GPS SPEAKER MICROPHONE

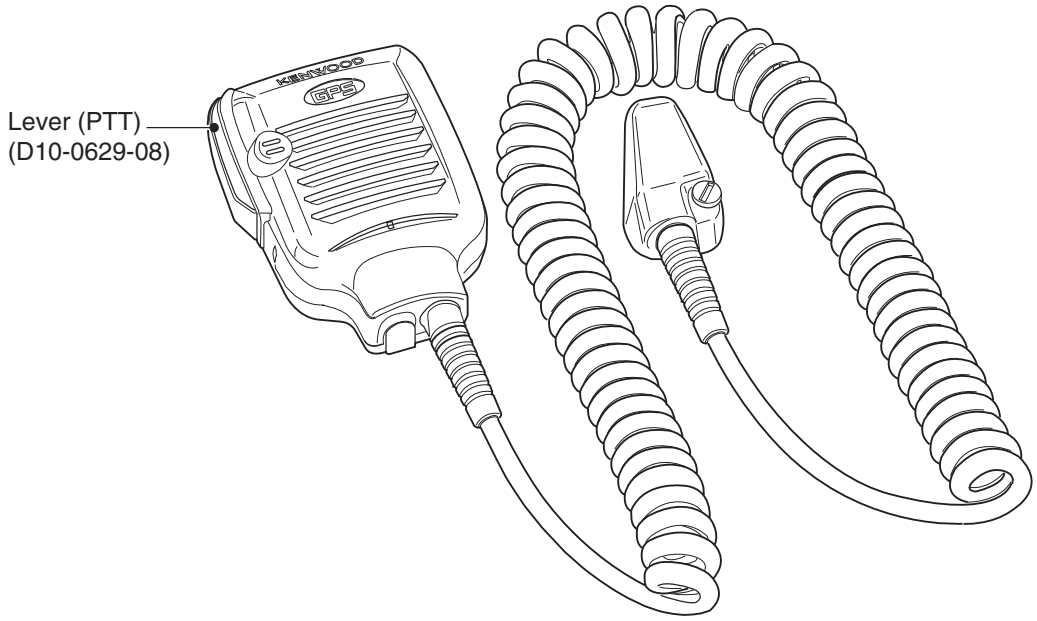
KMC-47GPSD

SERVICE MANUAL

KENWOOD

JVC KENWOOD Corporation

RQ027 (K) B5B-7123-00



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SPECIFICATIONS

General

Operating temperature range	–30°C~+60°C (–22°F~+140°F)

Microphone

Impedance	2.2kΩ (max)
Sensitivity	–45dB±5dB at 300Hz

Speaker

Impedance	16Ω±15% at 1.2kHz
Rating input	0.8W
Maximum input	1.6W
Dimensions (W x H x D)	62 x 81 x 36 mm (2.44 x 3.19 x 1.42 inches)
Weight	Approx. 230g/ 8.1oz

GPS Receiver

Receiver system	Parallel 12 channels
Receiver frequency	1575.42MHz±1MHz, L1 band, C/A code
GPS data format	Compatible with NMEA 0183
GPS data update cycle	Every 1 second

This product complies with the **RoHS** directive for the European market.

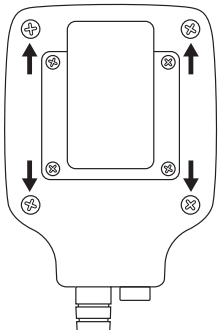
This product uses Lead Free solder.

