CVG-DA2CS

1:2 s-Video/Composite/Audio Distributor

Several words on Distribution Amplifiers:

Distribution amplifiers distribute one signal to several users. They vary in the number of inputs, looping capability, number of outputs, operating format, bandwidth and input/output coupling. Distribution amplifiers are used to distribute one video and/or audio source to several video/audio acceptors for simultaneous recording or monitoring one source.

A good quality distribution amplifier amplifies the incoming signal (video and audio), pre-compensates the signal for potential losses (resulting from the use of long cables, for example) and generates several identical buffered and amplified outputs.

Often, a signal processor is inserted between the source and the distribution amplifier for correction and fine-tuning of the source signal before multiplication, thus all copies are corrected in the same way.

There are many factors effecting signal quality when transmitted from a source, to an acceptor:

- Source and acceptor signal handling capability - as different brands offer different qualities and the result is limited by the lowest quality part performance. Using a low quality source will always result in low quality duplicates.
- The connection cables should be of the best quality you can afford. Low quality cables are susceptible to interference, deteriorate signal quality due to poor matching and cause elevated noise levels.
- Sockets and connectors of the sources and acceptors - so often ignored, should be of best quality, as "Zero Ohm" connection resistance should be assured. Sockets and connectors should match the required impedance (75 ohms in video). Cheap connectors tend to rust, causing breaks in the signal path.
- Amplifying circuitry quality is extremely important and is needed for high linearity, low distortion and low noise operation.
- The distance between source and acceptors plays a major role in the final result. If long distances (over 15 meters) exist between sources and acceptors - special means should be taken in order to avoid cable loss, such as using higher quality cables or if necessary - line amplifiers.
- Interference from neighboring appliances may have an adverse effect on signal quality. Balanced audio lines are less prone to interference, but unbalanced audio and video lines, even though the cables are shielded, should be installed far away from mains carrying cables, electric motors, transmitters etc.

The CVG-DA2CS

The **CVG-DA2CS** is an ultra-high bandwidth, s-*Video /Composite/ Audio Distribution Ampli*fier designed for studio and other demanding applications. The **CVG-DA2CS** splits a single input source into two identical outputs with no discernible signal degradation.

The user can adjust Y level, Y cable EQ. and C level for the s-Video signal, Video level and cable EQ. For the Composite video signal and audio L and R levels externally. The **CVG-DA2CS** has AC video input coupling for removal of unwanted DC components from the incoming signals. The machine has fully buffered, broadcast level, audio stereo outputs.

Operation:

- Connect an s-Video, and a composite video source to the video input connectors of the **CVG-DA2CS** unit.
- Connect up to two stereo-audio (Left and Right) signals (or balanced mono, using the right and left RCA connector as the + and -) into the appropriate input sockets of the **CVG-DA2CS**.
- Connect up to two s-Video/Composite/Audio acceptors to the output sockets.
- Operate source, acceptors and the **CVG-DA2CS**.
- Only if absolutely necessary, adjust, using an insulated screwdriver, the level controls. *Please note that the machine was factory-preset for accurate 1:1 signal transparency, and re-tuning unnecessarily the trimmers will upset this transparency.* The Y EQ., Video EQ. and C level trimmers should be used when long cables are used (longer than 15 meters = 45 ft.) Unnecessary adjustment might result in picture and

color “snow”. *The built in trimmers were not designed for continuous control of the machine, but for occasional tuning.*

Technical Specifications:

INPUT: 1 Video, Composite or single component, 1Vpp/75 Ω on a BNC.
1 s-Video, 1Vpp/75ohm (Y), 0.3Vpp/75 ohms (C) on a 4P connector.
1 Audio stereo, 1Vpp /22k ohms on RCAs.

OUTPUTS: 2 Video, Composite or single component, 1 Vpp/75 Ω on BNCs.
2 s-Video, 1Vpp/75ohm (Y), 0.3Vpp/75 ohms (C) on 4P connectors.
2 Audio Stereo, 1Vpp/150 Ω, 5 Vpp max. on RCAs.

MAX. VIDEO OUTPUT (CV/Y): 2 Vpp.
COUPLING: AC.
VIDEO BANDWIDTH (CV): 426 MHz -3dB.
VIDEO BANDWIDTH (Y): 200 MHz -3dB.
DIFF. GAIN: <0.04 %.
DIFF. PHASE: <0.02 Deg.
VIDEO S/N RATIO (CV/Y): >80 dB.
VIDEO NON LINEARITY: <0.1%
K-FACTOR (CV): <0.05%.
VIDEO CONTROLS: CV: Video Gain: -0.8 to +6dB, EQ.: 0 to +2.7dB.
Y/C: Y Gain: -1.2 to +3.3dB, EQ.: 0 to +4.4dB,
C Gain: -1.7 / + 4.9dB.
AUDIO BANDWIDTH: 100 kHz +/- 3 dB.
AUDIO THD: < 0.06 %.
AUDIO 2nd HARMONIC: <0.004 %.
AUDIO S/N RATIO: > 81 dB, Unweighted @ 1Vpp.
AUDIO CONTROLS: -73 to +9.5 dB.
POWER SOURCE: 12VDC, 500mA., max.
DIMENSIONS: 22cm X 18cm X 4.5cm (8.7" x 7" x 1.8", W, D, H., half 19").
WEIGHT: 1.1 Kg. (2.4 Lbs.) approx.
OPTIONS: 19-inch rack mount kit.

Please note that if the output signal is disturbed or interrupted by very strong external electromagnetic interference, it should return and stabilize when such interference ends. If not, turn the power switch off and on again to reset the machine. The socket-outlet shall be installed near the equipment and shall be easily accessible. To fully disconnect equipment, remove power cord from its socket.

CVG-DA2CS
INSTRUCTION MANUAL