

Technical Bulletin #7How to upgrade the PIC chip in a MkII Scale Board

If you have a MKI Scale Board, please contact Vale-Tech UK or your nearest authorized Service Agent for further instructions.

Usually it is only necessary to upgrade the software in the IDS to either add a new feature or prevention future problems. Normally this procedure is simply carried out on the PC, but in some cases it can involve changing a chip (known as a PIC) on the Scale Board, which is located inside the machine.

Warning!



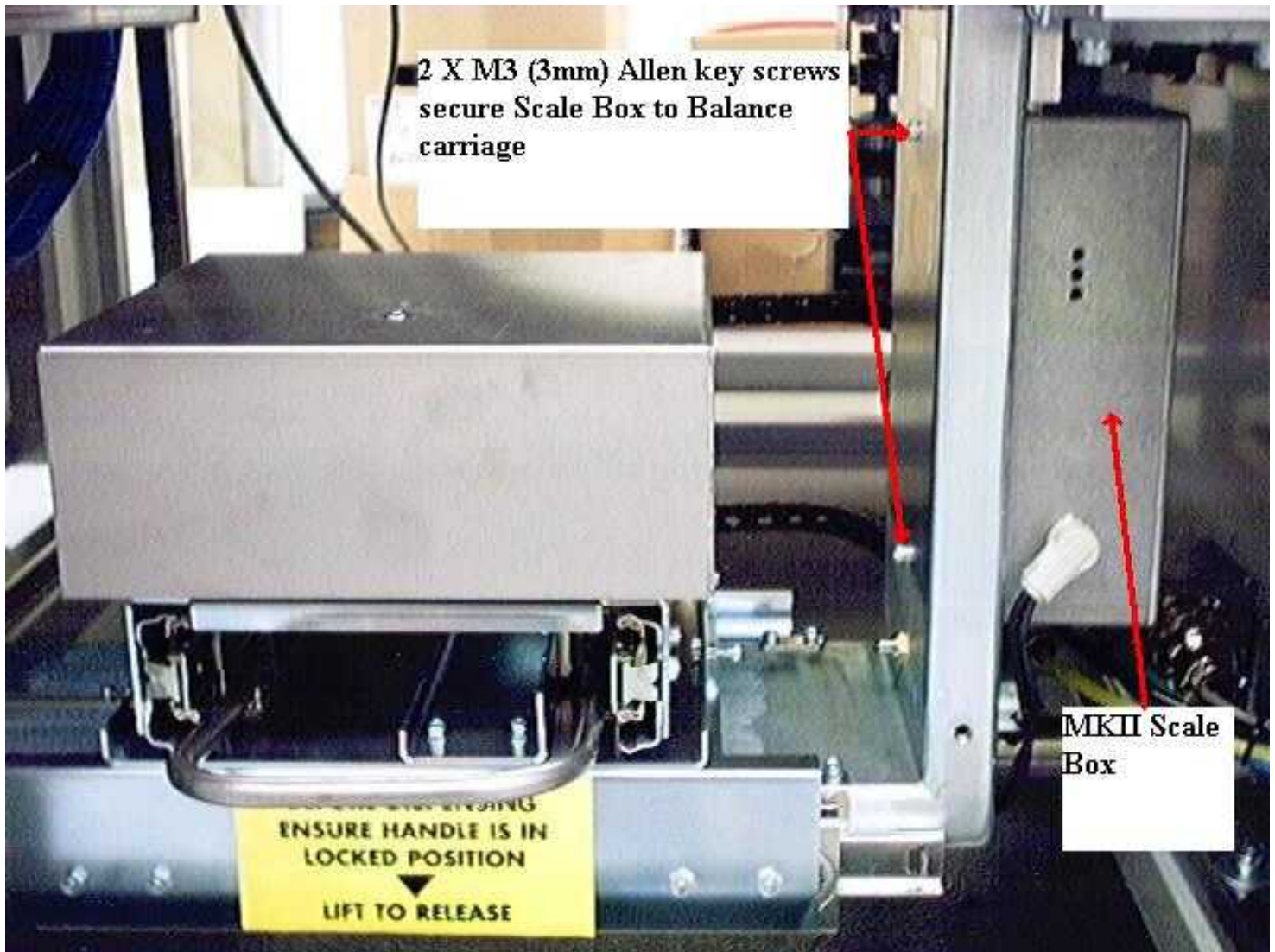
NOTE: PLEASE ENSURE THAT THE “EMERGENCY STOP SWITCH” HAS BEEN DEPRESSED/ENABLED ON THE IDS, BEFORE ATTEMPTING TO CARRY OUT ANY WORK ON THE IDS!

What do I do now?

