

## PRODUCT SPECS

Automatic quick-charger and discharger  
only for NiCd and NiMH batteries

1 to 10 cells ( packs )

Display 1 line, 16 characters  
shown mode, charge- and discharge- capacity

check polarity LED

DATA retention if main power off

max. charge current 3 ampere rms

max. discharge current 1.5 ampere rms

Modes:

Charge : charges only

Cycle : charge - discharge - charge

Alive : max. 6 cycles if discharge-capacity increase

## PACK- CHARGER - SELFTEST

### Equipment

- small screw-driver
- metallic tweezers
- 6 cells NiCd battery-pack ( capacity about 1500 to 2000 mAh )
- True-RMS DC mV - meter ( range 200 mV )
- DC current - meter ( range 2 A )

### Prepare of selftest

No battery is connected

AC power-switch ( main 230V ) in position **off**

Battery-typ-switch ( S2 ) in position **NiCd**

Cell-rotary-switch ( S3 ) in position **6 cells**

Put in the AC power plug ( 230V )

### To start selftest

There are two SMD- pads on the solderside of the front PCB -  
namend Y41 and Y42.

Connect these two SMD- pads (f. e. metallic tweezers) and switch on  
the charger with the main switch - called power ( see picture 1 ).  
Then you will start the selftest- program.

Remove the metallic tweezers.

In this program the display will show what you have to do and/or shows  
measured values.

By every press of the MODE-button you reach the next check-point.

1. First you will see "START SELFTEST".  
Adjust R73 to get the best display brightness ( see picture 2 ).

Connect the 6-cells NiCd-battery-pack to the red- and black-socket.  
Connect a DC-TRUE-RMS millivolt-meter ( range 200 mV ) to R 11  
( see picture 3 ).

Push button

#### MODIFICATION OF CHARGE-CURRENT ADJUSTMENT

2. Display will show "CHARGE= 3 A MAX".  
! True-RMS-meter will show a value between 120 and 160 mV  
( see picture 3 ).

Push button

3. Display will show "CHARGE= 2 A MID".  
True-RMS-meter must show the same value +/- 2 mV.

Push button

4. Display will show "CHARGE= 1 A LOW".  
! Adjust R 72 to 45 ... 50 mV.  
Remove true-RMS-meter

Push button

5. Display will show "ADJUST 1.800 A".  
Connect the DC-current-meter ( range 2 ampere ) between red-socket  
and battery-plus ( see picture 4 ).  
Use R 21 to adjust the discharge current within a range from 1.782 to  
1.818 A.  
Remove the DC-current-meter and the battery-pack.

Notify that during this test the battery-pack is out of full charge- and  
discharge- control. So please do this adjust/check within a short time  
and use a half-way charged battery-pack.

Push button

6. Display must show " OVER - VOLTAGE ".  
Turnaround "cell-switch" ( S 3 ) in position 10 cells.  
Then you will see "IN:xxxx EMP:1200"

xxxx must be a value more then 1200

Now you have to shift the "battery-ty-p-switch" ( S 2 ) in position  
NiMH.

- ! xxxx must be a value more then 1800 or the Display will show  
" OVER - VOLTAGE ".

Connect the red- and black-battery-socket ( f. e. metallic tweezers ).  
Notify that this is an allowed short-circuit.

xxxx must be a value lower then 10 and the "check polarity" LED must switch on

Remove the connection of red and black battery- socket (metallic tweezers)

Push button

Then you are in the real charger program.  
Display will show "NO AKKU TO SERVE"

