\*\*\* IMPORTANT NOTE \*\*\*

Far Memory Support is only available in the PK51 package.

If you have an CA51, DK51, or Evaluation Package the far memory

support is not available and this example will not work.

The following example program shows you how to use xdata banking with

the Evatronix R8051XC core.

In this example we are using 7 memory banks for xdata variables.

Refer to the "Linker/Locater User's Guide - Bank Switching - Configuration"

for more information.

C51 provides you with the 'far' memory type that can be used to

access large memory. The memory accesses routines are part of the

XBANKING.A51 configuration file. The example includes a configured

version of the XBANKING.A51 file.

You may use the 'far' memory banking together with code banking

to expand the program code memory.

The 'far' memory type is handled at LX51 linker/locater level with

the memory class:

HDATA memory class for the 'banked' xdata memory.

To configure the LX51 Linker/Locater you the following options

under Options for Target - LX51 Locate:

Disable: Use Memory Layout from Target Dialog.

Enter under User Classes:

XDATA (X:0x0-X:0x7FFF), CODE (C:0x0-C:0x7FFF),

HDATA (X:0x018000-X:0x01FFFF, X:0x028000-X:0x02FFFF, X:0x038000-X:0x03FFFF, X:0x048000-X:0x04FFFF,

X:0x058000-X:0x05FFFF, X:0x068000-X:0x06FFFF, X:0x078000-X:0x07FFFF)

The simulator is also configured to simulate xdata banking using the -XB 95 parameter under

Project - Options - Debug - CPU DLL Parameter.

The logical memory regions defined with the linker are mapped to physical memory as shown below:

LOGICAL VIEW (TOOLS) PHYSICAL VIEW (HARDWARE)

------------------------------------------------------------------

X:0 - X:0x007FFF (common area) 0 - 0x007FFF

X:0x008000 - X:0x00FFFF (bank 0) 0x008000 - 0x00FFFF !do not use bank 0!

X:0x018000 - X:0x01FFFF (bank 1) 0x008000 - 0x00FFFF

X:0x028000 - X:0x02FFFF (bank 2) 0x010000 - 0x017FFF

: : : :

X:0x078000 - X:0x07FFFF (bank 7) 0x038000 - 0x03FFFF