It is possible to easily replace the PIC on the Scale Board, however it is good working practice to use the correct extraction/insertion tool when removing or fitting any Integrated Circuits or IC's

NOTE: FULL Anti-Static protection and precautions should always be observed when handling PIC devices

Figure 1. Shows location of MKII Scale Box on IDS10K (IDS front door in the open position)



Removing the Scale Box

1. With the Balance/Scale in the Home position (front and to the right)
2. Open the front door of the IDS machine
3. Locate the Scale Box (secured to right hand side of Balance carriage)
4. Using a 3mm Allen Key, remove 2 x Allen Head screws that secure the Scale Box to the side of the Balance carriage
5. Remove the following connections to the Scale Box

Front of the Scale Box, from top to the bottom

- Micro switch Sensors Connector (Audio DIN type)

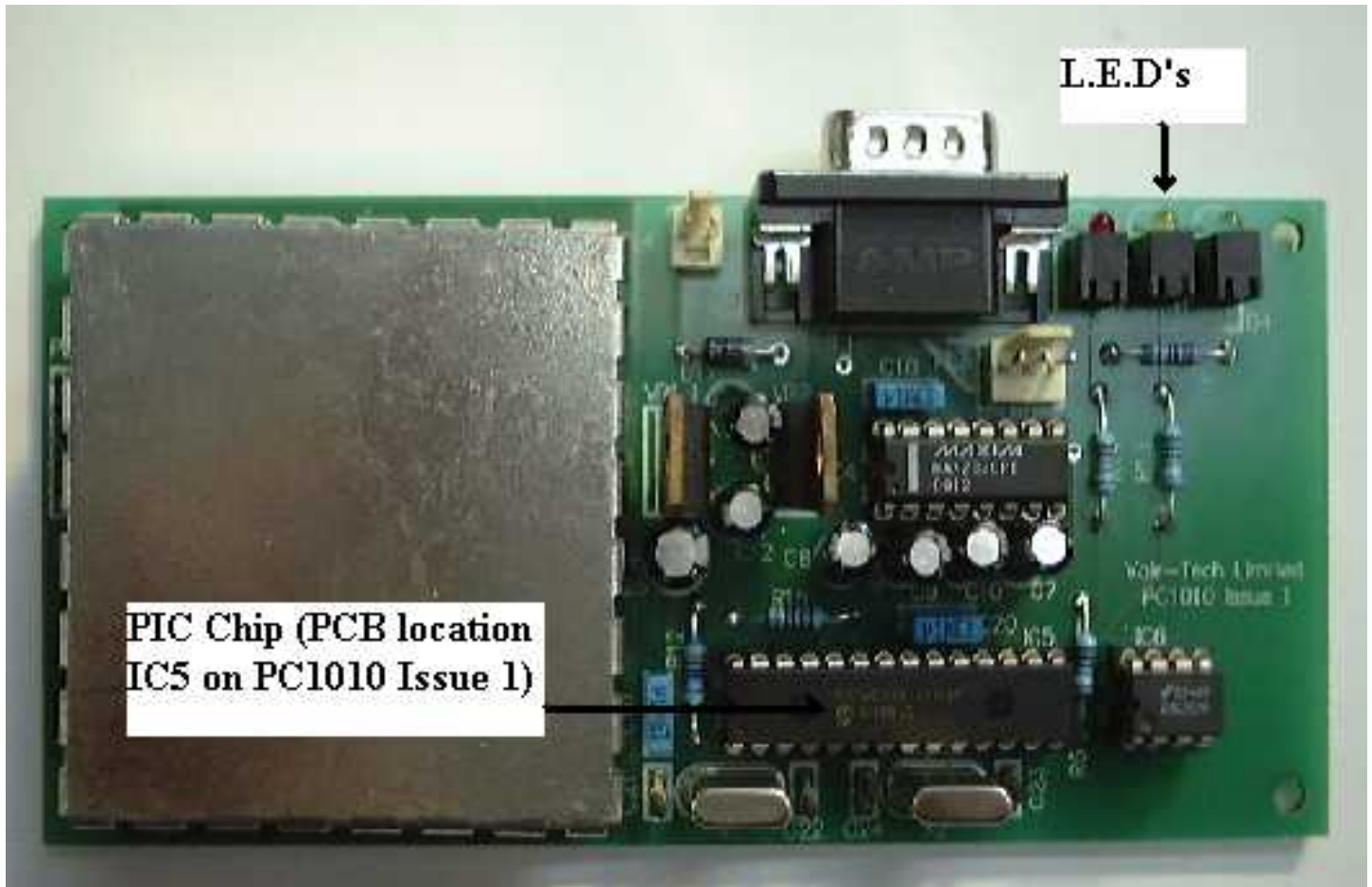
Rear side of the Scale Box, from top to the bottom

- Scale Board Load cell Output Connector (Amphenol type)
- Load cell connector (screw type)
- Balance Extend/Retract Green and Blue air pipes (push/lock fit)
- Locking Handle Switch Jack Plug (Stereo Jack Plug type)

Remove the Scale Board from the IDS machine

Now using a small cross head screwdriver, remove the 6 x cross head screws that secure the lid of the Scale box

Figure 3. Shows the L.E.D and PIC location on the PC1010 MKII Scale



Board

- Locate the PIC IC (Position IC5 on PCB 1010 Issue 1)
- Wearing Anti-static precautions, remove the PIC using an IC extraction tool
- Replace with new PIC taking care to ensure that the orientation is correct for the new PIC IC, and that none of the legs of the PIC IC are damaged.

