



## FIELD CHANGE ORDER

**Service**

<b>Issued by</b>	: PMS DMC Hamburg	<b>Reference No.</b>	: FCO74200002
<b>Released by</b>	: G. Kramm <b>signed</b>	<b>Date</b>	: April 2002
<b>Publication No.</b>	: 4512 980 59421	<b>Product Group</b>	: 742

**action  
for performance  
retrofit on failure**

### OPTIMUS RAD / RF

**APPLIES TO:**

All Optimus RAD / RF generators release 3 9890 000 02001	RAD	R/F
serial number(s)	970218 - 970220; 970223 - 970763 980001 - 980743; 982998; 982999 990001 - 990742 000001 - 000801; 002996; 002997; 002999 010001 - 010874	971001 - 971130 982001 - 982332 992001 - 992266; 992998; 992999 002001 - 002204; 002998 012001 - 012213

**TITLE:**

Optimus RAD / RF release 3.x upgrade to release 3.5

**LIST OF PAGES & DRAWINGS:**

00 135 017	1 ... 3	02.0
	ANR	02.0

## **INTRODUCTION:**

- Symptom** : Different errors e.g. 03AB, 00X6, 00XU, 00B5, 00PP, 00PL, 00L2 or sporadic symptomatic failures like early waiting time indication etc.
- Cause** : All the different problems have different causes which have been solved in the CU rotor control and user desk software.
- Remedy** : Upgrade the CU software via flash load; exchange the high speed rotor control (where required) and control desk EPROM.

### ***Bug fixes***

- 03AB, 00X6 after preparation
- 00XU CU endless loop
- TTS data (Ta, Tb) now equal with OMCP TTS data
- 00L2 during APR programming
- Rotor temperature calculation
- 00B5
- 00PP
- 00PL dose digit disturbance
- 10LU displayed with preparation

### ***Improvements***

- Tube load counter similar to SCP or OMCP
- mAs backup \* 9.5 for premature exposure termination
- Rotor energy value for TTS calculation reduced to 170Ws for SRO tubes
- No density corrections anymore for II technique
- Density correction step number changed, 2 \* 25% or 4 \* 12.5% or 8 \* 6.25% to avoid that dose limits are exceeded during dose correction

## **MANPOWER / TIME TO COMPLETE:**

2 hours, 1 engineer

## **TOOLS & TEST EQUIPMENT:**

- Standard set of service tools
- PLCC extraction tool AMP 822154-1      12NC      2422 487 89772
- PC **with** hardkey
- Dual-beam memory oscilloscope to monitor kV during re-adaptation

## **MODIFICATION KIT / PARTS REQUIRED:**

**4512 104 96491** Containing:

- 4512 116 02206 Service disk A (OPTIMUS)
- 4512 116 02306 Service disk B (OPTIMUS)
- 4512 113 20525 EPROM human interface Rel. 2.5
- 4512 113 22323 EPROM rotor control HS
- 4512 109 24961 OM OPTIMUS V3.5, German
- 4512 109 24971 OM OPTIMUS V3.5, English
- 4512 109 24991 OM OPTIMUS V3.5, French
- 4512 109 25001 OM OPTIMUS V3.5, Spanish
- 4512 984 25551 UN UK OPTIMUS RAD/RF rel 3.5
- 4512 980 59421 FCO74200002 - Optimus RAD / RF release 3.x upgrade to release 3.5

### **Note**

The modification kit is available free of charge till the end of April 2003 at the SL Hamburg. Please indicate the generator serial number when ordering the modification kit.

**PROCEDURE:**

- Upload the new firmware.
- Exchange the user desk EPROM.
- Exchange the rotor control HS EPROM if units 4512 104 7142. or 4512 104 7146. are present.
- Detailed description in instruction manual (4512 984 2551 UN UK OPTIMUS RAD/RF rel. 3.5).

**PARTS DISPOSAL:**

All parts are to be disposed of in a safe way in accordance with local safety regulations.

**DOCUMENTATION:**

- Log this action in section "History record" of the system reference manual.
- File this FCO in section "Service information" of the system reference manual.
- Fill out the attached action notification report and send it to your SSD Customer Support Manager.

# FCO ACTION NOTIFICATION REPORT

## For local SSD use only; do not return to PMG.

TITLE : <i>Optimus RAD / RF upgrade to Rel. 3.5</i>	
CLASSIFICATION : <i>action for performance retrofit on failure</i>	FCO REF. NO.: <i>74200002</i>
APPLIES TO : <i>All Optimus RAD / RF</i>	

HOSPITAL / ADDRESS :	
LOCATION / FW SITE NO.:	SALES ORDER NO. / OA NO.:
PRODUCT NUMBER :	<input style="width: 100%;" type="text"/>
UNIT SERIAL NUMBER :	<input style="width: 100%;" type="text"/>

<b>ACTION ON THIS UNIT WAS:</b> (select one)	JOB NO. / SERVICE INCIDENT NO.:
<input type="checkbox"/> Completed per instruction on _____ DATE <input style="width: 150px;" type="text"/>	
<input type="checkbox"/> Completed by the factory prior to delivery.	
<input type="checkbox"/> Not completed as this unit is not affected per instruction because: (state reason) _____	
<input type="checkbox"/> Not completed because customer has unit in storage. Required parts & instructions received by the customer.	

CUSTOMER ACKNOWLEDGEMENT (Required for **MANDATORY ACTIONS** only).  
The **REASON and PURPOSE** of this modification have been explained to me.

CUSTOMER NAME (PLEASE PRINT)	TITLE
CUSTOMER SIGNATURE	DATE

BRANCH REGION / DEALER : _____	SERVICE UNIT / SERVICE AREA NO.: _____
SIGNATURE CUSTOMER SUPPORT ENGINEER	DATE
SIGNATURE CUSTOMER SUPPORT MANAGER	<b>MAIL TO : SSD Customer Support Manager</b>