



**KORG**

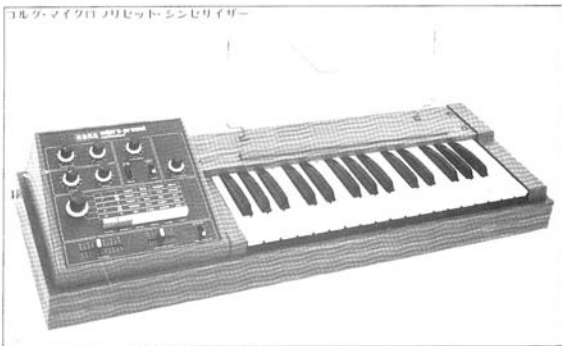
OWNER'S MANUAL

取扱説明書

# micro-preset synthesizer

M-500

コルグ・マイクロ・プリセット・シンセサイザー



## ■ シンセサイザーについて

ラジオやテレビのスイッチを入れてみて下さい。音楽番組に限らず、CMのバックやドラマのテーマ音楽に、或いはチョンマグの時代劇にさえシンセサイザーによる音楽が当り前になっている事にお気づきでしょう。

今、私たちは好むと好まざるとに拘らず、シンセサイザーの音に囲まれて生活していると言っても過言ではないのです。

では何故、シンセサイザーがそれ程までに「出番」の多い楽器になったのでしょうか。それは一日に言ってしまうと、この楽器が既成の楽器の音を真似たり、今まで誰も使った事のないユニークな音を創り出すことができるからなのです。

また、一般にシンセサイザーは主にメロディーを演奏する単音楽器であり、このことは音色を自由に変えたり、音の出し方を変えたり、音程を連続的に変化させられるという特長を形づくる要素にもなっています。

しかし、技術の進歩のお陰で、現在では非常に高価ではありませんが、和音の出せるポリフォニックシンセサイザーも作られるようになりました。

シンセサイザーの種類もいろいろと増えつつあります。(写真ご参照下さい)

また、シンセサイザーは電子オルガン、ステレオセット、ギターアンプ(キーボードアンプが望ましいのですが)に接続して音を出すことができますが、エコーマシンやフエーズシフター(コルグミスター・マルチ ¥15,000)、ボリュームペダル(コルグ2チャンネル ¥8,500)などを中間に接続することによって演奏効果を倍加することが可能です。

ポリフォニック  
シンセサイザー  
PS-3000



Polyphonic  
Synthesizer  
PS-3000

ポリフォニック  
シンセサイザー  
PS-3000



Polyphonic  
Synthesizer  
PS-3000

2 Voice  
シンセサイザー  
MS1V



2 Voice  
Synthesizer  
MS1V

フロント  
シンセサイザー  
MS1FS



Front  
Synthesizer  
MS1FS

2チャンネル  
シンセサイザー  
TMS



2 Channel  
Synthesizer  
TMS

2チャンネル  
シンセサイザー  
TR



2 Channel  
Synthesizer  
TR

シンセ  
ベース  
SB-100



Synthe  
Bass  
SB-100

## ■ On Synthesizers

Switch on the radio or the TV, music by synthesizers is commonplace not only in music programs but also as commercial background music and drama theme music.

You could say that we are surrounded by synthesized sound.

Then, why has the synthesizer become so popular?

In a word, it is because the synthesizer can imitate the sounds of the existing musical instruments and produce unique sounds which no one else has ever used.

Generally, the synthesizer is a monophonic instrument for playing melodies. This means that the synthesizer has the features that it can freely change tones and sounds, and continuously change tunes.

As a result of technological progress, a polyphonic synthesizer capable of producing chords is now available, though at a very high price; and an increasing variety of synthesizers are on the market. (see photo)

The synthesizer can produce sounds by connection to an electronic organ, stereo set or guitar amplifier (preferably a keyboard amplifier). And the effects can be doubled by connecting an echo machine, phase shifter (KORG Mr.Multi), or a volume pedal (KORG 2 - channel) between them.

## ■マイクロプリセットの特徴

このコルグ・マイクロプリセット・シンセサイザーは、アマチュアの電子オルガン愛好者から、プロのキーボード奏者まで、幅広くご愛用いただける画期的な小型シンセサイザーです。

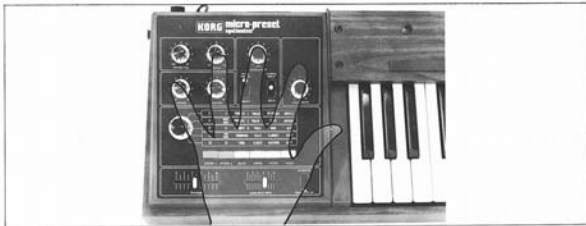
従来シンセサイザーは操作が複雑であると考えられていました。

このコルグ・マイクロプリセットはその複雑な操作を簡素化し、さらに、IC技術の導入によってシンセサイザーとしてのすべての機能を凝縮し、小型化いたしました。特に「シンセサイザーにおける操作パネル上のつまみは、鍵盤の一部である」との思想に基づき操作部の小型化に努めて、ほとんど手を動かさずにすべてのつまみを操作できるように設計いたしました。

初めてシンセサイザーに接する皆様にも、コルグ・マイクロプリセット・シンセサイザーによって新しい音を創造する喜びを、充分に味わっていただけるものと確信しております。

### 主な特徴

1. コルグ・マイクロプリセットは、2つ以上のプリセットセレクトスイッチを同時に押すことによりプリセット音のミックスができます。このため従来のプリセットシンセサイザーにはない多彩な音創りが可能です。
2. 演奏に効果的なつまみ(トラベラー、モジュレーションデプス、ボルタメント)をパネル下部にまとめて左手だけで自由に操作できる様にレイアウトされています。
3. 回路によって小型、軽量となったためにストラップを使用してスタンドプレーも可能です。
4. コルグ・マイクロプリセットは、電源スイッチをONしてから一回のチューニングだけで、常に正しい音程で演奏できます。電子オルガンや他の楽器と合奏することの多い、プリセットシンセサイザーにとって非常に重要なことです。



## ■Main Features

It is a revolutionary, compact synthesizer that can be used by a wide range of music lovers from amateur electronic organ players to professional Keyboard artists. It has long been believed that it is difficult and complex to play a synthesizer.

