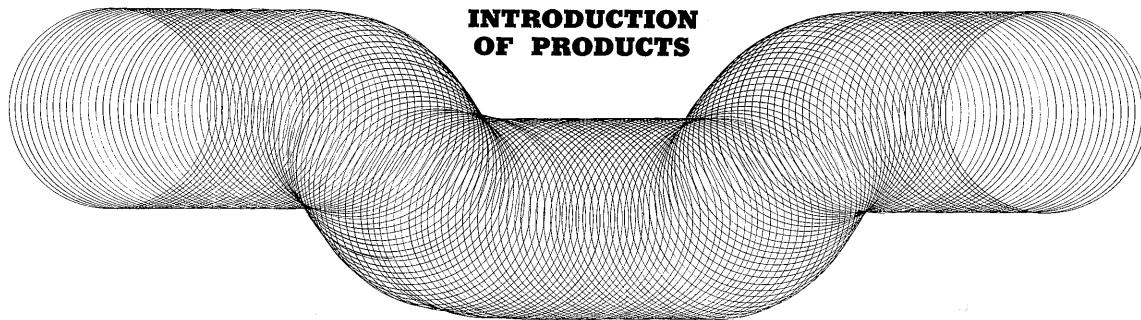


## INTRODUCTION OF PRODUCTS



# TELEPNEU ROOT EXTRACTOR, MODEL QPGR

## Preface

According to the progress of the instrumentation techniques, the composition of the control circuit is becoming complicated so that the importance of the computing relays has been recognized. In addition to the line of products of Fuji TELEPNEU Computing Relays such as TELEPNEU Multiplying Relay (Model: QPVS) and TELEPNEU Adding Relay (Model: QPDU) which have already been in use, the TELEPNEU Root Extractor (Model QPRG) in a new development.

## Usage

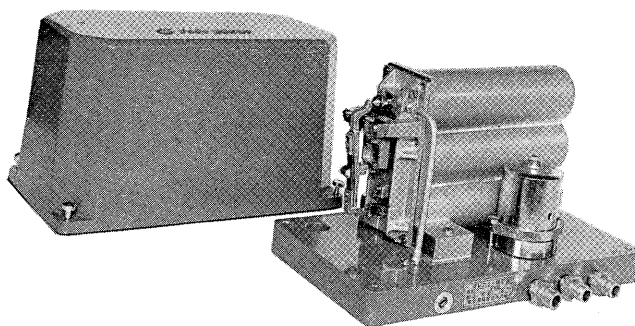
The flow measurement of the differential pressure is the method most commonly utilized. According to this method, the flow is measured by measuring the differential pressure between the liquids which are flowing through the throttled part and the straight part of the pipe.

In this method the following relationship exists between the differential pressure and the flow rate:

$$Q = K \sqrt{\Delta P}$$

$Q$ : Flow rate  
 $\Delta P$ : Differential pressure  
 $K$ : Constant

This differential pressure  $\Delta P$  is transmitted as a unified signal by the flow transmitter. In the electrical signal system the differential pressure  $\Delta P$  is extracted in the transmitter and the signal in proportion to the flow rate is transmitted. On the other hand, in the pneumatic signal system the root extraction by the transmitter is difficult in general so that the signal is transmitted in the state of the square of the flow rate and measured by the receiver with the square law scale. But in the case of the ratio control and cascade control it is necessary to extract the pneumatic signal so that the signal is



proportional to the flow rate and for this purpose the TELEPNEU Root Extractor was developed.

## Structure

The root extractor is designed for installation in the field. The device is comprised of the root extracting mechanism, the pilot relay and the piping board. The root extracting mechanism consists of the input measuring chamber, the output measuring chamber, the damping capacitance and the root extracting unit comprising an assembly of the band spring and lever. The pilot relay is interchangeable with other instruments since it is used for Q-series instruments in common. Each piping of the instrument is carried out in the piping board and mounting of the parts is done by the plug-in method as is done with other Q-series instruments.

## Features

- 1) Though deflection equilibrium method is used for the root extracting computation, the fixed nozzle maintains a high level of accuracy.
- 2) The plate spring method used in rotating parts makes the instrument stable since it eliminates the

influence of friction and backlash.

3) Build-in the small size and sturdy case, it is suitable for field installation.

4) In using the plug-in method and parts in common with other Q-series instruments, maintenance is very easy.

5) A temperature compensating mechanism is used for ambient temperature thus making the characteristics very stable.

### Specifications

Input :	0.2~1.0 kg/cm <sup>2</sup>
Output :	0.2~1.0 kg/cm <sup>2</sup>

Characteristic :	Output $\propto \sqrt{\text{input}}$
Air supply :	1.4 kg/cm <sup>2</sup>
Air consumption	
At infinite load :	30 l/min
At no load :	5 l/min
Ambient temperature :	0~70°C
Accuracy	
Output more than 20% :	$\pm 0.6\%$
Output less than 20% :	Not guaranteed
Output less than 10% :	Linear relation
Temperature characteristic:	0.3%/10°C

(By M. Okubo, Toyoda Factory)

## 10-TRANSISTOR, 3 BAND FM PORTABLE RADIO

### MODEL TRF 1062S (FM/MW/SW)

### MODEL TRF 1062L (FM/MW/LW)

### Preface

The new TRF 1062S and TRF 1062L are the improved versions of TRF 1061S which was previously introduced in our FUJI ELECTRIC REVIEW, Vol 10, No. 3.

All of the outstanding engineering qualities of the famous predecessor, TRF 1061S have been retained in the two new models and in addition new design features and an exciting new approach to styling have been incorporated in TRF 1062S and TRF 1062L. Highlighting the sparkling new styling is the three colored dial: blue for FM, light yellow for MW and red for SW or LW. The handsome cabinet in either all black or a two-tone finish (black and simulated woven silver) measures  $5\frac{5}{8}'' \times 9\frac{5}{8}'' \times 2\frac{3}{8}''$ . The functional panel layout has all of the controls located for easy and convenient operation. There are separate controls for tone, volume, tuning, fine tuning and the band selector switch. In addition to FM and MW bands, TRF 1062S provides reception of SW and TRF 1062L of LW. Now you can have hi-fi wherever you go!

### Special Features

#### 1) Gear drive dial

The dial mechanism is gear operated. Skillful usage of gears causes the dial mechanism to work smoothly and accurately...no slipping.

#### 2) Easily read 3-colored dial

Each band is clearly marked on a separate colored dial for ease of selection. Blue for FM, light yellow for MW and red for SW or LW.

#### 3) Economical operation

Power is furnished by only four of the most popular priced "C" type flashlight batteries for up to 300 hours or about 2 and one-half months (at four hours a day) of listening pleasure. Batteries can be replaced conveniently through the battery replacement door on the back without removing the entire back cover.

#### 4) Variable tone control

The variable tone control dial makes the selection of any tone quality desired. Turn the knob downward or upward for treble-bass adjustment; for treble, turn it downward toward you; for bass, reverse the knob upward.

