Operation Manual

Program Timer

PW-642

interM

Welcome

A personal welcome to you from the management and employees of Inter-M

All of the co-workers here at Inter-M are dedicated to providing excellent products with inherently good value, and we are delighted you have purchased one of our products.

We sincerely trust this product will provide years of satisfactory service, but if anything is not to your complete satisfaction, we will endeavor to make things right.

Welcome to Inter-M, and thank you for becoming part of our worldwide extended family!

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.

DO NOT REMOVE COVER (OR BACK).

NO USER-SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

Attentions: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant on une autre sortie de courant, sauf si les lames peuvent étre insérées à fond sans en laisser aucune partie à découvert.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

*Do not install this equipment in a confined space such as a book case or similar unit.
*The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such vases, shall be placed on the apparatus.
*WARNING FOR YOUR PROTECTION PLEASE READ THE FOLLOWING-WATER AND MOISTURE: Unit should not be used near water(e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so than objects do not fall and liquids are not spilled into the enclosure through openings.
*CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
NOTE : This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

*** It can be heated up if you use this product in closed box or ill-ventilated place.**

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Unpacking

Although your PW-642 is neither complicated nor difficult to operate, we recommend you take a few minutes to read this brief manual and familiarize yourself with the important information regarding product features, setup and operation.

As with most electronic devices, we strongly recommend you retain the original packaging. In the unlikely event the product must be returned for servicing, the original packaging (or reasonable equivalent) is required.

Installation

Environment

Never place this product in an environment which could alter its performance or reduce its service life. Such environments usually include high levels of heat, dust, moisture, and vibration.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Features

- CONSIDERATION OF USER'S CONVENIENCE
NUMERIC buttons and various function buttons are separated for timer program enter and convenience in use so that the user can easily operate.

- ADOPTION OF VACUUM FLUORESCENT DISPLAY PANEL
Adopting a vacuum fluorescent display of a dot matrix method enables to check operation status of each function at a glimpse.

- PROGRAMMING USING A PC
You can easily execute reservation setting thorough management program by connecting a PC to the RS-232C port.

- VARIOUS MELODY AND SOUND OUTPUT
You can generate various melodies and sounds by linking the flash memory mounted on this unit to our model, PV-632 (MULTI-VOICE FILE).

- AC POWER OUTPUT CONTROL
When PW-642 and other equipment are connected via the AC outlet terminal of PW-642, you can turn ON/OFF the AC outlet button in the front panel and manually control ON/OFF of the AC power connected to other device.

- BACK-UP POWER
You can continue to maintain the time counter for about a week though the inner back-up even though AC power turns off with current time set. There is no need of readjusting time even though AC power is applied.

- MEASURE AGAINST POWER FAILURE
A separate memory is used to prevent data extinguishment due to power failure or other unstable power.

- AUTOMATIC RETURN
In programming data using a key button on the front side of PW-642 without using a PC, no pressing any button is recognized as cancel of program entry to return to normal operation status.

- AC POWER OUTPUT TIME ADJUSTMENT
You can adjust the AC power output time of PW-642 by 1~20sec to prevent time delay from occurring in the interface with the outside power amp.

- KEY LOCK
You can protect reservations and user's setting.

Front Panel

1. AC OUTLET BUTTON

This is a button to turn ON/OFF the AC power and the REMOTE OUTPUT contact terminal of the rear AC OUTLET No.1, 2.

Pressing this button lengthily in the STANDBY mode, you can adjust output time of AC power.

2. OUTPUT BUTTON

This is a button used to turn MELODY channel output ON/OFF.

If the OUTPUT button is turned off, no output is done even though MELODY is generated.

3. VOICE BUTTON

This is a button used when changing VOICE reservation setting and setting.

4. MELODY BUTTON

This is a button used when changing MELODY generation, reservation setting and setting.

5. AC BUTTON

This is a button used when changing reservation setting and setting of AC outlet.

6. CHANNEL LED

This is a LED to display the channel output when VOICE or MELODY sound source is generated.