The new KORG Micro-preset synthesizer is not only simple to play but, thanks to IC technology, has all the functions of a synthesizer in compact form.

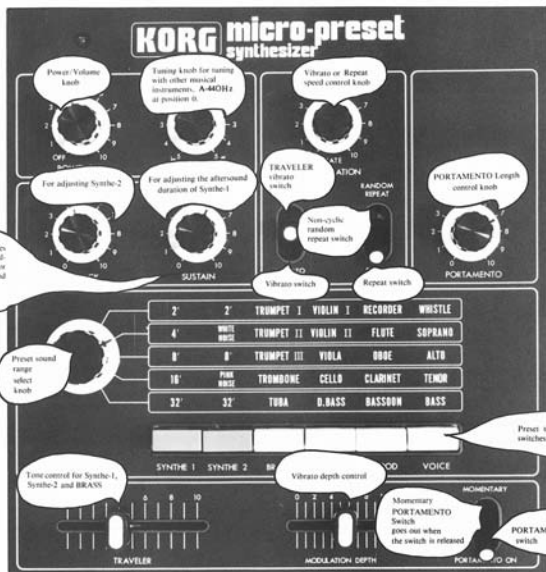
With the belief that knobs on the operation panel of a synthesizer are part of the keyboard, we have designed the operation panel to be as compact as possible so that the player may be able to operate all the knobs with little need of moving his hand. We are sure that you will be fully satisfied with the sounds you produce with this new KORG Micro-preset synthesizer.

### Main Features

1. This KORG Micro-preset Synthesizer can mix preset sounds by means of depressing more than two preset select switches at the same time. This means that it can produce a greater variety of sounds than the conventional preset type synthesizer.
2. Such effect knobs as TRAVELER, MODULATION DEPTH and PORAMENTO are located together in the lower part of the panel so they can be operated freely with the left hand alone.
3. The new KORG Micro-preset synthesizer is small in size and light in weight because its circuitry consists of ICs. This enables you to play the synthesizer in a standing posture by hanging it from your shoulder with a strap.
4. Once the KORG Micro-preset is tuned after it is switched ON, it is ready for playing in tune always. This is very important for a synthesizer which is often played with an electronic organ or other musical instruments, but there have been few synthesizer which meet this condition.



## ■ Operation Panel Description



## Effect of Switches

### Volume/Power Switch:

Tuning the knob clockwise will the power on and increase volume, pilot lamp will light.

### Pitch:

Adjust the pitch for tuning with other instruments.

### Portamento:

One note on the keyboard can be continuously connected with the next one played. If it is used long, an unrealistic tone is produced; and if it is used short, it can effectively produce the sounds of the trombone or violin.

**MOMENTARY**----- PORTAMENTO effect continues as long as this switch is on, but ceases when it is released.



**PORTAMENTO** does not work at the center position.

**PORTAMENTO ON**----- PORTAMENTO effect stays on.

### Portamento Switch:

### Traveler:

A wide-range tone control knob which works only with SYNTH-1, SYNTH-2 and BRASS. It permits unrealistic tonal changes peculiar to a synthesizer, and fine brass expressions. Standard tone at the center position.

### Vibrato Switch:

TRAVEL VIBRATO

----- A special vibrato effect similar to the tone produced when the TRAVELER knob is moved to the right and left. Works only with SYNTH-1, STNTH-2, and BRASS.



VIBRATO

----- VIBRATO does not work at the center position.

----- Change the intervals periodically to make the sounds expressive. Depress the key, and Vibrato works shortly later.

### Modulation Depth:

Control knob for adjusting the DEPTH of vibrato and travel vibrato.

### Repeat Switch:

RANDOM REPEAT

----- A non-cyclic repeat is obtained at the speed selected with the MODULATION RATE knob.



----- REPEAT does not work at the center position.

----- REPEAT ----- A sound is repeated periodically.

### Modulation Rate

Control knob for adjusting the speed of VIBRATO, TRAVEL VIBRATO, REPEAT and RANDOM REPEAT. Control knob for adjusting attack time. Works only with SYNTH-2

### Attack:

Control knob for adjusting aftersound duration. Works only with SYNTH-1 and SYNTH-2.

### Sustain:

## Preset Note

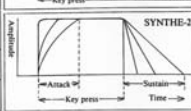
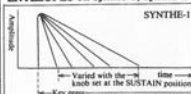
	Wave Forms	Features
BRASS	Saw-Tooth	The same effect as moving TRAVELER knob is produced in direct proportion to sound volume. (Expand effect)
STRING	Saw-Tooth	With little change of tone, the desired effect is produced by delaying attack.
WOOD	Square	Part of the tone components is emphasised to produce the tones peculiar to the respective instruments. (Bright effect)
VOICE	Saw-Tooth	Each time the key is pressed, the tone returns from a little down level to normal. (Pitch Bend effect)

synthe 1    synthe 2

## PRESET NOTES

	Wave Forms	Features
SYNTH-1	Pulse	Volume change (envelope) after depressing the keys is dependent only on the SUSTAIN knob regardless of key pressing time as shown. So this is suitable for synthesizing the tones of plucking and hitting the strings.
SYNTH-2	Saw-Tooth	A strong TRAVELER effect is produced to provide a strong EXPAND effect as BRASS. Most suitable for synthesizing so-called synthetic sounds.
	White Noise	Suitable for synthesizing the sounds of winds and running steam locomotive.
	Pink Noise	Suitable for synthesizing such sounds as waves and storms.