HOW TO REPLACE THE INTERNAL BATTERY

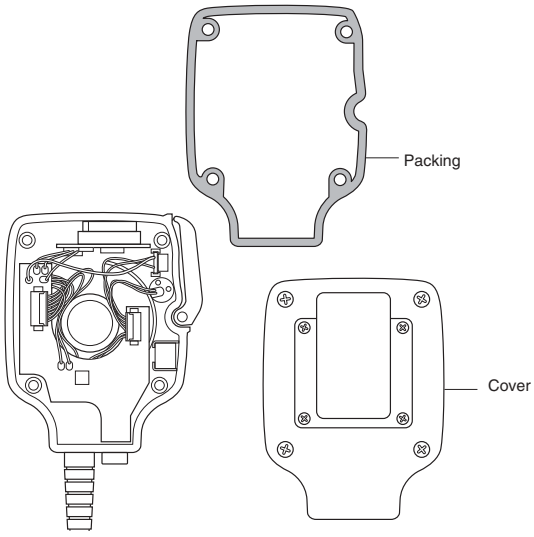
If a Cold Start occurs frequently (the transceiver cannot start GPS positioning after the transceiver is turned ON) even though the transceiver has been continuously used, the internal battery may be degraded. When the internal battery terminal is less than 1.4V after charging, use the following procedure to replace the internal battery.

CAUTION: THE OPERATOR MUST WEAR AN ANTISTATIC BAND WHEN REPLACING THE BUILT-IN BATTERY IN ORDER TO PREVENT STATIC DISCHARGE. THE INSTALLED IC MAY BE DAMAGED BY A DISCHARGE OF STATIC ELECTRICITY.

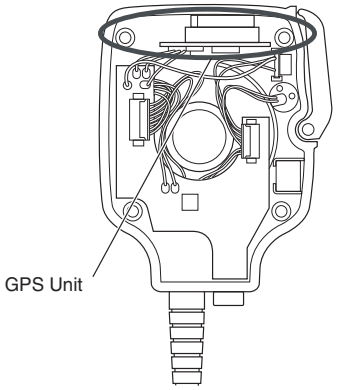
1. Remove the KMC-47GPSD from the transceiver and 4 screws on the rear panel.

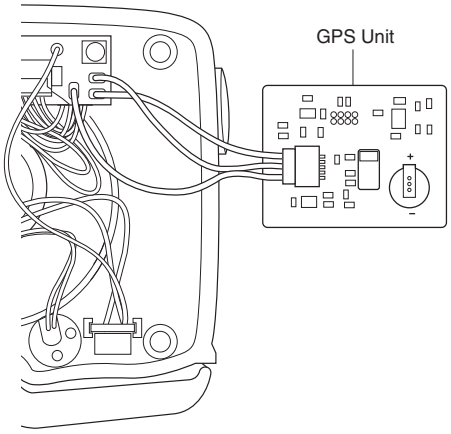


2. Remove the cover and packing.



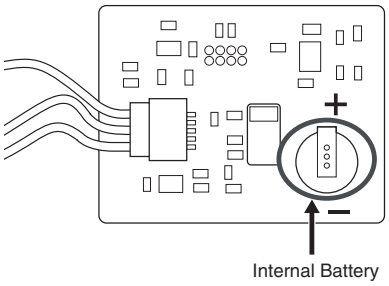
3. Remove the GPS unit installed in the upper part of the microphone.
   CAUTION: DO NOT DAMAGE CABLES WHEN REMOVING THE GPS UNIT.





   Note: Remove cables connected to the GPS unit, if needed.

4. Remove the internal battery in the GPS unit by using the soldering iron. Replace the battery with a new battery.
   CAUTION: BE SURE THE POLARITY OF THE BATTERY BEFORE INSTALLING IT.



5. Reinstall the GPS unit, packing and cover.

CIRCUIT DESCRIPTION

The location data is calculated by the GPS unit and is then sent to the transceiver via the RXD terminal of the universal connector.

When the transceiver is turned OFF, the GPS unit enters to backup mode and the power is supplied by the internal rechargeable lithium battery.

When the transceiver is turned ON, the GPS unit enters to normal operation mode and the power is supplied from the transceiver via the 5M terminal of the universal connector. While the transceiver is turned ON, the internal rechargeable lithium battery charges.

