

SERVICE INFORMATION

D827 MCH

Software up-date V 2.0

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Order no. 10.85.7371 (Ed. 0995)

1. General Information and Overview

V 2.0 offers many unique features and has a much wider functionality. For more details please refer to the description in § 6. General Improvements. This software up-date is recommended but not necessary.

To gain the full functionality we recommend to carry out the complete software up-date for both, machine and remotes.

The Software up-date V 2.0 includes a floppy with the new parameter back-up program. This program PARABACK.EXE V 2.0 (Edition 12. January 1995) works with all former software versions from D820 MCH and D827 MCH. It is recommended to use the improved version only. The new program contains an automatic verify and allows to select the communication port.

Attention! Attention! Attention! Attention! Attention!

Before performing the master software up-date, please make sure that all machine parameters are filed to disk:

- Make sure that you have the factory machine parameter disk available.
- Delete the or better rename first the old PARABACK.EXE file.
- Copy the new program PARABACK.EXE V 2.0 (Edition 12. January 1995) to your machine parameter disk. Up-date also the back-ups.
- Use the new PARABACK.EXE V 2.0 program to download the parameters onto the floppy.
In case of communications error, please check the switch at the TERM socket of the D827 MCH CPU, it has to be in the front position.

After the cared out up-date reload the parameters back into the machine.

Please return after tested the up-dated machine:

- **Configuration Sheet**
- **all old EEROMs**

2. Software Kits and Hardware Modifications

The following pages describes all possible V 2.0 up-date kits for the D827 MCH. Modify according your requirement.

PS. To gain the full functionality we recommend to carry out the complete software up-date for both, machine and remotes.

The machine requires only a software change and different jumper setting. Reinstall the parameters after the up-date. Modify all labels of the changed boards.

On the remotes additional buttons have to be added. The prints are prepared. The front glans must be changed. The new fronts are made by Plexiglas. They are more robust, particularly when moving the D827 MCH around often.

We recommend to carry the up-date in the order as described in this paper.

2.1. **D827 MCH** Software Kit 20.100.863.06

The modification on the machine concerns the following boards:

- 1.863.655.20 Central Processor unit CPU with
1.862.683.20 CPU piggy back
- 1.863.656.21 Peripheral Interface PIF
- 1.863.659.20 SSTC Board, System Synchronizer and TC Board
- 1.863.665.20 Sound Memory Board
- 1.863.685.20 Time Code Back bag
- 1.863.769.21 Serbus CTR & Display Driver, LCU (Local Control Unit)
- 1.862.764.22 Capstan Control Unit
- 1.863.781.20 MP Unit TD, Tape Deck Master Processor

2.1.1. Software Kit for Machine up-date Software V 2.0

The Modification Set 20.100.863.06 contains:

- MP Unit TD Software, Set of 2 IC IC 16, 18 1.863.797.22
- LCU Software, IC 15 1.863.826.22
- Sound Memory Software (HI), IC 62 1.863.890.21
- Sound Memory Software (M), IC 63 1.863.891.21
- Sound Memory Software (LO), IC 64 1.863.892.21
- CPU Master Software, Set of 4 IC IC 3, 4, 5, 6 1.863.926.21
- PIF Software TDC program, IC 35 1.863.937.21
- PIF Software SBC program, IC 43 1.863.938.23
- Capstan Control Software, IC 17 1.863.950.20
- SSTC Software (Int. Synchr.), IC 40 1.863.967.21
- SSTC Software (Int. Synchr.Capst), IC 50 1.863.968.20
- TC Generator Software (HI), IC 25 1.863.980.21
- TC Generator Software (LO), IC 26 1.863.981.21
- Paraback V 2.0, Floppy 1.863.996.21
- SI 161a/95 D827 MCH Software up-date V 2.0 Instruction 10.85.7371
- SET-UP Guide V2.0 (Ed. 0595) 10.27.36.21
- Set of labels

2.1.2. Hardware Modifications of the Machine

1.863.655.20 Central Processor unit CPU with
1.862.683.20 CPU piggy back

Attention! Attention! Attention! Attention!

