```
                                        .TITLE  TSOVR - Overlay handler for mapped system regions
                                ;
                                ;  This overlay handler replaces the normal RT11 handler in SYSLIB at link
                                ;  time.  The calling sequence remains the same as documented in the RT-11
                                ;  System User's Guide chapter 11.  This handler is called by a dummy
                                ;  subroutine of the following form:
                                ;
                                ;       JSR     R5,$OVRH        ;call to common code for overlays
                                ;       .WORD   <OVERLAY # * 6> ;# of desired segment
                                ;       .WORD   <ENTRY ADDRESS> ;actual core address (virtual)
                                ;
                                ;  This routine intercepts the overlay request and maps KPAR5 to the
                                ;  address in physical memory where the segment was loaded.
                                ;

000000                                  .PSECT  O$HAND,GBL

                                ;  Global definitions
                                        .GLOBL  $OVRH,OVRLEN,OVRHC,OVRADD,$OVTAB,O$HAND

                                ;  Global references
                                        .GLOBL  PSW,SYSMAP,MAPSYS

                                        .ENABL  LC
000000                          O$HAND:
000000                          $OVRH:
000000  010546                          MOV     R5,-(SP)        ;save a pointer to the argument list
000002  011505                          MOV     (R5),R5         ;obtain the segment number of the system region
000004  004767  0000000G                CALL    MAPSYS          ;call the mapping system routine
000010  012605                          MOV     (SP)+,R5        ;restore the pointer to the argument list
000012  005725                          TST     (R5)+           ;get to the module entry point
000014  011505                          MOV     @R5,R5          ;obtain entry of address of mapped module
000016  000205                          RTS     R5              ;enter the system mapped region
        000020                  OVRLEN = . - $OVRH              ;length of the overlay handler
                                ;
                                ;  OVRHC is used by the root and mapped regions to call other mapped
                                ;  regions.  It preserves the currently mapped region, sets a return address,
                                ;  and calls the system overlay handler.  Upon return, it restores the
                                ;  previously mapped region and returns to the caller.
                                ;
000020  011646                  OVRHC:  MOV     (SP),-(SP)      ;move the return address down one location
000022  013746  0000000G                MOV     @#KPAR5,-(SP)   ;save the system mapping region on the stack
000026  012746  000046'                 MOV     #OVRET,-(SP)    ;save the return address on the stack
000032  017646  000004                  MOV     @4(SP),-(SP)    ;obtain the entry address
000036  062766  000002  000006          ADD     #2,6(SP)        ;set return past the module overlay address
000044  000136                          JMP     @(SP)+          ;jump into the overlay handler
                                ;
                                ;  OVRET will return from the OCALL macro.
                                ;  The C-bit must be preserved on entry until the return.
                                ;
000046  013766  0000000G 000004 OVRET:  MOV     @#PSW,4(SP)     ;save the current psw
000054  012637  0000000G                MOV     (SP)+,@#KPAR5   ;restore system overlay mapping
000060  000002                          RTI                     ;return to the caller

000062  000000'                 OVRADD::.WORD   $OVTAB          ;point to overlay handler table
                                ;
                                ;  Overlay table structure:
```

```
     58                                 ;
     59                                 ;       loc 64 --> $OVTAB:
     60                                 ;                       .WORD   <IDENTIFIER>,<KPAR5>,<WORD COUNT>
     61                                 ;                       DUMMY SUBROUTINES FOR ALL OVERLAY SEGMENTS
     62                                 ;
     63 000000                                  .PSECT  $OTABL,D,GBL,OVR
     64
     65 000000                          $OVTAB::
     66
     67          000001                         .END
Errors detected:  0

*** Assembler statistics


Work  file  reads:  0
Work  file writes:  0
Size of work file:  45 Words  ( 1 Pages)
Size of core pool:  17920 Words  ( 70 Pages)
Operating  system:  RT-11

Elapsed time:  00:00:01.24
DK:TSOVR,LP:TSOVR=DK:TSOVR/C/N:SYM
```

Cross reference table (CREF V05.05)

$OVRH	1-19	1-26#	1-34
$OVTAB	1-19	1-55	1-65#
KPAR5	1-42	1-52*	
MAPSYS	1-22	1-29	
O$HAND	1-19	1-25#	
OVRADD	1-19	1-55#	
OVRET	1-43	1-51#	
OVRHC	1-19	1-41#	
OVRLEN	1-19	1-34#	
PSW	1-22	1-51	
SYSMAP	1-22		