AN6356N

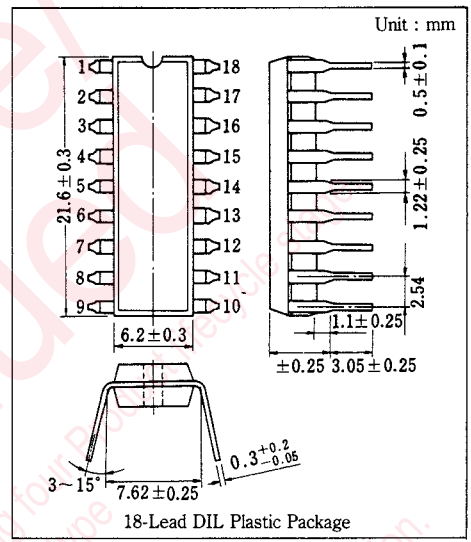
VTR Cylinder Inteface Circuit

■ Outline

The AN6356N is an integrated circuit designed for VTR's cylinder interface.

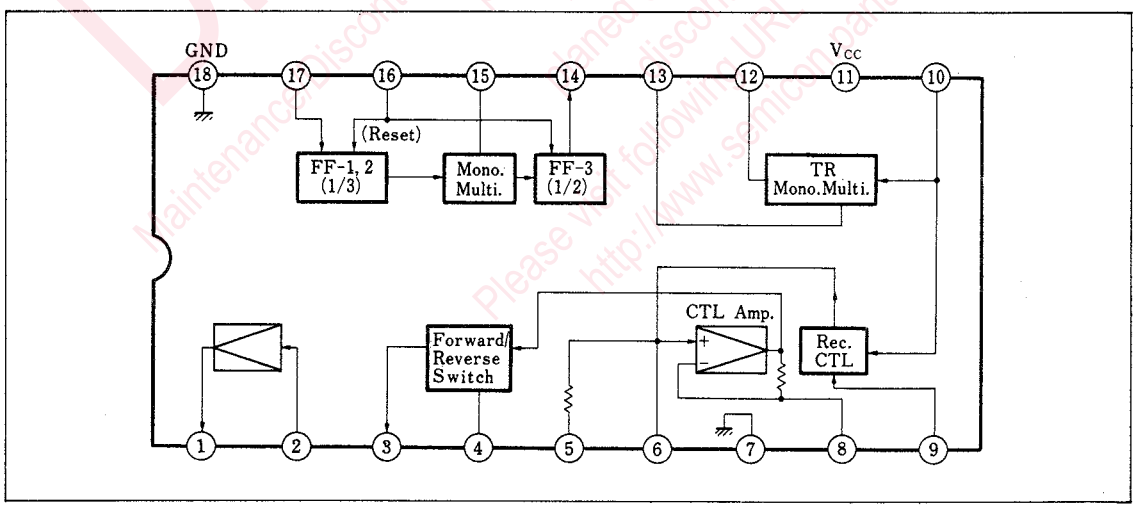
■ Features

- The functions consist of:
  - PG monostable multivibrator
  - Tracking monostable multivibrator
  - CTL amplifier
- Supply voltage : 5V



18-Lead DIL Plastic Package

■ Block Diagram



■ Pin

Pin No.	Pin Name	Pin No.	Pin Name
1	P.B. CTL Output	10	½ V_{ss} Input
2	P.B. CTL Clamp Input	11	V_{cc}
3	P.B. CTL Amp. Output	12	Tracking Mono. Multi. Out.
4	Forword Reverse Select	13	Tracking Mono. Multi. Cont.
5	½ V_{cc}	14	Head Switch Output
6	CTL Signal	15	PG Control
7	GND	16	Cylinder PG Input
8	CTL Amp. Feedback	17	Cylinder PG Input
9	Rec./P.B. Select	18	GND

■ Absolute Maximum Ratings (Ta=25℃)