## ELECTRICAL SPECS

### Transformer

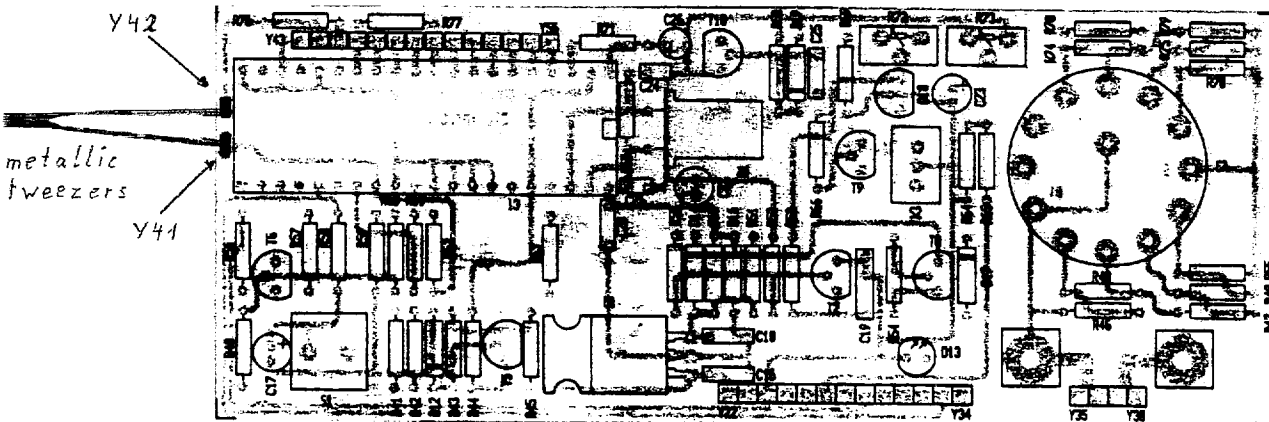
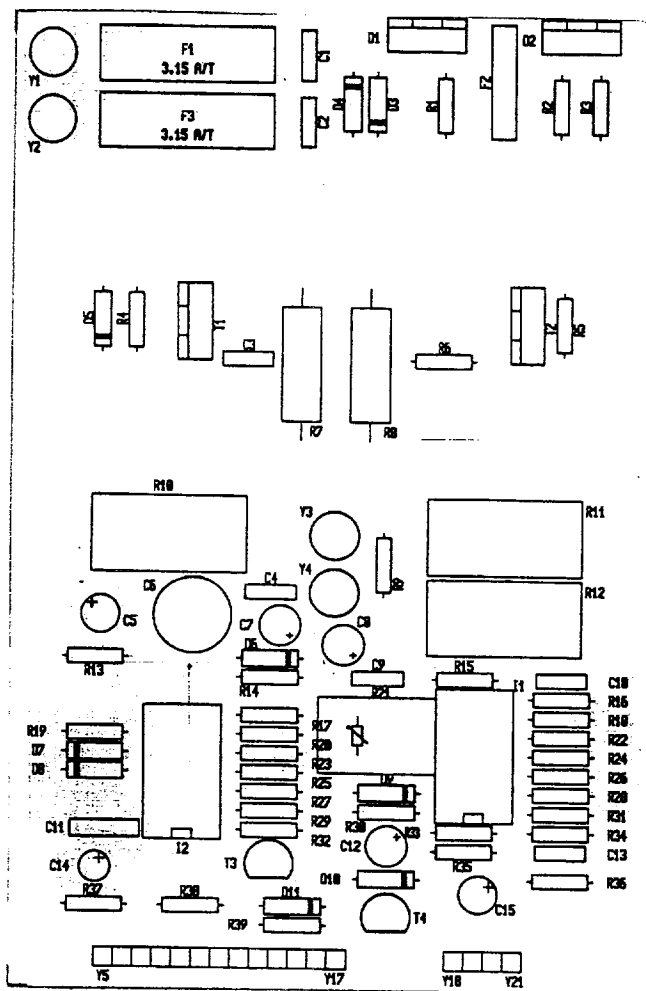
primary	230 V AC / 50 Hz
secondary	2 * 20 V AC / 2 * 60 VA

charge current:	1 - 3 A rms
disch. current:	0.5 - 1.5 A rms

voltage at battery sockets:  
around 25 V DC ( high resistance )

