

## Bi-directional 10-way Selector Dekatron with Routing Guides

GZ11 / GS10H

Although the seated height of this tube is less than  $1\frac{1}{2}$ " , the electrical characteristics are similar to the Dekatrons with phenolic bases.

### Limit Ratings

Maximum counting rate	5000 p.p.s.
Maximum anode current	370 $\mu$ A
Minimum anode current	250 $\mu$ A
Minimum supply voltage (normal room illumination)	380 V
Maximum potential difference between electrodes other than anode	140 V
Maximum cathode output voltage	28 V

### Characteristics

Running voltage at 310 $\mu$ A	187 V nominal
--------------------------------	---------------

### Recommended Operating Conditions for a maximum counting rate of 4000 p.p.s.\*

**Cathode resistors	82 K $\Omega$
***Anode resistor	820 K $\Omega$
Supply voltage, with 1% anode resistor	475 V $\pm$ 10%
with 5% anode resistor	475 V $\pm$ 5%
Guide Bias	+ 35 V
Forced resetting pulse	— 120 V
Double Pulse Circuit, Fig. 2	
Pulse amplitudes	— 70 $\pm$ 7 V
Pulse durations	80 $\pm$ 5 $\mu$ S
Integrated Pulse Circuit, Fig. 1	
Input pulse amplitude	— 145 $\pm$ 15 V
Input pulse duration	75 $\mu$ S min. 1/3f secs max.
Continuous Sine Wave Circuit, Fig. 3	
Amplitude	55 $\pm$ 15 V r.m.s.

\* The manufacturers will design circuits to suit individual cases where the counting rate exceeds 4 kps.

\*\* Each cathode must have a return path to the negative rail via 82 K $\Omega$ , even though an output pulse is not required.

\*\*\* To reduce the effect of stray capacity to a minimum, it is essential that the anode resistor be wired not more than  $\frac{1}{4}$ " (5 mm) from the anode tag on the valve holder.

GS10H / GZ11

# Bi-directional 10-way Selector Dekatron with Routing Guides

## Mechanical Data

Mounting position

Any

For visual indication the tube is viewed through the dome of the bulb.

Alignment

Cathode 1 is aligned with pin 9  $\pm 3^\circ$ .

Base

B17A

Escutcheon

N79368

Valveholder, printed circuit

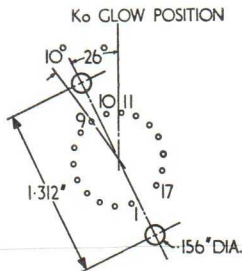
E.T.L. code HFD 13534

Valveholders, tags

A.E.I. type VH26/1703

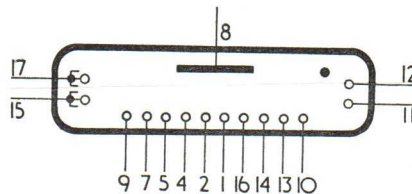
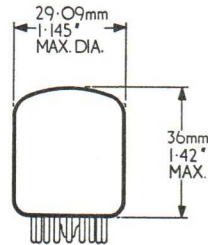
E.T.L. code HFD 13045

Valveholder connections and fixing (under-chassis view).



Valveholder requires 1.0" dia. hole in chassis.