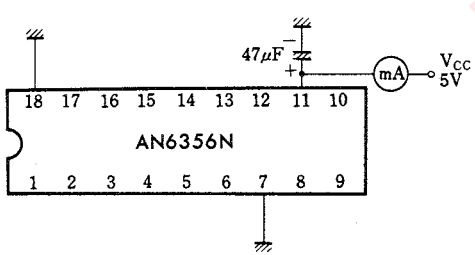
Item	Symbol	Rating	Unit
Supply voltage	V_{CC}	6.0	V
Power dissipation (Ta=70℃)	P_D	100	mW
Operating ambient temperature	T_{opr}	−20～+70	℃
Storage temperature	T_{stg}	−40～+150	℃

■ Electrical Characteristics (V_{CC}=5V, Ta=25℃)

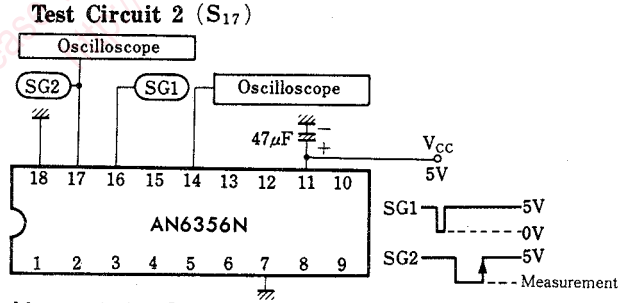
Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Circuit current	I_{11}	1	Without load	7.0		14	mA
CY. PG. FG. input sensitivity	$S_{17,16}$	2,3				1.5	V
PG MM delay time	T_{15}	4	C=0.056μF, R=20kΩ	690		860	μs
H/SW output High	V_{OH14}	5	Without load	4.6			V
H/SW output Low	V_{OL14}	5	Without load			0.4	V
½ V_{ss} input sensitivity	S_{10}	6				1.5	V
Rec. start select sensitivity	S_9	7		3.0			V
For./Rev. select sensitivity	S_4	8		3.0			V
Rec. CTL output High	V_{OH6}	9	Without load	4.0			V
Rec. CTL output Low	V_{OL6}	9	Without load			0.4	V
PB CTL amp. gain (For.)	$G_{(Forward)}$	10		60		72	dB
PB CTL amp. gain (Rev.)	$G_{(Reverse)}$	10		59		72	dB
Tracking mono. multi. delay amount	T_{13}	11	C=0.27μF, R=100kΩ	18		22	ms
PB CTL wave shaping input sensitivity	S_2	12		300			mV

Note) Operating supply voltage range $V_{cc(opr)}$=4.5～5.5V

Test Circuit 1 (I_{11})

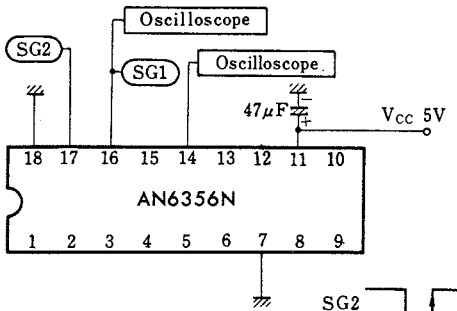


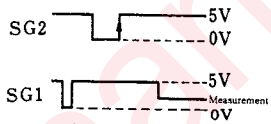
Test Circuit 2 (S_{17})



Measure the Pin ⑰ voltage at which Pin ⑭ output rises after IC internal FF reset(applying pulses to the Pin ⑯ in the circuit above).

