

GP-IB ADAPTER
G P - 6 2 0
INSTRUCTION MANUAL

KENWOOD CORPORATION

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1. OUTLINE

The GP-620 is an adapter designed to provide external control on the multi-output DC regulated power supplies of the PWR Series through a GP-IB bus (IEEE-488-1978).

Up to four PWR units can be controlled via the system interface between the adapter-to-PWR interface.

2. SPECIFICATIONS

• GP-IB

Electrical specifications	: As per IEEE-488-1978
Mechanical specifications	: As per IEEE-488-1978
Interface functions	: SH1, AH1, TEO, L3, LEO, T6, SR1, RLI, PPO, DC1 DT1, CO
Address setting	: Any address 0 to 31 can be set via address switch.
Listen-only mode	: Established with L.ONLY switch
Outgoing delimiter	: Selected with EOI/CR.LF switch
Remote/local control	: Alternated with LOCAL key
Listener function	: All output conditions of PWR units can be set.
Talker function	: All output and setup conditions of PWR units can be detected.
Service request function	: - Notifications a change in CC/CV conditions of PWR units. - Notifications abnormal voltage event of PWR units.

• PWR bus (REMOTE connector)

Data transfer rate	: 9600 bit/sec, error within 5%
Data code structure	: Status bit 1 bit Data bit 7 bit Parity bit 1 bit Stop bit 1 bit
Parity method	: Even parity
Max. length of control cord	: 1.5 m
Max. number of controllable units	: 4units
Signal method	: Single-pass NRZ { 0: +5 [V] 1: 0 [V]

• Operating conditions

Rated temperature and humidity : 0 to 40°C, 10 to 85%RH

Operating temperature and humidity : 0 to 40°C, 10 to 85%RH

Storage temperature and humidity : -20 to 65°C, 10 to 85%RH

• Dielectric strength

Between GP-IB connector and case : 500 Vac for 1 min

Between modular connector and case : 500 Vac for 1 min

Between input power supply and case : 1 kVac for 1 min

Between input power supply and GP-IB connector : 500 Vac for 1 min

Between input power supply and modular connector : 500 Vac for 1 min

• Insulation resistance

Between input power supply and case : 30 MΩ or more at 500 Vdc

Between GP-IB connector and case : 30 MΩ or more at 500 Vdc

Between modular connector and case : 30 MΩ or more at 500 Vdc

• Input voltage

Voltage : 100 Vac±10%, 120/220/240 Vac±10% (max, 250 Vac), internally selectable

Frequency : 50/60 Hz

• Power consumption

Approx. 5 W, 6 VA at 100 Vac input voltage

• Dimensions

Frame dimensions : 68(W)× 147 (H)× 251(D) mm

Maximum dimensions : 73(W)× 161.5(H)× 283(D) mm

• Weight : Approx. 1.8 kg

• Accessories

Instruction manual : 1

Replacement Fuse : 2

3. PRECAUTIONS FOR USE

● VERIFYING THE SUPPLY VOLTAGE

- Ensure the supply voltage is within the rating:
100/120/220/240 Vac $\pm 10\%$, single phase, 50/60 Hz (250 Vac max.)
- If an attempt is made to change the rated supply voltage, see the MAINTENANCE section.
- The rated voltage is stated on the rating label on the AC power cord of the GP-620.

● CONNECTING THE GP-620 TO PWR UNITS

- The modular cable supplied with each PWR unit must be used for connection to the GP-620.

● ENVIRONMENTAL CONDITIONS

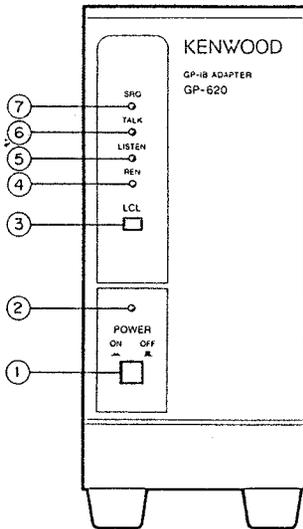
- Ensure that the operating temperature and humidity of the GP-620 are within specification.