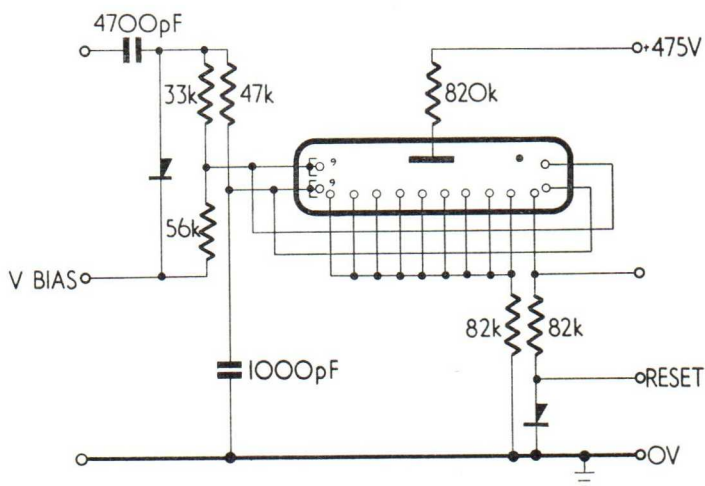
- Pin 1 Cathode 6  
 2 Cathode 5  
 3 Do not connect  
 4 Cathode 4  
 5 Cathode 3  
 6 Do not connect  
 7 Cathode 2  
 8 Anode  
 9 Cathode 1



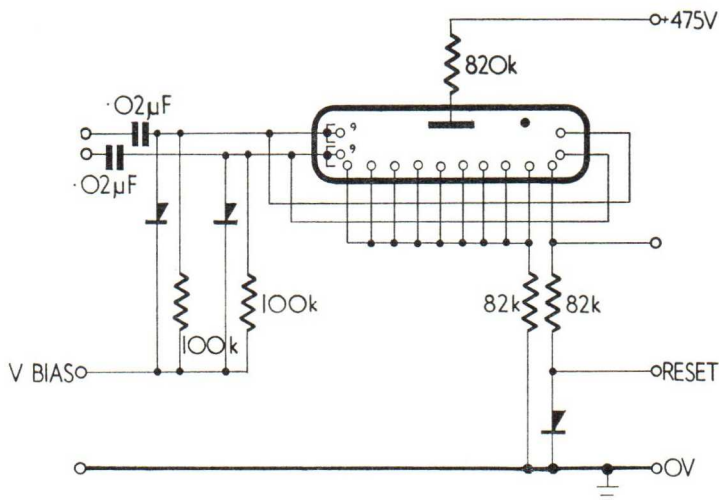
- Pin 10 Cathode 0  
 11 Routing Guide 2  
 12 Routing Guide 1  
 13 Cathode 9  
 14 Cathode 8  
 15 Commoned Guide 2  
 16 Cathode 7  
 17 Commoned Guide 1

**Bi-directional 10-way Selector  
 Dekatron with Routing Guides**

GZ11 / GS10H



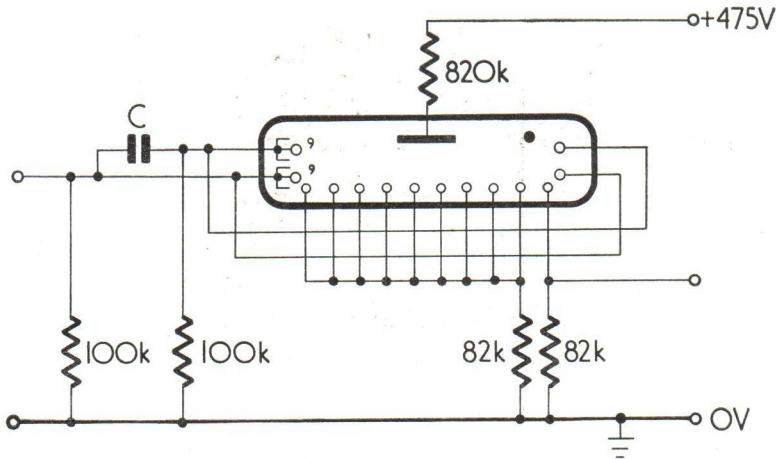
**Fig. 1 Integrated Pulse Drive**



**Fig. 2 Double Pulse Drive**

GS10H / GZ11

## Bi-directional 10-way Selector Dekatron with Routing Guides



f	4 kc/s	2 kc/s	1 kc/s	500 c/s	200 c/s	100 c/s	50 c/s
C	680 pF	·002 $\mu$ F	·005 $\mu$ F	·01 $\mu$ F	·02 $\mu$ F	·05 $\mu$ F	·1 $\mu$ F

