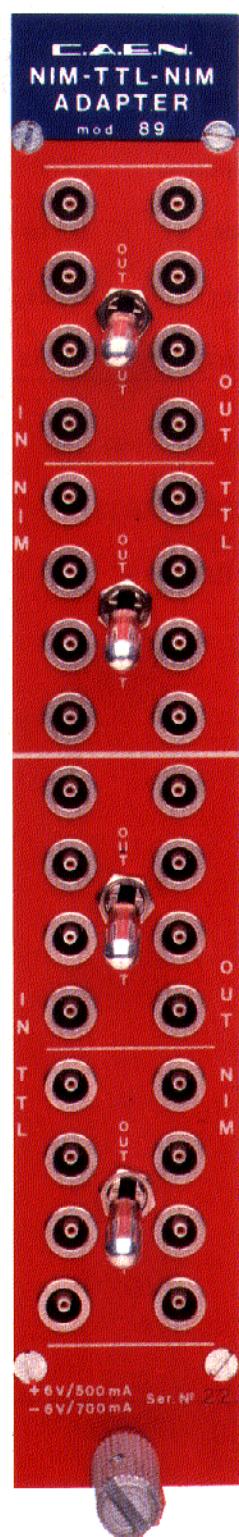


Technical
Information
Manual

MOD. N 89

*NIM-TTL-NIM
ADAPTER*

30th August 1991



CAEN will repair or replace any product within the guarantee period if the Guarantor declares that the product is defective due to workmanship or materials and has not been caused by mishandling, negligence on behalf of the User, accident or any abnormal conditions or operations.

CAEN declines all responsibility for damages or injuries caused by an improper use of the Modules due to negligence on behalf of the User. It is strongly recommended to read thoroughly the CAEN User's Manual before any kind of operation.



CAEN reserves the right to change partially or entirely the contents of this Manual at any time and without giving any notice.

TABLE OF CONTENTS

DESCRIPTION	Page 1
SPECIFICATIONS	Page 2
ELECTRIC DIAGRAM	Page 3
COMPONENTS LOCATION	Page 4
LISTS OF COMPONENTS	Page 5

DESCRIPTION

Model N 89 is a NIM-to-TTL, TTL-to-NIM Adapter and incorporates 8 channels of NIM to TTL converters and 8 channels of TTL to NIM converters in a 1-unit wide std. NIM module.

In order to increase its flexibility, the module is divided into four sections: the two upper sections perform the NIM to TTL conversion; the two lower sections, the TTL to NIM conversion. In each section a two-position switch allows logic inversion.

All the channels are DC coupled and have no duty-cycle limitations. The TTL output can deliver 2V on $50\ \Omega$ and can therefore be connected to remote $50\ \Omega$ loads through $50\ \Omega$ coaxial cable with minimum signal degradation. Fast rise-and-fall times ensure reliable operations with minimum pulse width and maximum frequency.