7. DAY LED

This is a LED to display the weekday of current time or reserved time.

8. STATUS DISPLAY

This displays operation status and manipulation time when manipulating each function button.

9. TRACK BUTTON
This is a button used when selecting a track for setting MELODY, VOICE.

10. CHANNEL BUTTON
This is a button used when selecting output channel for MELODY, VOICE reservation and MELODY PLAY operation.

11. MODIFY BUTTON
This is a button used when changing reserved settings.

12. DOWN/UP BUTTON
This is a button used when checking reservation.
Press this button shortly during checking reservations to check following contents, and press it lengthily to check reservations of other weekday.

13. OUTPUT LEVEL VOLUME
This is a volume adjuster to adjust output volume of built-in melody.

14. TIME BUTTON
This is a button used when setting current time.

15. AM/PM, HOUR/MIN, DAY BUTTON
This is a button used when setting current time and reservation time. The AM/PM button is used to set AM/PM, and the HOUR/MIN button is used to set MIN and HOUR. The DAY button is used when setting WEEKDAY.

16. CANCEL BUTTON
This is a button used when canceling. If pressing this button, the unit is converted to STANDBY mode.

17. NUMERIC BUTTON
This is a button used when selecting TIME SETTING, TRACK ENTRY and CHANNEL.

18. ENTER BUTTON
This is a button used when saving setting contents.

19. DELETE BUTTON
This is a button used when deleting reservations.

20. COPY BUTTON
This is a button used when copying reservations to other weekday.

Rear Panel

1. AC CONNECTOR AND FUSE HOLDER

Connect the supplied standard AC input cable to this input. The fuse holder below the input contains the AC overload protection fuse. If the fuse has blown out, replace it with a fuse of the same type and rating. If the fuse continues to blow, refer servicing to a qualified service technician.

2. AC POWER OUTLET 1

This provides up to 500W as switched AC mains source for an external device.

※ The shape of outlets can be different according to country requirements.

3. AC POWER OUTLET 2

This provides up to 30W as switched AC mains source for an external device.

※ The shape of outlets can be different according to country requirements.

4. VOICE INPUT CONNECTOR

This connection is intended to receive signal from the output of the Inter-M PV-632 (Multi Voice file).

5. CHANNEL INPUT (1-4)

These are the input connectors for channels 1 through 4.

6. DC INPUT TERMINALS

This is an entry terminal of DC +24V power to operate this unit by connecting to DC power. Before connection, ensure to check voltage and the (+), (-)polarity.

7. REMOTE CONTROL PORT (REMOTE OUTPUT)

This provides remote control of the AC OUTLETS when used in conjunction with the Inter-M PD-659 or ECS-616.

8. SERIAL PORT (RS-232C)

This is a terminal that communication is done between our corporation's product, PV-632 and PW-642, and you can easily perform reservation setting through management program by connecting a PC.
This terminal uses RS-232C communication method and the distance to stably transmit and receive data is maximum 15M.

9. CHANNEL OUTPUT (1-4)

These are the output connectors for channels 1 through 4.

Operation

1. Time and Date Setting

Function to set current time.

1) If pressing the TIME button from STANDBY mode, setting starts and AM or PM flashes on a display window.

2) You can select AM/PM using the AM/PM button, and AM and PM toggle whenever pressing it once.

3) "TIME" flashes on the display window if pressing the HOUR/MIN button, and you can enter time using the NUMERIC button.

4) "MINUTE" flashes on the display window if pressing the HOUR/MIN button again, and you can enter minute with the NUMERIC button.
HOUR and MIN setting status toggle whenever pressing it once. If pressing the relevant button lengthily, you can set "SECOND".

5) If pressing the DAY button, "WEEKDAY" flashes on the display window, you can select weekday to enter.

6) If pressing the ENTER button, setting is saved and ended.
To cancel setting, pressing the CANCEL button enables to convert STANDBY mode.

7) If time setting is completed, LED of the relevant weekday turns on the WEEKDAY indicator.

