

# B77

## SPECIAL-VERSIONS

### SCHALTUNGSSAMMLUNG SET OF SCHEMATICS RECUEIL DE SCHÉMAS



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Änderungen vorbehalten

Subject to change

Sous réserve de modification

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## DIASTEUERUNG 1.177.270

Mit einem eingebauten Spezial-Tonkopf und angeschlossener Laufwerk-Fernbedienung, ermöglicht diese Schaltung Steuerimpulse für den Bildwechsel bei handelsüblichen Dia-Projektoren auf Band zu bringen.

Eine Anpassung der Steuerschaltung an diverse Projektor-Fabrikate ist gewährleistet, indem über einen galvanisch getrennten Relaiskontakt geschaltet wird.

Über die beiden Steuertasten REC-SLIDE und SET-SLIDE, werden die folgenden Betriebszustände gewählt:

- Wiedergabe von Schaltimpulsen
- Sperren der Wiedergabe von bereits aufgezeichneten Schaltimpulsen (wichtig bei bespielten 4-Spur Bändern)
- Löschen sowie Setzen von (neuen) Impulsen

Es werden 1 kHz Sinussignale aufgezeichnet. Die Löschung erfolgt mit Gleichstrom.

Die genaue Funktion der Steuertasten ist aus der Tabelle ersichtlich. Ein Ausserbetriebsetzen des Relais ohne angeschlossene Fernbedienung ist mittels eines beschalteten Blindsteckers möglich.

## Slide synchronizing electronics 1.177.270

A special magnetic head in conjunction with the slide synchronizing electronics makes it possible to record control impulses on tape. Upon playback, these impulses will effect a picture change in any commercially available projector, when connected to the B77 recorder. This system is operational only in conjunction with the REVOX B77 remote control device.

Reliable operation with different makes of projectors is ensured by the fact that control of the slide advance mechanism is effected by separate relay contacts.

By means of the buttons REC-SLIDE and SET-SLIDE on the remote control device, the following operating conditions can be selected:

- Reproduction of control (switching) impulses.
- Disabling of the synchronizing circuit so as not to respond to signals scanned by the impulse head (important when playing fully recorded quarter track tapes).
- Erasure and recording of (new) control impulses.

The exact function of each control button can be seen from the table. To disable the relay without a remote control device connected to the recorder, a suitably wired dummy plug has to be inserted in the remote receptacle.

## Synchronisateur de diapositives 1.177.270

Ce circuit monté dans un B77 équipé d'une tête pilote et raccordé à la commande à distance, permet la commande par la bande d'un projecteur de diapositives.

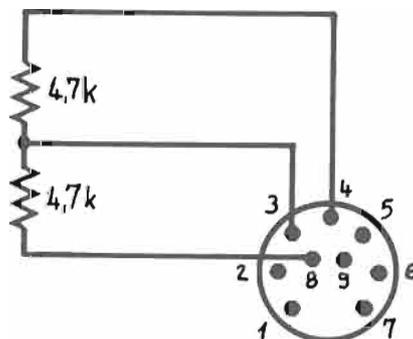
La commande par les contacts du relais, isolés galvaniquement du circuit, s'adapte à n'importe quel type de projecteur.

Les deux touches de commande REC-SLIDE et SET-SLIDE permettent les fonctions suivantes:

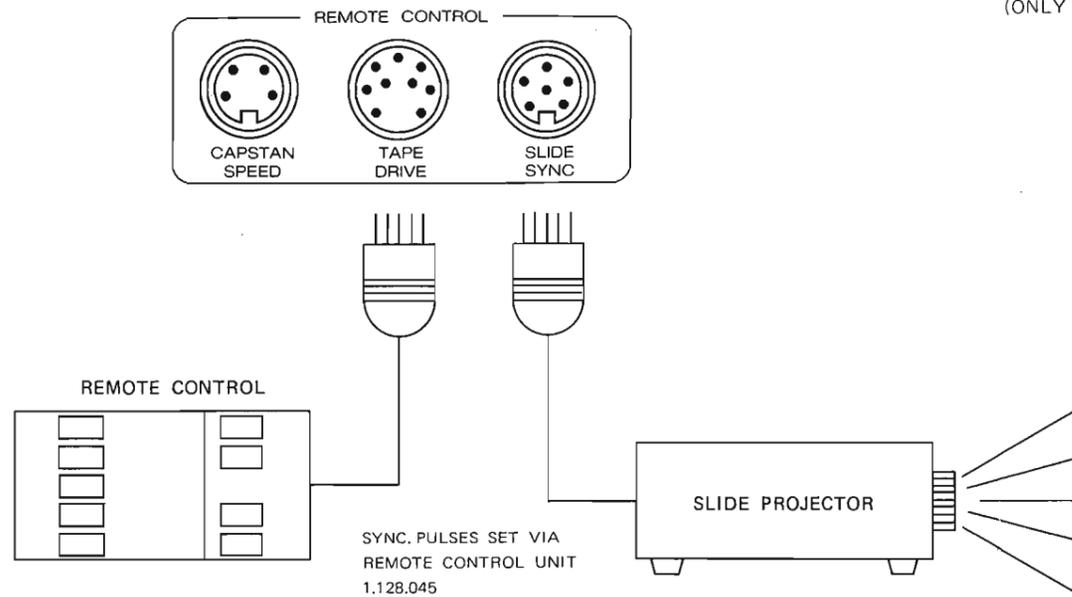
- Lecture des impulsions de commande
- Blocage de la lecture des impulsions de commande (important pour les appareils 4 pistes).
- Effacement ainsi qu'enregistrement des (nouvelles) impulsions.

Ces impulsions sont constituées par des trains d'un signal sinusoïdal de 1 kHz. L'effacement s'effectue par courant continu.

Les fonctions exactes des touches de commande sont données par la table. La mise hors fonction du relais sans l'aide de la commande à distance, peut se faire avec une fiche borne pontée.

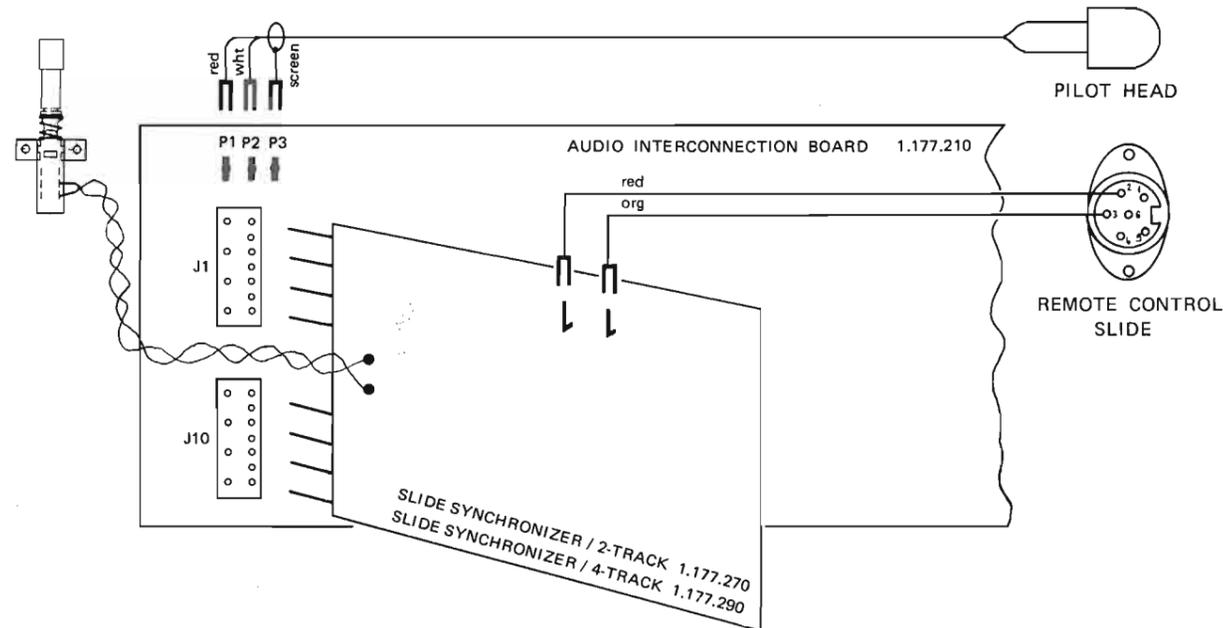


**A**  
STANDARD VERSION

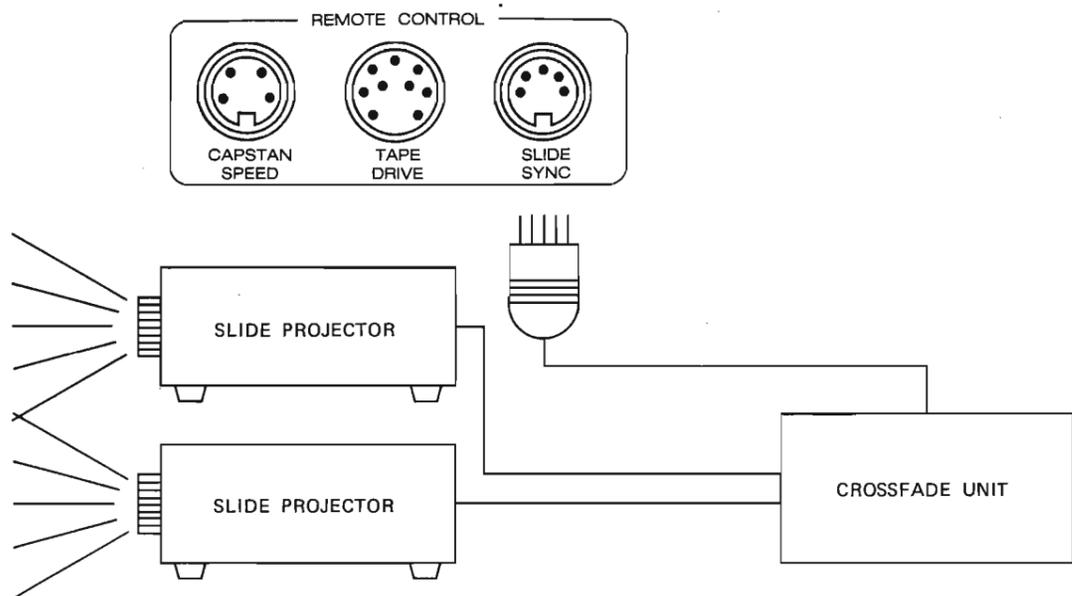


DIA PILOT MUTING SWITCH  
(ONLY FOR 4-TRACK VERSIONS)

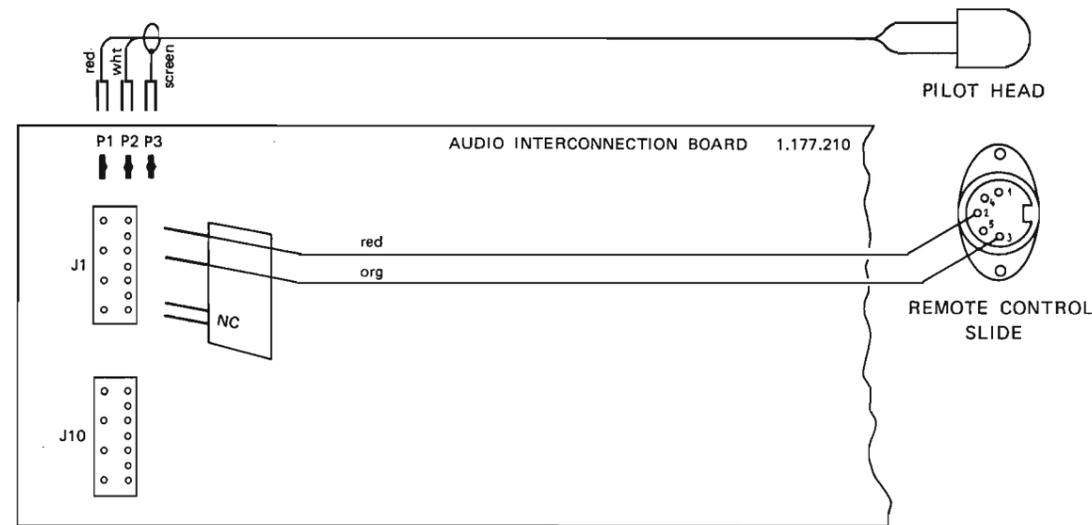
PILOT HEAD 2-TRACK 1.116.082-01  
PILOT HEAD 4-TRACK 1.116.083-01



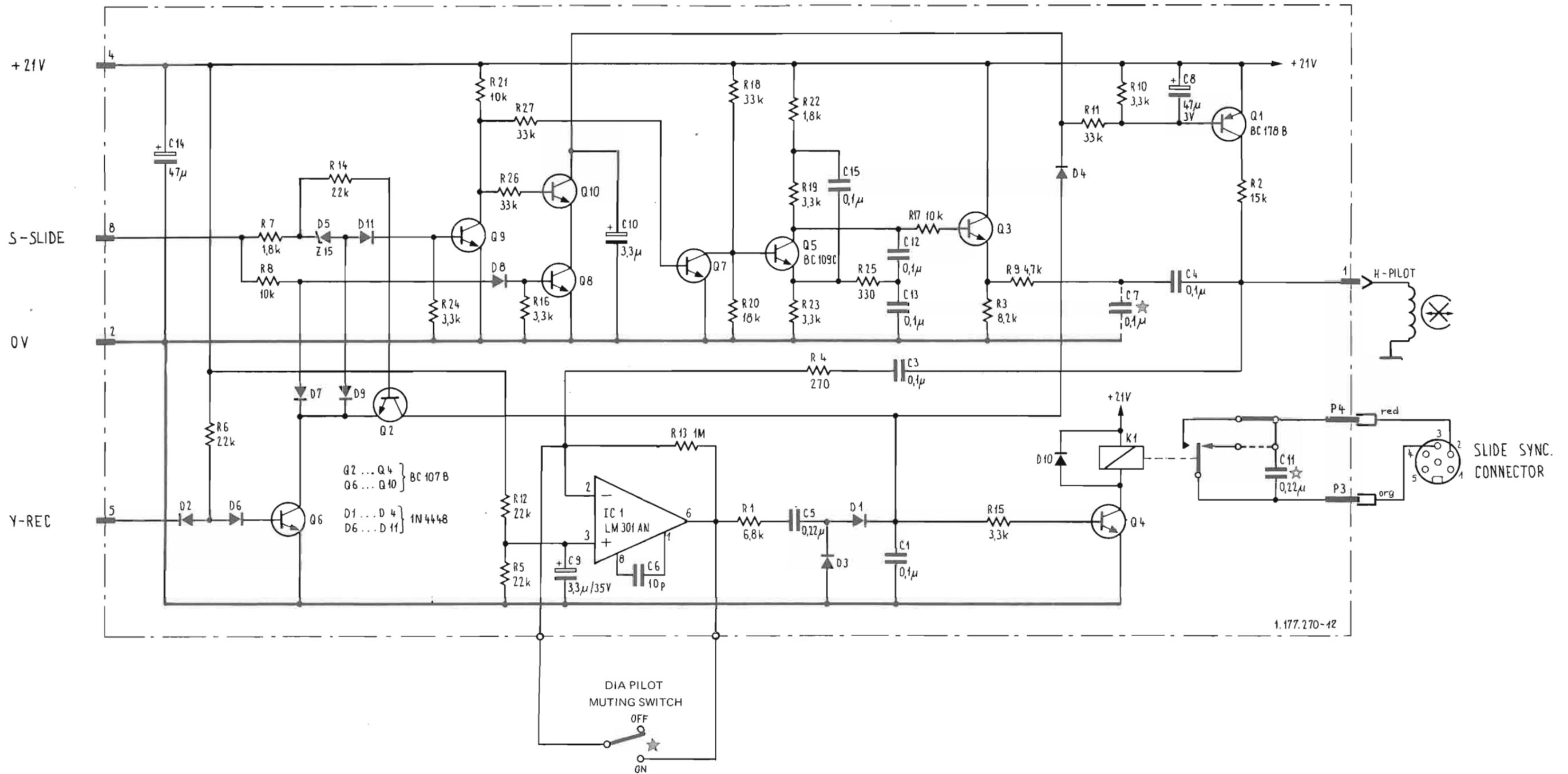
**B**  
WIRING FOR  
CROSSFADE UNITS



PILOT HEAD 2-TRACK 1.116.082-01  
PILOT HEAD 4-TRACK 1.116.083-01

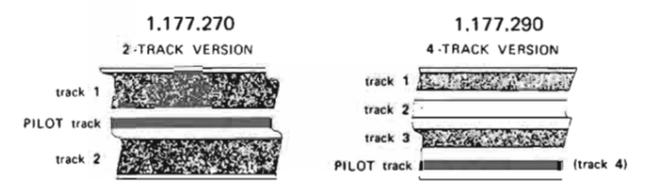


|                                 |         |
|---------------------------------|---------|
| STUDER <b>REVOX</b>             | B77 DIA |
| INSTALLATION OF SLIDE SYNC. KIT |         |
| ED2 09.79                       |         |



| Schaltbefehl                       | Funktion   | Effected switching                 | Resulting function  | Comande                            | Fonction  |
|------------------------------------|--|------------------------------------|---|------------------------------------|---|
| PLAY                               | Wiedergabe Steuerimpulse   | PLAY                               | Reproduction of control impulses  | PLAY                               | Lecture des impulsions  |
| PLAY + SLIDE-REC                   | Wiedergabe Steuerimpulse gesperrt  | PLAY + SLIDE-REC                   | Reproduction of control impulses disabled                               | PLAY + SLIDE-REC                   | Blocage de la lecture des impulsions  |
| PLAY + REC + Vorwahl               | normale NF-Aufnahme  | PLAY + REC + preselected           | Normal audio recording  | PLAY + REC + présélecteur          | Enregistrement BF normal  |
| PLAY + REC + SLIDE-REC             | Löschen der Steuerimpulse  | PLAY + REC + SLIDE-REC             | Erasure of control impulses   | PLAY + REC + SLIDE-REC             | Effacement des impulsions de commande   |
| PLAY + REC + SLIDE-REC + SET-SLIDE | solange SET gedrückt, wird Steuerimpuls gesetzt (kurz und lang möglich). | PLAY + REC + SLIDE-REC + SET-SLIDE | Recording of a new impulse as long as the button SET is kept depressed. | PLAY + REC + SLIDE-REC + SET-SLIDE | Enregistrement des impulsions de commande aussi longtemps que la touche SET reste enfoncée. |

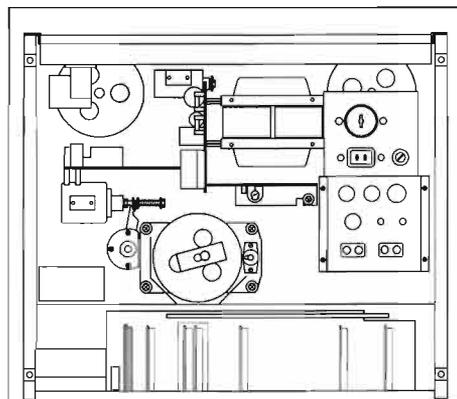
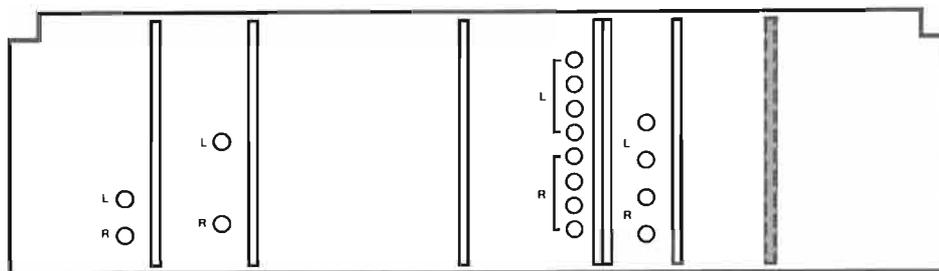
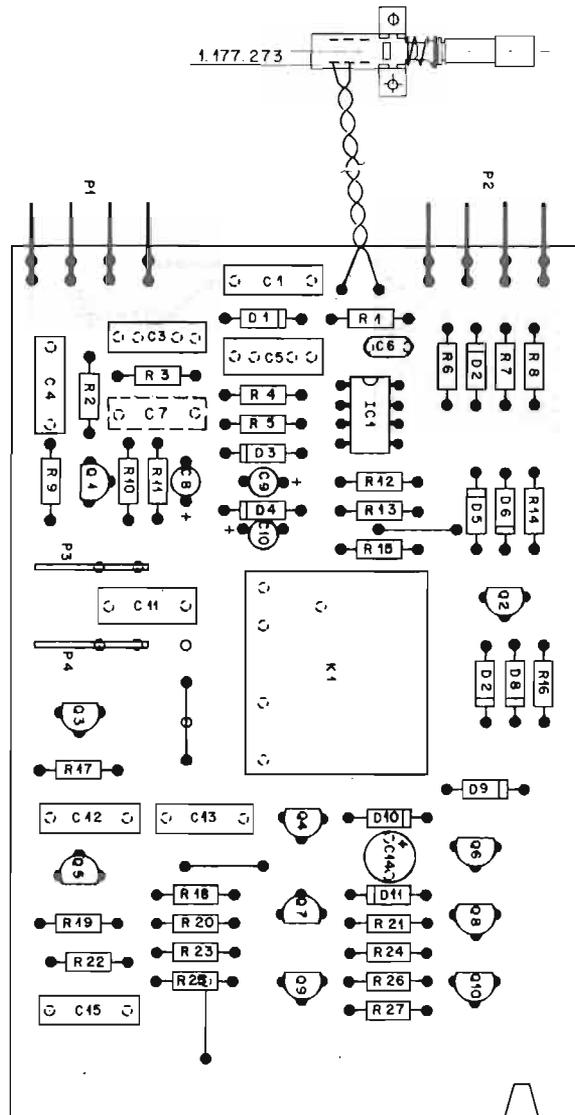
★ FOR 4-TRACK VERSION ONLY (KIT 74504)  
 ☆ REMOVE C11 FOR USE WITH ROLLEI P3800



**STUDER REVOX** B77 DIA

**SLIDE SYNCHRONIZER**

1.177.270/290 ED2 09.79



| POS NO   | PART NO    | VALUE                        | SPECIFICATIONS        | EQUIVALENT MFR       |      |
|--|------------|------------------------------|-----------------------|----------------------|------|
| C 01   | 59.31.6104 | 0,1 U                        | 10% 100V MPETP        |                      |      |
| C 03   | 59.31.6104 | 0,1 U                        | 10% 100V MPETP        |                      |      |
| C 04   | 59.31.6104 | 0,1 U                        | 10% 100V MPETP        |                      |      |
| C 05   | 59.31.1224 | 0,22 U                       | 20% 100V MPETP        |                      |      |
| C 06   | 59.32.0100 | 10 P                         | 20% 50V CER           |                      |      |
| C 07   | 59.31.6104 | 0,1 U                        | 10% 100V MPETP        |                      |      |
| C 08   | 59.30.1470 | 47 U                         | -20% 3V TA            |                      |      |
| C 09   | 59.30.6339 | 3,3 U                        | -20% 35V TA           |                      |      |
| C 10   | 59.30.6339 | 3,3 U                        |                       |                      |      |
| C 11   | 59.31.1224 | 0,22 U                       | 20% 100V MPETP        |                      |      |
| C 12   | 59.31.6104 | 0,1 U                        | 10%                   |                      |      |
| C 13   | 59.31.6104 | 0,1 U                        |                       |                      |      |
| C 14   | 59.22.5470 | 47 U                         | -10% 25V EL           |                      |      |
| C 15   | 59.31.6104 | 0,1 U                        | 10% 100V MPETP        |                      |      |
| D 01   | 50.04.0109 | 1N 4448                      |                       | any                  |      |
| D 02   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 03   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 04   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 05   | 50.04.0119 | Z 15                         | 15V 5% 400mW          |                      |      |
| D 06   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 07   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 08   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 09   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 10   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| D 11   | 50.04.0109 | 1N 4448                      |                       |                      |      |
| IC 1   | 50.05.0257 | LM 301                       |                       | TI, N                |      |
| K 01   | 56.99.0116 | 1 x U                        | 24V                   | S, O                 |      |
| P 01   | 54.01.0470 | 4-Pole                       | PIN-Strip             | AMP                  |      |
| P 02   | 54.01.0470 | 4-Pole                       | PIN-Strip             | AMP                  |      |
| P 03   | 54.02.0328 |                              | Flat Pin 0,8          | AMP                  |      |
| P 04   | 54.02.0328 |                              | Flat Pin 0,8          | AMP                  |      |
| Q 01   | 50.03.0318 | BC178B                       |                       | PNP any              |      |
| Q 02   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| Q 03   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| Q 04   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| Q 05   | 50.03.0439 | BC109C                       |                       | NPN                  |      |
| Q 06   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| Q 07   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| Q 08   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| Q 09   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| Q 10   | 50.03.0436 | BC107B                       |                       | NPN                  |      |
| TI = Texas Instr.      MPETP = metallized polyester<br>N = National              TA = tantalum<br>S = Siemens              EL = electrolytic<br>O = Omron                CER = ceramic |            |                              | ④<br>③<br>②<br>①<br>0 | 8.6.78<br>Lu./gv lu. |      |
|  |            |                              | IND                   | DATE                 | NAME |
| <b>STUDER</b>  |            | SLIDE SYNCHRONIZER 2/4 TRACK |                       | 1.177.270/290        |      |
|  |            |                              |                       | PAGE 1 of 2          |      |

| POS NO | PART NO    | VALUE | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|-------|----------------|----------------|
| R 01   | 57.41.4682 | 6,8 k | 5%             | .25W CF        |
| R 02   | 57.41.4153 | 15 k  |                |                |
| R 03   | 57.41.4822 | 8,2 k |                |                |
| R 04   | 57.41.4271 | 270   |                |                |
| R 05   | 57.41.4223 | 22 k  |                |                |
| R 06   | 57.41.4223 | 22 k  |                |                |
| R 07   | 57.41.4182 | 1,8 k |                |                |
| R 08   | 57.41.4103 | 10 k  |                |                |
| R 09   | 57.41.4472 | 4,7 k |                |                |
| R 10   | 57.41.4332 | 3,3 k |                |                |
| R 11   | 57.41.4333 | 33 k  |                |                |
| R 12   | 57.41.4223 | 22 k  |                |                |
| R 13   | 57.41.4105 | 1 M   |                |                |
| R 14   | 57.41.4223 | 22 k  |                |                |
| R 15   | 57.41.4332 | 3,3 k |                |                |
| R 16   | 57.41.4332 | 3,3 k |                |                |
| R 17   | 57.41.4103 | 10 k  |                |                |
| R 18   | 57.41.4333 | 33 k  |                |                |
| R 19   | 57.41.4332 | 3,3 k |                |                |
| R 20   | 57.41.4183 | 18 k  |                |                |
| R 21   | 57.41.4103 | 10 k  |                |                |
| R 22   | 57.41.4182 | 1,8 k |                |                |
| R 23   | 57.41.4332 | 3,3 k |                |                |
| R 24   | 57.41.4332 | 3,3 k |                |                |
| R 25   | 57.41.4331 | 330   |                |                |
| R 26   | 57.41.4333 | 33 k  |                |                |
| R 27   | 57.41.4333 | 33 k  |                |                |

CF = Carbon Film

④  
③  
②  
①  
○

8.6.78

Lu./gv lu

IND

DATE

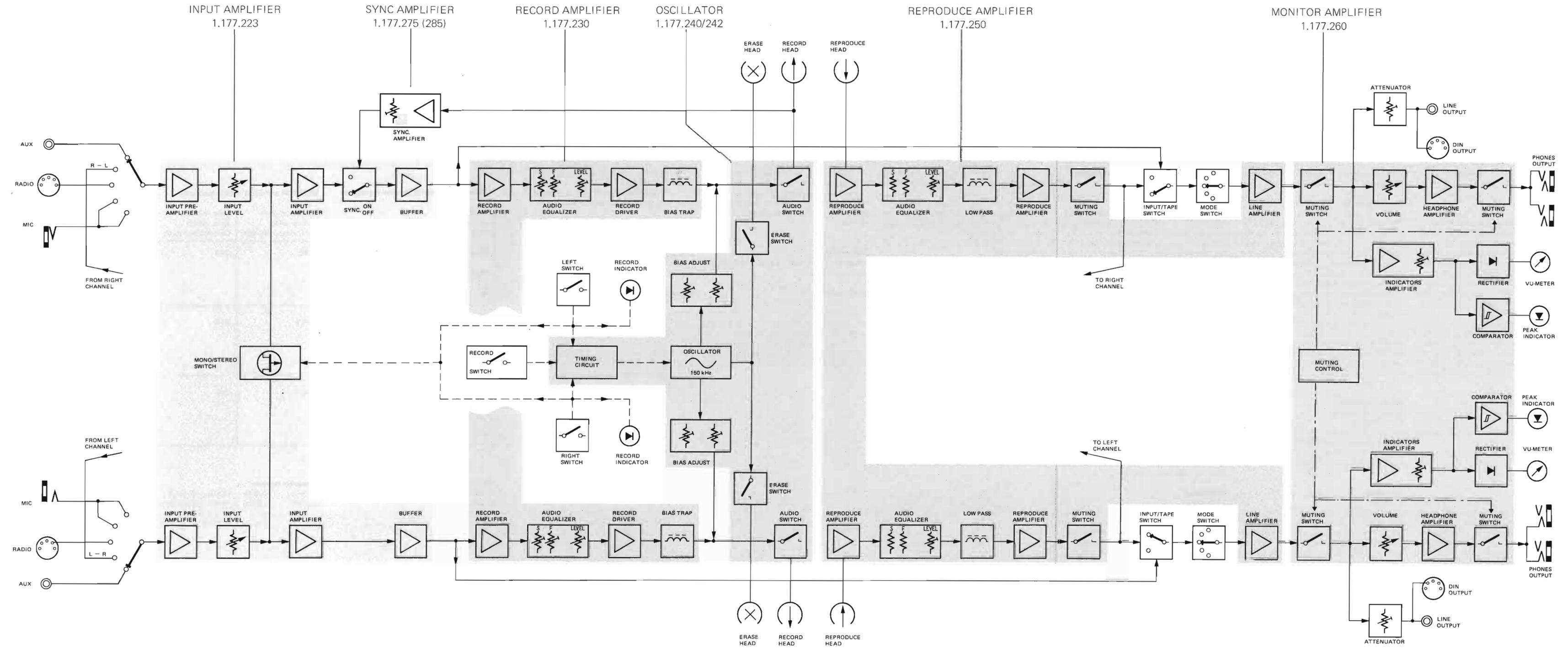
NAME

**STUDER**

SLIDE SYNCHRONIZER 2/4 TRACK

1.177.270/290

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2 of 2



**STUDER REVOLX** B77 SYNC  
**AUDIO BLOCK DIAGRAM B77 SYNC**  
ED1 09.79

## Schaltungsbeschreibung zu Tonbandgerät REVOX B77 SYNC

### Funktionsbeschrieb

Der linke Kanal (obere Spur des Aufnahmekopfes) wird auf einen speziell dafür entzerrten Wiedergabeverstärker geführt und in den Signalweg "vor Band" geschaltet. Eine zuvor auf dem linken Kanal gemachte Aufnahme kann beim Abspielen (Monitor-Schalter auf Position INPUT) ab dem Aufnahmekopf wiedergegeben werden. Der linke Kanal kann auf die gleiche Weise abgehört werden, auch wenn das Gerät auf Aufnahme geschaltet ist.

Dadurch ist es möglich, den rechten Kanal ohne zeitliche Verschiebung zwischen Aufnahme- und Wiedergabekopf zu bespielen. Eine Verriegelungslogik verhindert, dass der linke Kanal nicht versehentlich auf Aufnahme geschaltet wird (LED für Aufnahmevorwahl leuchtet nicht).

### Spezielle Baugruppen

SYNC-Eingangsverstärker 1.177.223

SYNC-Verstärker 1.177.275

Betriebsartenwahlschalter (hinter der Abdeckklappe)

Das Umschalten auf SYNC-Betrieb kann durch Drücken der Taste "SLIDE-REC" auch über die Fernbedienung erfolgen.

### Elektronik

1.177.223

Zusätzlich zu der Standardversion wird der Signalpfad des linken Kanals vom Eingang her unterbrochen und über ein Relais geführt. Dadurch wird eine schaltbare Einspeisung des vom Aufnahmekopf kommenden und verstärkten Signals möglich. Die Auskoppelung auf die Sammelschiene erfolgt mittels IC 2.

1.177.275

Die Verbindung (Kabelbund, gesteckt) zwischen Aufnahmekopf und Oszillator wird über diesen Print geführt. Dadurch ist ein schaltbarer Zugriff zum Aufnahmekopf möglich. Der linke Kanal (obere Spur) des Aufnahmekopfes wird über K1 auf ein HF-Sperrfilter mit nachfolgendem geschwindigkeitsabhängig-entzerrten Verstärker geschaltet.

## Circuit description for REVOX B77 SYNC tape recorder

### Functional details

The signal of track 1 (upper section of the recording head), which corresponds to the left channel, is fed to a separate, especially equalized playback amplifier from where it enters the "INPUT" signal path. A recording existing on track 1 can thus be replayed through the recording head (monitor selector in position INPUT). Headphone monitoring of track 1 in this manner is possible even with the machine in the recording mode.

This permits a second recording to be laid down on track 2, yet without being displaced by the distance between the playback and recording heads. Accidental recording on track 1 is not possible when this operating mode is selected (LED for recording preselection will not become luminous).

### Special components

SYNC input amplifier 1.177.223

SYNC amplifier 1.177.275

Operating mode selector (behind front flap)

Remote switching to SYNC operation can be effected also via the button "SLIDE-REC" on the B77 remote control device 128.040.

### Electronics

1.177.223

Unlike in the standard version, the input signal path of the left channel passes via the change-over contacts of a relay. In this manner, the amplified signal as picked up by the recording head may be fed into the monitor circuit. Coupling to the signal bus is effected through IC 2.

1.177.275

The plugable connection from the oscillator to the recording head is routed via this printed circuit board, thereby providing switchable access to the recording head. Track 1, which corresponds to the upper section of the recording head, can thus be connected via K1 to a bias trap, which is followed by an amplifier with tape speed dependent equalization.

## Explications des circuits pour le magnétophone REVOX B77 SYNC

### Description des fonctions

Le canal gauche (piste supérieure de la tête d'enregistrement) est amené par un amplificateur correcteur de lecture spéciale à la ligne audio avant bande. Un enregistrement effectué sur le canal gauche peut être ainsi écouté (commutateur TAPE/INPUT en position INPUT) par la tête d'enregistrement. Le canal gauche peut également être lu, même lorsque l'appareil est commuté en enregistrement.

Cela permet d'effectuer un enregistrement sur le canal droit sans décalage dans le temps entre la tête d'enregistrement et la tête de lecture. En enregistrement un verrouillage électronique évite tout risque d'enregistrement du canal gauche (la LED du présélecteur d'enregistrement ne s'allume pas).

### Sous-ensemble spéciaux

Amplificateur d'entrée "SYNC" 1.177.223

Amplificateur "SYNC" 1.177.275

Commutateur de mise en service (sous le cache escamotable)

La commutation de fonction SYNC se fait également en appuyant sur la touche SLIDE-REC de la commande à distance.

### Electronique

1.177.223

Contrairement à la version standard la ligne audio d'entrée du canal gauche passe au travers d'un relais. Ceci permet de commuter et d'amplifier le signal provenant de la tête d'enregistrement. L'accouplement à la barre collective audio se fait avec IC 2.

1.177.275

Ce circuit sert de liaison entre la tête d'enregistrement et l'oscillateur. Il permet d'accéder par commutation à la tête d'enregistrement. Le canal gauche (piste supérieure) de la tête d'enregistrement est amené par K1 à un filtre de réjection HF, puis à l'amplificateur correcteur d'adaptation à la vitesse de défilement.

Über einen verzögerten FET-Schalter gelangt das Signal auf den Eingangsverstärker 1.177.223.

Um den Signalpegel bei SYNC-Betrieb dem Wiedergabepegel anzupassen, kann die Verstärkung im Entzerrer mit R22 verändert werden.