### ENVELOPES on synthe-1, synthe-2



## ■ Before Use

1. Avoid using the instrument near a heater or a stove, and keep it away from exposure to direct sunlight, much moisture, dust and vibration.

## ■ 接続方法

マイクロプリセットをお使いになるには、電源を入れなければなりません。裏パネルに出ている電源コードを使用場所のコンセントに差し込んで下さい。次に付属のシールドコードのアダプター側でない方を、裏パネルのアウトジャックに接続します。使用するアンプ等が電子オルガンやステレオの場合はHIGH側、ギターアンプやP Aシステムの場合はLOW側が適しています。アンプ等のジャックがピンジャックの場合は、シールドコード端末のアダプター部分を抜いてピンプラグとしてお使い下さい。尚、ボリュームペダルをお使いになる場合はペダルに接続後、下記の要領でアンプ等に接続して下さい。

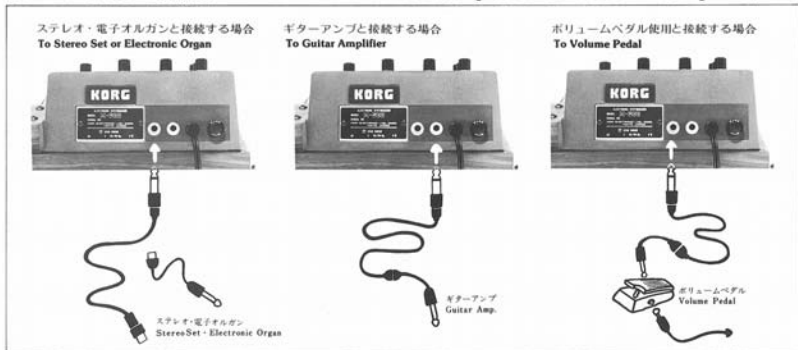
2. Avoid using it near a neon lamp, fluorescent light, transformer, or motor because the synthesizer may pick up noise.

## ■ Connecting Method

To use the Micro-preset, it must be connected to an electrical outlet. Connect the power cord from the rear panel into an electrical outlet. Then connect that end of the accessory shielded cord which has no adapter to the rear panel's out jack. Connect it to the H (high) jack in case of using an electronic organ or stereo amplifier; or to the L (low) jack in case of using a guitar amplifier or a PA system amplifier. When connecting it to an amplifier having a pin connector, remove the adapter from the shielded cord end, and use the pin plug on the cord end. When using the volume pedal, connect the pedal and then connect it to an amplifier in the manner mentioned below.

## ■ アンプなどとの接続例

## ■ Examples of connection to amplifier, etc.



## 仕様

鍵盤：F-C 32鍵

スケール：6.5オクターブ 32' 16' 8' 4' 2'

音源：A [ ] [ ] Pink Noise, White Noise

スイッチ：ビブラート——トラベルビブラート  
リヒート——ランダムリヒート  
ホルタメント——モーメンタリーホルタメント

コントローラー：ボリューム/パワースイッチ  
ピッチコントローラー  
アタックコントローラー  
サステインコントローラー  
モジュレーションスピードコントローラー  
ホルタメントコントローラー  
モジュレーションデプスコントローラー  
トラベルノブ

プリセットセレクター：

2	2	TRUMPET I	VIOLIN I	RECORDED	WHISTLE
4	4	WHITE NOISE	TRUMPET II	VIOLIN II	FLUTE SOPRANO
8	8	TRUMPET III	VIOLA	OBOE	ALTO
16	16	PINK NOISE	TOBACCO	CELLO	CLARINET TENOR
32	32	TUBA	B.BASS	BASSOON	BASS
		SYNTH 1	SYNTH 2	BRASS	STRING WOOD VOICE

その他：パイロット/モジュレーションスピードランプ

出力：アウトプット1 2VP-P 出力インピーダンス4KΩ以下  
アウトプット2 0.3VP-P \* 5KΩ以下

消費電力：4ワット

電源：100V 50/60Hz

ヒューズ：0.2(250VA)

大きさ：巾730×奥行250×高さ125(mm)

重さ：4.9 Kg

付属品：接続コード 講義立て ビニールカバー

## Specifications

Keyboard: F-C 32 Keys

Scale: 6.5 Octaves 32'; 16'; 8'; 4'; 2'

Sound source: A [ ] [ ] Pink Noise, White Noise.

Switches: Vibrato—Travel Vibrato  
Repeat—Random Repeat  
Portamento—Momentary Portamento

Controls: Volume/Power Switch  
Pitch Control  
Attack Control  
Sustain Control  
Modulation Speed Control  
Modulation Depth Control  
Portamento Control  
Traveler Knob

Preset Selectors:

2	2	TRUMPET I	VIOLIN I	RECORDED	WHISTLE
4	4	WHITE NOISE	TRUMPET II	VIOLIN II	FLUTE SOPRANO
8	8	TRUMPET III	VIOLA	OBOE	ALTO
16	16	PINK NOISE	TOBACCO	CELLO	CLARINET TENOR
32	32	TUBA	B.BASS	BASSOON	BASS
		SYNTH 1	SYNTH 2	BRASS	STRING WOOD VOICE

Others: Pilot/Modulation Speed Lamp

Output: OUTPUT 1 2Vp-p, Output Impedance less than 4KΩ  
OUTPUT 2 0.3Vp-p, Output Impedance less than 5KΩ

Power Consumption: 4 Watts

Power Requirements: Local Voltage 50/60Hz

Fuse: 0.2A (250VA)

Dimensions: 730mm (width)x250mm (depth)x125mm (height)

