Calibration Instrument

Multimeter (DVM):

        FLUKE 45: measures the DC current
        KEITHLEY 2000: measures the DC voltage

Power supply:

        CHROMA 61601 AC power supply

Cautions
- When the calibration is conducted, the ambient temperature should be within the range of $25℃ \pm 2℃$. All testing instruments and the supply power must be preheated for 30 minutes before the calibration.
- As when the FLUKE 45 measures a current as high as 9.5A, the sample resistance temperature will increase and give rise to a change in resistance value, you should test the high current as soon as possible.

Calibration Procedures

Turn on the unit by pressing the "Vset" and Power keys simultaneously; the display will show as follows:

```
CALIBRATE  MODE:
      SECURED
```
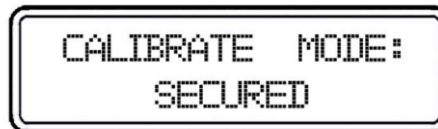
Press "secure" key after pressing "2nd" key and you will see the following graph:

```
INPUT   PASSWORD
        _
```
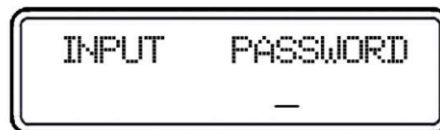
Input the password "**003662**", then press "Enter" key to enter the calibration menu, which is shown as below:

```
CALIBRATE  MODE:
CV* CC  OV  DEF
```

Select CV, CC or OV mode calibration by direction key. If "DEF" is selected, all calibration parameters are restored to default value. CV, CC and OV mode should be calibrated one by one, which is the correct calibration sequence. Return to calibration menu after each mode calibration is completed. Press "Clear" key to exist calibration state.

3.1 CV Mode Calibration

In this mode, three voltage points: 0.5V, 22V, 34.5V (using the 3662A, for example) should be calibrated.

3.1.1 Wiring
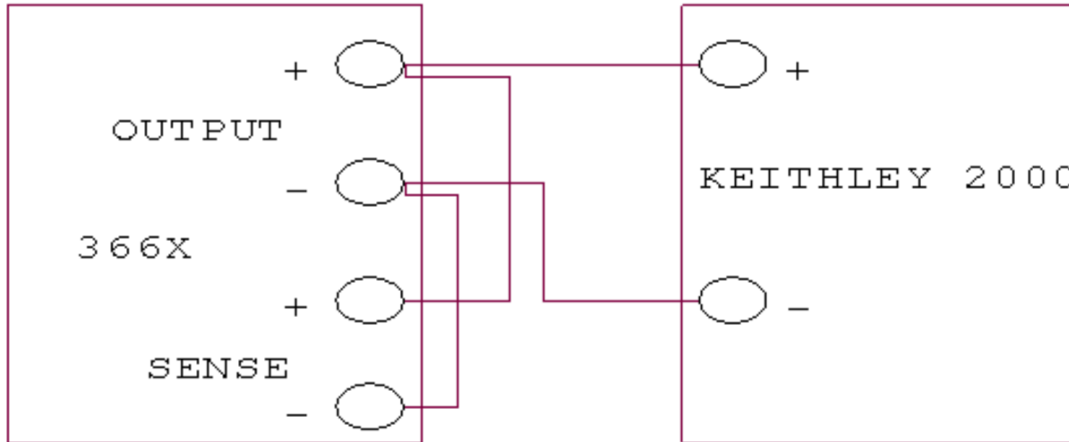
3.1.2   0.5V Calibration

Press "Enter" key, you will see the following figure in the display:

Input the value you read from KEITHLEY 2000, which is retained to four decimal places. Press "Clear" key to remove the wrong input value of current digit. Then press "Enter" key to confirm.

3.1.3   22 V Calibration

Press "Enter" key to verify and then you will see the followings:

Input the value you read from KEITHLEY 2000, which is retained to four decimal places. Press "Clear" key to remove the wrong input value of current digit. Then press "Enter" key to confirm.

