AD-1000 Audio Delay

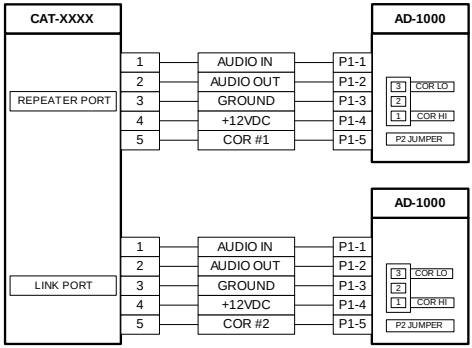
Instruction Manual

Computer Automation Technology Inc.
4631 N.W. 31st. Avenue, Suite 142
Fort Lauderdale, Florida 33309
Phone: 954 978-6171 Fax: 561 488-2894
Internet: www.catauto.com

AD-1000 Audio Delay Card

When placed in the receive audio path, the AD-1000 will eliminate the first chirp of DTMF tone during DTMF muting, and eliminate the squelch crash noise present on many repeater systems. The delayed audio is faithfully reproduced.

Installation is easy. Remove the jumper plug from the Controller. Replace the jumper with the cable from the AD-1000.



Delay Adjustment

The amount of audio delay is determined by the setting of control R10. The delay is adjustable between 100 and 600 milliseconds. Turn R10 clockwise until the squelch crash noise is just eliminated.

The AD-1000 is inserted in the receiver's audio path before the repeater controller's audio switch. The AD-1000 provides time for the switch to open before the squelch crash noise reaches the switch's input.

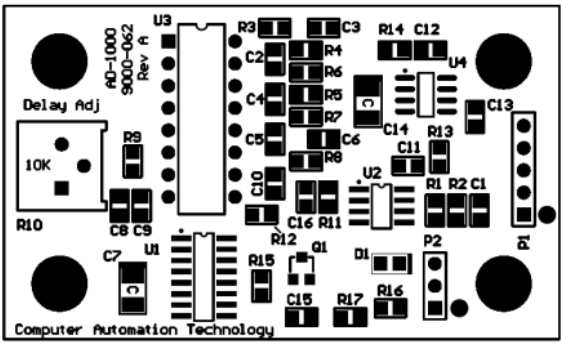
During DTMF muting, 40 milliseconds of the first tone will sneak through before the DTMF decoder can tell the microprocessor to open its audio switch. The AD-1000 provides the necessary delay to overcome this problem.

Discriminator Switch

The AD-1000 can be used with discriminator audio. A FET switch Q1 is included on the board. If the P1 header, the white noise repeater's COR logic is connected to hiss will be eliminated during key-up.

NOTE: If the COR logic is active high set the P2 jumper between pins 1 and 2. If the COR is active low set the P2 jumper between pins 2 and 3

AD-1000 Audio Delay Board



AD-1000 Part List

Qty	Type	Value	Ref Designators
2	Capacitor (SM)	560pf	C2, C4
2	Capacitor (SM)	.0047uf	C3, C6
9	Capacitor (SM)	.1uf	C1, C5, C8, C9, C10, C11, C12,C13, C15
2	Capacitor (SM)	22 or 33uf	C7, C14
1	Diode (SM)	BAT-43	D1
1	Header	5 Pin Header	P1
1	Header	3 Pin Header	P2
1	FET	2N7002	Q1
1	Resistor (SM)	100	R14
1	Resistor (SM)	4.7K	R9
7	Resistor (SM)	10K	R1,R2, R4, R7,R11 R12, R13, R15, R16
4	Resistor (SM)	15K	R3, R5, R6, R8
3	Resistor (SM)	47K	R17
1	Resistor	20K VAR	R10
1	I.C.	HEF4053	U1
1	I.C.	TLC2272	U2
1	I.C.	PT2399	U3
1	I.C.	L78L05ACD	U4