Before performing the master software up-date, please make sure that all machine parameters are filed to disk:

Use the new PARABACK.EXE V 2.0 program, included in this software packages to download the parameters onto the floppy.
In case of communications error, please check the switch at the TERM socket of the D827 MCH CPU, it has to be in front position.

To keep the same user setting after the up-date, all user set-ups can be stored via Setup Handler. It is just a convenience.

Modification:

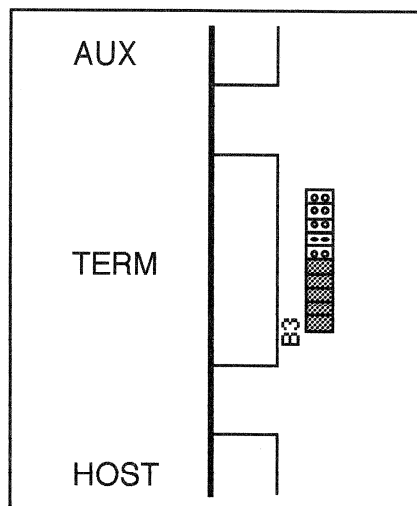
Cause:

New CPU Software V 2.0 (05/95)

Action:

- Replace **IC 3 to 6** (old software number 1.863.926.20) by new software (05/95) **1.863.926.21**
- Change Index on the CPU Piggy Back to new 1.863.683.21
- Change on the grip the index of the CPU board to new 1.863.655.21
- Clear the RAM (IC 7 and 8 on CIF, 1.863.654.21), by removing it from its socket and short circuiting it on a metal surface.

- Modify the Jumper Array B3 (behind the TERM socket) as followed:



- Remove two jumpers and the wrap wire according to the drawing
- Add on jumper according to the drawing.

Result: 5 Jumpers left are inserted in B3

Remark:

The first time after switching on with new Software, the D827 MCH shows: SYSTEM MESSAGE "Warning: 023, System default setup loaded". Please load the parameters back to the machine.

1.863.656.21 Peripheral Interface PIF

Modification:**Cause:**

New Software V 2.0 (05/95)

Action:

- Replace **IC 35** (old software number 1.863.937.20) by new TDC software (12/94) **1.863.937.21**

- Replace **IC 43** (old software number 1.863.938.20 or 21) by new SBC software (07/95) **1.863.938.23**

- Change the index on the grip and on the print of the PIF board to new 1.863.656.23

1.863.659.20 SSTC Board, System Synchronizer and TC Board

Modification:**Cause:**

New Software V 2.0 (05/95)

Action:

To have access to the EPROMs remove the Back Bag board by loosen the 2 screws in the middle of the board.

- Replace **IC 40** (old software number 1.863.967.20) by new Int. Synchr. software (37/94) **1.863.967.21**

- Replace **IC 50** (old software number 1.862.968.22) by new Int. Synchr. Capst. software (03/95) **1.863.968.20**

- Change the index on the grip and on the print of the SSTC board to new 1.863.659.21

1.863.685.20 Time Code Back bag

Modification:Cause:

New Software V 2.0 (05/95)

Action:

- Replace **IC 25** (old software number 1.863.980.20) by new TC Gen. (HI) software (03/95) **1.863.980.21**

- Replace **IC 26** (old software number 1.863.981.20) by new TC Gen. (LO) software (03/95) **1.863.981.21**

- Change Jumper J2 to **TC_AUTO**

- Change Index on the TC Back bag board to new 1.863.685.21

1.863.665.20 Sound Memory Board

If the machine is not equipped with a Sound Memory, return this software IC together with the old software IC to STUDER.

