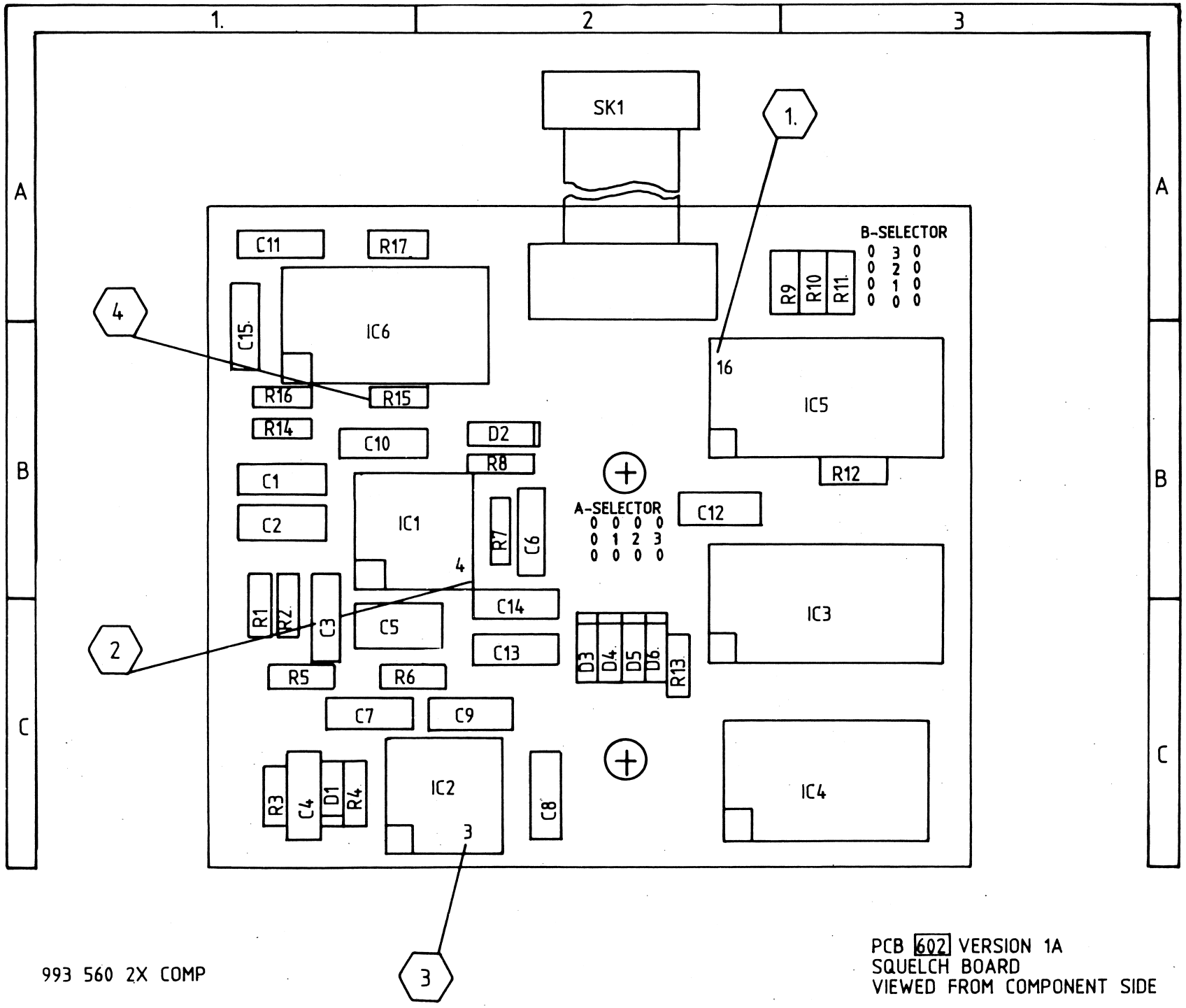
TECHNICAL DESCRIPTION

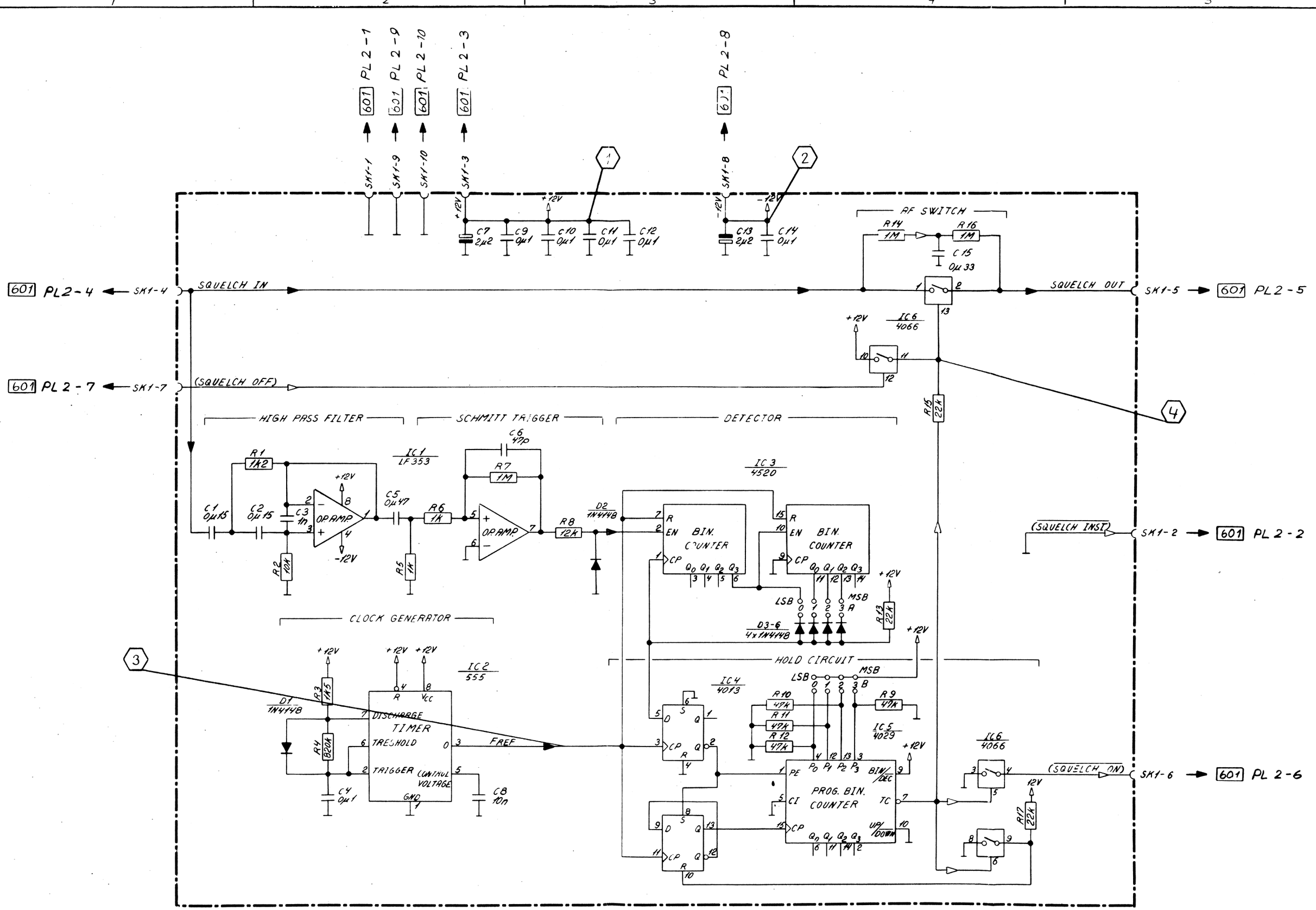
PCB [602] SQUELCH BOARD

The Squelch Circuit is operating exclusively on the received AF signal knowing its spectral distribution with and without the presence of speech. The AF signal is fed to the AF switch, which carries out the squelch function by turning on and off the AF signal. The AF signal is also fed to the input of the High Pass Filter which prevents hum and low frequency noise from disturbing the Detector. The high pass filter output signal is converted into a squarewave by the Schmitt Trigger, and the resulting signal is led to the input of the Detector. The Clock Generator produces a reference frequency for both Detector and Hold Circuit. In the presence of speech the mean frequency of the AF signal is lowered and becomes smaller than the detector frequency limit set by the reference frequency and the A-selector. This causes the Detector via the Hold Circuit to turn on the AF signal. When speech ceases the AF signal consists of noise only which increases the mean frequency above the detector frequency limit. The detector now triggers the Hold Circuit, which turns off the AF signal after a certain hold time, set by the reference frequency and the B-selector.