Weight: 4.9kgs

Accessories: Connecting Cord, Music Rack, Vynil Cover

NEW SOUNDS with  
**KORG**

京王技研工業株式会社

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FAX：(03) 323-2424 東京都品川区東品川7-27-6 5F 電話：(03) 320-5681  
関西支店：大阪市北区茶屋町18-21 東崎ビル4階 電話：(06) 374-0691 (代)  
KEIO ELECTRONIC LABORATORY CORP.  
TOKYO, JAPAN



# KORG micro-preset synthesizer M-500SP

OWNER'S MANUAL

## IMPORTANT

- The wires in the mains lead fitted to this equipment are coloured coded as follows:

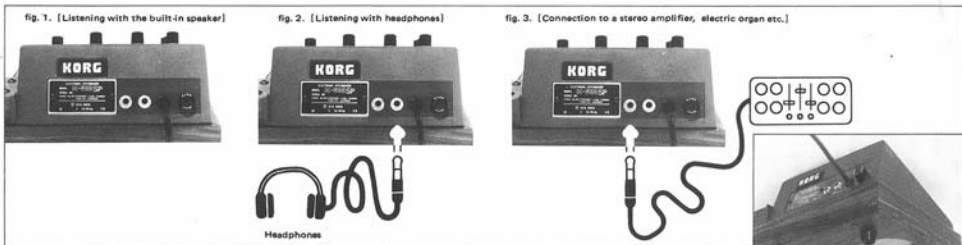
BLUE	-	NEUTRAL
BROWN	-	LIVE
GREEN/YELLOW	-	EARTH

You are advised to fit a 3-pin plug to the lead, wiring the BLUE wire to the NEUTRAL terminal marked "N" in the plug, the BROWN wire to the LIVE terminal marked "L", and the GREEN/YELLOW wire to the terminal marked by the letter "E" or by the safety Earth symbol  $\perp$ . The plug must incorporate a 3 amp fuse.

**WARNING** - This apparatus **MUST** be earthed!

## ■ HOW TO USE THE MICRO-PRESET WITH BUILT-IN SPEAKER M-500SP

- 1) A compact amp and speaker are built right into the M-500SP so you can play it anytime by just plugging in the power cord. Output is 600mW so you have plenty of volume for performance even without an external amp. See figure 1.
- 2) To listen to the M-500SP with headphones, plug the headphones into the headphone jack. When headphones are plugged in, the speaker is automatically switched off. See figure 2. For best results, be sure to use headphones rated at  $8\Omega$ .
- 3) Use the connecting cord supplied to attach external amplification equipment, as described on page 7. However, for the model M-500SP, only connect the cord to the rear panel socket marked "High".

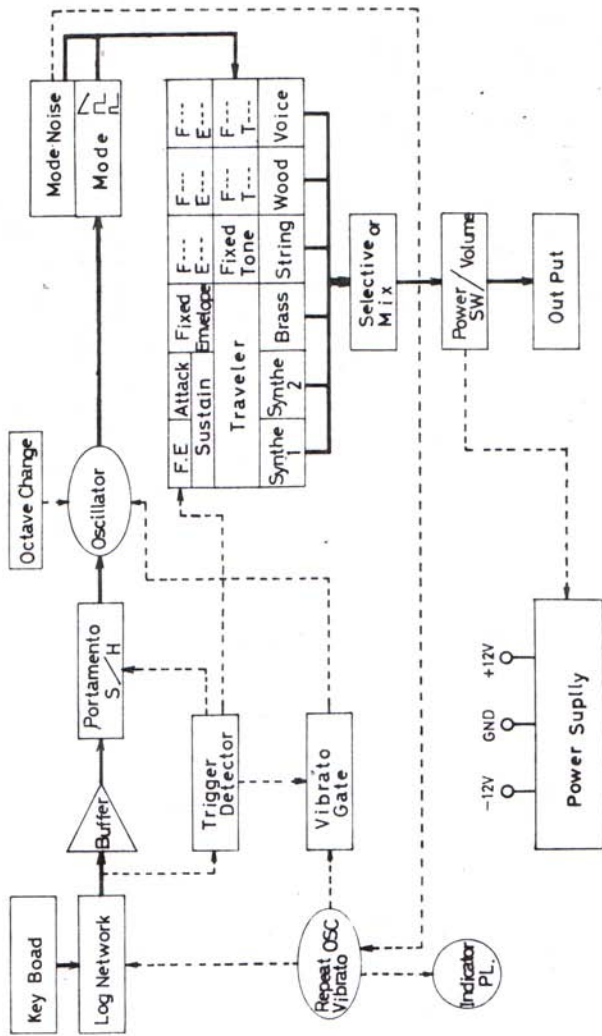


Mains Power Requirement: 240 volts, 50Hz

## ■ SPECIFICATIONS

Speaker output	600mW
Speaker	10cm full range $8\Omega$
Weight	5.1 kg
"Low" Headphone out	stereo or mono plug $8\Omega$
"High" Output	2Vp-p $4k\Omega$
Other specifications same as M-500	