※ NOTE : If not connecting power without sufficient power recharge, time may be reset.
If recharge is normally done, time is kept for 7 days.

8) If "AM 00:00 MON" flashes on the display window when powering-on after leaving the unit for a long time, reset time.

2. Voice Setting

This setting functions to play the sound source saved in our model PV-632 ((MULTI-VOICE FILE) at the desired time.

1) Setting starts while LED of a button flashes if pressing the VOICE button.

2) Reservation time setting : Set in the same manner as for above time setting item.

3) Reservation track setting : "TRACK NUMBER" flashes on the display window if entering the TRACK button. And then enter track number using the NUMERIC button. (Selectable up to 999)

4) Channel setting: Pressing the CH button enables to convert the display window to output channel setting mode.

- Select desiring channel (1~4) using the NUMERIC button.
  Press the same NUMERIC button as the selected channel number or the CH button to toggle ON/OFF.
  If setting to ON, LED of the relevant channel turns on the channel indicator.

- "ALL ON" flashes on the display window for a short time if pressing the CH button lengthily in the CH setting mode and all CH1~4 are changed to ON status.
- "ALL OFF" flashes on the display window for a short time if pressing the button lengthily in the status that all channels set to ON, and all CH1~4 are changed to OFF status.

5) If pressing the ENTER button after setting channel, setting is saved and ended.

6) If arriving at the setting time, play starts as reserved contents.

※ If setting and saving VOICE RESERVATION in the same time as already reserved MELODY, the MELODY reservation contents previously saved are deleted.

3. Melody Setting

This is setting function to play the sound source file saved in this unit at the desiring time.

1) Setting starts while LED of the button flashes if pressing the MELODY button lengthily.

2) Remaining setting method is same as VOICE setting function.
However, enter between No.1 and No.15 for track setting. Melody provided in this unit is limited to 15 songs. If entering track number over it, "NO FILE" is displayed on the display window for reservation play.
※ The VOICE reservations previously saved are deleted if setting and saving MELODY reservations in the same time as VOICE already reserved.

3) Play starts as per reserved contents if becoming setting time.

4. Melody Play

This is function to select and play the desiring track and channel to be output among sound sources saved in this unit.

1) Setting starts if pressing the TRACK button lengthily.

2) Enter a track to play with the NUMERIC button and then press the ENTER button or press the CH button to convert to setting mode.

3) Set channel in the same manner as for VOICE reservation setting.

4) The selected track is played if pressing the ENTER button after setting.

※The unit automatically stops if playing is finished.

5) Enter between No.1 and No.15 for track setting. If there is no selected track, "NO FILE" is displayed on the display window.
※ This function cannot be used during play of MELODY/VOICE reservations.

5. AC Setting

This is function to turn on or off the AC power outlet and the remote output contact at the desiring time.
The AC power outlet and the remote output contact operate at the same time.

1) Setting starts while LED of the button flashes if pressing the AC button lengthily.

2) Reservation time setting is same as VOICE/MELODY setting function.

3) ON/OFF setting of the AC OUTLET starts if pressing the CH button. ON/OFF toggles whenever pressing the CH button.

4) Press the ENTER button to save or end setting.

※ The unit is designed so that the AC OUTLET and REMOTE OUTPUT can be operated during MELODY/VOICE play. Output of AC OUTLET and REMOTE OUTPUT is shut-off during play if ending is done.

※ Both AC OUTLET and REMOTE OUTPUT continues to maintain output status even when MELODY is ended if executing AC reservation (AC OUTLET ON) at the same time as MELODY/VOICE reservation time. Both AC OUTLET and REMOTE OUTPUT continues to maintain output status.

6. Display

If there are reservations of VOICE, MELODY or AC, you can check them in the following method. If there are no reservations, "NO MEMORY" is displayed on the display window.

