

Pressure Compensation for arm
movement position in ^{B.P.} recording.

If the B.P. recordings must be made
with the arm in all position then compensation
schemes are possible. A differential strain

~~mounted on the arm~~ A weighted strain gauge

can be mounted ~~on it~~ at the center of axis
(^{engineering} ~~in mechanical~~, not anatomic terminology)
of rotation of the arm, about the shoulder joint.

The weight would correspond to length of
the liquid column from the rotation point
to the cuff level. The strain gauge would
be sensitive only to forces in the vertical
plane such that with the arm hanging
cuff at ventricular level no compensation

will occur as the angle of the arm is increased to vertical increasing force corresponding to the tilting of a liquid column will occur. A second such compensation ~~was~~ for the equivalent ventricular-axis column will be required for compensation of the body through a vertical axis say lying down or standing on ones head. ~~Atto~~ The compensating voltages would correct ~~strain~~ pressure strain gage voltages before recording. Although this is relatively straight forward it may be worth asking if the additional complexity will be justified in the probable mode of operation imposed by cuff & K-sound measurement of B.P.

Such a system will ~~be~~ ^{be} limited
to the amount of ^{arm} activity allowed during
measurement. Although ~~physiological~~ ^{effects} on
psychological activity ~~feedback~~ to the subject
must be minimized if practical results are to
be obtained he should stop any vigorous
activity in the arm & in this case simply
lowering the arm to table level or by the
side would reduce the error to little more
than 5 mm. Hg. in the worst case. One
could postulate activity such as climbing
when the cycle occurs but again the
machine will require cessation of activity.
~~Such compensation can~~.