KEIO ELECTRONIC LAB., CORP. Tokyo, Japan

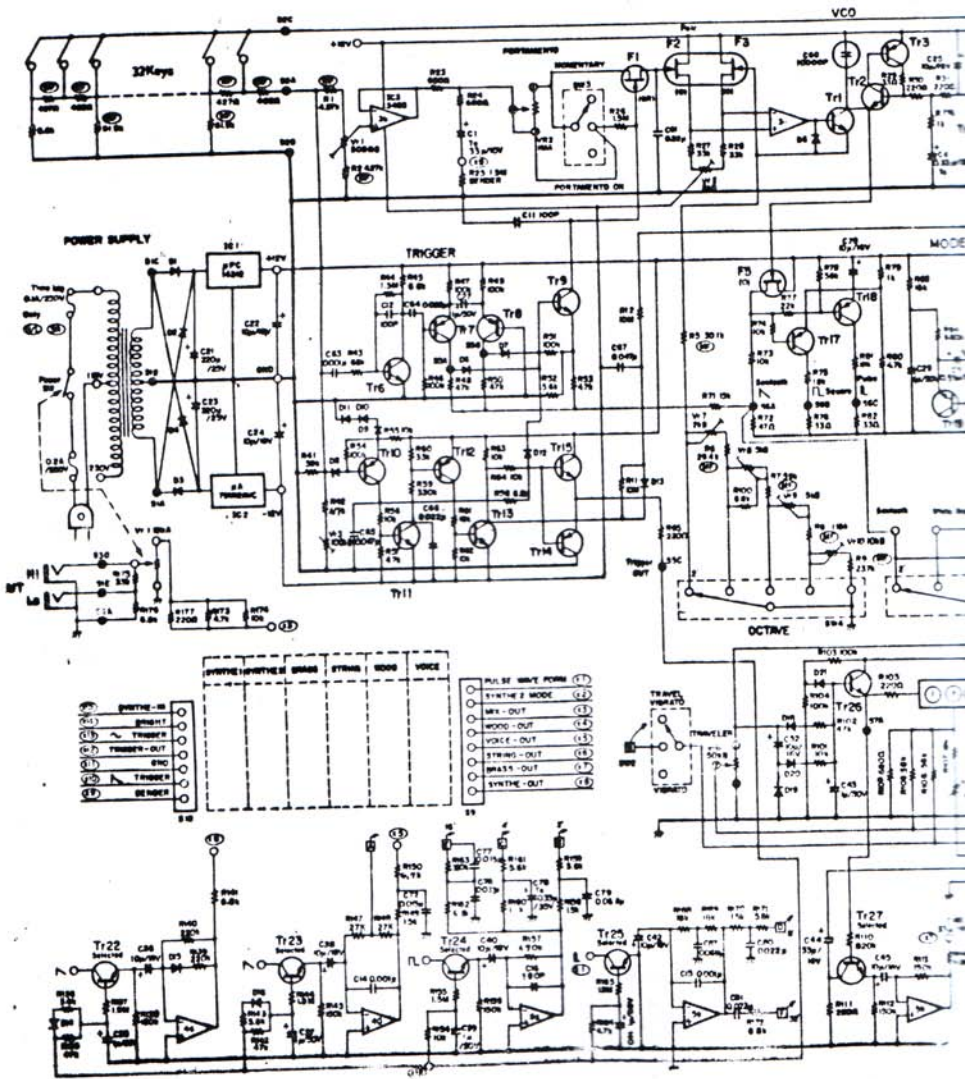


BLOCK DIAGRAM

DRAWN BY	KORG
APPROPRIATE BY	Micro. Praset M-500
DATE	JUL 8 71
DRAWING NO	X-1000D
KEIO GIKEN KOGYO	
TEL. 03 (302) 7471 TOKYO JAPAN	