Modification:**Cause:**

New Software V 2.0 (05/95)

Action:

- Replace **IC 62** (old software number 1.863.890.20) by new Sound Memory (HI) software (01/95) **1.863.890.21**

- Replace **IC 63** (old software number 1.863.891.20) by new Sound Memory (M) software (01/95) **1.863.891.21**

- Replace **IC 64** (old software number 1.863.892.20) by new Sound Memory (LO) software (01/95) **1.863.892.21**

- Change the index on the grip and on the print of the SOUND MEMORY board to new 1.863.665.21

1.863.769.21 Serbus CTR & Display Driver, LCU (Local Control Unit)

Modification:Cause:

New Software V 2.0 (05/95)

Decoding problem with software 1.863.826.20 only on channel 40 to 48.
Noticeable by random flashing on the status LEDs of those channels.
Software 1.863.826.21 solved this problem already.

Action:

- Please handle the LCU (Local Control Unit) with care.
The edge of the glass panel is very delicate.
- Remove LCU hold by 2 screws, accessible by open transport.
- Open the box and remove the board 1.863.769.2X. Don't forget the 2 screws
covert by the ribbon cable.
- Replace **IC 15** (old software number 1.863.826.20 or 1.863.826.21) by
new Local Contr. Unit software (45/94) **1.863.826.22**
- Change Index on the Serbus CTR & Display Driver board to new 1.863.769.22
- Reinstall the board and take care that the cue wheel is not blocked by the ribbon
cable.
- Mark on the software indicator sticker field 22.

1.862.764.22 Capstan Control Unit

Modification:**Cause:**

New Software V 2.0 (05/95)

Action:

- Replace **IC 17** (old software number 1.862.796.22) by new Capstan Controller software (03/95) **1.863.950.20**

- Change label on Capstan Control Unit board to new 1.863.774.20

1.863.781.20 MP Unit TD, Tape Deck Master Processor

Modification:Cause:

ERROR Handling not correct, indicating errors when there are none.

Action:

- Replace **IC 16 and IC 18** (old software number 1.862.797.20) by new Tape Deck Mot. Ctr. software (05/95) **1.863.797.22**

- Change label on MP Unit TD Control board to new 1.863.781.22

2.1.3. Optional Hardware Change for Reading RT and CTL

Order number 1.863.657.21

A new RT Board reading RT (STUDER) and CTL (Sony dialect) is now available. It is possible to clone and/or synchronize sample accurate not only between Studer machines but also from a PCM 3324A or 3348.

It is hardly recommended to use the Master Tally Cable (1.023.781.00). and set the the park window to approximately 400 ms.

The board switches automatically between RT and CTL. No setting in the menu is required.

To avoid switching when reading bad RT code at a lower wind speed, a jumper JP6-JP7 can be inserted.

To be ordered separately:

Master tally cable for PCM 3324A/3348 1.023.781.00

Optional Modification:**Cause:**

Reading RT and CTL with the same board

Action:

- Exchange the RT board (1.862.657.26) by the new **1.863.657.20**
- send the old RT board back to Studer Switzerland, if you have no other use for it.

2.1.4. Optional System Extension for EDR, 24 Bit Mode

Order number of the Kit	21.863.564.00
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EDR, Extended Digital Resolution (24 Bit upgrade)

The new EDR option for the D827 MCH allows 24-bit recording on up to 24 audio channels. The 24 bit technique is carried out by distributing the 24 data bits across two physical tracks. This is accomplished by recording the 16 most significant bits on the first 24 tracks, retaining compatibility with 16 bit recorders, while the remaining 8 bits are recorded on a second track.

The big advantage of the Studer solution is the build-in 24 bit processing. This enables to have full 24 bit resolution also during crossfade. The crossfade times have been extended up to 5000 ms in the EDR Mode. The processor is accessed via MAD1 or AES/EBU only.

This system extension can be fitted in every D827 MCH/48. The user can select via menu between the standard 16 bit operating mode on 48 channels or the 24 bit extended resolution on 24 channels.

A EDR recorded tape can be played back on every DASH multi track machine like a standard 24 channel tape but only in 16 bit quality.

Optional Modification:**Cause:**

System Extension to 24 Bit

Action:

- D827 MCH, 48 CH has to be up-dated to Software V 2.0!
- Exchange the MAD1 board (1.862.666.23) by the new **1.863.666.20**
- send the old MAD1 board back to Studer Switzerland, if you have no other use for it.