● SYSTEM INTERFACE

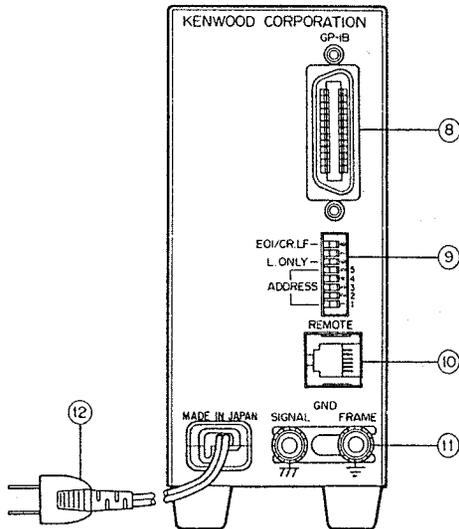
- When the GP-620 is operated in the service request enabled mode, the control software must be compatible with the service request function.
- When the GP-620 is operated in the listen only mode, it must be designated only as a listener by the controller.

4. CONTROLS AND INDICATORS

Front panel



Rear panel



① POWER switch

Press this button () to apply the power. Press it again () to disconnect the power.

② POWER LED (Red)

Illuminates when the power is on.

③ LOCAL KEY (Nonlock)

When the GP-620 is in remote mode, the GP-620 is placed into local mode by pressing this local switch. When the GP-620 is in local lockout mode, however, pressing this switch does not cause a transfer to local mode.

For details, see the OPERATING INSTRUCTIONS contained later in this manual.

- ④ REMOTE LED (Red)
Illuminates when the GP-620 enters the remote mode.

- ⑤ LISTEN LED (Red)
Illuminates when the GP-620 enters the listen mode.

- ⑥ TALK LED (Red)
Illuminates when the GP-620 enters the talk mode.

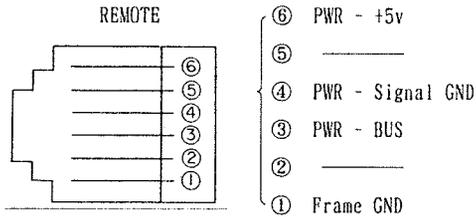
- ⑦ SRQ LED (Red)
Illuminates when the GP-620 issues a service request to the controller.

- ⑧ GP-IB connector
Complies with IEEE-488-1978.

- ⑨ ADDRESS, L. ONLY and EOI/CR.LF switches
 - Address switch (Bits 1 - 5)
Sets an address of the GP-IB.
 - L. ONLY switch (Bit 6)
Sets the listen only mode.
 - EOI/CR.LF switch (Bit 8)
Selects a delimiter(s) to be sent out.
 - Bit 7 is unused.For details, see the OPERATING INSTRUCTIONS contained later in this manual.

⑩ REMOTE connector

Connects the GP-620 to the PWR units.



Terminals ③, ④ and ⑥ on the REMOTE connector are floated off the signal GND of the GP-620. Ensure these terminals are floated off the signal and frame GNDs of the GP-620.

⑪ GND terminal

- SIGNAL GND

Connects to the signal and power GNDs of the GP-620.

- FRAME GND

Connects to the frame of the GP-620.

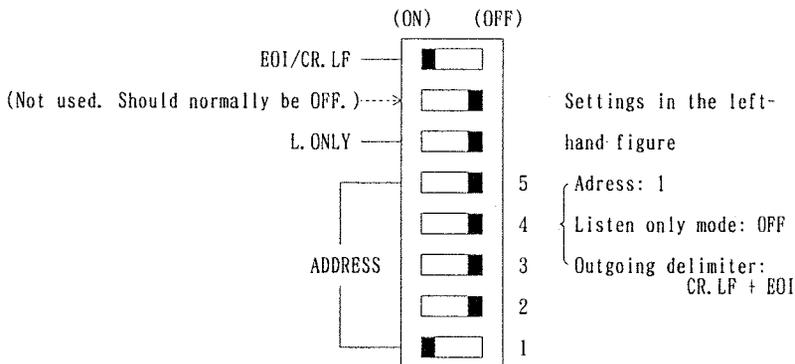
⑫ AC cord plug

Ensure the supply voltage must be within specification.

5. MEANS FOR SETTING AND CONNECTING SYSTEM UNITS AND APPLYING POWER

5 - 1 SETTING THE ADDRESS, L. ONLY AND EOI/CR. LF SWITCHES

Selections of GP-620's address on the GP-IB bus, listen only mode, and outgoing delimiter are made via the 8-bit DIP switch on the rear panel.