Proviso  
 ——— Signal  
 - - - - - Electric Control

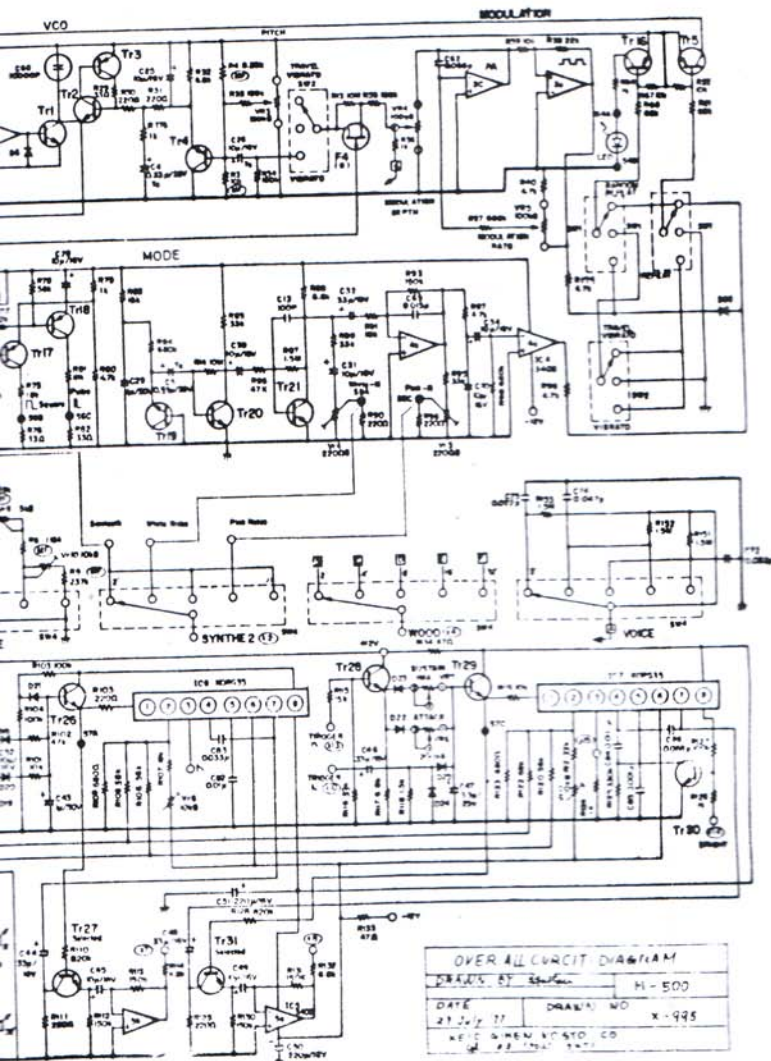
K-0-D-B #0005



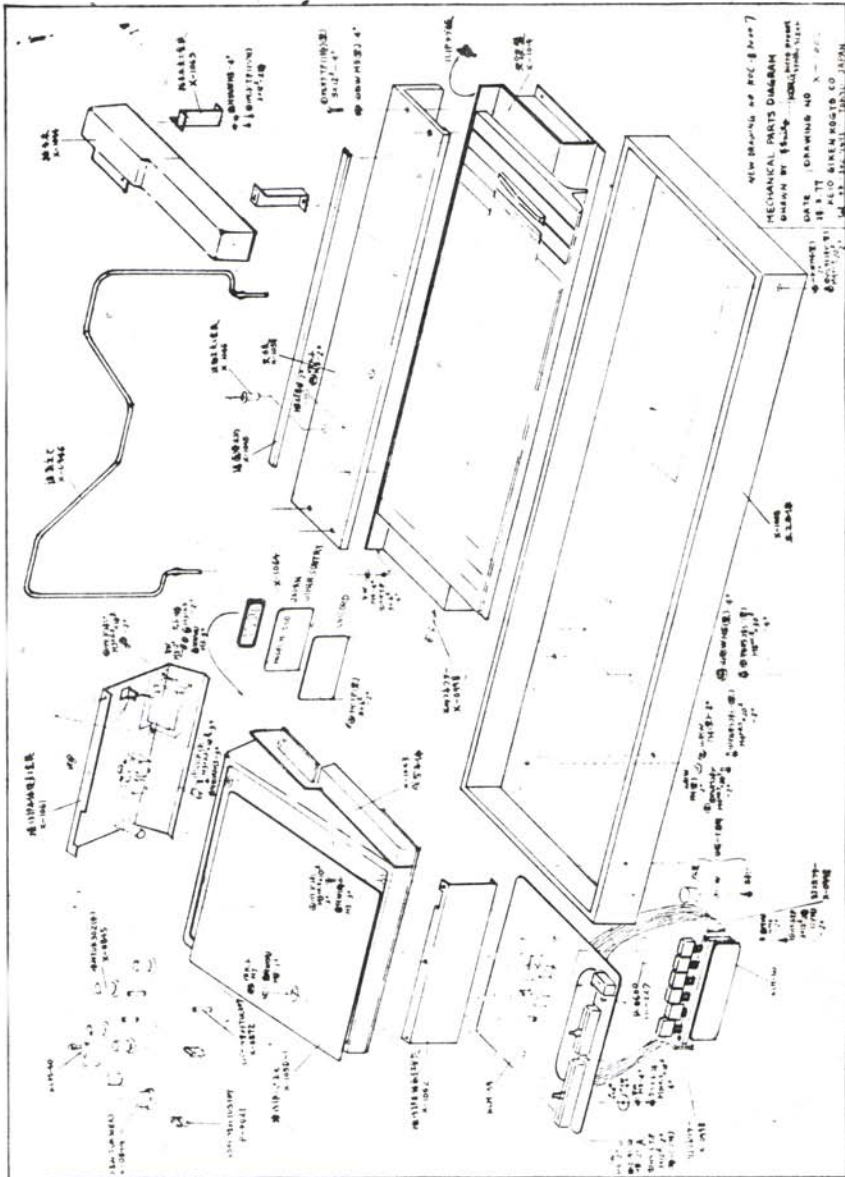
- (1) SYNTHESIS - IN
- (2) TRIGGER - IN
- (3) TRIGGER - OUT
- (4) VOICE - IN
- (5) VOICE - OUT
- (6) TRIGGER - IN
- (7) TRIGGER - OUT

- (1) SYNTHESIS MODE
- (2) MIX - OUT
- (3) WOOD - OUT
- (4) VOICE - OUT
- (5) STRINGS - OUT
- (6) MIX - OUT
- (7) SYNTHESIS - OUT





OVERALL CIRCUIT DIAGRAM  
 DRAWN BY [Signature] H-500  
 DATE 21 July 77 DRAWING NO X-995  
 KSC GLENVIEW CO



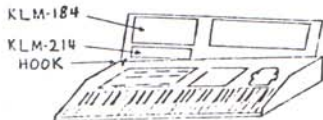
NEW DRAWING OF FIG. 1, PAGE 7  
 MECHANICAL PARTS DIAGRAM  
 DRAWN BY [unclear]  
 DATE [unclear]  
 PLO BIKEM BOSTON CO

SCALE: DRAWING NO. X-100  
 DATE: [unclear]

SHOW 1  
 PARTS LIST

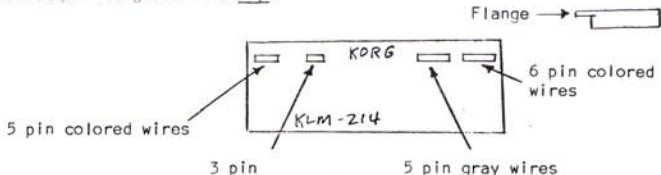
ES50 MODIFICATION PROCEDURE: "Warbling" or "Chirping" problem and excess chorus noise.

1. Unpack unit. Leave plastic spread out as protection.
2. Carefully remove four top bolts and two side bolts.
3. Swing up top part (lid) of unit. Prop the lid against something that won't scratch it. There is one hook attached to each side of the back of the lid. Rest only the left-hand hook on the top rear metal edge of the bottom part of the unit (lid will lean to the right). This protects the wiring on the left from stress. Be careful not to pinch these wires.