#### **SYNC-Montage**

(Ersichtlich aus Schaltbild "Audio Interconnection Board")

#### **SYNC-Einstellung**

- Linker Kanal, NF-Eingang mit 1 kHz 0,775 V 0 dB an Anschluss AUX-INPUT einspeisen.
- Gerät auf Aufnahme starten und ca. eine Minute aufnehmen.
- SYNC-Betrieb einstellen, Monitor-schalter abwechslungsweise auf TAPE und INPUT schalten und mit R22 (SYNC-Amplifier 1.177.275) auf kleinsten Pegelsprung einstellen.

Through a time delayed FET switch, the signal reaches the input amplifier 1.177.223.

Gain adjustments to match the signal level for SYNC operation with that of normal playback are possible by means of R22 in the equalizer.

#### **SYNC assembly**

(for details check circuit diagram "audio interconnection board")

#### **SYNC calibration**

- Feed 1 kHz/0.775 V (0 VU) into the left channel AUX input.
- Start the machine in the recording mode and record for 1 minute approximately.
- Select SYNC operation. Alternate the monitor selector between TAPE and INPUT and adjust R22 (in the SYNC amplifier 1.177.275) for equal levels.

Un circuit FET retardé amène ce signal à l'amplificateur d'entrée 1.177.223.

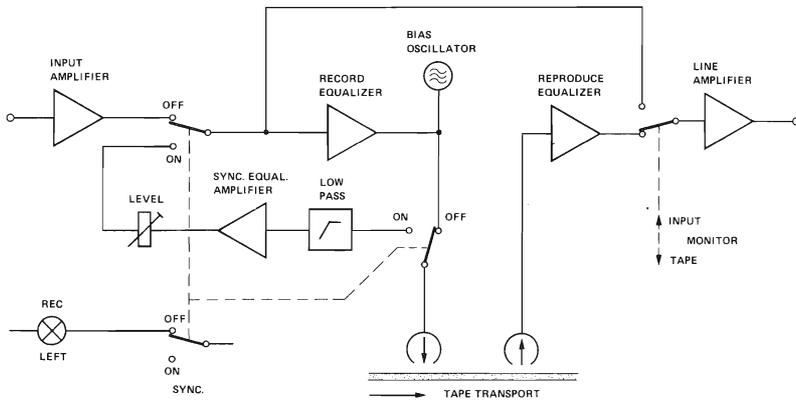
Le potentiomètre R22 permet, en fonction SYNC, d'adapter le niveau du signal de lecture.

#### **Montage SYNC**

(Voir le schéma "Audio Interconnection Board")

#### **Réglage SYNC**

- Injectez à l'entrée auxiliaire AUX-INPUT du canal gauche un signal de 1 kHz à 0,775 V, 0 dB
- Démarrez l'appareil en enregistrement pour une durée d'environ 1 minute
- Enclenchez la fonction SYNC, puis à l'aide du commutateur TAPE/INPUT, comparez les niveaux et corrigez éventuellement à l'aide de R22 du circuit amplificateur SYNC 1.177.275.



FUNCTION DIAGRAM B77 SYNC

**MONITOR-und SYNC-Schalter Positionen**

**MONITOR and SYNC switch positions**

**Positions du commutateur MONITOR et SYNC**

| Linker Kanal<br>Left channel<br>Canal gauche  | Monitor Schalter<br>Monitor switch<br>Commutateur Monitor | Sync. Schalter<br>Sync. switch<br>Commutateur Sync. | Rechter Kanal<br>Right channel<br>Canal droit   |
|---|---|---|---|
| Wiedergabe-Signal vom Wiedergabekopf<br>Reproduce signal from reproduce head<br>Signal enregistré de la tête de lecture                 | <b>TAPE</b>   | <b>OFF</b>  | Wiedergabe-Signal vom Wiedergabekopf<br>Reproduce signal from reproduce head<br>Signal enregistré de la tête de lecture |
| Eingangssignal links<br>Input signal left<br>Signal d'entrée gauche   | <b>INPUT</b>  | <b>OFF</b>  | Eingangssignal rechts<br>Input signal right<br>Signal d'entrée droit  |
| Wiedergabe-Signal vom Aufnahme-(SYNC-)Kopf<br>Reproduce signal from record (SYNC) head<br>Signal enregistré de la tête d'enregistrement | <b>INPUT</b>  | <b>ON</b>   | Eingangssignal rechts<br>Input signal right<br>Signal d'entrée droit  |

**Frequenzgang:**

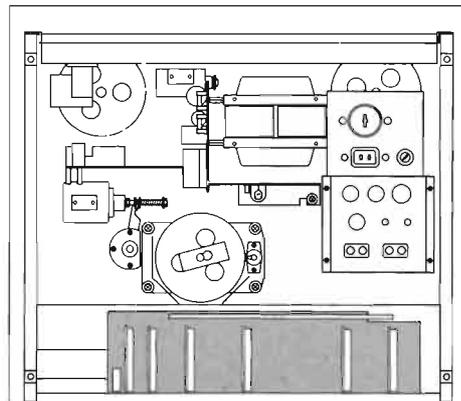
19 cm/s 125 Hz ... 12 kHz + 2/-3 dB  
38 cm/s 125 Hz ... 15 kHz + 2/-3 dB

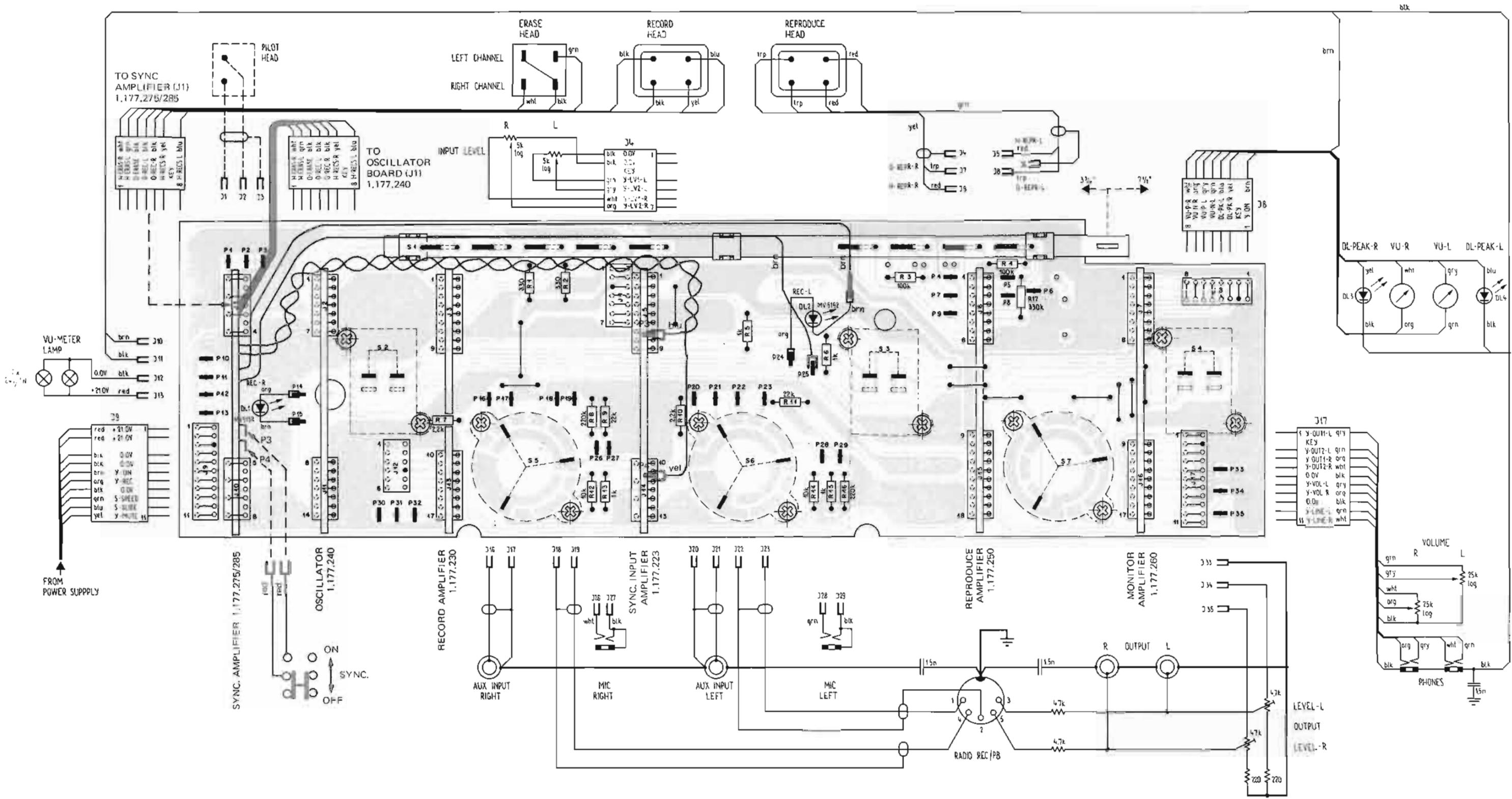
**Frequency response:**

19 cm/s 125 Hz ... 12 kHz + 2/-3 dB  
38 cm/s 125 Hz ... 15 kHz + 2/-3 dB

**Réponse en fréquence:**

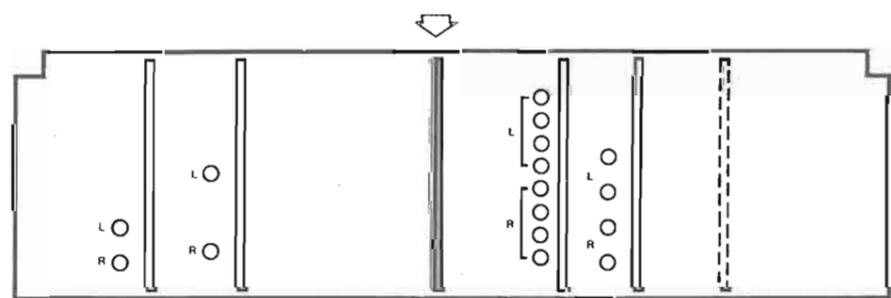
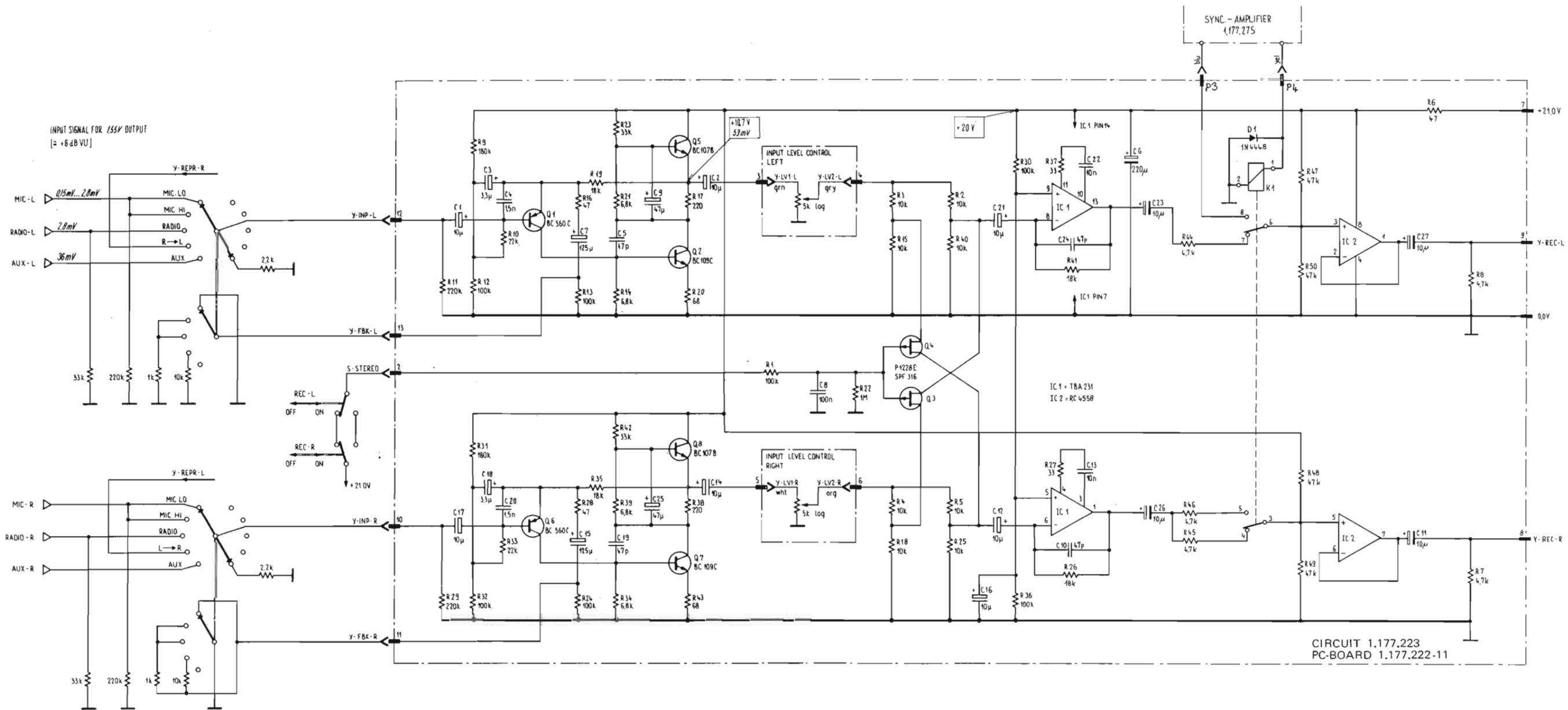
19 cm/s 125 Hz ... 12 kHz + 2/-3 dB  
38 cm/s 125 Hz ... 15 kHz + 2/-3 dB



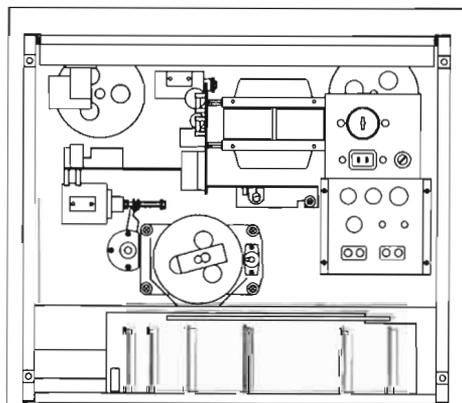
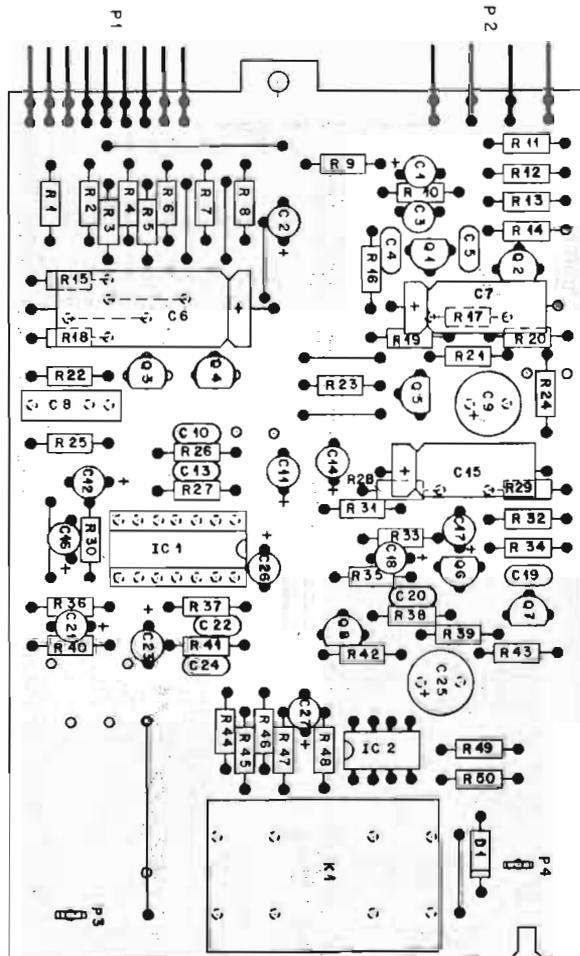


**REVOX** B77 SYNC  
**AUDIO INTERCONNECTION BOARD**  
 1.177.210 (with SYNC WIRING) ED1 09.79

| POS NO           | PART NO      | VALUE                       | SPECIFICATIONS   | EQUIVALENT | MFR         |
|------------------|--------------|-----------------------------|------------------|------------|-------------|
| J 01             | 54.01.0524   | 4-Pole                      | CIS-socket-strip |            |             |
| J 02             | 54.01.0218   | 7-Pole                      | "                |            |             |
| J 03             | 54.01.0217   | 9-Pole                      | "                |            |             |
| J 04             | 54.01.0263   | 7-Pole                      | "                |            |             |
| J 05             | 54.01.0217   | 9-Pole                      | "                |            |             |
| J 06             | 54.01.0289   | 8-Pole                      | "                |            |             |
| J 07             | 54.01.0289   | 8-Pole                      | "                |            |             |
| J 08             | 54.01.0289   | 8-Pole                      | "                |            |             |
| J 09             | 54.01.0291   | 11-Pole                     | "                |            |             |
| J 10             | 54.01.0524   | 4-Pole                      | "                |            |             |
| J 11             | 54.01.0218   | 7-Pole                      | "                |            |             |
| J 12             | 54.01.0216   | 6-Pole                      | "                |            |             |
| J 13             | 54.01.0289   | 8-Pole                      | "                |            |             |
| J 14             | 54.01.0524   | 4-Pole                      | "                |            |             |
| J 15             | 54.01.0290   | 10-Pole                     | "                |            |             |
| J 16             | 54.01.0217   | 9-Pole                      | "                |            |             |
| J 17             | 54.01.0291   | 11-Pole                     | "                |            |             |
| Pl-35            | 54.02.0320   |                             | AMP-Flat pin     |            |             |
| R 01             | 57.41.4331   | 330                         | 5% .25W CF       |            |             |
| R 02             | 57.41.4331   | 330                         |                  |            |             |
| R 03             | 57.41.4104   | 100 K                       |                  |            |             |
| R 04             | 57.41.4104   | 100 K                       |                  |            |             |
| R 05             | 57.41.4102   | 1 K                         |                  |            |             |
| R 06             | 57.41.4102   | 1 K                         |                  |            |             |
| R 07             | 57.41.4222   | 2,2 K                       |                  |            |             |
| R 08             | 57.41.4224   | 220 K                       |                  |            |             |
| R 09             | 57.41.4223   | 22 K                        |                  |            |             |
| R 10             | 57.41.4222   | 2,2 K                       |                  |            |             |
| R 11             | 57.41.4223   | 22 K                        |                  |            |             |
| R 12             | 57.41.4103   | 10 K                        |                  |            |             |
| R 13             | 57.41.4102   | 1 K                         |                  |            |             |
| R 14             | 57.41.4103   | 10 K                        |                  |            |             |
| R 15             | 57.41.4102   | 1 K                         |                  |            |             |
| R 16             | 57.41.4224   | 220 K                       |                  |            |             |
| (1) R 17         | 57.11.4334   | 330 K                       |                  |            |             |
| S 1              | 1.177.210.01 | special                     | Slide-Switch     |            |             |
| S2-S4            | 1.011.120.00 | 2-Pole                      | Toggle-Switch    |            |             |
| S5-S7            | 1.011.301.00 | 5-pos/3-Pole                | Rotary-Switch    |            |             |
| CF = Carbon Film |              |                             | ④                |            |             |
|                  |              |                             | ③                |            |             |
|                  |              |                             | ②                |            |             |
|                  |              |                             | ①                | 12.6.78    | JH          |
|                  |              |                             | ○                | 10.5.77    | Waser/gv    |
|                  |              |                             | IND              | DATE       | NAME        |
| <b>STUDER</b>    |              | Audio-Interconnection Board | 1.177.210        |            | PAGE 1 of 1 |



|                      |           |
|----------------------|-----------|
| STUDER <b>HEVOX</b>  | B77 SYNC  |
| SYNC-INPUT AMPLIFIER |           |
| 1.177.223            | ED1 09.79 |



| POS NO           | PART NO    | VALUE                | SPECIFICATIONS | EQUIVALENT MFR |
|------------------|------------|----------------------|----------------|----------------|
| C 01             | 59.30.4100 | 10 U                 | -20% 16V       | TA             |
| C 02             | 59.30.4100 | 10 U                 |                |                |
| C 03             | 59.30.4339 | 3.3 U                |                |                |
| C 04             | 59.32.1152 | 1500 P               | -10% 50V       | CER            |
| C 05             | 59.32.0470 | 47 P                 | -20% 50V       | CER            |
| C 06             | 59.25.4221 | 220 U                | -10% 25V       | EL             |
| C 07             | 59.25.3121 | 125 U                | -10% 16V       | EL             |
| C 08             | 59.31.1104 | 0,1 U                | 20% 100V       | MPETP          |
| C 09             | 59.22.5470 | 47 U                 | 20% 25V        | EL             |
| C 10             | 59.32.0470 | 47 P                 | -20% 50V       | CER            |
| C 11             | 59.30.4100 | 10 U                 | -20% 16V       | TA             |
| C 12             | 59.30.4100 | 10 U                 |                |                |
| C 13             | 59.32.3103 | 0,01 U               | +80% 40V=      | CER            |
| C 14             | 59.30.4100 | 10 U                 | -20% 16V       | TA             |
| C 15             | 59.25.3121 | 125 U                | -10% 16V       | EL             |
| C 16             | 59.30.4100 | 10 U                 | -20% 16V       | TA             |
| C 17             | 59.30.4100 | 10 U                 |                |                |
| C 18             | 59.30.4339 | 3.3 U                |                |                |
| C 19             | 59.32.0470 | 47 P                 | -20% 50V       | CER            |
| C 20             | 59.32.1152 | 1500 P               | -10% 50V       | CER            |
| C 21             | 59.30.4100 | 10 U                 | -20% 16V       | TA             |
| C 22             | 59.32.3103 | 0,01 U               | +80% 40V=      | CER            |
| C 23             | 59.30.4100 | 10 U                 | -20% 16V       | TA             |
| C 24             | 59.32.0470 | 47 P                 | -20% 50V       | CER            |
| C 25             | 59.22.5470 | 47 U                 | 20% 25V        | EL             |
| C 26             | 59.30.4100 | 10 U                 | -20% 16V       | TA             |
| C 27             | 59.30.4100 | 10 U                 |                |                |
| D 01             | 50.04.0125 | 1N 4448              |                | Si any         |
| IC 1             | 50.05.0288 | TBA 231              |                | A              |
| IC 2             | 50.05.0245 | RC 4558              |                | TI, Ray        |
| K 01             | 56.04.0142 | 2 x U                | 2000 Ω, 24V    | N, O           |
| P 01             | 54.01.0220 | 9-Pole               | PIN-Strip      | AMP            |
| P 02             | 54.01.0470 | 4-Pole               | PIN-Strip      | AMP            |
| P 03             | 54.02.0320 |                      | Flat PIN 0.8   | AMP            |
| P 04             | 54.02.0320 |                      | Flat PIN 0.8   | AMP            |
| Q 01             | 50.03.0496 | BC560C               |                | PNP            |
| Q 02             | 50.03.0439 | BC109C               |                | NPN            |
| Q 03             | 50.03.0329 | SPF316               | P-Channel      | J-FET          |
| Q 04             | 50.03.0329 | SPF316               | P-Channel      | J-FET          |
| Q 05             | 50.03.0436 | BC107B               |                | NPN            |
| A = SGS-Ates     |            | CER = Ceramic        | ④              |                |
| TI= Texas Instr. |            | TA = Tantalum        | ③              |                |
| Ray= Raytheon    |            | EL = Electrolytic    | ②              |                |
| N = National     |            | MPETP = Metallized-  | ①              | 29.9.78        |
| O = Omron        |            | polyester            | ○              | 24.8.78        |
|                  |            |                      | IND            | DATE           |
|                  |            |                      |                | NAME           |
| <b>STUDER</b>    |            | Sync-Input Amplifier | 1.177.223      |                |
|                  |            |                      | PAGE 1 of 3    |                |

| POS NO | PART NO    | VALUE  | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|--------|----------------|----------------|
| Q 06   | 50.03.0496 | BC560C |                | PNP            |
| Q 07   | 50.03.0439 | BC109C |                | NPN            |
| Q 08   | 50.03.0436 | BC107B |                | NPN            |
| R 01   | 57.11.4104 | 100 k  | 5%             | .25W CF        |
| R 02   | 57.11.4103 | 10 k   |                |                |
| R 03   | 57.11.4103 | 10 k   |                |                |
| R 04   | 57.11.4103 | 10 k   |                |                |
| R 05   | 57.11.4103 | 10 k   |                |                |
| R 06   | 57.11.4470 | 47     |                |                |
| R 07   | 57.11.4472 | 4,7 k  |                |                |
| R 08   | 57.11.4472 | 4,7 k  |                |                |
| R 09   | 57.11.4184 | 180 k  |                |                |
| R 10   | 57.11.4223 | 22 k   |                |                |
| R 11   | 57.11.4224 | 220 k  |                |                |
| R 12   | 57.11.4104 | 100 k  |                |                |
| R 13   | 57.11.4104 | 100 k  |                |                |
| R 14   | 57.11.4682 | 6,8 k  |                |                |
| R 15   | 57.11.4103 | 10 k   |                |                |
| R 16   | 57.11.4470 | 47     |                |                |
| R 17   | 57.11.4221 | 220    |                |                |
| R 18   | 57.11.4103 | 10 k   |                |                |
| R 19   | 57.11.4183 | 18 k   |                |                |
| R 20   | 57.11.4680 | 68     |                |                |
| R 21   | 57.11.4682 | 6,8 k  |                |                |
| R 22   | 57.11.4105 | 1 M    |                |                |
| R 23   | 57.11.4333 | 33 k   |                |                |
| R 24   | 57.11.4104 | 100 k  |                |                |
| R 25   | 57.11.4103 | 10 k   |                |                |
| R 26   | 57.11.4183 | 18 k   |                |                |
| R 27   | 57.11.4330 | 33     |                |                |
| R 28   | 57.11.4470 | 47     |                |                |
| R 29   | 57.11.4224 | 220 k  |                |                |
| R 30   | 57.11.4104 | 100 k  |                |                |
| R 31   | 57.11.4184 | 180 k  |                |                |
| R 32   | 57.11.4104 | 100 k  |                |                |
| R 33   | 57.11.4223 | 22 k   |                |                |
| R 34   | 57.11.4682 | 6,8 k  |                |                |
| R 35   | 57.11.4183 | 18 k   |                |                |
| R 36   | 57.11.4104 | 100 k  |                |                |
| R 37   | 57.11.4330 | 33     |                |                |
| R 38   | 57.11.4221 | 220    |                |                |
| R 39   | 57.11.4682 | 6,8 k  |                |                |
| R 40   | 57.11.4103 | 10 k   |                |                |
| R 41   | 57.11.4183 | 18 k   |                |                |
| R 42   | 57.11.4333 | 33 k   |                |                |
| R 43   | 57.11.4680 | 68     |                |                |
| R 44   | 57.11.4472 | 4,7 k  |                |                |
| R 45   | 57.11.4472 | 4,7 k  |                |                |
| R 46   | 57.11.4472 | 4,7 k  |                |                |

CF = Carbon Film

④  
③  
②  
①  
○

29.9.78  
24.8.78

*JM*  
RW/gv

IND

DATE

NAME

**STUDER**

Sync.-Input Amplifier

1.177.223

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2 of 3

| POS NO | PART NO    | VALUE | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|-------|----------------|----------------|
| R 47   | 57.11.4473 | 47 k  | 5% .25W        | CF             |
| R 48   | 57.11.4473 | 47 k  |                |                |
| R 49   | 57.11.4473 | 47 k  |                |                |
| R 50   | 57.11.4473 | 47 k  |                |                |

CF = Carbon Film

- ④
- ③
- ②
- ①
- 

29.9.78  
24.8.78

*JM*  
RW/gv

IND

DATE

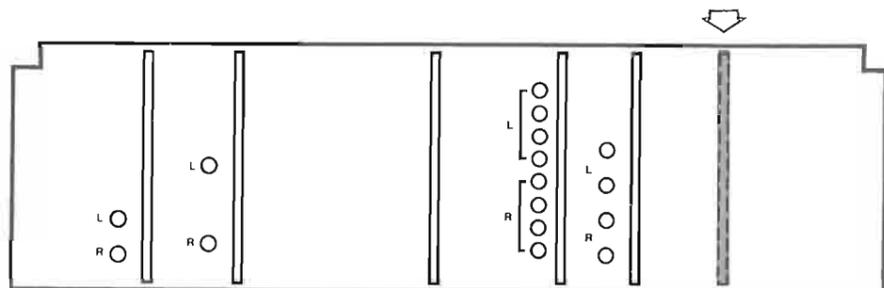
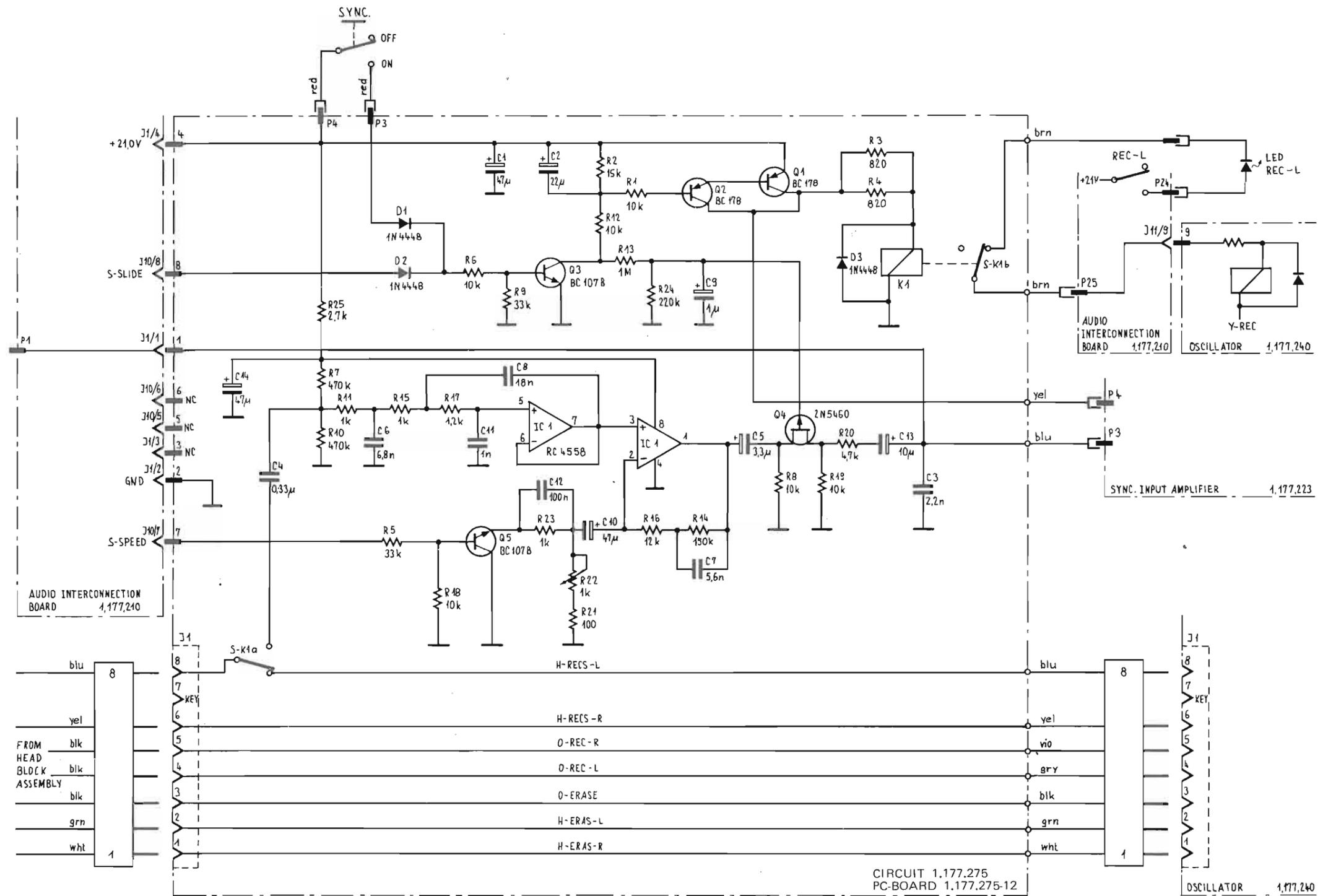
NAME

**STUDER**

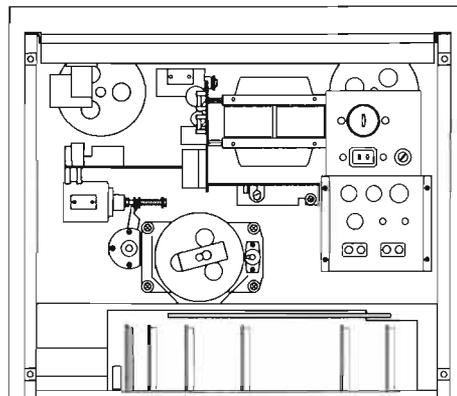
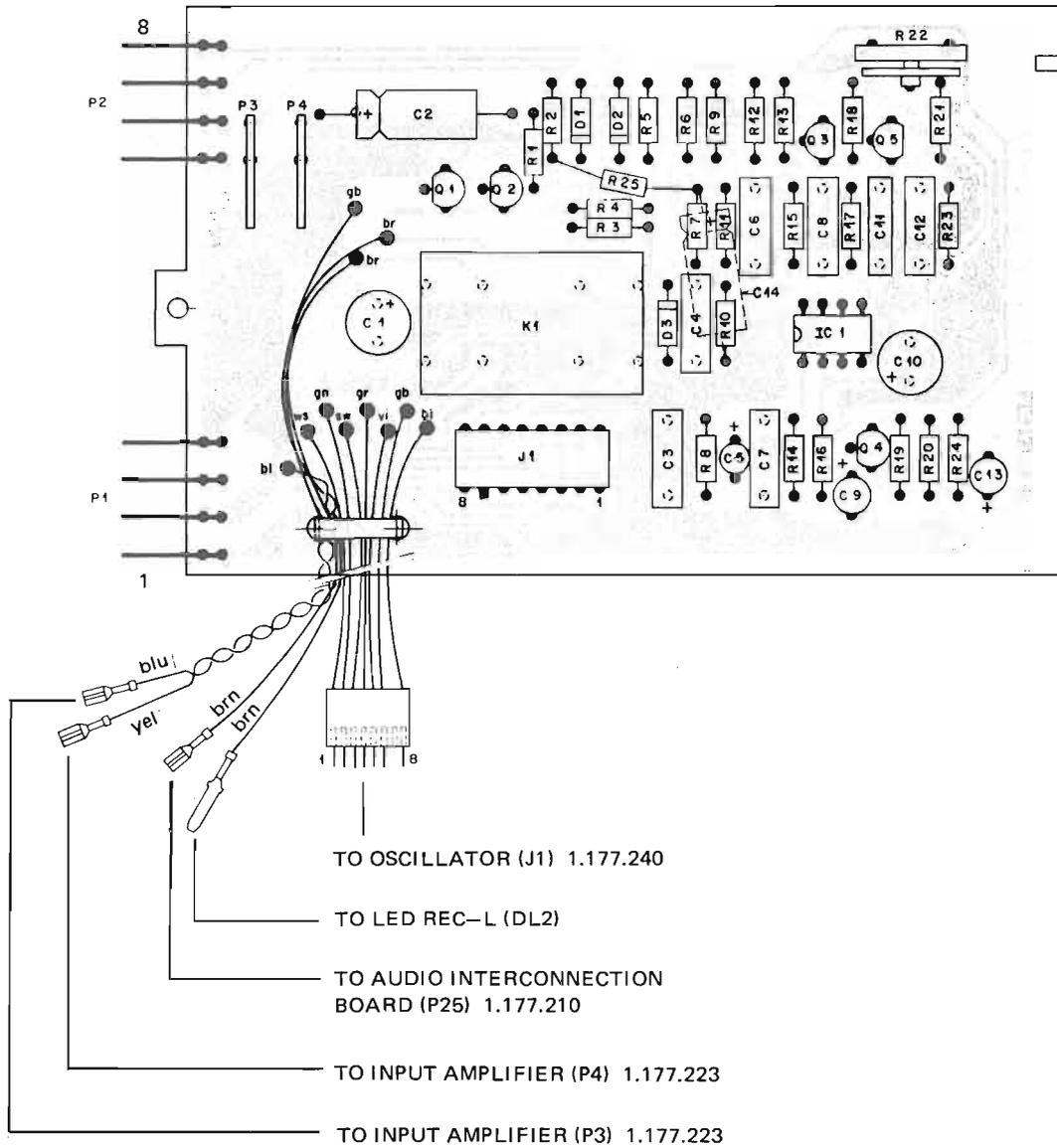
Sync.-Input Amplifier