A desired address from 0 to 31 can be set in binary notation using the first five bits of this switch. (ON = 1, OFF = 0).

The listen only mode is selected by setting the L. ONLY bit to ON.

One or two delimiter types can be selected with the EOI/CR. LF bit.

{ ON : CR. LF + EOI
OFF : CR. LF

Note: The settings of this switch must be established with the power off because they are read in upon power-up.

5 - 2 SETTING THE ADDRESSES OF PWR UNITS

Set a desired address of each PWR unit to be controlled by the GP-620 by selecting a number 1 to 26.

For more details, refer to the instruction manual furnished with your PWR power supply.

Note: Two or more same numbers must not be set on the system interface between the GP-620 and the PWR units.

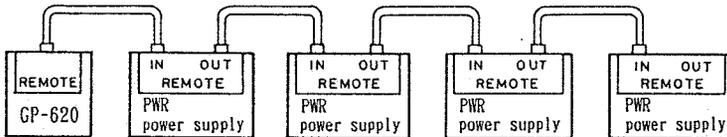
5 - 3 CONNECTING THE GP-620 TO THE CONTROLLER (E.G., PC)

Use a connector cable meeting the GP-IB standard and plug it to the GP-IB connector on the GP-620.

Note: When connecting the cable, the power supplies to the controller and GP-620 must be off.

5 - 4 CONNECTING THE GP-620 TO THE PWR UNITS

connect the the GP-620 and PWR units using the modular cable shipped with the PWR units. Plug the modular cable between the REMOTE connector ⑩ on the GP-620 and the REMOTE CONNECTER IN on the first unit of PWR power supply.



The GP-620 controls a maximum of four PWR units.

Notes: 1. The GP-620 will not work if its REMOTE connector is cabled to the REMOTE OUT connector on a PWR unit.

2. When connecting the cable, the GP-620 and the PWR units must be off.

5 - 5 POWERING UP THE SYSTEM UNITS

After completion of the settings and connections described above, power up each unit connected.

The units may be powered up in any order.

6. GP-IB INFORMATION MESSAGE FORMAT

Abbreviations (18-2) for PWR18-2 (36-1) for PWR36-1
(18-T) for PWR18-1T (18-Q) for PWR18-1.8Q
****: Insert parameter

6 - 1 LISTEN FUNCTIONS

• Format

PWR unit command (including controller address), command

Example: To set the PWR unit of address No. 1 to OUTPUT ON

PW 1, SW 1 From controller to GP-620

The diagram shows the command 'PW 1, SW 1' with lines pointing to its parts: 'SW 1' is the Command, '1' is the PWR unit address, and 'PW' is the PWR unit command. A note indicates the PWR unit command may be omitted for 2nd and following issues.

* Use a comma (,) as a data separator.

- Available commands are contained in the command list on pages 12 through 15.
- The PWR unit command may be omitted if a second or later information message is sent to the POWER unit of the same address.
- If the PWR address is omitted in the PWR unit command, the control address will be set as follows:
 - After GP-620 power up: Broadcast mode
 - Other times : Most recently entered PWR unit address

Note: Once the GP-620 is powered up, be sure to set the PWR and SR commands (service request enable/disable).

• Command list

1) Output Voltage Set

Command : Setting positive tracking voltage VA **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking voltage VB **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking voltage VC **** (18-T)(18-Q)
Setting negative non-tracking voltage VD **** (18-Q)

Effect : Sets variable reference voltage to message value.

2) Output Current Set

Command : Setting positive tracking current AA **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking current AB **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking current AC **** (18-T)(18-Q)
Setting negative non-tracking current AD **** (18-Q)

Effect : Sets variable reference current to message value.

3) Delay Time Set

Command : Plus set TA **** (18-T)(18-Q)
(non-tracking before tracking after)
Minus set TB **** (18-T)(18-Q)
(tracking before non-tracking after)

Effect : Sets variable delay time to a message value.

The DELAY time can be set for PWR18-2 and PWR36-1 as well. The output for these can function as tracking output.

4) Tracking Set

Command : TR0/TR1 (18-2)(36-1)(18-T)(18-Q)

Effect : Selects tracking ON or tracking OFF.

"0" turns tracking off and "1" turns tracking on.

The analog minus value follows the present analog puls value.

Corresponds with the TRACKING key on the panel.