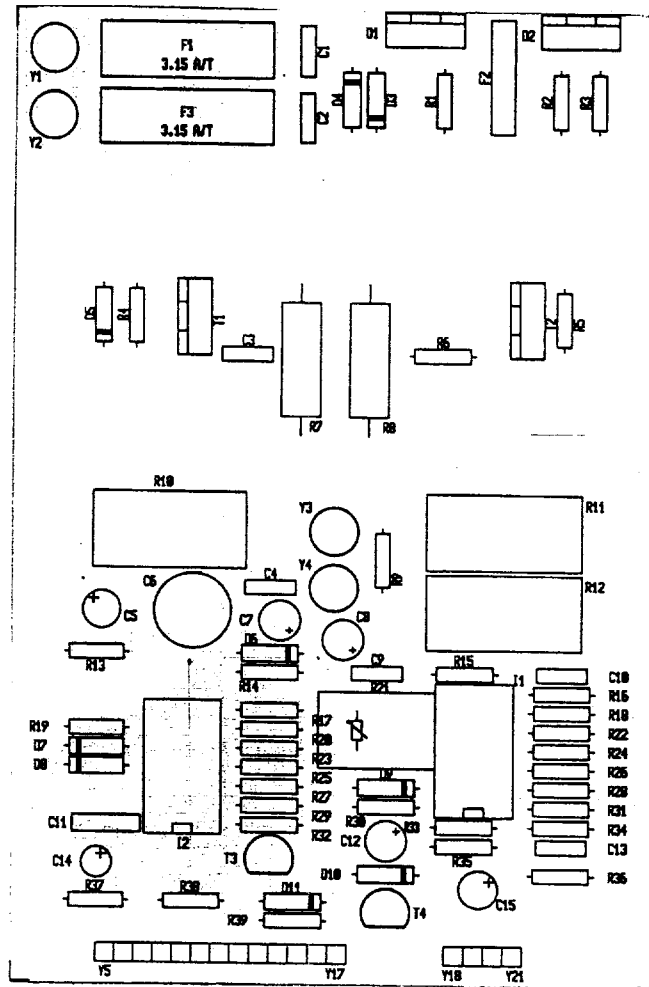
# PACK - CHARGER

picture 1

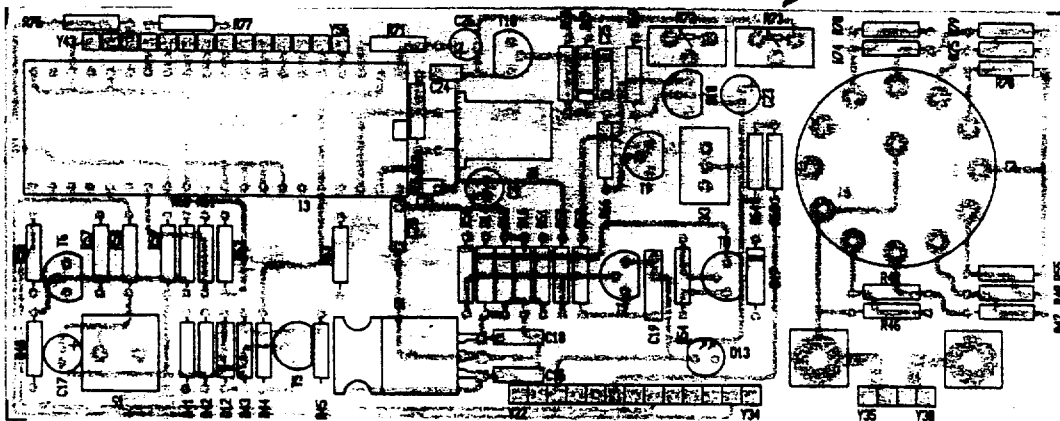


# PACK - CHARGER

picture 2

