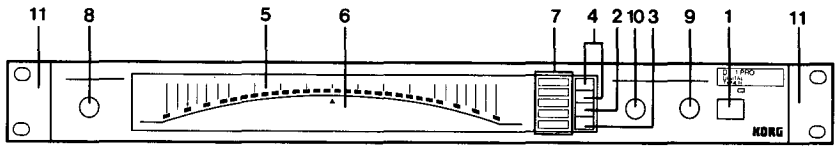
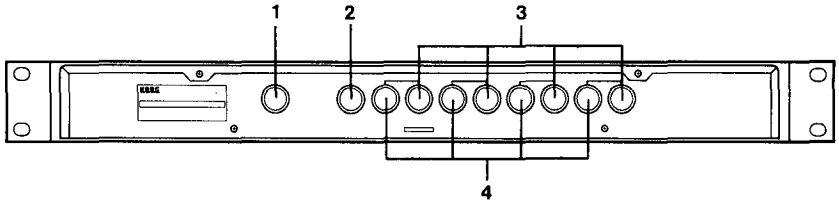
DT-1 PRO

OWNER'S MANUAL

Front Panel



Rear Panel

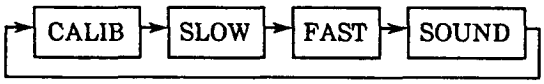


Names of Each Part

Front Panel

1. **POWER switch**

2. **MODE switch**
   Push this switch to change the modes in the following sequence:



   △ CALIB (calibration): A mode to establish the reference pitch. The range is A = 438Hz~445Hz at one hertz steps.
   △ SLOW/FAST: There are two selectable meter response speeds for tuning. The SLOW mode is suitable for measuring musical instruments with an unstable pitch or a human voice. The FAST mode is best used in a situation where an indication of slight pitch variations is needed.
   △ SOUND: A mode to deliver the reference pitch from the DT-1 Pro to an external amplifier and to tune the instrument while it is listened to. Connect the sound out terminal to an external amplifier to monitor the reference pitch (four octaves from C2 to B5.)

3. **MUTE switch**
   A switch to turn the output of OUT 1 off. This mute allows silent tuning of an instrument while viewing the DT1-Pro's meter.

4. **UP (▶)/DOWN (◀) switch**
   Used when establishing the reference pitch in the calibration mode or when establishing the reference sound in the sound mode.

5. **LED meter**
   A meter to measure and display pitch. Graduated every ten cents. Adjust the pitch of a musical instrument until the green LED at the center lights.

6. **LED for sound name/reference pitch indication**
   - Indicates the established reference pitch when the calibration mode is set.
   - Indicates sound name of the input pitch when the SLOW/FAST mode is set.
   - Indicates sound name of the output reference pitch when the sound mode is set.

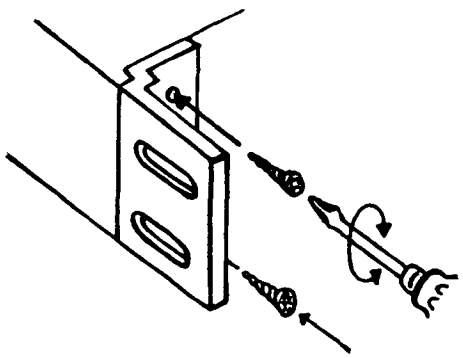
7. **Mode indication LED**
   An LED to indicate the mode currently established.

8. **INPUT terminal**
   Sound source to be turned is connected here. (Electric guitar, electronic instrument and external line signals). When this terminal is connected with the sound source, the terminal of IN 1 on the rear panel becomes invalid.

9. **MUTE terminal**
Connect a foot switch (type: ⅂ PS-1, etc.). When the foot switch is depressed the output of OUT 1 becomes muted enabling silent tuning during a performance.

10. **Headphone terminal**
To monitor collectively all the sound that is input. (IN 1 on the rear panel is invalid when a jack is inserted into INPUT on the front panel.)

11. **EIA rack adapter**
An adapter for mounting the unit in a standard case or rack. Remove the screws on the unit and use the screws supplied with the adapter.



Rear Panel

1. **SOUND OUT terminal**
A terminal to output the reference pitch in the SOUND mode. Monitor it with this terminal connected to an amplifier or use headphones.