2.2. Autolocator

Software Kit 20.100.863.02

The modification on the machine concerns the following boards:

- 1.328.712.20 Rembus Controller of Autolocator
- 1.328.711.00 Aloc Front Board *)

*) 1.328.713.00 Hardware already modified (V 2.0 Panel with ex. separate X-Fade display)

2.2.1. Software Kit for Autolocator up-date Software V 2.0

The Modification Set 20.100.863.02 contains:

- | | | |
|--|-----------|--------------|
| • Autolocator Software, | IC 25 | 1.328.798.21 |
| • ALOC Front Cover Plexi V 2.0 | 1 piece | 1.328.710.05 |
| • Pulse switch | 5 pieces | 55.15.0531 |
| • LED Light Bar yel. | 10 pieces | 50.04.2804 |
| • 7-Segment Display grn | 7 pieces | 73.01.0134 |
| • Push button dark grey | 5 pieces | 1.010.048.55 |
| • Sticky tape for front covers
(Please order if required) | 50 m | 65.99.0191 |
| • Set of labels | | |

2.2.2. Hardware Modifications of the Autolocator

1.328.712.20 Rembus Controller of Autolocator

Important! Important! Important!

This Software modification on the remote requires hardware V 2.0 (Aloc Front Board 1.328.713.00).

The D827 MCH equipped with V 2.0 SW works with V 2.0 and V 1.0 Remotes. The up-date of the Remote is therefore not necessary but recommended.

Conclusion: Either a HW and SW up-date of the Remote or leave it as it is.

Modification:

Cause:

More Functionality, Displays and Buttons with V 2.0 Software

Action:

- Remove Autolocator from its stand.
- Open the box and remove the board 1.328.712.20.
- Replace **IC 25** (old software number 1.328.798.20) by new software (18/94) **1.328.798.21**
- Modify the DIL Switch SW2 to:
1, 7 on; 2, 3, 4, 5, 6, 8 off (with V 2.0, new: 7 is on).
- Replace the Aloc Rembus Controller Board label (1.328.712.20) to 1.328.718.21
- Mark field 21 on the software status sticker of the housing
- Change Index of the housing to 1.328.710.81

1.328.711.00 Aloc Front Board *)

*) 1.328.713.00 Hardware already modified (V 2.0 Panel with ex. separate X-Fade display).

Modification:**Cause:**

More Functionality, Displays and Buttons with V 2.0 Software

Action:

- Remove the Aloc Front Board 1.328.711.00
- Solder-in the 5 pulse switch into the prepared holes and add the push buttons.
- Insert the 10 LED light bars (yel) into the socket except DL21 (TRACK BANK), DL44 (STORE CUE) and DL62 (USR1 left). Note the coding of the LEDs.
- Insert the 7 7-segment displays into the socket. Note the coding.
- Exchange the label to 1.328.713.00
- Remove the glass plate with a putty knife.
- Reinstall the modified Aloc Front Board 1.328.713.00
- Assemble the Autolocator and check all displays by pressing simultaneously STOP + REH MODE. Check also the new buttons.
- Put sticky tape onto the metal support and mount the Plexi glass cover.

2.3. 48 Channel Remote Control Software Kit 20.100.863.03

The modification on the machine concerns the following boards:

- 1.328.712.20 Rembus Controller of Channel Remote Control
- 1.328.701.00 48 CH CTR Front Board *)

*) 1.328.704.00 Hardware already modified (V 2.0 Panel with ex. PEAK HOLD key).