5) Setting of PRESET Parameters

Command : Voltage Set

PRESET 1

Setting positive tracking voltage VE **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking voltage VF **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking voltage VG **** (18-T)(18-Q)
Setting negative non-tracking voltage VH **** (18-Q)

PRESET 2

Setting positive tracking voltage VJ **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking voltage VK **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking voltage VL **** (18-T)(18-Q)
Setting negative non-tracking voltage VM **** (18-Q)

PRESET 3

Setting positive tracking voltage VN **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking voltage VP **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking voltage VQ **** (18-T)(18-Q)
Setting negative non-tracking voltage VR **** (18-Q)

Current set

PRESET 1

Setting positive tracking current AE **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking current AF **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking current AG **** (18-T)(18-Q)
Setting negative non-tracking current AH **** (18-Q)

PRESET 2

Setting positive tracking current AJ **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking current AK **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking current AL **** (18-T)(18-Q)
Setting negative non-tracking current AM **** (18-Q)

PRESET 3

Setting positive tracking current AN **** (18-2)(36-1)(18-T)(18-Q)
Setting negative tracking current AP **** (18-2)(36-1)(18-T)(18-Q)
Setting positive non-tracking current AQ **** (18-T)(18-Q)
Setting negative non-tracking current AR **** (18-Q)

Delay Set

PRESET 1

Plus set TE **** (18-2)(36-1)(18-T)(18-Q)
Minus set TF **** (18-2)(36-1)(18-T)(18-Q)

PRESET 2

Plus set TJ **** (18-2)(36-1)(18-T)(18-Q)
Minus set TK **** (18-2)(36-1)(18-T)(18-Q)

PRESET 3

Plus set TN **** (18-2)(36-1)(18-T)(18-Q)

Minus set TP **** (18-2)(36-1)(18-T)(18-Q)

Tracking Set 1: tracking ON 0: tracking OFF

PRESET 1 TSO/TS1 (18-2)(36-1)(18-T)(18-Q)

PRESET 2 TTO/TT1 (18-2)(36-1)(18-T)(18-Q)

PRESET 3 TU0/TU1 (18-2)(36-1)(18-T)(18-Q)

Effect : Sets PRESET parameters to the message values.

6) Output ON/OFF Set

Command : SW0/SW1 (18-2)(36-1)(18-T)(18-Q)

Effect : The output relay of the power supply is controlled. Setting "0" turns the output OFF, "1" turns the output ON. This function corresponds to that by the OUTPUT key on the panel.

7) Output protect ON/OFF Set

Command : PTO/PTI (18-2)(36-1)(18-T)(18-Q)

Effect : Selects the OUTPUT PROTECT function. "0" turns OUTPUT PROTECT off and "1" turns OUTPUT PROTECT on. Corresponds with the OUTPUT PROTECT key on the panel.

8) Display Set

Command : DS1/DS2/DS3/DS4 (18-2)(36-1)(18-T)(18-Q)

Effect : The display contents are selected.

1 : +18V (18-2)(18-T)(18-Q)

+36v (36-1)

2 : -18V (18-2)(18-T)(18-Q)

-36V (36-1)

3 : + 6V (18-T)

+ 8V (18-Q)

4 : - 6V (18-Q)

Each corresponds to the respective key on the panel.

9) Display of Delay Time

Command : DTO/DT1 (18-2)(36-1)(18-T)(18-Q)

Effect : Displays the Delay Time

0 : Displays V and A

1 : Displays the Delay Time

10) PRESET/VARIABLE Selection

Command : PRO/PR1/PR2/PR3 (18-2)(36-1)(18-T)(18-Q)

Effect : Select from "VARIABLE" or PRESET "1" through "3"

0 : Variable (18-2)(36-1)(18-T)(18-Q)

1 : Preset 1 (18-2)(36-1)(18-T)(18-Q)

2 : Preset 2 (18-2)(36-1)(18-T)(18-Q)

3 : Preset 3 (18-2)(36-1)(18-T)(18-Q)

Each corresponds to the respective key on the panel.

11) LOCAL Mode Set

Command : LC1 (18-2)(36-1)(18-T)(18-Q)

Effect : Shifts operation to LOCAL mode.

12) LOCAL Lockout Set

Command : LL1 (18-2)(36-1)(18-T)(18-Q)

Effect : Prohibits shifting to the LOCAL mode, so that even if the LOCAL key on the panel is pressed, the machine will not go into the LOCAL mode.