2. **MIX OUT terminal**
A terminal to collectively output all the sound that has been put in. (IN 1 on the rear panel is invalid when a jack is inserted into INPUT on the front panel.)

3. **INPUT terminal (1~4)**
An input terminal to connect electric guitar, electronic instrument and external line signals. If a jack is inserted into INPUT on the front panel, IN 1 terminal becomes invalid as the front panel terminal takes priority.

4. **OUTPUT terminal (1~4)**
Individual outputs for instruments connected to inputs 1~4.

Basic Knowledge of Tuning

1. Cent indication
A cent is the smallest unit to indicate the pitch of a sound. A halftone consists of 100 cents and an octave 1200 cents. The meter on the DT-1 Pro indicates the pitch of a sound that is input with the measurement in cent scales. Since one cent is a very small unit, a different of about ±3 cent is inaudible.

2. Reference pitch and calibration
To tune each musical instrument, the A4 pitch at the center of the piano range (A4=440Hz) is used as the reference pitch. This reference slightly differs depending on the region or the times. In recent years, slightly higher pitch is often used for tuning. (A4=441~444Hz). The DT-1 Pro establishes the reference pitch of A4 in the range from 438Hz to 445Hz. (Establishing this reference pitch is called calibration.)

Calibration (Establishing Reference Pitch)

1. Turn POWER switch on.

2. Verify that the mode is set to CALIB.

3. Set the pitch to the desired reference pitch by UP/DOWN switch. Setting can be performed in eight steps in one hertz within the range of 438~445Hz. (The mode just after the power supply is turned on is set to CALIB with the reference pitch at 440Hz.) Pushing UP makes increment by one hertz and DOWN decrement by one hertz.

Tuning while watching LED meter

1. Connect electronic instrument (such as electric guitar) to the INPUT terminal. Tuning while listening to the instrument sound is possible if OUTPUT terminal is connected to an amplifier at this time.

2. Turn POWER switch on. (Verify that the mode is set to CALIB.)

3. Set the reference pitch by UP/DOWN switch (calibration).

4. Select either SLOW or FAST by MODE switch.
   - FAST mode indicates immediately the

measured frequency. This gives extremely excellent tracking capability to pitch changes, which makes the mode suitable for tuning keyboard instrument, electric guitar and bass.

- SLOW mode has an effect of stabilizing the indication even if the pitch fluctuates broadly during measurement. Therefore, it is suitable for tuning musical instruments such as wind instrument, acoustic guitar and human voice.

5. When a musical instrument is played with a single tone, the sound name is indicated on sound name/reference indication LED. If the sound played differs from the indication, it means the pitch is extremely out of tune. Adjust the pitch of the instrument so that the correct sound name is displayed. (This is called coarse adjustment.)

6. Adjust the pitch of the instrument watching the meter indication so that the green LED at the center lights. (This is called fine adjustment.)

7. For a string instrument, perform the operation of Items 4 and 5 on each string.

Note: There may be a difficulty of measuring once is a great while depending on tone quality, for example, a tone containing many overtones. In such a cases, repeat measurements with attempts of changing sound volume and sound name.

Tuning by Reference Sound

1. Connect SOUND OUT terminal to an external amplifier.

2. Turn POWER switch on. (Verify that the mode is in CALIB.)

3. Set the reference pitch by UP/DOWN switch (calibration).

4. Turn the power switch of the amplifier on. Keep the amplifier volume down at this time.

5. Select SOUND mode by MODE switch. As the external amplifier volume is raised, the sound indicated on the sound name indication LED is output. If the sound that is output differs from the desired sound name or pitch adjust to the desired sound name and pitch by pushing either the UP or DOWN switch.
   - The reference pitch that is output has a range of four octaves from C2 to B5.
   - Pushing the UP and DOWN switches simultaneously enables resetting of the sound name and pitch to A440.

6. Tune the pitch of the instrument while listening to the reference tone that has been set at step 5.

7. Fine adjustment of the pitch is possible by performing the operation described in lines 4 through 7 in "Tuning while Watching LED Meter" following the above operation.
   - Effective method of tuning
     For tuning a musical instrument of which the pitch is extremely shifted, fast and accurate tuning is possible by making coarse adjustment by listening to the reference sound which is followed by fine adjustment while watching the meter.