2.3.1. Software Kit for 48 Channel Remote up-date Software V 2.0

The Modification Set 20.100.863.03 contains:

- | | | |
|--|----------|--------------|
| • Channel Remote Contr. Software, | IC 25 | 1.328.799.21 |
| • 48 CH CTR Front Cover Plexi V 2.0 | 1 piece | 1.328.700.05 |
| • Pulse switch | 6 pieces | 55.15.0531 |
| • LED Light Bar grn. | 1 piece | 50.04.2803 |
| • LED Light Bar yel. | 9 pieces | 50.04.2804 |
| • Push button light grey | 5 pieces | 1.010.045.55 |
| • Push button dark grey | 1 piece | 1.010.048.55 |
| • Sticky tape for front covers
(Please order if required) | 50 m | 65.99.0191 |
| • Set of labels | | |

2.3.2. Hardware Modifications of the Channel Remote Control

1.328.712.20 Rembus Controller of Channel Remote Control

Important! Important! Important!

This Software modification on the remote requires hardware V 2.0 (CH CTR Front Board 1.328.704.00).

The D827 MCH equipped with V 2.0 SW works with V 2.0 and V 1.0 Remotes. The up-date of the Remote is therefore not necessary but recommended.

Conclusion: Either a HW and SW up-date of the Remote or leave it as it is.

Modification:

Cause:

More Functionality, Displays and Buttons with V 2.0 Software

Action:

- Remove Channel Remote Control from its stand.
- Open the box and remove the board 1.328.712.20.
- Replace **IC 25** (old software number 1.328.799.20) by new software (50/94) **1.328.799.21**
- Modify the DIL Switch SW2 to:
2, 7 on; 1, 3, 4, 5, 6, 8 off (with V 2.0, new: 7 is on).
- Replace the CH CTR Rembus Controller Board label (1.328.712.20) to 1.328.717.21
- Mark field 21 on the software status sticker of the housing
- Change Index of the housing to 1.328.700.81

3.3. Remote with additional keys and functions

3.3.1 • REHEARSE RECORD key

The additional function **REH** is default programmed onto USER key 2. Pressing this key will perform like a record command with its fade-in/out times, but without record current. Therefore no signal goes onto the tape. It can be used in all combinations like the REC key. The punch-in and punch-out addresses will be stored. See also 3.2.12.

3.3.2 • Separate FADE-IN / FADE-OUT key

Now are two separate keys for entering the X-FADE times. Pressing either IN or OUT or both together allows to enter the fades you like. A flashing X-FADE TIME display indicates different IN and OUT times.

3.3.3 • Additional TRIM key set for varispeed / X-Fade

Two additional TRIM keys for X-FADE TIME are introduced at the Autolocator to enable to trim X-Fade and punch in/out at the same time.

3.3.4 • Additional display for VARISPEED and X-FADE time

For a better overview, a separate VARISPEED display has been added. As soon as varispeed is programmed or active, the display will light-up.

3.3.5 • Input / Repr keys for CUE, TC and RT

To provide full functionality also for the AUX Track, 4 INPUT/REPRO keys have been added. The AUX tracks are now fully controllable from the remote (to switch RT to INPUT, the RT Board 1.863.657.xx is required).

3.3.6 • Track bank key for easy TRACK BOUNCING of all 48 channels

To select the desired TRACK BANK (4 destination channels), use the TRACK BANK key on its own or hold down the TRACK BANK key while stepping through the track bank pages up and down with the TRIM keys.

3.3.7 • DISPLAY resolution key

An additional key in the display allows to select between the full resolution (ms or Fr) or the preselected in the menu (example 0.1s). The trim function will follow the display resolution (for example trimming in 0.001 or 0.1 sec.).

3.3.8 • PEAK HOLD and PEAK RESET key

The two added keys enable to control from the remote the bargraph display of the machine and the remote level display.