13) Status Output Request

Command : ST0/ST1/ST2/ST3 (18-2)(36-1)(18-T)(18-Q)

Effect : Requests output of the power supply's internal status information. The unit that receives this command adds on the preceding applicable message and transmits an information message.

0 : Output request for information on output current, output voltage, operation mode

1 : Output request for information on VARIABLE/all PRESETs.

2 : Output request for information on status of all keys.

3 : Output request for ID information.

Applicable preceding messages

ST0 : MS0

ST1 : MS1

ST2 : MS2

ST3 : MS3

Conditions: Cannot be used in the broadcast mode.

14) Service Request Allow/Disallow

Command : SR0/SR1 (18-2)(36-1)(18-T)(18-Q)

Effect : Sets the Service Request function to "allow" or "disallow".

"0" disallows Service Requests and "1" allows Service Requests.

6 - 2 TALK FUNCTIONS

• Format

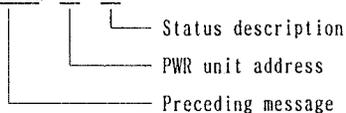
Preceding message, PWR unit address, status description

Example : What model of the PWR Series is the power supply of PWR unit address

No. 1 ?

PW1, ST3 From controller to GP-620

MS3, 1 0 From GP-620 to controller



The power supply of PWR unit address No. 1 is PWR18-1.8Q.

- The preceding messages and status descriptions possible in the format are contained in the command list on pages 16 through 22.

• Command list

1) Output of Output Voltage, Output Current, Operation Status

Corresponding command : ST0 (18-2)(36-1)(18-T)(18-Q)

Preceding message : MS0

Effect : Transmits information on Output Voltage, Output Current, and Operation Status.

Format : MS0, **, ***, ***, ****, **** (18-2)(36-1)

Columns 1, 2 Machine address

Columns 4 ~ 7 +18/+36 Voltage

Columns 9 ~ 12 +18/+36 Current

Columns 14 ~ 17 -18/-36 Voltage

Columns 19 ~ 22 -18/-36 Current

Columns 24 ~ 27 Operation status

Format : MS0, **, ***, ***, ****, **** (18-T)

Columns 1, 2 Machine address

Columns 4 ~ 7 +18 Voltage

Columns 9 ~ 12 +18 Current

Columns 14 ~ 17 -18 Voltage

	Columns	19~22	-18 Current
	Columns	24~27	+ 6 Voltage
	Columns	29~32	+ 6 Current
	Columns	34~37	Operation status
Format	:	MS0, **, ***, ****, ****, ****, ****, ****	(18-Q)
	Columns	1, 2	Machine address
	Columns	4 ~ 7	+18 Voltage
	Columns	9 ~12	+18 Current
	Columns	14~17	-18 Voltage
	Columns	19~22	-18 Current
	Columns	24~27	+ 8 Voltage
	Columns	29~32	+ 8 Current
	Columns	34~37	- 6 Voltage
	Columns	39~42	- 6 Current
	Columns	44~47	Operation status

The comma (,) is used as the data separator

Operation Status "****" 0: CV, 1: CC unused portion is 0.

┌───┐	-6v	(18-Q)
├───┤	+6/8V	(18-T)(18-Q)
└───┘	-18/36V	(18-2)(36-1)(18-T)(18-Q)
└───┘	+18/36V	(18-2)(36-1)(18-T)(18-Q)

2) Output of Information on VARIABLE/all PRESETs

Command	:	ST1	(18-2)(36-1)(18-T)(18-Q)
Preceding message	:	MS1	
Effect	:	Outputs information stored in all PRESETs	
Format	:	MS1, **, ***, ****, ****, ****, ****, ****	(18-2)(36-1)
	Columns	1, 2	Machine address
	Columns	4 ~ 7	VARIABLE +18/+36 Voltage
	Columns	9 ~12	+18/+36 Current
	Columns	14~17	-18/-36 Voltage
	Columns	19~22	-18/-36 Current
	Column	24	Delay plus/minus
	Columns	26~29	Delay time
	Column	31	Tracking
	Columns	33~36	PRESET 1 +18/+36 Voltage