NOTE: To replace the Scale Board repeat the above removal procedure, but in the reverse order.

How do I know if the Scale Board is working ok?

The MKII Scale Board has 3 colored L.E.D lights (see Figure 3. below). The L.E.D's are clearly visible through 3 holes located on the front of the Scale Box, when viewed from the front of the IDS machine. These 3 colored L.E.D's are used as indicators in accordance to whether there is Power and Input/Output to the Scale Board. These lights can be used to determine if the Scale Board is functioning correctly.

L.E.D positions

TOP = Green indicates POWER to the Scale Board

MIDDLE = Yellow indicates Communication OUT from the Scale Board

BOTTOM = Red indicates Communication IN to the Scale Board

Figure 3. Shows the front connection and L.E.D's on the MKII Scale Box

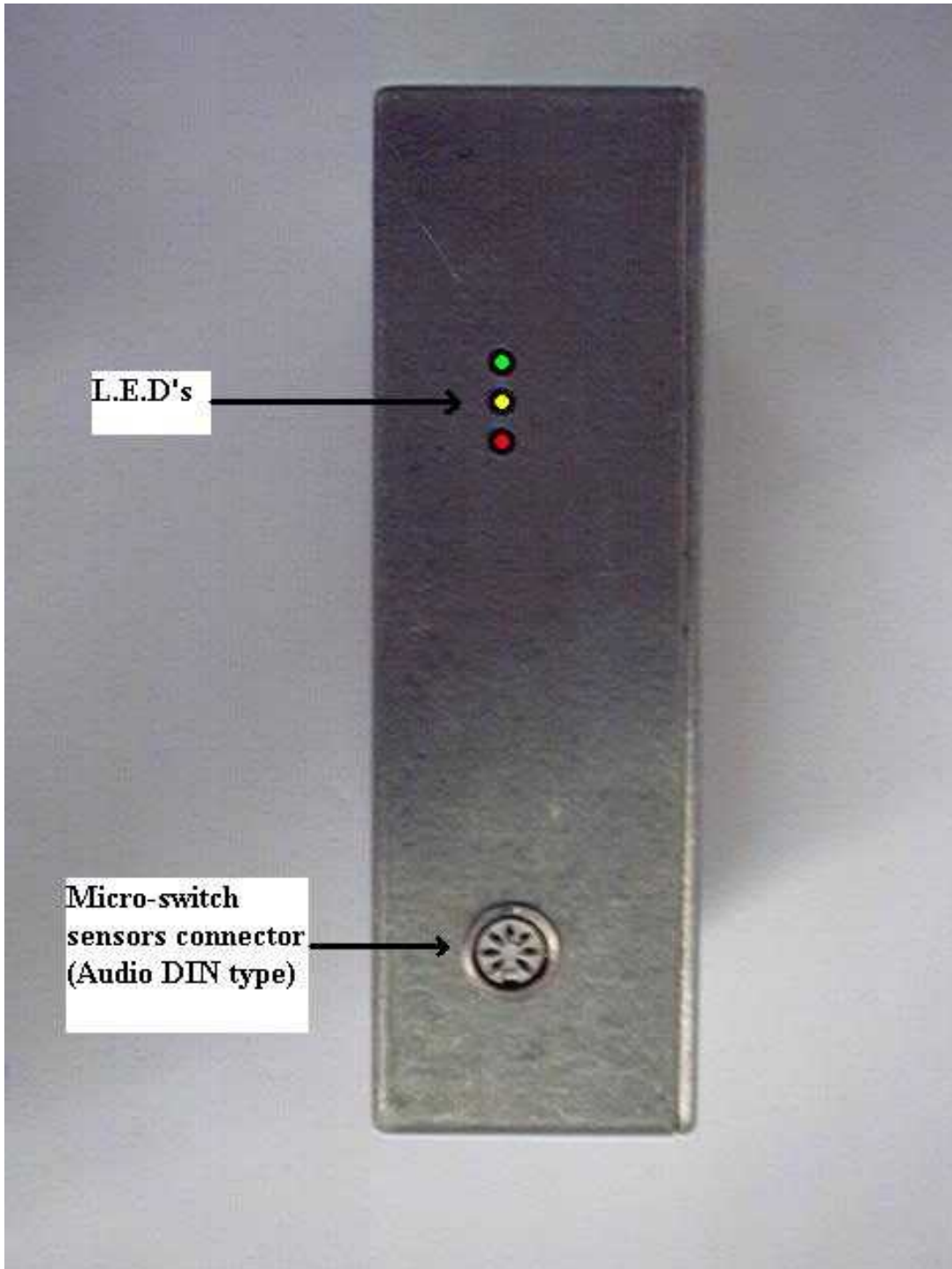


Figure 4. Shows the rear connections to the MKII Scale Box