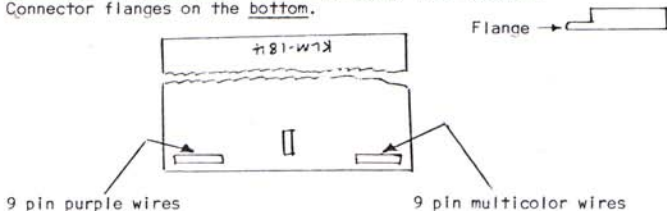


4. Carefully unplug four connectors from KLM-214 board (brown board at lower left of lid part). (See diagram, pg. 2).
5. Carefully unplug two 9-pin connectors from bottom part of KLM-184 board (green board directly above KLM-214). (See diagram, pg. 2).
6. Unscrew four woodscrews with plastic washers from KLM-214 board and carefully remove board.
7. On the solder side of KLM-214 board, add two .015 UF/50V or better 10% tolerance poly caps as follows. Both capacitors should be laid flat against the board. (See diagram A).
  - a. Solder one cap between traces connected to pins 1 and 3 of IC4. DO NOT SOLDER DIRECTLY TO PINS OF IC4.
  - b. Solder remaining cap in parallel w/R208 (solder side).
8. Remove IC6 from KLM-214 board (use Soder-wick or vacuum-type tool). Replace with one piece TL-072 type opamp (T.I.).
9. Re-install KLM-214 board using four woodscrews with plastic washers. Observe orientations: "KORG" label and connectors are at top of board (KLM-184 board is upside down).

10. Re-attach four connectors to KLM-214 board (see diagram). Connector flanges on the top.



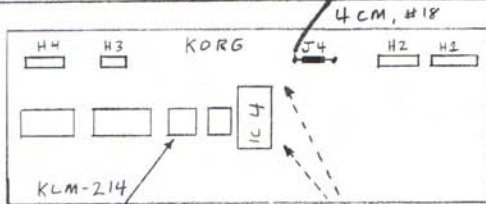
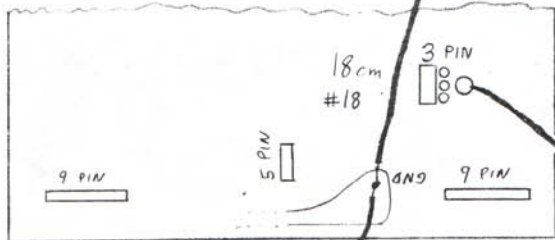
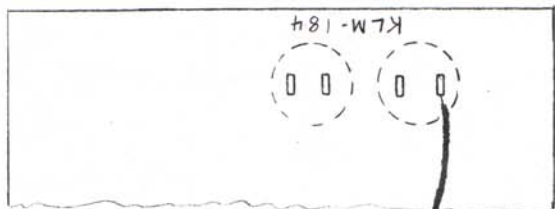
11. Re-attach two connectors to KLM-184 board (see diagram). Connector flanges on the bottom.



12. On KLM-184 board, solder one 18cm #18 ga. grounding wire between the right hand mounting tab for the "PERCUSSIVE" tone pot and the spot marked "GND" about 3cm to the left of the lower righthand 9 pin connector. On both this and the following step, tin separately the bare wire ends and the board locations described, then solder together. (See diagram B).
13. Solder one 4cm #18 ga. grounding between the spot marked "GND" described on (12) above (KLM-184) and the left hand end of J4 on KLM-214 board.
14. This completes the modifications. Swing the lid back down. Be careful that no wires are pinched and that the two side tabs on the control panel slide smoothly into the bottom chassis without catching.
15. Carefully re-install the four top bolts with metal cupwashers and the two side bolts with plastic washers. Center the lid before gently tightening bolts.
16. Listen to unit. Make sure that problem is corrected and everything is working fine.

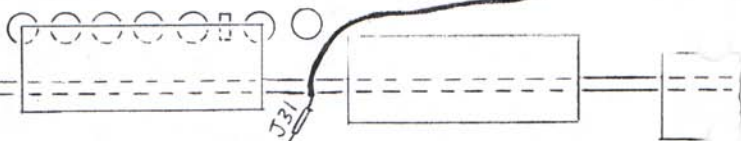
**Unicord.**

a Division of Gulf + Western Manufacturing Company  
89 Frost Street, Westbury, N.Y. 11590



22 cm  
#18

.015 uF / 50 V  
10% poly caps.



KLM-185

DIAGRAM B



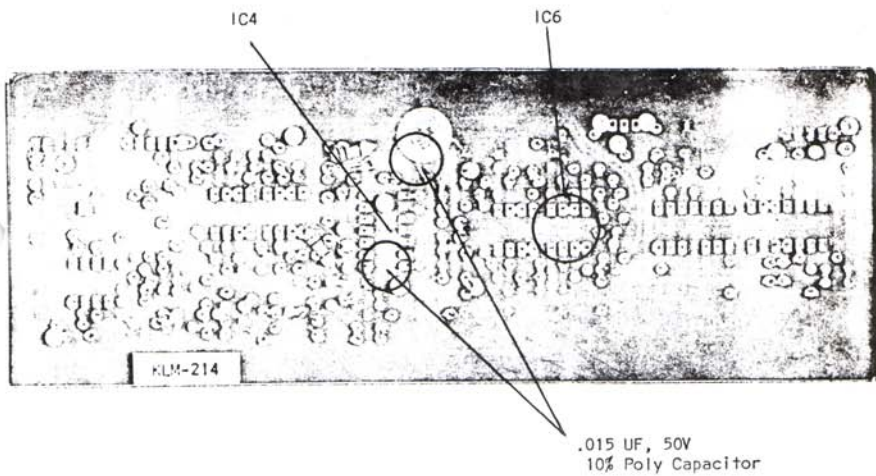
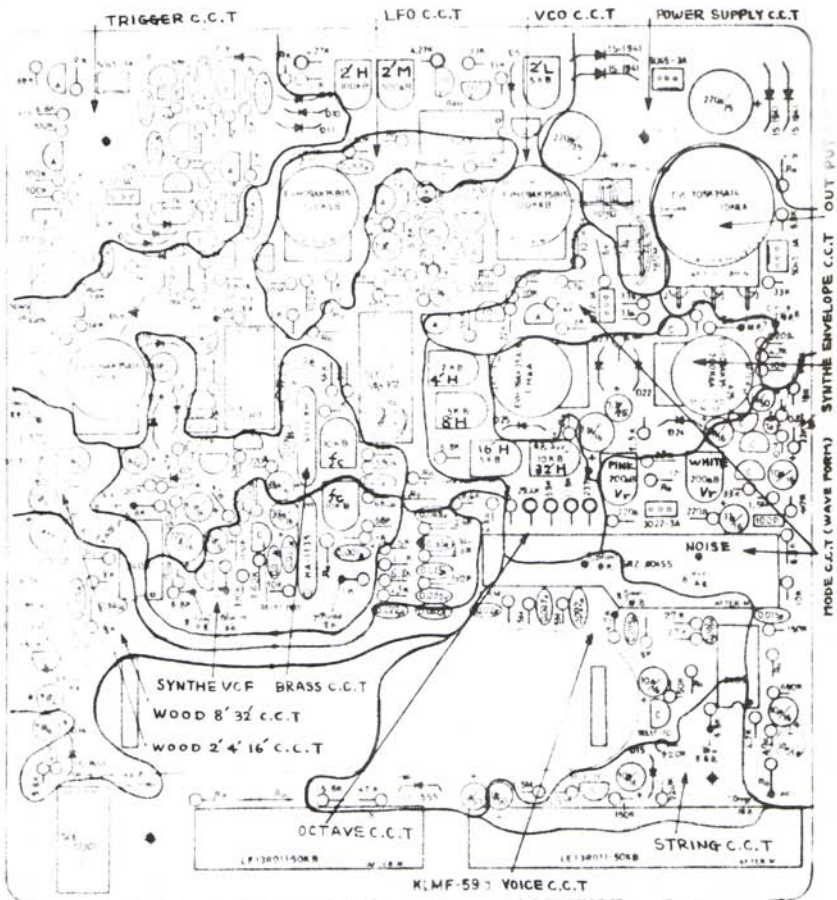