1.177.223

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|                                   |                  |
|-----------------------------------|------------------|
| <b>STUDER REVOX</b>               | <b>B77 SYNC</b>  |
| <b>SYNC-AMPLIFIER 33/4-7 1/2"</b> |                  |
| <b>1.177.275</b>                  | <b>ED1 09.79</b> |

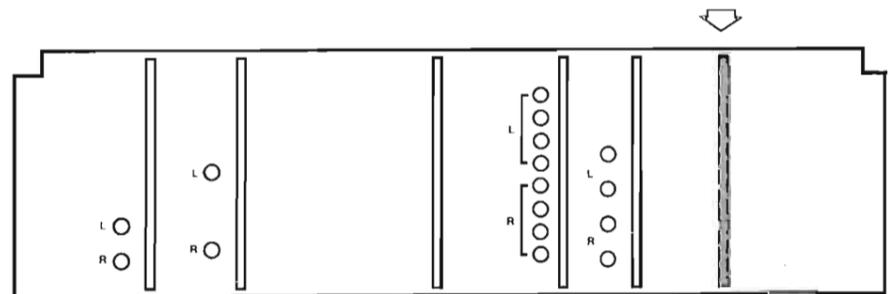
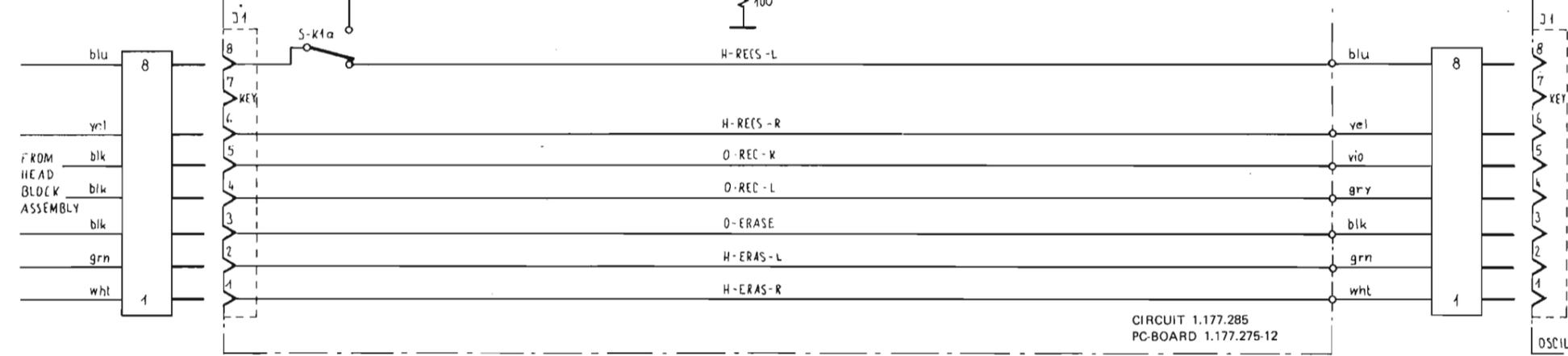
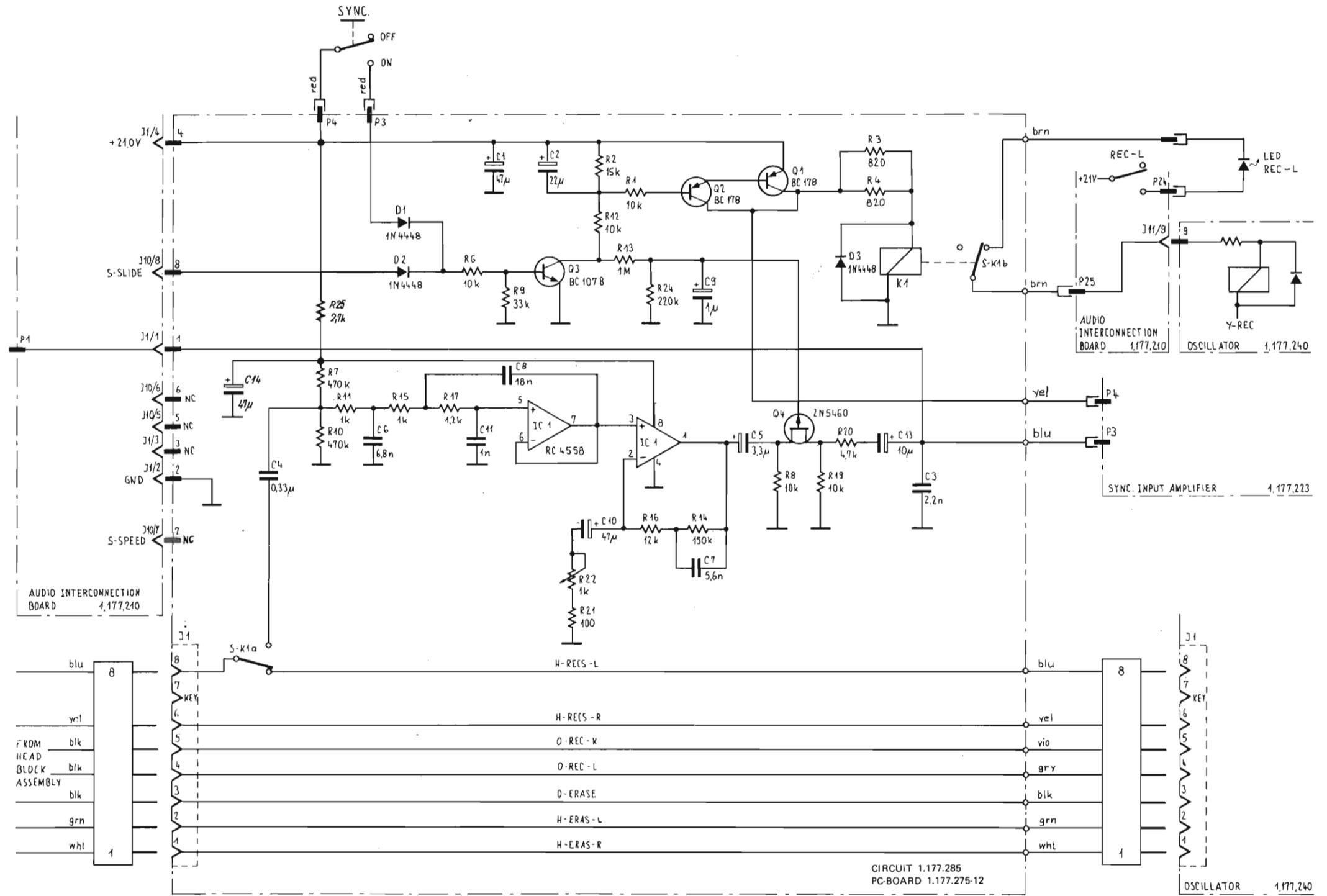


| IND | POS NO | PART NO      | VALUE         | SPECIFICATIONS/EQUIVALENT |      |               | MFR |
|-----|--------|--------------|---------------|---------------------------|------|---------------|-----|
|     | C 01   | 59.22.5470   | 47 $\mu$ F    | 10%                       | 25V  | EL            |     |
|     | C 02   | 59.25.5220   | 22 $\mu$ F    | 10%                       | 40V  | EL            |     |
|     | C 03   | 59.11.6222   | 2200 pF       | 5%                        | 400V | PC            |     |
|     | C 04   | 59.31.0334   | 0.33 $\mu$ F  | 20%                       | 63V  | MPETP         |     |
|     | C 05   | 59.30.6339   | 3.3 $\mu$ F   | 20%                       | 35V  | TA            |     |
|     | C 06   | 59.31.9682   | 6800 pF       | 10%                       | 160V | PETP          |     |
|     | C 07   | 59.11.3562   | 5600 pF       | 5%                        | 160V | PC            |     |
|     | C 08   | 59.12.4183   | 0.018 $\mu$ F | 5%                        | 250V | MPETP         |     |
|     | C 09   | 59.30.6109   | 1 $\mu$ F     | 20%                       | 35V  | TA            |     |
|     | C 10   | 59.22.5470   | 47 $\mu$ F    | 10%                       | 25V  | EL            |     |
|     | C 11   | 59.31.3102   | 1000 pF       | 20%                       | 400V | PETP          |     |
|     | C 12   | 59.31.1104   | 0.1 $\mu$ F   | 20%                       | 100V | MPETP         |     |
|     | C 13   | 59.30.7100   | 10 $\mu$ F    | 20%                       | 25V  | TA            |     |
|     | C 14   | 59 .25 .3470 | 47 $\mu$ F    |                           | 16V  | EL            |     |
|     | D 01   | 50.04.0125   | 1 N 4448      | Si                        |      |               |     |
|     | D 02   | 50.04.0125   | 1 N 4448      | Si                        |      |               |     |
|     | D 03   | 50.04.0125   | 1 N 4448      | Si                        |      |               |     |
|     | IC 01  | 50.05.0245   | RC 4558       |                           |      | Lin RC4558DN  |     |
|     | J 01   | 54.01.0306   | 8-Pole        |                           |      | Cis           |     |
|     | K 01   | 56.04.0140   | 2 x U         | Relay                     |      |               |     |
|     | P 01   | 54.01.0470   | 4-Pole        |                           |      | Cis           |     |
|     | P 02   | 54.01.0470   | 4-Pole        |                           |      | Cis           |     |
|     | P 03   | 54.02.0328   | 2.8x0.8       | Flat-Pin                  |      |               |     |
|     | P 04   | 54.02.0328   | 2.8x0.8       | Flat-Pin                  |      |               |     |
|     | Q 01   | 50.03.0318   | BC 178        |                           |      | PNP BC252/308 |     |

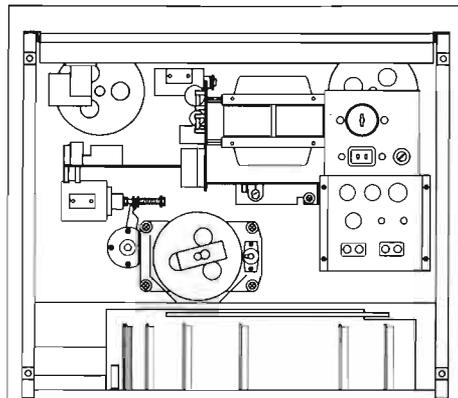
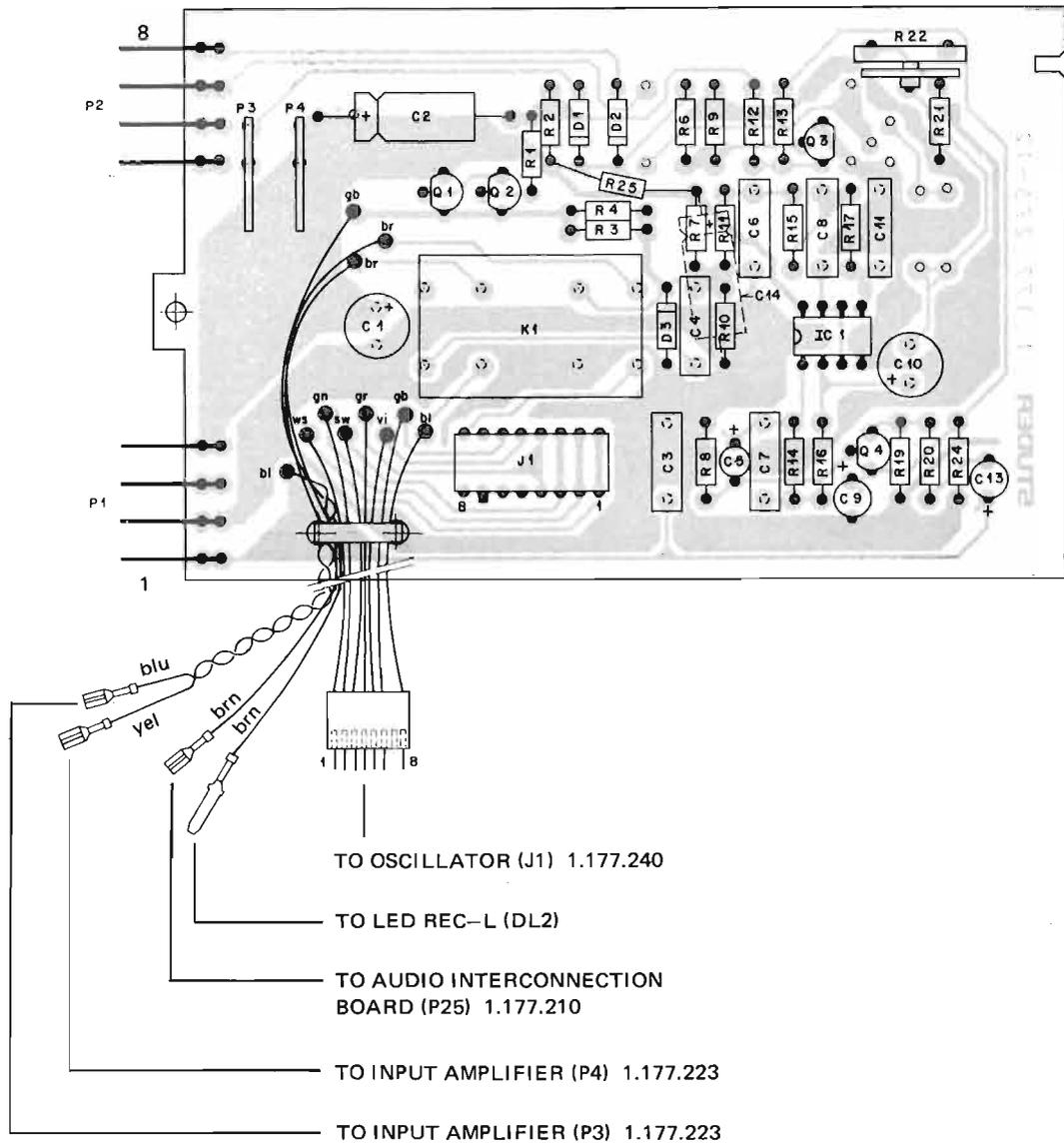
| IND           | DATE    | NAME           |              |             |
|---------------|---------|----------------|--------------|-------------|
| ④             |         |                |              |             |
| ③             |         |                |              |             |
| ②             |         |                |              |             |
| ①             |         |                |              |             |
| ○             | 19.1.79 | R.Weibel/gv    |              |             |
| <b>STUDER</b> |         | Sync-Amplifier | 1.177.275-00 | PAGE 1 OF 2 |

| IND | POS NO | PART NO    | VALUE  | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|------------|--------|---------------------------|-----|
|     | Q 02   | 50.03.0318 | BC 178 | PNP BC252/308             |     |
|     | Q 03   | 50.03.0436 | BC 107 | NPN BC237/547             |     |
|     | Q 04   | 50.03.0312 | 2N5460 | FD-Fet                    |     |
|     | Q 05   | 50.03.0436 | BC 107 | NPN BC237/547             |     |
|     | R 01   | 57.11.4103 | 10 k   | 5% .25W CF                |     |
|     | R 02   | 57.11.4153 | 15 k   |                           |     |
|     | R 03   | 57.11.4821 | 820    |                           |     |
|     | R 04   | 57.11.4821 | 820    |                           |     |
|     | R 05   | 57.11.4333 | 33 k   |                           |     |
|     | R 06   | 57.11.4103 | 10 k   |                           |     |
|     | R 07   | 57.11.4474 | 470 k  |                           |     |
|     | R 08   | 57.11.4103 | 10 k   |                           |     |
|     | R 09   | 57.11.4333 | 33 k   |                           |     |
|     | R 10   | 57.11.4474 | 470 k  |                           |     |
|     | R 11   | 57.11.4102 | 1 k    |                           |     |
|     | R 12   | 57.11.4103 | 10 k   |                           |     |
|     | R 13   | 57.11.4105 | 1 M    |                           |     |
|     | R 14   | 57.11.4154 | 150 k  |                           |     |
|     | R 15   | 57.11.4102 | 1 k    |                           |     |
|     | R 16   | 57.11.4123 | 12 k   |                           |     |
|     | R 17   | 57.11.4122 | 1.2 k  |                           |     |
|     | R 18   | 57.11.4103 | 10 k   |                           |     |
|     | R 19   | 57.11.4103 | 10 k   |                           |     |
|     | R 20   | 57.11.4472 | 4.7 k  |                           |     |
|     | R 21   | 57.11.4101 | 100    |                           |     |
|     | R 22   | 58.19.0102 | 1 k    | 20% .15W PCF              |     |
|     | R 23   | 57.11.4102 | 1 k    | 5% .25W CF                |     |
|     | R 24   | 57.11.4224 | 220 k  |                           |     |
|     | R 25   | 57.11.4272 | 2,7 k  | 5% .25W CF                |     |

| IND           | DATE    | NAME           |              |             |  |
|---------------|---------|----------------|--------------|-------------|--|
| ④             |         |                |              |             |  |
| ③             |         |                |              |             |  |
| ②             |         |                |              |             |  |
| ①             |         |                |              |             |  |
| ○             | 19.1.79 | R.Weibel/gv    |              |             |  |
| <b>STUDER</b> |         | Sync-Amplifier | 1.177.275-00 | PAGE 2 OF 2 |  |



|                              |           |
|------------------------------|-----------|
| STUDER REVOX                 | B77 SYNC  |
| SYNC-AMPLIFIER NAB 7 1/2-15" |           |
| 1.177.285                    | ED1 09.79 |

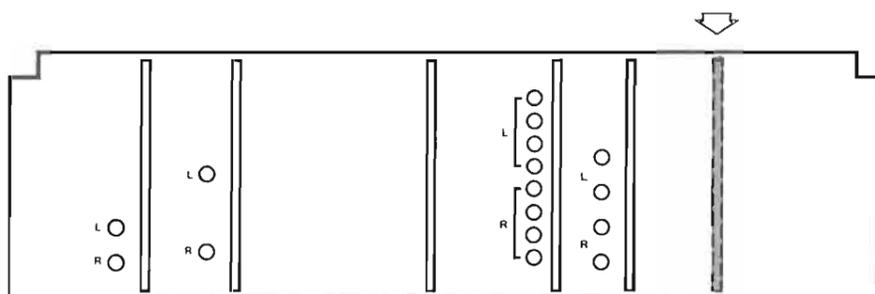
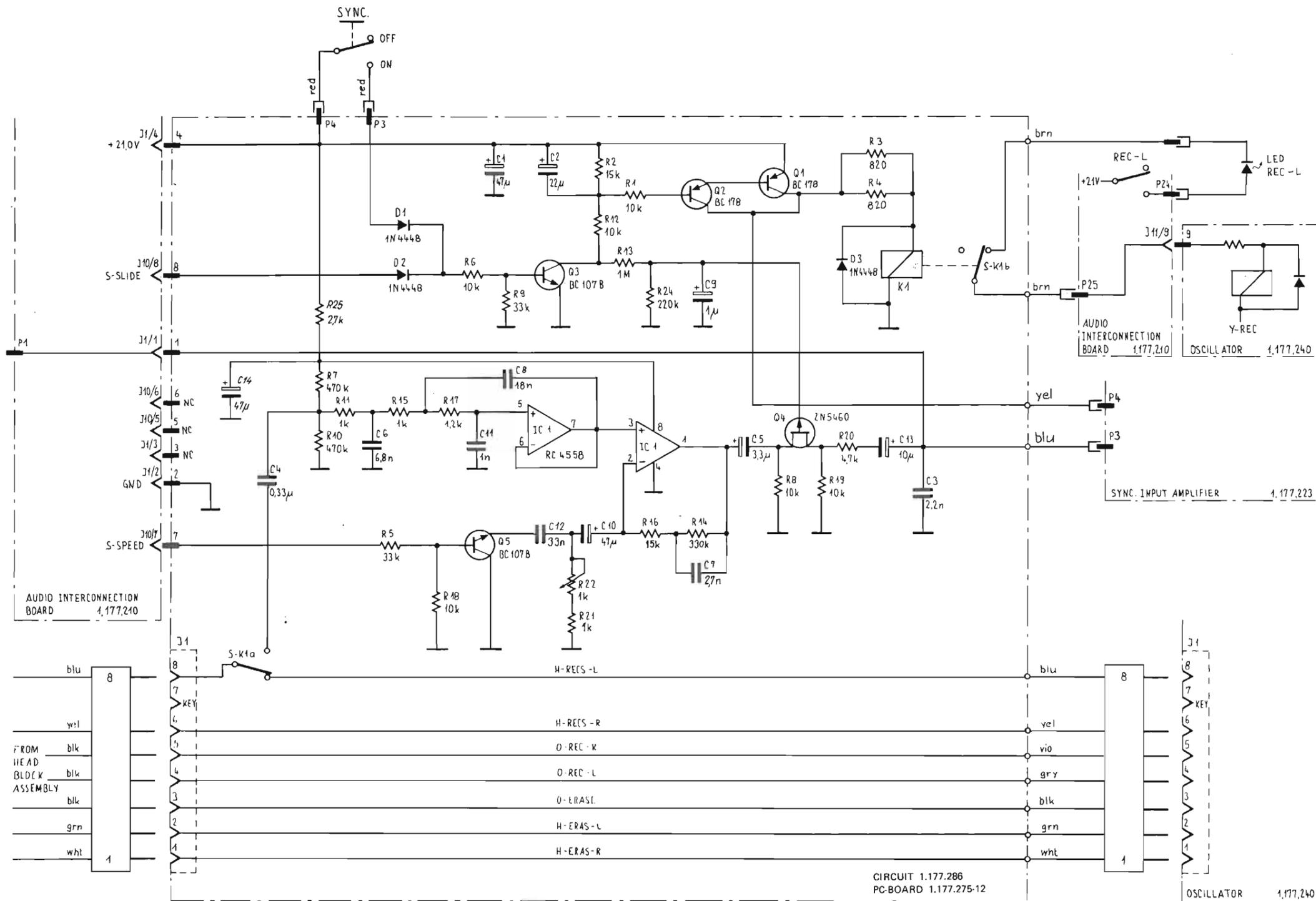


| IND | POS NO | PART NO    | VALUE         | SPECIFICATIONS/EQUIVALENT |      |               | MFR |
|-----|--------|------------|---------------|---------------------------|------|---------------|-----|
|     | C 01   | 59.22.5470 | 47 $\mu$ F    | 10%                       | 25V  | EL            |     |
|     | C 02   | 59.25.5220 | 22 $\mu$ F    | 10%                       | 40V  | EL            |     |
|     | C 03   | 59.11.6222 | 2200 pF       | 5%                        | 400V | PC            |     |
|     | C 04   | 59.31.0334 | 0.33 $\mu$ F  | 20%                       | 63V  | MPETP         |     |
|     | C 05   | 59.30.6339 | 3.3 $\mu$ F   | 20%                       | 35V  | TA            |     |
|     | C 06   | 59.31.9682 | 6800 pF       | 10%                       | 160V | PETP          |     |
|     | C 07   | 59.11.3562 | 5600 pF       | 5%                        | 160V | PC            |     |
|     | C 08   | 59.12.4183 | 0.018 $\mu$ F | 5%                        | 250V | MPETP         |     |
|     | C 09   | 59.30.6109 | 1 $\mu$ F     | 20%                       | 35V  | TA            |     |
|     | C 10   | 59.22.5470 | 47 $\mu$ F    | 10%                       | 25V  | EL            |     |
|     | C 11   | 59.31.3102 | 1000 pF       | 20%                       | 400V | PETP          |     |
|     | C 12   |            |               |                           |      |               |     |
|     | C 13   | 59.30.7100 | 10 $\mu$ F    | 20%                       | 25V  | TA            |     |
|     | C 14   | 59.25.3470 | 47 $\mu$ F    |                           | 16V  | EL            |     |
|     | D 01   | 50.04.0125 | 1 N 4448      | Si                        |      |               |     |
|     | D 02   | 50.04.0125 | 1 N 4448      | Si                        |      |               |     |
|     | D 03   | 50.04.0125 | 1 N 4448      | Si                        |      |               |     |
|     | IC 01  | 50.05.0245 | RC 4558       |                           |      | Lin RC4558DN  |     |
|     | J 01   | 54.01.0306 | 8-Pole        |                           |      | Cis           |     |
|     | K 01   | 56.04.0140 | 2 x U         | Relay                     |      |               |     |
|     | P 01   | 54.01.0470 | 4-Pole        |                           |      | Cis           |     |
|     | P 02   | 54.01.0470 | 4-Pole        |                           |      | Cis           |     |
|     | P 03   | 54.02.0328 | 2.8x0.8       | Flat-Pin                  |      |               |     |
|     | P 04   | 54.02.0328 | 2.8x0.8       | Flat-Pin                  |      |               |     |
|     | Q 01   | 50.03.0318 | BC 178        |                           |      | PNP BC252/308 |     |

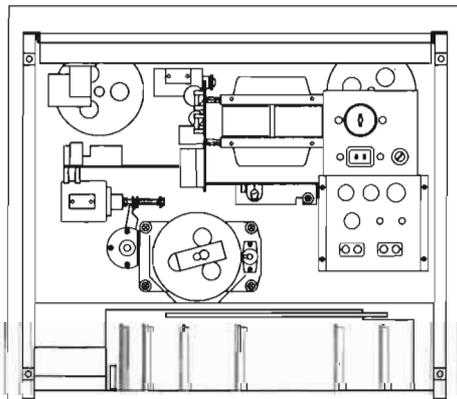
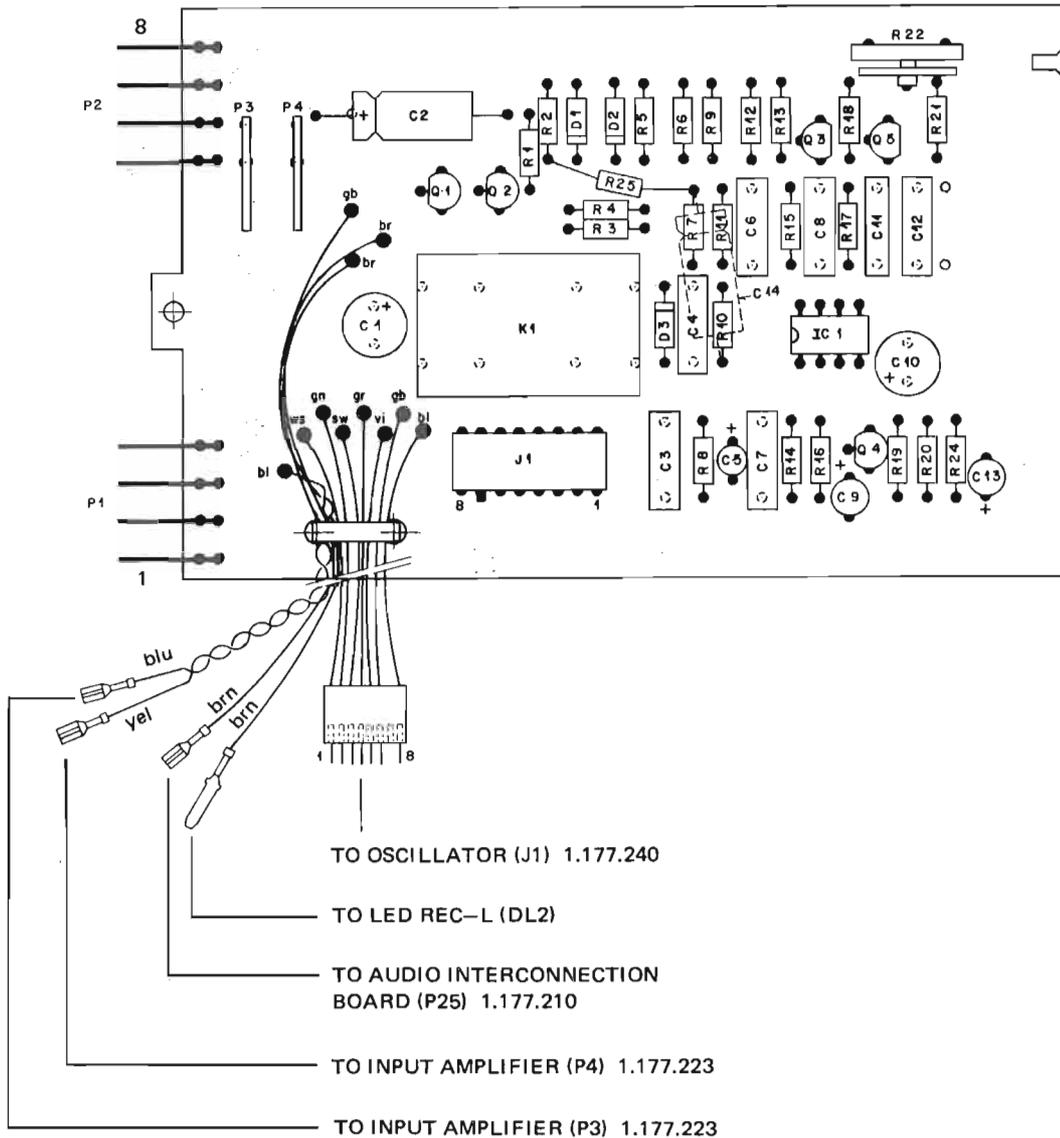
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|---------------|---------|------------------------------|--------------|-------------|--|
| ④             |         |                              |              |             |  |
| ③             |         |                              |              |             |  |
| ②             |         |                              |              |             |  |
| ①             |         |                              |              |             |  |
| ○             | 25.4.79 | R.Weibel/gv                  |              |             |  |
| <b>STUDER</b> |         | Sync-Amplifier NAB 7 1/2-15" | 1.177.285-00 | PAGE 1 OF 2 |  |

| IND | POS NO | PART NO    | VALUE  | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|------------|--------|---------------------------|-----|
|     | Q 02   | 50.03.0318 | BC 178 | PNP BC252/308             |     |
|     | Q 03   | 50.03.0436 | BC 107 | NPN BC237/547             |     |
|     | Q 04   | 50.03.0312 | 2N5460 | FD-Fet                    |     |
|     | Q 05   |            |        |                           |     |
|     | R 01   | 57.11.4103 | 10 k   | 5% .25W CF                |     |
|     | R 02   | 57.11.4153 | 15 k   |                           |     |
|     | R 03   | 57.11.4821 | 820    |                           |     |
|     | R 04   | 57.11.4821 | 820    |                           |     |
|     | R 05   |            |        |                           |     |
|     | R 06   | 57.11.4103 | 10 k   |                           |     |
|     | R 07   | 57.11.4474 | 470 k  |                           |     |
|     | R 08   | 57.11.4103 | 10 k   |                           |     |
|     | R 09   | 57.11.4333 | 33 k   |                           |     |
|     | R 10   | 57.11.4474 | 470 k  |                           |     |
|     | R 11   | 57.11.4102 | 1 k    |                           |     |
|     | R 12   | 57.11.4103 | 10 k   |                           |     |
|     | R 13   | 57.11.4105 | 1 M    |                           |     |
|     | R 14   | 57.11.4154 | 150 k  |                           |     |
|     | R 15   | 57.11.4102 | 1 k    |                           |     |
|     | R 16   | 57.11.4123 | 12 k   |                           |     |
|     | R 17   | 57.11.4122 | 1.2 k  |                           |     |
|     | R 18   |            |        |                           |     |
|     | R 19   | 57.11.4103 | 10 k   |                           |     |
|     | R 20   | 57.11.4472 | 4.7 k  |                           |     |
|     | R 21   | 57.11.4101 | 100    |                           |     |
|     | R 22   | 58.19.0102 | 1 k    | 20% .15W PCF              |     |
|     | R 23   |            |        |                           |     |
|     | R 24   | 57.11.4224 | 220 k  |                           |     |
|     | R 25   | 57.11.4272 | 2,7 k  | 5% .25W CF                |     |

| IND | DATE    | NAME        |
|-----|---------|-------------|
| ④   |         |             |
| ③   |         |             |
| ②   |         |             |
| ①   |         |             |
| ○   | 25.4.79 | R.Weibel/gv |



|                                     |                  |
|-------------------------------------|------------------|
| <b>STUDER REVOX</b>                 | <b>B77 SYNC</b>  |
| <b>SYNC-AMPLIFIER IEC 7 1/2-15"</b> |                  |
| <b>1.177.286</b>                    | <b>ED1 09.79</b> |



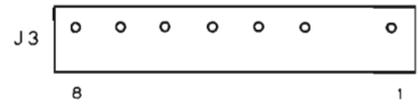
| INDI | POS NO | PART NO    | VALUE       | SPECIFICATIONS/EQUIVALENT |      |              | MFR |
|------|--------|------------|-------------|---------------------------|------|--------------|-----|
|      | C 01   | 59.22.5470 | 47 $\mu$    | 10%                       | 25V  | EL           |     |
|      | C 02   | 59.25.5220 | 22 $\mu$    | 10%                       | 40V  | EL           |     |
|      | C 03   | 59.11.6222 | 2200 p      | 5%                        | 400V | PC           |     |
|      | C 04   | 59.31.0334 | 0.33 $\mu$  | 20%                       | 63V  | MPETP        |     |
|      | C 05   | 59.30.6339 | 3.3 $\mu$   | 20%                       | 35V  | TA           |     |
|      | C 06   | 59.31.9682 | 6800 p      | 10%                       | 160V | PETP         |     |
|      | C 07   | 59.11.6272 | 2700 p      | 5%                        | 160V | PC           |     |
|      | C 08   | 59.12.4183 | 0.018 $\mu$ | 5%                        | 250V | MPETP        |     |
|      | C 09   | 59.30.6109 | 1 $\mu$     | 20%                       | 35V  | TA           |     |
|      | C 10   | 59.22.5470 | 47 $\mu$    | 10%                       | 25V  | EL           |     |
|      | C 11   | 59.31.3102 | 1000 p      | 20%                       | 400V | PETP         |     |
|      | C 12   | 59.12.2333 | 0.033 $\mu$ | 5%                        | 160V | MPETP        |     |
|      | C 13   | 59.30.7100 | 10 $\mu$    | 20%                       | 25V  | TA           |     |
|      | C 14   | 59.25.3470 | 47 $\mu$    |                           | 16V  | EL           |     |
|      |        |            |             |                           |      |              |     |
|      | D 01   | 50.04.0125 | 1N4448      |                           |      | Si           |     |
|      | D 02   | 50.04.0125 | 1N4448      |                           |      |              |     |
|      | D 03   | 50.04.0125 | 1N4448      |                           |      |              |     |
|      |        |            |             |                           |      |              |     |
|      | IC 01  | 50.05.0245 | RC4558      |                           |      | Lin RC4558DN |     |
|      |        |            |             |                           |      |              |     |
|      | J 01   | 54.01.0306 | 8-Pole      |                           |      | Cis          |     |
|      |        |            |             |                           |      |              |     |
|      | K 01   | 56.04.0140 | 2 x U       | Relay                     |      |              |     |
|      |        |            |             |                           |      |              |     |
|      | P 01   | 54.01.0470 | 4-Pole      |                           |      | Cis          |     |
|      | P 02   | 54.01.0470 | 4-Pole      |                           |      | Cis          |     |
|      | P 03   | 54.02.0328 | 2.8x0.8     | Flat-Pin                  |      |              |     |
|      | P 04   | 54.02.0328 | 2.8x0.8     | Flat-Pin                  |      |              |     |

| IND           | DATE    | NAME                         |                 |             |
|---------------|---------|------------------------------|-----------------|-------------|
| ④             |         |                              |                 |             |
| ③             |         |                              |                 |             |
| ②             |         |                              |                 |             |
| ①             |         |                              |                 |             |
| ○             | 14.8.79 | R.W/gv                       |                 |             |
| <b>STUDER</b> |         | Sync-Amplifier IEC 7 1/2-15" | PL 1.177.286.00 | PAGE 1 OF 3 |