Note: If the reference sound is output with the input terminal kept connected to the musical instrument, the reference sound may become weak. Adjust the volume of the connected instrument in such a case.

Precautions

Location of use:

To avoid failures, do not use the unit in these conditions.

- direct sunlight
- high temperature and himidity
- areas with high level of sand and dust
- near a magnetic field or excessive levels of static electricity

Gentle handling:

Imposing undue force on switches and other parts or dropping the unit may cause failures.

Maintenance:

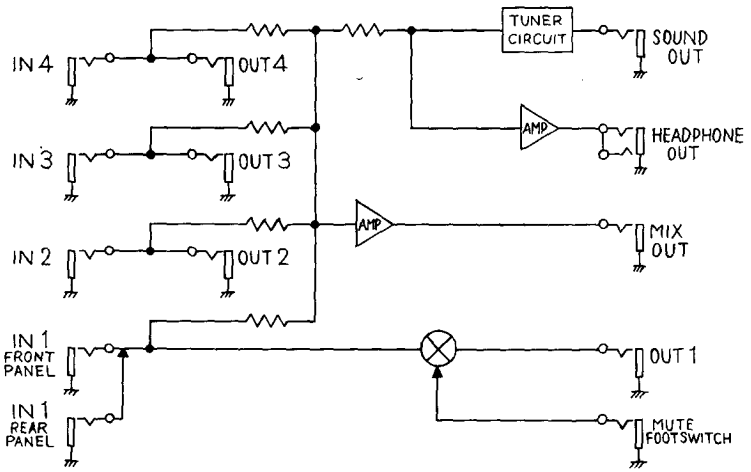
Clean the outer surface with a soft and dry cloth. Never use solutions such as benzine, paint thinner or polishes that are highly inflammable.

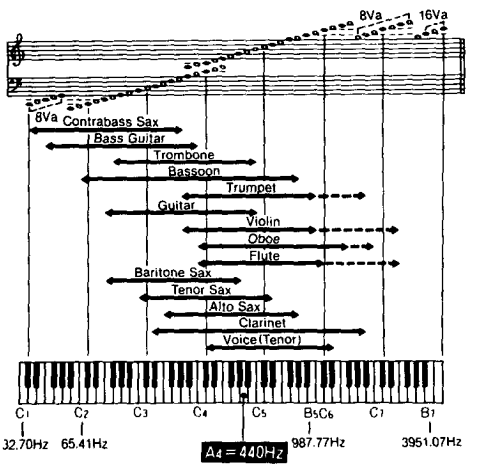
Warranty card:

Be sure to fill out and promptly mail your warranty card to the address indicated. This ensures that your unit is guaranteed for the specified factory warranty period.

Specification/Optional Item

Scale:	12 tone scale
Meter:	cent indication (−50k to +50 cents)
Indication solution:	2 cents (−20 to +20 cents), 10 cents (−50 to −21 cents, +21 to +50 cents)
Measurement range:	C1 (32.70Hz)~B7 (3951.07Hz), 7 octaves (at A=440Hz)
Measurement accuracy:	±0.5 cent
Reference oscillation sound:	C2 (65.4Hz)~B5 (987.77Hz), 4 octaves (at A4=440Hz)
Calibration range:	A4=438Hz~445Hz (1Hz step)
Indication LED:	Sound name indication LED × 12 and reference pitch indication LED × 8, mode indication LED × 5, tuning indicator LED × 28 (red), × 1 (green)
Cennecting terminal:	Front panel - INPUT, MUTE, PHONE
Rear panel:	IN (1~4), OUT (1~4), SOUND OUT, MIX OUT
Power supply:	100V AC, 50/60Hz
Outline dimensions:	435 (W) × 221 (D) × 44 (H) mm
Weight:	2.5 kg
Accessory:	EIA rack adaptor





NOTICE:
Korg products are manufactured under strict specifications and voltages required by each country. These products are warranted by the Korg distributor only in each country. Any Korg product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacture's/distributor's warranty and liability. This requirement is for your own protection and safety.

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