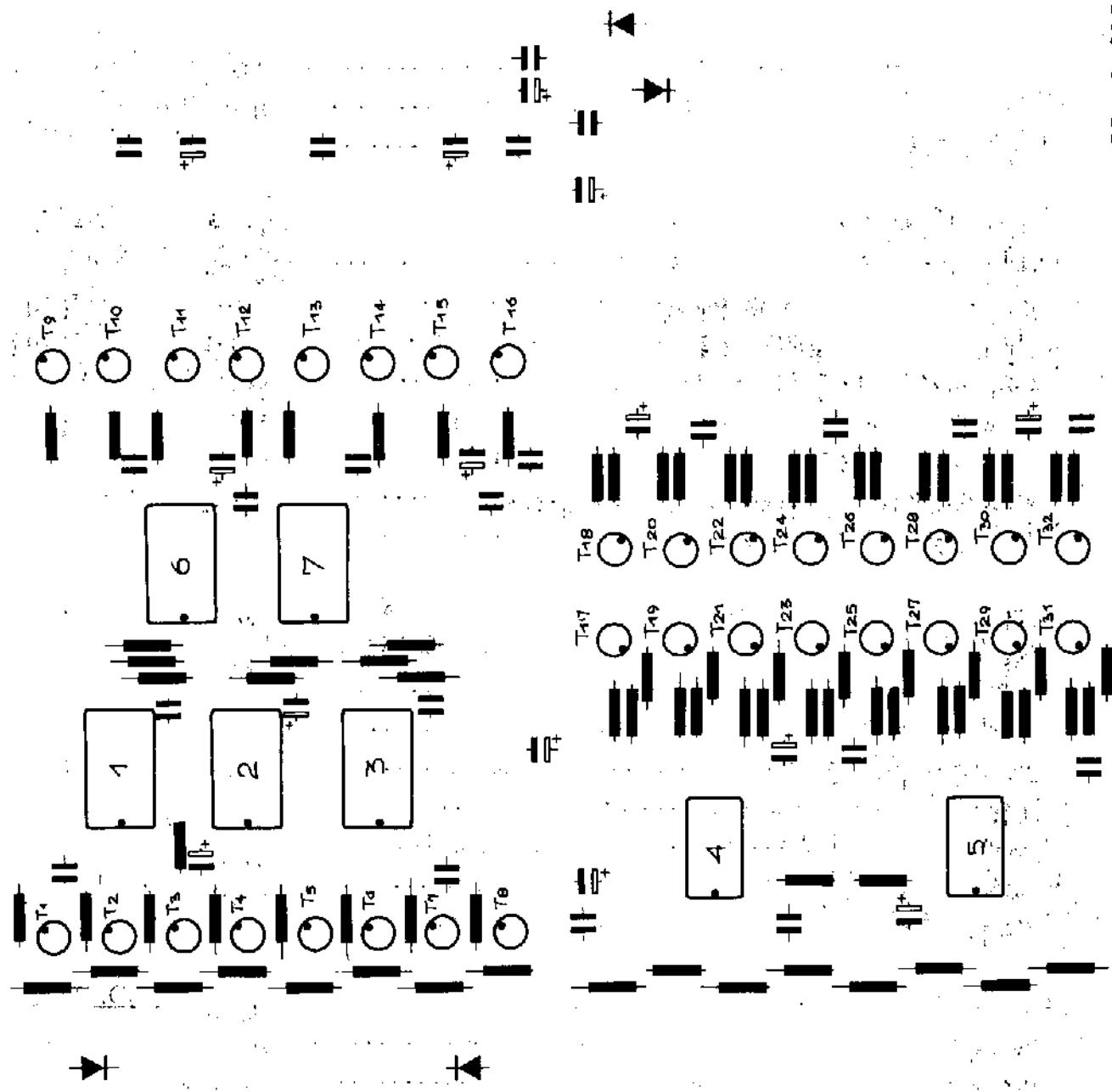
SPECIFICATIONS

PARAMETER	NIM-TTL	TTL-NIM
Number of channels	8	8
Input impedance	50 Ω	50 Ω
Min. input pulse width	10 ns	12 ns
Output pulse amplitude	≥ 2 V	800 mV
Output impedance	50 Ω	50 Ω
Rise- and fall-time	≤ 3 ns	≤ 2 ns
Input-Output delay	≤ 8 ns	≤ 10 ns
Max. operating frequency	60 MHz	40 MHz

All connectors are **LEMO 00** type

Power requirements: + 6V 0.23 A
 - 6V 0.23 A

Mod. N89



LIST OF COMPONENTS

I.C.s.

(IC4) x 2	.....	SN7486	(2)
IC1,IC2,IC3	.....	MC10107	(3)
IC6,IC7	.....	MC10125	(2)

TRANSISTORS

(T18,T20,T22,T24) x 2	.....	2N918 Ph.	(8)
T1+T8	.....	2N918 Mot.	(8)
T9+T16	.....	2N2369A	(8)
(T17,T19,T21,T23) x 2	.....	BSX 29	(8)

DIODES

D1,D2	.....	1N4007	(2)
D3,D4	.....	1N914	(2)

RESISTORS 1/4 W 5%

R1,R3,R5,R7,R11,R13,R15,R17 (R39,R42,R51,R54) x 2	..	51 Ω	(16)
(R41,R47,R53,R59) x 2	.....	178 Ω	1% (8)
(R37,R44,R49,R56) x 2	.....	220 Ω	(8)
(R40,R46,R52,R58) x 2	.....	215 Ω	1% (8)
R19+R26, (R38,R45,R50,R57) x 2	.....	560 Ω	(16)
R2,R4,R6,R8+R10,R12,R14,R16,R18	.....	1 KΩ	(10)
R27+R34, (R35) x 2	.....	2.2 KΩ	(10)
(R36,R53,R48,R55) x 2	.....	6.8 KΩ	(8)

CAPACITORS

C*	.....	10 nF	(22)
C**	.....	> 6.8 μF > 6V	(14)

C*,C**: Filter Capacitors