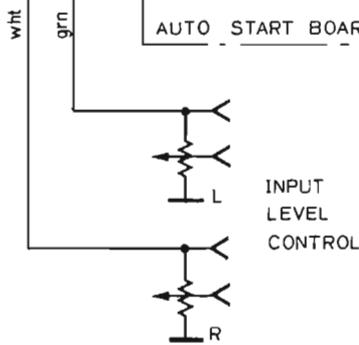
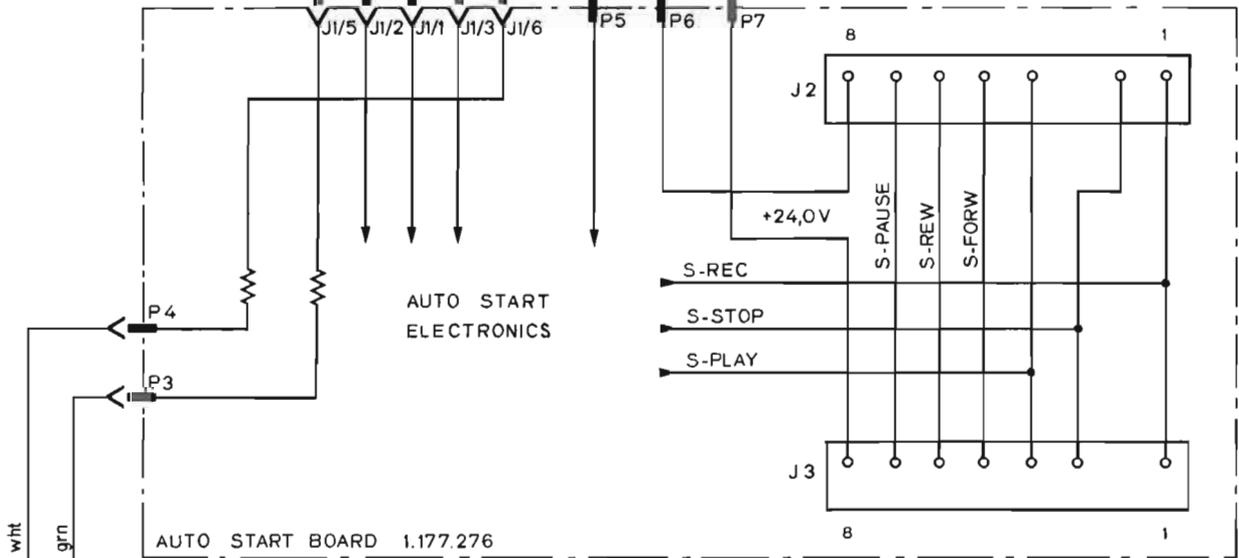
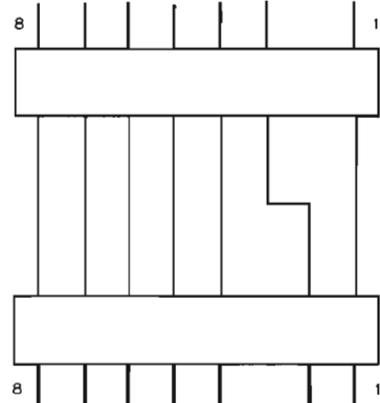
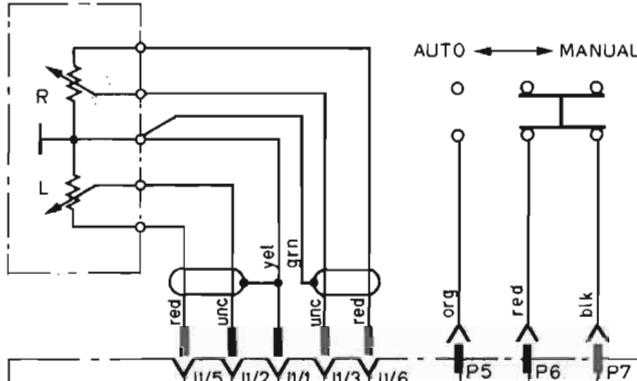
| IND | POS NO | PART NO    | VALUE  | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|------------|--------|---------------------------|-----|
|     | Q 01   | 50.03.0318 | BC178  | PNP BC252/308             |     |
|     | Q 02   | 50.03.0318 | BC178  | PNP BC252/308             |     |
|     | Q 03   | 50.03.0436 | BC107  | NPN BC237/547             |     |
|     | Q 04   | 50.03.0312 | 2N5460 | FD-Fet                    |     |
|     | Q 05   | 50.03.0436 | BC107  | NPN BC237/547             |     |
|     |        |            |        |                           |     |
|     | R 01   | 57.11.4103 | 10 k   | 5% .25W CF                |     |
|     | R 02   | 57.11.4153 | 15 k   |                           |     |
|     | R 03   | 57.11.4821 | 820    |                           |     |
|     | R 04   | 57.11.4821 | 820    |                           |     |
|     | R 05   | 57.11.4333 | 33 k   |                           |     |
|     | R 06   | 57.11.4103 | 10 k   |                           |     |
|     | R 07   | 57.11.4474 | 470 k  |                           |     |
|     | R 08   | 57.11.4103 | 10 k   |                           |     |
|     | R 09   | 57.11.4333 | 33 k   |                           |     |
|     | R 10   | 57.11.4474 | 470 k  |                           |     |
|     | R 11   | 57.11.4102 | 1 k    |                           |     |
|     | R 12   | 57.11.4103 | 10 k   |                           |     |
|     | R 13   | 57.11.4105 | 1 M    |                           |     |
|     | R 14   | 57.11.4334 | 330 k  |                           |     |
|     | R 15   | 57.11.4102 | 1 k    |                           |     |
|     | R 16   | 57.11.4153 | 15 k   |                           |     |
|     | R 17   | 57.11.4122 | 1.2 k  |                           |     |
|     | R 18   | 57.11.4103 | 10 k   |                           |     |
|     | R 19   | 57.11.4103 | 10 k   |                           |     |
|     | R 20   | 57.11.4472 | 4.7 k  |                           |     |
|     | R 21   | 57.11.4102 | 1 k    |                           |     |
|     | R 22   | 58.19.0102 | 1 k    | 20% .15W PCF              |     |
|     | R 23   |            |        |                           |     |

| IND           | DATE    | NAME                         |                 |             |  |
|---------------|---------|------------------------------|-----------------|-------------|--|
| ④             |         |                              |                 |             |  |
| ③             |         |                              |                 |             |  |
| ②             |         |                              |                 |             |  |
| ①             |         |                              |                 |             |  |
| ○             | 14.8.79 | R.W/gv                       |                 |             |  |
| <b>STUDER</b> |         | Sync-Amplifier IEC 7 1/2-15" | PL 1.177.286.00 | PAGE 2 OF 3 |  |

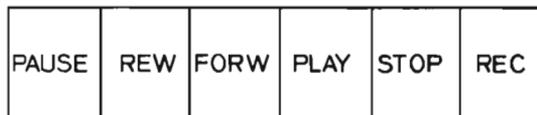




THRESHOLD BOARD  
1.177.278



LOCAL SWITCH BOARD 1.011.220



|                     |           |
|---------------------|-----------|
| STUDER <b>REVOX</b> | B77 AUTO  |
| AUTO START WIRING   |           |
| (1.177.276)         | ED1 09.79 |

## Schaltungsbeschreibung zu Tonbandgerät REVOX B77 AUTO

### B77 AUTO START Logik 1.177.276

(Zusatz zu Laufwerksteuerung)

Diese Schaltung ermöglicht den automatischen Start in Aufnahmebetrieb bei Eintreffen eines Schallereignisses. Nach Ablauf einer in Grenzen wählbaren Zeit nach Eintreffen des letzten Schallereignisses, wird das Gerät automatisch auf Stop gesetzt.

Bei Automatik-Betrieb (Schalter AUTO/MANUAL hinter der Abdeckklappe) werden die Laufwerkstasten, sofern ein Band eingelegt ist, ausser Betrieb gesetzt.

Das NF-Signal beider Kanäle wird derart weiterverarbeitet, dass das Tonbandgerät mit einem Impuls auf Aufnahme geschaltet wird.

Die Ansprechschwelle für den Start kann mit den Reglern hinter der Abdeckplatte für beide Kanäle getrennt eingestellt werden (sie ist von der Position der Eingangspegelregler unabhängig).

Nach Eintreffen des letzten Signals wird der Timer NE555 aktiviert. Dieser sendet verzögert den Stop-Impuls. Die Verzögerung wird mit R20 (Print 1.177.276) eingestellt.

### AUTO-START Montage

Da Eingriffe in das Gerät notwendig sind, ist kein Nachrüstsatz erhältlich. Das Tonbandgerät B77 AUTO ist als Spezialversion erhältlich.

### AUTO-START Einstellung

- AUTO-START Regler auf Stellung ON
- Ansprechschwelle mit den beiden Threshold-Reglern für einen oder beide Kanäle einstellen
- Ausschaltverzögerung mit R20 (auf AUTO-START Logik 1.177.276) von der Lötseite her einstellen (Gehäuse entfernen).

### Bemerkung:

Die Ausschaltverzögerung ist ab Werk auf 5 s eingestellt, der einstellbare Bereich beträgt 0,5 ... 30 s.

## Circuit description for REVOX B77 AUTO- START Recorder

### B77 AUTO-START Circuit 1.177.276

(additional to tape transport control)

This circuit makes the automatic audio-signal-dependent activation of the recording mode possible. After the audio signal has ceased, the recording cycle will be maintained for an adjustable period of time before the machine returns to stop.

With automatic operation selected (AUTO/MANUAL switch behind the front flap), the tape transport control buttons are disabled if the recorder is loaded with tape.

The audio signal entering both channels is processed in a manner, which produces a switching impulse to activate the recording circuits.

By means of rotary controls behind the front flap, the operating threshold can be adjusted separately for each channel. This adjustment is independent of the setting of the record level controls.

If an input signal is no longer present, timer NE555 becomes activated to release a time delayed STOP impulse. The length of this time delay can be adjusted with R22 on circuit board 1.177.276.

### AUTO START Installation

The AUTO START electronics are not available as a retrofit item, because of the various wiring changes that are required. The model B77 AUTO tape recorder must be ordered as such.

### AUTO START calibration

- AUTO START controls switched ON
- Adjust operating threshold on one or both channels to the desired level.
- Adjust turn-off delay with R22 (accessible from the soldered side of the AUTO START circuit 1.177.276 after removal of the recorder from its case).

### Note:

The turn-off delay is factory adjusted to 5 s. The delay is adjustable over a range from 0.5 ... 30 s.

## Descriptions des circuits du magnétophone B77 AUTO

### Logique B77 AUTO START 1.177.276

(supplémentaire au commande du mécanisme)

Ce circuit permet la mise en marche automatique de l'appareil par la présence d'un signal audio. A la fin du signal, l'appareil s'arrête automatiquement après un temps ajustable.

En fonction automatique (sélecteur AUTO/MANUAL, sous le cache escamotable), si la bande magnétique est mis en place, les organes de commande du mécanisme sont hors fonction.

Le signal BF des deux canaux est traité de manière à fournir une impulsion pour la commande d'enregistrement de l'appareil.

Le seuil de commutation pour le démarrage de l'appareil peut être ajusté par les réglages situés sous le cache escamotable. Le seuil de commutation n'est pas dépendant des réglages de niveau d'entrée.

A la fin du signal le "timer" NE555 est activé et donne l'impulsion "stop". L'ajustage du retard se fait par R20 (circuit 1.177.276).

### Montage AUTO START

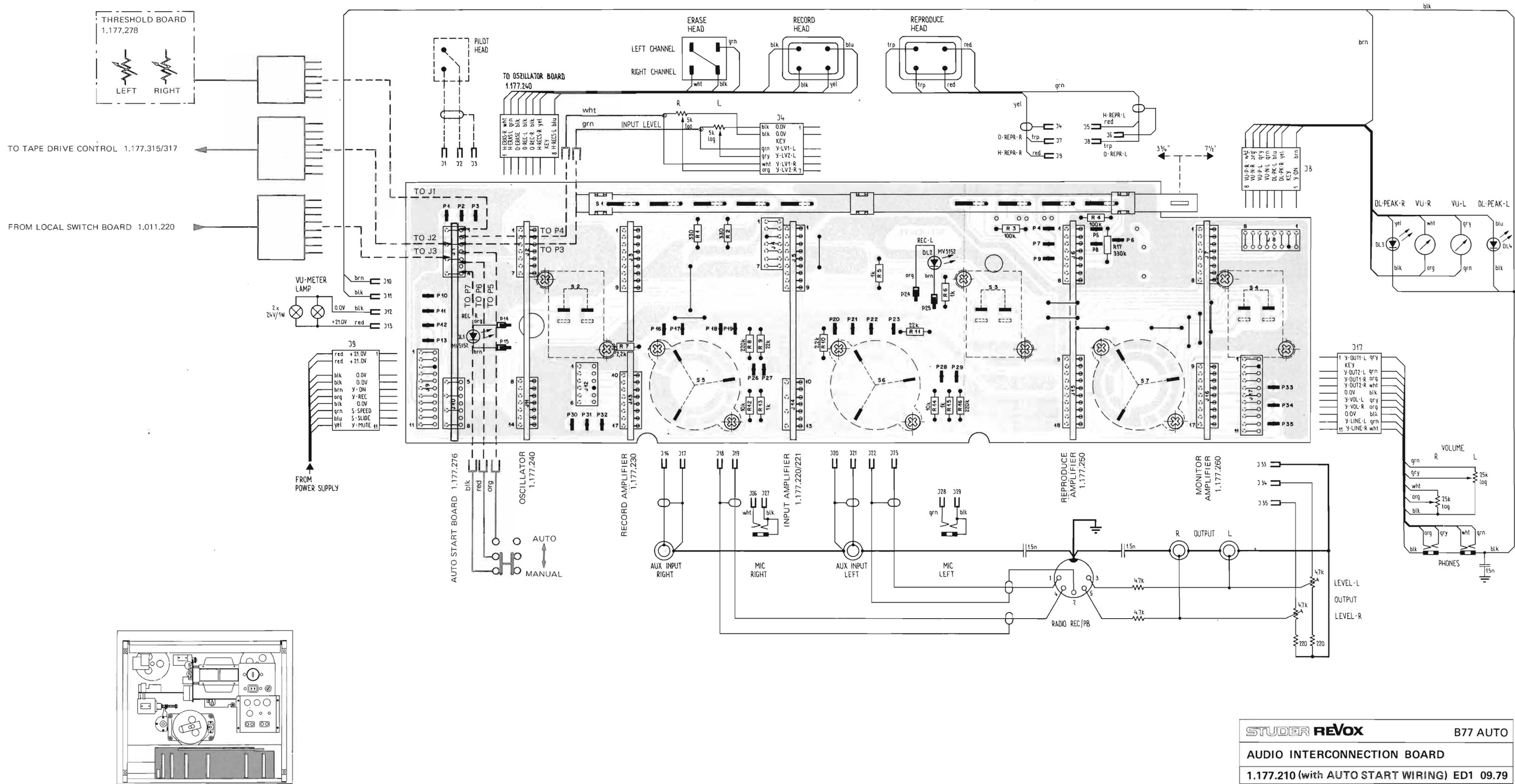
Il n'en existe pas de kit de montage en raison de l'adaptation spéciale dans l'appareil. Le magnétophone B77 AUTO n'est en vente qu'en version spéciale.

### L'ajustage de l'AUTO START

- Touche AUTO START sur ON
- Ajustez à l'aide des deux réglages "Threshold" le seuil de commutation pour un ou les deux canaux
- Ajustez le retard à l'aide de R20 (circuit 1.177.276) sur le côté soudure du circuit.

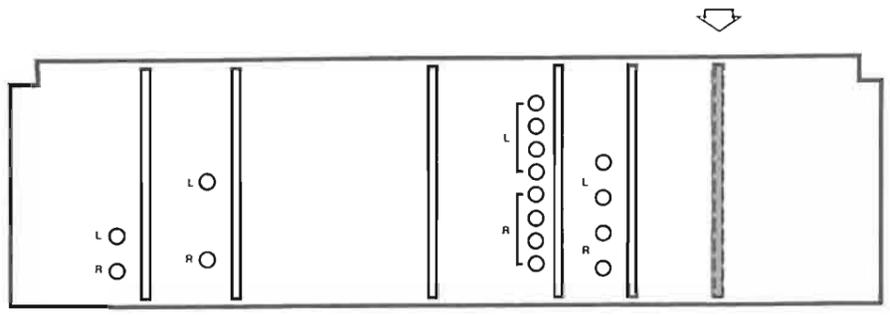
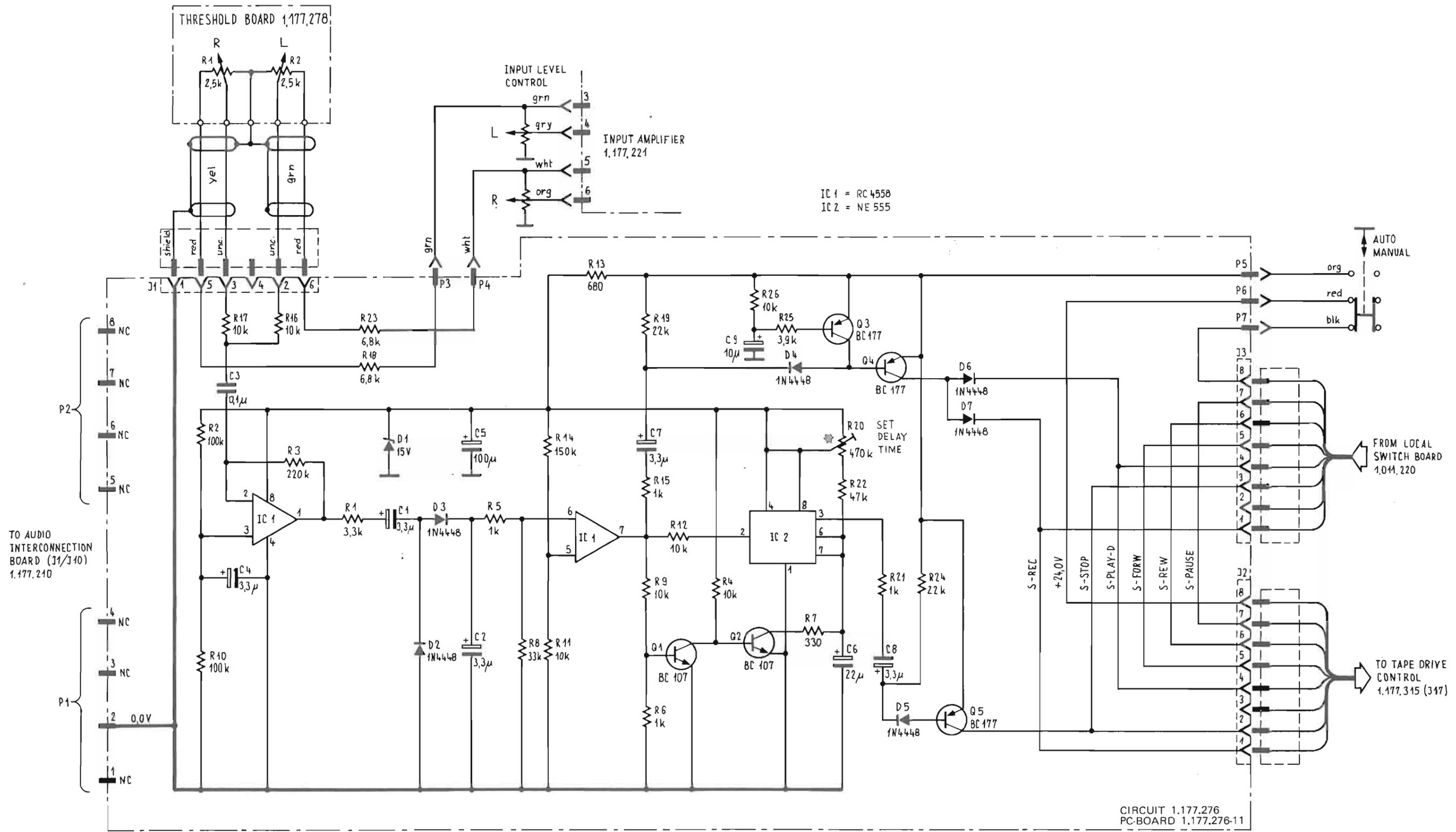
### Note

Le retard est ajusté d'usine à 5 s. La gamme de réglage varie de 0.5 ... 30 s.



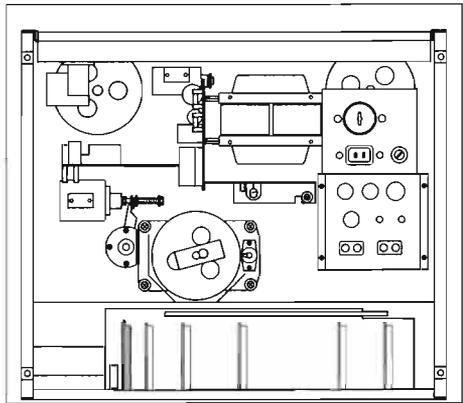
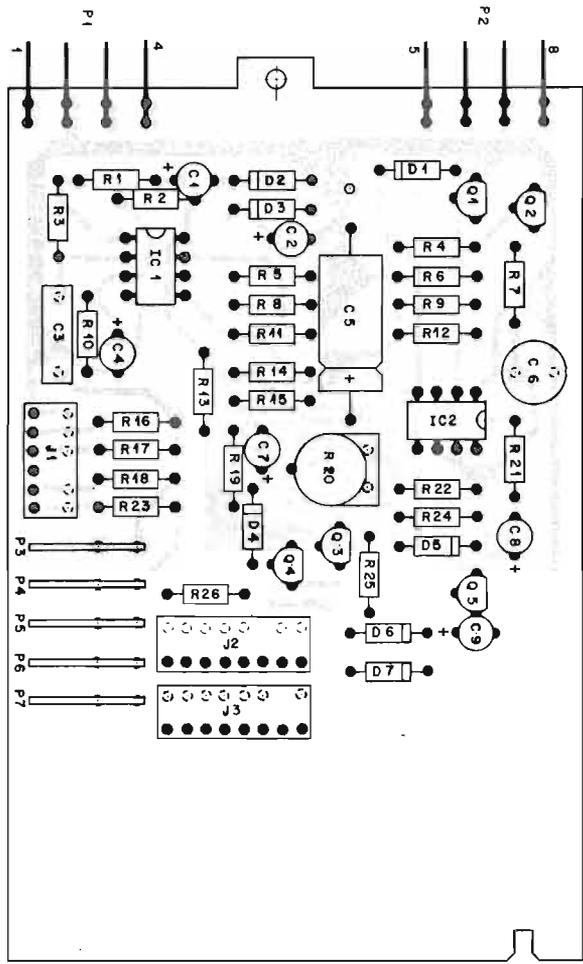
STUDER **REVOX** B77 AUTO  
 AUDIO INTERCONNECTION BOARD  
 1.177.210 (with AUTO START WIRING) ED1 09.79





★ ADJUSTABLE BETWEEN APPROX. 0.5 ... 30 SEC  
FACTORY ADJUSTED TO 5 SEC

|                  |           |
|------------------|-----------|
| STUDER REVOX     | B77 AUTO  |
| AUTO-START BOARD |           |
| 1.177.276        | ED1 09.79 |

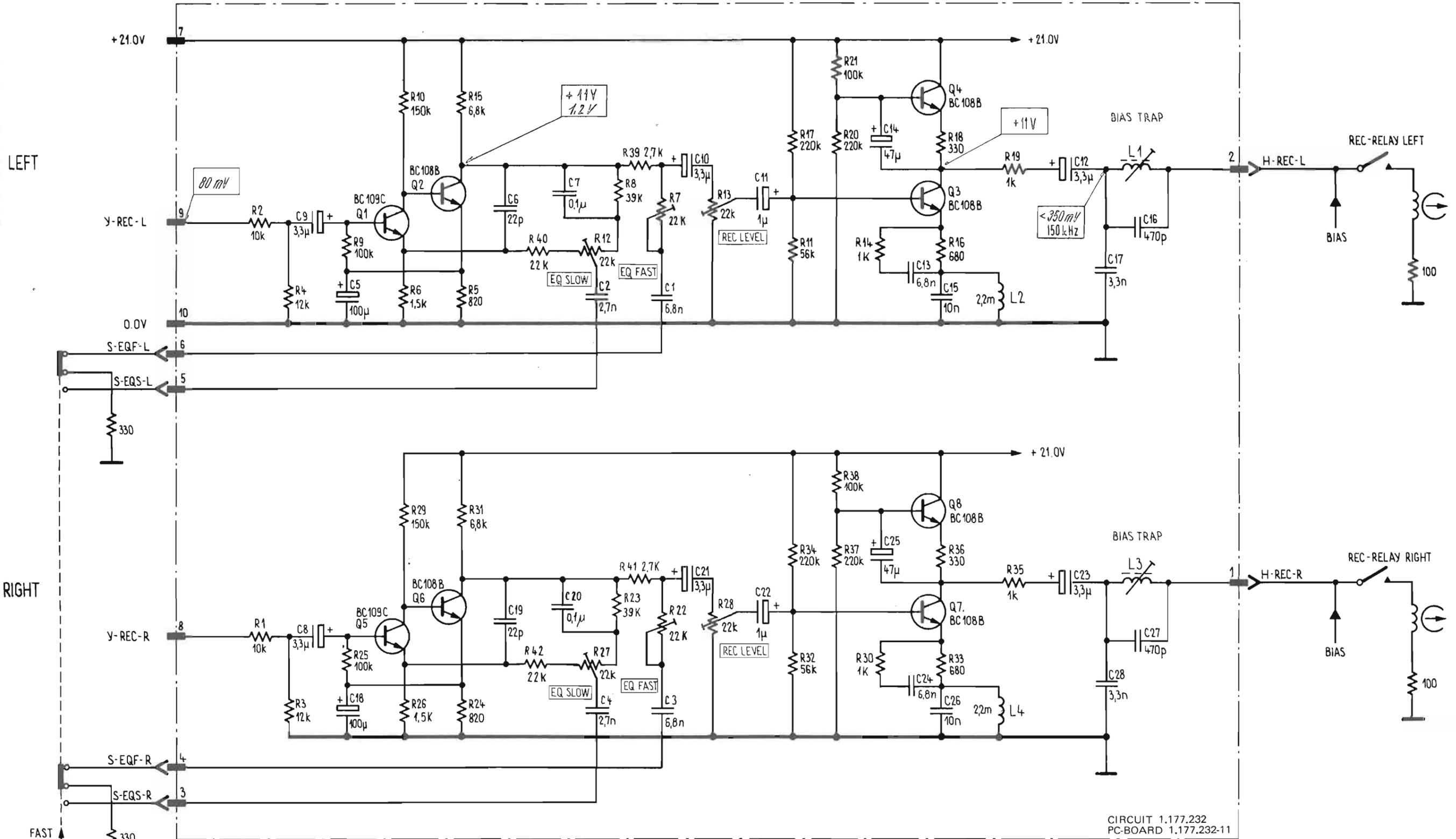


| IND | POS NO | PART NO    | VALUE       | SPECIFICATIONS/EQUIVALENT |      |                 | MFR |
|-----|--------|------------|-------------|---------------------------|------|-----------------|-----|
|     | C 01   | 59.30.6339 | 3,3 $\mu$ F | 20%                       | 35V  | TA              |     |
|     | C 02   | 59.30.6339 | 3,3 $\mu$ F | 20%                       | 35V  | TA              |     |
|     | C 03   | 59.31.1104 | 0,1 $\mu$ F | 20%                       | 100V | MPETP           |     |
|     | C 04   | 59.30.6339 | 3,3 $\mu$ F | 20%                       | 35V  | TA              |     |
|     | C 05   | 59.25.4101 | 100 $\mu$ F | 10%                       | 25V  | EL              |     |
|     | C 06   | 59.22.6220 | 22 $\mu$ F  | 10%                       | 40V  | EL              |     |
|     | C 07   | 59.30.6339 | 3,3 $\mu$ F | 20%                       | 35V  | TA              |     |
|     | C 08   | 59.30.6339 | 3,3 $\mu$ F | 20%                       | 35V  | TA              |     |
|     | C 09   | 59.30.7100 | 10 $\mu$ F  | 20%                       | 20V  | TA              |     |
|     |        |            |             |                           |      |                 |     |
|     | D 01   | 50.04.1119 | 15 V        | 5%                        | .4W  | Z-Diode         |     |
|     | D 2-7  | 50.04.0125 | 1N 4448     |                           |      |                 |     |
|     |        |            |             |                           |      |                 |     |
|     | IC 01  | 50.05.0245 | RC 4558     |                           |      | Lin RC 4558DN   |     |
|     | IC 02  | 50.05.0158 | NE 555      |                           |      | Lin MC 1455     |     |
|     |        |            |             |                           |      |                 |     |
|     | J 01   | 54.01.0238 | 6-Pole      |                           |      | Cis             |     |
|     | J 02   | 54.01.0262 | 8-Pole      |                           |      | Cis             |     |
|     | J 03   | 54.01.0262 | 8-Pole      |                           |      | Cis             |     |
|     |        |            |             |                           |      |                 |     |
|     | P 01   | 54.01.0470 | 4-Pole      |                           |      | Cis             |     |
|     | P 02   | 54.01.0470 | 4-Pole      |                           |      | Cis             |     |
|     | P 3-7  | 54.02.0328 |             |                           |      | Flach 2,8 x 0,8 |     |
|     |        |            |             |                           |      |                 |     |
|     | Q 01   | 50.03.0436 | BC 237      |                           |      | NPN BC 547      |     |
|     | Q 02   | 50.03.0436 | BC 237      |                           |      | NPN BC 547      |     |
|     | Q 03   | 50.03.0317 | BC 251      |                           |      | PNP BC 307      |     |
|     | Q 04   | 50.03.0317 | BC 251      |                           |      | PNP BC 307      |     |

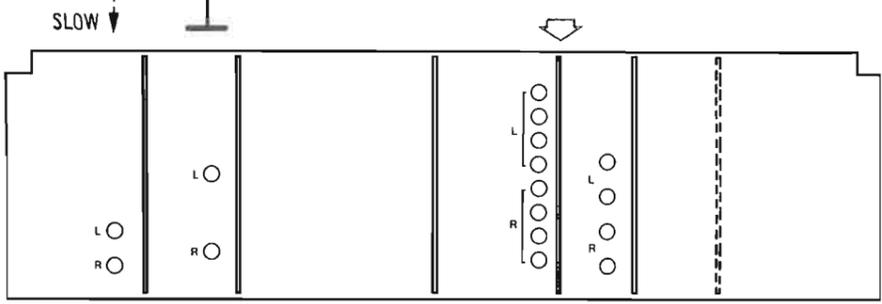
| IND           | DATE    | NAME             |              |
|---------------|---------|------------------|--------------|
| ④             |         |                  |              |
| ③             |         |                  |              |
| ②             |         |                  |              |
| ①             |         |                  |              |
| ○             | 11.1.79 | R.Weibel/gv      |              |
| <b>STUDER</b> |         | Auto-Start Board | 1.177.276.00 |
|               |         |                  | PAGE 1 OF 2  |

| IND | POS NO | PART NO    | VALUE  | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|------------|--------|---------------------------|-----|
|     | Q 05   | 50.03.0317 | BC 251 | PNP BC 307                |     |
|     | R 01   | 57.11.4332 | 3,3 k  | 5% .25W CSCH              |     |
|     | R 02   | 57.11.4104 | 100 k  |                           |     |
|     | R 03   | 57.11.4224 | 220 k  |                           |     |
|     | R 04   | 57.11.4103 | 10 k   |                           |     |
|     | R 05   | 57.11.4102 | 1 k    |                           |     |
|     | R 06   | 57.11.4102 | 1 k    |                           |     |
|     | R 07   | 57.11.4331 | 330    |                           |     |
|     | R 08   | 57.11.4333 | 33 k   |                           |     |
|     | R 09   | 57.11.4103 | 10 k   |                           |     |
|     | R 10   | 57.11.4104 | 100 k  |                           |     |
|     | R 11   | 57.11.4103 | 10 k   |                           |     |
|     | R 12   | 57.11.4103 | 10 k   |                           |     |
|     | R 13   | 57.11.4681 | 680    |                           |     |
|     | R 14   | 57.11.4154 | 150 k  |                           |     |
|     | R 15   | 57.11.4102 | 1 k    |                           |     |
|     | R 16   | 57.11.4103 | 10 k   |                           |     |
|     | R 17   | 57.11.4103 | 10 k   |                           |     |
|     | R 18   | 57.11.4682 | 6,8 k  |                           |     |
|     | R 19   | 57.11.4223 | 22 k   |                           |     |
|     | R 20   | 58.02.5474 | 470 k  | 20% .1 W PLSCH            |     |
|     | R 21   | 57.11.4102 | 1 k    | 5% .25W CSCH              |     |
|     | R 22   | 57.11.4473 | 47 k   |                           |     |
|     | R 23   | 57.11.4682 | 6,8 k  |                           |     |
|     | R 24   | 57.11.4223 | 22 k   |                           |     |
|     | R 25   | 57.11.4392 | 3,9 k  |                           |     |
|     | R 26   | 57.11.4103 | 10 k   |                           |     |

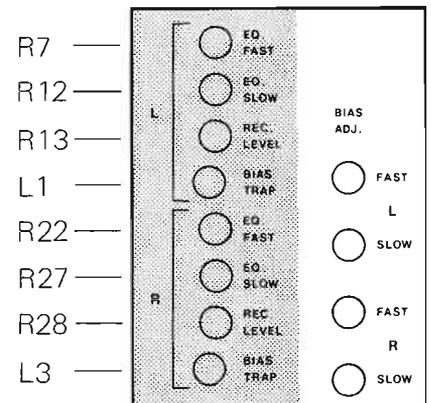
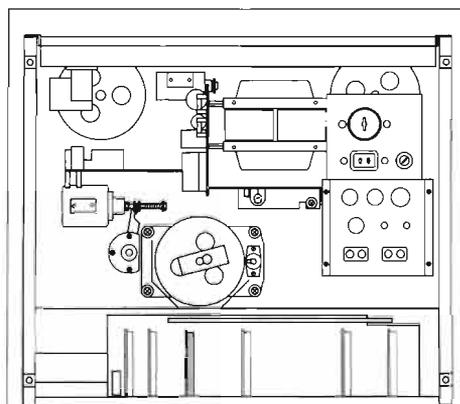
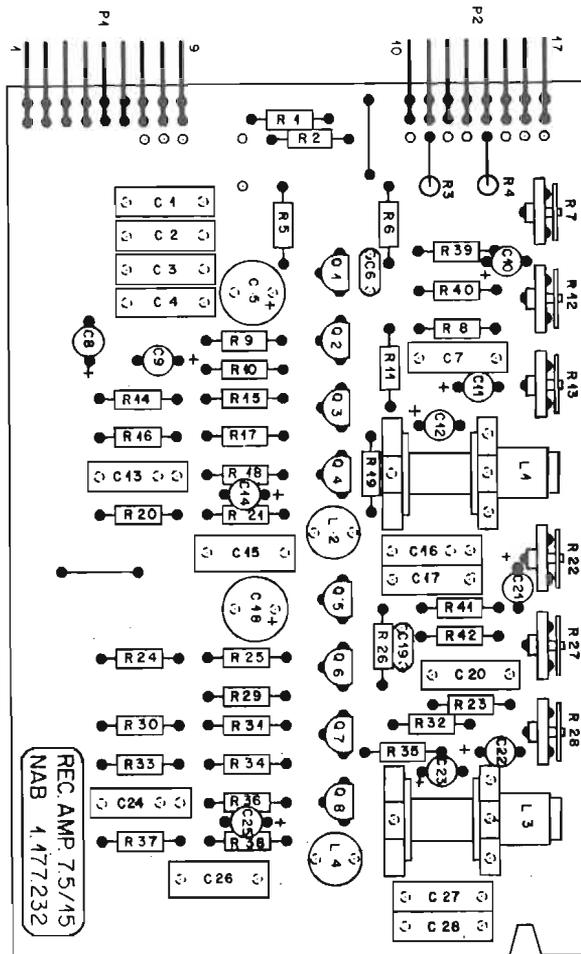
| IND | DATE    | NAME        |
|-----|---------|-------------|
| ④   |         |             |
| ③   |         |             |
| ②   |         |             |
| ①   | 11.1.79 | R.Weibel/gv |
| ○   |         |             |