1) Check of VOICE reservations
   - If pressing the VOICE button, LED of the button turns on and the unit displays from reservations saved on Monday.
   - To check other reservations in this case, you can search to the order of reservation time with the DOWN/UP button and press it lengthily to check contents of other weekday. If there are reservations on other weekday, you can move to the weekday to search.
2) For MELODY, AC, you can check to the same order as for VOICE.
   However, press the MELODY button to check MELODY reservations and press the AC button to check AC reservations.
3) For example,

PM 02:08 MON TR-002

You can check that VOICE track No.2 is output to CH2, CH4 on Monday, PM 14:08.

4) Press the CANCEL button to return to the STANDBY mode.

7. Modify

This function is used when changing VOICE/MELODY/AC reservation contents.1) Check of VOICE reservations.

1) Select contents to change using the DOWN/UP button from the reservation contents checking mode.
2) Press the MODIFY button to convert to the CHANGE mode. In this case, button LED of the relay mode flashes and the MODIFY button LED turns on.

PM 02:22 THU TR-002

3) Press the ENTER button after changing contents of reservation, track and channel setting for saving and ending.
4) Press the MELODY button to change VOICE reservations to MELODY reservation during MODIFY.
   Press the VOICE button to change MELODY reservations to VOICE reservation.
   ※ When reservations are copied, track number is automatically changed to No.1. Change to desiring track with MODIFY function.

8. Memory Copy

This function is used when copying reservations to other weekday.

1) Setting starts if pressing the COPY button.

2) The preceding weekday of indications is the original weekday and the subsiding weekday is a weekday to be copied.
3) When the preceding original weekday flashes, select the desiring weekday with the DOWN/UP button or DAY button.
4) If pressing the COPY button again, the subsiding weekday to be copied flashes, and select the desiring weekday with the DOWN/UP button or DAY button.
5) COPY is executed if pressing the ENTER button after setting.

9. Delete

Function to delete reserved contents.

1) Delete of specific time reservation information
   - Delete contents to delete during reservation contents checking and then press the DELETEE button.

   - Selected contents are deleted if pressing the ENTER button.
2) Delete of reservation information by weekday
   - Press the DELETE button in the STANDBY button to convert to relevant mode.

   - Select weekday by pressing the DAY button.
   - Pressing the ENTER button enables to delete all contents of the selected weekday if pressing the button.
3) Delete of all reservation information
   - Pressing the DELETE button lengthily in the STANDY mode to convert to the relevant mode.

   - All reservation information are deleted if pressing the ENTER button.

10. AC Power Output Time Adjustment

This is function used to previously transmit output of AC OUTLET and REMOVE OUTPUT by setting time before reservation broadcasting is transmitted.

This function can be used without delay when reservation broadcasting is output by previously operating the unit connected for broadcasting.

1) You can adjust AC output time if pressing the AC OUTLET button lengthily in the STANDBY mode.

2) Enter AC power output time using the NUMERIC button.
3) Press the ENTER button for saving or ending.
4) Setting is done within the range of 1 through 20sec, and basic setting is set to 10sec.

11. Time Calibration Adjustments

1) Press the TIME button lengthily in the STANDBY mode to start setting.

2) Enter setting value with the NUMERIC button.
Setting is done within the range of 1 through -30 ~ +30, and basic setting is set to +6.
Time is compensated by 0.2 per day every stage.
3) +/- before number can be changed if pressing the TIME button. (+) compensates rapidly, and (-) compensates slowly.
4) Press the ENTER button for saving or ending.

12. Key Lock

1) This is function to protect the user's setting contents. "KEY LOCK" is displayed for a short time on the display window if pressing the ENTER button lengthily, and entry of all function buttons is shut-off.

2) "KEY UNLOCK" is displayed for a short time on the display window if pressing the ENTER button lengthily again, and entry of all function buttons is available.

13. Operating the unit using free application software

APPLICATION PROGRAM is program to more effectively manage the current reservation status, etc or setting for installation and maintenance of PW-642(PROGRAM TIMER) equipment. Data base setting by weekday is available. Much time for setting equipment can be saved with the DB automatic generation function. In addition, inter-equipment interface is provided using both a GUI pattern of clean display and the RS-232 port.
(Please download APPLICATION PROGRAM and manual from the Inter-M homepage for use.)