Columns	38~41		+18/+36 Current
Columns	43~46		-18/-36 Voltage
Columns	48~51		-18/-36 Current
Column	53		Delay plus/minus
Columns	55~58		Delay time
Column	60		Tracking
Columns	62~65	PRESET 2	+18/+36 Voltage
Columns	67~70		+18/+36 Current
Columns	72~75		-18/-36 Voltage
Columns	77~80		-18/-36 Current
Column	82		Delay plus/minus
Columns	84~87		Delay time
Column	89		Tracking
Columns	91~94	PRESET 3	+18/+36 Voltage
Columns	96~99		+18/+36 Current
Columns	101~104		-18/-36 Voltage
Columns	106~109		-18/-36 Current
Column	111		Delay plus/minus
Columns	113~116		Delay time
Column	118		Tracking

Tracking 0: ON, 1: OFF

Comma (,) used as the data separator.

Format

: MS1, **, ***, ****, ***** (18-2)(36-1)

Columns	1, 2		Machine address
Columns	4~7	VARIABLE	+18 Voltage
Columns	9~12		+18 Current
Columns	14~17		-18 Voltage
Columns	19~22		-18 Current
Columns	24~27		+ 6 Voltage
Columns	29~32		+ 6 Current
Column	34		Delay plus/minus
Columns	36~39		Delay time
Column	41		Tracking
Columns	43~46	PRESET 1	+18 Voltage
Columns	48~51		+18 Current

Columns	53~56	-18 Voltage
Columns	58~61	-18 Current
Columns	63~66	+ 6 Voltage
Columns	68~71	+ 6 Current
Column	73	Delay plus/minus
Columns	75~78	Delay time
Column	80	Tracking
Columns	82~85 PRESET 2	+18 Voltage
Columns	87~90	+18 Current
Columns	92~95	-18 Voltage
Columns	97~100	-18 Current
Columns	102~105	+ 6 Voltage
Columns	107~110	+ 6 Current
Column	112	Delay plus/minus
Columns	114~117	Delay time
Column	119	Tracking
Columns	121~124 PRESET 3	+18 Voltage
Columns	126~129	+18 Current
Columns	131~134	-18 Voltage
Columns	136~139	-18 Current
Columns	141~144	+ 6 Voltage
Columns	146~149	+ 6 Current
Column	151	Delay plus/minus
Columns	153~156	Delay time
Column	158	Tracking

Delay Plus/Minus: 0: Plus, 1: Minus

Tracking : 0: Off, 1: On

Comma (,) used as the data separator.

Format

: MS1, **, ***, ****, ****, ****, **** (18-Q)

Columns	1, 2	Machine address
Columns	4~7 VARIABLE	+18 Voltage
Columns	9~12	+18 Current
Columns	14~17	-18 Voltage
Columns	19~22	-18 Current
Columns	24~27	+ 8 Voltage

Columns	29~32		+ 8 Current
Columns	34~37		- 6 Voltage
Columns	39~42		- 6 Current
Column	44		Delay plus/minus
Columns	46~49		Delay time
Column	51		Tracking
Columns	53~56	PRESET 1	+18 Voltage
Columns	58~61		+18 Current
Columns	63~66		-18 Voltage
Columns	68~71		-18 Current
Columns	73~76		+ 8 Voltage
Columns	78~81		+ 8 Current
Columns	83~86		- 6 Voltage
Columns	88~91		- 6 Current
Column	93		Delay plus/minus
Columns	95~98		Delay time
Column	100		Tracking
Columns	102~105	PRESET 2	+18 Voltage
Columns	107~110		+18 Current
Columns	112~115		-18 Voltage
Columns	117~120		-18 Current
Columns	122~125		+ 8 Voltage
Columns	127~130		+ 8 Current
Columns	132~135		- 6 Voltage
Columns	137~140		- 6 Current
Column	142		Delay plus/minus
Columns	144~147		Delay time
Column	149		Tracking
Columns	151~154	PRESET 3	+18 Voltage
Columns	156~159		+18 Current
Columns	161~164		-18 Voltage
Columns	166~169		-18 Current
Columns	171~174		+ 8 Voltage
Columns	176~179		+ 8 Current
Columns	181~184		- 6 Voltage

Columns 186~189 - 6 Current
 Column 191 Delay plus/minus
 Columns 193~196 Delay time
 Column 198 Tracking
 Delay Plus/Minus: 0 : Plus, 1: Minus
 Tracking : 0: Off, 1: On
 Comma (,) used as the data separator.