4. Software Compatibility List

Software Reference List D827 MCH

Software	IC	Check	Release	IC Type	IDENT	Hardware
1.328.796.20	18	4125	45/94	27C256	RDL SW	1.328.73X.20
1.328.798.20	25	EF7B	07/94	27C256	AUTOLOC MIT SMEM	1.328.710.00
or						
1.328.798.21	25	F2F5	18/94	27C256	AUTOLOC MIT SMEM	1.328.710.81
1.328.799.20	25	F405	07/94	27C256	CHANEL REMOT CONTR.	1.328.70X.00
or						
1.328.799.21	25	67CB	50/94	27C256	CHANEL REMOT CONTR.	1.328.70X.81
1.328.896.21	514	F7AA	28/91	27C256	PAI SW	1.328.631.21
1.862.924.20	01	612B	29/90	27C256	CPU BOOT (HI)	1.863.655.21
1.862.925.20	02	5623	29/90	27C256	CPU BOOT (LO)	1.863.655.21
1.862.939.22	61	D4B6	27/92	27C256	PIF MAIN PROGRAM SEC	1.863.656.23
1.862.940.21	68	DDB9	03/91	27C256	PIF MAIN PROGRAM RBC	1.863.656.23
1.862.956.20	10	8FE9	32/89	28L22	RT TMS PLL H)	(1.862.657.26)
1.862.957.20	18	765B	32/89	28L22	RT TMS PLL LO)	(or 1.863.657.20/
1.862.958.26	48	5D9E	36/92	7C263	RT TMS MAIN PR HI	1.862.657.26
or						
1.863.958.20	48	1AE5	04/95	7C263	RT TMS MAIN PR HI	1.863.657.20
1.862.959.26	67	807E	36/92	7C263	RT TMS MAIN PR LO	1.862.657.26
or						
1.863.959.20	67	191A	04/95	7C263	RT TMS MAIN PR LO	1.863.657.20
1.863.797.22	16	2B13	15/95	27128	TDM SW	1.863.781.22
1.863.797.22	18	38D8	15/95	27128	TDM SW	1.863.781.22
1.863.826.22	15	C20E	05/95	27C256	LCU SW	1.863.769.22
1.863.890.21	62	AA04	01/95	WS57C64	SM HI	1.863.665.21
1.863.891.21	63	1328	01/95	WS57C64	SM M	1.863.665.21
1.863.892.21	64	DA06	01/95	WS57C64	SM LO	1.863.665.21
1.863.910.20	XX	EF5C		WS57C64	NOISE SHAPER	1.863.653.20
1.863.913.20	XX	76F8	43/93	WS57C64	MAPRO HI	1.863.652.20
1.863.914.20	XX	90BF	43/93	WS57C64	MAPRO LO	1.863.652.20
1.863.926.21	03	F89C	05/95	27C011	CPU SYSTEM	1.863.655.21
1.863.926.21	04	3389	05/95	27C011	CPU SYSTEM	1.863.655.21
1.863.926.21	05	8C73	05/95	27C011	CPU SYSTEM	1.863.655.21
1.863.926.21	06	801C	05/95	27C011	CPU SYSTEM	1.863.655.21
1.863.937.21	35	00AD	12/94	27C256	PIF MAIN PROGRAM TDC	1.863.656.23
1.863.938.23	43	34ED	07/95	27C256	PIF MAIN PROGRAM SBC	1.863.656.23
1.863.940.20	XX	6DFA	20/94	TMS320	MAPRO	1.863.660.20
1.863.950.20	17	D6AC	03/95	27128	CAPSTAN CONTROL UNIT	1.863.774.20
1.863.967.21	40	6D93	37/94	27128	INT. SYNCHR.	1.863.659.21
1.863.968.20	50	73EC	03/95	27128	INT. SYNCHR. CAPST.	1.863.659.21
1.863.970.20	56	C4CB		27C64	MADI 24	1.863.666.20
1.863.980.21	25	825C	03/95	27C256	TIME CODE BACKBAG (LO)	1.863.659.21
1.863.981.21	26	A7A4	03/95	27C256	TIME CODE BACKBAG (HI)	1.863.659.21
1.863.995.20	-		V 2.1	FLOPPY	SET-UP HANDLER V 2.1	
1.863.996.21	-		V 2.0	FLOPPY	PARABACK V 2.0	

5. Status Control Sheet

Due to technical progress and improvements the following boards have been modified since the introduction of the machine. The actual index state is listed below. Please compare the hardware in your machine and remote with the index on this sheet and make the necessary notes on the confirmation sheet.

