 1 |
| Power Rating @ 8 Ω (4 Ω stable all Ch driven) | Zones A-F / 55 Watts Per Ch | Zone A-C / 55 Watts Per Ch | Zones A-F / 55 Watts Per Ch |
| Signal To Noise Ratio | 89 dB | 89 dB | 89 dB |
| Audio Frequency Response | 20 Hz – 20 kHz | 20 Hz – 20 kHz | 20 Hz – 20 kHz |
| Audio Source Inputs | 9 (RCA) | 9 (RCA) | 9 (RCA) |
| Audio Source Buffered Outputs | 9 (RCA) | 9 (RCA) | 9 (RCA) |
| Audio Buffered Output Impedance | 220 Ω | 220 Ω | 220 Ω |
| Video Freq. Response – Composite | 20 Hz – 10 MHz | 20 Hz – 10 MHz | 20 Hz – 10 MHz |
| Video Source Input Impedance | 75 Ω | 75 Ω | 75 Ω |
| Video Source Inputs | 9 Composite | 9 Composite | 9 Composite |
| Video Source Buffered Outputs | 9 Composite | 9 Composite | 9 Composite |
| Video Buffered Output Impedance | 75 Ω | 75 Ω | 75 Ω |
| Dedicated Zone AV Inputs | 6 (RCA) | 3 (RCA) | 6 (RCA) |
| Dedicated Zone Line AV Outputs | 6 (RCA) | 3 (RCA) | 6 (RCA) |
| Source IR Flashers Outputs | 9 (1/ 8" plug) | 9 (1/ 8" plug) | 9 (1/ 8" plug) |
| IR Flasher Voltage | 5V with 475 Ω in series | 5V with 475 Ω in series | 5V with 475 Ω in series |
| Front Panel Controls | IR | IR | IR |
| Front Display Type | Main Power Indicator | Main Power Indicator | Main Power Indicator |
| RS232 Device Control | Yes – Triggerable by IR | Yes – Triggerable by IR | Yes – Triggerable by IR |
| IR Zone Data Inputs | 6 | 3 | 6 |
| 12 Volt Control / Status Outputs | 6 | 3 | 6 |
| Common Control Inputs | 2 | 1 | 2 |
| Common Control Outputs | 2 | 1 | 2 |
| Whole House Presets | 100 | 100 | 100 |
| Dimensions in Inches (Cutout Dimensions) | Width 17 (17 1/8) Height 7 1/2 (7 5/8) Depth 15 3/4 (16 5/8) | Width 17 (17 1/8) Height 7 1/2 (7 5/8) Depth 15 1/2 (16 5/8) | Width 17 (17 1/8) Height 7 1/2 (7 5/8) Depth 15 1/2 (16 5/8) |
| Shipping Weight | 55 lbs. | 55 lbs. | 55 lbs. |

HD 6 High Definition Video Switcher

| | |
|------------------------|---|
| Number of Zones | 6 |
| Component Outputs | 6 |
| CAT-5 outputs | 6 |
| Inputs | 9 |
| Buffered Outputs | 9 |
| Video Bandwidth | 200MHz I/O |
| Video Input Impedance | 75 ohm |
| Video Input Signal | 1.2 Volts p-p |
| Video Output Impedance | 75 ohm |
| Video Output Signal | 1.2 Volts |
| CAT 5 Power Source | 6 (12VDC, 200mA) |
| Power Consumption | 50 Watts (Max) |
| Transcoding | Composite or S-Video to Component or CAT-5 |
| Control | RS 232 or back panel IR |
| Test Generator | Color Bar Video |
| Flashable Software | yes |
| Daisy Chain | yes |
| Dimensions in Inches | Width 17" Height 5.25" Depth 15" |
| Shipping Weight | 20 lbs. |

FEATURES: CT Receivers

- The CT602 & CT600 have 6 fully independent A/V stereo zones; the CT300 has 3 fully independent A/V stereo zones.
- Each stereo zone has independent power, volume, bass, treble and loudness control for proper zone sound-field.
- Each stereo zone may be configured as 2 mono zones.
- 100 **Personal Action Macros**© can be preset for instant use by any combination of zones you desire.
- The CT602 is equipped standard with 2 AM/FM tuners, and the CT300 and the CT600 have 1 AM/FM tuner.
- 9 source inputs each have composite video and stereo audio inputs, each with a dedicated IR flasher output.
- 9 source outputs each have buffered composite video and stereo audio outputs, line level & impedance matched.
- All stereo zones have one additional dedicated input (for a local source) with auto-selecting video and stereo audio.
- All stereo zones have one line-level audio output with video
- All system setup can be done with a computer for fast, easy, and intuitive configuration, backup, and database archiving.
- All speaker outputs are 4 Ω stable in stereo or mono zone configurations.
- All B & K products sold through authorized dealers are covered by a 5 year, parts and labor factory warranty.

Additional B & K Products Available

CK1.2 and CK1.1 Keypad Control – Complex control veiled in Simple Elegance is B & K's solution to whole house automation. Programmable LCD screen capable of operating 20 different devices. Over 1000 IR codes to fully command audio/video accessories. Also features 2-way feedback & intelligent input sync. Macro Programmable.

SR10.1 Remote Control – The compliment to the CK1.2 for intelligent control of B & K's Home Theater and Multi-Zone units. Programmable LCD screen capable of operating 20 different devices. Over 1000 IR codes to fully command audio/video accessories. (Macro Programmable)

CT-1 IR System Integrator – Integration and Control of 3 CT Multi-Zone and 1 AVR/REF Home Theater System Made Simple.

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B&K. Buy It Just Once

In a world of use it once and throw it away, we are trying to make a difference and offer you an option that makes a difference. Upgradability: B & K is one of the first manufacturers in the audio/video industry to consistently offer software and hardware upgrades to its processing of audio signals. Through upgrades, B & K delivers exceptional value to its customers.

But what is "Upgradability"? We define it as a philosophy of designing and manufacturing products so that as audio technology evolves, B & K can provide enhancements and improvements to its products. Upgradability is not a guarantee, it is a methodology of designing, engineering and manufacturing products that allows us to offer future upgrades if the enhancements to the processing of audio signals and changes in technology have widespread support in the industry and are economically viable.

We design our products to be upgradable for a number of reasons. Two of the primary reasons are that the industry and technology are evolving very quickly and B & K wants to provide its customers with state-of-the-art products; secondly, we believe that "Upgradability" allows us to provide added value to our customers by increasing the lifecycle of B & K's products and simultaneously decreasing the use of our limited natural resources by both B & K and our customers.