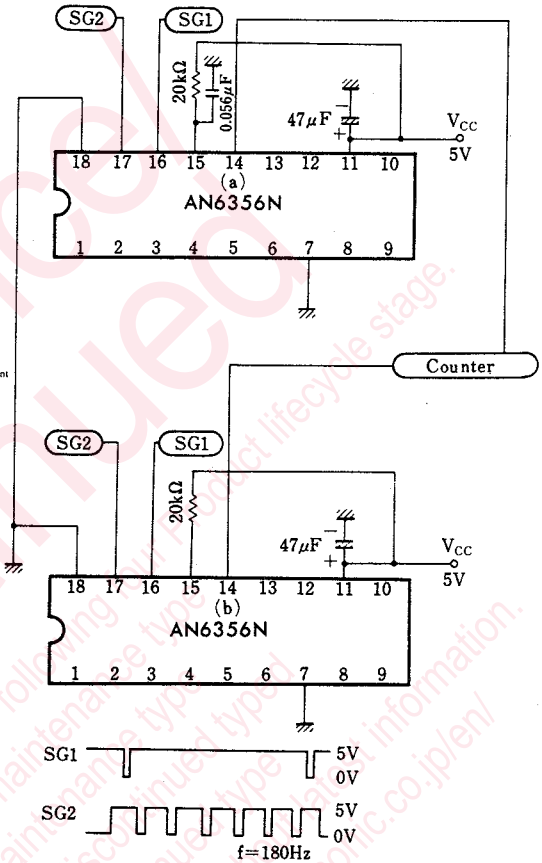
Test Circuit 3 (S_{16})





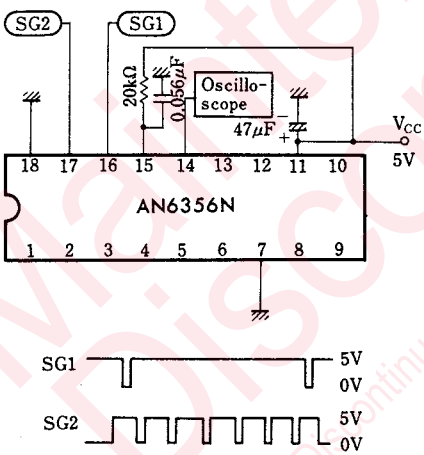
After inputting the signal above to SG1, input SG2 to the Pin ⑰. Then, measure the Pin ⑯ voltage at which Pin ⑭ output falls.

Test Circuit 4 (T_{15})

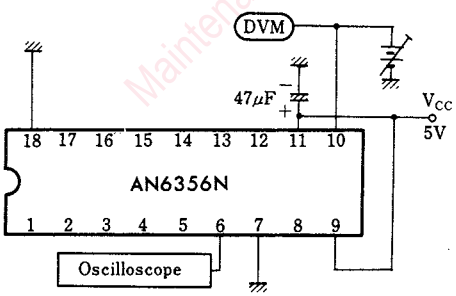


Measure a time from a rise of Pin ⑭ output "a" to a rise of Pin ⑭ output "b"

Test Circuit 5 (V_{OH14}, V_{CL14})

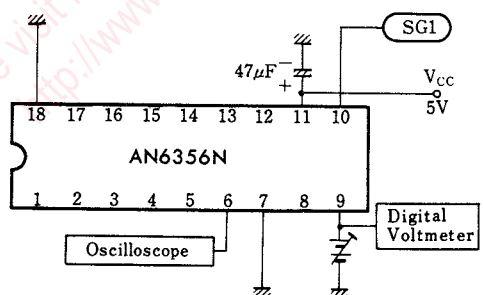


Test Circuit 6 (S_{10})



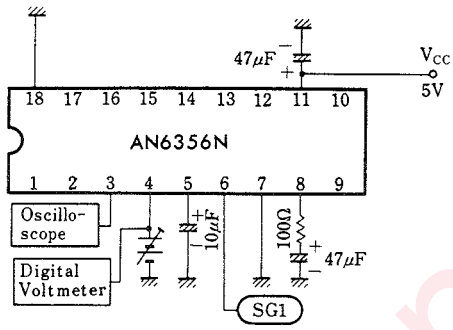
Measure the Pin ⑩ voltage at which Pin ⑥ output changes after IC internal R−S FF setting(applying pulses to the Pin ⑩ in the circuit above).