It takes approximately 40 seconds to calculate the location data when the GPS unit is “cold started” (full initialization).

RESETTING THE GPS UNIT

When the KMC-47GPSD cannot determine the position in a situation where GPS data is received, use the following procedure to reset the GPS unit.

Reset the GPS unit by removing the internal battery and then re-installing it. (To remove the internal battery, refer to “HOW TO REPLACE THE INTERNAL BATTERY”.)

GPS OPERATION CHECK METHOD AFTER REPAIRS

Check the GPS operation according to the following procedures.

1. Prepare the transceiver which incorporate the GPS function. (Set the GPS Position Display to a key, such as the [S] key, with the FPU beforehand.)
2. Connect the KMC-47GPSD to the universal connector on the transceiver.
3. Turn the transceiver power ON.
4. Go outside, then press the [S] key (the key that you previously set as the GPS Position Display) on the transceiver.
5. The “GPS” and latitude information are displayed on the LCD of a transceiver.

Note:

• The KMC-47GPSD has an internal battery to backup the built-in pinpointing data. When the internal battery is charged, the transceiver will retain the pinpointing data (the last positional information) for approximately 20 days. (When used for the first time, it takes approximately 10 hours to fully charge the internal battery.)

• When the internal battery is in the discharged state, pinpointing data returns to its initial value. When the positional information is at its initial value while turning on the transceiver, the life cycle of the internal battery is considered.