3) Status Output for All Keys

Command : ST2 (18-2)(36-1)(18-T)(18-Q)
 Preceding message : MS2
 Effect : Outputs status of all keys.
 Format : MS2, **, *, *, *, *, *, *, * (18-2)(36-1)(18-T)(18-Q)
 Columns 1, 2 Machine address
 Column 4 Display
 0 :
 1 : +18V (18-2)(18-T)(18-Q)
 +36V (36-1)
 2 : -18V (18-2)(18-T)(18-Q)
 -36V (36-1)
 3 : + 6V (18-T)
 + 8V (18-Q)
 4 : - 6V (18-Q)
 Column 6 Output Switch
 0 : All OFF
 1 : Tracking ON,
 Non-tracking OFF
 2 : Tracking OFF,
 Non-tracking ON
 3 : All ON
 Column 8 Output protect
 0 : OFF, 1 : ON
 Column 10 Tracking
 0 : OFF, 1 : ON
 Column 12 PRESET/VARIABLE
 0 : VARIABLE

- 1 : PRESET 1
- 2 : PRESET 2
- 3 : PRESET 3

4) ID Information Output

Command : ST3 (18-2)(36-1)(18-T)(18-Q)
 Preceding message : MS3
 Effect : Outputs ID information
 Format : MS3, **, * (18-2)(36-1)(18-T)(18-Q)

Columns 1, 2 Machine address
 Column 4 ID Information

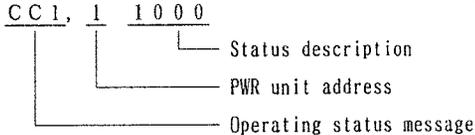
- 0 : PWR 18-1, 8Q
- 1 : PWR 18-1T
- 2 : PWR 18-2
- 3 : PWR 36-1

6 - 3 SERVICE REQUEST FUNCTION

• Format

Operating status message, PWR unit address, status description

Example : At the +18 output terminal on the power supply (PWR 18-1.8Q) of PWR unit address No. 1, the output status switched from constant-voltage operation (CV) to constant current operation (CC).



• The operating status messages and status descriptions possible in the format are contained in the command list on page 23.

• Command list

1) Constant Voltage/Constant Current Mode Change Notification

Message : CCl, **, **** (18-2)(36-1)(18-T)(18-Q)

Operating state **, **** 0: CV, 1: CC Unused portion is 0.

- 6V (18-Q)
+ 6/8V (18-T)(18-Q)
-18/36V (18-2)(36-1)(18-T)(18-Q)
+18/36V (18-2)(36-1)(18-T)(18-Q)
Machine address

The notification signal is generated in the Service Requests "allowed" state, when the machine shifts from the constant voltage to constant current mode, or from the constant current to constant voltage mode.

2) Notification of Alarm Mode on Output Voltage with Error

Message : UU1, **, **** (18-2)(36-1)(18-T)(18-Q)

Operating state **, **** 0: normal, 1: abnormal
unused portion is 0.

- 6V
+ 6/8V
-18/36V
+18/36V
Machine address

This notification is made, under a service request authorized condition, when an error-containing output voltage becomes output or when an error-containing voltage output condition is returned to an error-free voltage output condition.

6 - 4 PARAMETER SET RANGES

Voltage

0 0 0 0 ~ 0 6 1 7 (6.17 V) (18-T)(18-Q)
0 0 0 0 ~ 0 8 2 3 (8.23 V) (18-Q)
0 0 0 0 ~ 1 8 5 0 (18.50 V) (18-2)(18-T)(18-Q)
0 0 0 0 ~ 3 6 5 0 (36.50 V) (36-1)

Current

0 0 0 2 ~ 0 1 0 4 (1.04 A) (36-1)(18-T)
0 0 0 3 ~ 0 1 8 5 (1.85 A) (18-Q)
0 0 0 4 ~ 0 2 0 6 (2.06 A) (18-2)
0 0 1 0 ~ 0 5 1 2 (5.12 A) (18-T)

Delay time

0 0 0 0 ~ 1 0 0 0 (0.00 ~ ±10.00 sec) (18-T)(18-Q)

Parameters can be set in digits other than 4-digit.

Example: Setting 5 V

Either "0500" or "500" can be specified as 5 V. Take note that specifying "5" results in the voltage being set at 0.05 V.