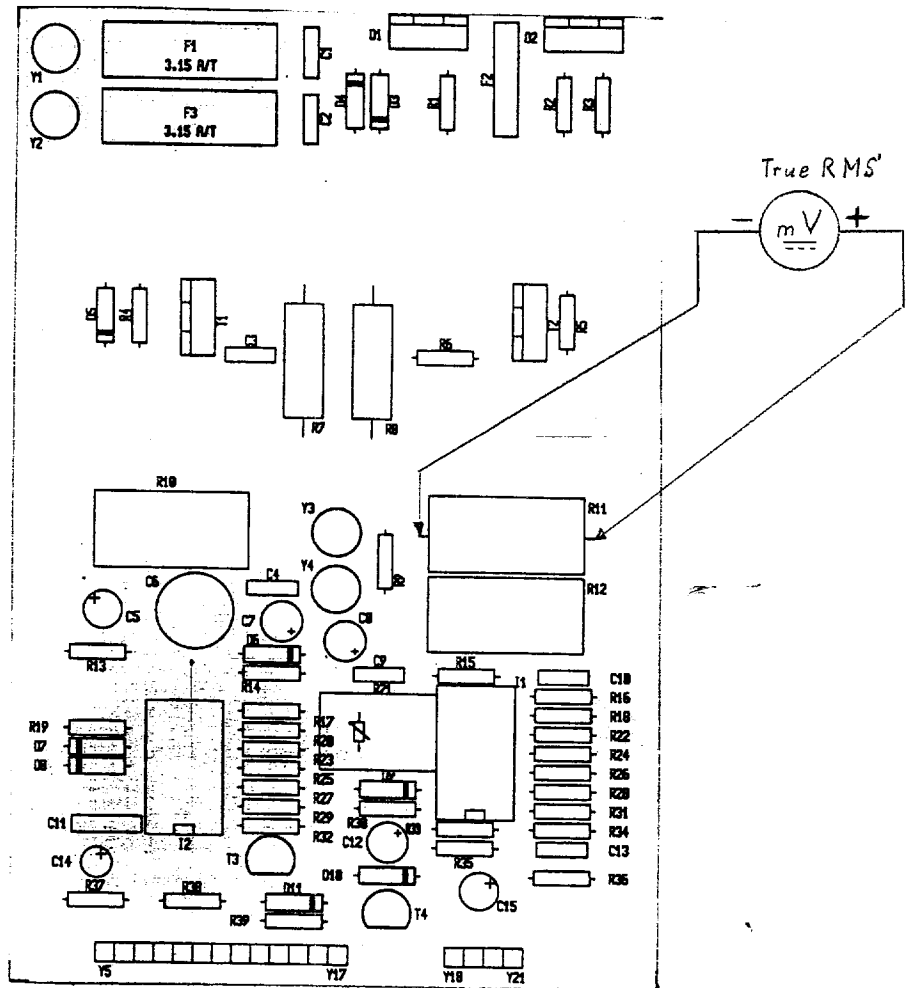


Display brightness

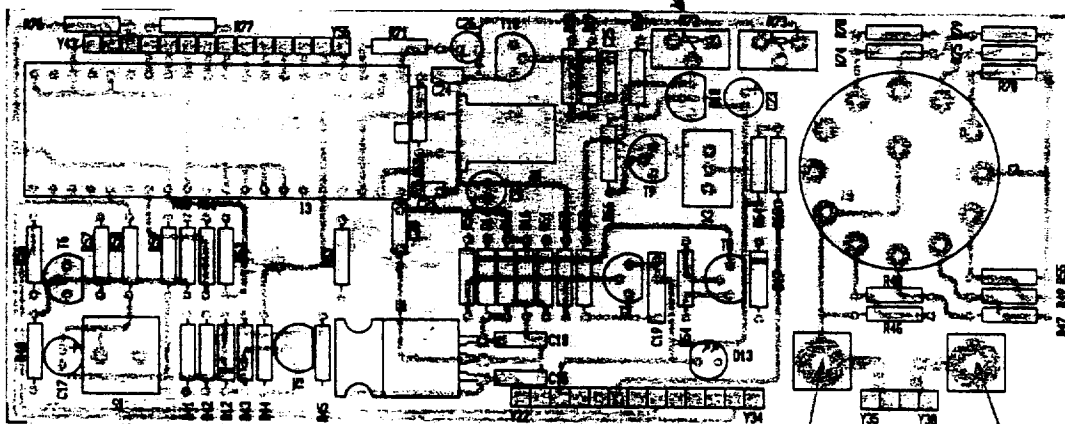


# PACK - CHARGER

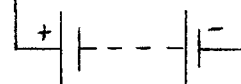