CIRCUIT 1.177.232  
PC-BOARD 1.177.232-11



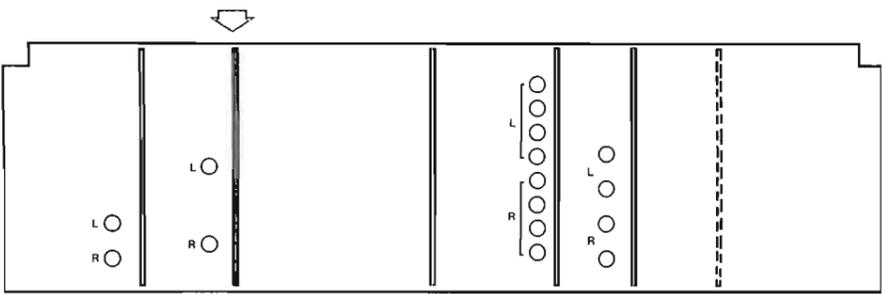
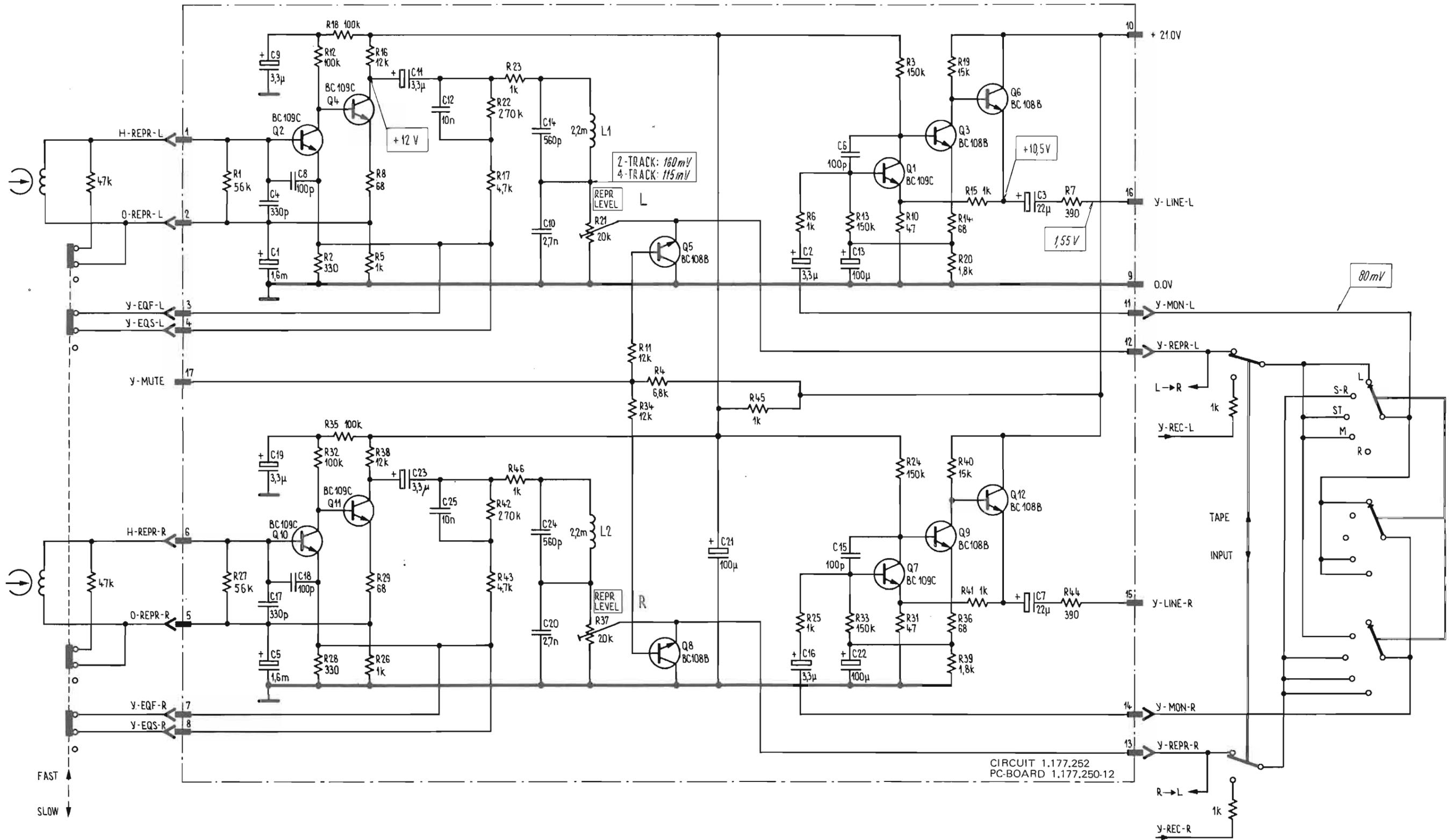
|                         |                      |
|-------------------------|----------------------|
| <b>STUDER REVOX</b>     | <b>B77 HS</b>        |
| <b>RECORD AMPLIFIER</b> | <b>NAB 7 1/2-15"</b> |
| <b>1.177.232</b>        | <b>ED1 09.79</b>     |



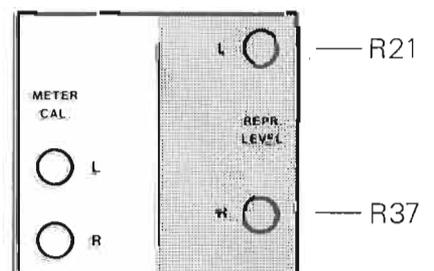
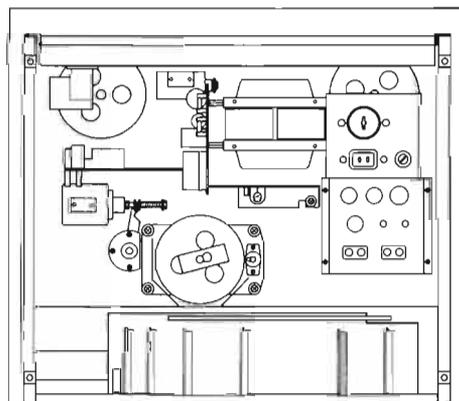
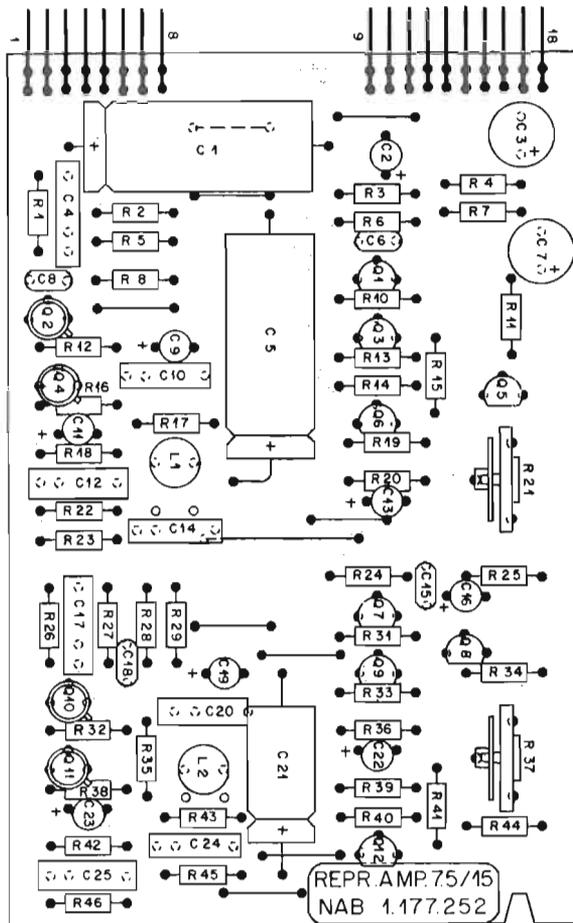
| POS NO                     | PART NO      | VALUE    | SPECIFICATIONS                 |      |              | EQUIVALENT | MFR          |
|----------------------------|--------------|----------|--------------------------------|------|--------------|------------|--------------|
| C 01                       | 59.11.3682   | 6800P    | 5%                             | 400V | PC           |            |              |
| C 02                       | 59.11.6272   | 2700P    | 5%                             | 400V | PC           |            |              |
| C 03                       | 59.11.3682   | 6800P    | 5%                             | 400V | PC           |            |              |
| C 04                       | 59.11.6272   | 2700P    | 5%                             | 400V | PC           |            |              |
| C 05                       | 59.22.3101   | 100 U    | 10%                            | 12 V | EL           |            |              |
| C 06                       | 59.32.0220   | 22 P     | 20%                            | 500V | CER          |            |              |
| C 07                       | 59.31.6104   | 0,1 U    | 10%                            | 100V | MPETP        |            |              |
| C 08                       | 59.30.6339   | 3,3 U    | 20%                            | 35 V | TA           |            |              |
| C 09                       | 59.30.6339   | 3,3 U    | 20%                            | 35 V | TA           |            |              |
| C 10                       | 59.30.6339   | 3,3 U    | 20%                            | 35 V | TA           |            |              |
| C 11                       | 59.30.6109   | 1 U      | 20%                            | 35 V | TA           |            |              |
| C 12                       | 59.30.6339   | 3,3 U    | 20%                            | 35 V | TA           |            |              |
| C 13                       | 59.11.3682   | 6800P    | 5%                             | 400V | PC           |            |              |
| C 14                       | 59.30.1470   | 47 U     | 20%                            | 3 V  | TA           |            |              |
| C 15                       | 59.31.9103   | 0,01U    | 10%                            | 100V | PETP         |            |              |
| C 16                       | 59.11.6471   | 470 P    | 5%                             | 400V | PC           |            |              |
| C 17                       | 59.11.6332   | 3300P    | 5%                             | 400V | PC           |            |              |
| C 18                       | 59.22.3101   | 100 U    | 10%                            | 12 V | EL           |            |              |
| C 19                       | 59.32.0220   | 22 P     | 20%                            | 500V | CER          |            |              |
| C 20                       | 59.31.6104   | 0,1 U    | 10%                            | 100  | MPETP        |            |              |
| C 21                       | 59.30.6339   | 3,3 U    | 20%                            | 35 V | TA           |            |              |
| C 22                       | 59.30.6109   | 1 U      | 20%                            | 35 V | TA           |            |              |
| C 23                       | 59.30.6339   | 3,3 U    | 20%                            | 35 V | TA           |            |              |
| C 24                       | 59.11.3682   | 6800P    | 5%                             | 400V | PC           |            |              |
| C 25                       | 59.30.1470   | 47 U     | 20%                            | 3 V  | TA           |            |              |
| C 26                       | 59.31.9103   | 0,01U    | 10%                            | 100V | PETP         |            |              |
| C 27                       | 59.11.6471   | 470 P    | 5%                             | 400V | PC           |            |              |
| C 28                       | 59.11.6332   | 3300P    | 5%                             | 400V | PC           |            |              |
| L 01                       | 1.177.231.00 |          |                                |      |              |            | S            |
| L 02                       | 62.02.1222   | 2,2 mH   | 5%                             |      |              |            |              |
| L 03                       | 1.177.231.00 |          |                                |      |              |            | S            |
| L 04                       | 62.02.1222   | 2,2 mH   | 5%                             |      |              |            |              |
| P 01                       | 54.01.0220   | 9 - Pole | Pin-Strip                      | AMP  |              |            |              |
| P 02                       | 54.01.0270   | 8 - Pole | Pin-Strip                      | AMP  |              |            |              |
| Q 01                       | 50.03.0439   | BC 109 C |                                |      | NPN          |            | any          |
| Q 02                       | 50.03.0436   | BC 107 B |                                |      | NPN          |            | any          |
| Q 03                       | 50.03.0436   | BC 107 B |                                |      | NPN          |            | any          |
| Q 04                       | 50.03.0436   | BC 107 B |                                |      | NPN          |            | any          |
| Q 05                       | 50.03.0439   | BC 109 C |                                |      | NPN          |            | any          |
| Q 06                       | 50.03.0436   | BC 107 B |                                |      | NPN          |            | any          |
| PC = Polycarbonate         |              |          | S = Studer                     |      | ④            |            |              |
| MPETP=Metallized Polyester |              |          |                                |      | ③            |            |              |
| PETP=Polyester             |              |          |                                |      | ②            |            |              |
| CER=Ceramic                |              |          |                                |      | ①            |            |              |
|                            |              |          |                                |      | ○            | 19.4.78    | Fol./gv      |
|                            |              |          |                                |      | IND          | DATE       | NAME         |
| <b>STUDER</b>              |              |          | Record Amplifier NAB 7 1/2 -15 |      | 1.177.232-00 |            | PAGE<br>of 2 |

| POS NO | PART NO    | VALUE    | SPECIFICATIONS | EQUIVALENT | MFR |
|--------|------------|----------|----------------|------------|-----|
| Q 07   | 50.03.0436 | BC 107 B |                | NPN        | any |
| Q 08   | 50.03.0436 | BC 107 B |                | NPN        | any |
| R 01   | 57.11.4103 | 10 k     | 5% .25W        | CF         |     |
| R 02   | 57.11.4103 | 10 k     | 5% .25W        | CF         |     |
| R 03   | 57.11.4123 | 12 k     | 5% .12W        | CF         |     |
| R 04   | 57.11.4123 | 12 k     | 5% .12W        | CF         |     |
| R 05   | 57.41.4821 | 820      | 5% .25W        | CF         |     |
| R 06   | 57.41.4332 | 3,3 k    | 5% .25W        | CF         |     |
| R 07   | 58.02.4223 | 22 k     | 10% .1 W       | P CF       |     |
| R 08   | 57.41.4393 | 39 k     | 5% .25W        | CF         |     |
| R 09   | 57.41.4104 | 100 k    |                |            |     |
| R 10   | 57.41.4154 | 150 k    |                |            |     |
| R 11   | 57.41.4563 | 56 k     |                |            |     |
| R 12   | 58.02.4223 | 22 k     | 10% .1 W       | P CF       |     |
| R 13   | 58.02.4223 | 22 k     | 10% .1 W       | P CF       |     |
| R 14   | 57.41.4102 | 1 k      | 5% .25W        | CF         |     |
| R 15   | 57.41.4682 | 6,8 k    |                |            |     |
| R 16   | 57.41.4681 | 680      |                |            |     |
| R 17   | 57.41.4224 | 220 k    |                |            |     |
| R 18   | 57.41.4331 | 330      |                |            |     |
| R 19   | 57.41.4102 | 1 k      |                |            |     |
| R 20   | 57.41.4224 | 220 k    |                |            |     |
| R 21   | 57.41.4104 | 100 k    |                |            |     |
| R 22   | 58.02.4223 | 22 k     | 10% .1 W       | P CF       |     |
| R 23   | 57.41.4393 | 39 k     | 5% .25W        | CF         |     |
| R 24   | 57.41.4821 | 820      |                |            |     |
| R 25   | 57.41.4104 | 100 k    |                |            |     |
| R 26   | 57.41.4332 | 3,3 k    |                |            |     |
| R 27   | 58.02.4223 | 22 k     | 10% .1 W       | CF         |     |
| R 28   | 58.02.4223 | 22 k     | 10% .1 W       | CF         |     |
| R 29   | 57.41.4154 | 150 k    | 5% .25W        | CF         |     |
| R 30   | 57.41.4102 | 1 k      |                |            |     |
| R 31   | 57.41.4682 | 6,8 k    |                |            |     |
| R 32   | 57.41.4563 | 56 k     |                |            |     |
| R 33   | 57.41.4681 | 680      |                |            |     |
| R 34   | 57.41.4224 | 220 k    |                |            |     |
| R 35   | 57.41.4102 | 1 k      |                |            |     |
| R 36   | 57.41.4331 | 330      |                |            |     |
| R 37   | 57.41.4224 | 220 k    |                |            |     |
| R 38   | 57.41.4104 | 100 k    |                |            |     |
| R 39   | 57.41.4272 | 2,7 k    |                |            |     |
| R 40   | 57.41.4223 | 22 k     |                |            |     |
| R 41   | 57.41.4272 | 2,7 k    |                |            |     |
| R 42   | 57.41.4223 | 22 k     |                |            |     |

|                |                             |  |              |         |             |
|----------------|-----------------------------|--|--------------|---------|-------------|
| CF=Carbon Film |                             |  | ④            |         |             |
|                |                             |  | ③            |         |             |
|                |                             |  | ②            |         |             |
|                |                             |  | ①            |         |             |
|                |                             |  | ○            | 19.4.78 | Fol./gv     |
|                |                             |  | IND          | DATE    | NAME        |
| <b>STUDER</b>  | Record Amplifier NAB 7/2-15 |  | 1.177.232-00 |         | PAGE 2 of 2 |



|                                   |           |
|-----------------------------------|-----------|
| STUDER <b>REVOX</b>               | B77 HS    |
| REPRODUCE AMPLIFIER NAB 7 1/2-15" |           |
| 1.177.252                         | ED1 09.79 |



| POS NO   | PART NO    | VALUE                           | SPECIFICATIONS | EQUIVALENT            | MFR    |                |
|--|------------|---------------------------------|----------------|-----------------------|--------|----------------|
| C 01   | 59.25.0162 | 1600U                           | 10% 3V         | EL                    |        |                |
| C 02   | 59.30.6339 | 3,3U                            | 20% 35V        | TA                    |        |                |
| C 03   | 59.22.6220 | 22U                             | 10% 40V        | EL                    |        |                |
| C 04   | 59.11.6221 | 220P                            | 5% 400V        | PC                    |        |                |
| C 05   | 59.25.0162 | 1600U                           | 10% 3V         | EL                    |        |                |
| C 06   | 59.32.0101 | 100P                            | 20% 500V       | CER                   |        |                |
| C 07   | 59.22.6220 | 22U                             | 10% 40V        | EL                    |        |                |
| C 08   | 59.32.0101 | 100P                            | 20% 500V       | CER                   |        |                |
| C 09   | 59.30.6339 | 3,3U                            | 20% 35V        | TA                    |        |                |
| C 10   | 59.99.0259 | 2700P                           | 10% 50V        | PETP                  |        |                |
| C 11   | 59.30.6339 | 3,3U                            | 20% 35V        | TA                    |        |                |
| C 12   | 59.11.3103 | 0,01U                           | 5% 160V        | PC                    |        |                |
| C 13   | 59.30.1101 | 100U                            | 20% 3V         | TA                    |        |                |
| C 14   | 59.11.6561 | 560P                            | 5% 400V        | PC                    |        |                |
| C 15   | 59.32.0101 | 100P                            | 20% 500V       | CER                   |        |                |
| C 16   | 59.30.6339 | 3,3U                            | 20% 35V        | TA                    |        |                |
| C 17   | 59.11.6221 | 220P                            | 5% 400V        | PC                    |        |                |
| C 18   | 59.32.0101 | 100P                            | 20% 500V       | CER                   |        |                |
| C 19   | 59.30.6339 | 3,3U                            | 20% 35V        | TA                    |        |                |
| C 20   | 59.99.0259 | 2700P                           | 10% 400V       | PETP                  |        |                |
| C 21   | 59.25.4101 | 100U                            | 10% 25V        | EL                    |        |                |
| C 22   | 59.30.1101 | 100U                            | 20% 3V         | TA                    |        |                |
| C 23   | 59.30.6339 | 3,3U                            | 20% 35V        | TA                    |        |                |
| C 24   | 59.11.6561 | 560P                            | 5% 400V        | PC                    |        |                |
| C 25   | 59.11.3101 | 0,01U                           | 5% 160V        | PC                    |        |                |
| L 01   | 62.02.1222 | 2.2 mH                          | 5%             |                       |        |                |
| L 02   | 62.02.1222 | 2.2 mH                          | 5%             |                       |        |                |
| P 01   | 54.01.0270 | 8-Pole                          | Pin-Strip      | AMP                   |        |                |
| P 02   | 54.01.0271 | 10-Pole                         | Pin-Strip      | AMP                   |        |                |
| Q 01   | 50.03.0439 | BC109C                          |                | NPN                   | any    |                |
| Q 02   | 50.03.0407 | BC109C                          | T018           | NPN                   |        |                |
| Q 03   | 50.03.0436 | BC107B                          |                | NPN                   |        |                |
| Q 04   | 50.03.0407 | BC109C                          | T018           | NPN                   |        |                |
| Q 05   | 50.03.0436 | BC107B                          |                | NPN                   |        |                |
| Q 06   | 50.03.0436 | BC107B                          |                | NPN                   |        |                |
| Q 07   | 50.03.0439 | BC109C                          |                | NPN                   |        |                |
| Q 08   | 50.03.0436 | BC107B                          |                | NPN                   |        |                |
| Q 09   | 50.03.0436 | BC107B                          |                | NPN                   |        |                |
| Q 10   | 50.03.0407 | BC109C                          | T018           | NPN                   |        |                |
| Q 11   | 50.03.0407 | BC109C                          | T018           | NPN                   |        |                |
| Q 12   | 50.03.0436 | BC107B                          |                | NPN                   |        |                |
| EL = Electrolytic<br>PC = Polycarbonate<br>TA = Tantalum<br>CER = Ceramic<br>PETP= Polyester |            |                                 |                | ④<br>③<br>②<br>①<br>○ | 3.7.78 | Lu./gv         |
|  |            |                                 |                | IND                   | DATE   | NAME           |
| <b>STUDER</b>  |            | Reproduce-Amplifier 7 1/2-15NAE |                | 1.177.252             |        | PAGE<br>1 of 2 |

| POS NO | PART NO    | VALUE | SPECIFICATIONS  | EQUIVALENT MFR |
|--------|------------|-------|-----------------|----------------|
| R 01   | 57.41.4563 | 56 k  | 5% .25W         | CF             |
| R 02   | 57.41.4331 | 330   |                 |                |
| R 03   | 57.41.4154 | 150 k |                 |                |
| R 04   | 57.41.4682 | 6,8 k |                 |                |
| R 05   | 57.41.4102 | 1 k   |                 |                |
| R 06   | 57.41.4102 | 1 k   |                 |                |
| R 07   | 57.41.4391 | 390   |                 |                |
| R 08   | 57.41.4680 | 68    |                 |                |
| R 10   | 57.41.4470 | 47    |                 |                |
| R 11   | 57.41.4123 | 12 k  |                 |                |
| R 12   | 57.11.4104 | 100 k |                 |                |
| R 13   | 57.41.4154 | 150 k |                 |                |
| R 14   | 57.41.4680 | 68    |                 |                |
| R 15   | 57.41.4102 | 1 k   |                 |                |
| R 16   | 57.11.4123 | 12 k  |                 |                |
| R 17   | 57.41.4472 | 4,7 k |                 |                |
| R 18   | 57.41.4104 | 100 k |                 |                |
| R 19   | 57.41.4153 | 15 k  |                 |                |
| R 20   | 57.41.4182 | 1,8 k |                 |                |
| R 21   | 58.19.0203 | 20 k  | 20% .15Wlin.PCF |                |
| R 22   | 57.41.4274 | 270 k | 5% .25W         | CF             |
| R 23   | 57.41.4102 | 1 k   |                 |                |
| R 24   | 57.41.4154 | 150 k |                 |                |
| R 25   | 57.41.4102 | 1 k   |                 |                |
| R 26   | 57.41.4102 | 1 k   |                 |                |
| R 27   | 57.41.4563 | 56 k  |                 |                |
| R 28   | 57.41.4331 | 330   |                 |                |
| R 29   | 57.41.4680 | 68    |                 |                |
| R 31   | 57.41.4470 | 47    |                 |                |
| R 32   | 57.11.4104 | 100 k |                 |                |
| R 33   | 57.41.4154 | 150 k |                 |                |
| R 34   | 57.41.4123 | 12 k  |                 |                |
| R 35   | 57.41.4104 | 100 k |                 |                |
| R 36   | 57.41.4680 | 68    |                 |                |
| R 37   | 58.19.0203 | 20 k  | 20% .15Wlin.PCF |                |
| R 38   | 57.11.4123 | 12 k  | 5% .25W         | CF             |
| R 39   | 57.41.4182 | 1,8 k |                 |                |
| R 40   | 57.41.4153 | 15 k  |                 |                |
| R 41   | 57.41.4102 | 1 k   |                 |                |
| R 42   | 57.41.4274 | 270 k |                 |                |
| R 43   | 57.41.4472 | 4,7 k |                 |                |
| R 44   | 57.41.4391 | 390   |                 |                |
| R 45   | 57.41.4102 | 1 k   |                 |                |
| R 46   | 57.41.4102 | 1 k   |                 |                |

CF = Carbon Film  
PCF = Pot. Carbon Film

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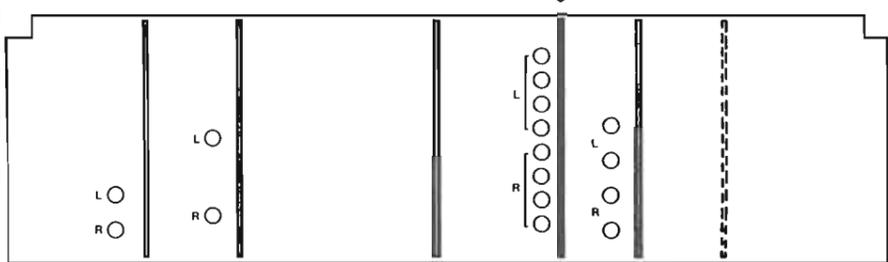
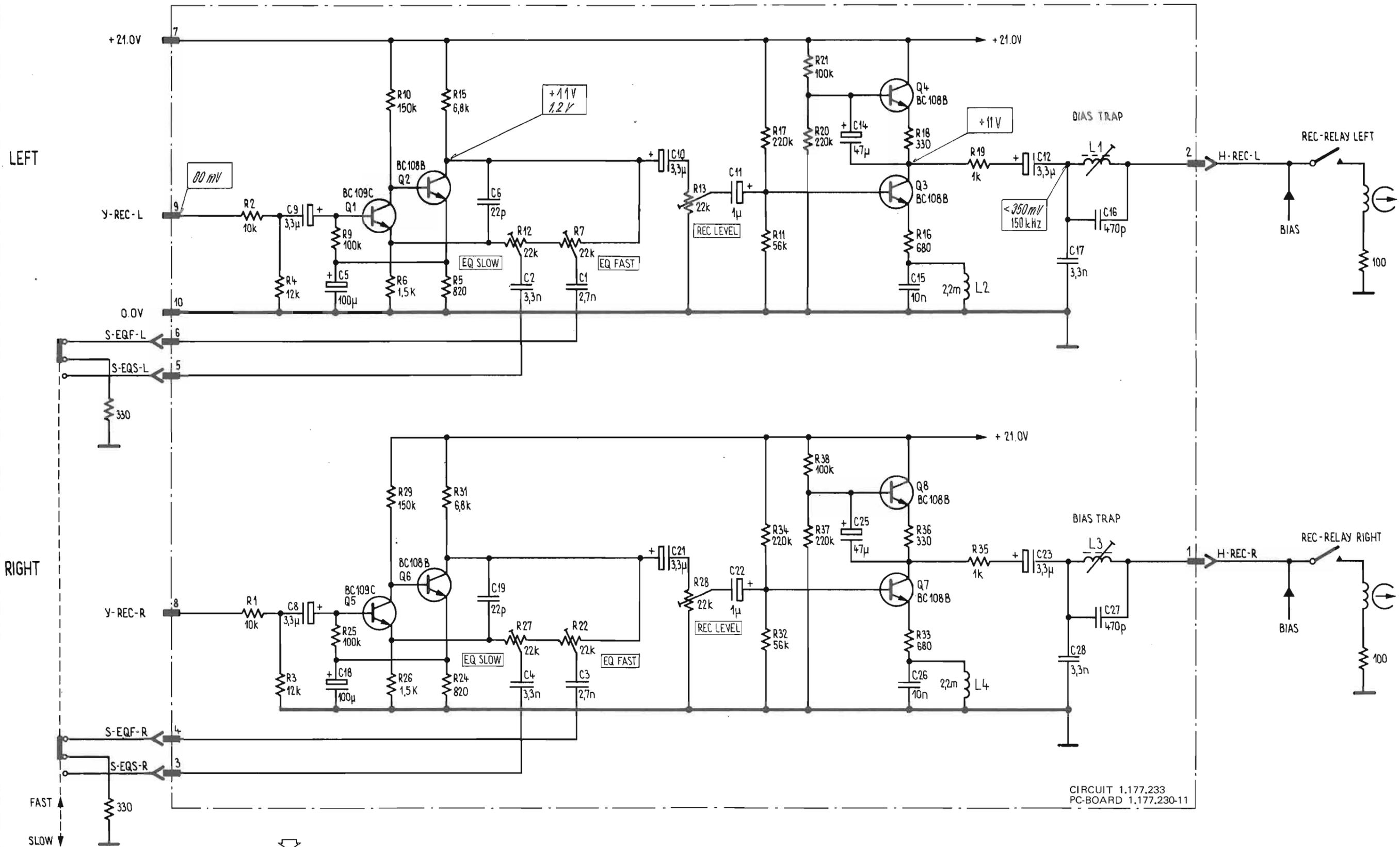
NAME

**STUDER**

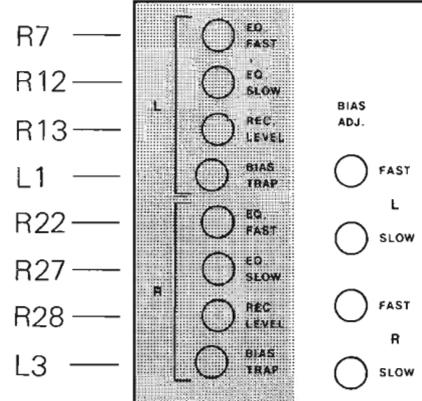
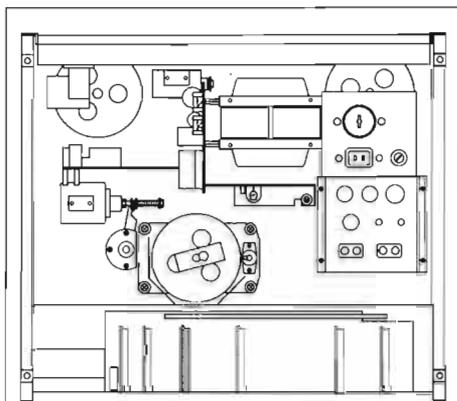
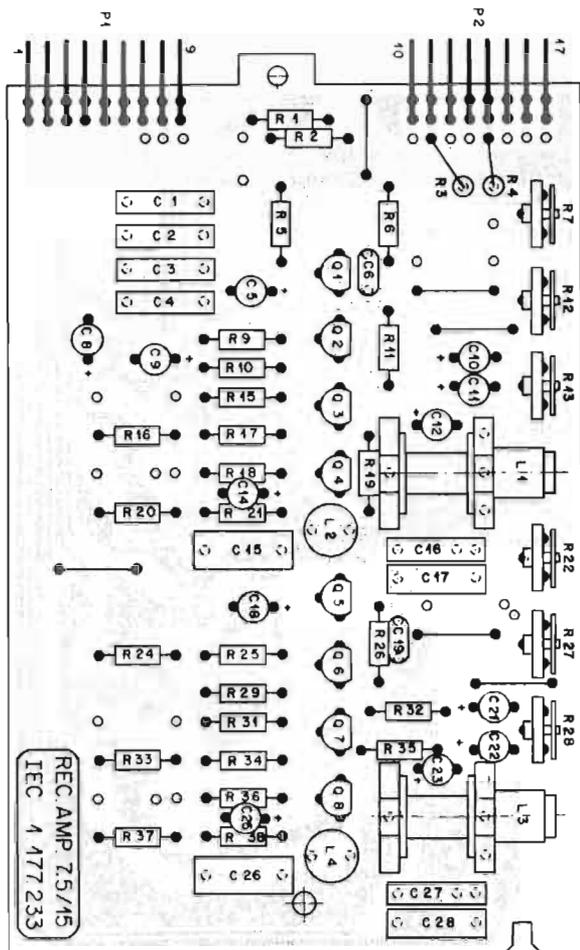
Reproduce-Amplifier 7 1/2-15NAB

1.177.252

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|                                |           |
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| STUDER <b>REVOX</b>            | B77 HS    |
| RECORD AMPLIFIER IEC 7 1/2-15" |           |
| 1.177.233                      | ED1 09.79 |



| POS NO | PART NO      | VALUE    | SPECIFICATIONS | EQUIVALENT | MFR |
|--------|--------------|----------|----------------|------------|-----|
| C 01   | 59.11.6272   | 2700P    | 5% 400V        | PC         |     |
| C 02   | 59.11.6272   | 2700P    |                |            |     |
| C 03   | 59.11.6272   | 2700P    |                |            |     |
| C 04   | 59.11.6272   | 2700P    |                |            |     |
| C 05   | 59.22.3101   | 100 U    | 10% 12V        | EL         |     |
| C 06   | 59.32.0220   | 22 P     | 20% 500V       | CER        |     |
| C 07   |              |          |                |            |     |
| C 08   | 59.30.6339   | 3,3 U    | 20% 35V        | TA         |     |
| C 09   | 59.30.6339   | 3,3 U    |                |            |     |
| C 10   | 59.30.6339   | 3,3 U    |                |            |     |
| C 11   | 59.30.6109   | 1 U      |                |            |     |
| C 12   | 59.30.6339   | 3,3 U    |                |            |     |
| C 13   |              |          |                |            |     |
| C 14   | 59.30.1470   | 47 U     | 20% 3V         | TA         |     |
| C 15   | 59.31.9103   | 0,01U    | 10% 100V       | PETP       |     |
| C 16   | 59.11.6471   | 470 P    | 5% 400V        | PC         |     |
| C 17   | 59.11.6332   | 3300P    | 5% 400V        | PC         |     |
| C 18   | 59.22.3101   | 100 U    | 10% 12V        | EL         |     |
| C 19   | 59.32.0220   | 22 P     | 20% 500V       | CER        |     |
| C 20   |              |          |                |            |     |
| C 21   | 59.30.6339   | 3,3 U    | 20% 35V        | TA         |     |
| C 22   | 59.30.6109   | 1 U      |                |            |     |
| C 23   | 59.30.6339   | 3,3 U    |                |            |     |
| C 24   |              |          |                |            |     |
| C 25   | 59.30.1470   | 47 U     | 20% 3V         | TA         |     |
| C 26   | 59.31.9103   | 0,01U    | 10% 100V       | PETP       |     |
| C 27   | 59.11.6471   | 470 P    | 5% 400V        | PC         |     |
| C 28   | 59.11.6332   | 3300P    | 5% 400V        | PC         |     |
| L 01   | 1.177.231.00 |          |                |            | S   |
| L 02   | 62.02.1222   | 2,2 mH   | 5%             |            |     |
| L 03   | 1.177.231.00 |          |                |            | S   |
| L 04   | 62.02.1222   | 2,2 mH   | 5%             |            |     |
| P 01   | 54.01.0220   | 9-Pole   | Pin-Strip      | AMP        |     |
| P 02   | 54.01.0270   | 8-Pole   | Pin-Strip      | AMP        |     |
| Q 01   | 50.03.0439   | BC 109 C |                | NPN        | any |
| Q 02   | 50.03.0436   | BC 107 B |                | NPN        | any |
| Q 03   | 50.03.0436   | BC 107 B |                | NPN        | any |
| Q 04   | 50.03.0436   | BC 107 B |                | NPN        | any |
| Q 05   | 50.03.0439   | BC 109 C |                | NPN        | any |
| Q 06   | 50.03.0436   | BC 107 B |                | NPN        | any |
| Q 07   | 50.03.0436   | BC 107 B |                | NPN        | any |
| Q 08   | 50.03.0436   | BC 107 B |                | NPN        | any |

PC = Polycarbonate  
PETP= Polyester  
CER = Ceramic

S = STUDER

|     |         |         |
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| ○   | 19.4.78 | Fol./gv |
| IND | DATE    | NAME    |

**STUDER**

Record Amplifier IEC 7 1/2-15"