Fig. 3 Sine Wave Drive

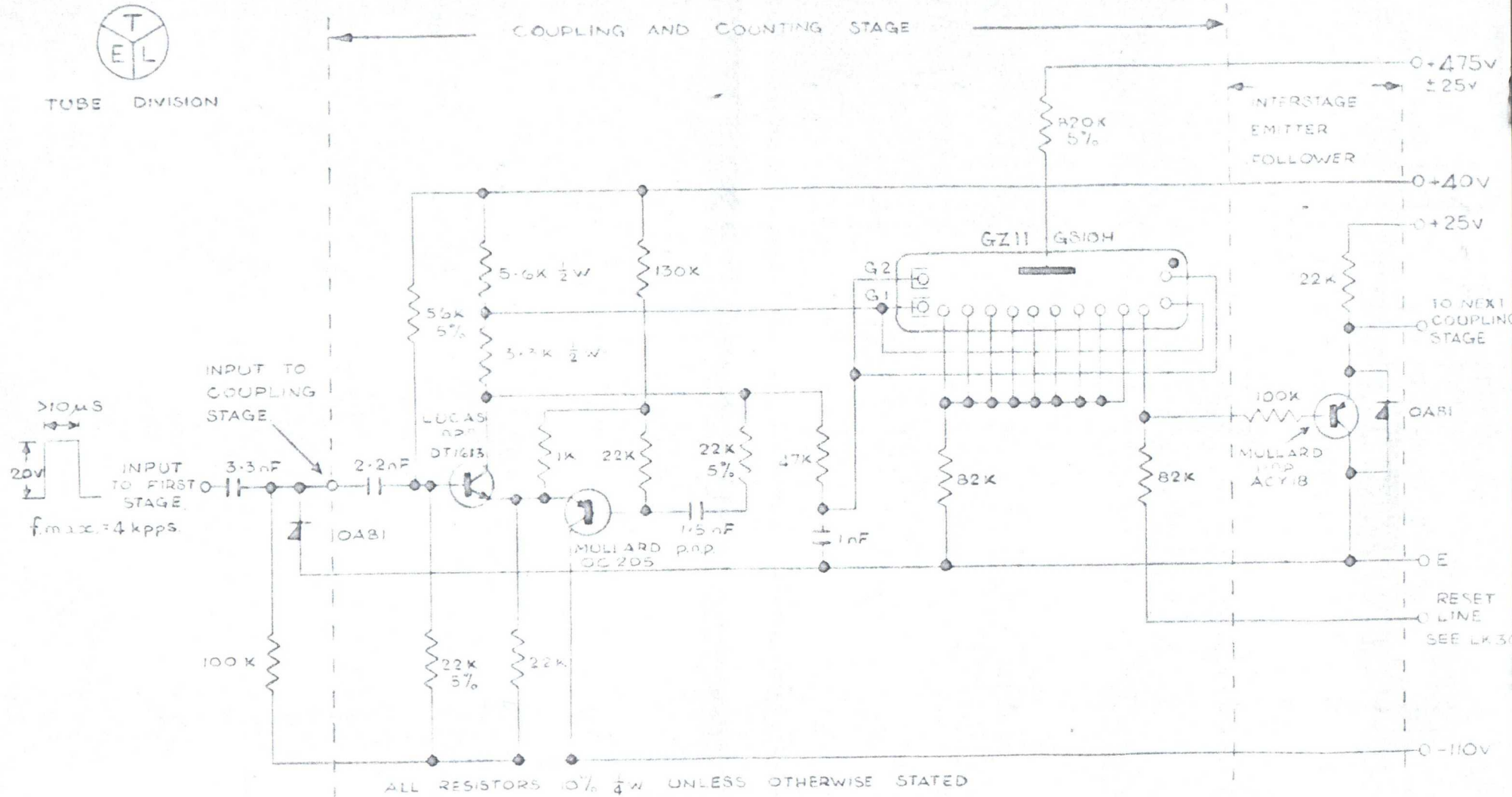
All diodes type 0A202 or equivalent.

