



TELEPHONE ANALOGUE HYBRID AH-1

Chilton have manufactured the AH1-2 series since 1997 and has proved very reliable in different environments world wide. This is the first major upgrade and incorporates features not found in other products. In particular the Half Duplex facility, and the comprehensive logic with full remote control and Parametric Caller Voice Correction. (Single Unit Only)

What is Half Duplex

This prevents Double Talk 'DT' (simultaneous conversation) with the studio having priority. This mode is very useful when the line is noisy has echo or delay, which would otherwise prevent the connection being unuseable on air. The amount of priority or ducking can be pre-set according to requirements.

1: Maximum reduction of 20dBs removes noise, echo and delay when the studio is active. This is sufficient to mask the source interference and allow a seamless return.

2: Medium reduction of 12dBs talk down a caller when unacceptable comments or abuse is received.

3: Low reduction of 6dBs full Double Talk with the presenter having the edge on level.

In addition when the caller is speaking solo, the return output from the studio is reduced by 12dBs, this reduces any leakage through the hybrid to the caller as echo, also any low level studio background.

What is Balance

The Hybrid converts a 4 wire studio system (send, receive) to a 2 wire Telephone system. The Studio send to caller is balanced out from the Studio receive (caller only). The problem is the Telephone impedance 'Z' is always changing with the added possibility of both Echo and Delay generally with satellite links. The required 'Z' is complex and also varies with audio frequency. The Hybrid samples the send audio continuously then adjusts for minimum Studio output. During 'DT' only, sampling stops, and temporary stores the current 'Z' to maintain balance. When Echo or Delay is present we suggest 'HD'.

SPECIFICATION

Audio Line in	10k Electronically balanced
Audio Line Out	50 ohms Transformer Balanced
Tx Gain to Limit	-15dBu to +10dBu
Tx Limit level	Default -3dBu adjustable -10 to 0dBu
Bandwidth Tx Rx	250Hz-3k5Hz -3dB Ref:1kHz
Telephone line Z range	400 to 1200 ohms
Rx LED indicator	+9 to -18dBu in 3dB steps
Rx gain	22dB
EQ Parametric	+/-11dBs 300-3300Hz. Q 1 or 2. EQ in/out switch.
Rx distortion -10dBu in	0.1% @ +0dBu
**Rejection ratio typically	28-30dBu Rx@ -10dBu. Tx@ -3dBu. Ref:0dBu.
With Half Duplex Mode 3	-48dBu. Pink Noise.
Power	220-240V or 110-120V AC

**Received gain adjusted to give 0dBm out for phone level of -10dBs. Send to Phone Line -3dBs

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