993 560 2X COMP

PCB 602 VERSION 1A
SQUELCH BOARD
VIEWED FROM COMPONENT SIDE



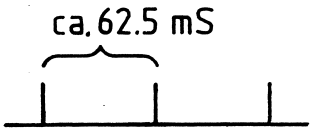
PCB 602 SQUELCH BOARD
VERSION 1A MAIN DIAGRAM

TEST POINTS FOR [602] SQUELCH BOARD

(1) + 12V

(2) − 12V

(3) ≃ 16 Hz



(4) + 12V WHEN SQUELCH OFF

PARTS LIST FOR SQUELCH BOARD 602 VERSION 1A

Printed Circuit Board Complete 602					107 560 21
IC1	LF353				850 035 30
IC2	NE555				850 055 50
IC3	CD4520B				850 452 00
IC4	4013B				850 401 30
IC5	CD4029B				850 402 90
IC6	CD4066BC				850 406 60
D1-6	1N4148				830 414 80
R1	1.2 kohm	5%	1/8W	MF	500 312 00
R2	10 kohm	5%	1/8W	MF	500 410 00
R3	1.5 kohm	5%	1/8W	MF	500 315 00
R4	820 kohm	5%	1/8W	MF	500 582 00
R5,6	1 kohm	5%	1/8W	MF	500 310 00
R7,14,16	1 Mohm	5%	1/8W	MF	500 610 00
R8	12 kohm	5%	1/8W	MF	500 412 00
R9-12	47 kohm	5%	1/8W	MF	500 447 00
R13,15,17	22 kohm	5%	1/8W	MF	500 422 00
C1,2	0.15 uF	10%	63V	Polyes.	622 515 00
C3	1 nF	10%	63V	Cer.	602 310 02
C4,9-12,14	0.1 uF	10%	63V	Polyes.	622 510 00
C5	0.47 uF	10%	63V	Polyes.	622 547 01
C6	47 pF	+-2%	63V	Cer.	602 147 00
C7,13	2.2 uF	20%	25V	Tan.	652 622 02
C8	10 nF	-20+50%	63V	Cer.	602 410 01
C15	0.33 uF	20%	63V	Polyes.	622 533 01