Test Circuit 7 (S_9)



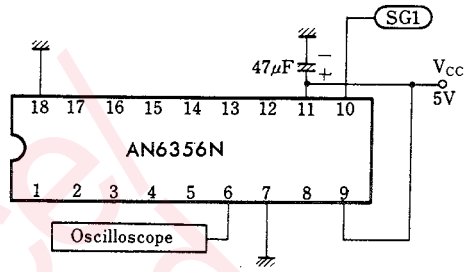
SG1 : Input signal rectangular wave, f= 30 Hz, $5V_{O-P}$. Measure the Pin ⑨ voltage at which no output is made to the Pin ⑥.

Test Circuit 8 (S_4)



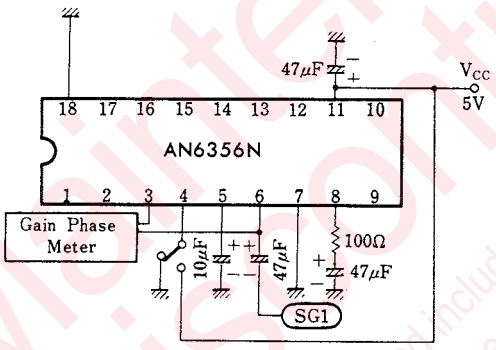
SG1 : Input signal sine wave, f=1kHz, 0.2mV_{P-P}

Test Circuit 9 (V_{OH6}, V_{OL6})



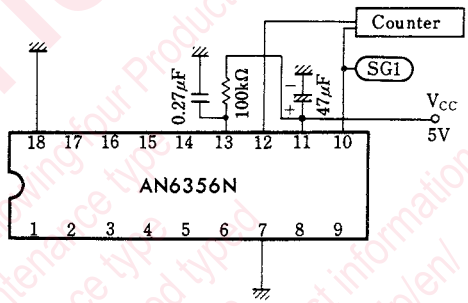
SG1 : Input signal rectangular wave, f=30Hz, 5V_{O-P}

Test Circuit 10 ($G_{(Forward)}$, $G_{(Reverse)}$)



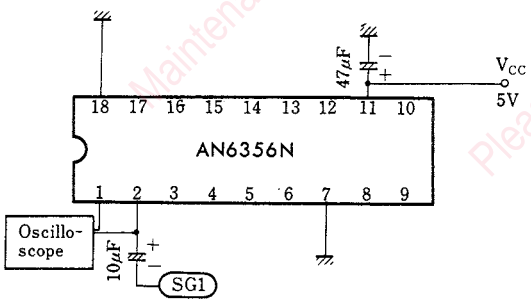
SG1 : Input signal sine wave, f=1kHz, 0.2mV_{P-P}
G_{F3} for Pin ④ GND, G_{R3} for Pin ④ V_{CC}

Test Circuit 11 (T_{13})