picture 3



Charge current



red — sockets — black

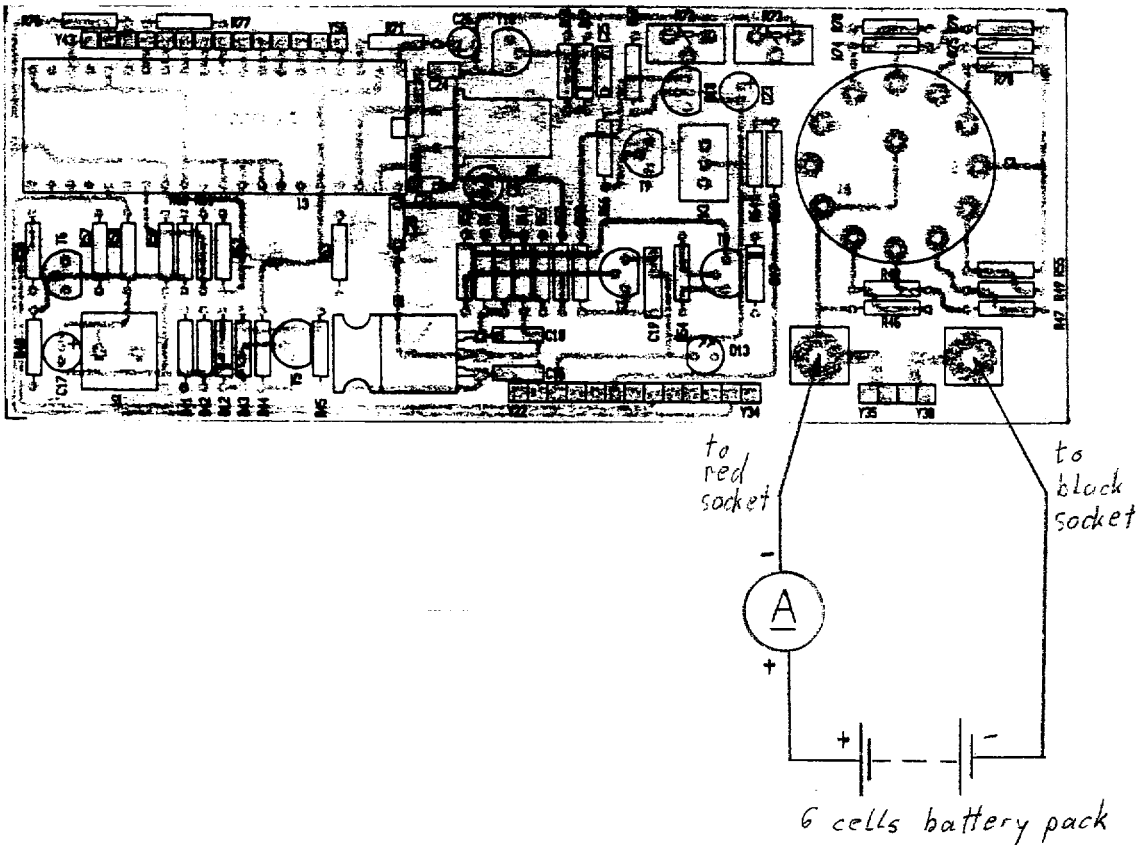
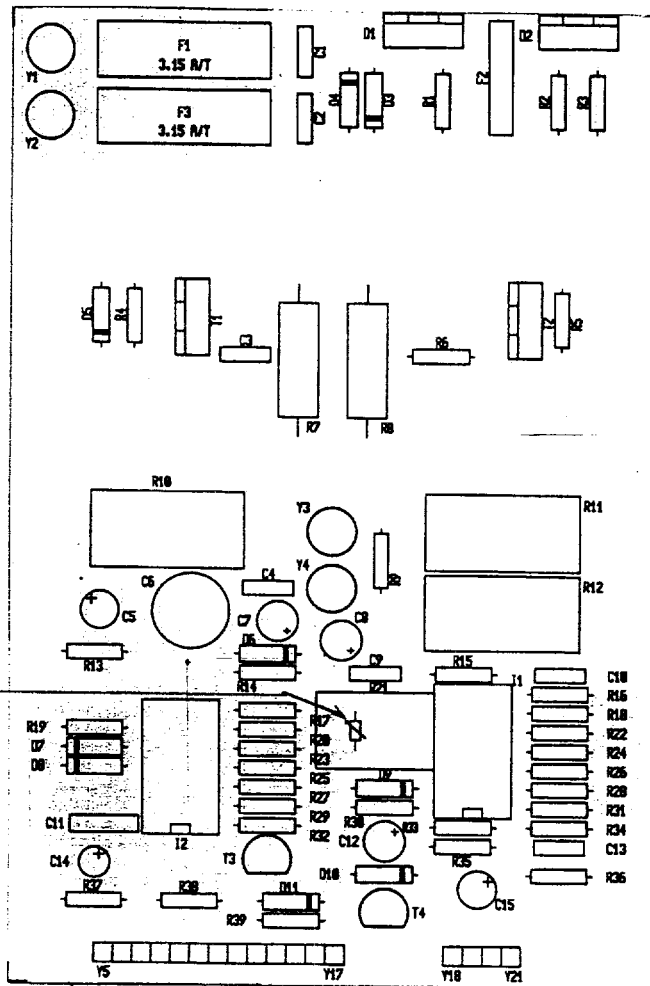