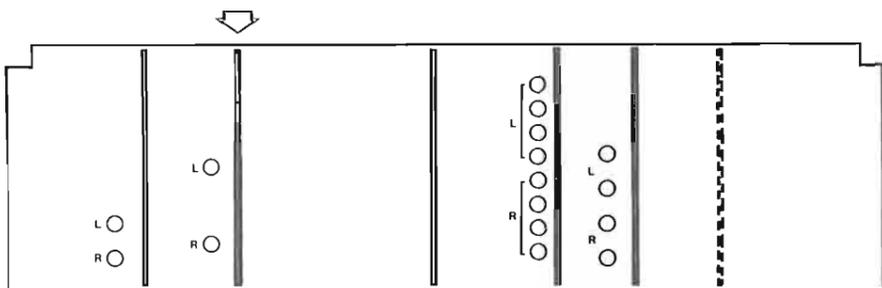
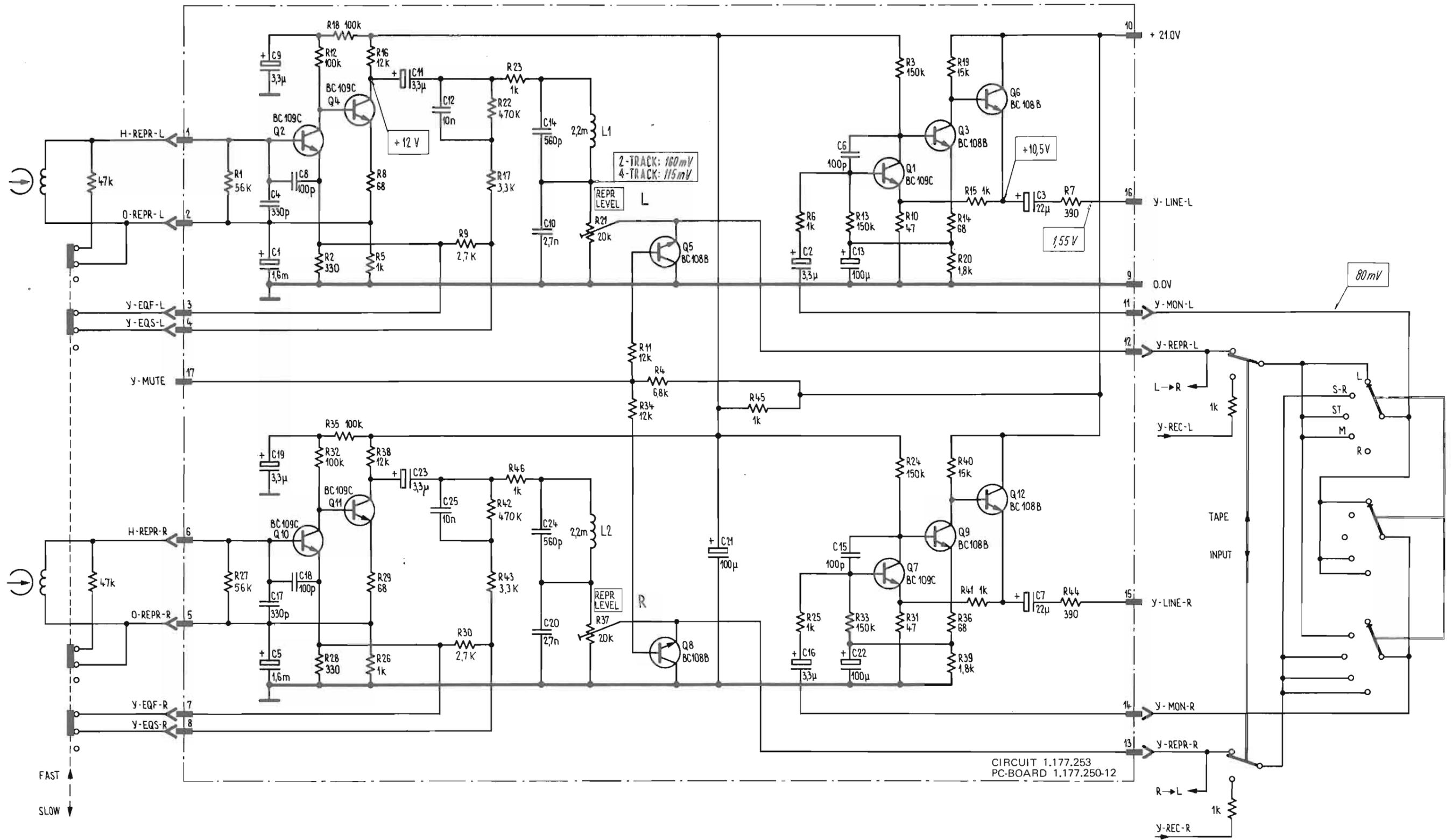
1.177.233-00

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of 2

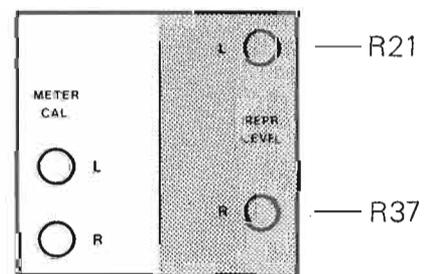
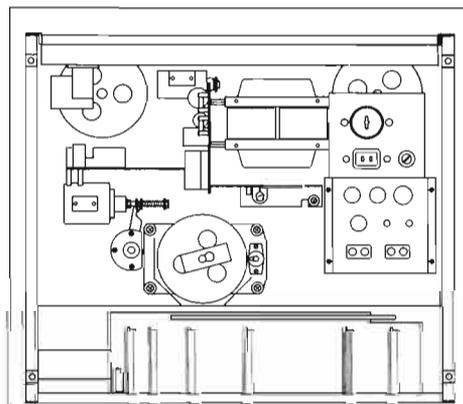
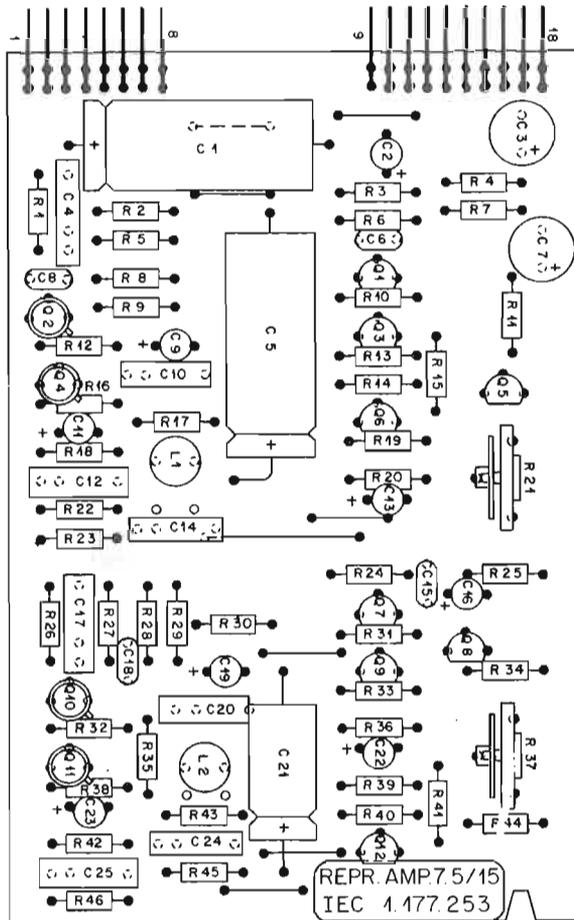
| POS NO | PART NO    | VALUE | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|-------|----------------|----------------|
| R 01   | 57.11.4103 | 10 k  | 5% .25W        | CF             |
| R 02   | 57.11.4103 | 10 k  |                |                |
| R 03   | 57.11.4123 | 12 k  | .12W           |                |
| R 04   | 57.11.4123 | 12 k  |                |                |
| R 05   | 57.41.4821 | 820   | 5% .25W        | CF             |
| R 06   | 57.41.4152 | 1,5 k |                |                |
| R 07   | 58.02.4223 | 22 k  | 10% .1 W       | CF             |
| R 08   |            |       |                |                |
| R 09   | 57.41.4104 | 100 k | 5% .25W        | CF             |
| R 10   | 57.41.4154 | 150 k |                |                |
| R 11   | 57.41.4563 | 56 k  |                |                |
| R 12   | 58.02.4223 | 22 k  | 10% .1 W       | CF             |
| R 13   | 58.02.4223 | 22 k  |                |                |
| R 14   |            |       |                |                |
| R 15   | 57.41.4682 | 6,8 k | 5% .25W        | CF             |
| R 16   | 57.41.4681 | 680   |                |                |
| R 17   | 57.41.4224 | 220 k |                |                |
| R 18   | 57.41.4331 | 330   |                |                |
| R 19   | 57.41.4102 | 1 k   |                |                |
| R 20   | 57.41.4224 | 220 k |                |                |
| R 21   | 57.41.4104 | 100 k |                |                |
| R 22   | 58.02.4223 | 22 k  | 10% .1 W       | CF             |
| R 23   |            |       |                |                |
| R 24   | 57.41.4821 | 820   | 5% .25W        | CF             |
| R 25   | 57.41.4104 | 100 k |                |                |
| R 26   | 57.41.4152 | 1,5 k |                |                |
| R 27   | 58.02.4223 | 22 k  | 10% .1 W       | CF             |
| R 28   | 58.02.4223 | 22 k  |                |                |
| R 29   | 57.41.4154 | 150 k | 5% .25W        | CF             |
| R 30   |            |       |                |                |
| R 31   | 57.41.4682 | 6,8 k |                |                |
| R 32   | 57.41.4563 | 56 k  |                |                |
| R 33   | 57.41.4681 | 680   |                |                |
| R 34   | 57.41.4224 | 220 k |                |                |
| R 35   | 57.41.4102 | 1 k   |                |                |
| R 36   | 57.41.4331 | 330   |                |                |
| R 37   | 57.41.4224 | 220 k |                |                |
| R 38   | 57.41.4104 | 100 k |                |                |

CF = Carbon Film

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| ○   | 19.4.78 | Fol./gv |
| IND | DATE    | NAME    |



**STUDER REVOX** B77 HS  
 REPRODUCE AMPLIFIER IEC 7 1/2-15"  
 1.177.253 ED1 09.79



| POS NO   | PART NO    | VALUE                             | SPECIFICATIONS        | EQUIVALENT MFR |                |
|--|------------|-----------------------------------|-----------------------|----------------|----------------|
| C 01   | 59.25.0162 | 1600U                             | 10% 3V                | EL             |                |
| C 02   | 59.30.6339 | 3,3U                              | 20% 35V               | TA             |                |
| C 03   | 59.22.6220 | 22U                               | 10% 40V               | EL             |                |
| C 04   | 59.11.6221 | 220P                              | 5% 400V               | PC             |                |
| C 05   | 59.25.0162 | 1600U                             | 10% 3V                | EL             |                |
| C 06   | 59.32.0101 | 100P                              | 20% 500V              | CER            |                |
| C 07   | 59.22.6220 | 22U                               | 10% 40V               | EL             |                |
| C 08   | 59.32.0101 | 100P                              | 20% 500V              | CER            |                |
| C 09   | 59.30.6339 | 3,3U                              | 20% 35V               | TA             |                |
| C 10   | 59.99.0259 | 2700P                             | 10% 50V               | PETP           |                |
| C 11   | 59.30.6339 | 3,3U                              | 20% 35V               | TA             |                |
| C 12   | 59.11.3103 | 0,01U                             | 5% 160V               | PC             |                |
| C 13   | 59.30.1101 | 100U                              | 20% 3V                | TA             |                |
| C 14   | 59.11.6561 | 560P                              | 5% 400V               | PC             |                |
| C 15   | 59.32.0101 | 100P                              | 20% 500V              | CER            |                |
| C 16   | 59.30.6339 | 3,3U                              | 20% 35V               | TA             |                |
| C 17   | 59.11.6221 | 220P                              | 5% 400V               | PC             |                |
| C 18   | 59.32.0101 | 100P                              | 20% 500V              | CER            |                |
| C 19   | 59.30.6339 | 3,3U                              | 20% 35V               | TA             |                |
| C 20   | 59.99.0259 | 2700P                             | 10% 400V              | PETP           |                |
| C 21   | 59.25.4101 | 100U                              | 10% 25V               | EL             |                |
| C 22   | 59.30.1101 | 100U                              | 20% 3V                | TA             |                |
| C 23   | 59.30.6339 | 3,3U                              | 20% 35V               | TA             |                |
| C 24   | 59.11.6561 | 560P                              | 5% 400V               | PC             |                |
| C 25   | 59.11.3101 | 0,01U                             | 5% 160V               | PC             |                |
| L 01   | 62.02.1222 | 2.2 mH                            | 5%                    |                |                |
| L 02   | 62.02.1222 | 2.2 mH                            | 5%                    |                |                |
| P 01   | 54.01.0270 | 8-Pole                            | Pin-Strip             | AMP            |                |
| P 02   | 54.01.0271 | 10-Pole                           | Pin-Strip             | AMP            |                |
| Q 01   | 50.03.0439 | BC109C                            |                       | NPN any        |                |
| Q 02   | 50.03.0407 | BC109C                            | TO18                  | NPN            |                |
| Q 03   | 50.03.0436 | BC107B                            |                       | NPN            |                |
| Q 04   | 50.03.0407 | BC109C                            | TO18                  | NPN            |                |
| Q 05   | 50.03.0436 | BC107B                            |                       | NPN            |                |
| Q 06   | 50.03.0436 | BC107B                            |                       | NPN            |                |
| Q 07   | 50.03.0439 | BC109C                            |                       | NPN            |                |
| Q 08   | 50.03.0436 | BC107B                            |                       | NPN            |                |
| Q 09   | 50.03.0436 | BC107B                            |                       | NPN            |                |
| Q 10   | 50.03.0407 | BC109C                            | TO18                  | NPN            |                |
| Q 11   | 50.03.0407 | BC109C                            | TO18                  | NPN            |                |
| Q 12   | 50.03.0436 | BC107B                            |                       | NPN            |                |
| EL = Electrolytic<br>PC = Polycarbonate<br>TA = Tantalum<br>CER = Ceramic<br>PETP= Polyester |            |                                   | ④<br>③<br>②<br>①<br>○ | 4.7.78         | Lu./gv         |
|  |            |                                   | IND                   | DATE           | NAME           |
| <b>STUDER</b>  |            | Reproduce-Amplifier 7 1/2-15' IEC | 1.177.253             |                | PAGE<br>1 of 2 |

| POS NO | PART NO    | VALUE | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|-------|----------------|----------------|
| R 01   | 57.41.4563 | 56 k  | 5%             | .25W CF        |
| R 02   | 57.41.4331 | 330   |                |                |
| R 03   | 57.41.4154 | 150 k |                |                |
| R 04   | 57.41.4682 | 6,8 k |                |                |
| R 05   | 57.41.4102 | 1 k   |                |                |
| R 06   | 57.41.4102 | 1 k   |                |                |
| R 07   | 57.41.4391 | 390   |                |                |
| R 08   | 57.41.4680 | 68    |                |                |
| R 09   | 57.41.4272 | 2,7 k |                |                |
| R 10   | 57.41.4470 | 47    |                |                |
| R 11   | 57.41.4123 | 12 k  |                |                |
| R 12   | 57.11.4104 | 100 k |                |                |
| R 13   | 57.41.4154 | 150 k |                |                |
| R 14   | 57.41.4680 | 68    |                |                |
| R 15   | 57.41.4102 | 1 k   |                |                |
| R 16   | 57.11.4123 | 12 k  |                |                |
| R 17   | 57.41.4332 | 3,3 k |                |                |
| R 18   | 57.41.4104 | 100 k |                |                |
| R 19   | 57.41.4153 | 15 k  |                |                |
| R 20   | 57.41.4182 | 1,8 k |                |                |
| R 21   | 58.19.0203 | 20 k  | 20%            | .15Wlin.PCF    |
| R 22   | 57.41.4474 | 470 k | 5%             | .25W CF        |
| R 23   | 57.41.4102 | 1 k   |                |                |
| R 24   | 57.41.4154 | 150 k |                |                |
| R 25   | 57.41.4102 | 1 k   |                |                |
| R 26   | 57.41.4102 | 1 k   |                |                |
| R 27   | 57.41.4563 | 56 k  |                |                |
| R 28   | 57.41.4331 | 330   |                |                |
| R 29   | 57.41.4680 | 68    |                |                |
| R 30   | 57.41.4272 | 2,7 k |                |                |
| R 31   | 57.41.4470 | 47    |                |                |
| R 32   | 57.11.4104 | 100 k |                |                |
| R 33   | 57.41.4154 | 150 k |                |                |
| R 34   | 57.41.4123 | 12 k  |                |                |
| R 35   | 57.41.4104 | 100 k |                |                |
| R 36   | 57.41.4680 | 68    |                |                |
| R 37   | 58.19.0203 | 20 k  | 20%            | .15Wlin.PCF    |
| R 38   | 57.11.4123 | 12 k  | 5%             | .25W CF        |
| R 39   | 57.41.4182 | 1,8 k |                |                |
| R 40   | 57.41.4153 | 15 k  |                |                |
| R 41   | 57.41.4102 | 1 k   |                |                |
| R 42   | 57.41.4474 | 470 k |                |                |
| R 43   | 57.41.4332 | 3,3 k |                |                |
| R 44   | 57.41.4391 | 390   |                |                |
| R 45   | 57.41.4102 | 1 k   |                |                |
| R 46   | 57.41.4102 | 1 k   |                |                |

CF = Carbon Film  
PCF = Pot. Carbon Film

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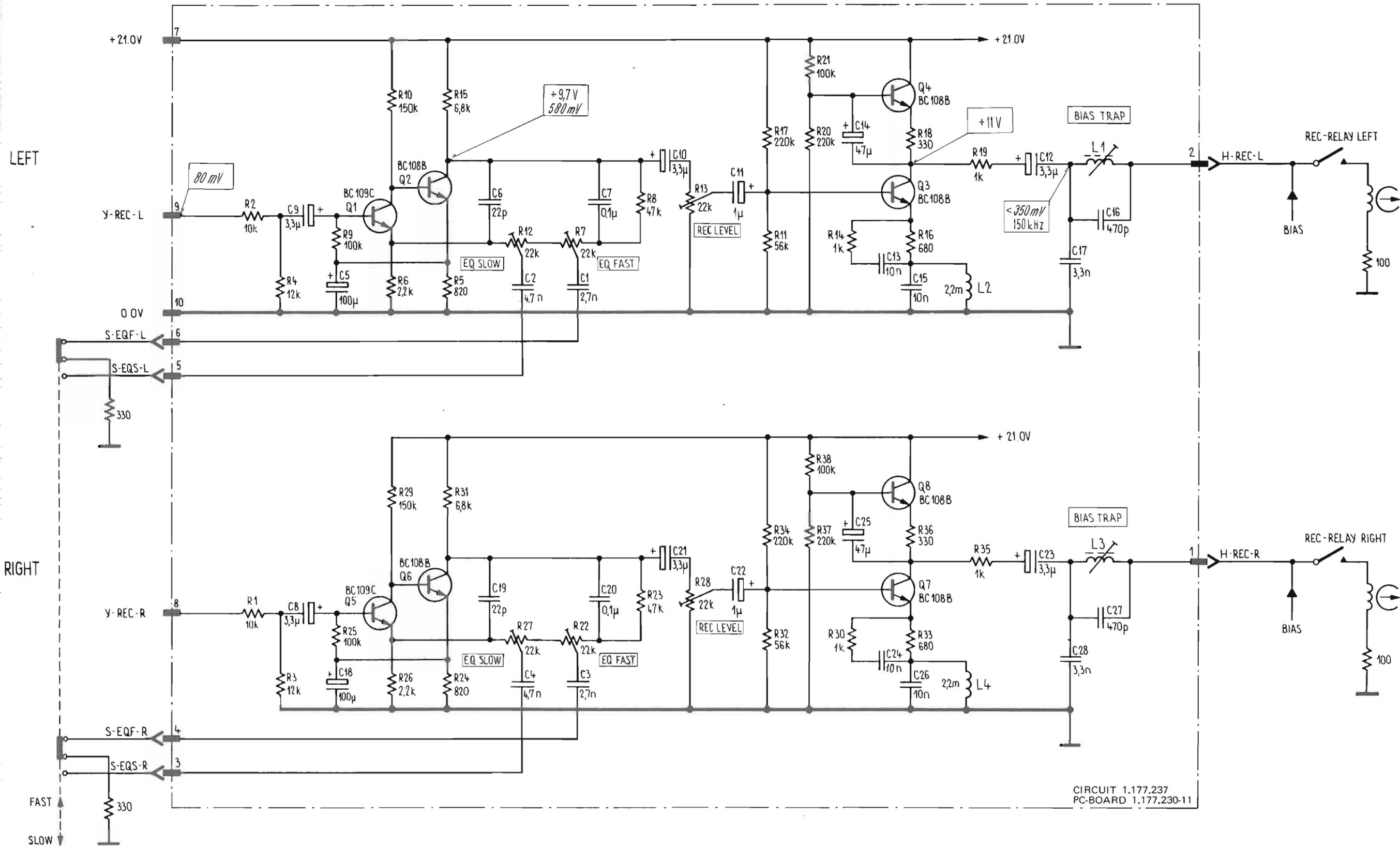
NAME

**STUDER**

Reproduce-Amplifier 7 1/2-15" IEC

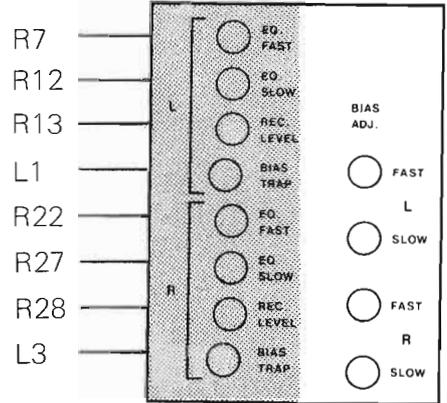
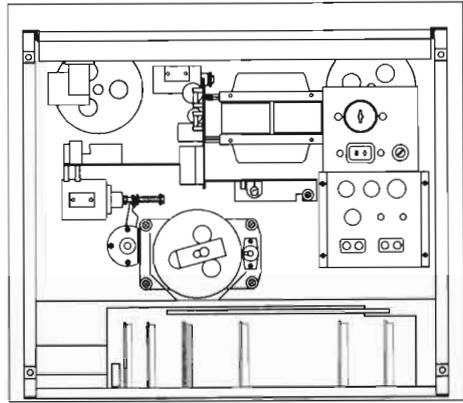
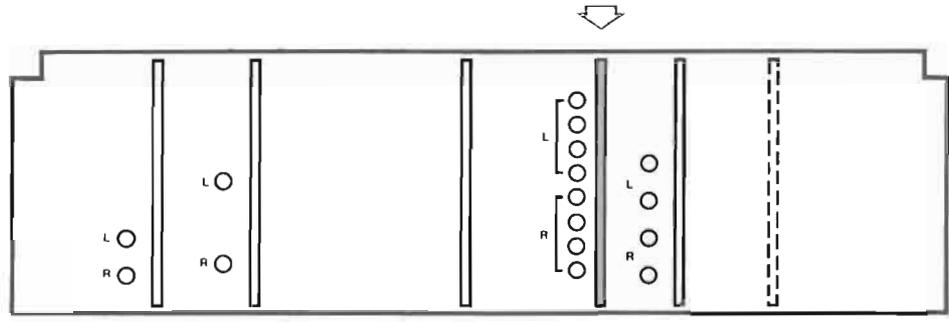
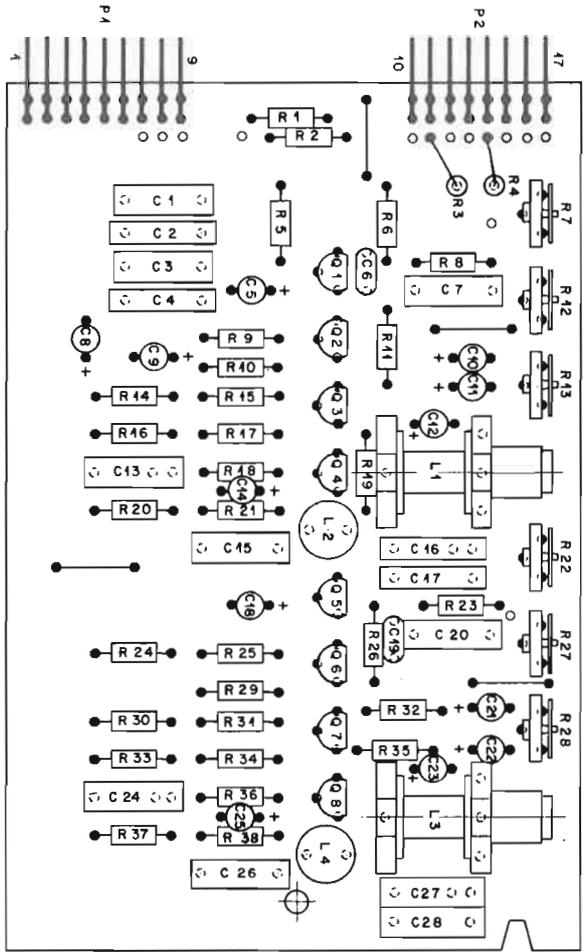
1.177.253

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CIRCUIT 1.177.237  
PC-BOARD 1.177.230-11

|                                   |           |
|-----------------------------------|-----------|
| STUDER <b>REVOX</b>               | B77 LS    |
| RECORD AMPLIFIER NAB 1 7/8-3 3/4" |           |
| 1.177.237                         | ED1 09.79 |



| POS NO  | PART NO      | VALUE                         | SPECIFICATIONS | EQUIVALENT MFR    |
|---|--------------|-------------------------------|----------------|-------------------|
| C 01  | 59.11.6272   | 2700 P                        | 5% 400V        | PC                |
| C 02  | 59.11.4472   | 4700 P                        | 2,5%           | PC                |
| C 03  | 59.11.6272   | 2700 P                        | 5% 400V        | PC                |
| C 04  | 59.11.4472   | 4700 P                        | 2,5%           | PC                |
| C 05  | 59.22.3101   | 100 U                         | 10% 12V        | EL                |
| C 06  | 59.32.0220   | 22 P                          | 20% 500V       | CER               |
| C 07  | 59.31.6104   | 0,1 U                         | 10% 100V       | MPETP             |
| C 08  | 59.30.6339   | 3,3 U                         | 20% 35V        | TA                |
| C 09  | 59.30.6339   | 3,3 U                         |                |                   |
| C 10  | 59.30.6339   | 3,3 U                         |                |                   |
| C 11  | 59.30.6109   | 1 U                           |                |                   |
| C 12  | 59.30.6339   | 3,3 U                         |                |                   |
| C 13  | 59.11.3103   | 0,01 U                        | 5% 160V        | PETP              |
| C 14  | 59.30.1470   | 47 U                          | 20% 3V         | TA                |
| C 15  | 59.11.3103   | 0,01 U                        | 5% 160V        | PETP              |
| C 16  | 59.11.6471   | 470 P                         | 5% 400V        | PC                |
| C 17  | 59.11.6332   | 3300 P                        |                |                   |
| C 18  | 59.22.3101   | 100 U                         | 10% 12V        | EL                |
| C 19  | 59.32.0220   | 22 P                          | 20% 500V       | CER               |
| C 20  | 59.31.6104   | 0,1 U                         | 10% 100V       | MPETP             |
| C 21  | 59.30.6339   | 3,3 U                         | 20% 35V        | TA                |
| C 22  | 59.30.6109   | 1 U                           |                |                   |
| C 23  | 59.30.6339   | 3,3 U                         |                |                   |
| C 24  | 59.11.3103   | 0,01 U                        | 5% 160V        | PETP              |
| C 25  | 59.30.1470   | 47 U                          | 20% 3V         | TA                |
| C 26  | 59.11.3103   | 0,01 U                        | 5% 160V        | PETP              |
| C 27  | 59.11.6471   | 470 P                         | 5% 400V        | PC                |
| C 28  | 59.11.6332   | 3300 P                        | 5% 400V        | PC                |
| L 01  | 1.177.231.00 |                               |                | S                 |
| L 02  | 62.02.1222   | 2,2 mH                        | 5%             |                   |
| L 03  | 1.177.231.00 |                               |                | S                 |
| L 04  | 62.02.1222   | 2,2 mH                        |                |                   |
| P 01  | 54.01.0220   | 9-Pole                        | Pin-Strip      | AMP               |
| P 02  | 54.01.0270   | 8-Pole                        | Pin-Strip      | AMP               |
| Q 01  | 50.03.0439   | BC109C                        |                | NPN any           |
| Q 02  | 50.03.0436   | BC107B                        |                | NPN any           |
| Q 03  | 50.03.0436   | BC107B                        |                | NPN any           |
| Q 04  | 50.03.0436   | BC107B                        |                | NPN any           |
| Q 05  | 50.03.0439   | BC109C                        |                | NPN any           |
| Q 06  | 50.03.0436   | BC107B                        |                | NPN any           |
| Q 07  | 50.03.0436   | BC107B                        |                | NPN any           |
| PC = Polycarbonate<br>CER = Ceramic<br>PETP = Polyester<br>MPETP = Metallized Polyester |              |                               | S = Studer     |                   |
|   |              |                               | ④              |                   |
|   |              |                               | ③              |                   |
|   |              |                               | ②              |                   |
|   |              |                               | ①              |                   |
|   |              |                               | ○              | 30.8.78 Weibel/gv |
|   |              |                               | IND            | DATE NAME         |
| <b>STUDER</b>   |              | Record Amplifier 1 7/8-3 3/4" |                | PAGE 1 of 2       |
|   |              |                               | 1.177.237      |                   |

| POS NO | PART NO    | VALUE  | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|--------|----------------|----------------|
| Q 08   | 50.03.0436 | BC107B |                | NPN any        |
| R 01   | 57.11.4103 | 10 k   | 5%             | .25W CF        |
| R 02   | 57.11.4103 | 10 k   |                |                |
| R 03   | 57.11.4123 | 12 k   |                |                |
| R 04   | 57.11.4123 | 12 k   |                |                |
| R 05   | 57.11.4821 | 820    |                |                |
| R 06   | 57.11.4222 | 2,2 k  |                |                |
| R 07   | 58.02.4223 | 22 k   | 10%            | .1 W PCF       |
| R 08   | 57.11.4473 | 47 k   | 5%             | .25W CF        |
| R 09   | 57.11.4104 | 100 k  |                |                |
| R 10   | 57.11.4154 | 150 k  |                |                |
| R 11   | 57.11.4563 | 56 k   |                |                |
| R 12   | 58.02.4223 | 22 k   | 10%            | .1 W PCF       |
| R 13   | 58.02.4223 | 22 k   |                |                |
| R 14   | 57.11.4102 | 1 k    | 5%             | .25W CF        |
| R 15   | 57.11.4682 | 6,8 k  |                |                |
| R 16   | 57.11.4681 | 680    |                |                |
| R 17   | 57.11.4224 | 220 k  |                |                |
| R 18   | 57.11.4331 | 330    |                |                |
| R 19   | 57.11.4102 | 1 k    |                |                |
| R 20   | 57.11.4224 | 220 k  |                |                |
| R 21   | 57.11.4104 | 100 k  |                |                |
| R 22   | 58.02.4223 | 22 k   | 10%            | .1 W PCF       |
| R 23   | 57.11.4473 | 47 k   | 5%             | .25W CF        |
| R 24   | 57.11.4821 | 820    |                |                |
| R 25   | 57.11.4104 | 100 k  |                |                |
| R 26   | 57.11.4222 | 2,2 k  |                |                |
| R 27   | 58.02.4223 | 22 k   | 10%            | .1 W PCF       |
| R 28   | 58.02.4223 | 22 k   |                |                |
| R 29   | 57.11.4154 | 150 k  | 5%             | .25W CF        |
| R 30   | 57.11.4102 | 1 k    |                |                |
| R 31   | 57.11.4682 | 6,8 k  |                |                |
| R 32   | 57.11.4563 | 56 k   |                |                |
| R 33   | 57.11.4681 | 680    |                |                |
| R 34   | 57.11.4224 | 220 k  |                |                |
| R 35   | 57.11.4102 | 1 k    |                |                |
| R 36   | 57.11.4331 | 330    |                |                |
| R 37   | 57.11.4224 | 220 k  |                |                |
| R 38   | 57.11.4104 | 100 k  |                |                |

CF = Carbon Film  
PCF = Pot'met. Carbon Film

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30.8.78

Weibel/gv

IND

DATE

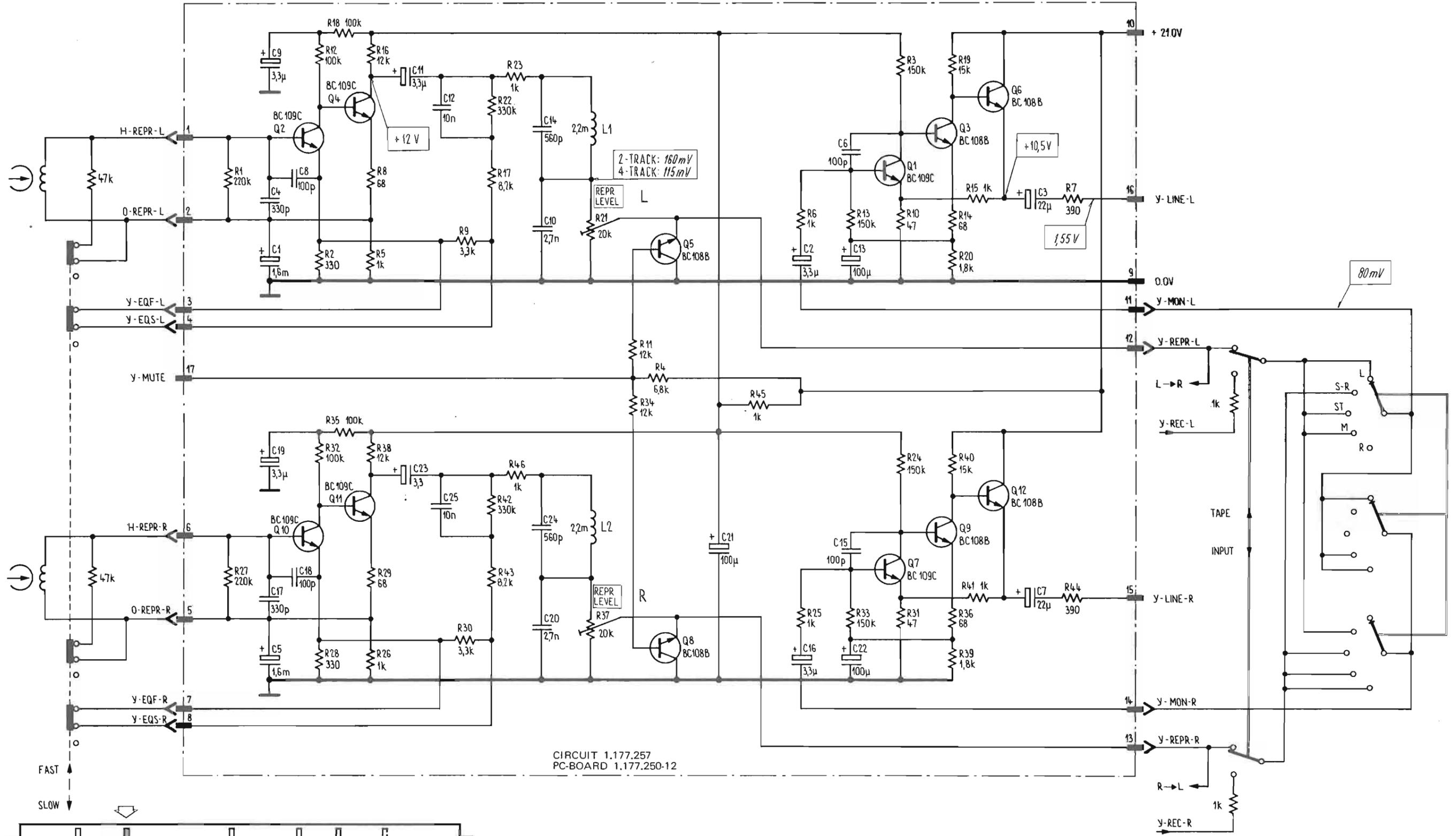
NAME

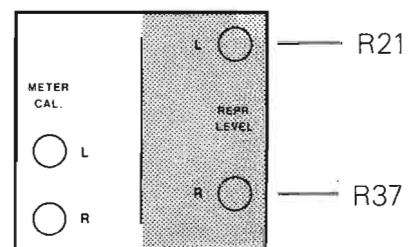
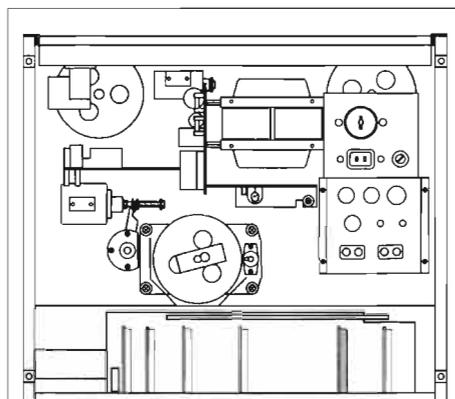
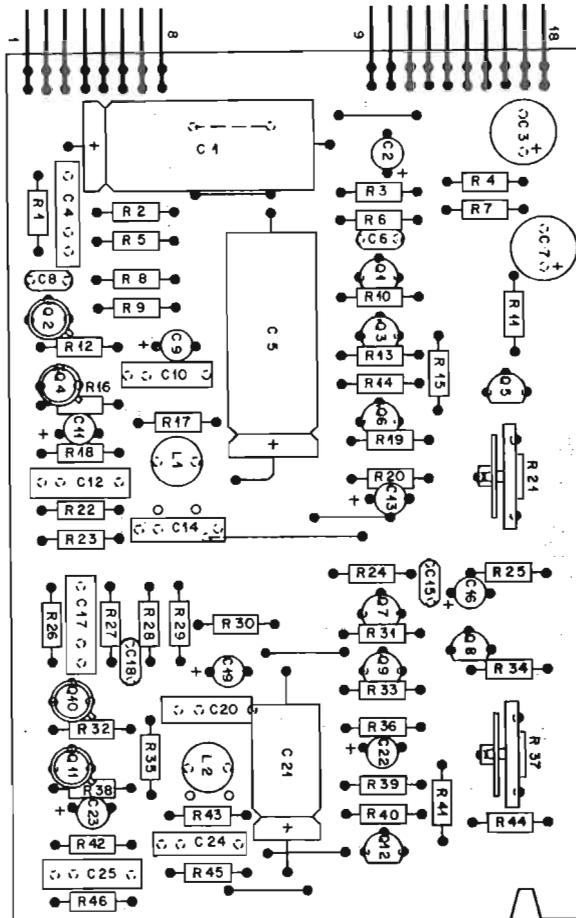
**STUDER**