Components and Voltages 10% tol. unless specified in data.

# SINGLE PULSE DRIVE FOR $\frac{GZ11}{GS10H}$ DEKATRON



TUBE DIVISION



NOTES:-

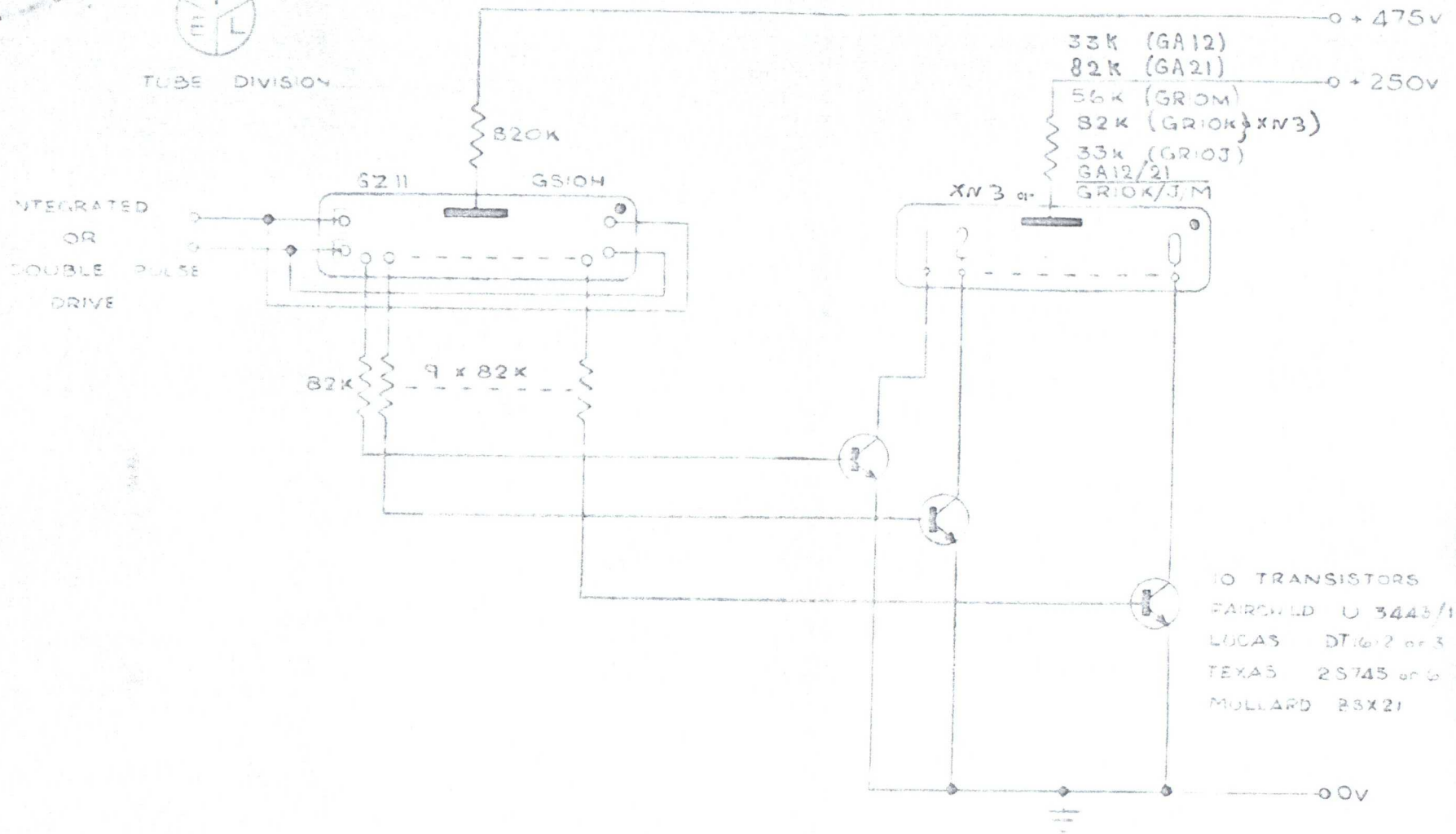
- 1 FOR AN  $n$  STAGE COUNTER ( $n-1$ ) INTERSTAGE EMITTER FOLLOWERS ARE REQUIRED.
- 2 OUTPUTS TO BE TAKEN FROM RELEVANT CATHODES

