

OMX-7002

1:5 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 final 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 OCEAN MATRIX OMX-7002

The OCEAN MATRIX **OMX-7002** is an extended bandwidth, state-of-the art YC/Video/Audio Stereo Distribution Amplifier designed for studio and other demanding applications. The **OMX-7002** splits a single input source into five identical outputs with no discernible signal degradation. Hundreds of copies of video tapes can be made at the same time using several **OMX-7002** units chained through the looping inputs. The user may select video AC or DC coupling for full flexibility.

The **OMX-7002** has an additional unique feature - by a flip of a switch it allows to convert a YC source to 5 Composite Video outputs.

Operation:

- ⊗ Connect composite or Y/C video and audio stereo sources to the appropriate inputs of the **OMX-7002**.
- ⊗ Select with the rear-mounted switch whether AC or DC coupling is needed.
- ⊗ If a Y/C input is connected, select with the MODE rear switch whether you want to distribute plain Y/C signals (switch is on the "YC" side) or convert the Y/C input to 5 Composite Video outputs (switch is on the "YC to CV" side.)
- ⊗ Connect up to 5 Video/s-Video/Audio acceptors to the output sockets.
- ⊗ If looping is needed, connect a second unit to the "LOOP" sockets, toggle the termination switch on the first unit into the "Hi-Z" position and the next unit into "75 Ohms" position.
- ⊗ Operate source, acceptors and the **OMX-7002**.

Typical applications:

- Video duplication studios, delivering undiminished quality video duplicates.
- Video Showrooms, delivering an identical picture to several monitors.
- Easy on-line conversion between YC to Composite.

Technical Specifications:

INPUTS:	1 Video looping, 1Vpp/75 Ω Composite (BNC), 1Vpp/75 Ω (Y), 0.3Vpp/75 Ω (C) on “4P” connector. 1 Audio Stereo looping 1Vpp/ 50K Ω on RCAs.
OUTPUTS:	5 Video 1 Vpp/75 Ω (Composite or “Y”), 5x0.3Vpp/75 Ω (C). 5 Audio Stereo, 1Vpp /100 Ω on RCAs.
VIDEO BANDWIDTH:	90 MHz –3dB (Y).
AUDIO THD:	Less than 0.04%.
VIDEO S/N RATIO:	Better than 73 dB.
AUDIO S/N RATIO:	Better than 74 dB.
K-FACTOR:	0.05%.
COUPLING:	DC/AC (video), AC audio.
DIFF. GAIN:	1.1 %.
DIFF. PHASE:	0.13 Deg.
MAX. VIDEO OUTPUT:	2 Vpp.
POWER SOURCE:	230VAC 50/60 Hz (115V USA).
DIMENSIONS:	19”, 1U rack mountable.

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.

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