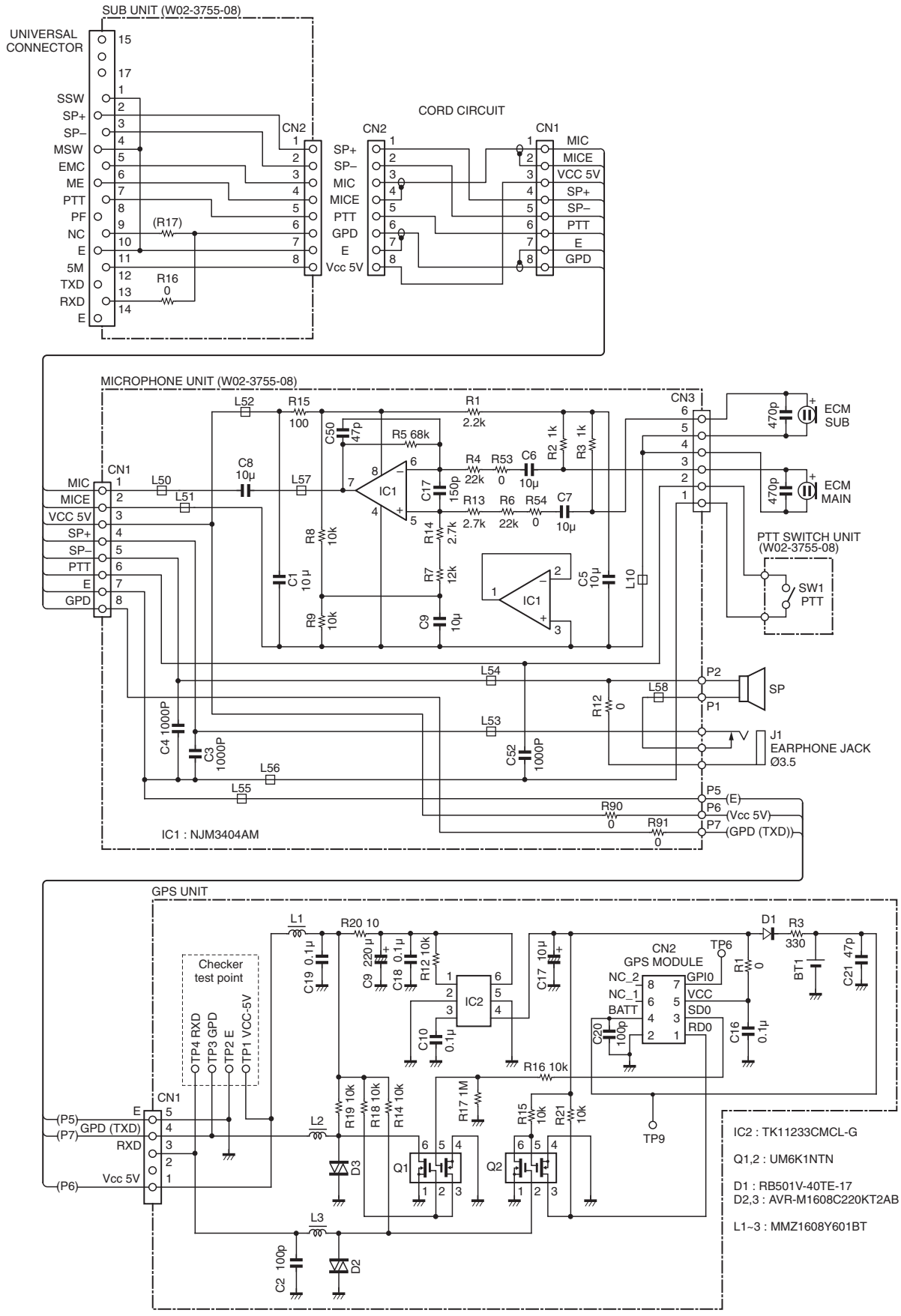
TERMINAL FUNCTION

Universal connector

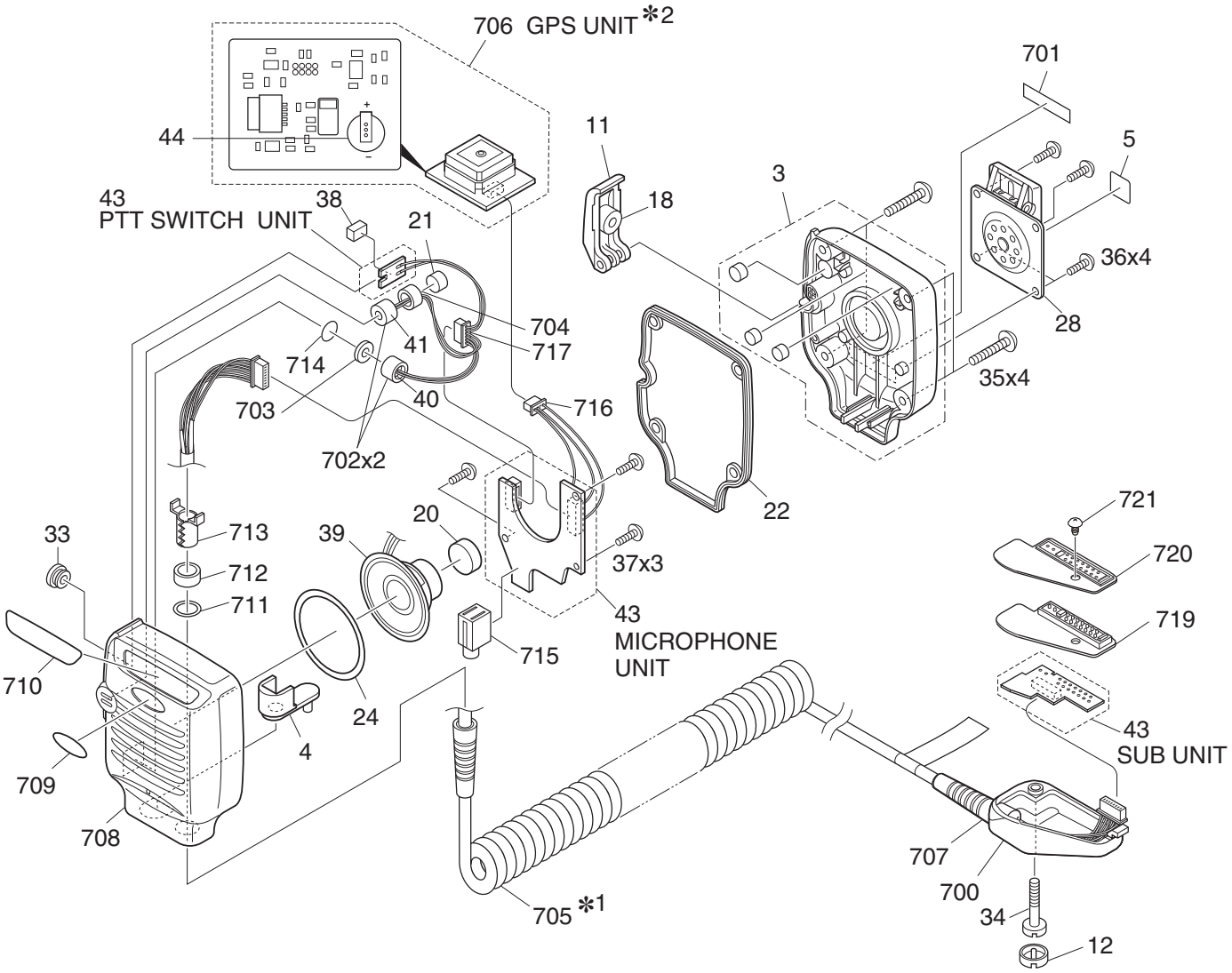
Pin No.	Name	I/O	Function
1	SSW	O	External speaker switch
2	SP+	I	Speaker input (BTL + side)
3	SP-	I	Speaker input (BTL – side)
4	MSW	O	External MIC switch
5	EMC	O	MIC output
6	ME	-	MIC GND
7	PTT	O	PTT output
8	PF	-	No connection
9	NC	-	No connection
10	E	-	GND
11	5M	I	Input from the power with DC 5V
12	TXD	-	No connection
13	RXD	O	GPS data output
14	E	-	No connection