6 cells battery pack

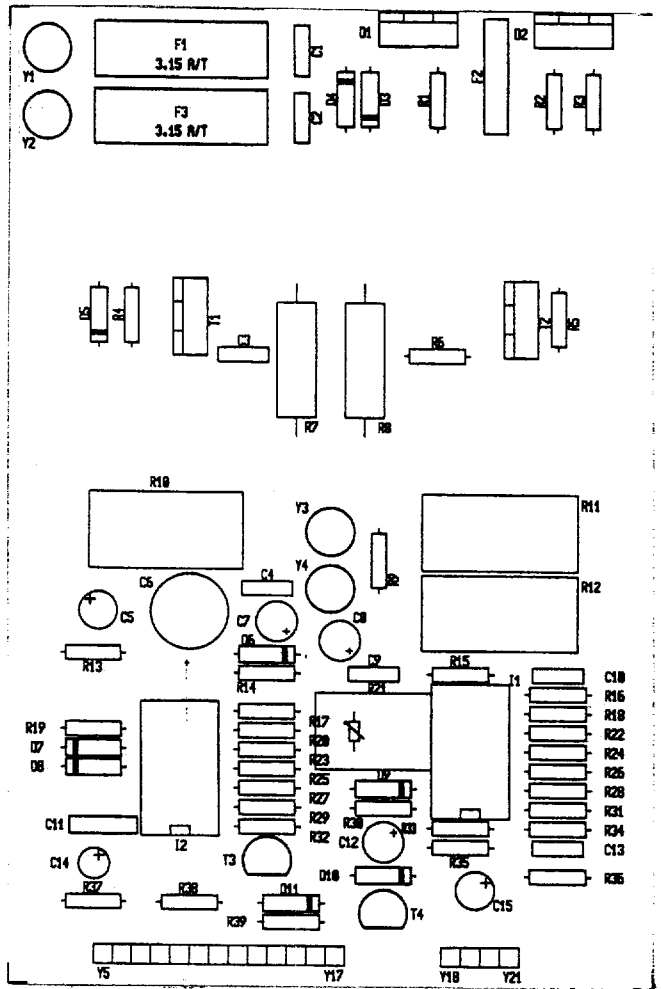
# PACK - CHARGER

picture 4

Discharge current



# PACK - CHARGER



Self test