Record Amplifier 1 7/8-3 3/4"

1.177.237

PAGE  
2 of 2





| POS NO  | PART NO    | VALUE                                      | SPECIFICATIONS        | EQUIVALENT MFR |                |
|---|------------|--|-----------------------|----------------|----------------|
| C 01  | 59.25.0162 | 1600 U                                     | 10% 3V                | EL             |                |
| C 02  | 59.30.6339 | 3,3 U                                      | 20% 35V               | TA             |                |
| C 03  | 59.22.6220 | 22 U                                       | 10% 40V               | EL             |                |
| C 04  | 59.11.6221 | 220 P                                      | 5% 400V               | PC             |                |
| C 05  | 59.25.0162 | 1600 U                                     | 10% 3V                | EL             |                |
| C 06  | 59.32.0101 | 100 P                                      | 20% 500V              | CER            |                |
| C 07  | 59.22.6220 | 22 U                                       | 10% 40V               | EL             |                |
| C 08  | 59.32.0101 | 100 P                                      | 20% 500V              | CER            |                |
| C 09  | 59.30.6339 | 3,3 U                                      | 20% 35V               | TA             |                |
| C 10  | 59.99.0259 | 2700 P                                     | 10% 50V               | PETP           |                |
| C 11  | 59.30.6339 | 3,3 U                                      | 20% 35V               | TA             |                |
| C 12  | 59.11.3103 | 0,01 U                                     | 5% 160V               | PC             |                |
| C 13  | 59.30.1101 | 100 U                                      | 20% 3V                | TA             |                |
| C 14  | 59.11.6561 | 560 P                                      | 5% 400V               | PC             |                |
| C 15  | 59.32.0101 | 100 P                                      | 20% 500V              | CER            |                |
| C 16  | 59.30.6339 | 3,3 U                                      | 20% 35V               | TA             |                |
| C 17  | 59.11.6221 | 220 P                                      | 5% 400V               | PC             |                |
| C 18  | 59.32.0101 | 100 P                                      | 20% 500V              | CER            |                |
| C 19  | 59.30.6339 | 3,3 U                                      | 20% 35V               | TA             |                |
| C 20  | 59.99.0259 | 2700 P                                     | 10% 400V              | PETP           |                |
| C 21  | 59.25.4101 | 100 U                                      | 10% 25V               | EL             |                |
| C 22  | 59.30.1101 | 100 U                                      | 20% 3V                | TA             |                |
| C 23  | 59.30.6339 | 3,3 U                                      | 20% 35V               | TA             |                |
| C 24  | 59.11.6561 | 560 P                                      | 5% 400V               | PC             |                |
| C 25  | 59.11.3101 | 0,01 U                                     | 5% 160V               | PC             |                |
| L 01  | 62.02.1222 | 2,2 mH                                     | 5%                    |                |                |
| L 02  | 62.02.1222 | 2,2 mH                                     | 5%                    |                |                |
| P 01  | 54.01.0270 | 8-Pole                                     | Pin-Strip             | AMP            |                |
| P 02  | 54.01.0271 | 10-Pole                                    | Pin-Strip             | AMP            |                |
| Q 01  | 50.03.0439 | BC109C                                     |                       | NPN            |                |
| Q 02  | 50.03.0407 | BC109C                                     | TO18                  | NPN            |                |
| Q 03  | 50.03.0436 | BC107B                                     |                       | NPN            |                |
| Q 04  | 50.03.0407 | BC109C                                     | TO18                  | NPN            |                |
| Q 05  | 50.03.0436 | BC107B                                     |                       | NPN            |                |
| Q 06  | 50.03.0436 | BC107B                                     |                       | NPN            |                |
| Q 07  | 50.03.0439 | BC109C                                     |                       | NPN            |                |
| Q 08  | 50.03.0436 | BC107B                                     |                       | NPN            |                |
| Q 09  | 50.03.0436 | BC107B                                     |                       | NPN            |                |
| Q 10  | 50.03.0407 | BC109C                                     | TO18                  | NPN            |                |
| Q 11  | 50.03.0407 | BC109C                                     | TO18                  | NPN            |                |
| Q 12  | 50.03.0436 | BC107B                                     |                       | NPN            |                |
| PC = Polycarbonate<br>PETP= Polyester<br>TA = Tantalum<br>EL = Electrolytic |            |  | ④<br>③<br>②<br>①<br>○ | 30.8.78        | Weibel/gv      |
|   |            |  | IND                   | DATE           | NAME           |
| <b>STUDER</b>   |            | Reproduce-Amplifier 1 7/8-3 3/4" 1.177.257 |                       |                | PAGE<br>1 of 2 |

| POS NO | PART NO    | VALUE | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|-------|----------------|----------------|
| R 01   | 57.11.4224 | 220 k | 5%             | .25W CF        |
| R 02   | 57.11.4331 | 330   |                |                |
| R 03   | 57.11.4154 | 150 k |                |                |
| R 04   | 57.11.4682 | 6,8 k |                |                |
| R 05   | 57.11.4102 | 1 k   |                |                |
| R 06   | 57.11.4102 | 1 k   |                |                |
| R 07   | 57.11.4391 | 390   |                |                |
| R 08   | 57.11.4680 | 68    |                |                |
| R 09   | 57.11.4332 | 3,3 k |                |                |
| R 10   | 57.11.4470 | 47    |                |                |
| R 11   | 57.11.4123 | 12 k  |                |                |
| R 12   | 57.11.4104 | 100 k |                |                |
| R 13   | 57.11.4154 | 150 k |                |                |
| R 14   | 57.11.4680 | 68    |                |                |
| R 15   | 57.11.4102 | 1 k   |                |                |
| R 16   | 57.11.4123 | 12 k  |                |                |
| R 17   | 57.11.4822 | 8,2 k |                |                |
| R 18   | 57.11.4104 | 100 k |                |                |
| R 19   | 57.11.4153 | 15 k  |                |                |
| R 20   | 57.11.4182 | 1,8 k |                |                |
| R 21   | 58.19.0203 | 20 k  | 20%            | .15W PCF lin.  |
| R 22   | 57.11.4334 | 330 k | 5%             | .25W CF        |
| R 23   | 57.11.4102 | 1 k   |                |                |
| R 24   | 57.11.4154 | 150 k |                |                |
| R 25   | 57.11.4102 | 1 k   |                |                |
| R 26   | 57.11.4102 | 1 k   |                |                |
| R 27   | 57.11.4224 | 220 k |                |                |
| R 28   | 57.11.4331 | 330   |                |                |
| R 29   | 57.11.4680 | 68    |                |                |
| R 30   | 57.11.4332 | 3,3 k |                |                |
| R 31   | 57.11.4470 | 47    |                |                |
| R 32   | 57.11.4104 | 100 k |                |                |
| R 33   | 57.11.4154 | 150 k |                |                |
| R 34   | 57.11.4123 | 12 k  |                |                |
| R 35   | 57.11.4104 | 100 k |                |                |
| R 36   | 57.11.4680 | 68    |                |                |
| R 37   | 58.19.0203 | 20 k  | 20%            | .15W PCF lin.  |
| R 38   | 57.11.4123 | 12 k  | 5%             | .25W CF        |
| R 39   | 57.11.4182 | 1,8 k |                |                |
| R 40   | 57.11.4153 | 15 k  |                |                |
| R 41   | 57.11.4102 | 1 k   |                |                |
| R 42   | 57.11.4334 | 330 k |                |                |
| R 43   | 57.11.4822 | 8,2 k |                |                |
| R 44   | 57.11.4391 | 390   |                |                |
| R 45   | 57.11.4102 | 1 k   |                |                |
| R 46   | 57.11.4102 | 1 k   |                |                |

CF = Carbon Film  
PCF = Pot'meter Carbon Film

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30.8.78

Weibel/gv

IND

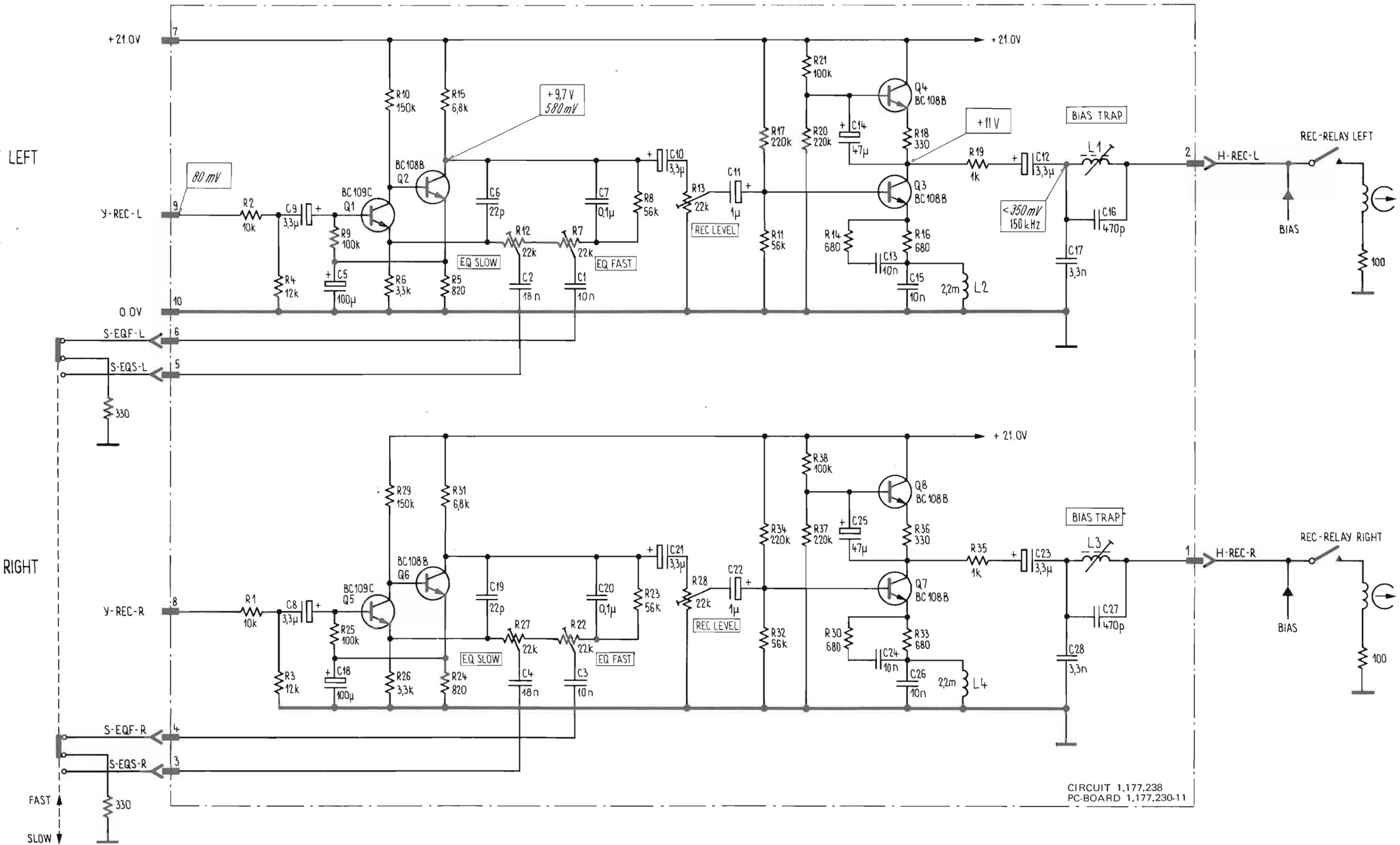
DATE

NAME

**STUDER**

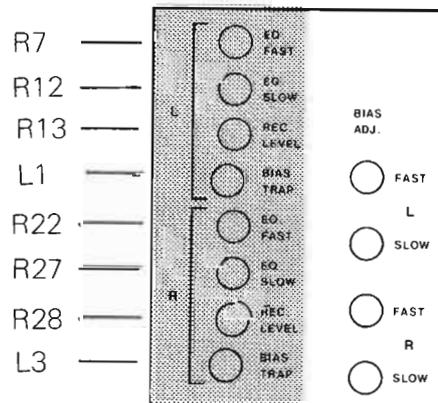
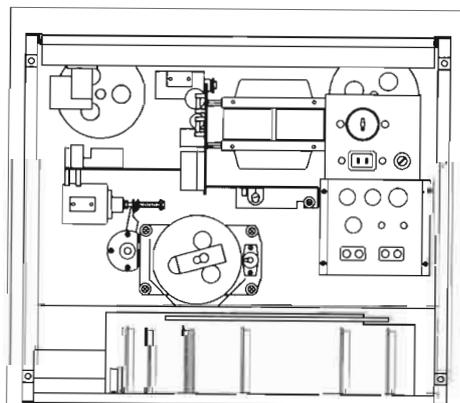
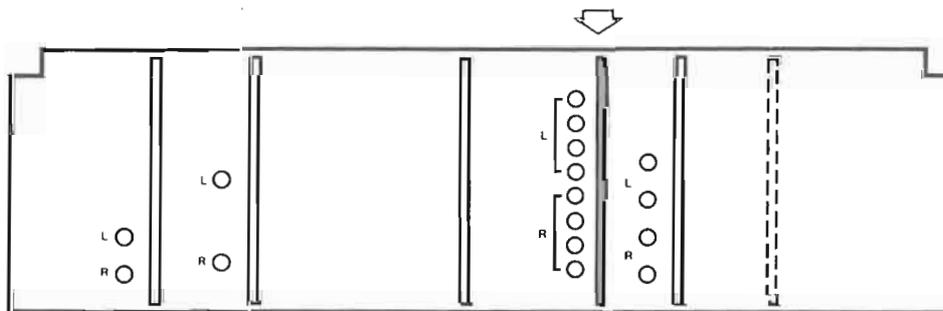
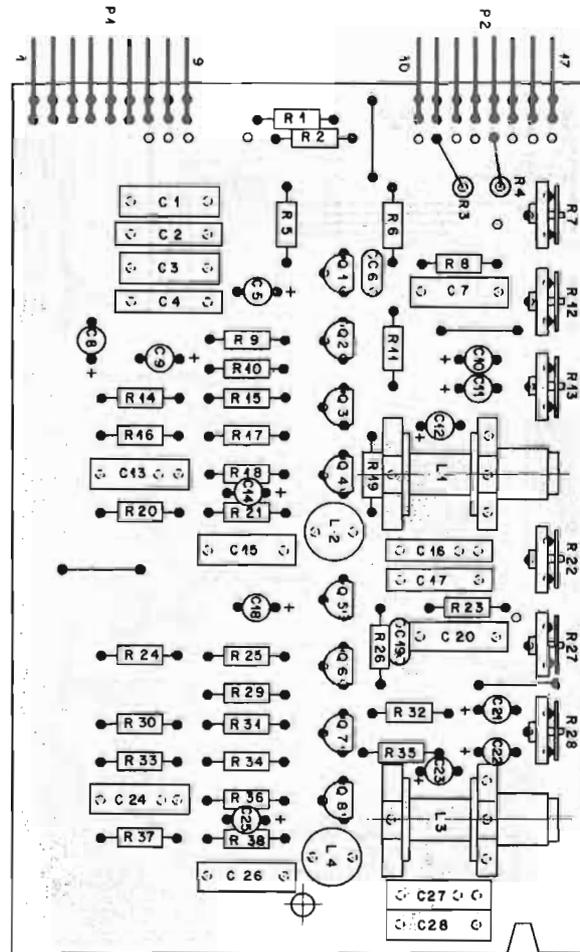
Reproduce-Amplifier 1 7/8-3 3/4" 1.177.257

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CIRCUIT 1.177.238  
PC-BOARD 1.177.230-11

|                                   |           |
|-----------------------------------|-----------|
| STUDER <b>REVOX</b>               | B77 SLS   |
| RECORD AMPLIFIER NAB 15/16-1 7/8" |           |
| 1.177.238                         | ED1 09.79 |



| IND | POS NO | PART NO    | VALUE  | SPECIFICATIONS/EQUIVALENT |      |       | MFR |
|-----|--------|------------|--------|---------------------------|------|-------|-----|
|     | C 01   | 59.11.4103 | 0,01 U | 2,5%                      | 160V | PC    |     |
|     | C 02   | 59.12.4183 | 0,018U | 5%                        | 250V | MPETP |     |
|     | C 03   | 59.11.4103 | 0,01 U | 2,5%                      | 160V | PC    |     |
|     | C 04   | 59.12.4183 | 0,018U | 5%                        | 250V | MPETP |     |
|     | C 05   | 59.22.3101 | 100 U  | 10%                       | 12V  | EL    |     |
|     | C 06   | 59.32.0220 | 22 P   | 20%                       | 500V | CER   |     |
|     | C 07   | 59.31.6104 | 0,1 U  | 10%                       | 100V | MPETP |     |
|     | C 08   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA    |     |
|     | C 09   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA    |     |
|     | C 10   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA    |     |
|     | C 11   | 59.30.6109 | 1 U    | 20%                       | 35V  | TA    |     |
|     | C 12   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA    |     |
|     | C 13   | 59.11.4103 | 0,01 U | 2,5%                      | 160V | PC    |     |
|     | C 14   | 59.30.1470 | 47 U   | 20%                       | 3V   | TA    |     |
|     | C 15   | 59.31.9103 | 0,01 U | 10%                       | 100V | PETP  |     |
|     | C 16   | 59.11.6471 | 470 P  | 5%                        | 400V | PC    |     |
|     | C 17   | 59.11.6332 | 3300 P | 5%                        | 400V | PC    |     |
|     | C 18   | 59.22.3101 | 100 U  | 10%                       | 12V  | EL    |     |
|     | C 19   | 59.32.0220 | 22 P   | 20%                       | 500V | CER   |     |
|     | C 20   | 59.31.6104 | 0,1 U  | 10%                       | 100V | MPETP |     |
|     | C 21   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA    |     |
|     | C 22   | 59.30.6109 | 1 U    | 20%                       | 35V  | TA    |     |
|     | C 23   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA    |     |
|     | C 24   | 59.11.4103 | 0,01 U | 2,5%                      | 160V | PC    |     |
|     | C 25   | 59.30.1470 | 47 U   | 20%                       | 3V   | TA    |     |
|     | C 26   | 59.31.9103 | 0,01 U | 10%                       | 100V | PETP  |     |
|     | C 27   | 59.11.6471 | 470 P  | 5%                        | 400V | PC    |     |
|     | C 28   | 59.11.6332 | 3300 P | 5%                        | 400V | PC    |     |
|     |        |            |        |                           |      |       |     |
|     |        |            |        |                           |      |       |     |

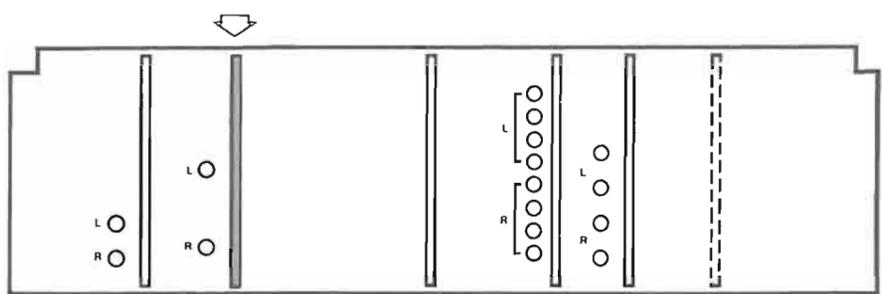
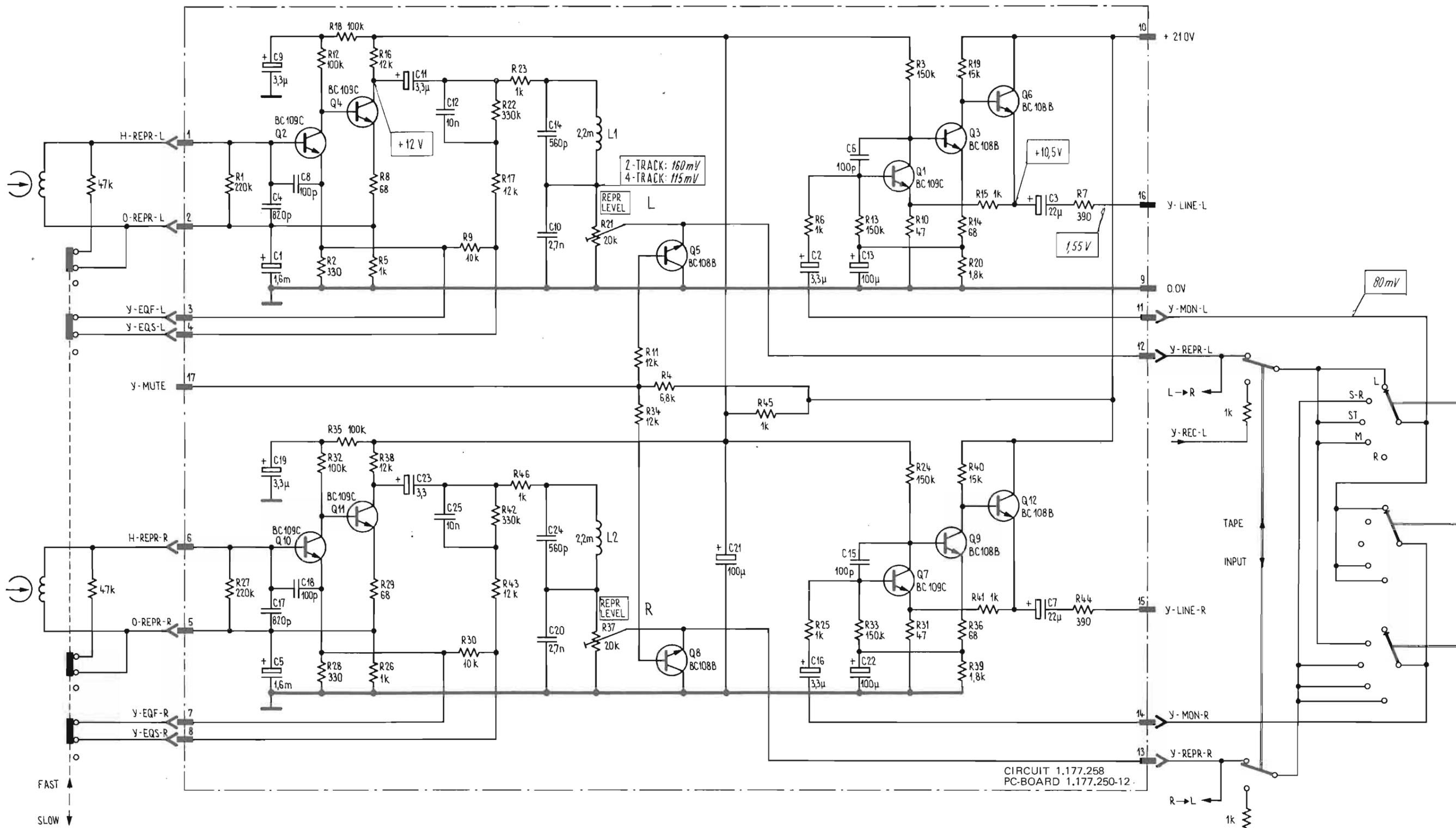
| IND           | DATE      | NAME                          |   |
|---------------|-----------|-------------------------------|---|
| ④             |           |                               | PC = Polycarbonate      MPETP = Met.Polyester |
| ③             |           |                               | TA = Tantalum                                 |
| ②             |           |                               | EL = Electrolytic                             |
| ①             |           |                               | CER = Ceramic                                 |
| ○             | 15.2.1979 | R.W/gv                        | PETP= Polyester                               |
| <b>STUDER</b> |           | Record Amplifier 15/16-1 7/8" | 1.177.238      PAGE 1 OF 3                    |

| IND | POS NO | PART NO      | VALUE  | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|--------------|--------|---------------------------|-----|
|     | L 01   | 1.177.231.00 |        |                           | S   |
|     | L 02   | 62.02.1222   | 2.2 mH | 5%                        |     |
|     | L 03   | 1.177.231.00 |        |                           | S   |
|     | L 04   | 62.02.1222   | 2.2 mH | 5%                        |     |
|     | P 01   | 54.01.0220   | 9-Pole | Pin-Strip AMP             |     |
|     | P 02   | 54.01.0270   | 8-Pole | Pin-Strip AMP             |     |
|     | Q 01   | 50.03.0439   | BC239C | NPN                       | any |
|     | Q 02   | 50.03.0436   | BC107B | NPN                       |     |
|     | Q 03   | 50.03.0436   | BC107B | NPN                       |     |
|     | Q 04   | 50.03.0436   | BC107B | NPN                       |     |
|     | Q 05   | 50.03.0439   | BC239C | NPN                       |     |
|     | Q 06   | 50.03.0436   | BC107B | NPN                       |     |
|     | Q 07   | 50.03.0436   | BC107B | NPN                       |     |
|     | Q 08   | 50.03.0436   | BC107B | NPN                       |     |
|     | R 01   | 57.11.4103   | 10 k   | 5% .25W CF                |     |
|     | R 02   | 57.11.4103   | 10 k   |                           |     |
|     | R 03   | 57.11.4123   | 12 K   |                           |     |
|     | R 04   | 57.11.4123   | 12 k   |                           |     |
|     | R 05   | 57.41.4821   | 820    |                           |     |
|     | R 06   | 57.41.4332   | 3,3 k  |                           |     |
|     | R 07   | 58.02.4223   | 22 k   | 10% .1 W CF               |     |
|     | R 08   | 57.41.4563   | 56 k   | 5% .25W CF                |     |
|     | R 09   | 57.41.4104   | 100 k  |                           |     |
|     | R 10   | 57.41.4154   | 150 k  |                           |     |
|     | R 11   | 57.41.4563   | 56 k   |                           |     |
|     | R 12   | 58.02.4223   | 22 k   | 10% .1 W CF               |     |
|     | R 13   | 58.02.4223   | 22 k   |                           |     |

| IND | DATE      | NAME    |                             |
|-----|-----------|---------|-----------------------------|
| ④   |           |         | CF = Carbon-Film S = Studer |
| ③   |           |         |                             |
| ②   |           |         |                             |
| ①   |           |         |                             |
| ○   | 15.2.1979 | R.W /gv |                             |

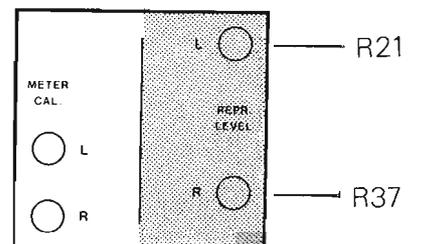
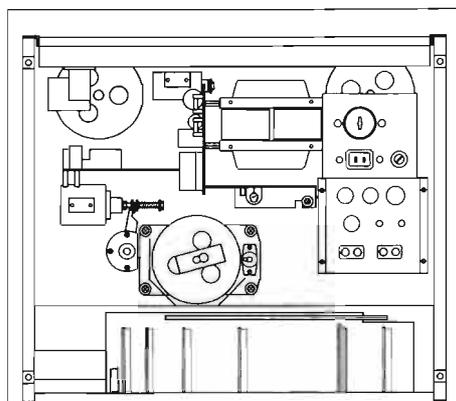
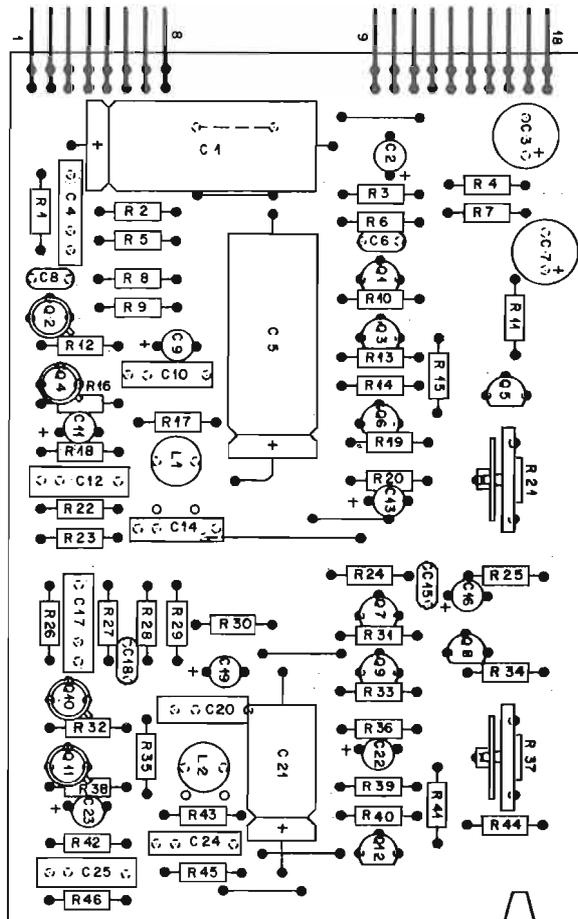
| IND | POS NO | PART NO    | VALUE | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|------------|-------|---------------------------|-----|
|     | R 14   | 57.41.4681 | 680   | 5% .25W CF                |     |
|     | R 15   | 57.41.4682 | 6,8 k |                           |     |
|     | R 16   | 57.41.4681 | 680   |                           |     |
|     | R 17   | 57.41.4224 | 220 k |                           |     |
|     | R 18   | 57.41.4331 | 330   |                           |     |
|     | R 19   | 57.41.4102 | 1 k   |                           |     |
|     | R 20   | 57.41.4224 | 220 k |                           |     |
|     | R 21   | 57.41.4104 | 100 k |                           |     |
|     | R 22   | 58.02.4223 | 22 k  | 10% .1 W CF               |     |
|     | R 23   | 57.41.4563 | 56 k  | 5% .25W CF                |     |
|     | R 24   | 57.41.4821 | 820   |                           |     |
|     | R 25   | 57.41.4104 | 100 k |                           |     |
|     | R 26   | 57.41.4332 | 3,3 k |                           |     |
|     | R 27   | 58.02.4223 | 22 k  | 10% .1 W CF               |     |
|     | R 28   | 58.02.4223 | 22 k  |                           |     |
|     | R 29   | 57.41.4154 | 150 k | 5% .25W CF                |     |
|     | R 30   | 57.41.4681 | 680   |                           |     |
|     | R 31   | 57.41.4682 | 6,8 k |                           |     |
|     | R 32   | 57.41.4563 | 56 k  |                           |     |
|     | R 33   | 57.41.4681 | 680   |                           |     |
|     | R 34   | 57.41.4224 | 220 k |                           |     |
|     | R 35   | 57.41.4102 | 1 k   |                           |     |
|     | R 36   | 57.41.4331 | 330   |                           |     |
|     | R 37   | 57.41.4224 | 220 k |                           |     |
|     | R 38   | 57.41.4104 | 100 k |                           |     |
|     |        |            |       |                           |     |
|     |        |            |       |                           |     |
|     |        |            |       |                           |     |
|     |        |            |       |                           |     |
|     |        |            |       |                           |     |

| IND           | DATE      | NAME                          |                  |
|---------------|-----------|-------------------------------|------------------|
| ④             |           |                               | CF = Carbon-Film |
| ③             |           |                               |                  |
| ②             |           |                               |                  |
| ①             |           |                               |                  |
| ○             | 15.2.1979 | R.W/gv                        |                  |
| <b>STUDER</b> |           | Record Amplifier 15/16-1 7/8" | 1.177.238        |
|               |           |                               | PAGE 30F 3       |



CIRCUIT 1.177.258  
PC-BOARD 1.177.250-12

|   |                  |
|---|------------------|
| <b>STUDER REVOX</b>                         | <b>B77 SLS</b>   |
| <b>REPRODUCE AMPLIFIER NAB 15/16-1 7/8"</b> |                  |
| <b>1.177.258</b>                            | <b>ED1 09.79</b> |



| IND | POS NO | PART NO    | VALUE  | SPECIFICATIONS/EQUIVALENT |      |      | MFR |
|-----|--------|------------|--------|---------------------------|------|------|-----|
|     | C 01   | 59.25.0162 | 1600 U | 10%                       | 3V   | EL   |     |
|     | C 02   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA   |     |
|     | C 03   | 59.22.6220 | 22 U   | 10%                       | 40V  | EL   |     |
|     | C 04   | 59.11.6821 | 820 P  | 5%                        | 400V | PC   |     |
|     | C 05   | 59.25.0162 | 1600 U | 10%                       | 3V   | EL   |     |
|     | C 06   | 59.32.0101 | 100 P  | 20%                       | 500V | CER  |     |
|     | C 07   | 59.22.6220 | 22 U   | 10%                       | 40V  | EL   |     |
|     | C 08   | 59.32.0101 | 100 P  | 20%                       | 500V | CER  |     |
|     | C 09   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA   |     |
|     | C 10   | 59.99.0259 | 2700 P | 10%                       | 50V  | PETP |     |
|     | C 11   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA   |     |
|     | C 12   | 59.11.3103 | 0,01 U | 5%                        | 160V | PC   |     |
|     | C 13   | 59.30.1101 | 100 U  | 20%                       | 3V   | TA   |     |
|     | C 14   | 59.11.6561 | 560 P  | 5%                        | 400V | PC   |     |
|     | C 15   | 59.32.0101 | 100 P  | 20%                       | 500V | CER  |     |
|     | C 16   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA   |     |
|     | C 17   | 59.11.6821 | 820 P  | 5%                        | 400V | PC   |     |
|     | C 18   | 59.32.0101 | 100 P  | 20%                       | 500V | CER  |     |
|     | C 19   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA   |     |
|     | C 20   | 59.99.0259 | 2700 P | 10%                       | 400V | PETP |     |
|     | C 21   | 59.25.4101 | 100 U  | 10%                       | 25V  | EL   |     |
|     | C 22   | 59.30.1101 | 100 U  | 20%                       | 3V   | TA   |     |
|     | C 23   | 59.30.6339 | 3,3 U  | 20%                       | 35V  | TA   |     |
|     | C 24   | 59.11.6561 | 560 P  | 5%                        | 400V | PC   |     |
|     | C 25   | 59.11.3101 | 0,01 U | 5%                        | 160V | PC   |     |
|     |        |            |        |                           |      |      |     |
|     | L 01   | 62.02.1222 | 2.2 mH | 5%                        |      |      |     |
|     | L 02   | 62.02.1222 | 2.2 mH | 5%                        |      |      |     |
|     |        |            |        |                           |      |      |     |
|     | P 01   | 54.01.0270 | 8-Pole | Pin-Strip                 | AMP  |      |     |

| IND | DATE    | NAME   |                    |
|-----|---------|--------|--------------------|
| ④   |         |        | EL = Electrolytic  |
| ③   |         |        | PC = Polycarbonate |
| ②   |         |        | PETP= Polyester    |
| ①   |         |        | CER = Ceramic      |
| ○   | 15.2.79 | R.W/gv |                    |