KMC-47GPSD

SCHEMATIC DIAGRAM



EXPLODED VIEW



✻1: In order to maintain the waterproofing performance, the cord ASSY with plug cannot be replaced.
✻2: The GPS unit cannot be replaced.

Parts with the exploded numbers larger than 700 are not supplied.

KMC-47GPSD

PARTS LIST

KMC-47GPSD

Ref. No.	Address	Parts No.	Description	Destination
			KMC-47GPSD	
3		A02-3988-08	PLASTIC CABINET ASSY (REAR)	
4		B09-0382-08	CAP (PHONE)	
5		B42-7733-04	STICKER (WEEE)	
11		D10-0629-08	LEVER (PTT)	
12		F07-1932-08	COVER	
18		G13-1638-08	CUSHION (PTT LEVER)	
20		G13-2201-08	CUSHION (SPEAKER)	
21		G13-2202-08	CUSHION (MAIN ECM)	
22		G53-0820-08	PACKING (CASE)	
24		G53-0834-08	PACKING (SPEAKER)	
28		J29-0644-08	CLIP ASSY	
33		K29-5217-18	KEY TOP (PTT)	
34		N08-0565-08	DRESSED SCREW	
35		N09-6542-08	TAPTITE SCREW (CASE)	
36		N46-2605-60	PAN HEAD TAPPING SCREW (CLIP)	
37		N80-2005-43	PAN HEAD TAPTITE SCREW (PCB)	
38		S70-0471-08	TACT SWITCH	
39		T07-0359-18	SPEAKER	
40		T91-0584-08	MIC ELEMENT (SUB)	
41		T91-0634-08	MIC ELEMENT (MAIN)	
43		W0C-0009-00	ELECTRIC CIRCUIT MODULE (MIC, PTT SW, SUB UNIT)	
44		W09-1072-08	LITHIUM CELL	

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