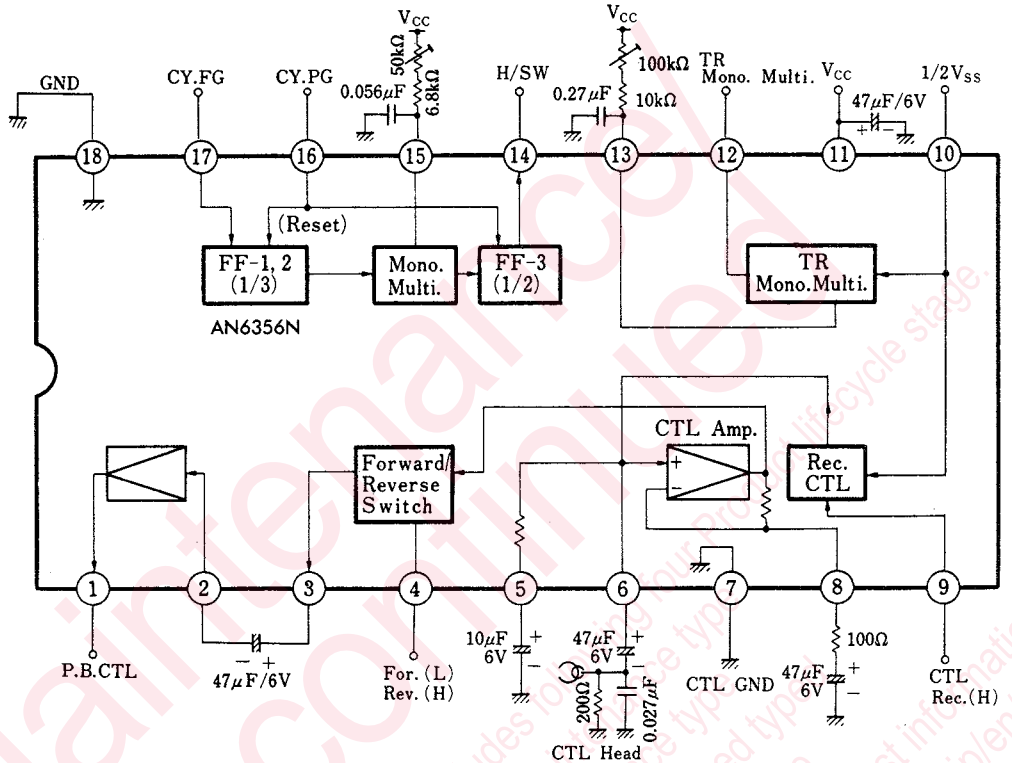
·SG1 : Input signal rectangular wave, f=30Hz, 5V_{O-P}
·T_{13} is a time rise of SG1 to a fall of Pin ⑫ output.

Test Circuit 12 (S_2)



·SG1 : Input signal, rectangular wave, f=30Hz
·SG1 $V_H-V_L=S_2$ when an SG1 signal level is changed and a signal is at the Pin ①.

■ Application Circuit



Request for your special attention and precautions in using the technical information and semiconductors described in this book

(1) If any of the products or technical information described in this book is to be exported or provided to non-residents, the laws and regulations of the exporting country, especially, those with regard to security export control, must be observed.

(2) The technical information described in this book is intended only to show the main characteristics and application circuit examples of the products. No license is granted in and to any intellectual property right or other right owned by Panasonic Corporation or any other company. Therefore, no responsibility is assumed by our company as to the infringement upon any such right owned by any other company which may arise as a result of the use of technical information described in this book.

(3) The products described in this book are intended to be used for standard applications or general electronic equipment (such as office equipment, communications equipment, measuring instruments and household appliances).
Consult our sales staff in advance for information on the following applications:
- Special applications (such as for airplanes, aerospace, automobiles, traffic control equipment, combustion equipment, life support systems and safety devices) in which exceptional quality and reliability are required, or if the failure or malfunction of the products may directly jeopardize life or harm the human body.
- Any applications other than the standard applications intended.

(4) The products and product specifications described in this book are subject to change without notice for modification and/or improvement. At the final stage of your design, purchasing, or use of the products, therefore, ask for the most up-to-date Product Standards in advance to make sure that the latest specifications satisfy your requirements.

(5) When designing your equipment, comply with the range of absolute maximum rating and the guaranteed operating conditions (operating power supply voltage and operating environment etc.). Especially, please be careful not to exceed the range of absolute maximum rating on the transient state, such as power-on, power-off and mode-switching. Otherwise, we will not be liable for any defect which may arise later in your equipment.
 Even when the products are used within the guaranteed values, take into the consideration of incidence of break down and failure mode, possible to occur to semiconductor products. Measures on the systems such as redundant design, arresting the spread of fire or preventing glitch are recommended in order to prevent physical injury, fire, social damages, for example, by using the products.

(6) Comply with the instructions for use in order to prevent breakdown and characteristics change due to external factors (ESD, EOS, thermal stress and mechanical stress) at the time of handling, mounting or at customer's process. When using products for which damp-proof packing is required, satisfy the conditions, such as shelf life and the elapsed time since first opening the packages.

20080805

littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.