7. SAMPLE PROGRAM

```

100 *INIT
110 KEY 1," TALK " : KEY 2,"LISTEN" : KEY 3," EXIT "
120 ON KEY GOSUB *TALK,*LISTEN,*EXIT
130 KEY ON
140 GP620=3
150 ISET IFC
160 ISET REN
170 WBYTE &H14;
180 FOR J= 1 TO 1000 : NEXT
190 SRQ OFF
200 ON SRQ GOSUB *RQS
210 SRQ ON
220 *MAIN
230 GOTO *MAIN
240 *TALK
250 PRINT "MESSAGE ? ";
260 LINE INPUT A$
270 PRINT @GP620;A$
280 RETURN
290 *LISTEN
300 PRINT "MESSAGE ? ";
310 LINE INPUT A$
320 PRINT @GP620;A$
330 LINE INPUT @GP620;B$
340 PRINT "MESSAGE : ";B$
350 RETURN
360 *RQS
370 POLL GP620,R
380 PRINT "STATUS BYTE :";R
390 LINE INPUT@GP620;B$
400 PRINT "SRQ MESSAGE : ";B$
410 SRQ ON
420 RETURN
430 *EXIT
440 CLS
450 KEY OFF
460 END

```

— Sets function keys.

— Initializes GP-IB.

— Main loop

— Talker routine

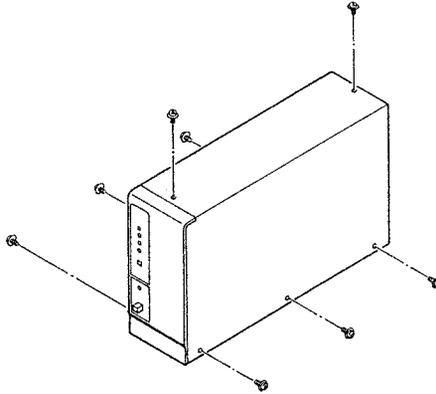
— Listen routine

— Service request routine

— Termination routine

8. MAINTENANCE

8 - 1 REMOVING THE CASE

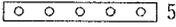
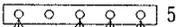
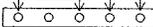
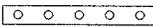
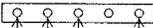
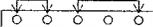
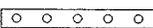


The case is easily removed by removing the screws from the top and side faces of the frame and sliding the case upward.

8 - 2 CHANGING THE SUPPLY VOLTAGE AND REPLACING THE FUSE

- Changing the supply voltage

Change the connectors (P6, P7, P8) and fuse (F1 or F2) in the GP-620 frame as illustrated below.

Rated voltage	Change	Fuse
1 0 0 V	P7 1  5 P6 1  5 P8 	100mA (TL)
1 2 0 V	  	100mA (TL)
2 2 0 V	  	100mA (TL)
2 4 0 V	  	100mA (TL)

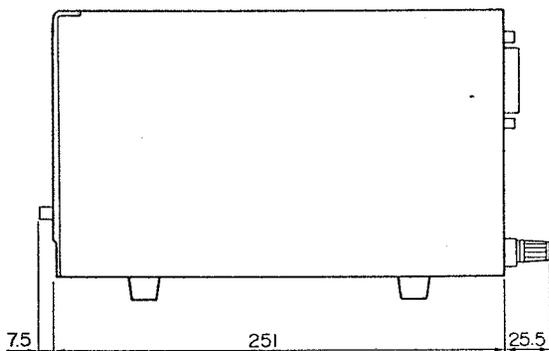
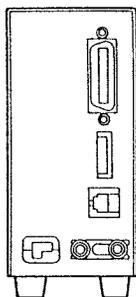
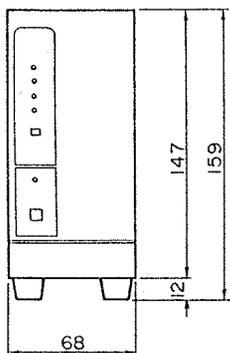
(TL): Time-lag fuse

- Replacing the fuse

The fuse should be replaced to change the supply voltage or after the fuse has blown. Insert a new fuse into either of socket F1 (for $\ell = 30$ mm) or F2 (for $\ell = 20$ mm) in the GP-620 frame.

Note: The power cord must be pulled out of the socket before attempting at the above work.

8 - 3 EXTERNAL DIMENSIONS



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