14. The Others

1) You can turn ON/OFF AC power output with the AC OUTLET button.
If desiring AC power output, press the AC OUTLET button to turn on LED.

2) No output is done even though MELODY is generated with LED of the OUTPUT button turned off.
If desiring to output MELODY channel, turn on LED by pressing the OUTPUT button.

VOICE RESERVATION BROADCASTING is always output with regardless of status of the output button.

Applications

※ The shape of outlets can be different according to country requirements.

PC and RS-232C Connection

-RS-232C

Pin No.	Definition
1	NC
2	RxD
3	TxD
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

PW-642			PC	
D-SUB 9Cable(Twisted RS-232C Cable)				
# 2	RxD	↔	RxD	# 2
# 3	TxD	↔	TxD	# 3
# 5	GND	↔	GND	# 5

Block Diagram

Specifications

		PW-642
Input Channel(Balanced)		5CH
Output Channel(Balanced)		4CH
Output Level		Maximum 1V
AC Power Output 1		Maximum 500W
AC Power Output2		Maximum 30W
Data Preservation Time		7 days and more
Melody Time (15 settings total - 247 seconds)	No. 1	2 seconds
	No. 2	3 seconds
	No. 3	3 seconds
	No. 4	5 seconds
	No. 5	5 seconds
	No. 6	7 seconds
	No. 7	7 seconds
	No. 8	10 seconds
	No. 9	10 seconds
	No. 10	15 seconds
	No. 11	20 seconds
	No. 12	30 seconds
	No. 13	30 seconds
	No. 14	40 seconds
	No. 15	60 seconds
Operation Temperature		-10°C ~ +40°C
Power Source		100–120VAC or 220–240VAC; 50/60Hz (Supplied AC mains transformer depends on country requirements)
Power Consumption		10W
Weight (SET)		5.7kg / 12.6lb
Dimensions (SET)		482(W)x88(H)x380(D)mm / 19(W)x3.5(H)x15(D)in

* Specifications and design are subject to change without notice.

Service

Procedures
Take steps to insure the problem is not related to operator error or other products within the system. Information provided in the troubleshooting portion of this manual may help with this process. Once it is certain that the problem is related to the product contact your warranty provider as described in the warranty section of this manual.

Schematic
A Schematic is available by contacting your warranty provider.

Parts List
A Parts List is available by contacting your warranty provider.

Variations and Options

Variations
Variations of this product exist to reflect the variations in AC power requirements throughout the world. Product supplied through local sources are compatible with local AC power requirements.

Options
No optional items are available for this product.

Warranty

Warranty terms and conditions vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

To obtain specific warranty information and available service locations contact Inter-M directly or the authorized Inter-M Distributor for your specific country or region.

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Inter-M, Ltd. (Korea) began operations in 1983.

Since then, Inter-M has grown to become one of the largest manufacturers
of professional audio and commercial sound electronics equipment in the world.

Inter-M has gained worldwide recognition for its own branded products,
as well as private label manufacturing of electronics sold under other names (OEM).

The company is no longer just a Korean company, but rather a global company
that is truly international in scope, with factories and offices in Korea and China,
and sales and marketing operations located in Japan, Europe, and the U.S.A.

With more than 850 employees around the globe,
Inter-M is well-poised for further growth and expansion.

Inter-M Americas, Inc.
13875 Artesia Blvd. Cerritos, CA 90703 USA
TEL : +1-562-921-0313, FAX : +1-562-921-0370
Home Page : http://www.inter-m.net, E-mail : info@inter-m.net

Inter-M Corporation
Seoul OFFICE:653-5 BANGHAK-DONG, DOBONG-KU, SEOUL, KOREA
TEL : +82-2-2289-8140~8, FAX : +82-2-2289-8149
Home Page : http://www.inter-m.com, E-mail : overseas@inter-m.com

MADE IN KOREA

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