3.1.4 34.5V Calibration

Press "Enter" key to verify and then the display will show as follows:

```
CALI  VOLT  HIGH:
VOLT=         _V
```
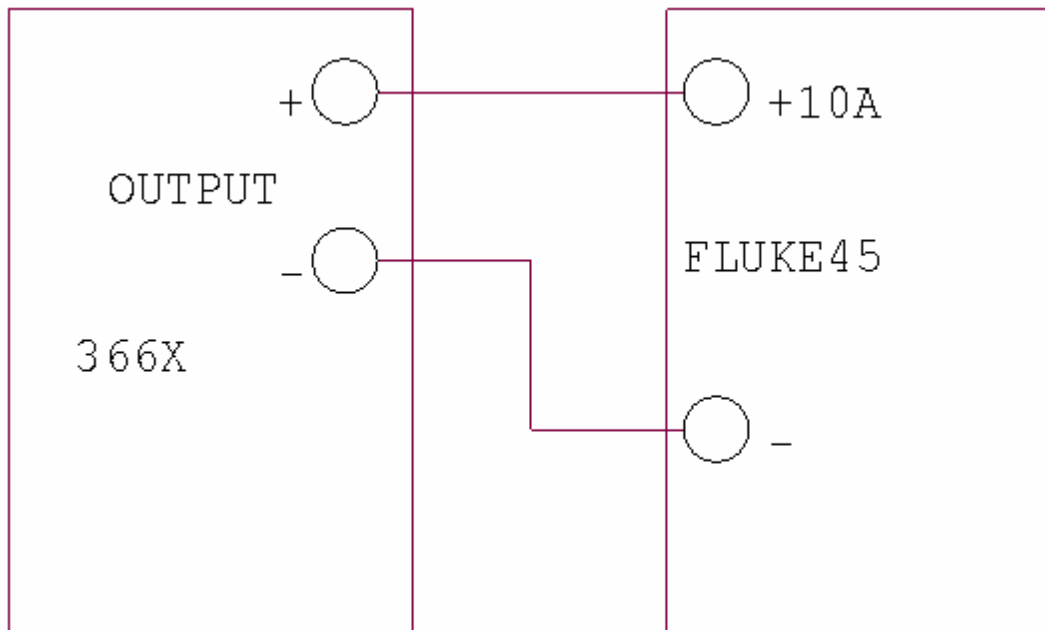
Input the value you read from KEITHLEY 2000, which is retained to four decimal places. Press "Clear" key to remove the wrong input value of current digit. Then press "Enter" key to confirm and exit to calibration menu. Now, voltage calibration is completed.

3.2 CC Mode Calibration

In this mode, three current points: 0.5A、6A、9A (take 3662A as example) should be calibrated.

3.2.1 Wiring

3.2.2 0.5A Calibration

Press "Enter" key, you will see the following figure in the display:

```
CALI  CURR  LOW:
CURR=         _A
```

Input the value you read from FLUKE 45, which is retained to four decimal places. Press "Clear" key to remove the wrong input value of present digit. Then press "Enter" key to confirm.

3.2.3   6A Calibration
Press "Enter" key to verify and then you will see the followings:

```
┌─────────────────────────┐
│ CALI  CURR  MID:        │
│ CURR=          _A       │
└─────────────────────────┘
```

Input the value you read from FLUKE 45, which is retained to four decimal places. Press "Clear" key to remove the wrong input value of present digit. Then press "Enter" key to confirm.

3.2.4   9A Calibration
Press "Enter" key to verify and then the display will show as follows:

```
┌─────────────────────────┐
│ CALI  CURR  HIGH:       │
│ CURR=          _A       │
└─────────────────────────┘
```

Input the value you read from FLUKE 45, which is retained to four decimal places. Press "Clear" key to remove the wrong input value of present digit. Then press "Enter" key to confirm.

3.3   OV Calibration
OV calibration is a kind of automatic calibration without manual operation, which starts after the voltage calibration is conducted and is shown in the following:

```
┌─────────────────────────┐
│ CALI  OVER  VOLT        │
│ AUTO  CALI              │
└─────────────────────────┘
```

When the calibration is completed, the display will go back to the calibration menu.