Remote (Options):

1.328.700.81	D827 48 CH Channel Remote	or 1.328.700.00
	including:	
	1.328.704.00	D827 48 CH CTR Font Board
	1.328.717.21	D827 CH CTR Rembus Controller Board
1.328.705.81	D827 24 CH Channel Remote	or 1.328.705.00
	including:	
	1.328.707.00	D827 24 CH CTR Font Board
	1.328.717.21	D827 CH CTR Rembus Controller Board
1.328.710.81	D827 Auto Locator	or 1.328.710.00
	including:	
	1.328.713.00	D827 Aloc Font Board
	1.328.718.21	D827 Aloc Rembus Controller Board

Machine:

1.021.695.86	Tacho Sensor Board	
1.820.774.27	Capstan Motor Drive Amplifier	
1.862.600.83	18 V Voltage Converter	or 1.862.600.82
1.862.601.81	5 V Voltage Converter	or 1.862.601.00
1.862.651.21	D/A Converter (Option)	or 1.863.658.20
1.862.657.26	RT Board	or 1.863.657.21
1.862.662.21	Ping Pong	
1.862.666.23	MADI Interface	
1.862.683.21	CPU Piggy Back D827	
1.863.150.00	D827 Tape Tension Sensor left	or 1.863.155.00
1.863.151.00	D827 Tape Tension Sensor right	or 1.863.156.00
1.863.155.00	D827 Tape Tension Sensor left	or 1.863.150.00
1.863.156.00	D827 Tape Tension Sensor right	or 1.863.151.00
1.863.652.20	MAPRO	or 1.863.660.20
1.863.654.21	D827 CPU Interface	
1.863.655.21	Central Processor Unit D827	
1.863.656.23	Peripheral Interface (PIF) D827	
1.863.657.21	RT Board	or 1.862.657.26
1.863.658.20	D/A Converter (Option)	or 1.862.651.21
1.863.659.21	D827 SSTC Synchronizer	
1.863.665.21	Sound Memory (Option) D827	
1.863.685.21	Time Code Backbag D827	
1.863.769.22	Serbus Contr. & Display Driver	
1.863.774.20	Capstan Control Unit	
1.863.781.22	MP Unit TD Controlr	

6. General Improvements

For all the operational features please refer to § 3. There you will find the explanation of the additional functions, listed for machine and remote separately.

With the V2.0 Software, it is possible to equip a 48 CH version with the Option **EDR**, Extended Digital Resolution. This plug-in card allows 24-bit recording on up to 24 audio channels. The 24 bit technique is carried out by distributing the 24 data bits across two physical tracks. This is accomplished by recording the 16 most significant bits on the first 24 tracks, retaining compatibility with 16 bit recorders, while the remaining 8 bits are recorded on a second track. Any DASH machine is therefore able to play back such a recording with 16 Bit resolution. With this card you do not lose any of the machines functionality, like recording 48 channels on 16 bit resolution etc..

With the **RT Board** 1.863.657.20 you are capable to **read CTL information** as well. DASH-Lock is now possible to non STUDER machines as well. It is recommended to use the master tally cable (1.023.781.00).

Set-up Handler, Software for Macintosh®

Version 2.1 of the setup handler is available to store the user setting. It is an ideal tool for keeping user set-ups before performing the SW up-date.

D827 MCH Kit number	21.863.995.00
including: Floppy with software for Mac	1.863.995.20
Cable	41.001.804.22
Manual	10.27.3530

The **SET-UP Guide V2.0** (10.27.3621) is adapted to V2.0 Software and explains the applications like DASH LOCK etc..

The Power Supply (1.863.620.81) passed the **UL and IEC approvals**:

- Recognition UL 1950; UL File QGGQ2 E164184 (M)
- Classification IEC Publication 950; UL File QQKV2 E164184 (M)

7. Confirmation Sheet

**Please fill out the attached sheet and return it to
STUDER Regensdorf, Switzerland**