DIAGRAM A

**Unicord.**

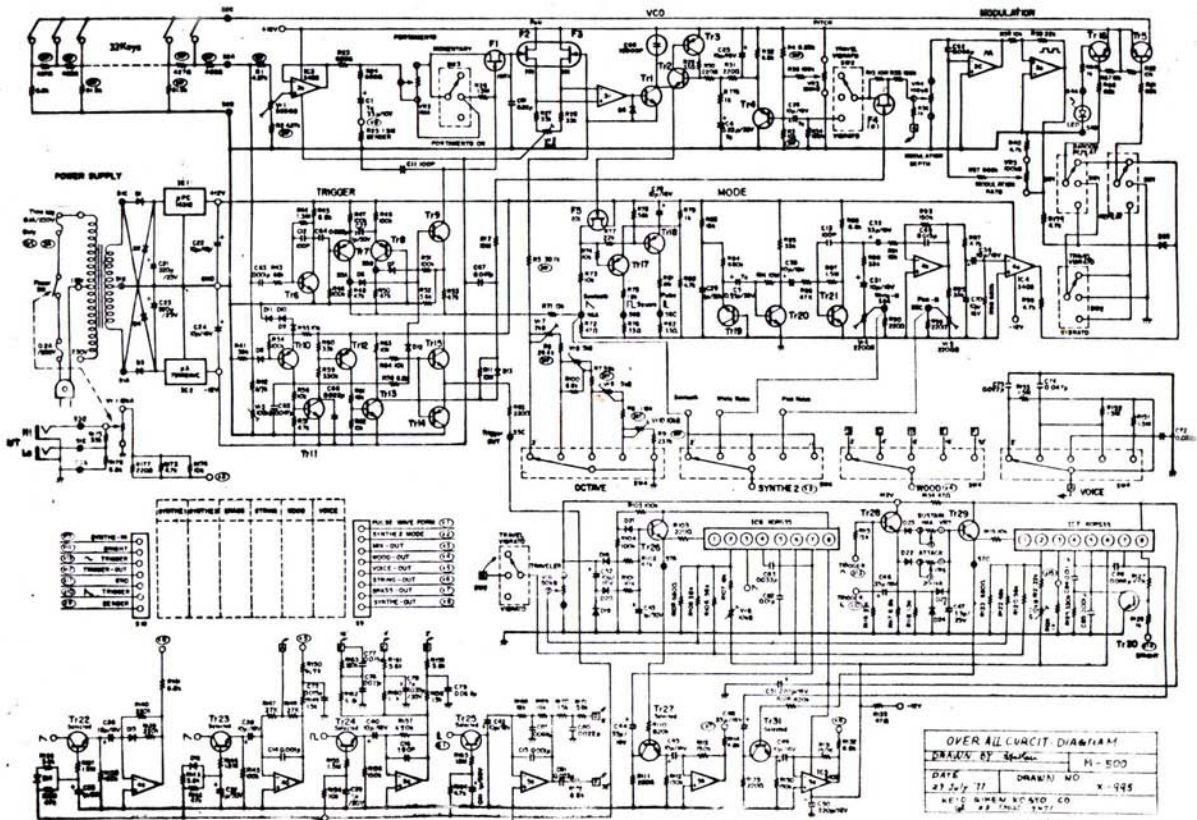
a Division of Gulf + Western Manufacturing Company  
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**CANON**  
 1100 West Washington Blvd.  
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 U.S. Patent Office Application No. 3,154,000  
 U.S. Pat. 3,154,000

7/21/59 July 21 1959

DESCRIPTION	
DATE	7/21/59
BY	J. J. Jones
CHK'D BY	W. J. Jones
NO.	7/21/59
1100 West Washington Blvd. New York, N. Y. 10019	



OVER ALL CIRCUIT DIAGRAM  
 DRAWN BY [Signature]  
 DATE 27.7.77 DRAWING NO. H-500  
 REC. BY [Signature] X-995  
 # 27.7.77