**T.V. GROENPOL**  
 POSTBUS 1188  
 TEL. 64474  
**AMSTERDAM**

LK 307



TUBE DIVISION



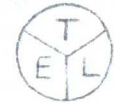
DEKATRON WITH DIGITAL READOUT USING TRANSISTOR  
COUPLING

**T.V. GROENPOL**  
POSTBUS 1188  
TEL. 64474  
**AMSTERDAM**

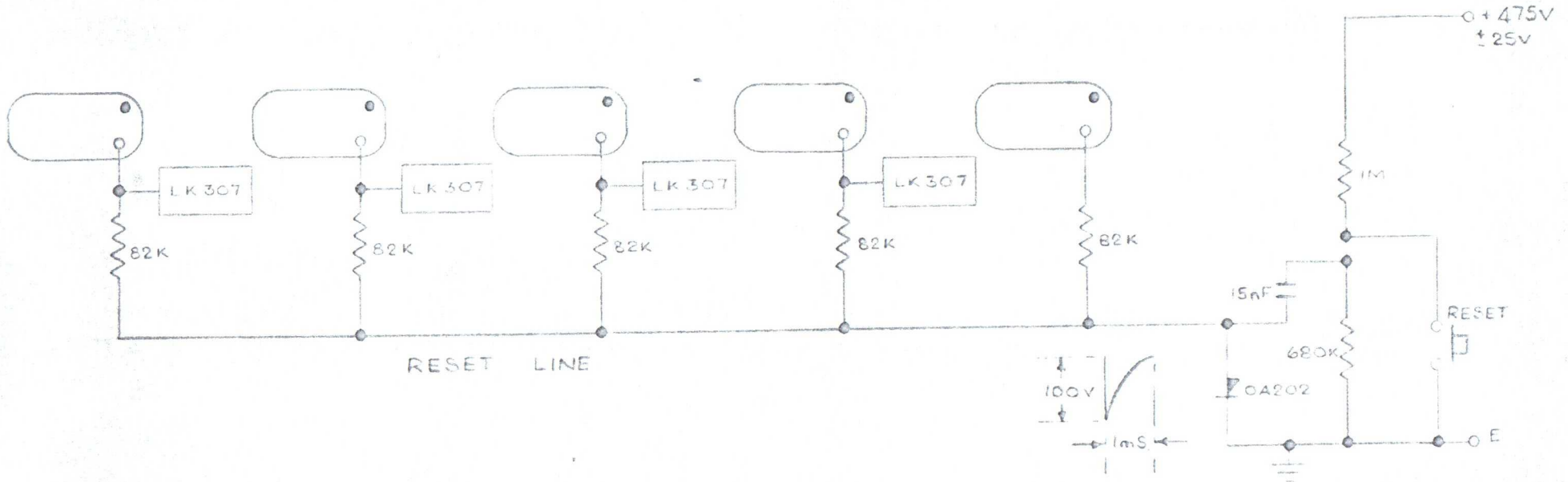
LK 301

# RESETTING CIRCUIT FOR LK307

(OUTPUT CATHODES ONLY SHOWN)



TUBE DIVISION



LK 308

**T.V. GROENPOL**  
POSTBUS 1188  
TEL. 64474  
**AMSTERDAM**