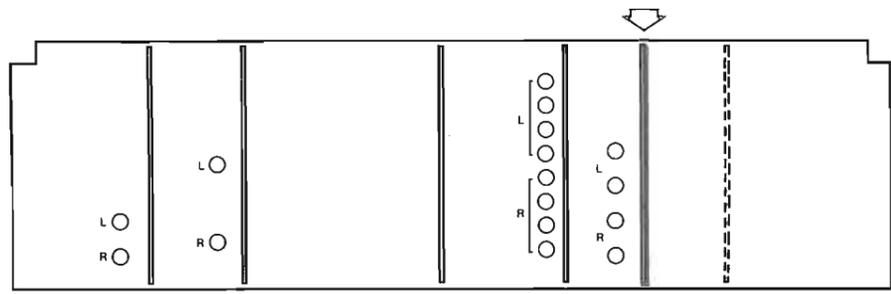
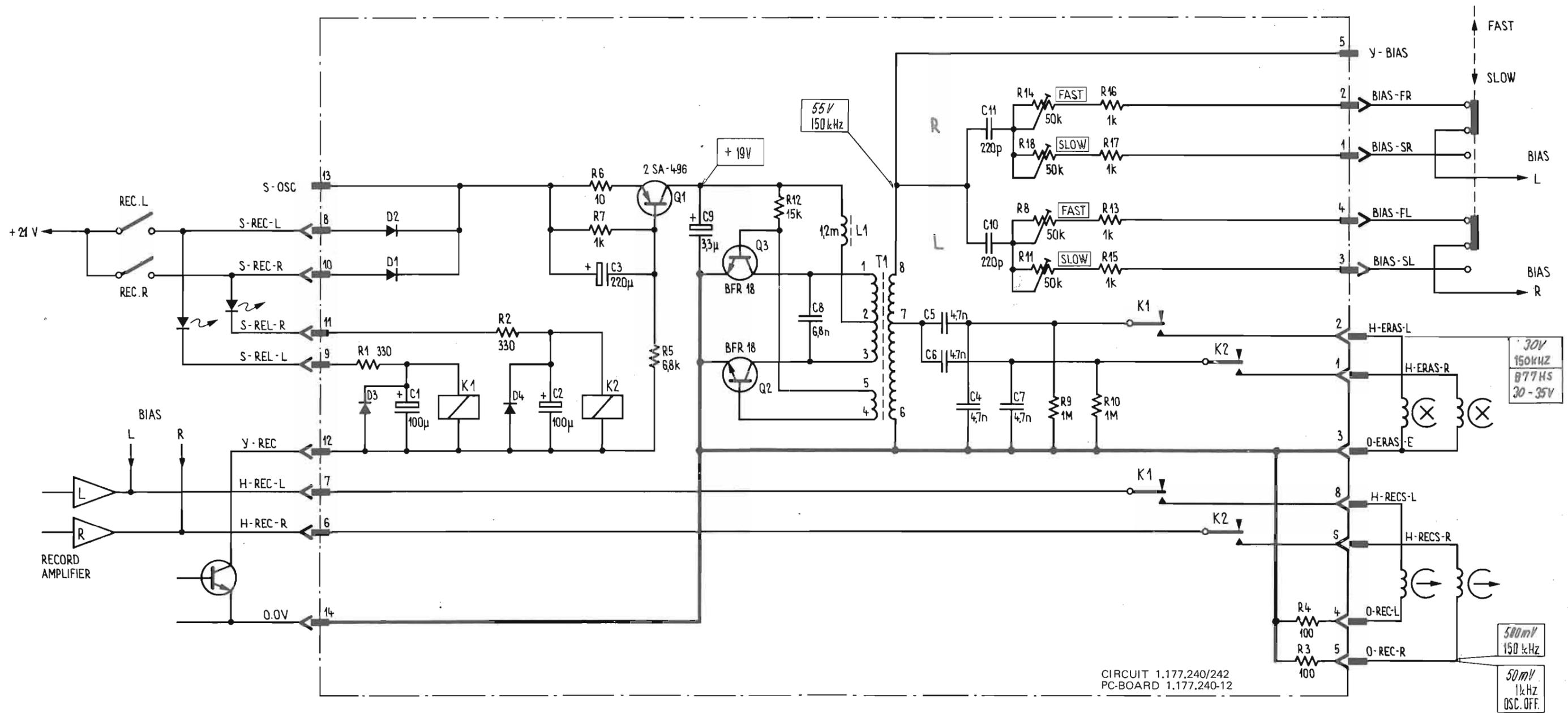
|               |                                  |           |             |
|---------------|----------------------------------|-----------|-------------|
| <b>STUDER</b> | Reproduce-Amplifier 15/16-1 7/8" | 1.177.258 | PAGE 1 OF 3 |
|---------------|----------------------------------|-----------|-------------|

| IND | POS NO | PART NO    | VALUE   | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|------------|---------|---------------------------|-----|
|     | P 02   | 54.01.0271 | 10-Pole | Pin-Strip AMP             |     |
|     | Q 01   | 50.03.0439 | BC239C  | NPN                       | any |
|     | Q 02   | 50.03.0407 | BC109C  | T018 NPN                  |     |
|     | Q 03   | 50.03.0436 | BC107B  | NPN                       |     |
|     | Q 04   | 50.03.0407 | BC109C  | T018 NPN                  |     |
|     | Q 05   | 50.03.0436 | BC107B  | NPN                       |     |
|     | Q 06   | 50.03.0436 | BC107B  | NPN                       |     |
|     | Q 07   | 50.03.0439 | BC239C  | NPN                       |     |
|     | Q 08   | 50.03.0436 | BC107B  | NPN                       |     |
|     | Q 09   | 50.03.0436 | BC107B  | NPN                       |     |
|     | Q 10   | 50.03.0407 | BC109C  | T018 NPN                  |     |
|     | Q 11   | 50.03.0407 | BC109C  | T018 NPN                  |     |
|     | Q 12   | 50.03.0436 | BC107B  | NPN                       |     |
|     | R 01   | 57.41.4224 | 220 k   | 5% .25W CF                |     |
|     | R 02   | 57.41.4331 | 330     |                           |     |
|     | R 03   | 57.41.4154 | 150 k   |                           |     |
|     | R 04   | 57.41.4682 | 6,8 k   |                           |     |
|     | R 05   | 57.41.4102 | 1 k     |                           |     |
|     | R 06   | 57.41.4102 | 1 k     |                           |     |
|     | R 07   | 57.41.4391 | 390     |                           |     |
|     | R 08   | 57.41.4680 | 68      |                           |     |
|     | R 09   | 57.41.4103 | 10 k    |                           |     |
|     | R 10   | 57.41.4470 | 47      |                           |     |
|     | R 11   | 57.41.4123 | 12 k    |                           |     |
|     | R 12   | 57.41.4104 | 100 k   |                           |     |
|     | R 13   | 57.41.4154 | 150 k   |                           |     |
|     | R 14   | 57.41.4680 | 68      |                           |     |
|     | R 15   | 57.41.4102 | 1 k     |                           |     |
|     | R 16   | 57.11.4123 | 12 k    | 5% .25W CF                |     |

| IND | DATE      | NAME    |                  |
|-----|-----------|---------|------------------|
| ④   |           |         | CF = Carbon Film |
| ③   |           |         |                  |
| ②   |           |         |                  |
| ①   |           |         |                  |
| ○   | 15.2.1979 | R.W /gv |                  |

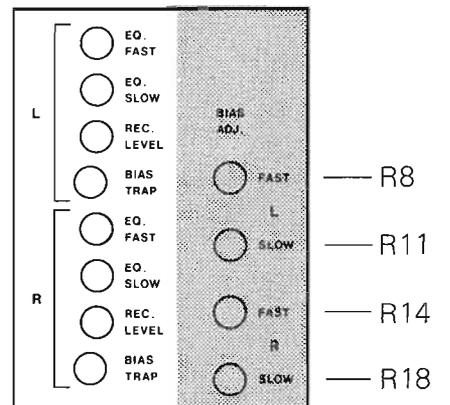
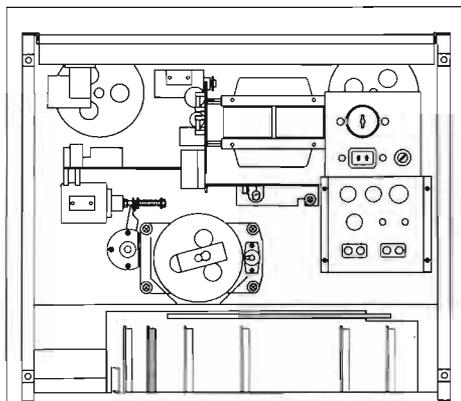
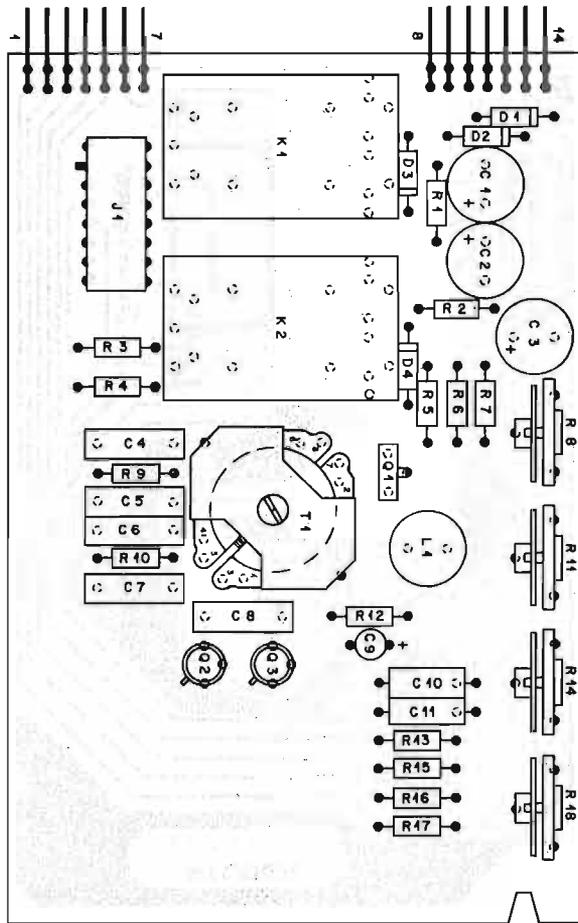
| IND | POS NO | PART NO    | VALUE | SPECIFICATIONS/EQUIVALENT | MFR |
|-----|--------|------------|-------|---------------------------|-----|
|     | R 17   | 57.41.4123 | 12 k  |                           |     |
|     | R 18   | 57.41.4104 | 100 k |                           |     |
|     | R 19   | 57.41.4153 | 15 k  |                           |     |
|     | R 20   | 57.41.4182 | 1,8 k |                           |     |
|     | R 21   | 58.19.0203 | 20 k  | 20% .15W lin.PCF          |     |
|     | R 22   | 57.41.4334 | 330 k | 5% .25W CF                |     |
|     | R 23   | 57.41.4102 | 1 k   |                           |     |
|     | R 24   | 57.41.4154 | 150 k |                           |     |
|     | R 25   | 57.41.4102 | 1 k   |                           |     |
|     | R 26   | 57.41.4102 | 1 k   |                           |     |
|     | R 27   | 57.41.4224 | 220 k |                           |     |
|     | R 28   | 57.41.4331 | 330   |                           |     |
|     | R 29   | 57.41.4680 | 68    |                           |     |
|     | R 30   | 57.41.4103 | 10 k  |                           |     |
|     | R 31   | 57.41.4470 | 47    |                           |     |
|     | R 32   | 57.11.4104 | 100 k |                           |     |
|     | R 33   | 57.41.4154 | 150 k |                           |     |
|     | R 34   | 57.41.4123 | 12 k  |                           |     |
|     | R 35   | 57.41.4104 | 100 k |                           |     |
|     | R 36   | 57.41.4680 | 68    |                           |     |
|     | R 37   | 58.19.0203 | 20 k  | 20% .15W lin.PCF          |     |
|     | R 38   | 57.11.4123 | 12 k  | 5% .25W CF                |     |
|     | R 39   | 57.41.4182 | 1,8 k |                           |     |
|     | R 40   | 57.41.4153 | 15 k  |                           |     |
|     | R 41   | 57.41.4102 | 1 k   |                           |     |
|     | R 42   | 57.41.4334 | 330 k |                           |     |
|     | R 43   | 57.41.4123 | 12 k  |                           |     |
|     | R 44   | 57.41.4391 | 390   |                           |     |
|     | R 45   | 57.41.4102 | 1 k   |                           |     |
|     | R 46   | 57.41.4102 | 1 k   | 5% .25W CF                |     |

| IND | DATE      | NAME    |
|-----|-----------|---------|
| ④   |           |         |
| ③   |           |         |
| ②   |           |         |
| ①   |           |         |
| ○   | 15.2.1979 | R.W /gv |



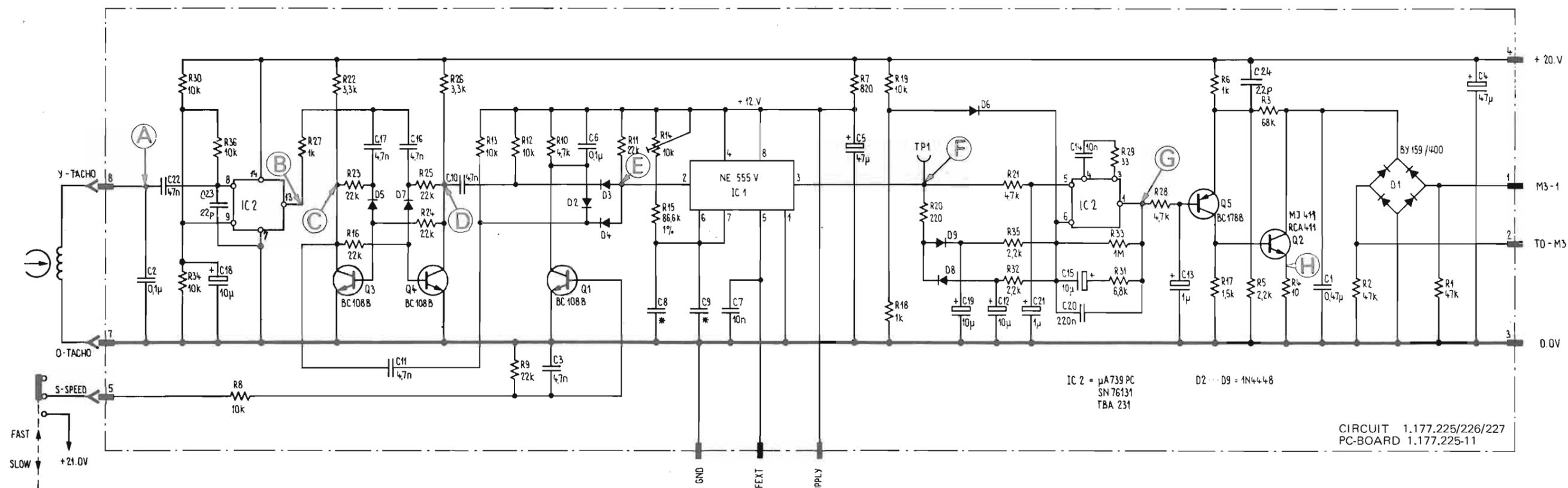
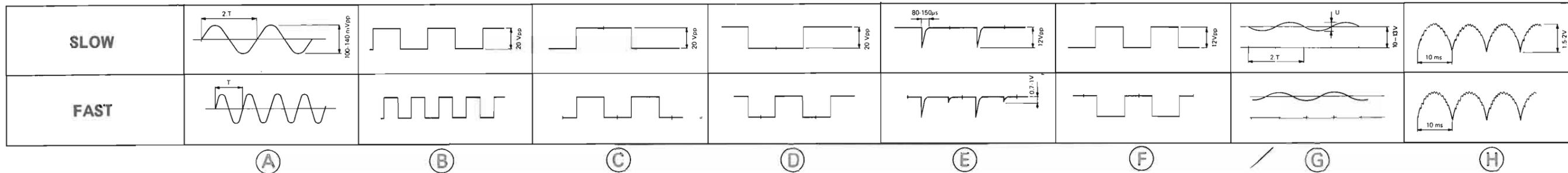
1.177.242 VALID FOR B77 HS  
(T1 FOR MORE ERASE CURRENT/ORDER NO. 1.022.192.00)

|                     |           |
|---------------------|-----------|
| STUDER <b>REVOX</b> | B77       |
| OSZILLATOR          |           |
| 1.177.240 / 242     | ED2 09.79 |



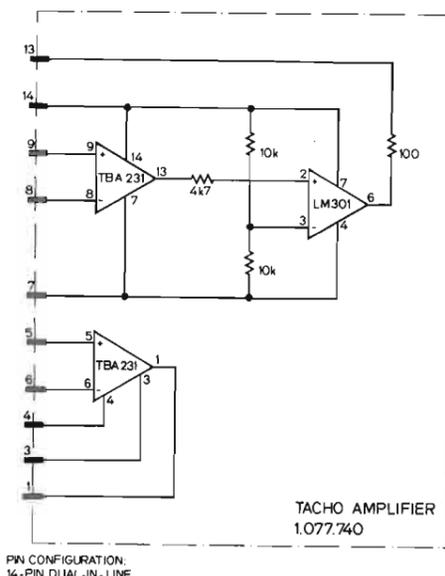
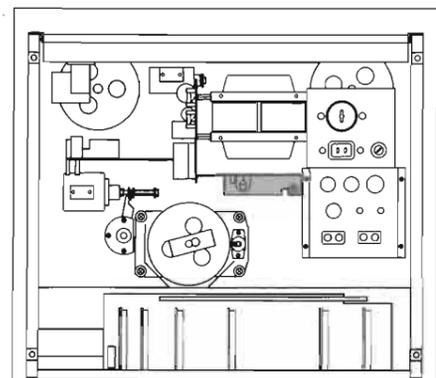
| POS NO                | PART NO    | VALUE        | SPECIFICATIONS                     | EQUIVALENT | MFR            |
|-----------------------|------------|--------------|------------------------------------|------------|----------------|
| C 01                  | 59.22.4101 | 100 U        | 10% 16 V EL                        |            |                |
| C 02                  | 59.22.4101 | 100 U        | 10% 16 V EL                        |            |                |
| C 03                  | 59.22.2221 | 220 U        | 10% 6,3V EL                        |            |                |
| C 04                  | 59.11.4472 | 4700P        | 2,5% 160V PC                       |            |                |
| C 05                  | 59.11.4472 | 4700P        | 2,5% 160V PC                       |            |                |
| C 06                  | 59.11.4472 | 4700P        | 2,5% 160V PC                       |            |                |
| C 07                  | 59.11.4472 | 4700P        | 2,5% 160V PC                       |            |                |
| C 08                  | 59.11.3682 | 6800P        | 5% 160V PC                         |            |                |
| C 09                  | 59.30.6339 | 3,3 U        | 20% 35 V TA                        |            |                |
| C 10                  | 59.04.8221 | 220 P        | 5% 160V PS                         |            |                |
| C 11                  | 59.04.8221 | 220 P        | 5% 160V PS                         |            |                |
|                       |            |              |                                    |            |                |
| D 01                  | 50.04.0109 | 1 N 4448     |                                    |            | any            |
| D 02                  | 50.04.0109 | 1 N 4448     |                                    |            | any            |
| D 03                  | 50.04.0109 | 1 N 4448     |                                    |            | any            |
| D 04                  | 50.04.0109 | 1 N 4448     |                                    |            | any            |
|                       |            |              |                                    |            |                |
| J 01                  | 54.01.0306 | 8 - Pole     | Socket-Strip AMP                   |            |                |
|                       |            |              |                                    |            |                |
| K 01                  | 56.04.0140 | 2 x U        | 500 $\Omega$ 12V                   |            | N,O            |
| K 02                  | 56.04.0140 | 2 x U        | 500 $\Omega$ 12V                   |            | N,O            |
|                       |            |              |                                    |            |                |
| L 01                  | 62.02.2122 | 1,2 mH       | 5% R <sub>DC</sub> max. 6 $\Omega$ |            |                |
|                       |            |              |                                    |            |                |
| P 01                  | 54.01.0223 | 7 -Pole      | Pin-Strip AMP                      |            |                |
| P 02                  | 54.01.0223 | 7 -Pole      | Pin-Strip AMP                      |            |                |
|                       |            |              |                                    |            |                |
| Q 01                  | 50.03.0479 | BD 14o       | Medium Power PNP                   |            |                |
| Q 02                  | 50.03.0434 | BFR 18       | NPN                                |            |                |
| Q 03                  | 50.03.0434 | BFR 18       | NPN                                |            |                |
|                       |            |              |                                    |            |                |
| R 01                  | 57.41.4331 | 330          | 5% .25W CF                         |            |                |
| R 02                  | 57.41.4331 | 330          |                                    |            |                |
| R 03                  | 57.41.4101 | 100          |                                    |            |                |
| R 04                  | 57.41.4101 | 100          |                                    |            |                |
| R 05                  | 57.41.4682 | 6,8 k        |                                    |            |                |
| R 06                  | 57.41.4100 | 10           |                                    |            |                |
| R 07                  | 57.41.4102 | 1 k          |                                    |            |                |
| R 08                  | 58.19.0503 | 50 k         | 20% .15W PCF                       |            |                |
| PC = Polycarbonate    |            | N = National | ④                                  |            |                |
| PS = Polystyrene      |            | O = Omron    | ③                                  |            |                |
| CF = Carbon Film      |            |              | ②                                  |            |                |
| PCF= Pot. Carbon Film |            |              | ①                                  |            |                |
|                       |            |              | ○                                  | 6.4.77     | Wartburg/gv    |
|                       |            |              | IND                                | DATE       | NAME           |
| <b>STUDER</b>         |            | Oscillator   | 1.177.240                          |            | PAGE<br>1 of 2 |





IC 2 =  $\mu$ A 739 PC  
SN 76131  
TBA 231

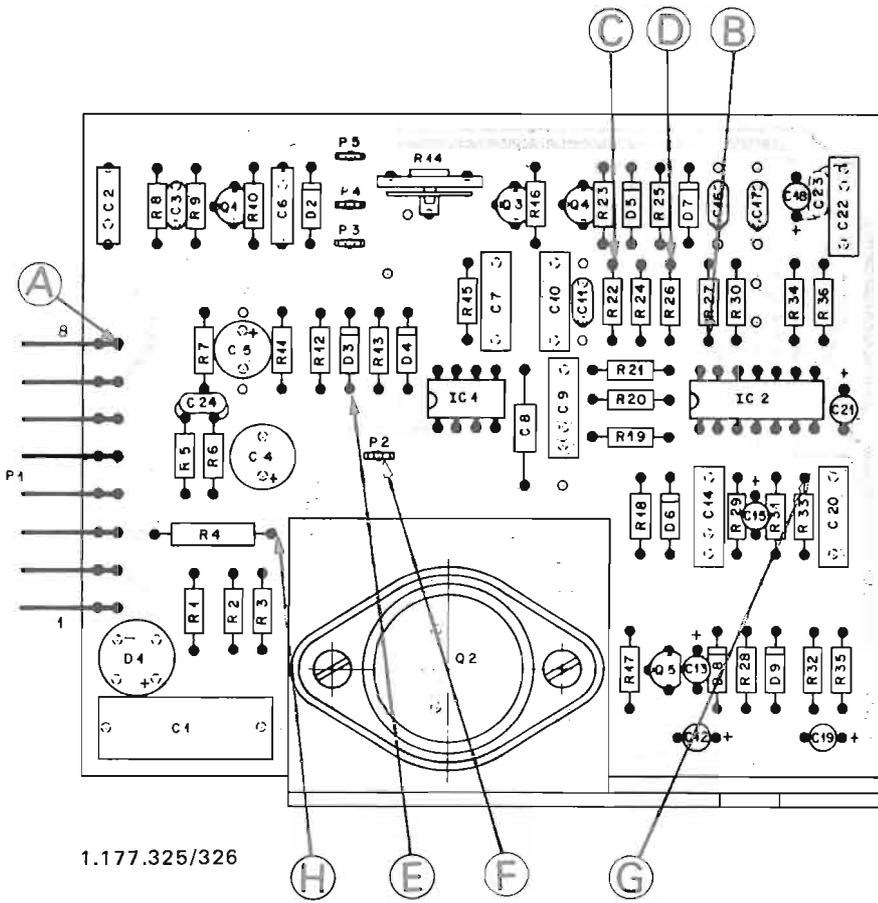
CIRCUIT 1.177.225/226/227  
PC-BOARD 1.177.225-11



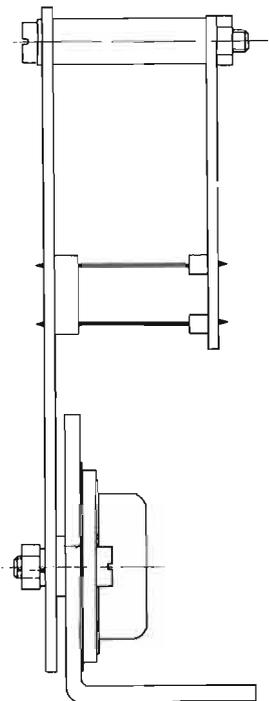
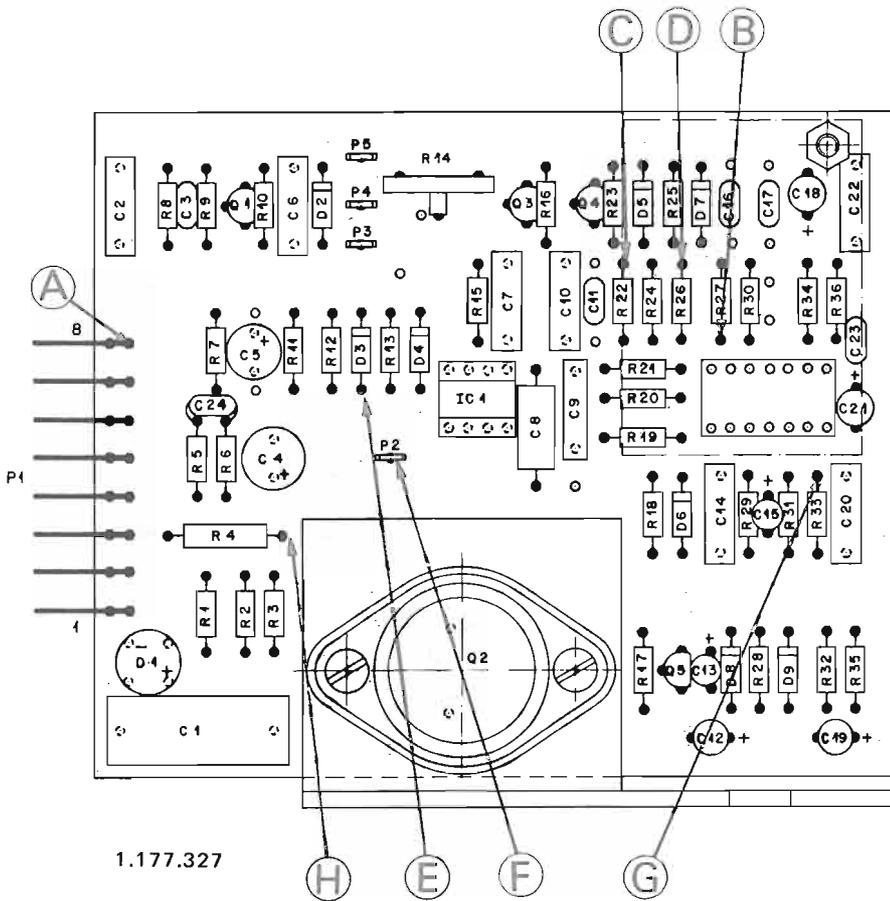
VERSION 1.177.327: INSTEAD OF THE REMOVED IC 2  
THE SUBPRINT TACHO AMPLIFIER 1.077.740 IS  
PLUGGED INTO THE IC 2 SOCKET!

| TYPE | SPEED           | CAPSTAN<br>SHAFT $\phi$ | C-MOTOR<br>NO. | SPEED<br>CONTROL | C8     | C9     |
|------|-----------------|-------------------------|----------------|------------------|--------|--------|
| HS   | 7 1/2" - 15"    | 9.06 mm                 | 1.021.320      | 1.177.325        | 1.6 nF | 4.7 nF |
| STD  | 3 3/4" - 7 1/2" | 4.51 mm                 | 1.021.300      | 1.177.325        | 1.6 nF | 4.7 nF |
| LS   | 1 7/8" - 3 3/4" | 3.00 mm                 | 1.021.304      | 1.177.326        | 1.6 nF | 6.8 nF |
| SLS  | 15/16" - 1 7/8" | 3.00 mm                 | 1.021.304      | 1.177.327        | 5.6 nF | 10 nF  |

|                          |                  |
|--------------------------|------------------|
| <b>STUDER REVOX</b>      | <b>B77</b>       |
| <b>SPEED CONTROL</b>     |                  |
| <b>1.177.325/326/327</b> | <b>ED2 09.79</b> |



| SPEED CONTROL | T            | U       |
|---------------|--------------|---------|
| 1.177.325     | 625 $\mu$ s  | 1 Vpp   |
| 1.177.326     | 833 $\mu$ s  | 2.5 Vpp |
| 1.177.327     | 1666 $\mu$ s | 3 Vpp   |



| POS NO                                    | PART NO    | VALUE      | SPECIFICATIONS        | EQUIVALENT | MFR           |
|---|------------|------------|-----------------------|------------|---------------|
| C 01                                      | 59.99.0450 | 0,47 U     | ±10% 150V             | MP         |               |
| C 02                                      | 59.31.4104 | 0,1 U      | 5% 250V               | MPETP      |               |
| C 03                                      | 59.32.3472 | 4700 P     | -20% 40V              | CER        |               |
| C 04                                      | 59.22.5470 | 47 U       | 10% 25V               | EL         |               |
| C 05                                      | 59.22.5470 | 47 U       | 10% 25V               | EL         |               |
| C 06                                      | 59.31.4104 | 0,1 U      | 5% 250V               | MPETP      |               |
| C 07                                      | 59.31.4103 | 0,01 U     | 20% 160V              | PETP       |               |
| C 08                                      | 59.12.8162 | 1600 P     | 1% 125V               | PS         |               |
| C 09                                      | 59.11.4472 | 4700 P     | 2,5% 160V             | PC         |               |
| C 10                                      | 59.31.4472 | 4700 P     | 20% 160V              | PETP       |               |
| C 11                                      | 59.32.3472 | 4700 P     | -20% 40V              | CER        |               |
| C 12                                      | 59.30.4100 | 10 U       | -20% 16V              | TA         |               |
| C 13                                      | 59.30.6109 | 1 U        | -20% 35V              | TA         |               |
| C 14                                      | 59.31.4103 | 0,01 U     | 20% 160V              | PETP       |               |
| C 15                                      | 59.30.4100 | 10 U       | 20% 16V               | TA         |               |
| C 16                                      | 59.32.3472 | 4700 P     | -20% 40V              | CER        |               |
| C 17                                      | 59.32.3472 | 4700 P     | -20% 40V              | CER        |               |
| C 18                                      | 59.30.4100 | 10 U       | 20% 16V               | TA         |               |
| C 19                                      | 59.30.4100 | 10 U       | 20% 16V               | TA         |               |
| C 20                                      | 59.31.1224 | 0,22 U     | 20% 100V              | MPETP      |               |
| C 21                                      | 59.30.6109 | 1 U        | 20% 35V               | TA         |               |
| C 22                                      | 59.31.4473 | 0,047U     | 20% 250V              | MPETP      |               |
| C 23                                      | 59.32.0220 | 22 pF      | +20% 400 V            | CER        |               |
| C 24                                      | 59.32.0220 | 22 pF      | +20% 400 V            | CER        |               |
| D 01                                      | 70.01.0223 | B 250 C800 |                       |            |               |
| D 02                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| D 03                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| D 04                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| D 05                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| D 06                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| D 07                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| D 08                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| D 09                                      | 50.04.0109 | 1 N 4448   |                       |            | any           |
| IC 01                                     | 50.05.0158 | NE 555     | Timer                 | MC1455P    | S,M           |
| IC 02                                     | 50.05.0237 | TBA 231    | µA 739 equiv.         | SN76131N   | F,A,T         |
| P 01                                      | 54.01.0582 | 8 - Pole   | Pin Strip             | AMP        |               |
| P 2-5                                     | 54.02.0320 | 8 - Pole   |                       | AMP        |               |
| Q 01                                      | 50.03.0436 | BC 107 B   |                       | NPN        |               |
| Q 02                                      | 50.03.0477 | MJ 411     |                       | NPN Power  | RCA 411 M,RCA |
| Q 03                                      | 50.03.0436 | BC 107 B   |                       | NPN        |               |
| Q 04                                      | 50.03.0436 | BC 107 B   |                       | NPN        |               |
| Q 05                                      | 50.03.0318 | BC 178 B   |                       | PNP        |               |
| M = Motorola MP =metallized paper         |            |            | ④                     |            |               |
| S = Signetics PS =polystyrene             |            |            | ③                     |            |               |
| A = Ates CER=ceramic                      |            |            | ②                     |            |               |
| T = Texas Instr. PETP = polyester         |            |            | ①                     |            |               |
| F = Fairchild MPETP= metallized polyester |            |            | ○                     | 1.4.77     | Wartburg/cv   |
|   |            |            | IND                   | DATE       | NAME          |
| <b>STUDER</b>                             |            |            | Capstan Speed Control |            | 1.177.325     |
|   |            |            |                       |            | PAGE 1 of 2   |

| POS NO | PART NO    | VALUE | SPECIFICATIONS | EQUIVALENT MFR |
|--------|------------|-------|----------------|----------------|
| R 01   | 57.41.4473 | 47 K  | 5% .25W        | CF             |
| R 02   | 57.41.4473 | 47 K  | 5% .25W        | CF             |
| R 03   | 57.41.4683 | 68 K  | 5% .25W        | CF             |
| R 04   | 57.42.4100 | 10    | 5% .33W        | CF             |
| R 05   | 57.41.4222 | 2,2 K | 5% .25W        | CF             |
| R 06   | 57.41.4102 | 1 K   |                |                |
| R 07   | 57.41.4821 | 820   |                |                |
| R 08   | 57.41.4103 | 10 K  |                |                |
| R 09   | 57.41.4223 | 22 K  |                |                |
| R 10   | 57.41.4472 | 4,7 K |                |                |
| R 11   | 57.41.4223 | 22 K  |                |                |
| R 12   | 57.41.4103 | 10 K  |                |                |
| R 13   | 57.41.4103 | 10 K  |                |                |
| R 14   | 58.99.0126 | 10 K  | 10% 500ppm/°C  | PCF            |
| R 15   | 57.99.0179 | 86,6K | 1% 50ppm       | MF             |
| R 16   | 57.41.4223 | 22 K  | 5% .25W        | CF             |
| R 17   | 57.41.4152 | 1,5 K |                |                |
| R 18   | 57.41.4102 | 1 K   |                |                |
| R 19   | 57.41.4103 | 10 K  |                |                |
| R 20   | 57.41.4221 | 220   |                |                |
| R 21   | 57.41.4472 | 4,7 K |                |                |
| R 22   | 57.41.4332 | 3,3 K |                |                |
| R 23   | 57.41.4223 | 22 K  |                |                |
| R 24   | 57.41.4223 | 22 K  |                |                |
| R 25   | 57.41.4223 | 22 K  |                |                |
| R 26   | 57.41.4332 | 3,3 K |                |                |
| R 27   | 57.41.4472 | 4,7 K |                |                |
| R 28   | 57.41.4472 | 4,7 K |                |                |
| R 29   | 57.41.4330 | 33    |                |                |
| R 30   | 57.41.4103 | 10 K  |                |                |
| R 31   | 57.41.4682 | 6,8 K |                |                |
| R 32   | 57.41.4222 | 2,2 K |                |                |
| R 33   | 57.41.4105 | 1 M   |                |                |
| R 34   | 57.41.4103 | 10 K  |                |                |
| R 35   | 57.41.4222 | 2,2 K |                |                |
| R 36   | 57.41.4103 | 10 K  |                |                |

CF = Carbon Film  
PCF= Pot.carbon Film  
MF = Metal Film

④  
③  
②  
①  
○

1.4.77

Wartburg/g

IND

DATE

NAME

**STUDER**

Capstan Speed Control

1.177.325

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2 of 2

**Hersteller/Manufacturer/Fabricant**

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Althardstrasse 30

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